MCM 3 Plan and Standard Operating Procedure

Illicit Discharge Detection and Elimination Inspection Procedures and Spill Response

City of Brainerd
501 Laurel Street, Brainerd, MN 56401

PLAN MANAGER: City Engineer **UPDATED:** 04/15/2021

I. INTRODUCTION

The City of Brainerd owns and operates an MS4 (Municipal Separate Storm Sewer System). Under the MS4 General Permit, the Minnesota Pollution Control Agency requires that the City develop a plan with written procedures for the purpose of identifying illicit discharges to this system. The storm sewer system is designed to convey surface water runoff from natural precipitation that discharges to protected public water resources. All implementation of elements of this plan need to be done in coordination with a review of both the current MS4 Permit and CSW requirements. Key elements of those documents are provided herein.

As per City Code, that also references the above State regulations for compliance, no person shall discharge or cause to be discharged into the municipal storm drain system or watercourses any materials, including but not limited to pollutants or waters containing pollutants that cause or contribute to a violation of applicable water quality standards, other than storm water, except for the following related discharges:

- Firefighting activities.
- Water line flushing Landscape and irrigation water.
- Diverted stream flows.
- Rising groundwater.
- Uncontaminated groundwater infiltration.
- Uncontaminated pumped groundwater.
- Potable groundwater sources.
- Foundation footing drains.
- Air conditioning condensation Individual car washing.
- Flows from riparian habitats and wetlands.
- De-chlorinated swimming pool water.
- Street wash water.
- Any other water source not containing pollutants.

Illicit discharge detection shall be incorporated into all inspection and maintenance activities as per MPCA MS4 General Permit which includes:

- Annual inspections of structural stormwater BMPs.
- At least one inspection of all ponds and outfalls before the end of each permit cycle.
- Quarterly inspections of all stockpiles and material storage handling areas and rain gardens.

When feasible, inspection should be conducted during dry- weather conditions (periods of 72 hours or more with no precipitation).

Whenever pollutants are detected in the storm sewer system, the City of Brainerd is responsible for identifying the source and removing the material from the system. The City has an Illicit Discharge Detection and Elimination (IDDE) inspection procedure for response to " normal' illicit discharges.

If the material is potentially hazardous, the fire department' s hazardous material team should be contacted immediately.

The City must conduct an annual assessment of the IDDE program to evaluate program compliance, the status of achieving the measurable requirements in the MS4 Permit, and determine how the program might be improved. Measurable requirements are activities that must be documented or tracked as applicable to the MCM (e.g., trainings, inventory, inspections, enforcement, etc.). The permittee must perform the annual assessment prior to completion of each annual report and document any modifications made to the program as a result of the annual assessment.

II. RESPONSIBLE PARTY

The City Engineer or their designee is responsible for insuring compliance with the procedure and validating that appropriate records and documentation is in place.

III. PREVENTION

Neighborhoods, generating sites, and municipal operations have potential for producing intermittent and transitory discharges. These key “discharge behaviors” are then targeted for improved pollution prevention practices that can prevent or reduce the risk of discharge. The City then applies a wide range of education and enforcement tools to promote the desired pollution prevention practices.

- **Neighborhood Discharges**. The pollution prevention practices related to discharge prevention in residential neighborhoods include pet waste, storm drain stenciling, lawn care, septic system maintenance, vehicle fluid changing, car washing, household hazardous waste disposal and swimming pool draining.
- **Generating Sites (commercial, industrial, institutional, municipal and transport-related operations).** This group of pollution prevention practices can reduce spills and transitory discharges generated during common business operations. Practices include salt storage and handling, business outreach, spill prevention and response plans, employee training and site inspections.
- **Municipal Housekeeping.** This group of pollution prevention practices is performed during municipal operations, such as sewer and storm drain maintenance, plumbing code revision, and provision of household hazardous waste and used oil collection services as well as salt storatge and handling.

