

Appendix B

B. Illicit Discharge Detection and Elimination (MCM #3)

1. The Permit requirement (per Ohio EPA NPDES Permit No.: OHQ100000)

3.2.3.1.1 Develop, implement and enforce a program to detect and eliminate illicit discharges into your small MS4 (for illicit discharges to your MS4 via an adjacent, outside of your jurisdiction interconnected MS4, you are only required to inform the neighboring MS4 and the Ohio EPA in your annual report submission, of their existence).

3.2.3.1.2 & 3.2.3.1.2.1.2 Develop a storm sewer system map, showing the location of all outfalls and HSTSSs connected to the MS4 and the surface waters that receive discharges from those outfalls.

3.2.3.1.2.1.1 Submit a list of all on-site sewage disposal systems (HSTSSs) connected to your MS4.

3.2.3.1.3 To the extent allowable under State or local laws, effectively prohibit, through ordinance or other regulatory mechanism, illicit discharges into your MS4 and implement appropriate enforcement procedures and/or actions.

3.2.3.1.4 Develop and implement a plan to detect and eliminate non-storm water discharges, including illegal dumping, to your system.

3.2.3.1.5 Inform public employees, municipalities and the general public of hazards associated with illegal discharges and improper disposal of waste.

3.2.3.1.6 Address the non-storm water discharges identified as significant pollutant contributors to the MS4.

3.2.3.1.7 Develop a list of other non-storm water discharges that will not be addressed as illicit discharges.

2. Illicit Discharge Detection and Elimination Plan

The BMP's measurable goals and responsible parties in this Illicit Discharge Detection and Elimination Plan are detailed in Table 2 contained at the end of this permit. In addition to Table 2, per Ohio EPA NPDES Permit requirement 3.2.3.2, we are hereby documenting our decision process with the following information required by the permit.

3.2.3.2.1 How you will develop a storm sewer map showing the location of all outfalls and the names and location of all receiving waters. Describe the sources of information you used for the maps, and how you plan to verify the outfall locations with field surveys. Describe how your map will be regularly updated.

CCEO shall develop the following plan per EPA requirements and submit the proposal by March 10, 2003. The plan overview is shown in Table 2 at the end of this permit.

Storm Sewer Map – Location of Outfalls

The base map shall be developed utilizing digital orthophotos coupled with the 1993 DTM contours. The bridge and culvert locations will be overlaid on this map to show our inspections of such. In addition, our maintenance yard facilities will be shown. Most of the data is existing on our digital maps in different locations; coordination will be the key to combine each of these areas. The areas, which will be developed in conjunction with this plan, are as follows:

Olmsted Township – All outflows through the storm sewer system and the location of all existing HSTSs shall be mapped; existing creek, rivers, ditches and their flow patterns will also be mapped for the entire township including a perimeter outside the boundaries of the township for approximately 200 feet.

Chagrin Falls Township – All outflows through the storm sewer system and the location of all existing HSTSs shall be mapped; existing creeks, rivers, ditches and their flow patterns will also be mapped for the entire township including a perimeter outside the boundaries of the township for approximately 200 feet.

County Maintenance Yards – All outflows through the storm sewer system and the location of any existing HSTSs shall be mapped; existing creek, rivers, ditches and their flow patterns will also be mapped for each location including a perimeter outside the right-of-way up to 200 feet. Present yard facilities include Brookpark, Miles, Bridge Complex, Fitch and York.

Structures – All outflows through the storm sewer system tied to or adjacent to county bridges and culverts shall be mapped.

In addition to compiling data as described above, field investigations will begin during the summer of 2004, along the County and Township Roads, as well as along the major storm water outfalls in and through Olmsted

and Chagrin Townships. These field investigations will be charted against the digital records and be imported into the mapping database.

On-Site Sewage Disposal Systems: A list of all on-site sewage disposal systems (HSTSs) connected to discharge to our MS4 including addresses is being developed.

We will field locate each HSTS and their connections to our system.

