



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

March 26, 2013

Mr. Eric Reiners  
Deerfield Township Public Works Director  
4900 Parkway Drive, Suite 150  
Mason, OH 45040

**RE: Storm Water Program Evaluation, NPDES Permit 1GQ00036\*BG**

Dear Mr. Reiners:

On Wednesday, February 20, 2013, I met with you and Billy Highfill to evaluate the Deerfield Regional Storm Water District's (DRSWD) storm water management program. Caitlin Botschner from the Warren County Soil and Water Conservation District was present at this meeting, as was Andrew Bohlen from CDM/Smith. The evaluation consisted of discussions about the 6 "Minimum Control Measures" (MCMs) that provide the framework for municipal storm water programs.

The intent of this cursory evaluation was to assess program activities and effectiveness, and to discuss ways to improve the Deerfield Township's Storm Water Management Plan (SWMP). The balance of this letter includes suggestions on how the Township can revise its SWMP so that it is comprehensive, easy to read, and accurate. Note that future storm water program reviews are likely to be true audits, and will look at each component of the program in greater detail.

Based on my review of Deerfield Township's storm water management plan (last revised in 2009), its 2011 storm water program annual report, and our discussions, I offer the following observations and recommendations:

**MCMs 1 & 2 Public Education, Outreach, Involvement and Participation**

Deerfield Township is unique in Ohio because it is the only Township (so far) that created its own storm water district. The revised SWMP should provide background information that briefly explains the origins of the district and the intent behind its creation.

The Township's SWMP should elaborate on its use of the internet as a way to inform its residents about storm water management issues. The revised plan should include the address needed to access the District's website, as well as links to other relevant websites at which storm water information can be obtained.

Several items are erroneously mentioned on DRSWD's website (under the section titled "Why Do We Need a Storm water Fee?") as being "mandated" by Clean Water Act regulations pertaining to storm water. These include:

- Setting up a storm water hotline for Township residents
- Installing stream tributary signage
- Mapping all home septic systems
- Getting community groups to “adopt” streams and storm drains within the Township
- Creating a certification program for construction contractors

Many of these activities are worth undertaking, but they are not specifically mandated by Phase II regulations. The website should be corrected accordingly.

Concerning storm water information provided to residents through either mailings or at fairs and festivals, sources should be cited, and titles of specific articles provided in subsequent years’ annual reports. DRSWD can utilize articles prepared by U.S. EPA or other public agencies, or it can craft its own articles based on specific storm water issues of local concern.

The revised SWMP should remove reference to surveying residents to gauge the level of public awareness, unless the Township is prepared to conduct such surveys. Detailed surveying is perhaps the best way to determine if information provided to the public is improving their understanding of storm water management issues. But gathering this information is time consuming and expensive, and it’s assumed that shrinking municipal budgets in the near term will preclude the district from undertaking such surveys. If surveys do get done, then details concerning their development and execution can be included in the appropriate year’s annual report.

The revised SWMP should explain the current approach to taking storm water related complaints from Township residents. On page 5 of the current SWMP, it states that “if funding permits”, a storm water hotline will be developed for residents to call with complaints about storm water pollution. Since most storm water complaints are about poor drainage or flooding, and funding is relatively scarce, it’s assumed no such hotline has been established. If it has been established, the hotline number should be included in the revised SWMP. The revised plan should also speak to the manner in which complaints are typically received and dispersed to Township staff for follow-up.

On page 5 of the 2009 version of DRSWD’s storm water plan, it states that public meetings will be held in 2003 and 2004 “to inform citizens about storm water impacts and to gain support for the proposed storm water management plan”. Obviously, this information is out of date, but the revised plan should avoid being too specific about activities if it’s not certain they can be carried out. Instead, the plan should discuss, in general, some of the various activities the Township reasonably thinks could be carried out in the future. Activities that do occur can then be listed in annual reports.

A copy of Ohio EPA’s 15 minute video “Tempest in a Channel: Storm Water Runoff’s Impacts on Urban Streams” has been included with this letter. Copies were sent to every MS4 and SWCD office in the state in late 2005, but it’s not known if the video was ever received or used by the DRSWD. The video targets a general audience, and seeks to inform about basic storm water runoff issues in urban areas. Despite its age, the video discusses topics which remain relevant today. It is hoped the video can be played over local government or educational cable access TV stations. Numbers of potential viewers can be provided in subsequent annual reports.

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

#### **Mapping**

It's not clear if the DRSWD has completed its map of storm sewer outfalls within its jurisdictional area. This requirement was to have been met by the end of the first small MS4 general permit's term in 2008. Questions about the definition of an outfall have been one source of delay.

By the end of the current permit's term in January 2014, the district's entire storm sewer network is to be mapped. The revised SWMP should discuss in some detail how it will collaborate with other county agencies in the preparation of the required maps, as well as how future updates to the map will be handled. The status of efforts to complete mapping should be discussed in annual reports. If the deadline for mapping the entire storm sewer system cannot be met, DRSWD must request an extension of time from Ohio EPA.

#### **Home Sewage Treatment Systems**

Note that only home septic systems that discharge to DRSWD's storm sewers are required to be mapped. A list of such systems is to be included in the storm water management plan. A review of storm water program information submitted to Ohio EPA since 2003 determined that a listing of residential properties using discharging septic systems has never been provided. If no such systems are present within DRSWD's jurisdictional area, the revised SWMP should state this. If more time is needed in order to determine if such systems are present, then DRSWD must request an extension of time from Ohio EPA.