Intermittent and transitory discharges are difficult to detect through outfall screening or indicator monitoring. Indeed, the best way to manage these discharges is to promote pollution prevention practices in the community that prevent them from occurring. Effective IDDE programs develop education and outreach materials targeted toward neighborhoods, generating sites, and municipal operations. The discharge prevention message is normally integrated with other storm water education programs required under MS4 Permits such as:

- Public education and outreach (MCM 1)

- Public participation/involvement (MCM 2)
- Municipal pollution prevention/good housekeeping (MCM 6)

The City provides education regrading IDDE to the public and its staff through its training program as related to each MCM. The following key elements are recommended for these programs as related to IDDR (guidance and recommendations can be found within the EPA's IDDE Manual):

- **Neighborhood Discharges**
    - Pet waste management. For cities, townships, and counties, the permittee's regulatory mechanism(s) must require owners or custodians of pets to remove and properly dispose of feces on permittee owned land areas.
    - Storm drain stenciling
    - Septic system maintenance
    - Vehicle fluid changing
    - Car washing
    - Household hazardous waste storage and disposal
    - Swimming pool draining
- **Generating Sites.**
    - Salt storage location management. For cities and townships, the permittee's regulatory mechanism(s) must require proper salt storage at commercial, institutional, and non-NPDES permitted industrial facilities. At a minimum, the regulatory mechanism(s) must require the following:
        - Designated salt storage areas must be covered or indoors.
        - Designated salt storage areas must be located on an impervious surface.
        - Implementation of practices to reduce exposure when transferring material in designated salt storage areas (e.g., sweeping, diversions, and/or containment).
    - Vehicle Operations
    - Outdoor materials
    - Waste Management
    - Physical plant maintenance
    - Turf and landscaping
    - Hotspot Operations
- **Municipal Housekeeping**
    - Salt storage location management. For cities and townships, the permittee's regulatory mechanism(s) must require proper salt storage at commercial, institutional, and non-NPDES permitted industrial facilities. At a minimum, the regulatory mechanism(s) must require the following:
        - Designated salt storage areas must be covered or indoors.
        - Designated salt storage areas must be located on an impervious surface.
        - Implementation of practices to reduce exposure when transferring material in designated salt storage areas (e.g., sweeping, diversions, and/or containment).
    - Routine sewer and storm drain maintenance
    - Plumbing code revisions
    - HHW collection services
    - Used motor oil collection services

IV. PRIOTIZATION OF RISK AREAS

The City must maintain a written or mapped inventory of priority areas the City identifies as having a higher likelihood for illicit discharges. At a minimum, the City must evaluate the following for potential inclusion in the inventory:

- Land uses associated with business/industrial activities.
- Areas where illicit discharges have been identified in the past.
- Areas with storage of significant materials that could result in an illicit discharge.

To the extent allowable under state or local law, the City must conduct additional illicit discharge inspections in these areas.

As part of MCM 4/5, the City maintains a priority area list that is also incorporated herein:

1. High Priority
    a. Subwatershed draining to impaired water resources.
    b. History of stormwater and erosion control negligence at a site.
    c. Active construction sites.
    d. Public facilities and storage areas.
    e. Industrial land uses.
    f. Gas stations and other high-potential land uses.
2. Medium Priority
    a. Commercial land uses.
    b. Institutional land uses.
3. Low Priority
    a. Residential land uses.
    b. Open spaces.