Storm Sewer Map and HSTS Details: A storm sewer map, as described above, showing the location of all HSTSs connected to our MS4 is also being developed. The map will include details on the type and size of conduits/ditches in the MS4 that receive discharges from those HSTSs, as well as the water bodies receiving the discharges from our MS4.

The above information will be updated on a yearly basis for the structures in conjunction with our annual inspections per the Ohio Revised Code. At the same time, facilities will be inspected and updated as needed. CCEO personnel (maintenance, bridge, construction, survey and design) will intermittently inspect the townships throughout the year and the map will be updated yearly to reflect any changes.

3.2.3.2.2 The mechanism (ordinance or other regulatory mechanism) you will use to prohibit illicit discharges and why you chose that mechanism. If you need to develop this mechanism, describe your plan and a schedule to do so. If your ordinance or regulatory mechanism is already developed, include a copy of the relevant sections with your program.

CCEO does not have legal authority to proceed with sanctions or other enforcement procedures, although we shall document, measure and follow up with each occurrence, as it becomes evident.

The CCEO will provide the data they have, and make it available to all communities that lie within our service area. Other outside communities and counties will have to provide for mapping requirements on their own. CCEO will also provide a standardized database to all communities to facilitate data management and sharing.

3.2.3.2.3 Your plan to ensure through appropriate enforcement procedures and actions that your illicit discharge regulation is implemented.

As stated above, the county does not have legal authority to develop ordinances or sanctions against violations. We will however, develop a countywide inspection worksheet for general use. This shall be contained on a server database so that whether the occurrence is generated from the

Bridge Design, Bridge Inspection, Public Information, Construction or Highway Design Department, the report will be documented in sequence. The plan is already in place for our bridge inspection teams.

3.2.3.2.4 Your plan to detect and address illicit discharges to your system, including discharges from illegal dumping and spills. Your plan must include dry weather field screening for non-storm water flows and field tests of selected chemical parameters as indicators of discharge sources. Your plan must also address on-site sewage disposal systems (including failing on-lot HSTS and off-lot discharging sewage discharging HSTS) that flow into your storm drainage system. Your description must address the following at a minimum:

CCEO will initiate a program and prioritize all problem areas, coordinating with proper authorities (community health organizations, Ohio EPA, Board of Health, etc.). Responses to dry-weather discharges and complaint-based investigations will also be coordinated.

3.2.3.2.4.1 Procedures for locating priority areas which includes areas with higher likelihood of illicit connections (e.g. areas with older sanitary sewer lines, for example) or ambient sampling to locate impacted reaches.

The first areas to be addressed will be those identified in the Public Notice Permit dated December 27, 2002. Attachment A of that Permit shows the watershed of streams identified as being particularly at risk due to rapid development and associated land use impacts on water quality. The portion of French Creek located in Olmsted Township will be identified and visually inspected for illicit discharges as part of our first step procedure.

3.2.3.2.4.2 Procedures for tracing the source of an illicit discharge, including specific techniques you will use to detect the location of the source.

The first line of defense will be The Visual Inspection Worksheet. All personnel will be introduced to this countywide format via our Public Education and Outreach BMP. The following specific techniques will be utilized for county facilities:

Townships – When an illicit discharge is detected through the Visual Inspection Worksheet, personnel will be required to contact the appropriate yard and corresponding Superintendent. Together they will track the upstream areas checking and identifying ditches, manholes, catch basins, all pipes/outlets and the general upstream characteristics. Once the process is narrowed down within the township, additional monitoring will be performed based on dry-weather flows and HSTS maps.

When the discharge is traced to an area which lies outside the township and/or the county, documentation will be gathered and the proper municipality and/or county and Board of Health officials will be contacted. All existing data will be forwarded to these agencies.

County Maintenance Yards – When an illicit discharge is detected through the Visual Inspection Worksheet, personnel will be required to contact the Yard Superintendent. Together they will track the upstream areas checking and identifying ditches, manholes, catch basins, all pipes/outlets and the general upstream characteristics. If the discharge cannot be traced while on county property, documentation will be gathered and the proper municipality and Board of Health officials will be contacted. All existing data will be forwarded to these agencies.

