

# **Clermont County Storm Water Management Plan**

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**Prepared in support of:  
Ohio EPA NPDES Phase II General Permit OHQ000001**

**August 2010**

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## LIST OF ACRONYMS AND ABBREVIATIONS

<b>ACSWMD</b>	Adams-Clermont Solid Waste Management District
<b>BMP</b>	Best Management Practice
<b>BSA</b>	Basic System Assessment (Health District’s inspection program and database for home sewage treatment systems)
<b>CPESC</b>	Certified Professional in Erosion and Sediment Control
<b>GIS</b>	Geographic Information System
<b>HHW</b>	Household Hazardous Waste
<b>HSTS</b>	Home Sewage Treatment System
<b>MS4</b>	Municipal Separate Storm Sewer System
<b>NPDES</b>	National Pollutant Discharge Elimination System
<b>ODNR</b>	Ohio Department of Natural Resources
<b>OEEF</b>	Ohio Environmental Education Fund
<b>OEPA</b>	Ohio Environmental Protection Agency
<b>OEQ</b>	Clermont County Office of Environmental Quality
<b>ORSANCO</b>	Ohio River Valley Water Sanitation Commission
<b>SNARP</b>	Sewage Nuisance Abatement and Remediation Plan
<b>SWCD</b>	Clermont County Soil and Water Conservation District
<b>SWMP</b>	Storm Water Management Plan
<b>SWP3</b>	Storm Water Pollution Prevention Plan
<b>U.S. EPA</b>	United States Environmental Protection Agency
<b>WMSC</b>	Water Management and Sediment Control Regulations

## Background

### *History of Storm Water Regulations*

In 1987, amendments to the Clean Water Act required the U.S. Environmental Protection Agency (U.S. EPA) to develop a comprehensive phased program for regulating municipal and industrial storm water discharges under the National Pollutant Discharge Elimination System (NPDES) permit program. In response to this, U.S. EPA instituted Phase I of the NPDES Stormwater Program in November 1990. The Phase I program addresses storm water discharges from medium to large municipal separate storm sewer systems (MS4s), which serve communities having a population of at least 100,000 people, as well as storm water discharges from industrial activities. The ruling also placed permitting requirements on construction activities that disturb five or more acres of land.

The NPDES Phase II rule was promulgated in December 1999. The Phase II stormwater program addresses small MS4s serving populations of less than 100,000 people in urbanized areas, as well as construction activities that disturb between one and five acres of land. Only those small MS4s that are located in “urbanized areas” as defined by the U.S. Bureau of the Census require a storm water permit. The designated permitting authority, which in the State of Ohio is the Ohio Environmental Protection Agency (Ohio EPA), may also require small MS4s outside of urbanized areas to participate in the Phase II Stormwater Program.

The Phase II rule required that all regulated small MS4s apply for permit coverage and submit a Stormwater Management Plan to the permitting authority by March 10, 2003. The Stormwater Management Plan must address six Minimum Control Measures, including:

1. Public Education and Outreach on Stormwater Impacts
2. Public Involvement / Participation
3. Illicit Discharge Detection and Elimination
4. Construction Site Stormwater Runoff Control
5. Post-Construction Stormwater Management in New Development and Redevelopment
6. Pollution Prevention / Good Housekeeping for Municipal Operations

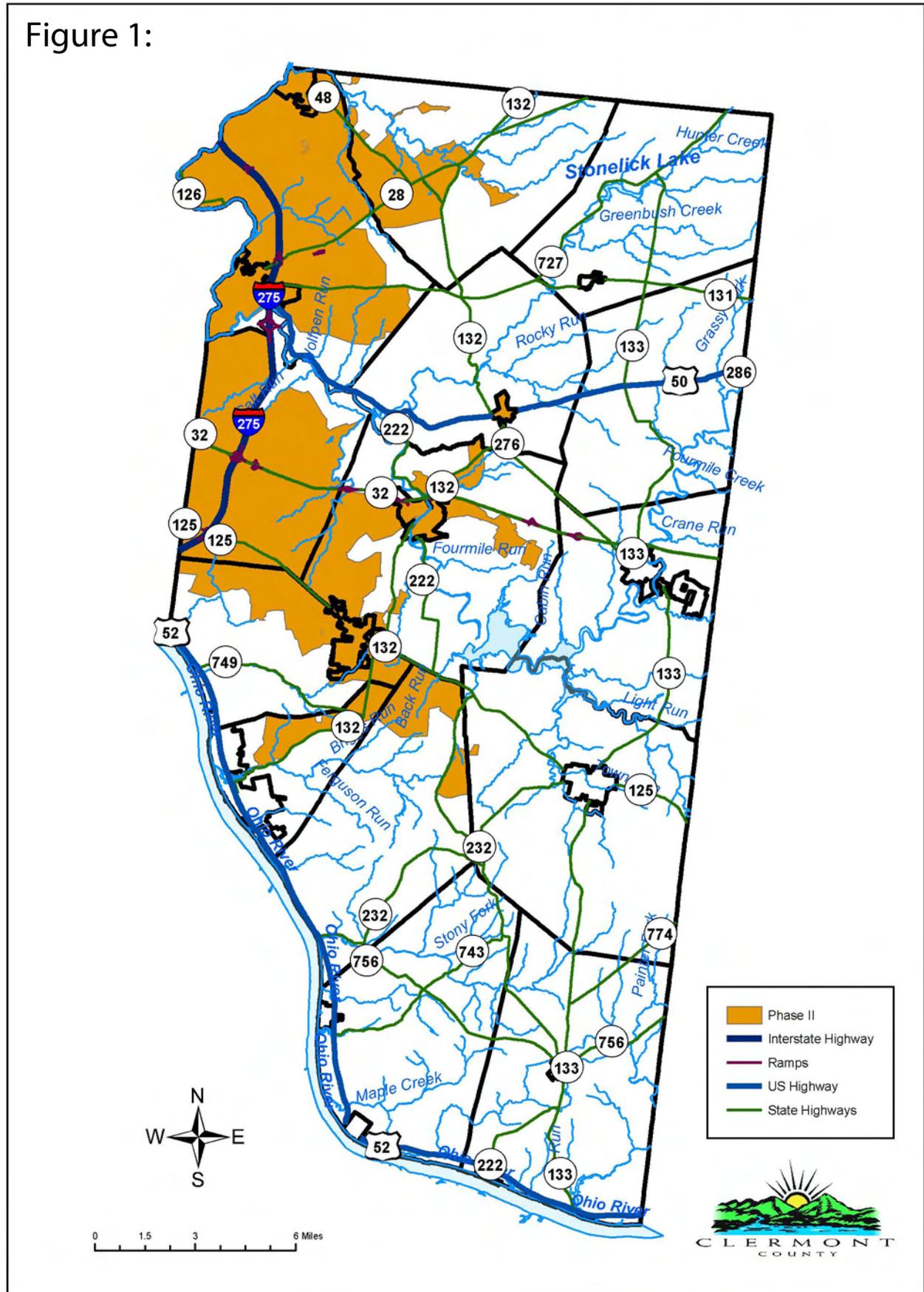
### *Storm Water Management in Clermont County*

The Ohio EPA designated 15 communities in Clermont County as Phase II communities that must comply with the new Phase II Stormwater regulations (see Figure 1). These communities are:

- Clermont County
- City of Loveland
- City of Milford
- Village of Amelia
- Village of Batavia
- Village of Owensville
- Batavia Township
- Goshen Township
- Miami Township
- Monroe Township
- Ohio Township
- Pierce Township
- Stonelick Township
- Tate Township
- Union Township

# Clermont County Urbanized Area - Phase II Storm Water Permit

Figure 1:



Early in 2002, a group of leaders from the above communities formed a Storm Water Task Force to help the County, municipalities and townships meet the Phase II requirements. This group determined that the most cost effective and efficient approach for addressing the requirements was to develop and implement a regional approach that utilized existing programs to the greatest extent practical. It should be noted that the City of Loveland is designated as a stormwater Phase II community, but will not be part of the Clermont County regional program. Since Loveland is located in portions of three counties, and primarily within Hamilton County, the City instead has opted to develop and implement its own storm water management program.

On March 7, 2003, the Clermont County Board of Commissioners adopted the regional Phase II Storm Water Management Plan and subsequently submitted it to Ohio EPA on behalf of the partnering communities. The plan was approved by Ohio EPA without condition on October 24, 2003.

Since its adoption, Clermont County and its partners have worked diligently to implement the activities contained in the management plan. Annual reports detailing the advancement of the storm water management program have been completed as submitted to Ohio EPA in accordance with the permit requirements. These plans are available for review at [www.clermontstorm.net](http://www.clermontstorm.net).

Six years have now passed, and many changes and improvements have been made to the County's storm water management program. Additionally, Ohio EPA issued a renewal of the NPDES permit for small MS4 dischargers on January 30, 2009 with additional requirements under each of the six minimum controls. In order to meet the new permit requirements, and to describe the program improvements that have been made since March 2003, Clermont County has developed this updated Storm Water Management Plan that will guide the program over the next four to five years. The plan addresses each of the six minimum control measures, and for each control measure, describes best management practices (BMPs), measurable goals, implementation schedules and responsible departments.

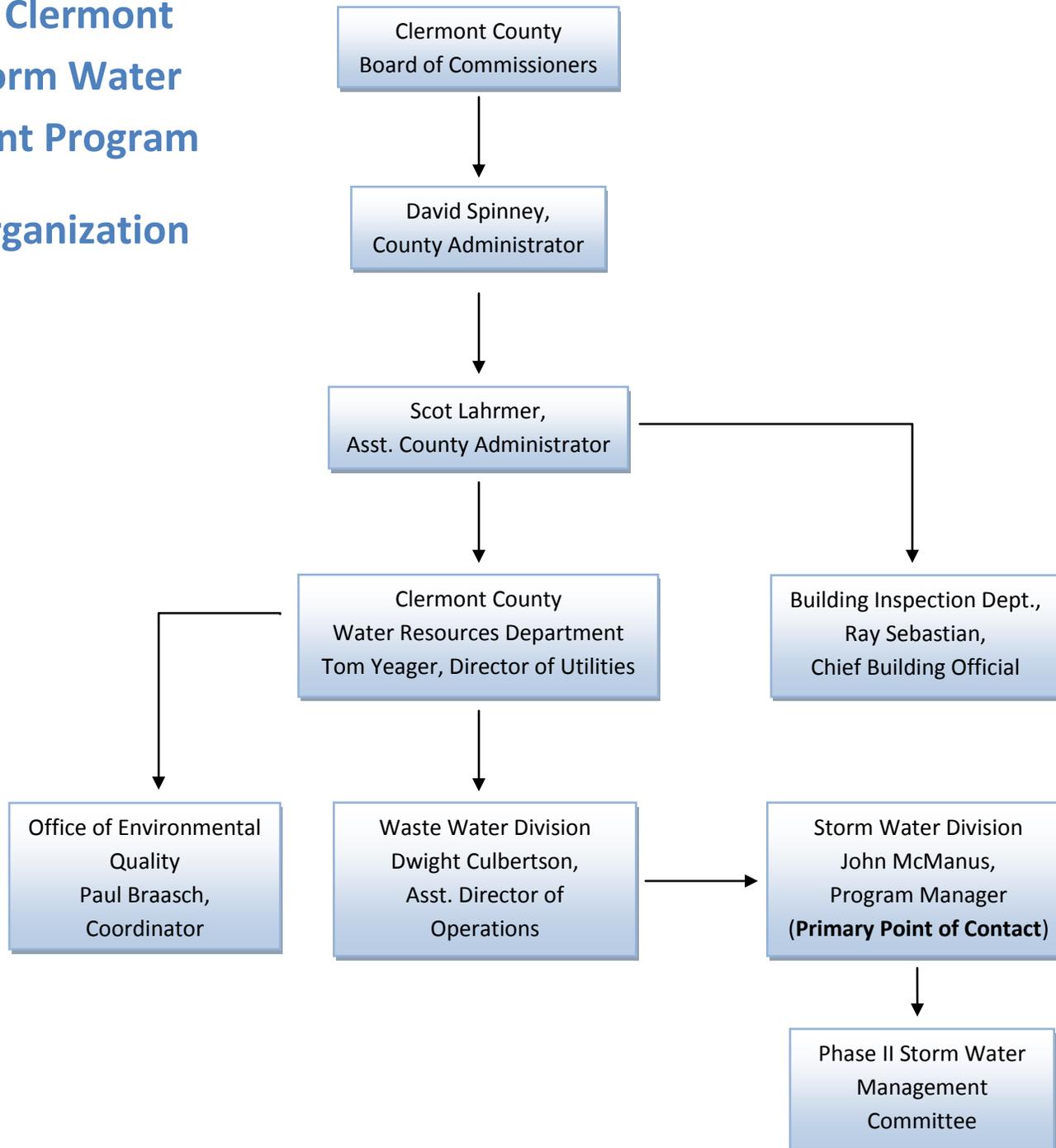
#### *Legal Authority*

Unless otherwise stated, Clermont County and the partnering municipalities and townships have the legal authority to implement the best management practices contained within this plan.

#### *Table of Organization*

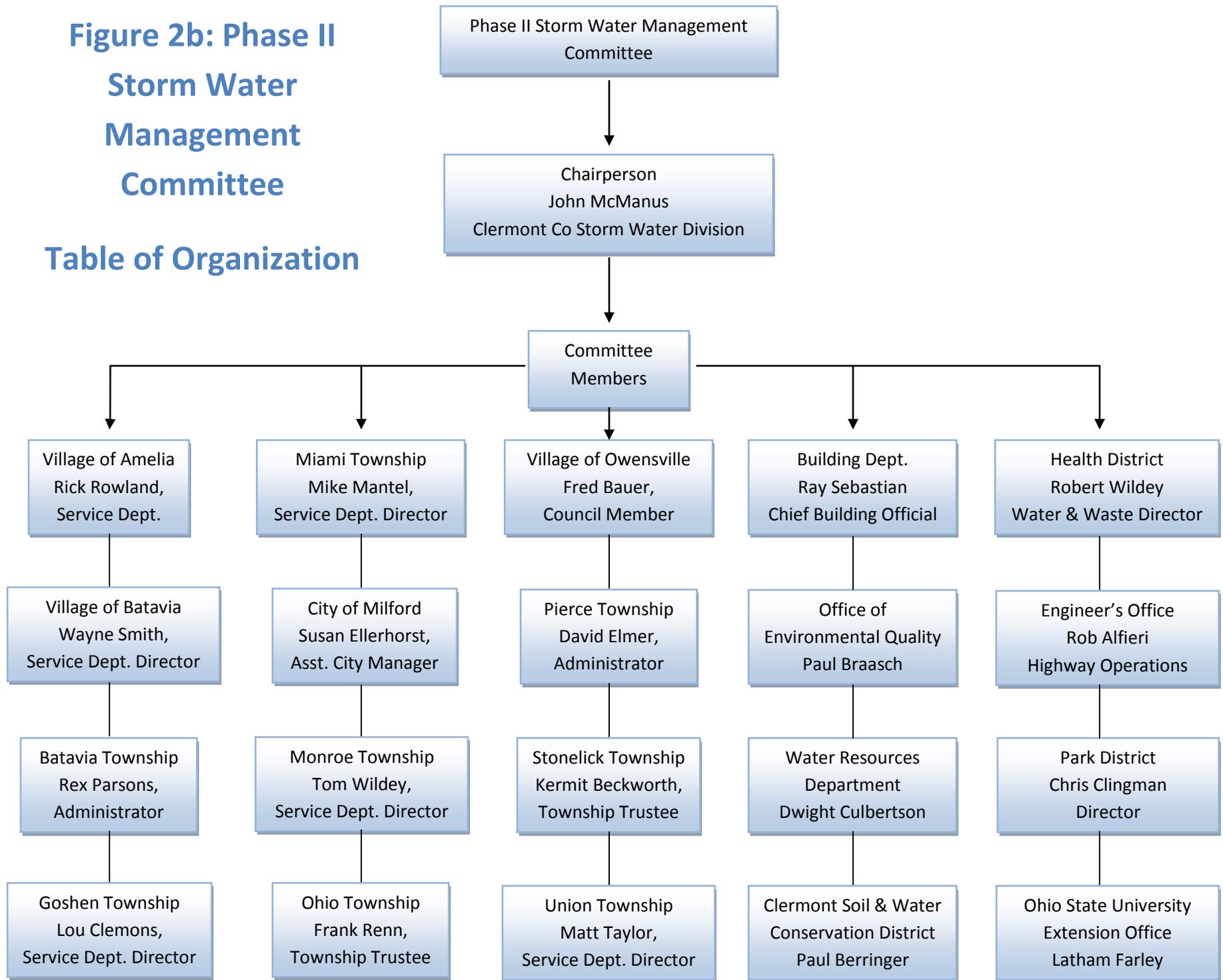
Four municipalities (Amelia, Batavia, Milford and Owensville), eight townships (Batavia, Goshen, Miami, Monroe, Ohio, Pierce, Stonelick and Union Townships) and Clermont County (including the County Commissioners, County Engineer and Park District) are listed as MS4 co-permittees. Each helps implement the activities contained in this management plan. The County's Storm Water Management Division supervises the implementation of the plan and serves as the primary point of contact with Ohio EPA. A Regional Storm Water Advisory Committee comprised of representatives from the MS4 co-permittees provides direction to the overall program and meets regularly to monitor the progress. A Table of Organization is provided in Figures 2a and 2b.

**Figure 2a: Clermont  
County Storm Water  
Management Program  
Table of Organization**



# Figure 2b: Phase II Storm Water Management Committee

## Table of Organization



## **I. Public Education and Outreach**

Clermont County and its MS4 partners have developed a comprehensive program designed to educate the public about the impacts of storm water runoff on stream quality and steps they can take to reduce pollutants in storm water runoff. This section of the Storm Water Management Plan presents the details of the education program.

The MS4 permit requires the inclusion of at least five different storm water themes or messages over the permit term. Under this plan, the County will implement programs relating to 11 different themes plus general education programs over the five year period. The following sections provide details on each educational theme, including the following information: rationale for selection, specific educational activities, target audience, how the target audience will be reached, targeted pollution sources, and entities responsible for implementation. At the end of this chapter, a table is included that summarizes the activities to be conducted, the timeline for implementation and a list of responsible departments.

With each year's annual report, the estimated number of people reached per activity will be provided. By the end of the permit cycle, the Public Education and Outreach program as a whole will have reached at least 50 percent of the population within the urbanized area. The annual report will also include an evaluation of the Public Education and Outreach program and recommendations for improvement, if any are necessary.

### **A. Erosion and Sediment Control Best Management Practices (BMPs)**

Rationale: Clermont County is located just east of Cincinnati/Hamilton County and has experienced a significant amount of development over the past 20 years. Under the first MS4 permit, Clermont County and other communities were classified by Ohio EPA as "rapidly developing," and therefore, were required to meet certain aspects of the permit in a shorter time frame than those that did not receive this designation. It can be reasonably expected that Clermont County will continue to grow in coming years. As such, it will be important to promote the proper use of different erosion and sediment control best management practices, or BMPs.