V. INSPECTIONS

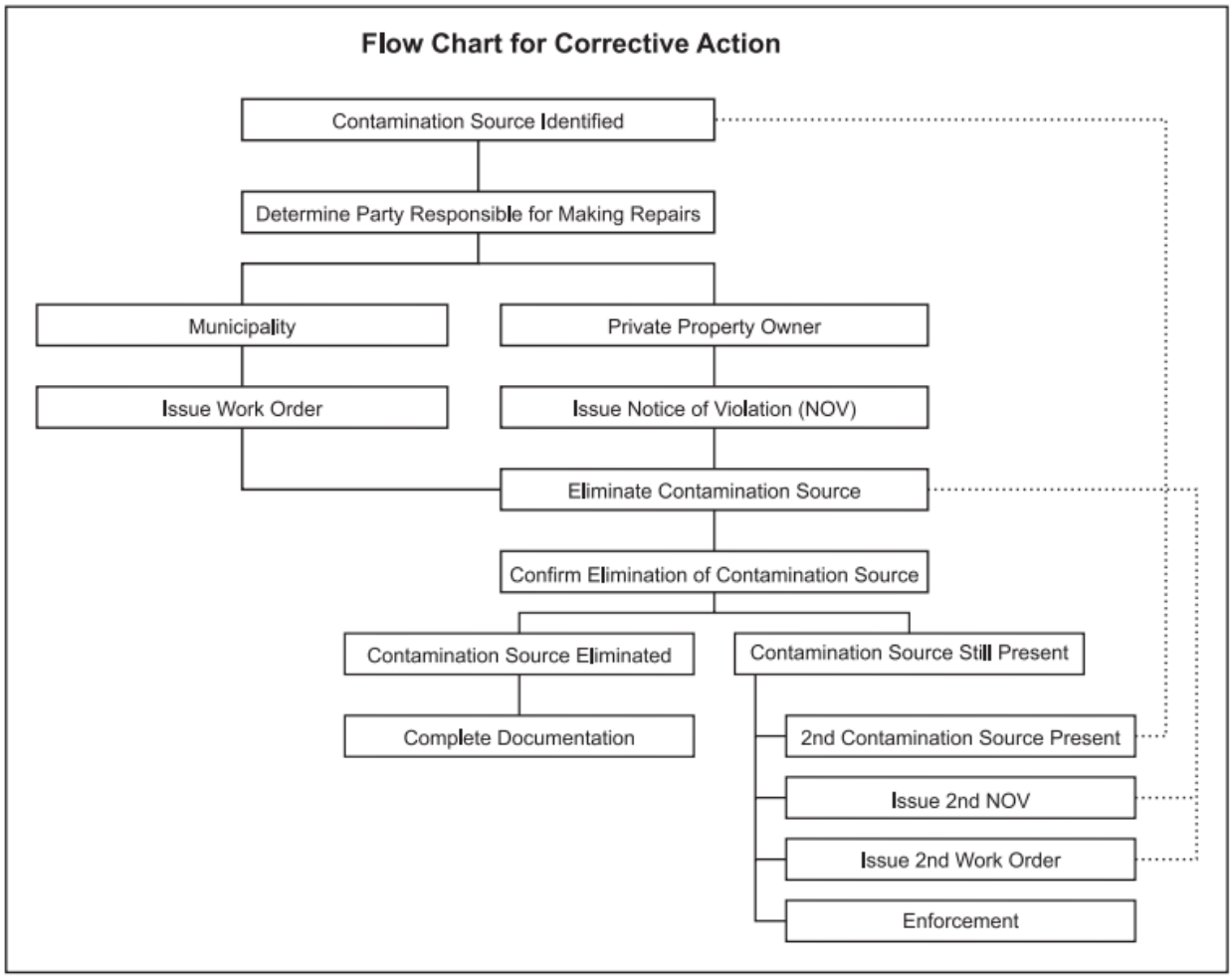
The City must incorporate illicit discharge detection into all inspection and maintenance activities conducted:

- During inspection of structural stormwater BMPs.
- During inspection of all ponds and outfalls.

Based on inspection findings, the permittee must determine if repair, replacement, or maintenance measures are necessary in order to ensure the structural integrity and proper function of structural stormwater BMPs and outfalls. The permittee must complete necessary maintenance as soon as possible. If the permittee determines necessary maintenance cannot be completed within one year of discovery, the permittee must document a schedule(s) for completing the maintenance.

VI. RESPONSE

1. **Report Received.** In the case of a detected or reported illicit discharge, staff must visit the site as soon as possible and attempt to identify the illicit material. Upon detection or public notification of a potential illicit discharge, the following stepwise procedure will be acted on:
    - **a.** Immediately notify the Minnesota Department of Public Safety Duty Officer at 1-800-422-0798 (toll free) or 651-649-5451 (Metro area), if the source of the illicit discharge is a spill or leak as defined in Minn. Stat. 115.061.
    - **b.** Public Works, Engineering, or Natural Resources Staff must respond as soon as possible, but no more than 2 hours after the initial report.
    - **c.** As quickly as possible, a work order must be created. All work orders for illicit discharges must be assigned immediately.
    - **d.** Contact information of the person making the report.
    - **e.** Documents the location of suspicious material or odor.
    - **f.** Make field observation and record the following:
        - **i.** Date(s) and location(s) of IDDE inspections
        - **ii.** Reports of alleged illicit discharges received, including date(s) of the report(s), and any follow-up action(s) taken by the permittee
        - **iii.** Date(s) of discovery of all illicit discharges
        - **iv.** Identification of outfalls, or other areas, where illicit discharges have been discovered.
        - **v.** Sources (including a description and the responsible party) of illicit discharges (if known)
            1. Determine receiving water using base maps /GIS mapping.
            2. Follow the trail.
            3. Dye Testing.
            4. Sampling upstream and downstream.
    - **g.** Action(s) taken by the City, including date(s), to address discovered illicit discharges.
    - **h.** Description of material.
    - **i.** Tools available to the permittee to investigate and locate an illicit discharge (e.g., mobile cameras, collecting and analyzing water samples, smoke testing, dye testing, etc.).
    - **j.** Cleanup methods available to the permittee to remove an illicit discharge or spill.
    - **k.** Name or position title of responsible person(s) for investigating, locating, and eliminating an illicit discharge.
    - **l.** All work orders for illicit discharges must be assigned immediately.
    - **m.** Decide if the enforcement response plan should take effect.



