



Environmental
Protection Agency

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

January 24, 2012

Mr. Charles Haught, City Engineer
City of Moraine
4200 Dryden Road
Moraine, Ohio 45439

RE: Stormwater Program Evaluation

Dear Mr. Haught:

On Wednesday, January 11, 2012, I conducted a "screening evaluation" of Moraine's stormwater management program. You represented the city during this review. The evaluation consisted of discussions about the 6 "Minimum Control Measures" (MCMs) that provide the framework for municipal stormwater programs. The intent was to evaluate program activities over the first permit term, from 2003 to 2008.

Note that following the discussion of activities for each MCM, specific annual reporting requirements and performance standards (taken directly from the current permit) are listed. Also note that future stormwater program reviews will likely be true audits, and will look at each aspect of the county's program in greater detail.

Based on my review of the city's current stormwater management plan (SWMP), recent annual reports, and our discussion, I offer the following observations observations:

MCMs 1 and 2 – Public Information, Participation, Education and Outreach

The primary way Moraine notifies its residents about stormwater management issues has been to include relevant articles in its monthly newsletter, *The Moraine Messenger*, which is sent to every home and business in the city. Future annual reports should contain copies of these articles, not the entire newsletter. The city should explore ways of archiving older articles on its website. The city should also consider adding a counter to the applicable portion of its website where stormwater information is available as a way of "measuring" the level of interest among its residents. Lastly, the city should add to its website links to other sources of stormwater information.

The city must re-write its original SWMP to explain that its monthly newsletter and website will continue to be the main ways in which stormwater information is made available to its residents. Reference to the city's in-house capabilities to produce short public service announcement videos should also be made, provided that stormwater issues will be an occasional subject. The revised plan should also explain what sorts of

public involvement activities the city thinks it can reasonably undertake on its own in the coming years. If budget issues will continue making it difficult for these activities to occur, the plan should state this. The city should consider working with the Miami Conservancy District, when opportunities presents themselves, in developing projects in which public participation is sought.

As a reminder, future program audits will focus on the following performance standards:

MCM 1 - Performance Standards Moraine's stormwater public education and outreach program shall include more than one mechanism and target at least five different stormwater themes or messages over the permit term. At a minimum, at least one theme or message shall be targeted to the development community. Stormwater public education and outreach shall reach at least 50 percent of the MS4's population over the permit term.

Annual Reporting Annual reports shall identify each mechanism used, including each stormwater theme, audience targeted, and estimate of how many people were reached by each mechanism.

MCM 2 Performance Standards Moraine's stormwater public involvement and participation program shall include, at a minimum, five public involvement activities over the permit term.

Annual Reporting Annual reports shall identify each public involvement and/or participation activity conducted, including a brief description of each activity and an estimate of how many people participated.

MCM 3 – Illicit Discharge Detection and Elimination (IDDE)

IDDE Ordinance

Moraine City Ordinance 945 appears to adequately address the need for the city to have the authority to investigate and ultimately stop illicit discharges to its storm sewer system. The revised SWMP should in its narrative portion explain the basics of this ordinance, what it restricts, and its provisions for enforcement. A copy of the ordinance can be included as an attachment or appendix to the plan itself.

The revised plan should also include a description of the system the city relies on for taking and dealing with illicit discharge complaints.

Mapping

The city's storm sewer network, along with all its outfalls, has been completely mapped. The revised SWMP should state this fact, and explain how the city intends to keep the map updated in the future.

Home Sewage Treatment Systems (HSTS) No septic systems are believed to be present within the portion of Moraine that is a designated Urbanized Area (UA), per the US Census Bureau. Septic systems are believed to be present in the western part of Moraine, but this area is outside the designated UA. Therefore, a list of addresses of properties which use septic systems for sewage disposal does not have to be provided.

Moraine's revised SWMP should state that no home septic systems are present within that portion of the city which is also a designated UA.

Dry-Weather Screening

The revised SWMP must explain Moraine's approach to dry-weather field screening storm sewer outfalls located within the city's urbanized area. The plan should contain a schedule that explains which outfalls will be screened in which year of the permit term, or if all outfalls will be screened every year. It should clarify if dry weather screening will be done by city staff, or contracted out, as alluded to in Moraine's 2010 stormwater program annual report. The revised plan should also include a general discussion of what the city will do if an unusual discharge is observed coming from one of its outfalls. If the discharge is simply water, how will this determination be made? If it is obviously not water, what steps will be taken to figure out the composition of the discharge?

Future program audits will focus on the following performance standards:

MCM 3 - Performance Standards Moraine's stormwater illicit discharge detection and elimination program shall include or have included an initial dry-weather screening of all stormwater outfalls over the permit term. The program shall establish priorities and specific goals for long-term systemwide surveillance of the MS4, as well as for specific investigations of outfalls and their tributary area where previous surveillance demonstrates a high likelihood of illicit discharges. Data collected each year shall be evaluated and priorities and goals shall be revised annually based on this evaluation. Moraine's storm sewer system map shall be updated annually as needed.

Annual Reporting Annual reports shall document the following: (1) number of outfalls dry weather screened, (2) number of dry-weather flows identified, (3) number of illicit discharges identified, (4) number of illicit discharges eliminated, (5) provide schedules for elimination of illicit connections that have been identified but have yet to be eliminated and (6) summary of any storm sewer system mapping updates.

MCM 4 – Construction Site Stormwater Runoff Control

Moraine City Ordinance 1323 (which recently replaced MCO 1106), is relied upon to meet the requirements of the city's small MS4 general stormwater discharge permit. A review of the ordinance via Moraine's website revealed that it is not "at least equivalent" with the technical requirements of Ohio EPA's construction site stormwater discharge permit, as required by part 4.a.i of the small MS4 general permit (see page 10).