The primary pollutant of concern associated with construction is sediment, which in excess, can lead to siltation in stream beds that deprives aquatic life of quality habitat. The target audience will be local erosion and sediment control enforcement officials and members of the development community, including developers, design engineers, contractors and home builders associations. Several activities will be conducted under the erosion and sediment control education program, as summarized below.

1. *Erosion and Sediment Control Field Day*: The County's Division of Storm Water Management will continue to be an active planning partner for the annual Southwest Ohio Erosion and Sediment Control Field Day. This event had been held during the summer from 2003 through 2008. After the 2008 Field Day, the committee decided to hold the next event in winter (February 2010) in an effort to reach more homebuilders and contractors. While attendance was up slightly and the event was a success, weather prohibited the outdoor demonstration of erosion and sediment control practices. As a result, the committee has decided to hold the next Field Day in late summer or early fall of 2011. After this event, the dates and locations of future Field Days will be evaluated by the committee.

2. *Erosion and Sediment Control BMP fact sheets*: The Clermont County maintains fact sheets for various erosion and sediment control BMPs on its web site ([www.clermontstorm.net/escbmps.aspx](http://www.clermontstorm.net/escbmps.aspx)). Each fact sheet contains information on BMP usage, benefits, limitations, installation tips, maintenance, range of costs and alternatives. These were developed in conjunction with Miami University's Institute of Environmental Sciences in 2006, and will be maintained throughout the 2009-2014 permit cycle.
3. *"Erosion Control" Magazine*: The Division of Storm Water Management will be responsible for providing information about subscriptions to *Erosion Control* magazine, published by Forester Communications (which also publishes Stormwater magazine and hosts the national StormCon conference). As of January 2009, Forester Communications offers free subscriptions to qualified businesses, including the following types of firms: Landscape, Architecture, Engineering/Consulting, Contractor/Construction, Waste Disposal, Geology/Hydrology, Public Works/Highway Construction, Agriculture, Mining/Land Clearing, and Government. This magazine is an excellent way to stay up-to-date on advances in the field of erosion and sediment control. A link to *Erosion Control* will be posted on [www.clermontstorm.net](http://www.clermontstorm.net). Information will also be made available during Erosion and Sediment Control Field Days.
4. *Promotion of Regional Workshops and Training Sessions*: As the Division of Storm Water Management learns of regional erosion and sediment control workshops and training opportunities, it will promote these among the Clermont development community via listings under the "Hot Topics" section of its web site and Clermont County E-News notices.

#### **B. Post Construction BMPs**

Rationale and Pollutants of Concern: As land use changes from agricultural/open field to residential/commercial, the amount of impervious area increases. This typically results in increased volumes and rates of storm water runoff, which, if not properly managed, could result in significant bed and bank erosion in the receiving streams. A study conducted by the Clermont County Office of Environmental Quality (OEQ) found that stream flashiness was strongly correlated to responses in the fish community (*A National Demonstration Project for Watershed Management*, June 2007). Additionally, urban storm water runoff can carry various types of pollutants, such as lawn fertilizers and pesticides, pet waste, oils and metals from roadways and parking lots, and much more. For these reasons, post construction storm water management has been identified as one of the themes of the County's Public Education and Outreach program. The target audiences of this program are members of the development community, homeowners associations, local businesses and homeowners.

1. *Post-Construction BMP Fact Sheets*: In 2005, Clermont County partnered with the Sanitation District No. 1 of Northern Kentucky and the Louisville Metropolitan Sewer District to develop a series of fact sheets for various post-construction BMPs. The fact sheets can be viewed at [www.clermontstorm.net/postconstructbmp.aspx](http://www.clermontstorm.net/postconstructbmp.aspx). Each fact sheet contains information on the advantages and limitations of each BMP, as well as maintenance requirements and costs. The fact sheets will be maintained throughout the 2009-2014 permit cycle.
2. *Post-Construction BMP Management Guides*: The Clermont County Water Management and Sediment Control (WMSC) Regulations require a developer to provide maintenance plans for all post-construction BMPs, including detention and retention ponds, to the post-construction BMP

operator. The Division of Storm Water Management will develop templates of management plans for detention/retention ponds that can be used by the developer to meet the WMSC requirements. These will also be provided to homeowners associations and individuals who currently have the responsibility of maintaining storm water ponds that were constructed before this regulation went into effect.

3. *Pond Management Workshop*: For many years, the Clermont Soil & Water Conservation District has held pond management clinics each spring for the residents of Clermont County. The clinics have typically dealt with management issues for ordinary ponds that weren't designed to provide any storm water management services. In 2010, Clermont SWCD will add to its clinic a retention pond management section on a trial basis. Homeowners associations and other owners of retention ponds will be added to the pond clinic mailing list. Attendees will be provided information on the purposes and functions of a storm water retention pond and how to properly maintain them. After evaluating the success of the Spring 2010 pond clinic, Clermont SWCD will come to a decision on whether retention pond management should be added as a permanent item on the clinic's agenda.
4. *Rain Gardens and Bioretention*: Clermont County will make the promotion of rain gardens and bioretention a focal point of its public education program. Constructing a rain garden is one of the most positive steps residents or business owners can take to improve the quality (and reduce the quantity) of storm water runoff from their individual properties. Activities to be conducted under the rain garden education program include:
  - a. *Rain Garden How-to Brochures* – Clermont County developed a modified rain garden brochure based on a design created by the Greater Cincinnati Rain Garden Alliance. During the early spring of 2010, a supply of these "how-to" brochures, along with a display stand, will be sent by the Division of Storm Water Management to all Clermont County plant nurseries (as well as some in Hamilton County) so that they can offer them to their customers. In subsequent years, the Division of Storm Water Management will provide additional brochures to the plant nurseries when their supplies run low.
  - b. *Rain Garden / Rain Barrel Web Site* – In 2009, the Division of Storm Water Management developed a section on its web site ([www.clermontstorm.net](http://www.clermontstorm.net)) devoted entirely to rain gardens and rain barrels. The page includes general information on how to construct a rain garden, native Ohio plants that are suitable for rain gardens, a PDF of the rain garden brochure, a place where residents can "register" their rain garden, where rain barrels can be purchased, and links to other related resources. The web site will continue to be maintained and updated as needed.
  - c. *Rain Garden Presentations* – Throughout the permit cycle, Clermont SWCD will offer to provide informative rain garden presentations to garden clubs and any other groups that wish to learn more about how to construct and maintain a rain garden. Clermont SWCD will provide at least one presentation each year through the end of the permit cycle.
  - d. *Demonstration Rain Gardens* – In 2007, Clermont SWCD constructed a demonstration rain garden near its offices at the Clermont County Fairgrounds in Owensville. The rain

garden is very visible to visitors of the Fairgrounds and is prominently displayed during the annual Clermont County Fair. An educational sign is posted at the rain garden along with a display stand that holds a supply of rain garden brochures. This demonstration rain garden will be maintained by Clermont SWCD through the 2009-2014 permit cycle.

In 2008, a second demonstration rain garden was constructed by Clermont SWCD and the Clermont County Park District at Pattison Park west of Owensville on U.S. Route 50. This garden will also be maintained as a demonstration site through the permit cycle.

By 2012, a third rain garden will be constructed on the grounds of the Clermont County Water Resources Department's administration building, which houses the County's Water, Sewer and Storm Water divisions as well as the Office of Environmental Quality.

- e. *Rain Garden Partnership with Clermont County Schools* - Under an Ohio Environmental Education Fund (OEEF) Grant received from Ohio EPA, Clermont SWCD and the Division of Storm Water Management partnered with Greenacres Foundation, Marvins Organic Gardens and local school districts to construct a rain garden on the grounds of 10 area schools in 2009. Students of the participating schools were involved in the design, plant selection and planting of the gardens. The gardens are located in high-traffic areas so they will be visible to parents and other visitors. Educational signs with a brochure display box will be placed at each garden. Additionally, the grant project team developed a rain garden educational activity guide that meets state curriculum standards. Clermont SWCD will continue to provide technical assistance to the schools to help them maintain the gardens and conduct lessons contained in the activity guide.
- f. *Residential Rain Garden Grant Program* – In 2008 and 2009, the Clermont SWCD offered up to ten \$100 grants to home owners to construct their own rain gardens. A third round of grants will be offered in 2010. The number of grants, if any, offered after 2010 will be re-evaluated by Clermont SWCD's Board of Supervisors at the end of each year. Refer to Chapter 2, Section G for more information on this program.
- g. *Conservation /Low Impact Development* – During the 2009-2014 permit cycle, the Division of Storm Water Management and/or the Soil & Water Conservation District will provide at least one presentation regarding various aspects of conservation/low impact development to the Clermont County Planning Commission and local municipal and township zoning commissions. An offer will be made to present the same information to the Clermont County Homebuilders Association. Additionally, educational information related to conservation /low impact development, including information on conservation easements and riparian setbacks, will be included on the Division of Storm Water's web site.

### **C. Illicit Discharge Awareness Programs**

Rationale and Pollutants of Concern: Illicit discharges to the MS4 can introduce a variety of pollutants to local streams such as oil and grease, sewage, paint, hazardous waste, organic material and nutrients, to name a few. Illicit discharges can originate from many different sources, including illegal connections to the MS4, cross connections with the sanitary sewer system, illegal dumping, accidental spills and others.

Because such discharges can occur most anywhere, and because many people may be unaware that these discharges are illegal, it is important to establish an education program that informs residents of Clermont County about what is and is not an allowable discharge, and provides them with information on how to recognize and report an illicit discharge.

The target audience of the illicit discharge program will include private property owners and any person that may do business in Clermont County. Activities included in the illicit discharge awareness program are detailed below.

1. *Recognizing and Reporting Illicit Discharges*: The Division of Storm Water Management developed a brochure entitled “Spotting and Reporting Illicit Discharges” that highlights different indicators of various types of illicit discharges, and provides information about how the general public should report these if spotted. The brochure will be posted on the Division of Storm Water’s web site, and made available at the County’s Permit Central Building. Additionally, a supply of the brochures will be distributed to each of the 10 local library branches. Once during the permit cycle, the Division of Storm Water will seek to partner with Ohio EPA to host an illicit discharge training session for local government personnel.
2. *Illicit Discharge Regulations Brochure*: The Division of Storm Water Management also created a second brochure entitled “Household Guide to Illegal Discharges and Storm Water Pollution Prevention.” This brochure, designed for the general public, provides information about storm sewers and where they drain and contrasts them with sanitary sewers, and provides information about what types of discharges are illegal and which are allowed under the County’s illicit discharge regulations. The brochure also provides tips on how to handle various types of household wastes and gives contact information for local hazardous waste disposal outlets. The brochure is available online at [www.clermontstorm.net/idhouseholdguide.pdf](http://www.clermontstorm.net/idhouseholdguide.pdf). Hard copies will be made available at Permit Central. Once during the permit cycle, the brochure will be mailed as a bill stuffer to each customer of the Clermont County Water Resources Department.
3. *“When It Rains, Clermont Drains” educational flyer*: During the first MS4 permit cycle, the Clermont SWCD created an educational flyer entitled “When It Rains, Clermont Drains.” The flyer includes a photo depicting where storm water runoff goes, and includes a list of 10 easy things any person can do to prevent storm water pollution. The flyer also provides contact information for various departments involved in the Clermont County storm water management program, and lists Ohio EPA’s spill hotline. The brochure will remain posted on the Division of Storm Water Management’s web site ([www.clermontstorm.net/clermontdrains.pdf](http://www.clermontstorm.net/clermontdrains.pdf)). The Clermont SWCD educational specialist distributes copies of this flyer to school children during storm water-related in-school education programs. Additionally, the flyers are made available to the general public at the County’s booth at the annual Clermont County Fair in July.
4. *Storm Drain Labeling* –Clermont County and its permit partners placed “Don’t Dump, Drains to River” labels on almost 1700 catch basins over the course of the first permit cycle. In addition, the County now requires this message to be pre-cast into new catch basins under its Subdivision Street Design and Construction Standards, adopted in October 2005. Clermont County and its partners will commit to placing 500 new labels by the end of the permit cycle. During the storm sewer inventory and condition assessment project (see Section III), catch basins and other inlets with labels or pre-cast messages will be documented and managed in a Geographic Information

System (GIS) database. Information on the storm drain labeling program, including how interested parties can obtain labels, will be placed on the Clermont SWCD and Division of Storm Water web sites.

5. *Public Employee Training* – Clermont County and each of the Phase II townships and municipalities have a number of staff that spend significant amounts of time in the field, whether on storm-related issues or other matters. All field personnel can serve as an extra set of eyes for the illicit discharge detection program. During the first permit cycle, Clermont County partnered with Ohio EPA’s Southwest District Office to hold an illicit discharge detection and elimination training program for local field personnel. At least one refresher training session will be held during the 2009-2014 permit cycle. Clermont County will once again seek to partner with Ohio EPA on this effort.

#### **D. Home Sewage Treatment System (HSTS) Education Programs**

Along with its Basic System Assessment program described above, the General Health District has developed an education program designed to help HSTS owners take better care of their systems. There are four different components to the Health District’s HSTS public education program. These include:

1. the preparation and distribution of the Septic Gazettes to HSTS owners prior to inspection.
2. the creation and distribution of various care and maintenance fact sheets to HSTS owners immediately following inspections.
3. the maintenance of information contained on the Health District’s HSTS web pages, located at [www.clermonthhealthdistrict.org/BSA.aspx](http://www.clermonthhealthdistrict.org/BSA.aspx) and [www.clermonthhealthdistrict.org/FactSheets.aspx](http://www.clermonthhealthdistrict.org/FactSheets.aspx)
4. the conduct of annual training sessions for HSTS installers.

The Health District will continue to conduct each of these efforts during the 2009-2014 permit cycle.

#### **E. Youth Education/Awareness Programs**

Rationale and Pollutants of Concern: Many studies have shown that one of the more successful ways to effect and maintain changes in behavior is to focus on youth education programs. By reaching children with the intended message while they are young, it is more likely that it will stay with them through life. Additionally, children tend to bring these messages home to their parents. To this end, Clermont County has developed a successful program in which the Clermont SWCD Education Specialist provides numerous in-class programs to Clermont County school children throughout the year. Programs include: the Enviroscape and Streamulator models, indoor stream monitoring, “Fred the Fish,” “Sum of the Parts,” “Poison Pump,” “A Grave Mistake” and many, many more. These programs are appropriate for learning about almost any pollutant of concern. The target audience is primarily local K-12 school children.

1. *K-12 Education Programs:* Each year, the Clermont SWCD Educational Specialist will conduct at least 50 in-class programs related to storm water pollution or storm water / watershed management. A complete list of the education programs offered by Clermont SWCD is maintained on its web site at [www.clermontswcd.org/Education.aspx](http://www.clermontswcd.org/Education.aspx). Records will be maintained on the date of each presentation, the school and class at which the presentation is given, and the number of students reached.

2. *Loan Program for Educational Materials:* The Clermont SWCD also provides local schools with educational materials and loans equipment and supplies, such as the Enviroscope model, if teachers wish to conduct their own educational activities, or if the Clermont SWCD Educational Specialist is unable to give a presentation during the requested day/time. This loan program will be continued through the course of the permit cycle.
3. *Mini-Lessons for Local Teachers:* In March 2008, Clermont County assembled a local group of experts in the educational field to review the existing storm water education program and recommend additions, modifications or improvements. One such recommendation was to develop stormwater-related “mini-lessons” for teachers to use in their classrooms. The Division of Storm Water Management will work with Clermont SWCD, Clermont OEQ and the Clermont County Educational Services Center to develop at least three storm water “mini-lessons” in the form of PowerPoint presentations. These will be approximately 3-5 minutes in length and tied to state educational standards. The presentations will be provided to the schools through the Clermont County Educational Service Center by the end of 2011, and also made available through the Clermont SWCD web site.

#### **F. Lawn Care/Landscaping**

Rationale and Pollutants of Concern: Clermont County, located just to the east of Hamilton County and the City of Cincinnati, is a highly residential community. Of the 51,245 parcels in the urbanized area, 44,953, or 88 percent, are zoned residential (Clermont County Auditor, December 2009). As such, the potential for pollutant loadings via urban storm water runoff is considerable. Pollutants of concern include nutrients (phosphorus and nitrogen), BOD and pesticides. In addition to the chemical pollutants, increases in the volume and flow rate of storm water runoff (over that received from forested, open field or agricultural land), are a concern, as they contribute to stream bank erosion and habitat modifications. During the 2009-2014 permit cycle, Clermont County will develop an educational program that focuses on storm water issues related to residential lawn care and landscaping. The target audience will be residential property owners in the county. Details of the program are provided below:

1. *Lawn Care Pollution Prevention Brochure:* By spring of 2011, the Division of Storm Water Management will develop a brochure that provides helpful lawn care and landscaping tips to help reduce the amount of pollutants from these activities entering the storm water conveyance system. Once created, the brochure will be distributed to local plant nurseries as a means to reach Clermont County residents. The brochure will be posted at [www.clermontstorm.net](http://www.clermontstorm.net).
2. *Local TV Interview:* In conjunction with the distribution of the brochure, Division staff will discuss lawn care best management practices during an interview for the “Clermont County Today” news program that airs on the government access cable station. At a minimum, the “Clermont County Today” episode that includes this interview will run daily for a two-week period. A companion news release will be distributed when the program airs.
3. *Residential Rain Gardens:* During the 2009-2014 permit cycle, Clermont County will make the promotion of rain gardens a focal point of its public education program. This is discussed in detail in Section I.B.4. above.

4. *Rain Barrels*: Clermont County will continue to promote the use of rain barrels by offering them at a discounted price to the public during Clermont SWCD's annual plant sale, typically held in April each year. The number of rain barrels sold will be tracked and reported.

### **G. Pet Pollution**

Rationale and Pollutants of Concern: As mentioned above, Clermont County is a highly residential community, and as such, there are a large number of pets in the urbanized area. For example, the Clermont County Auditor's Office issues approximately 20,000 dog licenses each year. It follows that there is considerable potential for pet waste to enter rivers, streams and lakes via storm water runoff. Pollutants of concern are fecal coliform, *E. coli* and other pathogens for which the first two are indicators. The target audiences for efforts that promote the proper disposal of pet waste are pet owners in Clermont County.

The Division of Storm Water Management will work with the Office of Public Information to develop a brochure that highlights the impacts of pet waste on local streams and talks about proper disposal methods. The brochure will be finished by 2011. Once completed, the Division of Storm Water will work with the Clermont County Humane Society to distribute the brochures to county pet owners. Copies of the brochure will also be provided to local pet shops and posted at [www.clermontstorm.net](http://www.clermontstorm.net).

### **H. Auto Care, Maintenance and Repair**

Rationale and Pollutants of Concern: As with any urbanized area, there are a large number of auto repair shops serving the nearly 200,000 residents of Clermont County. Some of the repair shops are large franchise operations while others are small and privately owned. In addition, a large number of individuals prefer to do their own maintenance on their cars (such as oil changes). This brings about a strong potential for oil, gasoline and other automotive fluids to enter the MS4 via storm water runoff, spills or illegal dumping.

