



Environmental  
Protection Agency

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

May 24, 2011

Mr. Patrick Ross  
Safety Services Director  
City of Reading  
1000 Market Street  
Reading, OH 45215

**RE: Stormwater Program Evaluation, NPDES permit # 1GQ00007**

Dear Mr. Ross:

On Wednesday, May 4, 2011, I conducted a "screening evaluation" of the city of Reading's stormwater management program. You represented the City, and Mayor Robert Bemmes was present for most of the meeting. Sandy Camargo from CDP Engineers also represented the City during the evaluation, which 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 5 year term of the small MS4 general permit.

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 City's program in greater detail.

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

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

It appears the City has undertaken a variety of approaches to educate and involve its residents about stormwater management issues. Unfortunately, it's very difficult, if not impossible, to discern the impact of these efforts. In lieu of this, the City should consider tracking the numbers of visitors to the part of its website that contains stormwater related information. The City should also keep track of the numbers of various newsletters, brochures or pamphlets with stormwater information that are made available to residents. Sample copies of these publications should continue being included as attachments to future annual reports.

A short public service announcement video "After the Storm" was broadcast periodically over local government access TV from 2004-2007, and had the potential to reach all of Reading's residents. As with other public outreach, it's difficult to determine the level of

Mr. Patrick Ross  
May 24, 2011  
Page 2

impact or effectiveness of such broadcasts, despite the ease of getting the information out over a large area. A short video developed by Ohio EPA called "Tempest in A Channel: Stormwater Runoff's Impacts on Urban Streams" was sent to every MS4 in the state in late fall 2005, but there's no record of its being used by Reading. DVD copies of the 15 minute video, content of which was aimed at a general audience, are still available in case the City is interested in receiving one.

Because Reading's original stormwater management plan (SWMP) is outdated, it should be rewritten to more accurately reflect the specific education and outreach strategies the City currently uses and will likely continue to use in the future. The revised plan should also discuss outreach efforts that remain to be explored, and why other approaches, such as working with local public schools, have been ineffective. Details about specific activities conducted in any given year can be included in respective annual reports. Copies of newly written stormwater related articles should be included with future annual reports. If previously published articles will be re-used in some way, then copies do not have to be included in subsequent annual reports. Ideally, articles can be archived on-line for future reference.

The revised plan should explain Reading's involvement with local Mill Creek watershed groups, and how this interaction influences/impacts the City's stormwater management program. City efforts to mark storm sewer inlets should also be discussed.

#### **MCM 1 - Performance Standards**

Reading'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 City'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.

#### **MCM 2- Performance Standards**

Reading'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.

Mr. Patrick Ross  
May 24, 2011  
Page 3

### **MCM 3 – Illicit Discharge Detection and Elimination (IDDE)**

#### **Mapping**

Reading's entire storm sewer network was mapped, including outfalls to receiving streams, before phase II stormwater regulations were implemented. The revised stormwater management plan should explain this, and also explain where the information is kept (which City department), and who's responsible for map updates.

Copies of completed maps do not have to be submitted to Ohio EPA, but must be made available upon request.

#### **IDDE Ordinance**

Reading's ordinance prohibiting discharges of waste or other inappropriate materials to City storm sewers appears to be satisfactory, though a distinction needs to be made between illicit discharges and illicit tie-ins to sanitary sewers. The revised SWMP should explain the basics of the ordinance and how it meets the intent of phase II stormwater requirements, and include the relevant portions of the ordinance in an appendix. The revised SWMP should also clarify how the ordinance is numbered so it may be more easily located over the internet via links provided on the City's website. (Ordinances are numbered one way in the current SWMP, another similar way in subsequent annual reports, and in a completely different way on-line.)

#### **Home Sewage Treatment Systems (HSTS)**

Reading has within its borders only half a dozen properties with septic systems, all of which are close to an area that has been of interest to developers in the recent past. Future construction in this area will likely involve installation of public sewers, to which nearby homes now using septic systems will be connected. The revised SWMP should include addresses of the properties still relying on septic systems (if they discharge into the City's storm sewer network), and then outline the approach for eventually connecting these properties to public sewers.

#### **Dry Weather Screening**

It's not clear how the City is addressing the requirement to screen all its storm sewer outfalls at least once over the 5 year permit term. Information is presented in various annual reports that explains some of what's been done, but it's not clear what the City's overall plan entails. The revised SWMP should include a general description of the City's dry weather screening program, and what will be done if an illicit discharge is detected. Specific information about detected discharges and how they were addressed can be provided in annual reports.

