



State of Ohio Environmental Protection Agency

Southwest District Office

401 E. Fifth St.
Dayton, Ohio 45402

TELE: (937) 285-6357 FAX: (937) 285-6249
www.epa.state.oh.us

Ted Strickland, Governor
Lee Fisher, Lieutenant Governor
Chris Korteski, Director

December 30, 2009

Mr. Jeffrey Moorman
Assistant City Engineer
City of Beavercreek
1368 Research Park Drive
Beavercreek, Ohio 45432

RE: Stormwater Program Evaluation

Dear Mr. Moorman:

On Wednesday, August 19, 2009, I met with you to evaluate the city of Beavercreek's stormwater management program. The evaluation consisted of discussions about each of the 6 "Minimum Control Measures" (MCMs) that provide the framework for community stormwater programs. Note that a program evaluation is much less involved than a true audit, and in the future as stormwater programs mature, a full audit is likely to be conducted. Also note that following the discussion of activities for each MCM, specific annual reporting requirements and performance standards (taken directly from the current permit) have been listed.

Based on our discussions and my review of the city's original stormwater management plan and recent annual reports, I offer the following observations and recommendations:

MCMs 1 and 2 – Public Involvement, Participation and Education (PIPE)

The city has undertaken several different initiatives in an attempt to educate its residents about stormwater management issues. In addition to USEPA's publication about stormwater pollution, articles of some relevance have been included in the city's periodical newsletter *In Touch*. Future annual reports should include the numbers of copies of the newsletter that have been distributed to city residents, when it contains articles about stormwater management issues.

Mention is made in the 2008 annual report of using the city's website as an avenue for educating residents about stormwater management issues, as well a way for the city to receive stormwater related questions and complaints. These features are hoped to be added by the end of 2009. The city should consider tracking the number of visitors to the stormwater section of its website.

Recommendations

Details about the city's modified website should be provided in its revised stormwater management plan. Information regarding how articles or other written materials related to stormwater issues will be provided to city residents should be explained in the plan. Specific examples and numbers of articles made available to city residents should be provided in annual reports. Summaries of calls received about all stormwater management issues also should be provided in future annual reports.

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

Annual Reporting Your annual report shall identify each mechanism used, including each storm water theme, audience targeted and estimate of how many people were reached by each mechanism.

MCM 2- Performance Standards Your storm water public involvement/participation program shall include at a minimum, five public involvement activities over the permit term.

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

MCM 3 – Illicit Discharge Detection and Elimination (IDDE)

Mapping A complete map of storm sewer outfalls within Beavercreek has not been produced, and the city is now mapping its entire storm sewer system as required by the revised small MS4 permit. The city must complete mapping of its storm sewer system by January 2014, which is the end of the current permit term.

IDDE Ordinance An ordinance intending to address illicit discharges to Beavercreek's storm sewer system was approved by city council in August, 2009, and became enforceable in September, 2009. A copy was submitted to Ohio EPA on September 2, 2009. A cursory review suggests the ordinance is adequate to address illegal discharges to the city's storm sewer system.

Home Sewage Treatment Systems (HSTS)

While work is ongoing to map properties in Beavercreek known to have septic systems, a list of such properties has not been found within the city's stormwater plan or subsequent annual reports. This list should be included in the revised version of the city's stormwater management plan. Changes to the list can be noted in annual reports.

Dry Weather Screening

There was little discussion of this requirement during the evaluation. From reviewing the city's initial stormwater plan and subsequent annual reports, it does not appear that Beavercreek has established a plan for screening its storm sewer outfalls. How the city plans to meet this requirement should be explained in its revised stormwater management plan.

MCM 3 - Performance Standards Your storm water illicit discharge detection and elimination program shall include or have included an initial dry-weather screening of all your storm water outfalls over the permit term. Your program shall establish priorities and specific goals for long-term systemwide surveillance of your 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. Your comprehensive storm sewer system map shall be updated annually as needed.