Clermont County will develop and implement an automotive pollution prevention education program targeted at auto repair shop owners and operators, as well as individuals who perform their own care maintenance. Activities to be conducted are detailed below.

1. *Pollution Prevention Brochures*: By 2012, the Division of Storm Water Management will print and distribute an automotive repair pollution prevention brochure to car repair shops throughout the County. A second pollution prevention brochure will target individuals performing their own car care. While the two brochures will include similar best management practices, there will be some differences due to the different target audiences. The brochures for the automotive repair shops will be directly mailed to these businesses, while the Division will try to reach individuals by providing a supply of the brochures to automotive supply stores (such as AutoZone and Pep Boys) throughout the County. Both brochures will be posted at [www.clermontstorm.net](http://www.clermontstorm.net).
2. *Local TV Interview*: Division of Storm Water staff will also try to reach car care "do-it-yourselfers" individuals by discussing auto care BMPs during an interview for the "Clermont County Today" news program. At a minimum, the "Clermont County Today" episode that includes this interview will run daily for a two-week period.

3. *Promotion of Automotive Fluid Recycling Programs:* The Clermont County Fleet Maintenance Department and Miami Township offer recycling programs for automotive fluids to their residents. At least once each year, a press release will be issued informing the public about these opportunities to recycle motor oil, antifreeze, transmission fluid, and other automotive fluids. Information about the recycling programs will also be included in the pollution prevention brochures mentioned in section H.1 above, the Clermont County Recycling Guide published by the Adams-Clermont Solid Waste District, on the Clermont County Government Television bulletin board, and at [www.clermontstorm.net](http://www.clermontstorm.net).

#### **I. Industrial Pollution Prevention**

Rationale and Pollutants of Concern: Storm water runoff from industrial facilities has the potential to carry a variety of pollutants, including hazardous materials, into the MS4 through storm water runoff or accidental spills. In 2005, the Division of Storm Water Management developed an industrial pollution prevention brochure and directly mailed a small supply of the brochures to all industrial businesses in the Phase II urbanized area. During the 2009-2014 permit cycle, a second mailing of the industrial pollution prevention brochure will be completed. Water Resources Department staff also hand delivers the brochures to employees of industrial businesses that undergo industrial waste pretreatment program inspections. The brochure is available at [www.clermontstorm.net/industrial\\_p2\\_brochure.pdf](http://www.clermontstorm.net/industrial_p2_brochure.pdf).

#### **J. Watershed Management Issues**

Rationale: The watershed approach to addressing water quality issues in rivers, streams and lakes has been shown to be most effective means of dealing with pollutant loadings from both point and non-point sources and in achieving improvements in water quality. Since 1996, Clermont County has had one of the state's most effective watershed management programs in place for the East Fork Little Miami River.

Pollutants addressed under the watershed program include all those impacting streams in the East Fork watershed, including pathogens, sedimentation, nutrients, metals, and low dissolved oxygen levels, as well as other causes of impairment, such as habitat alteration, streambank erosion, channel modification and flow alteration. The target audience for the watershed programs includes all people living or doing business within the East Fork watershed. Specific activities of the watershed management program that will be conducted in 2010 are described below. Because of the uncertainty of State funding for the watershed program coordinators, the activities to be conducted under this program will be re-evaluated on an annual basis.

1. *Development of Watershed Management Plans:* The East Fork Little Miami River watershed is approximately 500 square miles in size. For the purposes of developing management plans, the watershed was broken up into five sub-watersheds, including the East Fork Headwaters, East Fork Lake and Tributaries, Middle East Fork, Stonelick Creek and Lower East Fork. To date, watershed management plans have been completed and endorsed by the Ohio EPA and the Ohio Department of Natural Resources (ODNR) for all sub-watersheds except Stonelick Creek. A draft of this watershed plan has been completed and submitted to Ohio EPA and ODNR for review, and full endorsement is expected in 2010. Copies of the watershed plans for the East

Fork will be posted on Clermont SWCD's web site ([www.clermontswcd.org](http://www.clermontswcd.org)), and on the Office of Environmental Quality's web site ([www.oeq.net/EFLMR.aspx](http://www.oeq.net/EFLMR.aspx)).

2. *East Fork News and Notes*: The East Fork Watershed Coordinator will prepare and distribute copies of an annual report entitled "East Fork News and Notes." As of 2009, there are 353 parties that receive this document, including elected officials, business owners, non-profit organizations and individuals in all parts of the East Fork watershed. The "News and Notes" will provide updates on the progress of implementation of different activities contained in the management plans, and news of upcoming management efforts. This report will be distributed electronically and as an insert in the "Clermont Conservation Quarterly" during the first quarter of each year. It will also be posted on SWCD's web site.
3. *East Fork Watershed Collaborative Advisory Committee*: The Advisory Committee of the East Fork Watershed Collaborative consists of representatives of the Soil & Water Conservation Districts for the four counties that comprise the East Fork Little Miami River watershed (Clermont, Brown, Clinton and Highland Counties). This group will meet once a year at a minimum to review the progress of watershed plan implementation and to help guide the activities of the watershed coordinator.

#### ***K. Solid/Hazardous Waste Disposal***

Rationale: The improper disposal or illegal dumping of solid or hazardous wastes into the MS4 can drastically impact the quality of the receiving water. In Clermont County, the illegal dumping of such waste into storm drains or creeks is one of the more common illicit discharges that have been detected.

The Adams-Clermont Solid Waste Management District (ACSWMD) has developed programs to provide information to all residents and people doing business within the two-county district on how both solid and hazardous waste materials can be properly disposed of or recycled. It is expected that, by providing this information, more residents will know how to handle these materials, resulting in fewer illegal or improper disposals which eventually lead to wastes entering groundwater, or being washed into streams and lakes during wet weather.

1. *On-line Map of Recycling and Disposal Facilities*: The Clermont County Office of Environmental Quality (OEQ), which also doubles as the solid waste district, will maintain an interactive map of disposal and recycling outlets for solid and household hazardous waste on its web site - [www.oeq.net/recycle.aspx](http://www.oeq.net/recycle.aspx). Visitors to the interactive map are able to search for disposal and recycling locations by the material of interest or by drop-off location. In addition, Clermont OEQ will maintain a list of answers to "Frequently Asked Questions" regarding waste disposal and recycling on its web site ([www.oeq.net/faqs.aspx](http://www.oeq.net/faqs.aspx)).
2. *Local TV Interview*: At least once during the 2009-2014 permit cycle, Solid Waste District staff will address illegal dumping issues and talk about proper disposal methods for solid and hazardous wastes during an interview for the "Clermont County Today" news program. At a minimum, the "Clermont County Today" episode that includes this interview will run daily for a two-week period.

3. *Environmental Response Line:* Clermont OEQ has an environmental response line that residents can call to ask questions, not only about recycling and waste disposal, but about any environmentally-related topic. The phone number for the environmental response line is (513) 732-7894. OEQ staff are available to answer calls during regular office hours (Monday through Friday, 8:00 a.m. to 4:30 p.m.). Also, anyone is welcome to call this number during non-office hours and leave a message. OEQ staff will respond to each call as soon as practical.

#### **L. General Education Programs**

Clermont County and its partners will also conduct a number of programs that may deal with various storm water management issues. These programs are discussed in detail below.

1. *Regional Storm Water Collaborative:* Clermont County is an active member of the Greater Cincinnati “Regional Storm Water Collaborative.” The Collaborative is composed of storm water districts, municipalities, and soil and water conservation districts in Southwest Ohio and Northern Kentucky. Its purpose is to raise awareness about water quality issues in the region. More information on the Collaborative is available on its web site at [www.savelocalwaters.org](http://www.savelocalwaters.org). The Collaborative seeks to raise public awareness about multiple storm-water related issues, primarily through television and other media advertising campaigns. A recent example is the “Don’t Feed the Storm Drain” ads that ran on WCPO-Channel 9 in 2008 and 2009. Clermont County and other Collaborative members will continue to develop and implement media advertising campaigns through the 2009-2014 permit cycle. Specific details of each ad campaign will be evaluated and decided upon on an annual basis by the Collaborative members.
2. *Project SIGNS:* The Clermont SWCD has partnered with other community agencies, watershed groups and environmental organizations to conduct a public education campaign known as Project SIGNS (Signage Inspires Great Neighborhood Streams). As part of this program, signs have been installed at stream crossings that identify the stream and the watershed in which it is located, along with a “Keep It Clean” message. The stream crossing signs help people identify with the streams in their neighborhood and hopefully encourage them to take steps as individuals to protect these important resources. The Clermont SWCD partnered with the County Engineer’s Office and the Phase II communities to print and install signs at 37 stream crossings in the urbanized area, including:
  - five stream crossings in Batavia Township,
  - one stream crossing in the Village of Batavia,
  - six stream crossings in Goshen Township,
  - six stream crossings in Miami Township,
  - five stream crossings in the City of Milford,
  - five stream crossings in Stonelick Township,
  - eight stream crossings in Union Township, and
  - one stream crossing at the Miami/Union Township border (East Fork at Roundbottom Road)

These signs will be maintained through the duration of the 2009-2014 permit cycle. As requests are made, Clermont SWCD will work with interested parties in printing and posting new stream crossing signs.

3. *Newsletters*: Clermont County and its MS4 co-permittees will use a variety of printed and electronic newsletters to deliver news of stormwater-related issues and events to those living and doing business within the county. The specific newsletters are described below.
  - a. *Clermont Stormwater E-News*: In December 2008, the Division of Storm Water Management launched “Clermont Stormwater E-News” - an electronic news service that provides timely information on stormwater issues, events, workshops, regulations and other items. This information is also typically posted on the Division’s web page ([www.clermontstorm.net](http://www.clermontstorm.net)) under “Hot Topics.” Any interested party can sign up to receive Stormwater E-News by visiting [www.clermontstorm.net](http://www.clermontstorm.net). Information that used to be included in the old “Clermont Environmental Quarterly” printed newsletter will be distributed via Stormwater E-News. At least 12 postings will be e-mailed to the distribution list each year.
  - b. *Clermont Conservation Quarterly*: The Clermont SWCD publishes a quarterly newsletter entitled “The Clermont Conservation Quarterly” in which it promotes various stormwater programs, including the District’s educational programs, information on a variety of best management practices, and activities associated with the East Fork watershed management program. This newsletter is received by approximately 2000 groups and individuals, and is also accessible on the SWCD web site ([www.clermontswcd.org/Newsletters.aspx](http://www.clermontswcd.org/Newsletters.aspx)). At least four storm water-related articles will be included in “The Clermont Conservation Quarterly” on an annual basis.
  - c. *Clermont County Park District Newsletter*: The Park District publishes four electronic newsletters each year. Anyone interested in receiving the newsletter can add their name to the mailing list on the Park District’s web site (<http://parks.clermontcountyohio.gov>). As of 2009, approximately 260 people receive the quarterly newsletters via email. Additionally, it is sent out as a county wide e-mail and is available on the web site as a PDF. The Park District will include at least one article related to storm water or watershed management on an annual basis.
  - d. *Municipal/Township Newsletters*: Several municipalities and townships produce newsletters to share information about community happenings. Those that have newsletters will incorporate at least one article related to storm water management each year. Clermont Phase II communities with newsletters include:
    - *City of Milford* – Milford’s tri-annual publication is delivered electronically to any interested party that signs up via the City’s web site ([www.milfordohio.org](http://www.milfordohio.org)).
    - *Batavia Bulletin* – The Village of Batavia publishes the *Batavia Bulletin* newsletter approximately two to four times a year. The publication is mailed with the village utility bills to approximately 600 customers and an additional 100 copies are distributed through other sources.
    - *Inside Miami Township* – This quarterly newsletter has a circulation of approximately 14,300, and is also posted on Miami Township’s web site ([www.miamitwp.org](http://www.miamitwp.org)). Older newsletters are archived on the web site. As of 2009, the Township still prints and mails the newsletter; however, it is

- considering moving toward an electronic distribution of the newsletter.
- *Monroe Township* – This newsletter is published twice a year and is delivered to all 8,200 township residents. Copies of the newsletter are posted on the township’s web site ([www.monroetwp.org](http://www.monroetwp.org)).
- *Ohio Township* – This small, rural township publishes one newsletter each year and directly mails it to its 3,000 residents.
- *Stonelick Township* – Stonelick Township publishes between 1 and 2 newsletters each year. The newsletter has a circulation of approximately 5,000. Copies of current and past newsletters are posted on the township’s web site ([www.stonelicktpw-oh.org](http://www.stonelicktpw-oh.org)).
- *Union Township* – “Talk of the Township” is Union Township’s quarterly newsletter. It has an approximate circulation of 17,000 and is distributed within the geographic boundaries of Union Township. The newsletter is also posted on Union Township’s web site (<http://www.union-township.oh.us/downloads/category/12-newsltr.html>).

4. *Web Sites*: Three primary web sites will be utilized to disseminate information related to the storm water management program – the Division of Storm Water Management web site ([www.clermontstorm.net](http://www.clermontstorm.net)), the Clermont County OEQ web site ([www.oeq.net](http://www.oeq.net)), and the Clermont SWCD web site ([www.clermontswcd.org](http://www.clermontswcd.org)). Descriptions of these sites are provided below. Phase II municipalities and townships with web sites will provide links to the Division of Storm Water’s web site.

a. *Clermont County Storm Water Web Site*: The Division of Storm Water Management under the Clermont County Water Resources Department will continue to maintain and update its web site at [www.clermontstorm.net](http://www.clermontstorm.net). Some of the information that can be found on this web site includes:

- Information on current news and events under the “Hot Topics” section
- Fact sheets for multiple construction best management practices, including various erosion and sediment control techniques
- Fact sheets for 15 different post-construction BMPs along with information and links related to low impact development
- Information on a wide variety of pollution prevention practices for both residential property owners and business owners
- Educational materials, including resources for teachers and fun stuff for kids.
- Information on how to report spills or illicit discharges
- Information about state and local environmental and storm water regulations
- Copies of past annual reports for the storm water management program.

The Division of Storm Water Management will continue to keep the web site up-to-date with the latest news, issues and events, and will track and report the number of visitors to key web site pages on an annual basis.

b. *Clermont County Office of Environmental Quality Web Site*: Clermont OEQ, which also serves as the Solid Waste District for Adams and Clermont Counties, will continue to

maintain its web site ([www.oeg.net](http://www.oeg.net)). Some of the information that can be found on this web site includes:

- Information about the County's stream monitoring and sampling program, including copies of past annual water quality reports
- Information about the County's biological sampling programs and copies of past biological survey reports
- Information about the East Fork Watershed Management Program and copies of endorsed watershed management plans
- News on fish consumption advisories
- An interactive map to help people find recycling or disposal locations for a wide variety of solid and hazardous wastes.

The Office of Environmental Quality will continue to keep its web site up-to-date with the most recent information available, and will track and report the number of visitors to key web site pages on an annual basis.

c. *Clermont Soil & Water Conservation District Web Site:* The Clermont SWCD completely updated its web site in 2008. Some of the information now included at [www.clermontswcd.org](http://www.clermontswcd.org) includes:

- A summary of school education programs offered by the SWCD educational specialist
- Detailed information about rain gardens and rain barrels
- A list of items for which Clermont SWCD offers technical services and landowner assistance, including erosion problems, pond management, land preservation and wetland management.
- Information about the East Fork Watershed Management Program
- Information about the U.S. Department of Agriculture's conservation programs.
- Soils information, including an electronic copy of the Clermont Soils Survey
- Information on who to notify with information about spills or pollution complaints

The Clermont Soil & Water Conservation District will continue to keep its web site up-to-date with the most recent information available, and will track and report the number of visitors to key web site pages on an annual basis.

5. *Videos / Public Access Cable:* The Clermont County Office of Public Information maintains and develops the programming for Clermont County Government Television, a local cable access program. One of the most popular programs on this channel is the "Clermont County Today" program – a 30-minute show that highlights news, hot issues and happenings in Clermont County that typically runs twice a day for a two-week period. As described in previous sections, the Office of Public Information will conduct interviews with several different County personnel on a variety of storm water topics, and these interviews will air on "Clermont County Today." The videos are available for download on the County's on-line video library, located at [www.clermontcountyohio.gov/videos.aspx](http://www.clermontcountyohio.gov/videos.aspx).

All “Clermont County Today” shows are made available to other communities that operate their own local cable TV station, including Miami Township, Stonelick Township and Union Township. Stonelick Township airs “Clermont County Today” programs daily, while Miami Township airs the program five times a week, and Union Township airs it three times a week.

In addition to the “Clermont County Today” programs, the Office of Public Information will also run the “After the Storm” video produced by U.S. EPA and the Weather Channel, and the “Tempest in a Channel” video produced by Ohio EPA on an annual basis.

6. *Water & Sewer Bill Educational Tips* – The Clermont County Water Resources Department distributes water and sewer utility bills to its 40,000+ customers on a bi-monthly basis. At least twice a year beginning in 2010, a short, 2-3 sentence storm water educational message will be placed in the comment field on the utility bill. The message may include home storm water management tips, news about upcoming events, information about local storm water regulations, or other storm water-related message.
  
7. *Stormwater Response Line* – The Division of Storm Water Management maintains a response line (513-732-7880) where any interested party may ask questions about any aspect of storm water management, or pass on information about an illicit discharge or other water quality problem. The response line does not include an automated menu of choices. During office hours (8 a.m. to 4:30 p.m. Monday-Friday), the phone is either directly answered by a staff person (typically the program manager), or the caller is sent directly to the program manager’s voice mail where he or she may leave a message. Callers may also leave messages on voice mail after hours. Division staff will respond to messages left on voice mail as soon as practical, typically within one business day.

**M. Measureable Goals**

1. *Erosion & Sediment Control BMPs*

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Erosion & Sediment Control Field Day	One per year	Div. of Storm Water Mgt Clermont SWCD
Maintain BMP fact sheets on web	Ongoing	Div. of Storm Water Mgt
Promote <i>Erosion Control</i> magazine subscriptions via web site, Field Day	Annually/Ongoing	Div. of Storm Water Mgt
Publicize external regional workshops and training opportunities	Annually/Ongoing	Div. of Storm Water Mgt

2. *Post-Construction BMPs*

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Maintain BMP fact sheets on web	Ongoing	Div. of Storm Water Mgt
Develop templates for detention/retention basin maintenance plans, distribute to private owners/operators	By 2011	Div. of Storm Water Mgt. Clermont Co. Building Dept. Clermont SWCD

Conduct pond management workshops	One per year	Clermont SWCD
Rain Garden Education Program	---	---
Distribute "How-to" brochures to all local plant nurseries	By 2010	Div. of Storm Water Mgt.
Maintain "Rain Garden Central" web site	Ongoing	Div. of Storm Water Mgt.
Conduct rain garden public workshop	One per year	Clermont SWCD Div. of Storm Water Mgt.
Maintain two existing demonstration rain Gardens; create 3 <sup>rd</sup> demonstration garden	Ongoing; 3 <sup>rd</sup> garden by 2012	Clermont SWCD Div. of Storm Water Mgt.
Provide technical assistance to local schools regarding garden maintenance and classroom activities	Annual inspections, assistance as requested	Clermont SWCD Div. of Storm Water Mgt.
Offer 10 \$100 grants for creation of new residential rain gardens	Annually	Clermont SWCD
Low impact development presentation to Clermont Planning Commission and Zoning Commissions	By 2014	Clermont SWCD Div. of Storm Water Mgt.