#### **Illicit Discharge Ordinance**

The revised SWMP should explain how the DRSWD would work with other local agencies to address and eliminate illicit discharges to the district's storm sewer network. It's understood that Townships have limited authority to create ordinances, so collaboration with other local entities empowered to address illicit discharges is about the only option available. The revised plan should reference specific sections of whatever local ordinances would be invoked to address, and ultimately stop, an illicit discharge. Copies of the ordinance(s) the DRSWD is relying on can be either included with the plan as an appendix or attachment, or made available electronically. If the latter, directions for locating the ordinance should be provided.

#### **Dry Weather Screening of Outfalls**

Information from past SWMP annual reports suggests that DRSWD has been actively screening outfalls within its jurisdictional area. Few, if any, problems have been discovered. Despite the lack of problems in the past, the revised plan needs to discuss how the district would go about identifying an unknown material discovered being discharged from one of its outfalls.

Though issues pertaining to the identification of public storm sewer outfalls remain, the revised SWMP should explain how the district prioritizes its screening efforts, as well as how it will schedule its screening efforts in the future. The large number of outfalls in the Township suggests that one-fifth will be examined each year in order to comply with permit requirements.

Marking storm sewer inlets with "Do Not Dump" messages is not required, but since the Township has chosen to do so, it should explain in its revised SWMP how these markers will be maintained in the future. Since this activity presents a rare opportunity for public involvement, the revised plan could speak to the possibility of enlisting the help of Township residents or schoolchildren in replacing worn or missing markers.

#### **MCM 4 – Construction Site Storm Water Runoff Control**

The revised SWMP should explain that all construction projects within the Township which disturb more than one acre of land will be held to erosion and sediment control requirements. The revised SWMP should discuss the review process that proposed projects follow from initial proposal to final approval.

The plan should discuss the role of other local agencies (Warren County Engineer and Soil and Water Conservation District) in overseeing the review and construction of new developments. (This section of the current SWMP is written as if the DRSWD was not yet in existence).

The revised SWMP should include blank copies of prescribed forms developed to document construction site inspections. Completed inspection forms do not need to be included with annual reports, but must be made available upon request for future storm water program evaluations.

#### **MCM 5 Post-Construction Storm Water Management in New/Re Development**

It's not clear from the current SWMP how post-construction storm water management requirements are being met for new developments within Deerfield Township. The intent of the requirement is to have newly developed properties treat a portion of its runoff before the water leaves the site. The revised SWMP must discuss how DRSWD addresses these requirements through its collaboration with the Warren County's Engineer and Soil and Water Conservation District. The revised plan must also explain how the responsibility for maintaining post-construction best management practices (BMPs) is addressed.

Note that detention basins installed before Phase II storm water regulations became effective are not subject to the current requirements. The Township may be stuck inspecting (for water conveyance issues) the numerous detention basins present in its territory which were installed before 2003. But only those structures installed since 2003 are required to have maintenance agreements in place.

The revised plan should also explain that other potential post-construction practices besides detention basins could be acceptable if proposed for use on newly developed property. Detention ponds will likely remain the most commonly used BMP, but other approaches exist that could be used in certain situations. The Township will have to rely on wording in county regulations that at least considers the possibility of using other strategies for post-construction runoff quality management.

#### **MCM 6 Pollution Prevention/Good Housekeeping for Municipal Operations**

This aspect of the Township's program was not discussed in great detail, but from recent annual reports it appears information is being provided concerning the amounts of various materials used which can have an impact on storm water runoff.

For the purposes of DRSWD's revised SWMP, the types of training offered to relevant staff should be discussed in some detail, with specific events and number of attendees provided in subsequent annual reports. The revised plan should also speak to changes made by the

Township in recent years that have led to more efficient use of materials, especially deicing salts and pesticides/herbicides. Many of these changes have been driven by fiscal necessity, but some changes are due to improved application technologies and better equipment.

The revised plan should also discuss how street sweepings are managed prior to being disposed.

### **Conclusions**

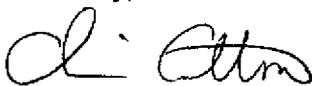
From my cursory review and our discussions, it appears Deerfield Township, through its regional storm water district, is addressing most of the requirements imposed by its small MS4 general permit. The Township should work towards updating its plan based on the suggestions put forth in this letter, with the goal of having the rewritten plan in place by the time the next small MS4 permit is implemented in early 2014.

Because the Township is not able to create its own ordinances or other regulatory mechanisms, it must describe how it collaborates with other public entities to ensure that illicit discharges, construction site erosion and sediment controls, and post-construction storm water runoff requirements found in the small MS4 general permit are being addressed. Updated letters of collaboration from the Warren County Engineer's Office, the Warren County Health District, and the Warren County SWCD Office should be included in the revised SWMP.

The revised plan should be written in a way that allows an average reader, who's intelligent but ignorant of storm water management specifics, to gain a decent overall understanding of the Township's program and how it seeks to comply with NPDES permitting requirements. If there is interest in getting Ohio EPA feedback on the revised plan as it is being prepared, feel free to send me draft versions of chapters for review.

If you have questions about anything in this letter, or about Ohio EPA's expectations for a revised storm water management plan, I can be reached at (937) 285-6442 or via email at [chris.cotton@epa.ohio.gov](mailto:chris.cotton@epa.ohio.gov).

Sincerely,



Chris Cotton  
Environmental Specialist II  
Division of Surface Water

CC/tb

cc: OEPA/SWDO/DSW Files

ec: Anthony Robinson, OEPA/DSW/CO  
Caitlin Botschner, Warren Co SWCD  
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