Annual Reporting Your annual report shall document the following: (1) number of outfalls dryweather 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

It's not clear from the city's stormwater management plan and subsequent annual reports how the overall review process for new construction projects incorporates erosion and sediment control planning and implementation. Beavercreek's revised stormwater management ordinance appears to adequately address the requirements expected to be seen in construction ordinances, but the actual review process a construction project follows from beginning to end remains unknown.

The program evaluation did not include a review of inspection records that are supposed to be kept for new developments within Beavercreek. These records may be requested as part of future stormwater program audits.

Recommendations The city should revise its stormwater management plan and rewrite, among other things, its description of the process construction projects will follow to ensure adequate erosion controls will be planned for and ultimately installed. A flow chart can be used if it more easily explains the process a construction project follows from initial proposal to final approval.

Note below the information that is to be included in the city's annual report for MCM 4.

MCM 4 - Performance Standards Your construction site storm water control program shall include preconstruction storm water 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 you document your procedures for prioritizing inspections such as location to a waterway, amount of disturbed area, compliance of site, etc. If you initially had coverage under a previous version of this permit you shall revise your program to satisfy these performance standards, if needed, within two years of when your coverage under this general permit was granted.

Annual Reporting. Your annual report shall document the following: (1)number of applicable sites in your jurisdiction, (2)number of pre-construction storm water 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

While Beavercreek has been actively requiring use of structural post-construction practices at recent developments, it appears to have limited the options to modification of retention/detention basin outlets. ("Stormceptor" type devices are currently considered an alternative post-construction BMP, subject to Ohio EPA approval.) The city's stormwater management plan does not explain how post-construction practices are decided upon for new developments, or why it has limited the options to basin outlet modification. The plan also contains no information that addresses how adequate long term operation and maintenance of post-construction practices will be mandated and enforced.

Recommendations

The city's stormwater management plan should be re-written to more accurately describe what is being done to meet the requirements of this control measure. Emphasis should be placed on performance standards listed below, and future annual reports should contain information specifically requested, also summarized below.

MCM 5 – Performance Standards Your post-construction SWMP shall include pre-construction storm water 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. Your program shall also ensure that long-term operation and maintenance (O&M) plans are developed and agreements in place for all applicable sites. If you initially had coverage under a previous version of this permit you shall revise your program to satisfy these performance standards, if needed, within two years of when your coverage under this general permit was granted.

Annual Reports Your annual reports shall document the following: (1)number of applicable sites in your jurisdiction requiring post-construction controls, (2)number of pre-construction storm water 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 Municipal Operations

Little time was spent discussing the specifics of this control measure. Information contained in recent annual reports suggests the city is mindful of the need to manage materials it uses in ways that reduce the potential for polluting stormwater runoff. What's lacking in both the plan itself and subsequent annual reports is information detailing the types of training city employees have taken per this requirement.

Recommendations

Future annual reports must contain copies of employee training records that are relevant to this particular control measure. Other annual reporting requirements are listed below.

MCM 6 - Performance Standards Your pollution prevention/good housekeeping program shall include, at a minimum, an annual employee training. Your 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.

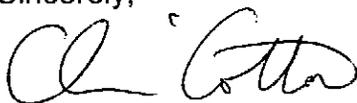
Annual Reporting Your annual reports shall document the following: (1) summary of employee training program(s) implemented with number of employees that attended and (2) summary of activities and procedures implemented for your operation and maintenance program.

Conclusions

Overall it appears the city of Beavercreek is doing a reasonable job implementing most of the required components of a stormwater management program. A revised plan should be written that more accurately describes how each MCM is being addressed. The document should be written so that anyone who would happen to read it can gain a decent understanding of how the city is addressing the requirements of each of the 6 MCMs. This revised plan must contain a table of organization which denotes who within the city is responsible for carrying out the requirements of each respective control measure.

If there are questions about anything discussed 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: Anthony Robinson, OEPA/DSW/CO
OEPA/DSW/SWDO Files

CC\bp