### 3. Illicit Discharge Awareness

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Distribute 200 copies of "Recognizing & Reporting Illicit Discharges Brochure" and post on web site	By 2011	Div. of Storm Water Mgt.
Distribute 200 copies of "Illicit Discharge Regulations" brochure and post on web site	By 2012	Div. of Storm Water Mgt.
Distribute 500 "When It Rains, Clermont Drains" flyers annually	Annually	Clermont SWCD Div. of Storm Water Mgt.
Label 500 catch basins with "Don't Dump, Drains to River" message	By 2014	MS4 Municipalities/Townships Clermont Co. Engineer Clermont SWCD
Conduct one Illicit Discharge Recognition & Reporting training session for MS4 personnel	By 2010	Div. of Storm Water Mgt.

### 4. Home Sewage Treatment System Public Education Program

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Distribute "Septic Gazettes" to HSTS owners	Prior to inspections	Clermont Co. Health District
Distribute HSTS care and maintenance fact sheets	After inspections	Clermont Co. Health District
Conduct one training session for HSTS installers annually	Annually	Clermont Co. Health District
Maintain HSTS web site	Ongoing	Clermont Co. Health District

5. Youth Education/Awareness Programs

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
K-12 In-Class Education Programs	50 Annually	Clermont SWCD
Educational material loan program for schools	Ongoing	Clermont SWCD
Develop three mini stormwater lessons for schools	By 2011	Clermont SWCD Div. of Storm Water Mgt. Clermont OEQ Clermont Ed. Services Center

6. Lawn Care/Landscaping

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Develop and distribute 500 copies of a lawn care pollution prevention brochure to local plant stores	By Spring 2011	Div. of Storm Water Mgt. Clermont SWCD
“Clermont County Today” TV interview	By Spring 2011	Div. of Storm Water Mgt. Clermont SWCD
Implement Rain Garden Education Programs	See Item #2 above	
Rain barrel sales	Once per year	Clermont SWCD

7. Pet Pollution

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Develop and distribute 500 copies of a pet pollution prevention brochure	By 2011	Clermont SWCD Div. of Storm Water Mgt.

8. Automotive Care and Maintenance

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Develop & distribute 100 copies of an auto pollution prevention brochure for repair shops	By 2012	Clermont SWCD Div. of Storm Water Mgt.
Develop & distribute 500 copies of an auto pollution prevention brochure for individuals	By 2012	Clermont SWCD Div. of Storm Water Mgt.
“Clermont County Today” TV interview	By 2012	Clermont SWCD Div. of Storm Water Mgt.
Promote local recycling programs for automotive fluids	Annually	Clermont OEQ Clermont Co. Fleet Maint. Div. of Storm Water Mgt. Miami Township

9. Industrial Pollution Prevention

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Direct mailing of industrial pollution prevention brochures to all industries in MS4 area	By 2014	Div. of Storm Water Mgt.

10. East Fork Watershed Management Program

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Complete development of East Fork Watershed Management Plans	2010	Clermont SWCD Clermont OEQ
Provide updates on implementation activities through “East Fork News & Notes”	Once per year	Clermont SWCD

11. Solid & Hazardous Waste Disposal

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Maintain on-line map of local recycling & disposal facilities	Ongoing	Clermont OEQ
Conduct “Clermont County Today” TV interview	Once by 2011	Clermont OEQ
Maintain environmental response line	Ongoing	Clermont OEQ

12. General Education Programs

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Participate in annual education campaigns through Regional Storm Water Collaborative	Annually	Div. of Storm Water Mgt.
Project SIGNS – maintain existing signs	Ongoing	Clermont County Engineer MS4 Municipalities/Townships Clermont SWCD
Clermont Storm Water E-News Postings	12 per year	Div. of Storm Water Mgt.
Storm water articles in “Clermont Conservation Quarterly”	4 per year	Clermont SWCD
Storm water articles in Park District newsletter	2 per year	Clermont Park District
Storm water articles in municipal & township newsletters	1 per year	Batavia Village Miami Township City of Milford Monroe Township Ohio Township Stonelick Township Union Township
Maintain educational materials on web sites	Ongoing	Div. of Storm Water Mgt. Clermont OEQ Clermont SWCD
Airings of “After the Storm” and “Tempest in a Channel” videos on cable access channels	1 per year for each	Div. of Storm Water Mgt. Clermont Office of Public Info.
Storm water educational tips on water and sewer bills	2 per year	Div. of Storm Water Mgt. Water Resources Dept.
Maintain storm water response line	Ongoing	Div. of Storm Water Mgt.

## **II. Public Involvement/Participation**

This chapter outlines the approach that the County and its MS4 permit partners intend to take in order to provide opportunities for Clermont citizens and other stakeholders to participate in the development and implementation of the County's Storm Water Management Plan. Details of each activity are provided below, including the theme of the activity, the target audience and how the target audience will be reached, and the parties responsible for conducting the activity. At the end of this chapter, a table is included that summarizes the public involvement/participation activities to be conducted, the timeline for implementation and a list of responsible departments.

Each year, the annual report will include a brief description of each activity and an estimate of how many people participated. The annual report will also include an evaluation of the Public Involvement/Participation program and recommendations for improvement, if any are necessary.

In general, all local governments participating in the Clermont County regional storm water management program will comply with State and local public notice requirements as they relate to this public involvement/participation program.

### **A. Revision of Clermont County Storm Water Management Plan**

Since the inception of the County's regional storm water management program in 2003, the program has evolved and grown considerably. Significant changes include the formation of the Storm Water Management Division in 2004, the completion of the storm water outfall inventory and the initiation of a comprehensive storm sewer system inventory and condition assessment, the development of a successful illicit discharge program, enhancements to the public education and involvement programs, and the drafting of storm water pollution prevention plans for each of the program partners. Because of these changes, along with new requirements contained in the January 2009 MS4 permit, there was a need to revise the County's Storm Water Management Plan (SWMP).

The Division of Storm Water Management coordinated the effort to revise the SWMP. Potential changes were first discussed with the Regional Storm Water Advisory Committee. Following these discussions, the Storm Water Management Division, with assistance from Clermont County OEQ, Clermont SWCD and the storm water education and awareness team (SWEAT) developed a draft plan revision and forwarded it to each of the MS4 co-permittees for review and comment. The committee met in December 2009 to discuss the revisions. Following this, the Division of Storm Water incorporated changes into a final draft of the SWMP.

Once the final draft of the SWMP is completed, Clermont County will publish it for public review and comment. A press release will be issued informing interested parties of the draft SWMP revision and the 30-day public comment period. The target audience will be all those living and doing business in Clermont County. The draft plan will be posted at [www.clermontstorm.net](http://www.clermontstorm.net). Written comments will be accepted by via email, fax, direct mail or personal delivery. The Advisory Committee will consider all public comments received and make changes to the revised SWMP as appropriate. The final draft will be presented to the Board of County Commissioners and all MS4 City and Village Councils and Township Boards of Trustees for adoption. This process will be completed by the end of 2010.

## ***B. Revision of Water Management & Sediment Control Regulations***

In 2007, Clermont County completed a comprehensive revision of its Water Management & Sediment Control Regulations, which include all construction and post construction storm water management requirements for new developments and re-development. The current WMSC regulations became effective on July 31, 2007. However, on April 21, 2008, Ohio EPA published a revised Construction General Permit, and furthermore, in January 2009 renewal of the MS4 permit, required local storm water management regulations to be at least as stringent as the Construction General Permit. To comply with this requirement, Clermont County will conduct another review and revision of its WMSC regulations.

The review process will comply with applicable State and local regulations. The Clermont County Building Inspection Department, which has the authority to enforce the WMSC Regulations, will lead the effort to update them, with assistance from the Division of Storm Water Management. The review and revision process will be very similar to that followed in 2007. The County Building and Storm Water Department staff will compare the existing WMSC regulations to the Construction General Permit and identify areas where the County regulations are less stringent. Staff will also look for other opportunities to improve the effectiveness of the regulations.

After the review and comparison to the Ohio EPA Construction General Permit, the Building Department will develop a first draft of the WMSC provisions. These will be presented to a WMSC review group that will include representatives from the target audience, including developers, design engineers, builders, environmental interest groups, planning personnel, municipal and township administrators and elected officials, among others. All proposed changes will be reviewed with this group, and all members will have the opportunity to submit comments prior to the development of a final draft.

The final draft will be published for public comment, and two public hearings will be held in accordance with State and local law. Following the public hearings, the WMSC regulations will either undergo a second review and revision, or be presented to the Board of County Commissioners and City/Village Councils for adoption.

## ***C. Public Committees***

Several committees have been established to help guide the formation and implementation of various storm water management activities. These committees are described below.

1. *East Fork Watershed Collaborative*: The East Fork Watershed Collaborative is an informal organization consisting of stakeholders from the four counties (Brown, Clermont, Clinton and Highland Counties) within the East Fork Little Miami River watershed. The Collaborative's mission is to protect and enhance the biological, chemical and physical integrity of the East Fork Little Miami River and its tributaries. Through this organization, local agencies, groups and individuals will help plan and implement stream improvement projects throughout the watershed. The Collaborative's Advisory Committee will meet at least once annually to review the status of watershed management plan implementation and provide guidance on future activities in the watershed.

2. *Scientific Advisory Committee:* Since 1997, Clermont OEQ has conducted an annual monitoring and sampling program in surface waters across the county, most notably in the East Fork Little Miami River watershed. Each year, under the guidance of its Scientific Advisory Committee, OEQ revises its monitoring and sampling strategy to provide new information, building upon data that have been collected in past years. The Scientific Advisory Committee includes representatives from the Clermont County Water Resources Department, Clermont SWCD, Ohio EPA, local universities, the East Fork Watershed Collaborative and other environmental groups, and other interested parties. The Scientific Advisory Committee will continue to meet during the first quarter of each year to provide input on the upcoming stream monitoring and sampling program.
3. *Storm Water Education and Awareness Team:* In March 2008, the Storm Water Management Division assembled a group of local educators to review its existing public education programs and provide input on potential improvements to existing programs or the development of new programs. Individuals on this committee included the Education Specialist from the Soil and Water Conservation District, a local science teacher, and representatives from the Clermont County Educational Service Center, the Ohio State University Extension Office and Greenacres Foundation Water Quality Project. Much of their input helped guide the activities presented in Chapter 1. Because the initial meeting was so beneficial, the Storm Water Management Division will re-assemble this committee on an annual basis beginning in 2011 to provide ongoing input on its public education and involvement activities.
4. *Milford Hazard Mitigation/Storm Water Advisory Committee:* This committee is composed of volunteers, including Milford city residents and business owners. The committee meets twice annually to review such environmental matters as: storm water quality and quantity issues, including public education and involvement efforts, combined sewer overflow elimination, the development of a wellhead protection plan, updating the City’s hazard mitigation plan, and identifying priorities for each of these programs.
5. *Pierce Township Green Space Committee:* In March 2007, the Pierce Township Trustees officially created its Green Space Committee and program. The mission of the Green Space Program is to preserve land – via acquisition, conservation easement, conservation development, covenants or other methods – that has ecological or historical significance, natural corridor potential, aesthetic or scenic value, or inherent traits that contribute to the positive character of the Township. The Green Space Committee meets on the first Wednesday of each month.

**D. Volunteer Clean-ups**

For many years, various county, municipal and township offices have worked with other organizations to hold three separate volunteer litter clean-up events in Clermont County, including the “Clean and Green Neighborhood Clean-Up,” the East Fork Little Miami River Sweep, and the Ohio River Sweep. Additionally, the City of Milford hosts its own “Make a Difference Day” in which groups and individuals conduct litter clean-ups within the city limits. The target audience for these events is all people living and doing business in Clermont County. Each volunteer clean-up is described in detail below.

1. *East Fork Little Miami River Sweep:* During the 2009-2014 MS4 permit cycle, the East Fork Watershed Collaborative, Clermont SWCD, Clermont OEQ, and other partners will continue to

conduct the annual East Fork Little Miami River Sweep. The goal of this event is to utilize volunteer labor to help keep local streams in the East Fork watershed free of trash and debris. The event increases public awareness and gives public participants the opportunity to get involved in an activity that helps enhance local water quality. Typically, four to five segments of the East Fork and its major tributaries are cleaned on a Saturday in late April each year. The Collaborative, SWCD, OEQ and other partners will track and report the number of participants and approximate cubic yards of trash collected per site during each Sweep.

2. *Clean and Green Neighborhood Clean-up*: Each year on Earth Day weekend, the Clermont County Clean and Green Collaborative organizes the “Clean and Green Neighborhood Clean-Up,” where volunteers gather at multiple locations around the county to collect litter along roadways, waterways and public parks. The Clean and Green Collaborative is a volunteer organization that promotes litter prevention and beautification programs throughout Clermont County. Different County departments are represented on the Clean and Green Collaborative, including the Solid Waste District/OEQ and Clermont County Municipal Court. Additionally, the Solid Waste District provides financial support for the Clean & Green clean-up. Clermont County will continue to support the April clean-up through the 2009-2014 MS4 permit cycle, assuming the Collaborative continues to host the event. With the help of the Clean and Green Coordinator, Clermont OEQ will track and report the number of participants and approximate cubic yards of trash collected per site during each year’s clean-up.
3. *Ohio River Sweep*: Each year on the third Saturday in June, Clermont County partners with the Ohio River Valley Water Sanitation Commission (ORSANCO), the U.S. Army Corps of Engineers, and villages along the Clermont stretch of the Ohio River to conduct the Ohio River Sweep. This event is the largest clean-up of its kind, covering six states along 981 miles of river. Similar to the East Fork clean-up, the goal of the Ohio River Sweep is to clean the river banks of trash once a year and more importantly, to increase public awareness about litter and other water quality issues. The County will continue to partner with ORSANCO for as long as this event is held. Clermont OEQ will track and report the number of participants and approximate cubic yards of trash collected per site during each year’s clean-up.
4. *City of Milford “Make a Difference Day”*: Each year in October, the City of Milford organizes a volunteer litter clean-up along City roadways, gateways and public parks. Support is provided by the Clermont Office of Environmental Quality and the Clermont Clean and Green Collaborative. The City of Milford will continue to sponsor this event through the 2009-2014 MS4 permit cycle, and will track and report the number of participants and approximate volume of trash collected during each year’s event.

#### **E. Volunteer Monitoring**

Beginning in 2009, the Division of Storm Water Management will provide the Greenacres Water Quality Project with financial assistance to purchase water quality testing materials for its Saturday Stream Snapshot volunteer monitoring program. Greenacres Water Quality Project is an educational community outreach project that works with school groups, citizens, environmental organizations, local communities, government agencies, and youth organizations to educate them about water resource issues and to work with them to preserve and protect water resources. The Saturday Stream Snapshot program is an award-winning volunteer monitoring program where participants collect samples from

numerous stream sites in the Little Miami River watershed on the second Saturday of the month from March through November. Samples are analyzed by the volunteers (with oversight provided by certified lab analysts) for fecal coliform, nitrate-nitrite, total phosphorus, turbidity, pH and conductivity. As of 2009, 24 streams sites in Clermont County (including those on the Hamilton County bank of the Little Miami River) were being monitored through this program. At the end of each year, Greenacres compiles and sends all data collected in Clermont County streams to the Division of Storm Water Management; however, if the volunteer data reveals a significant problem, Greenacres notifies the Division as soon as practical.

#### ***F. Residential Rain Garden Grant Program***

One of best ways the public can help address storm water runoff issues is to do what they can to manage storm water close to the source – that is, on their own property. One way this can be accomplished is through the creation of a home rain garden. Rain gardens provide additional infiltration of storm water runoff, sometimes where none existed previously, helping to reduce both the volume and rate of storm water runoff. Rain gardens are also quite effective at filtering a number of pollutants. In 2008, the Clermont SWCD initiated a program in which it offered ten \$100 rain garden grants to residential property owners willing to install and maintain a rain garden on their property. Along with the grant money, Clermont SWCD also offers design assistance to the home owner. In 2009-2010, Clermont SWCD will offer up to ten grants each year to interested home owners. After 2010, SWCD will evaluate the success of the program, and the SWCD Board of Supervisors will determine whether the grant program should continue or not on a year-to-year basis. Clermont SWCD will keep an inventory of the rain gardens that are established and continue to serve as a technical resource to those that have received past grants.

#### ***G. Annual Rain Barrel Sale***

Similar to rain gardens, rain barrels provide property owners with an opportunity to help manage storm water runoff on site by collecting and re-using water, thereby reducing volume and rate of runoff from their property. In conjunction with its annual plant sale in April, the Clermont SWCD has sold rain barrels at discounted prices since 2008, and will continue to do so to through the 2009-2014 MS4 permit cycle. Beginning in 2010, Clermont SWCD will track the number of rain barrels sold each year.

#### ***H. Storm Drain Labeling***

During the first MS4 permit cycle, Clermont County successfully established a storm drain labeling programs. Separate storm drain labels were designed for catch basins/storm sewers in the Little Miami River, the East Fork and the Ohio River Tributaries watersheds. From 2003 to 2008, almost 1,700 storm drain labels had been affixed to catch basins and storm sewer inlets throughout the county. Clermont County and its partners will commit to placing 500 new labels by the end of 2014. In an effort to get the public more involved, Clermont SWCD and the municipalities and townships participating in this program will recruit volunteers from the community to help label storm drains and place door hangers. In this way, the participating volunteers will be able to learn more about storm water issues while they work on a project designed to reduce storm water impacts on stream quality. The target audience for this program will primarily be service groups seeking volunteer opportunities, such as scouts, schools, churches and other service organizations.

## ***I. Illicit Discharge/Spill Reporting***

Clermont County will work to educate residents and people doing business within Clermont County about the problems associated with illicit discharges, how people can recognize an illicit discharge, and how they should report it if they witness one. As with all Phase II communities, Clermont County and its partners have a limited amount of staff and resources they can dedicate to detecting discharges that can be intermittent or temporary in nature. Involving the general public in the illicit discharge detection program provides the County and its partners with another set of eyes.

The specific education programs are discussed in detail in Chapter 1, Section C. In addition to these efforts and maintaining an illicit discharge hotline (513-732-7880 and 513-732-7894), the Clermont Storm Water Management Division will develop an on-line illicit discharge reporting form on its web site at [www.clermontstorm.net](http://www.clermontstorm.net). Along with the reporting form, the web site will include detailed information on how to detect an illicit discharge, and who should be contacted in specific situations.