The IDDE plan (dated December 2005) appears to contain all of the elements needed for an acceptable plan. The revised SWMP should include a generalized description of

the key elements of the plan, and the regulatory basis behind it. As mentioned above, the full ordinance can be included in the SWMP as an attachment or appendix.

### **MCM 3 - Performance Standards**

Reading's 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. Reading's storm sewer system map shall be updated annually as needed.

### **Annual Reporting**

Annual reports 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**

Inspection records were not requested during the review, but information included in recent annual reports suggests the City has been inspecting active construction projects for compliance with erosion and sediment control requirements. What's not clear from the original SWMP is the review process new construction projects (which will disturb more than an acre of land) follow from initial proposal until final approval. The City's revised SWMP must explain this review process, with emphasis on how proposed erosion and sediment control practices are evaluated and approved. The revised SWMP must also explain the regulatory basis behind the City's construction program, with general reference to the finalized ordinance in the narrative section of the plan. Relevant sections of the ordinance can be included as an attachment to the plan n.

### **MCM 4 - Performance Standards**

Reading'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.

Mr. Patrick Ross  
May 24, 2011  
Page 5

### **Annual Reporting**

Annual reports shall document the following: (1) number of applicable sites in Reading'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 how Reading's construction project review process accommodates post-construction stormwater runoff management requirements that focus on water quality, versus water quantity. While the ordinance from 2005 is very detailed and appears to be complete, the SWMP itself does not explain the City's post-construction program in a general way that can be easily understood. Who reviews post-construction proposals? Does the program require as-built inspections of installed post-con controls? What specific post-construction BMPs must developers consider? How are maintenance agreements reached between the City and private landowners who have detention basins or other post-con features sited on their properties?

Over time, much of the City's stormwater program has been revised, with relevant information included in annual reports but not incorporated into a revised plan. This makes for a fractured SWMP, from which it's difficult to discern if required elements of the program are in place. This appears to be the case for the City's post-construction program, requirements for which are included in ordinance 2005-108, along with construction program requirements. While the two are obviously linked, especially when it comes to pre-construction review of proposed projects, the SWMP should clearly describe the overall review process in general terms. Necessary details can be included in the ordinance, which should be appended or attached to the revised SWMP.

### **MCM 5 – Performance Standards**

Reading'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 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 Reading'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**

Little time was spent discussing this section, and from recent annual reports it's not clear what sorts of training City employees are given regarding materials management,

in the context of minimizing potential to contaminate stormwater runoff. Including with annual reports a copy of agendas for training sessions is adequate, while the revised SWMP outlines the general approach to addressing the requirement. Note that stormwater training can be included as a component of other safety or waste management training the City already may be required to provide to some of its workers.

Details on the amounts of road salt, pesticides, fertilizers and other materials used were not provided in the most recent annual report (submitted in 2010 for year 2009). This information is expected to be provided annually. The revised SWMP should discuss efforts the City has made to reduce its use of these materials, what remaining opportunities for waste reduction have been identified, and what it reasonably expects to do in the future to effect the needed reductions.

Reading must also prepare stormwater pollution prevention plans for facilities it operates which conduct industrial activities, such as vehicle maintenance and composting. These plans are not required for sites which can show their activities are not exposed to stormwater, such that contaminated runoff will not be produced and discharged from the site.

**MCM 6 - Performance Standards** Reading'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 Reading's operation and maintenance program.

### **Conclusions**

Reading appears to have all the elements in place for a compliant stormwater management program, but most of the changes and additions to the original SWMP have been submitted as parts of annual reports. So it would behoove the City to rewrite

Mr. Patrick Ross  
May 24, 2011  
Page 7

its SWMP so that it is up to date, clear, and accurate. The goal of a rewritten plan is to have a document that explains the City's stormwater program in a way that can be easily understood by a reasonably intelligent person. Specific details found in various city ordinances may be included in the plan's narrative if it helps explain how requirements are being met. But much of what's contained in the ordinances is better off being included as attachments or appendices to the revised plan.

It is expected that Reading have a revised SWMP prepared by the time the next small MS4 general permit is implemented, early in 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](mailto:chris.cotton@epa.state.oh.us).

Sincerely,

A handwritten signature in black ink, appearing to read "Chris Cotton". The signature is fluid and cursive, with a large initial "C" and a stylized "Cotton".

Chris Cotton  
Division of Surface Water

cc: OEPA/SWDO/DSW Files  
Anthony Robinson, OEPA/CO/DSW

ec: Sandy Camargo, CDP Engineers

CC/xf