2. **Cleanup/Elimination.** Once the source of an illicit discharge has been identified, steps should be taken to fix or eliminate the discharge.
    a. If location and type of material are known a clean -up crew should be dispatched immediately.
    b. Spill kits are located in yellow bins at Garfield and in most City facilities.
    c. Inlet protection should be placed on downstream storm sewer inlets immediately if necessary. Utilize the City' s GIS maps.
    d. If City crews /staff are not available, a contractor should be contacted to respond.
    e. All efforts should be made to recover the material before it enters the storm sewer. Dry clean -up or vacuuming methods are preferred.
    f. If the material has entered the storm sewer, a hydraulic rodder should be dispatched to recover as much material as possible.
    g. Utilize the City' s GIS system to locate the outfall of the storm sewer and place the appropriate absorbent BMPs at the outlet.

The response to the illicit discharge will vary by situation. In general, the following table provides a guideline to typical responses.

Table 26: Methods to Fix Illicit Discharges		
Type of Discharge	**Source**	**Removal Action(s)**
Sewage	Break in right-of-way	Repair by 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

Specifically, the following provides more detailed guidelines to follow:

One -Time Discharge (oil, paint, etc.)

- Verbally speak to the identified source and explain that the discharge is illegal.
- Determine the severity of the problem and whether use of the ERP (Enforcement Response Plan) is necessary.
- Make sure the system and environment is cleaned.
- Notify all agencies effected, if need be (a report may be necessary depending on the size of the spill and whether it is contained).
- Contacts required may include MPCA, DNR, and the Duty Officer.
- Follow up may be required. Refer to ERP (Enforcement Response Plan) if necessary.

Sanitary Sewer Leakage (Sewer Cam identified problems in the sewer line, etc.)

- Review the extent of the problem.
- Repair infrastructure as necessary.
- Verify correction with further testing.
- Notify all agencies effected, if need be (a report may be necessary depending on the size of the spill and whether it is contained). Contacts required may include MPCA, DNR, and the Duty Officer.
- Follow up may be required.

- Refer to ERP (Enforcement Response Plan) if necessary.

Non -point Source Pollution (animal waste, street run -off, yard run -off)

- Determine if problem can be reasonably corrected.
- Document with photographs.
- Perform Corrective Action.
- Share information with other agencies if appropriate.

VII. DOCUMENTING AND TRACKING

This last program component addresses the ongoing management of the IDDE program and reviews progress made in meeting the measurable program goals established earlier in the permit cycle. Adaptive management is critical since most communities initially have a poor understanding of the scope and nature of their illicit discharge problem. Frequent program review can ensure that the most severe illicit discharges are eliminated in the most cost-effective way during the permit cycle. Program evaluation should also be directly tied to program and permit goals.

All illicit discharge detection and elimination incidents shall be documented and tracked actively until the problem is resolved. The City Engineer or their designee will continue to monitor work and cleanup until the work is completed.

VIII. TRAINING

At least once each calendar year, the City must train all field staff in illicit discharge recognition (including conditions which could cause illicit discharges) and reporting illicit discharges for further investigation. Field staff includes, but is not limited to, police, fire department, public works, and parks staff. Training for this specific requirement may include, but is not limited to, videos, in-person presentations, webinars, training documents, and/or emails.

The City must ensure that individuals receive training commensurate with their responsibilities as they relate to the permittee's IDDE program. Individuals includes, but is not limited to, individuals responsible for investigating, locating, eliminating illicit discharges, and/or enforcement. The permittee must ensure that previously trained individuals attend a refresher-training every three (3) calendar years following the initial training.

Fore ach training event, the City must document the following:

- General subject matter covered.
- Names and departments of individuals in attendance
- Date of each event.