## ***J. Solid/Hazardous Waste Disposal***

Without available, convenient disposal options for many types of household hazardous and solid wastes, illegal dumping of materials down storm drains and creek banks becomes more prevalent. Clermont County and its MS4 permit partners have established several programs that provide residents with convenient alternatives to safely recycle or dispose of unwanted materials. These are described below:

1. *Household Hazardous Waste Voucher Program*: In 2004, the Adams-Clermont Solid Waste Management District (ACSWMD) established a program that issues vouchers to residents looking to safely dispose of certain household hazardous wastes (HHW). Under this program, homeowners who wish to dispose of HHW materials first call the District and provide a description of what they have, including type and amount of material. If at all possible, ACSWMD will first refer the caller to a local disposal or recycling center. If the material in question cannot be recycled or properly disposed of locally, the District issues that resident a disposal voucher. The resident is then responsible for bringing the material to Environmental Enterprises in Cincinnati, who then bills ACSWMD for the cost of disposal. The program is open to residents only; businesses are not eligible to participate. ACSWMD will continue to offer this program through the 2009-2014 permit cycle, and will track the number of HHW disposal vouchers each year, and will advertise the program through its web site, notices on the Clermont County Government local cable access channel, and with annual press releases.
2. *Antifreeze and Motor Oil Collection Program*: In 2002, with the help of a Supplemental Environmental Projects grant received from the Ohio EPA Division of Solid and Infectious Waste Management, Clermont County initiated an antifreeze recycling program for Clermont County residents. Under this program, Clermont County accepts used antifreeze from County residents at no charge. The used antifreeze is recycled and reused in County vehicles. Without a convenient means to properly dispose of antifreeze, many people will either dump old antifreeze onto the surrounding ground, where it can enter the groundwater, or into a nearby storm drain, where the coolant is eventually washed into a nearby stream. Through the establishment of this recycling program, residents of Clermont County have a convenient, no-cost alternative to disposing of their used antifreeze which, in turn, helps reduce the amount of used antifreeze and associated contaminants entering the environment.

Also in 2002, the Clermont County Fleet Maintenance Department began accepting used motor oil from County residents, who may bring up to five gallons of used motor oil to the County garage on Filager Road. The Fleet Maintenance Department uses this in two waste oil furnaces that are used to heat the shop area. Clermont County will continue to offer both the antifreeze and motor oil recycling programs to Clermont County residents through the 2009-2014 permit cycle. The ACSWMD will help advertise these programs through its web site, notices on the Clermont County Government local cable access channel, and with annual press releases.

3. *Mercury Collection Program:* Since 2005, the ACSWMD has partnered with the Clermont County Health District to offer a mercury collection program. Under this program, Clermont County residents can drop off any items containing mercury (e.g. thermometers, thermostats, etc.) at either the Solid Waste District or Health District offices. Personnel from Ohio EPA collect the mercury from the County for proper disposal. The ACSWMD will continue to offer this program through the 2009-2014 permit cycle. The amount of mercury collected will be tracked annually, and the ACSWMD will advertise the collection program through its web site, notices on the Clermont County Government local cable access channel, and with annual press releases.
4. *Refrigerant Collection Program:* The ACSWMD and the Clermont County Engineer's Office jointly operate an appliance collection program for Clermont County residents. Under this program, residents may bring refrigerators, air conditioners, freezers and other appliances (except for television sets and microwave ovens) to the Clermont County Engineer's field office on Filager Road for a small fee. The appliances are then transferred to the Adams-Brown Recycling Station in Georgetown, OH where refrigerant is removed, if necessary, and the appliances are recycled. ACSWMD will continue to offer this program through the 2009-2014 permit cycle. The number of appliances collected will be tracked annually. The ACSWMD will advertise the program through its web site, notices on the Clermont County Government local cable access channel, and with annual press releases.
5. *Municipal/Township Clean-Up Days:* Each year, several villages and townships hold "Clean-Up" or "Junk" days," in which they offer an opportunity to their residents to properly dispose of unwanted materials that their regular waste removal company may not accommodate, usually at no cost. Proof of residency is usually required. Notices for the Clean-up Days are typically listed in the Community Press and/or Clermont Sun newspapers, and on the communities' respective web sites. These events help reduce instances of illegal dumping down hillsides, along creeks and in other areas.

The following townships and villages will hold Clean-up Days in 2009 and 2010, after which, the effectiveness of the programs will be reviewed by the individual communities and a decision made about whether to continue with the event.

- a. *Batavia Village and Batavia Township:* Historically, Batavia Township and Village had partnered to hold two Clean-Up Days each year, in the spring and fall. Large solid waste items are typically accepted, including tires (a small fee is applied for more than three tires) and appliances (a small fee is applied for those containing refrigerant). Items not accepted include shingles or construction debris, paints and other household hazardous wastes, oil tanks, fluorescent bulbs and yard waste. The Township and Village are

committed to holding two junk days a year through 2010. After this, the number of junk days to be held annually will be re-evaluated at the end of each year.

- b. *Miami Township*: Trash Days occur twice a year, each Spring and Fall. The Service Department provides several trash dumpsters at the Civic Center parking lot located at 6101 Meijer Dr. for residents to drop off damaged or unwanted household goods. This includes furniture, toys, bikes, grills, concrete blocks, building or landscaping lumber, appliances, etc. Items that are not accepted include yard clippings, leaves, tires, wet paint, anti-freeze, or any hazardous materials.
- c. *Monroe Township*: The Township typically holds its Clean-Up Days in June each year. The following items are accepted: refrigerators, freezers, air conditioners, batteries, tires (small fee applied), chairs, tables, etc. Items not accepted include household garbage, yard waste, building materials, closed containers, and hazardous materials (paint, oil, grease, propane, etc.).
- d. *Stonelick Township and Owensville Village*: Stonelick Township and Owensville Village jointly host Clean-Up days for their residents in early May each year. Items accepted include large junk, computer appliances, appliances, tires, batteries, scrap metal and motor oil. Paint and hazardous waste materials are not accepted.
- e. *Union Township*: Junk days occur twice each year, in the Spring and Fall. Accepted items include: furniture, clothing, appliances (including refrigerators and air conditioners) and other large junk items. Items not accepted include tires, batteries, used motor oil, paints, hazardous wastes, home oil tanks and insulation

**K. Measurable Goals Table**

1. *Storm Water Management Plan*

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Public Comment period for draft Storm Water Management Plan revisions	By Spring 2010	Div. of Storm Water Mgt.
Adoption of revised Storm Water Management Plan	By December 2010	Clermont Co. Commissioners Clermont County Engineer Clermont County Park District MS4 Townships/Municipalities

2. *Water Management & Sediment Control Regulations*

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Public comment period/two public hearings for draft WMSC Regulations revisions	By October 2010	Clermont Building Dept. Div. of Storm Water Mgt.
Adoption of revised Storm Water Management Plan	By December 2010	Clermont Co. Commissioners MS4 Municipalities

3. *Public Involvement Committees*

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
East Fork Watershed Collaborative meetings	Once annually	Clermont SWCD Clermont OEQ Div. of Storm Water Mgt.
Scientific Advisory Committee	Once annually	Clermont OEQ Div. of Storm Water Mgt. Clermont SWCD
Storm Water Education and Awareness Team meetings	Once annually	Div. of Storm Water Mgt. Clermont SWCD Clermont OEQ
Milford Hazard Mitigation/Storm Water Advisory Committee meetings	Once annually	City of Milford
Pierce Township Green Space Committee	Once monthly	Pierce Township

4. *Volunteer Clean-ups*

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
East Fork Little Miami River Sweep	Annually in April	Clermont SWCD Clermont OEQ Clermont Park District Div. of Storm Water Mgt.
Clean & Green Neighborhood Clean-up	Annually, Earth Day weekend	Clean & Green Collaborative Clermont OEQ/Solid Waste
Ohio River Sweep	Annually, 3 <sup>rd</sup> Sat. in June	Clermont OEQ Clean & Green Collaborative ORSANCO
Make a Difference Day	Annually in October	City of Milford

5. *Volunteer Monitoring*

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Assistance to Greenacres "Saturday Stream Snapshot" volunteer monitoring program	Annually	Div. of Storm Water Mgt.

6. *Residential Rain Garden Grant Program*

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Offer 10 \$100 residential rain garden grants	2009-2010	Clermont SWCD

7. *Rain Barrel Sale*

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Conduct rain barrel sale for general public	Annually	Clermont SWCD

8. *Storm Drain Labeling*

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Utilize volunteers to help label 500 catch basins with “Don’t Dump, Drains to River” message	By 2014	Clermont SWCD MS4 Municipalities/Townships

9. *Illicit Discharge/Spill Reporting*

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Develop online illicit discharge/spill reporting form	By 2011	Div. of Storm Water Mgt.

10. *Solid/Hazardous Waste Disposal*

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Maintain household hazardous waste voucher program for Clermont County residents, track number of vouchers claimed	Ongoing	Clermont OEQ/Solid Waste
Maintain antifreeze and motor oil recycling programs for Clermont County residents, track amount recycled	Ongoing	Clermont Fleet Maintenance Clermont OEQ/Solid Waste
Mercury collection program	Ongoing	Clermont OEQ/Solid Waste Ohio EPA
Appliance/refrigerant collection program	Ongoing	Clermont OEQ/Solid Waste
Annual Municipal/Township “Clean-up Days”	2009-2010	Batavia Township/Village Miami Township Monroe Township Stonelick Twp. /Owensville Union Township

### III. Illicit Discharge Detection and Elimination

This chapter outlines the Illicit Discharge Detection and Elimination Program that has been established by Clermont County and its MS4 permit partners. This program, initiated in 2003, includes the following components:

- Maintenance and enforcement of the County's illicit discharge regulations, established in July 2007.
- Maintenance of the storm water outfall GIS database completed during the 2003-2008 MS4 permit cycle, and development of a GIS database of all components of the storm water conveyance system serving the urbanized area
- Implementation of a program to detect illicit discharges and eliminate when found
- Working with the Health District to maintain a map of all home sewage treatment systems (HSTs) connected to the MS4, and to inspect and ensure that HSTs are operating as designed and intended, and evaluating possibilities for eliminating discharging HSTs where they can be legally, feasibly and economically connected to central sewers.
- Implementation of a program to educate public employees, businesses and the general public of hazards associated with illegal discharges and improper disposal of waste.

At the end of this chapter, a table is included that summarizes the illicit discharge detection and elimination activities to be conducted, the timeline for implementation and a list of responsible departments.

Each year, the annual report will include the number of outfalls screened in dry weather, the number of dry weather flows identified, the number of illicit discharges identified, the number of illicit discharges eliminated, schedules for elimination of illicit discharges that have been identified but not yet eliminated, and a summary of any storm sewer mapping updates.

#### A. Illicit Discharge Regulations

Clermont County's Illicit Discharges and Illegal Connections regulations were adopted on June 27, 2007 as Article 8.0 of the Water management and Sediment Control (WMSC) Regulations. The WMSC regulations may be downloaded at <http://permit.clermontcountyohio.gov/WMSCRegulations.aspx>.

The illicit discharge regulations state that "no person shall discharge or cause to be discharged into any portion of the CCS4 (Clermont County Separate Storm Sewer System) any pollutants, contaminants, or waters containing any pollutants or contaminants other than storm water..." A list of exemptions is also included. The regulations require that any person notify either the Building Inspection Department or the Division of Storm Water Management of any spills or accidental discharges.

The regulations give the Enforcing Official (either the Division of Storm Water Management or the Building Inspection Department) the authority to assess and inspect properties and facilities, and the right to require the discharger to allow the installation of monitoring equipment if necessary. If an illicit discharge or illegal connection is identified and not eliminated immediately, the Enforcing Official may order compliance by a written notice of violation. In addition to the elimination of the discharge, the notice may require monitoring and analyses, the abatement or remediation of any contamination caused by the discharge, or the implementation of best management practices. In addition, the

Enforcing Official may petition the appropriate court for injunctive relief to restrain continuing or threatened future violations and/or to compel the abatement of the activities leading to the violation, or to remediate the effects of any violation.

The illicit discharge regulations (along with the entirety of the WMSC Regulations) pertain to all unincorporated areas of Clermont County. Additionally, the WMSC Regulations have been adopted by each of the Phase II municipalities, including Amelia, Batavia, Milford and Owensville. Clermont County is responsible for enforcing the regulations in the Villages of Batavia and Owensville, while Amelia and Milford enforce the regulations within their respective municipal limits.

## **B. Storm Sewer System Inventory and Condition Assessment**

1. *Storm Sewer Outfall Inventory:* The Storm Water Management Division completed mapping both public and private storm water outfalls that are associated with pipes 12 inches or more in diameter. The result of this effort was the development of a GIS geodatabase that includes information on the outfall location as well as receiving waters, diameter, pipe material, condition, presence/absence of flow and signs of illicit discharge. Storm Water Division staff maintain this database using construction and/or as-built drawings for new developments or storm sewer system improvements.
2. *Storm Sewer System Inventory and Condition Assessment:* With the outfall mapping completed, the Storm Water Management Division turned its efforts to conducting a comprehensive inventory and condition assessment of all storm sewer systems serving Clermont County.

The inventory and condition assessment project was initiated in 2006. A determination was made that it would not be possible to utilize a consultant to conduct a county-wide inventory; rather, the Storm Water Management Division would have to rely on existing staff and resources. However, Division staff did not have the expertise or equipment to conduct the inventory at that time. Therefore, a decision was made to hire a consultant to help develop an inventory for a pilot watershed. More so than the collection of data, the purpose of this pilot project was to develop a set of procedures that would enable the Storm Water Division to continue the inventory on its own throughout the rest of the county. A key to the pilot project was incorporating CCSWMD staff as part of the consultant field crew. This enabled staff to learn the inventory process and techniques first hand, and also helped keep project costs down. This enabled a level of cost savings that allowed two pilot watersheds to be mapped (Shayler Run and Hall Run). The end product was a completely interconnected geodatabase of all components of the storm water conveyance system, including ditch lines; an assessment of the condition of the storm sewer structures; and a set of standard operating procedures that is currently being used by CCSWMD to inventory the remainder of the county.

Using the procedures developed during the pilot project, Storm Water Division staff will map all components of storm sewer systems associated with pipes 12 inches in diameter or larger. All publicly owned and maintained systems will be mapped. Additionally, privately-owned systems downstream of any public storm sewers will also be mapped to the outfall/terminus. The inventory is conducted in two different ways. If accurate and up-to-date construction drawings are available, they are georeferenced and used to create and attribute the stormwater features

in GIS. If plans are not available, features are gathered in the field. Field work is conducted with a mast-mounted Magellan GPS running ESRI ArcPad on Windows CE.

The following structures are inventoried by Storm Water staff: catch basins, manholes, inlets, outfalls, connecting pipes and stormwater best management practices (BMPs). In addition, ditch lines are created using the County's digital elevation model. Attribute information on size/diameter, material, condition, presence/absence of flow, indications of illicit discharges and other information is also collected. All attributes are entered into ArcPad. At the end of each day gathered data is inspected, corrected, and uploaded into the ArcSDE database. Components of the public system that are in need of rehabilitation or replacement are flagged, and this information is forwarded to the entity responsible for maintaining that portion of the system (township, municipality, County Engineer or ODOT).

The inventory and condition assessment will be conducted on a watershed by watershed basis. By the end of 2008, the storm water conveyance systems for Hall Run, Salt Run and Shayler Run had been completely mapped. Work in 2009 will focus on the Happy Hollow and Dry Run (Clermont County portion) watersheds, and direct tributaries to the Lower East Fork watershed. In 2010, the inventory will be focused in the northern tributaries of the Lower East Fork. It is estimated that the storm sewer systems serving all watersheds in the urbanized area will be completed by the end of the permit cycle (2014).

Once mapping has been completed for a particular watershed, the Storm Water Management Division maintains the GIS layer in much the same way the storm water outfall layer is maintained. Division staff utilizes construction and as-built drawings for new developments to update the geodatabase on a regular basis.

### **C. Illicit Discharge Detection Program**

There are several components of Clermont County's illicit discharge detection program, including dry weather screening of storm water outfalls by the Division of Storm Water Management, annual stream monitoring and sampling conducted by the Office of Environmental Quality, field inspections conducted by county, municipal and township staff, and the illicit discharge and spill hotline. Each of these is explained in more detail below:

1. *Illicit Discharge Detection Methods and Procedures:* The Division of Storm Water Management has developed a four-page reference guide titled "Field Strategies for Detecting Illicit Discharges." This guide reviews seven different indicators of illicit discharges, including flow, odor, color, turbidity, floatables, deposits or staining, and changes to surrounding vegetation. For each indicator, the field guide provides specific information on how different observations could be related to specific types of discharges. The guide instructs field personnel on how to complete and submit the illicit discharge field data sheet, and provides information on who should be contacted for different types of discharges, such as hazardous waste spills, sewage overflows, failing septic systems and others. The field data sheet includes entries for the seven indicators, plus spots to note the presence of fish kills or other observations. Both the Field Strategies reference guide and the illicit discharge field data sheet are available online at [www.clermontstorm.net/idde.aspx](http://www.clermontstorm.net/idde.aspx).

2. *Dry Weather Field Screening*: The Division of Storm Water Management will conduct dry weather screening of all public outfalls at least one during the permit cycle. As of October 2009, a total of 690 publically owned and maintained outfalls have been identified in the Phase II municipalities and townships. The Division's goal will be to screen 20 percent of the public outfalls each year, with all outfalls being screened over a five year period.

By the end of 2010, the Division of Storm Water Management will develop a "hot list" of both public and private outfalls that have been determined to have a high potential for illicit discharges. Factors used in developing the hot list will include history of past discharges, age of system and types of businesses/industries tributary to the outfall, among others. Once the hot list has been developed, the Storm Water management staff will screen each of these outfalls during dry weather at least once a year. It is important to note that private outfalls will not be screened if access is denied by the property owner.

As part of the storm sewer system inventory and condition assessment project, each outfall within the watershed being mapped will be screened by the field crew as they are field mapping that portion of the system. This screening may be done in either dry or wet weather.

3. *Stream Monitoring and Sampling Program* - Since 1997, from May through October, Clermont OEQ has conducted an annual stream monitoring and sampling program, which has included both ambient and event-based sampling. Each year, under the guidance of its Scientific Advisory Committee, OEQ revises its monitoring and sampling strategy to provide new information, building upon data that have been collected in past years. In past years, samples have been collected and analyzed for a wide range of pollutants, including *E. coli*, nutrients, metals, solids, carbonaceous biological oxygen demand, dissolved oxygen, temperature, conductivity and pH. Rainfall data is also collected through a network of rain gauges at different locations throughout the county.

While the specific elements of the program may change from year to year, Clermont OEQ will continue to conduct its annual monitoring and sampling program. Each year, during the planning process for the upcoming sampling season, Clermont OEQ and the Scientific Advisory Committee will take into account the need to detect illicit discharges, and develop a sampling program that helps accomplish this. When selecting sampling sites, many different pieces of information will be taken into consideration in an effort to determine stormwater impacts on stream quality, including but not limited to location of stormwater outfalls, percent of impervious area within a watershed, areas with high densities of older on-site sewage treatment systems, areas with considerable construction activity, and areas with older sanitary sewer lines.