Structures – Although we own and maintain the bridges on the County Road System, most of these bridges are within incorporated areas. Therefore, in almost all cases, an illicit discharge detected on one of our bridges will have originated from an MS4 outside of our jurisdiction. All outflows through the storm sewer system tied to or adjacent to county bridges and culverts will be visually inspected as part of our annual bridge/culvert inspections per the Ohio Revised Code. When an illicit discharge is detected, the Visual Inspection Worksheet will be filled out. Inspectors shall then be responsible to visually check upstream for 200 feet for any indications of the outfall source or known origin. If the illicit discharge cannot be detected, documentation will be gathered and the proper municipality and Board of Health officials will be contacted. If the source of the illicit discharge is detected, the inspector/engineer will then make attempts to trace back the pipe, ditch, system, etc. to the origin. This will only be required for a distance of 200 feet in any direction from the approaches of the structure (at the roadway level), 200 feet upstream from the discharge, or 200 feet in the direction of the discharge pipe, ditch or system. If the inspector/engineer has a site plan that already documents the existing affected pipe, ditch or system, he/she shall note this on the plan and forward the information as above.

3.2.3.2.4.3 Procedures for removing the source of an illicit discharge.

CCEO can only be responsible for the above descriptions when the source of an illicit discharge is found to be on our property. This will mostly apply to Olmsted and Chagrin Falls Townships and County Maintenance Yards. These will be handled as follows:

Townships – When the discharge is known to be in the township, personnel in the immediate vicinity of the illicit discharge shall first be notified. For example, if detected in the ditch system and traced to a specific address, the negligent residence/industry shall be put on notice

and five (5) adjacent properties (either side) will also be notified. This will serve to communicate effectively to the municipalities the impacts of illicit discharges into our storm water system and the importance of detection and elimination.

County Maintenance Yards – When an illicit discharge is detected in one of our yards, personnel shall inform the Superintendent of that yard. The affected pipe, ditch, catch basin or water supply system shall be flushed thoroughly. It should then be determined if the source initiated in that yard or was located coming into our system. If it initiated in our yard, further testing may be warranted and performed. If the source is known to be outside our facility, we will work with the Board of Health and the municipality to eliminate the illicit discharge.

Dry-Weather Sampling – If outfalls are identified as flowing in dry-weather (dry-weather defined as less than .1” rain over a period of 72 hours), the County, depending on the scenario, will take samples of the dry-weather flow to determine if the flow is contaminated due to illicit discharges. These will be done on an as-needed basis. The County will also look at the quantity discovered over the period of the first year through the general inspections and determine if further consulting and/or environmental testing is required.

3.2.3.2.4.4 Procedures For Program Evaluation and Assessment

CCEO will gather all information based on the annual inspections, yard inspections and township data gathering and coordinate with communities and the Board of Health to determine the extent of illicit discharges affecting our MS4. Based upon results of any additional investigations (Visual Inspections, dye-testing, dry-weather sampling, etc.), the County will develop an assessment of the source of any problem to determine if the problem is attributed to a point source or if it is widespread (multiple sources).

3.2.3.2.5 How you plan to inform public employees, businesses, and the general public of the hazards associated with illegal discharges and improper disposal of waste. Include in your description how this plan will coordinate with your public education minimum measure and your pollution prevention/good housekeeping minimum measure.

This item will be coordinated through our Public Information Department. All illicit discharges and the tracking and elimination procedures thereof will be outlined in the annual report to the Board of County Commissioners. We will coordinate these efforts with Site Maps, pictures, database information, etc. to bring the public awareness to the forefront. The target audiences for Illicit Discharge Hazard education

should include the General Public, all County Employees, residents of Olmsted and Chagrin Falls Townships and Commercial/Industrial Businesses.

3.2.3.2.6 Who is responsible for overall management and implementation of your storm water illicit discharge detection and elimination plan and, if different, who is responsible for each of the BMPs identified for this plan.

Refer to Table 2.