Moraine's revised SWMP must contain an updated version of ordinance 1323 which incorporates, by reference, the technical requirements of Ohio EPA's most current NPDES construction permit. The basics of the ordinance should be discussed in the revised plan, with a copy of the ordinance included as an attachment or appendix. The revised plan must also explain the process new construction projects follow from initial review by the city to final approval. Emphasis should be put on how the city ensures that erosion and sediment controls approved during the pre-construction review process are installed once projects become active, and maintained until project are complete. The revised SWMP should also outline the enforcement process the city will follow if chronic violations of its erosion and sediment control regulations occur.

Inspection records were not requested during the program review. A sample of the inspection form(s) used to document construction site inspections should be included as attachments to the revised SWMP.

MCM 4 - Performance Standards Moraine's construction site stormwater control program shall include preconstruction stormwater pollution prevention plan review of all projects from construction activities that result in a land disturbance of greater than or equal to one acre. To ensure compliance, these applicable sites shall be initially inspected. The frequency of follow-up inspections shall be on a monthly basis unless the city documents its procedures for prioritizing inspections such as location to a waterway, amount of disturbed area, compliance of site, etc. If the city initially had coverage under a previous version of this permit it shall revise the program to satisfy these performance standards, if needed, within two years of when coverage under this general permit was granted.

Annual Reporting. Annual reports shall document the following: (1) number of applicable sites in Moraine's jurisdiction, (2) number of pre-construction stormwater pollution prevention plan reviews performed, (3) number and frequency of site inspections, (4) number of violation letters issued, (5) number of enforcement actions taken and (6) number of complaints received and number followed up on.

MCM 5 – Post Construction Stormwater Management in New Development

It's not clear what Moraine is doing with respect to post-construction stormwater management requirements at new development sites. The city does not have a specific post-construction ordinance (or other regulatory mechanism) in place. Moraine must revise this portion of its SWMP to clarify how it intends to meet current NPDES requirements that pertain to post-construction stormwater management. The intent is

that new developments have the means to treat a certain amount of runoff (the "water quality volume") before it is discharged from the property. A list of best management practice options for post-construction that are acceptable to Ohio EPA is contained in the NPDES general construction stormwater discharge permit, beginning on page 20.

The revised plan should discuss how the city intends to promote infiltration of stormwater runoff as a BMP at new developments. It should also discuss how the city intends to utilize its property maintenance codes as a way to ensure that structural post-construction runoff practices are maintained after new developments have been completed.

Moraine should consider the following performance standards for MCM 5 when it revises its SWMP:

MCM 5 – Performance Standards

Moraine's post-construction SWMP shall include pre-construction stormwater pollution prevention plan review of all projects from construction activities that result in a land disturbance of greater than or equal to one acre to ensure that required controls are designed per requirements. These applicable sites shall be inspected to ensure that controls are installed per requirements. The program shall also ensure that long-term operation and maintenance (O&M) plans are developed and agreements in place for all applicable sites. If the city initially had coverage under a previous version of this permit it shall revise its program to satisfy these performance standards, if needed, within two years of when coverage under this general permit was granted.

Annual Reporting Annual reports shall document the following: (1) number of applicable sites in the city's jurisdiction requiring post-construction controls, (2) number of pre-construction stormwater pollution prevention plan reviews performed, (3) number of inspections performed to ensure as built per requirements and (4) number of long-term operation and maintenance (O&M) plans developed and agreements in place.

MCM 6 – Pollution Prevention/Good Housekeeping for Municipalities

Because the original SWMP is not very specific with respect to this MCM, the revised SWMP should discuss in more detail the kinds of changes the city has made in its materials usage and management strategies since phase II requirements were implemented. Simple things like using beet juice to make deicing salt go farther, and dialing down salt spreaders used by city trucks, deserve mention in this plan. The revised plan should also discuss opportunities the city may have to further reduce materials used in the future (particularly herbicides, pesticides and fertilizers), assuming such opportunities exist. Plans to use biological controls to deal with pests may not prove any more effective, but the city does deserve credit for being creative.

Moraine's revised SWMP should explain in more detail the type of training it will provide to its employees, as required by this MCM. The description in the plan can be general, and relevant details can be included in subsequent annual reports. Refresher training should be discussed for specific stormwater related topics that may warrant it.

The revised SWMP also should contain a description of how street sweepings are managed between the time they are collected and ultimately disposed.

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MCM 6 - Performance Standards Moraine's pollution prevention/good housekeeping program shall include, at a minimum, an annual employee training. Its operation and maintenance program shall include appropriate procedures, controls, maintenance schedules and recordkeeping to address Part III.B.6.d.iii of the small MS4 permit.

Annual Reporting Annual reports shall document the following: (1) summary of employee training program(s) implemented with number of employees that attended and (2) summary of activities and procedures implemented for Moraine's operation and maintenance program.

Conclusions

The city has made some progress with certain stormwater program requirements, but is lacking in other areas. Because the original plan followed the cumbersome, overly complicated format provided by USEPA, I'm recommending that the plan be re-written so that it not only reflects more accurately the activities undertaken by the city, but is also intelligible to the average reader. The revised plan should include as attachments or appendices the relevant portions of IDDE, construction and post-construction ordinances, with summaries of the ordinances provided within the body of the plan.

An updated, accurate, and more easily readable plan should be completed by the time the next small MS4 general permit is implemented in January, 2014.

If there are questions about anything in this letter, I can be reached at 937.285.6442 or via email at chris.cotton@epa.state.oh.us.

Sincerely,



Chris Cotton
Division of Surface Water

cc: OEPA/SWDO/DSW Files
Anthony Robinson, OEPA/CO/DSW
CC\bp