The County will use the results to identify possible illicit discharges, which can be indicated by elevated levels of certain parameters (especially during dry weather periods) such as *E. coli*, nutrients and solids, low dissolved oxygen concentrations, or significant changes in pH or conductivity levels. If the data indicate that there may be a problem with an illicit discharge, a more detailed investigation will be conducted, either through additional sampling or field surveys.

4. *General Field Inspections* - County, municipal and township personnel involved in field inspections of various natures are instructed to be aware of and report signs of illicit discharges.

These include personnel that conduct field activities for the County Health District, the County Engineer's Office, the Water Resources Department, the Building Inspections Department, the Office of Environmental Quality, the Soil and Water Conservation District, and city, village and township service personnel. Although these people are typically in the field for matters unrelated to storm water management, they nevertheless provide an extra set of eyes for illicit discharges, especially those that may be temporary or intermittent in nature and therefore harden to detect. Each of the above agencies and communities are provided with copies of the County's Field Strategies for Detecting Illicit Discharges and the illicit discharge field data sheet, along with instructions on who to contact if a particular type of discharge is suspected.

5. *Public Complaint Response* – Because it is impossible for Clermont County and its partners to constantly screen over 3,000 public and private outfalls for illicit discharges, it is important to utilize the general public as a means for detecting impossible for Clermont County and its partners to monitor each one of these for an illicit discharge which may occur at any time. Under its education program, residents are shown how to recognize an illicit discharge, and told who to call if they witness one (see Section I.C. for more information). Additionally, the Division of Storm Water Management's web site contains information on how people should report a spill or a suspected illicit discharge ([www.clermontstorm.net/spills.aspx](http://www.clermontstorm.net/spills.aspx)). Anyone may call the Division of Storm Water at (513) 732-7880 or the Office of Environmental Quality at (513) 732-7894 to report a suspected discharge, and Storm Water or OEQ staff will respond as soon as possible.

#### **D. Illicit Discharge Source Identification and Elimination Procedures**

1. *Illicit Discharge Source Identification*: If the person or entity responsible for an illicit discharge is not immediately known, personnel will utilize information contained in the County's GIS along with their own knowledge of the area to locate the source of the suspected discharge. From the point the illicit discharge was first identified, personnel will use existing storm sewer and stream maps, along with parcel information, land use, and topography information in GIS to help track the discharge.
2. *Spill Notification*: Hazardous material spills reported to or identified by the Division of Storm Water Management are reported to the Clermont County Department of Public Safety Services, which in turn reports the spill to the County's Emergency Management Agency, the Local Emergency Planning Committee and Ohio EPA's spills hotline in accordance with State regulations. If a spill poses an immediate threat to the health of Clermont County residents, 911 is called. For direct spills or those with the potential to impact the Ohio River, personnel will contact the ORSANCO spills hotline at (513) 231-7719.
3. *Elimination of Illicit Discharges*: In all instances, it is preferable to work directly with the responsible party to arrange for voluntary elimination of the discharge. Based on past history, it is anticipated that this will address most of the problems. If voluntary elimination of the illicit discharge cannot be accomplished, the Division of Storm Water Management will follow the procedures contained in the County's Illicit Discharge Rules and Regulations, with the first step being the issuance of a Notice of Violation to the responsible party. In addition to a requirement to eliminate the discharge, the Notice of Violation may require monitoring and analyses, the abatement or remediation of any contamination caused by the discharge, or the implementation of best management practices. If the discharge threatens the use attainment of

a local waterbody, the Division may request assistance from Ohio EPA. The Division of Storm Water Management will conduct follow-up screening to ensure the discharge is eliminated, and if necessary, will add the location to the hot list for annual inspections. A database of illicit discharges will be maintained in GIS.

#### **E. Home Sewage Treatment System (HSTS) Mapping:**

The Clermont County General Health District tracks both discharging and non-discharging home sewage treatment systems in its Basic System Assessment (BSA) database. For individual parcels, the BSA database includes such information as parcel identification number and owner, permit number, type of HSTS, its general location on the lot, inspection history (e.g., dates of inspection, pass/fail) and next scheduled inspection date. The database is linked to the County's GIS database, so HSTS locations, types and inspection data can be viewed geographically. As of August 2009, the Health District has identified 21,520 HSTSs throughout Clermont County. An up-to-date list of these that includes address, system type and date of next inspection is maintained as a PDF on the Health District's web site at [www.clermonthhealthdistrict.org/ClermontBSAs.pdf](http://www.clermonthhealthdistrict.org/ClermontBSAs.pdf).

Health District personnel continue to map and enter systems into the BSA database as part of their regular inspection program. When inspectors visit a location, they bring an aerial photo with them along with inspection sheets. The type of HSTS is noted and its location is sketched on the aerial photo. Upon returning to the office, the BSA database is updated with the information collected in the field.

#### **F. Home Sewage Treatment System Inspection Program**

Health District inspectors conduct their assessments on a township by township basis over a 19 month rotation period (townships with a large number of systems require multiple months to conduct the necessary inspections). The BSA database is utilized to schedule the assessments. Those with electrical components are scheduled for an assessment every 19 months. Those without electrical components such as traditional gravity systems are scheduled for an assessment once every 38 months. Small flow (<1,000 gal/day) commercial systems are assessed once annually. A township by township assessment schedule is maintained online at [www.clermonthhealthdistrict.org/BSASchedule.pdf](http://www.clermonthhealthdistrict.org/BSASchedule.pdf).

On January 1, 2010, the Health District established the "Acceptable Operation and Maintenance Program." Under this program, an owner of an HSTS receives a pass on the next scheduled assessment if their system passes an assessment two consecutive times, thus doubling the interval between assessments. This provides an incentive to homeowners to maintain their system, and also helps Health District technicians to focus their resources and efforts where they are most needed.

Every advanced technology systems installed after April 1, 2003 is required to have a service contract for operation and maintenance of the system. The contract must be maintained with an approved service provider for as long as that system is in operation. Contracts are required to be for at least one year (longer contracts are of course acceptable). Advanced technology systems installed prior to April 1, 2003 are not required to have a contract with a service provider; however the Health District still highly recommends obtaining one.

One month prior to the scheduled assessments, the Health District mails a "Septic Gazette" newsletter to all HSTS owners in the township that will be assessed. This allows the homeowners the opportunity to look over their system prior to the assessment. The Health District publishes two different Gazettes –

one for owners with systems requiring service providers and one for owners with more traditional systems. The Septic Gazettes include educational information for HSTS owners and typically encourage people to perform maintenance and fix any problems prior to inspection. The Gazette's main article changes once a year.

After each assessment is made, the Health District provides each HSTS owner with one of several care and maintenance fact sheets, depending upon the system. The Health District maintains care and maintenance fact sheets for the following: Aerobic Treatment Units, General Septic Systems, Leach Lines, Mound Systems, Sand Filters, Procedures to Replace Broken Channels and Procedures to Replace Concrete Baffles. Each care and maintenance flyer is available at [www.clermonthhealthdistrict.org/FactSheets.aspx](http://www.clermonthhealthdistrict.org/FactSheets.aspx).

### **G. Home Sewage Treatment System Code Enforcement**

Violations that are found during initial assessments are documented on the inspection report and mailed to the homeowner. A time limit of 30 days is given to correct the violation; however, this can vary depending on the type and severity of the violation.

A follow up assessment is conducted at the end of the time frame. If no corrections have been made a Notice of Violation is sent via Certified Mail notifying the homeowner that they have 30 days to correct the violation. Another follow up is conducted at the end of the time period. If the violation has still not been corrected, the matter is referred to the Board of Health to be declared a code violation or a nuisance. The Board of Health sends a certified notice that the matter has been declared a nuisance or code violation. An inspection is conducted 30 days after receipt of the notice and if the matter is not corrected it is referred to the Clermont County Prosecutor's Office to take legal action against the homeowner.

It is important to note that the Health District may be willing to accommodate various time frames given the seriousness of the nuisance or violation, the level of cooperation of the homeowner, the time of year, or the cost of the repair; however, this is looked at on a case by case basis with input from the field staff. For homeowners who lack the ability to pay for a complete system replacement, the Health District has developed the Sewage Nuisance Abatement and Remediation Plan (SNARP) which allows homeowners to make gradual improvements to their systems. Full details on the SNARP program are given below:

1. *Sewage Nuisance Abatement and Remediation Plan (SNARP)*: Timely system replacement may be the most expedient way to resolve a sewage nuisance, but it may not always be possible. In those cases, the SNARP program provides homeowners with an opportunity to gradually make improvements to their system and possibly avoid or delay a full replacement of the septic system, as long as the plan abates the sewage nuisance. In short, the program allows for more flexibility in planning and provides an opportunity to manage costs.

The goal of the SNARP program is to effectively correct sewage nuisance problems at the lowest possible cost. To participate in the program, the homeowner first makes an application to the Health District for remediation. Once the application is made, Health District personnel will visit the property and evaluate the system. After the evaluation, the Health District contacts the homeowner and presents all possible options. The homeowner then decides what plan to follow. The plan may include two, three or more phases, depending on the circumstances. Each

subsequent phase will add more treatment or more control, or both, to the system. As much as possible, each phase will include steps that will be parts of the final system.

Phase 1 of the plan typically involves the following steps:

- Replace existing tank(s) with new, or modify/seal the existing tank(s) so that infiltration of ground or surface water is not going to affect the system.
- A commitment on the homeowner's part to conserve water and to look for and eliminate sources of extra water that may be going to the system.
- At least one additional step to get the sewage below the surface of the ground, unless conditions indicate that more than one additional step may be necessary.
- The choice of a final system for the site. The final system choice may be changed later, under the conditions that space is available and the soil is suitable.

After the plan is agreed upon, the resident is asked to sign off on that plan, and a copy is placed in the BSA file for later reference. The homeowner is provided a copy of the plan to give to registered installers so they can bid on the work to be conducted.

#### ***H. Evaluation of Eliminating Discharging Home Sewage Treatment Systems***

By the end of 2010, the General Health District and the Water Resources Department will work together to complete a review and if necessary, revise plans for identifying residences with individual discharging HSTSs that can legally, feasibly and economically connected to central sewers. Alternatives to replacing a discharging system will include connection to central sewers, or installation of a soil absorption system. For HSTS discharges that cannot be eliminated through either of these means, the Health District will notify the HSTS owner of the requirement to pursue coverage under an appropriate Ohio EPA general NPDES permit.

#### **I. Illicit Discharge Public Education Program**

During the first permit cycle, Clermont County developed and implemented an illicit discharge public education program with the following goals:

5. raise public awareness of the hazards associated with illegal discharges and improper disposal of wastes,
6. provide the public with information about how to properly dispose of various types of wastes, along with information about the consequences of illicitly discharging or illegally dumping waste into the MS4
7. with the assistance of the Adams-Clermont Solid Waste District, provide convenient opportunities for the recycling or disposal of various wastes
8. show the public how to identify illicit discharges and how to report them

Clermont County will continue to carry out these programs through the Office of Environmental Quality/Solid Waste District, the Division of Storm Water Management, and the General Health District. The target audience for the public education programs will be the general public, those doing business within Clermont County, and public employees. Specific programs are listed below, with details provided in Section I – Public Education and Outreach.

1. Distribution of “Household Guide to Illegal Discharges and Storm Water Pollution Prevention” brochure (see Section I.C. for details)
2. Distribution of a brochure entitled “Spotting and Report Illicit Discharges” (see Section I.C.)
3. Distribution of “When It Rains, Clermont Drains” educational flyer (see Section I.C.)
4. Continued implementation of the storm drain labeling program (see Section I.C.)
5. Prepare and distribute the Septic Gazettes to HSTS owners prior to inspection (see Section I.D.)
6. Distribute care and maintenance fact sheets to HSTS owners immediately following inspections (see Section I.D.)
7. Maintain information contained on the Health District’s HSTS web pages (see Section I.D.)
8. Conduct annual training sessions for HSTS installers (see Section I.D.)
9. Develop and distribute a brochure that highlights the impacts of pet waste on local streams and talks about proper disposal methods (see Section I.G.)
10. Develop and implement an automotive pollution prevention education program targeted at auto repair shop owners/operators and individuals who perform their own auto maintenance (see Section I.H.)
11. Conduct a second distribution of the industrial pollution prevention brochure (see Section I.I.)
12. Update and distribute Clermont County Recycling and Waste Disposal Guide (see Section I.K.).

#### **J. Program Evaluation and Assessment**

At the end of each year, the Division of Storm Water Management will work with the lead departments for each of the above tasks to review their effectiveness and make any changes that are deemed necessary. Any such changes will be included in the Annual Report to Ohio EPA.

In late winter or early spring of each year, Clermont County’s Scientific Advisory Committee will meet to provide input on the annual stream monitoring and sampling program conducted by the Office of Environmental Quality. A final monitoring and sampling plan will be completed by OEQ prior to the onset of sampling, which typically begins with the start of contact recreation season in May.

**K. Measurable Goals Table**

*1. Illicit Discharge Regulations*

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Enforce Clermont County illicit discharge regulations	Ongoing	Div. of Storm Water Mgt.

*2. Storm Sewer System Inventory and Condition Assessment*

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Maintain inventory of storm water outfall points in GIS	Ongoing	Div. of Storm Water Mgt.
Complete inventory and condition assessment of MS4 serving the urbanized area	By 2014	Div. of Storm Water Mgt.

*3. Illicit Discharge Detection Program*

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Dry weather field screening of public outfalls	20 percent of outfalls annually	Div. of Storm Water Mgt.
Develop “hot list” of outfalls with significant potential for illicit discharges	By 2010	Div. of Storm Water Mgt.
Dry weather field screening of all outfalls on “hot list”	Annually from 2010 to 2014	Div. of Storm Water Mgt.
Conduct stream monitoring and sampling program	Annually	Clermont OEQ Clermont SWCD

*4. Home Sewage Treatment System Mapping*

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Maintain/update Basic System Assessment database of HSTs	Ongoing	Clermont Co. Health District

*5. Home Sewage Treatment System Inspections*

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Inspect individual HSTs with electrical components	Once every 19 months	Clermont Co. Health District
Inspect individual HSTs without electrical components	Once every 38 months	Clermont Co. Health District
Inspect small flow commercial systems	Annually	Clermont Co. Health District

6. Home Sewage Treatment System Code Enforcement

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Enforce HSTS codes	Ongoing	Clermont Co. Health District

7. Evaluate Elimination of Discharging HSTSs

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Develop process for identifying discharging systems with potential for connection to central sewers	By 2010	Clermont Co. Health District Clermont Water Resources Dept.

8. Home Sewage Treatment System Public Education Program

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Distribute "Septic Gazettes" to HSTS owners	Prior to individual inspections	Clermont Co. Health District
Distribute HSTS care and maintenance fact sheets	After individual inspections	Clermont Co. Health District
Conduct one training session for HSTS installers	Annually	Clermont Co. Health District
Maintain HSTS web site	Ongoing	Clermont Co. Health District

#### **IV. Construction Site Runoff Control**

Clermont County has established and will continue to maintain and enforce the Water Management and Sediment Control (WMSC) Regulations, most recently adopted by the Board of County Commissioners in June 2007. It is the intention of these regulations to control the erosion of construction sites as much as feasible and to trap the sediment resulting from such erosion before it gets into the streams of Clermont County.

These regulations apply to all unincorporated areas of the county, as well as the MS4 municipalities of Amelia, Batavia, Milford and Owensville, each of which has adopted them. The Clermont County Building Inspection Department is the entity responsible for enforcing the regulations in the townships and Villages of Batavia and Owensville, while the City of Milford and Village of Amelia enforce the regulations within their respective boundaries.

This chapter will summarize the key components of the WMSC regulations, discuss the design and construction plan review process, review the procedures for site inspections and enforcement, provide a synopsis of the data management system utilized by Clermont, and highlight education activities designed to promote the use and proper installation of various erosion and sediment control BMPs.

##### **A. Clermont County Water Management and Sediment Control Regulations**

The Clermont County Water Management and Sediment Control (WMSC) regulations first became effective on April 2, 1990, and were recently revised to meet the intent of the County's first MS4 permit. This latest revision of the WMSC regulations went into effect on July 30, 2007. The following paragraphs provide a summary of key components of the regulations. A full copy can be obtained at <http://permit.clermontcountyohio.gov/WMSCRegulations.aspx>.

1. *Application of WMSC Regulations:* The WMSC Regulations apply to all non-farming earth disturbing activities performed on the unincorporated lands of Clermont County, and in those municipalities that have adopted the WMSC regulations. Activities that are exempt include strip mining and surface mining operations regulated under Sections 1513.01 and 1514.01 of the Ohio Revised Code. Additionally, public highways, transportation and drainage improvements undertaken by a government agency or political subdivision are exempt, provided their standard erosion and sediment control policies have been approved by the Board of Clermont County Commissioners or the Ohio DNR Division of Soil and Water Conservation.
2. *WMSC Plans and Permits:* Any activity that disturbs 100 cubic yards or more of soil is required to obtain a WMSC permit through the Building Inspection Department. Sediment and erosion control plans are required for subdivisions, commercial developments, industrial developments, site developments for single commercial or industrial buildings (including additions and accessory buildings), construction of residential homes in approved subdivisions or on single lots, and any cut or fill activity that disturbs more than 100 cubic yards. Specific requirements of WMSC plans for different types of activities are listed in Article 4.0 of the WMSC Regulations.

Before any work can be started on subdivisions or commercial/industrial developments or buildings, an applicant must submit an erosion and sediment control plan to obtain a separate WMSC Site Preparation Permit. The approved erosion and sediment control measures must be

installed prior to any clearing or grading work. A Building Permit will only be issued once the BMPS have been installed, inspected and approved by the Building Inspection Department.

3. *Erosion and Sediment Control Requirements:* Article 6 of the WMSC Regulations contains specific requirements related to erosion and sediment control measures. This section includes criteria and requirements for the following:

- stabilization of denuded areas and soil stockpiles
- protection of watercourses during construction
- timing and stabilization of erosion and sediment control BMPs
- cut and fill slope protection
- storm sewer inlet protection
- sediment settling ponds
- design standards for various erosion and sediment control BMPs
- BMP maintenance (additional maintenance requirements are contained in Section 730 of the WMSC Regulations)

Refer to the Clermont County WMSC Regulations for specific information on each of the above items.

4. *Enforcement Provisions:* Article 3, Section 330 of the WMSC Regulations contains the enforcement provisions. The provisions are summarized in Section C below.
5. *Compliance with Ohio EPA's General Storm Water Permit for Construction Activities:* Because the most recent revision of the County's WMSC regulations (effective 7/30/07) were completed prior to Ohio EPA's last revision of the General Storm Water Permit for Construction Activities (effective 4/21/08), Clermont County initiated a review and revision of its current WMSC Regulations in 2009 to ensure that they are equivalent with the technical requirements set forth in the Construction General Permit. A draft revision of the WMSC regulations will be available for public review and comment by early 2010. As with the last revision, a public stakeholder committee will be assembled to review the draft revisions. All comments will be considered, with changes made to the draft where appropriate. Two public hearings will be held once the final draft has been completed. It is anticipated that the revised regulations will be adopted by the Board of County Commissioners and become effective in 2010. The four municipal co-permittees will review and adopt the new regulations shortly thereafter.