The Cuyahoga County District Board of Health and The Cuyahoga County Engineer's Office have an Memorandum of Understanding whereby the Board of Health will provide sampling and testing of specific areas of suspected illicit discharge. A copy of their Memorandum of Understanding is in Appendix D of this document.

3.2.3.2.7 How will you evaluate the success of this minimum measure, including how you selected the measurable goals for each of the BMPs.

The success of CCEO's Illicit Discharge Detection and Elimination MCM will be measured by our ability to meet or exceed the measurable goals of each and every BMP listed in Table 2. The table outlines the schedules for employee training, and policy implementation. The measurable goals for each BMP were individually selected through evaluation of current practices of the CCEO as well as advancements that we feel can be practically achieved.

TABLE 2 - Illicit Discharge Best Management Practices Summary

Best Management Practice	Permit Requirement Filled	Responsible Party	Measurable Goal
Develop, implement and enforce a program to detect and eliminate illicit discharges.	3.2.3.1.1	Chief Bridge Inspection/Maintenance Engineer	Program development by March 10, 2003 Revisions – Annually or as needed.
Develop a storm sewer system map, showing the location of all outfalls and HSTSSs connected to the MS4 and the surface waters that receive discharges from those outfalls.	3.2.3.1.2 3.2.3.1.2.1.2	Chief Surveyor	Draft of Map to be submitted prior to March 10, 2003. Map data listing prior to March 10, 2003. Collection plan developed, by Dec. 31, 2003. Begin collection of the necessary data by Dec. 31, 2003.
Submit list of all on-site sewage disposal systems (HSTSSs) connected to your MS4.	3.2.3.1.2.1.1	Chief Surveyor	Will be completed by Dec. 31, 2005.
Develop and implement a plan to detect and eliminate non-storm water discharges, including illegal dumping, to your system.	3.2.3.1.4	Chief Bridge Inspection/Maintenance Engineer and Chief Surveyor	Initial visual inspection of all community outfalls should be accomplished by Dec. 31, 2003 if feasible or as soon after is possible. Routine follow-up investigations should be scheduled on an annual basis and arrangements should be made to perform complaint-generated inspections. Develop program by Dec. 31, 2003 to provide for problem tracing follow-up investigations to respond to prioritized dry-weather discharges or complaint-based investigations.
Inform public of hazards associated with illegal discharges.	3.2.3.1.5	Chief Bridge Inspection/Maintenance Engineer	Identify messages and methods of informing public by Dec. 31, 2003. Educational activities performed annually starting by Dec. 31, 2004. Perform public education program. Annual report describing educational focus taken and identifying future messages.
Address the non-storm water discharges identified as significant pollutant contributors to the MS4.	3.2.3.1.6	Chief Bridge Inspection/Maintenance Engineer	Identify if there are any non storm-water discharges that need to be addressed prior to March 10, 2003. Develop a plan to address these non storm-water discharges as necessary, throughout permit cycle.
Develop a list of other non-storm water discharges that will not be addressed as illicit discharges.	3.2.3.1.7	Chief Bridge Inspection/Maintenance Engineer	Begin assessment of non-storm water discharges in community prior to March 10, 2003. Develop list of non-storm water discharges that will not be addressed by Dec. 31, 2003. Revise list annually or as needed.

TABLE 2 - Illicit Discharge Best Management Practices Summary

Best Management Practice	Permit Requirement Filled	Responsible Party	Measurable Goal
Describe the methods, means and compiling of data relevant to our storm sewer map described in Table 2, BMP 2 and Table 2, BMP 3. Develop a yearly program for field verification and updating.	3.2.3.1.2, 3.2.3.1.2.1.2	Chief Surveyor & Chief Bridge Inspection/Maintenance Engineer	Map & Field verify 25 % of HSTS by 12/31/04 Map & Field verify 50 % of HSTS by 12/31/05 Map & Field verify 75 % of HSTS by 12/31/06 Map & Field verify 100 % of HSTS by 12/31/07 Field verify 25 % of HSTS by 12/31/04 Field verify 50 % of HSTS by 12/31/05 Field verify 75 % of HSTS by 12/31/06 Field verify 100 % of HSTS by 12/31/07