## **B. WMSC Plan Submittal and Review**

The Clermont County WMSC Regulations separate earth disturbing activities that require a WMSC plan into four types of site development:

- Subdivisions, commercial developments and industrial developments
- Single commercial or industrial buildings (including additions and accessory buildings)
- Construction of residential homes on single lots (including additions and accessory buildings)
- Cut, fill or grading on existing parcels in excess of 100 cubic yards

The following paragraphs summarize the minimum WMSC plan requirements and review process for each of these. The Building Department may require more detailed design specifications or plans when a particular problem is identified or if a sensitive area may be jeopardized.

1. *Subdivisions, commercial developments and industrial developments:* These types of developments require a separate Site Development Permit prior to the issuance of a Building Permit. The Site Development Permit is issued upon approval of the final construction plans that include the planned erosion and sediment control BMPs. These BMPs must be installed prior to any clearing or grading.

For these developments, a Preliminary (Design) Plan must first be submitted to the Clermont County Planning Department. Among other items, the Design Plan must show existing watercourses, a soils map, the proposed locations for any component of the storm water conveyance system including BMPs, and the approximate limits of grading and stripping. Specific Design Plan requirements are listed in Section 410.1-1 of the WMSC Regulations. These plans are reviewed by members of the Building Department, the Planning Department, the Water Resources Department (including the Storm Water Division), the Engineer's Office and the Clermont Soil & Water Conservation District. Once comments have been submitted, a meeting is scheduled with the site developer and/or project engineer to review the comments.

The next step is the submittal of a Final Construction Plan, which should address any comments raised during the review of the Design Plan. In addition to the items shown on the Design Plan, the Construction Plan must show existing and proposed final grades, location of all erosion and sediment control structural practices, and erosion and sediment control notes related to construction sequence, seeding specifications, filter barrier and silt fence placement notes and details, jute mat protection (or equivalent), among other items. Specific Construction Plan requirements are listed in Section 410.1-2 of the WMSC Regulations. These plans are reviewed by the same departments involved in Design Plan review, and as with design plans, a meeting is scheduled with the site developer and/or project engineer to review any comments submitted. Once all comments have been adequately addressed and the Final Construction Plan has been approved, a Site Development Permit may be issued. The applicant or developer is to notify the Building Department within seven days of the first earth disturbing activities.

2. *Single commercial or industrial buildings:* These types of developments do not require the submittal of a Preliminary (Design) Plan. The Final Construction Plan must include all items specified in Section 410.1-2 items A-F, which include the existing and proposed final grades, the location of all erosion and sediment control structural practices, and erosion and sediment control notes related to construction sequence, seeding specifications, filter barrier and silt fence placement notes and details, jute mat protection (or equivalent), among other items. Construction Plans are reviewed by the Building Department/Water Resources Department engineer, and if a portion of the storm water conveyance system is located within the road right-of-way, the Engineer's Office. Any comments are sent to the applicant in a plan review letter, and a face-to-face meeting may be held at the applicant's request. As with subdivisions and commercial/industrial developments, all sediment and erosion control measures must be in place before a Building Permit is issued.
3. *Construction of residential homes on single lots:* A preliminary plan is not required for these developments. A site plan indicating sediment and erosion control measures must be submitted

with each set of building plans for one-, two-, and three-family dwellings. For these types of developments, review of the erosion and sediment control measures are typically handled in the field by the Building Department's site inspector.

4. *Cut, fill or grading on existing parcels in excess of 100 cubic yards:* A preliminary plan is not required for these activities. The site plan must indicate existing and proposed drainage systems and all sediment and erosion control measures. Similar to residential homes on single lots, review of the erosion and sediment control measures for cut, fill or grading activities on existing lots are typically handled in the field by the Building Department's site inspector.
5. *Amelia Plan Review Process:* The Village of Amelia has adopted the Clermont County WMSC Regulations, but elected to conduct its own enforcement through 2009. Amelia is now in the process of developing an agreement with the Clermont County Building Department to enforce the regulations within the municipal limits. This would include everything from plan review to site inspection and enforcement. An agreement is expected to be in place by the end of 2010.

*Milford Plan Review Process:* Like Amelia, the City of Milford has adopted the Clermont County WMSC regulations as its own. It has also elected to enforce the regulations rather than contract with the County and continues to do so. Under Milford's plan review process, all types of development are handled the same way. The City Engineer reviews on all development plans for compliance with the WMSC regulations. Comments are provided to the applicant and a review meeting may be scheduled. Ultimately, the development plans are submitted to the Milford Planning Commission for approval. After approval of the plans, permits are obtained through the Milford's Building Department, which is also run by the City Engineer. The appeals process is managed by the Board of Zoning Appeals in accordance with section 1131.01 of the Milford Zoning Ordinance.

### **C. Procedures for Site Inspection and Enforcement**

All WMSC site inspections are conducted by the Clermont County Building Inspection Department, except in Milford, where inspections are conducted by city personnel. (Amelia will soon enter into an agreement with the County to conduct site inspection and enforcement activities). Three general types of inspection are conducted by Building Department staff. The first is the WMSC Site Preparation Inspection. For subdivisions, commercial and industrial developments, a Site Development Permit must be obtained prior to the issuance of a Building Permit. This permit requires that the approved erosion and sediment control measures be installed prior to any clearing or grading. Building Department inspectors will check to make sure the necessary BMPs have been properly installed before allowing any construction to begin.

The second type of inspection is the WMSC Rough Inspection. During these site visits, Building Department personnel inspect the construction entrance, the sediment basin and all other erosion and sediment control BMPs to ensure that they have been properly installed, are functioning as intended, and are being maintained. The Building Department site inspector is also responsible for reviewing other aspects of the development, including the water distribution and sanitary sewer collection systems, and will typically check erosion and sediment control measures while other inspections. Because the inspector is responsible for multiple aspects of the development, he may conduct multiple site visits a week. If any deficiencies are noted, the Building Inspector will verbally notify the responsible party of the deficiency and require that measures be taken to correct the situation within a specified

length of time. Written notices are utilized as needed if verbal comments aren't addressed, following the procedures set forth in the WMSC regulations.

Once the storm water conveyance system is completed and functioning, and the site is at final grade, the Building Department will conduct a WMSC Final Inspection to ensure that the final site stabilization has been achieved, the site has been seeded and mulched, and that the storm water conveyance system and post-construction BMPs have been constructed in accordance with the approved Construction Plan.

Article 3, Section 330 of the WMSC Regulations contains the enforcement provisions. Briefly, the regulations state that the Building Inspection Department will verbally notify the responsible party of any violations of the WMSC regulations, and require that measures be taken to correct the situation within a specified length of time. If the permittee continues work in violation of the WMSC Regulations, action shall be taken by the Building Inspection Department in accordance with Section 307.79 of the Ohio Revised Code. Other measures that may be used to ensure compliance include the issuance of Stop Work Orders, withholding a Certificate of Occupancy, or permit revocation.

*Milford site inspection/enforcement* - The City Engineer, as head of the Milford Building Department, administers and enforces the WMSC regulations within the city limits. Inspections of erosion and sediment control measures and the construction of permanent structural BMPs are done in conjunction with other building inspections, including footer inspections, framing inspections and insulation inspections. WMSC-only inspections may be conducted if the City Engineer notices problems on the site or complaints are received. A final site inspection is completed when the site has been permanently stabilized. If problems are noted, verbal comments are given first, followed by a written letter with time constraints specified for each corrective action needed. If problems are still not rectified following the written notice, the City Building Department may issue a stop work order or a citation may be issued and the issue at hand is handled in the Mayor's Court.

#### **D. WMSC Data Management**

The Clermont County Building Department tracks all aspects of an erosion and sediment control plan from the initial review to project close-out in its Hansen database. Upon the submittal of a permit application, a Project Number is assigned in Hansen. All reviewers of the WMSC Plan post any comments they have in Hansen under the appropriate Project Number (except for the Engineer's Office and Clermont SWCD, which submit comments in writing to Planning Department staff, who then input the comments into Hansen). At any time, the Planning Department or other Hansen user can view any plan revisions that are still required before final approval is granted. Once construction begins, the Building Department tracks inspections through Hansen, including any deficiencies noted and the status of any corrective measures that the Department's inspectors require. Prior to a site visit, inspectors can view the history of site inspections in Hansen, along with any problems that have not yet been addressed. Inspection results are tracked in Hansen until final site stabilization has been achieved and the project has been closed out.

#### **E. Construction BMP Education Programs**

1. *Construction BMP Manual*: From 2005-06, the Division of Storm Water Management partnered with Miami University's Institute of Environmental Sciences to develop a manual of construction best management practices. The manual includes fact sheets for numerous BMPs, each with information

regarding usage, benefits, limitations, installation tips, maintenance requirements, estimated costs, alternatives and vendors. Fact sheets available include:

Erosion Control BMPs

Anionic Polyacrylamide  
Earth Dikes  
Geotextiles  
Hydroseeding  
Mulching  
Riprap  
Seeding  
Slope Drain  
Sodding  
Soil Roughening

Sediment Control BMPs

Check Dam  
Fiber Roll/Sediment Log  
Gravel Berm Bag  
Sandbag Barrier  
Sediment Basin  
Sediment Trap  
Silt Fence  
Storm Drain Inlet Protection  
Vegetative Buffer Strip

Site Maintenance BMPs

Dust Control  
Entrance/Outlet Tire Wash  
Stabilized Construction Exit  
Street Sweeping  
Temporary Stream Crossings

Each fact sheet is available online at [www.clermontstorm.net/escbmps.aspx](http://www.clermontstorm.net/escbmps.aspx). It should be noted that the fact sheets are not intended to provide engineering specifications for the various erosion and sediment control BMPs. For this type of information, the web site refers the user to the Ohio Rainwater and Land Development Manual (a direct link is provided).

2. *Southwest Ohio Erosion and Sediment Control Field Day:* In 2008, the Division of Storm Water Management’s Program Manager joined the planning committee for the annual Southwest Ohio Erosion and Sediment Control Field Day. This event, first held in 2003, brings together representatives from the development community, design firms, homebuilders, regulators from various jurisdictions, vendors of current erosion and sediment control products and other varied NPDES Phase II stakeholders throughout southwest Ohio. The event aims to promote soil conservation and stormwater pollution prevention as it relates to the construction industry, showcase current practices and new technologies that are on the market to satisfy the regulatory requirements, and also serves as a forum to discuss current or upcoming trends and regulations. The event has typically been held in early summer; however, in an effort to better reach the target audience, the 7<sup>th</sup> annual Field Day was held in February 2010 at the Clermont County Fairgrounds in Owensville. While attendance was up slightly and the event was a success, weather prohibited the outdoor demonstration of erosion and sediment control practices. As a result, the committee has decided to hold the next Field Day in late summer or early fall of 2011. After this event, the dates and locations of future Field Days will be evaluated by the committee.
3. *CPESC Training Information:* The Division of Storm Water Management will promote any training or exams for the Certified Professional in Erosion and Sediment Control (CPESC) program that will be held in the Greater Cincinnati area or elsewhere in Ohio through the “Hot Topics” section on its web site ([www.clermontstorm.net](http://www.clermontstorm.net)), and through its “Stormwater E-News” mailing list described under the “General Education Programs” section in Chapter I.
4. *“Erosion Control” Magazine:* The Division of Storm Water Management will provide information about subscriptions to *Erosion Control* magazine, published by Forester Communications (which also publishes *Stormwater* magazine and hosts the national StormCon conference). A link to *Erosion Control* will be posted on [www.clermontstorm.net](http://www.clermontstorm.net). Information will also be made available during Erosion and Sediment Control Field Days.

**F. Program Evaluation and Assessment**

At the end of each year, the Building Inspection Department and the Division of Storm Water Management will review the effectiveness of each of the tasks listed above and make any changes that are deemed necessary. Any such changes will be included in the Annual Report to Ohio EPA.

**G. Measurable Goals**

1. *WMSC Plan Review*

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Evaluation of concept/preliminary plans and construction plans as submitted	Ongoing	Clermont Building Dept. Clermont Planning Dept. Clermont Engineer’s Office Clermont SWCD Div. of Storm Water Mgt. Clermont Health District City of Milford

2. *WMSC Site Inspections and Enforcement*

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Inspect erosion and sediment control BMPs and other aspects of WMSC regulations at construction sites	Ongoing	Clermont Building Dept. City of Milford
Agreement for County enforcement of WMSC regulations within Amelia village limits	December 2010	Clermont Building Dept. Amelia Village

3. *WMSC Data Management*

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Maintain WMSC plan review/inspection and enforcement database/records	Ongoing	Clermont Building Dept. City of Milford

4. *Construction BMP Education Programs*

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Maintain online fact sheets for multiple construction runoff control BMPs	Ongoing	Div. of Storm Water Mgt.
Erosion & Sediment Control Field Day	Winter 2010 Fall 2011 (re-evaluate in 2012)	Div. of Storm Water Mgt Clermont SWCD
Promotion of training opportunities and available education materials via Clermont Storm Water E-News and web site	Ongoing	Div. of Storm Water Mgt.

## **V. Post-Construction Storm Water Management**

As mentioned in Chapter 4, Clermont County has established and will continue to maintain and enforce the Water Management and Sediment Control (WMSC) Regulations, most recently adopted by the Board of County Commissioners in June 2007. In addition to erosion and sediment control requirements, the WMSC regulations include rules and design criteria pertaining to post-construction BMPs.

This chapter will summarize the key components of the WMSC regulations relating to post-construction storm water management, including information on structural and non-structural BMPs, the pre-construction plan review process, inspections to ensure as built per requirements, procedures in place to ensure long-term operation and maintenance, information on BMP demonstration projects, and activities that raise awareness and promote the use of alternative post-construction BMPs.

### **A. Clermont County Water Management and Sediment Control Regulations**

Clermont County utilizes its Water Management and Sediment Control regulations as the regulatory mechanism for addressing storm water runoff from new development and re-development. A full copy of the current WMSC Regulations can be obtained by visiting the Clermont County Building Inspection Department's web site at <http://permit.clermontcountyohio.gov> and clicking on "WMSC Regulations" under the main navigation menu.

Article 3.0 of the WMSC Regulations provides the requirements for when on-site storm water detention is needed, as well as maximum runoff velocity requirements for situations where on-site detention is not required. Chapter 3 also restricts detention or retention basins from being located in an existing natural watercourse or public right-of-way.

Article 5.0 of the WMSC Regulations contains the design criteria for various structural BMPs. Section 510 provides the criteria for defining the critical storm. The WMSC regulations state that the post-development peak rate of runoff from the critical storm and all more frequent storms shall not exceed the pre-development peak rate of runoff from a one-year storm of 24 hours duration. Storms occurring with less frequency than the critical storm shall have peak runoff rates equal or less than the peak rates of runoff for the same frequency storm under pre-development conditions.

Section 520 contains the design methods for determining if on-site detention is needed and what volume of detention will be required. For all construction activities involving the disturbance of five or more acres of land, the post-construction BMP must be sized to treat the water quality volume (the volume of runoff from a 0.75 inch rainfall) and ensure compliance with Ohio's Water Quality Standards in OAC Chapter 3745-1.

Section 530 contains design requirements and specifications for detention and retention basins. Detention and retention basins must be designed to limit the critical storm flow out of the basin to the one-year pre-developed rate and also have the capacity to store all storm frequencies greater than the critical storm up to the 100-year storm event and release the outflow at the pre-developed rate for like years. Section 530 provides target draw-down times for various BMPs, including basins, infiltration BMPs, vegetated swales and filter strips, bioretention and constructed wetlands. This section also allows for the use of alternative structural BMPs, provided the permittee can demonstrate that it is equivalent in effectiveness to approved BMPs.

In order to ensure that the County's WMSC regulations are at least as stringent as Ohio EPA's Construction General Permit, the County initiated a review of the regulations in 2009. A draft revision of the WMSC regulations will be available for public review and comment by the end of 2009. As with the last revision, a public stakeholder committee will be assembled to review the draft revisions. All comments will be considered, with changes made to the draft where appropriate. Two public hearings will be held once the final draft has been completed. It is anticipated that the revised regulations will be adopted by the Board of County Commissioners and become effective in 2010. The four municipal co-permittees will review and adopt the new regulations shortly thereafter.

#### **B. WMSC Plan Submittal and Review**

The submittal and review process for design and construction plans for post-construction storm water management controls follows the same process for outlined for the submittal and review of erosion and sediment control plans outlined above in Section IV.B. Storm water analysis calculations are required to be submitted with the design (preliminary) plan. At this stage, the analysis must indicate the design method, and provide the critical storm calculations and, if on-site detention is required, the calculations indicating the volume of detention that will be provided. In addition to these calculations, the construction plans must show the proposed location, design calculations and details for all post-construction BMPs. Easements for the BMPs must also be shown. Review of the plans by County staff follows the same procedures for the review of the erosion and sediment control measures contained in the storm water pollution prevention plan.

#### **C. Inspection of Post-Construction Storm Water BMPs**

During construction, it is the Building Inspection Department's responsibility to inspect the installation of any post-construction BMPs. These inspections are conducted along with the inspections of all erosion and sediment control measures. Final inspections help ensure that structural BMPs are built to specifications. Section 710 requires that a surveyor complete a field survey of detention and retention facilities to verify as-built elevations and dimensions. An as-built drawing of the detention or retention facility must be provided to the Building Department along with a certification signed by a Professional Engineer and a Professional Surveyor stating that the facility has been constructed in accordance with the approved plans. The Record Plat will not be signed nor will a Certificate of Occupancy be issued until the certification is submitted to and approved by the Building Department.

#### **D. Maintenance of Post-Construction Storm Water BMPs**

To ensure that structural BMPs are maintained before ownership reverts to the individual or groups of property owners identified on the record plat, Section 720 of the WMSC Regulations that all water management and sediment control facilities be included in the Performance/Maintenance Surety (bond) required by the Clermont County Engineer. Under the 2007 WMSC Regulations, a Performance Bond of 130% is required for any remaining work covered by the regulations before the record plat can be recorded. Periodic inspections are required to ensure the site remains in compliance. Failure to maintain the BMPs could result in action against both the surety and the owner/developer.

Upon expiration of the Performance/Maintenance Surety Bond, the maintenance responsibility for all post-construction BMPs shall revert to the individual(s) or group(s) of property owners as identified on the record plat. The maintenance responsibility is recorded on the deed for the property and on the record plat. Also, reference is made to the entity or individual(s) responsible for maintenance. Section

630.4-3 of the WMSC Regulations requires the WMSC permittee to provide the post-construction operator with a maintenance plan upon completion of construction activities. Neither Clermont County nor its MS4 permit partners have the authority or the responsibility to inspect or maintain privately-owned components of the separate storm sewer system, including detention and retention ponds and other post-construction BMPs.

The WMSC permittee does have the option of submitting a petition to the County for permanent maintenance of a WMSC facility. The petition must be submitted to the Building Inspection Department and the Engineer's Office during the preliminary design stage of the project, and approval must be granted by the Board of County Commissioners. Property tax assessments can then be charged to the individual lots that benefit from the WMSC facility. If the petition is approved, future inspection and maintenance of the facility is the responsibility of the County Engineer's Office. As of 2009, 24 subdivisions in Clermont County have storm water management basins in the ditch petition program (some subdivisions have multiple basins). The Engineer's Office performs a complete inspection of all aspects of the storm water basin once each year, typically in the spring, and any issues or problems are documented. One to two mowings are conducted during the growing season. Other types of maintenance are performed as needed.

#### **E. Clermont County Subdivision Regulations**

The Clermont County Subdivision Regulations contain several requirements that serve to reduce impervious area in new developments and protect nearby watercourses or other sensitive areas from the impacts of storm water runoff. The Subdivision Regulations were most recently revised and enacted on October 1, 2005. A full copy of the Subdivision Regulations can be obtained at <http://planning.clermontcountyohio.gov/AdoptedSubdivisionRegulationsFinalEnacted.pdf>.

1. *Sensitive Development Areas*: The Clermont County Subdivision Regulations, as adopted in October 2005, contains rules designed to protect "Sensitive Development Areas." Sensitive Development Areas are defined as any land or soils that, if subjected to improper use or management, are otherwise determined to be incapable or unsuitable of urban use. They can also be considered those lands that pose special hazards to development or the environment and may require special use, design and engineering restrictions. Sensitive Development Areas include:

- the beds and banks of perennial and intermittent streams;
- alluvial flood plains (soil types are specified);
- lands in the floodway of any existing watercourse, as defined by the Federal Emergency Management Agency's Flood Hazard Boundary Maps, or by the U.S. Army Corps of Engineers;
- lakes and ponds intermittently filled with water (soil types are specified);
- wetlands;
- surface and subsurface quarries and gravel pits;
- bedrock escarpments; and
- steep slopes and erosion hazards (percent slope and soil types are specified)

If any of the above is present at the proposed development site, the applicant must demonstrate that satisfactory efforts have been made to mitigate any special hazards. If the development area contains alluvial soils or lands in an existing floodway, the applicant is required to delineate the 100-year flood plain. And indicate these on the design plans, construction drawings and record plat. If

wetlands or wetland soil types (Blanchester, Clermont or Mahalasville silt loams) are present, a wetland delineation is required. The Clermont County Planning Commission may require conservation easements on lands designated as Sensitive Development Areas, open space or other areas deemed to be exceptional in character.

2. *Open Space:* The Subdivision Regulations encourage every applicant to provide open space. An applicant may designate all or part of a Sensitive Development Area as open space. Any lands dedicated for open space purposes shall contain appropriate covenants and be noted on the record plat, indicating that the intended use will continue in perpetuity, that future development of the open space will not be contrary to its stated use, and provisions for maintenance.
3. *Flood Plain Development:* Section 522 of the Subdivision Regulations states that if a stream flows through or adjacent to a proposed subdivision, the plat shall provide a storm water drainage easement sufficient to accommodate the 100-year storm event.
4. *Planned Unit Developments:* The October 2005 Subdivision Regulations states greatly encourage the use of planned unit developments that are intended to be in harmony with the natural site features. Section 702 states that the Planning Commission may modify Article V standards for residential lots less than five acres provided that the modification will meet several objectives, including the conservation of natural amenities of the landscape and the provision of open space.

#### **F. Middle East Fork Watershed Balanced Growth Initiative**

In 2009, Clermont SWCD was one of six recipients across the state to be awarded a grant through the Ohio Water Resources Council to develop a Balanced Growth Watershed Plan for a sub-watershed of the East Fork Little Miami River. Over the next two years, Clermont SWCD and Clermont County's Planning Department will be working with local jurisdictions to develop a Balanced Growth Plan for the Middle East Fork. This sub-watershed is 56 square miles in total area and is located entirely in Clermont County. The Middle East Fork consists of two 14-digit Hydrologic Units (HUC 05090202-120-030, HUC 05090202-120-040) and includes approximately 1,980 acres of Harsha Lake.

Jurisdictions with regulated MS4s involved with the project include Clermont County, the Villages of Amelia and Batavia, and Batavia, Monroe, Pierce, Stonelick and Union Townships. Communities outside the urbanized area involved in the initiative include Jackson, Tate and Williamsburg Townships. Representatives from these jurisdictions will work together to develop the Balanced Growth Plan, identifying priority areas for conservation and development. Jurisdictions will also work together to develop a suite of best local land use practices and model ordinances to implement the plan. A final plan is expected to be completed by December 30, 2011.

#### **G. Milford Post-Construction BMP Credits Program**

The City of Milford offers opportunities to non-residential property owners to obtain credits of up to 50 percent of their storm water utility fee if they establish and maintain one or more water quality best management practices. Types of BMPs eligible to receive credit include:

- Filter/buffer strips
- Infiltration trenches
- Water quality ponds
- Detention/retention ponds
- Dry wells
- Grass line conveyance

- Riparian buffers
- Stream restoration
- Active participation in Adopt-a-Road or Stream programs
- Storm water education programs

Those interested in receiving a BMP credit must submit an application along with supporting documentation to the City. To maintain a credit, the property owner must submit an annual management and maintenance report on each BMP for which credit has been granted. Failure to submit a report results in cancellation of the credit. Details on the credit program are provided in the Storm Water Credits Application Form, which can be viewed at [www.milfordohio.org/pdf/stormwater/SW\\_Credits\\_Application\\_Forms\\_2008rev.pdf](http://www.milfordohio.org/pdf/stormwater/SW_Credits_Application_Forms_2008rev.pdf).

#### **H. Pierce Township Green Space Program**

In March 2007, the Pierce Township Trustees officially created its Green Space Committee and program. The mission of the Green Space Program is to preserve land – via acquisition, conservation easement, conservation development, covenants or other methods – that has ecological or historical significance, natural corridor potential, aesthetic or scenic value, or inherent traits that contribute to the positive character of the Township. The Green Space Committee meets on the first Wednesday of each month.

The Township’s maintains a Green Space Program web site at [www.piercetownship.org/main/node/54](http://www.piercetownship.org/main/node/54). Among the items included on the web site are:

- the program mission and a copy of the resolution creating the Green Space Committee
- contact information
- information about the benefits of green space
- conservation options for private land owners, including gifts of land, conservation easements, deed restrictions, mutual covenants, and outright/bargain sales
- how township residents can help through gifts of land and conservation easements, financial donations or volunteering

#### **I. Post-Construction BMP Education Programs**

Clermont County and its co-permittees will continue to implement and improve upon the various post-construction storm water management programs developed during the first MS4 permit cycle. Specific details regarding these education programs are provided below. Some of these are also described in more detail under Section B of the Public Education chapter.

1. *Post-Construction BMP Fact Sheets:* As stated in Section I.B., the Division of Storm Water Management will maintain the series of post-construction BMP fact sheets developed in 2005 on its web site at [www.clermontstorm.net/postconstructbmp.aspx](http://www.clermontstorm.net/postconstructbmp.aspx) through the 2009-2014 permit cycle.
2. *Post-Construction BMP Management Guides:* The Clermont County WMSC Regulations require developers to provide maintenance plans for all post-construction BMPs, including detention and retention ponds, to the post-construction BMP operator. The Division of Storm Water Management will develop templates of management plans for detention/retention ponds that can be used by developers to meet the WMSC requirements. These will also be provided to homeowners

associations and individuals who currently have the responsibility of maintaining storm water ponds that were constructed before this regulation went into effect.

3. *Pond Management Workshop*: The Clermont Soil & Water Conservation District will hold an annual pond management clinic that will provide information on retention basins as well as ponds that have been constructed for purely aesthetic or recreational purposes. The clinic is typically held in April of each year.
4. *Rain Garden and Bioretention Education Programs*: Clermont County will make the promotion of rain gardens and bioretention a focal point of its public education program. Activities to be conducted under the rain garden education program include: supplying local plant nurseries with copies of the County's rain garden brochure to give to their customers, maintaining the Clermont County Rain Garden Central web site, conducting annual rain garden workshops for the general public, maintaining the demonstration rain gardens at Pattison Park and at Clermont SWCD offices in Owensville, and providing technical assistance to local schools to help maintain the demonstration rain gardens created in 2009 under an Ohio Environmental Education Fund grant. Each of these is described in more detail in Section I.B above.
5. *Conservation /Low Impact Development*: During the 2009-2014 permit cycle, the Division of Storm Water Management and/or the Soil & Water Conservation District will partner to provide at least one presentation regarding various aspects of conservation/low impact development to the Clermont County Planning Commission and each of the Zoning Commissions for the Phase II communities in Clermont County. An offer will be made to present the same information to the Clermont County Homebuilders Association. Additionally, educational information related to conservation /low impact development, including information on conservation easements and riparian setbacks, will be included on the Division of Storm Water Management's web site.
6. *Tools for Open Space Protection: Guidance and Options for Local Governments*: In June 2005, the Clermont County Planning Commission completed the development of a document entitled *Tools for Open Space Protection: Guidance and Options for Local Governments*. This document was created to provide local governments with an objective process that can be used to identify land areas with current and potential open space attributes; with guiding principles to compare the relative value of multiple open space parcels; and with a compilation of available tools which can be used to protect open space. The Planning Department continues to maintain a link to this document on its web site at <http://planning.clermontcountyohio.gov>.

#### **J. Program Evaluation and Assessment**

At the end of each year, the Building Inspection Department and the Division of Storm Water Management will review the effectiveness of each of the tasks listed above and make any changes that are deemed necessary. Any such changes will be included in the Annual Report to Ohio EPA.

**K. Measurable Goals**

1. *WMSC Plan Review*

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Evaluation of post-construction storm water management plans for new development	Ongoing	Clermont Building Dept. Clermont Planning Dept. Clermont Engineer’s Office Clermont SWCD Div. of Storm Water Mgt. Clermont Health District City of Milford Village of Amelia

2. *Post Construction BMP Inspection and Maintenance*

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Inspection of ditch petition storm water basins	Once annually	Clermont Engineer’s Office
Maintenance of ditch petition storm water basins	As needed	Clermont Engineer’s Office
Inspection of private storm water basins	Only during construction phase	Clermont Building Dept.

3. *Storm Water Utility Credits for Post-Construction BMPs*

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Evaluation of post-construction BMPs eligible for storm water utility credit	Annually	City of Milford

4. *Middle East Fork Balanced Growth initiative*

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Develop Balanced Growth Plan for Middle East Fork Watershed	By December 2011	Clermont SWCD Clermont County Village of Amelia Village of Batavia Batavia Township Monroe Township Pierce Township Stonelick Township Union Township

5. *Pierce Township Green Space Program*

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Green Space Committee Meeting	Monthly	Pierce Township

6. *Post Construction BMP Education Programs*

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Maintain online fact sheets for post-construction BMPs	Ongoing	Div. of Storm Water Mgt
Develop templates for detention/retention basin maintenance plans, distribute to private owners/operators	By 2011	Div. of Storm Water Mgt. Clermont Co. Building Dept. Clermont SWCD
Conduct pond management workshops	Annually	Clermont SWCD
Rain Garden Education Program	---	---
Distribute "How-to" brochures to local plant nurseries	By 2010	Div. of Storm Water Mgt. Clermont SWCD
Maintain "Rain Garden Central" web site	Ongoing	Div. of Storm Water Mgt.
Conduct rain garden public workshop	Annually	Clermont SWCD Div. of Storm Water Mgt.
Maintain two existing demonstration rain Gardens; create 3 <sup>rd</sup> demonstration garden	Ongoing; 3 <sup>rd</sup> garden by 2012	Clermont SWCD Div. of Storm Water Mgt.
Provide technical assistance to local schools regarding garden maintenance and classroom activities	Ongoing	Clermont SWCD Div. of Storm Water Mgt.
Offer 10 \$100 grants for creation of new residential rain gardens	Annually	Clermont SWCD
Low impact development presentation to Clermont Planning Commission and Zoning Commissions	By 2014	Clermont SWCD Div. of Storm Water Mgt.

## **VI. Pollution Prevention / Good Housekeeping**

Clermont County and its municipal and township co-permittees will continue to implement their individual inspection, operation and maintenance programs designed to reduce the discharge of pollutants into the MS4, and work together to examine and improve upon existing programs, and develop pollution prevention training programs for county, municipal and township personnel . Specifics details regarding the different pollution prevention programs and activities are presented below.

### **A. Local Government Storm Water Pollution Prevention Plans**

Within two years of the effective date of the MS4 permit, Storm Water Pollution Prevention Plans (SWP3) will be developed for all county, municipal and township vehicle maintenance facilities, bus terminals and impoundment lots in the urbanized area. There are no composting facilities or waste transfer stations in the county operated by any of the Clermont County MS4 permittees. The SWP3s will be developed in accordance with the requirements of Ohio EPA's Industrial Storm Water General Permit (OHR000004). Facilities for which SWP3s will be developed include:

- Clermont County Fleet Maintenance Facilities on Filager Road (includes maintenance for Clermont Transportation Connection buses and county impoundment lot)
- Clermont County Engineer's Office Highway Operations
- Miami Township Fleet Maintenance Operations
- Pierce Township Fleet Maintenance Operations
- Union Township Fleet Maintenance Operations

### **B. Operation and Maintenance Programs**

In 2007, the Division of Storm Water Management began helping each of the regulated municipalities and townships document their individual operation and maintenance programs as they relate to storm water pollution prevention. This process involved Storm Water staff conducting site visits with each of the co-permittees and recording and documenting their existing programs. Based on these site visits, the Storm Water Division, with input from each of its partners, created draft summaries of the operation and maintenance programs for each entity. These were included in Appendix 6 of the 2008 Annual Report. In 2010, the Division of Storm Water Management will work with its partners to review and where necessary, revise the operation and maintenance plans to ensure that they specifically address the following areas:

- maintenance activities, maintenance schedules and long-term inspection procedures for controls to reduce the discharge of floatables and other pollutants to the MS4 from roads, parking lots, maintenance and storage yards and sand/salt storage locations;
- descriptions of roadway and parking lot winterization plans, including application rates and controls to reduce the discharge of road salt or other products used to prevent ice build-up or remove ice and snow from roadways and parking lots;
- procedures for the proper disposal of waste removed from the MS4; and
- procedures to ensure that flood management projects are assessed for impacts on water quality.

### **C. Government Employee Training Programs**

Each of the MS4 co-permittees will implement an annual training program for employees involved in activities related to storm water management. The training programs may address road winterization programs, parks and open space maintenance, fleet and building maintenance, new construction and land disturbances, and maintenance of the MS4. Training topics will likely vary from year to year and may be conducted externally or in-house. At least once during the permit cycle, service department personnel for each permittee will review the training video published by Excal Visual entitled “Municipal Storm Water Pollution Prevention Storm Watch: Everyday Best Management Practices.”

In addition to the individual training programs, the Clermont County Storm Water Management Division will host at least one pollution prevention/good housekeeping training program each year for its MS4 permit partners. The topics presented at the annual training sessions will vary from year to year. The Division will also post pollution prevention fact sheets and other information on the “Phase II Partner Information” page of its web site ([www.clermontstorm.net/phaseIIpartner.aspx](http://www.clermontstorm.net/phaseIIpartner.aspx)).

### **D. Inspection and Maintenance Programs**

Each of the Clermont County MS4 permittees have developed a variety of inspection and maintenance programs that address maintenance of the individual MS4s, erosion and sediment runoff control in roadside ditches, road de-icing programs, fleet maintenance and solid waste management to reduce floatables and other pollutants. The Division of Stormwater Management will work with each permittee to document and summarize the inspection and maintenance programs for each permittee, including maintenance activities and schedules, and the procedures for the proper disposal of waste collected from the MS4. This will be completed within two years of the effective date of the MS4 permit.

### **E. Pollution Prevention Education Programs**

The Division of Storm Water Management will lead the effort to coordinate the various pollution prevention education programs, including training programs, the development of web-based educational materials, and direct mailings of brochures to Clermont County industries. The training programs are discussed in Section C above. Details on web site materials and direct mailings are provided below.

1. *Web Site Educational Materials:* A wide variety of pollution prevention tips and information is on the Division of Storm Water Management’s web site at [www.clermontstorm.net/p2.aspx](http://www.clermontstorm.net/p2.aspx). The target audiences for this site are home owners and businesses – separate sections are included for each. The residential pollution prevention section includes information on auto care, home care and remodeling, household waste disposal, lawn and garden care, litter prevention, pet waste disposal and septic system care and maintenance. As of December 2009, the pollution prevention section for commercial and industrial businesses includes information on general workplace practices and auto care. Additional topics will be added to this site during the course of the 2009-2014 permit cycle. The web site also includes PDFs of the following brochures: “When it Rains, Clermont Drains,” “Household Illegal Discharge and Pollution Prevention Guide,” “Pollution Prevention for Automotive Repair and Maintenance,” and “Storm Water Pollution Control for Industrial Facilities.”
2. *Industrial Pollution Prevention Fact Sheet:* In 2005, the Division of Storm Water Management developed an industrial pollution prevention brochure and directly mailed a supply of the brochures

to all industrial businesses in the Phase II urbanized area. A copy of the brochure can be seen at [www.clermontstorm.net/industrialp2brochure.pdf](http://www.clermontstorm.net/industrialp2brochure.pdf). A second direct mailing of the brochure to all urbanized area industries will be conducted mid-way through the 2009-2014 permit cycle.

**F. Program Evaluation and Assessment**

The pollution prevention and good housekeeping programs for each of the Clermont County MS4 permittees are continuously reviewed by local government staff throughout the year. Improvements may be made at any time. The programs are also reviewed at the end of each calendar year in concert with the preparation of the annual report. Any significant changes will be included in the report.

**G. Measurable Goals**

1. *Development of Storm Water Pollution Prevention Plans*

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Development of SWP3s for county, municipal and township fleet maintenance activities and bus terminals	By January 2011	Div. of Storm Water Mgt. Clermont Co. Engineer's Office Clermont Co. Fleet Maint. Miami Twp Fleet Maint. Pierce Twp Fleet Maint. Union Twp Fleet Maint.

2. *Operation and Maintenance Programs*

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Update summaries of storm water-related operation and maintenance plans for MS4 co-permittees	By April 2011	Div. of Storm Water Mgt. All MS4 co-permittees
Operation and maintenance record keeping	Ongoing	All MS4 co-permittees

3. *Pollution Prevention Training Programs*

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Pollution prevention training for storm water personnel of MS4 co-permittees	Annually	All MS4 co-permittees
Conduct county-wide storm water pollution prevention workshop	Annually	Div. of Storm Water Mgt.

4. *Pollution Prevention Education Programs*

<b>Task</b>	<b>Time Frame</b>	<b>Participants</b>
Maintain pollution prevention educational materials on web site	Ongoing	Div. of Storm Water Mgt.
Direct mailing of industrial pollution prevention brochure to Clermont County industries	Once during MS4 permit cycle	Div. of Storm Water Mgt.