

**WAYNE COUNTY**  
**STORM WATER MANAGEMENT REGULATIONS**  
**GUIDANCE DOCUMENT**

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# **SECTION ONE**

## **STORM WATER MANAGEMENT REGULATIONS OVERVIEW**

### **1.1 PURPOSE AND GOALS**

The Wayne County Commissioners developed the Storm Water Management Regulations with the goals of protecting the residents of Wayne County from the impacts of storm water runoff pollution, sedimentation and erosion during and after construction and preserving the aesthetic beauty and functionality of the open ways. Storm water management consists of the procedures and regulations that enable Wayne County to identify and mitigate conditions that erode the quality of the open waterways and to maintain Wayne County's compliance status with the storm water management requirements of the Ohio Environmental Protection Agency (EPA). The purpose of this Guidance Document is to provide residents and contractors working within the unincorporated areas of Wayne County with the information needed to comply with Wayne County's Storm Water Management Regulations.

This document was developed to supplement the user's understanding of the regulation. Where any conflicts between this document and the regulations exist, the regulations govern. Compliance with the information provided in this document does not relieve any person from any responsibilities, liabilities or penalties as provided in the Storm Water Management Regulations.

### **1.2 FORMAT OF DOCUMENT**

This document was developed to provide guidance for compliance with the Storm Water Management Regulations. It is intended as a living document that is reviewed and updated to reflect Wayne County's increasing understanding of the roles and impacts activities have on the quality of life in the open waterways.

This document is organized into four sections:

Section One: Storm Water Management Guidance Document Overview

Section Two: Illicit Discharge Program

Section Three: Construction and Post-Construction Management Program

Section Four: Facility Maintenance Program

Appendices are located at the end of the document. Source and other outside references are referenced throughout this guidance document. Such references are not included as appendices to avoid any confusion over current and superseded versions.

## 1.3 PLAN OVERVIEW

The Storm Water Management Regulations were developed based on:

- the Six Minimum Controls that are a part of the Storm Water Phase II regulations (see Section 1.4 Federal and State Regulations)
- Ohio Revised Code Chapter 1515 Soil and water conservation commission
- Ohio Revised Code Chapter 6101 Conservancy districts
- Ohio Revised Code Chapter 6117 Sewer districts and county sewers
- Ohio Revised Code Chapter 6119 Regional water and sewer districts
- Ohio Revised Code Chapter 6131 Single county ditches
- Ohio Revised Code Chapter 6137 Ditch maintenance fund
- Ohio Revised Code Section 307.79 Rules to abate soil erosion and water pollution by soil sediment caused by land development for nonfarm purposes

The Illicit Discharge Program establishes regulations that ban the discharging of non-storm water discharges into the storm water system operated and maintained by Wayne County. This program includes procedures for identifying, reporting and mitigating illicit discharges.

The Construction and Post-Construction Management Program specifies the limits for discharging from development sites during and after construction. The program includes methodologies for calculation and procedures for acquiring and maintaining permits.

The Facility Maintenance Program provides for the long-term maintenance of privately constructed storm water facilities.

## 1.4 FEDERAL AND STATE REGULATIONS

### 1.4.1 CLEAN WATER ACT AND NPDES PROGRAM

The regulations that drive these Storm Water Management Regulations are derived from the Federal Water Pollution Control Act, known as the Clean Water Act (CWA). The CWA establishes a basis for regulating the discharge of pollutants into the waters of the United States. The CWA was originally enacted in 1972 and has been amended several times. The U.S. EPA is responsible for the implementation of the CWA through the National Pollutant Discharge Elimination System (NPDES).

In 1990, the EPA developed Phase I of the NPDES Storm Water Program. This program addressed sources of storm water runoff that have the greatest potential to negatively impact water quality. Under this program, NPDES permit coverage for storm water discharges is required from Municipal Separate Storm Sewer Systems (MS4) serving populations of 100,000 or more and for eleven categories

of industrial activity, which includes construction activities that disturb five (5) or more acres of land.

In 1999, the Final Rule for Phase II of the NPDES Storm Water Program was published. This program addressed MS4s of less than 100,000 people in urbanized areas and construction activities that disturb between one (1) and five (5) acres of land.

#### **1.4.2 OEPA AND STORM WATER PERMITTING**

The CWA allows the U.S. EPA to designate duly authorized agents to administer and enforce the NPDES Program. In Ohio, the Ohio EPA is the duly authorized agent and the U.S. EPA retains oversight responsibilities. This enables the Ohio state government to implement, permit and enforce many aspects of the NPDES Program. Ohio EPA permits discharges from

- Publicly-Owned Treatment Works
- Industrial Treatment Works
- Municipal Separate Storm Sewer Systems (MS4)
- Industrial Storm Sewer Systems
- Construction Activities (Storm Water)
- Concentrated Animal Feeding Operations
- Non-Contact Cooling Water

Storm water regulations were implemented in two phases. Phase I applied to large (>250,000 people) and medium (100,000 to 250,000 people) MS4, industrial facilities and construction activities disturbing 5-acres or more. Phase II applied storm water regulations to separate sewer systems serving populations of 50,000 to 100,000 people, certain publicly owned facilities and construction activities between 1 and 5-acres.

The Phase II Regulations for MS4s apply to owners of storm water conveyance systems located within Urbanized Areas (UAs). UAs are land areas comprised of one or more central places and adjacent densely settled surrounding areas that together have a residential population of at least 50,000 people and an overall population density of at least 1,000 people per square mile. UAs are identified by the U.S. Census Bureau. Portions of Doylestown, Chippewa Township and the unincorporated lands of Wayne County are included in the Akron, Ohio UA. A map of the Akron UA is provided as Figure 1-1. Because a portion of the unincorporated lands of Wayne County is within the UA, Wayne County was required to seek coverage under the Ohio EPA NPDES permit for MS4s.

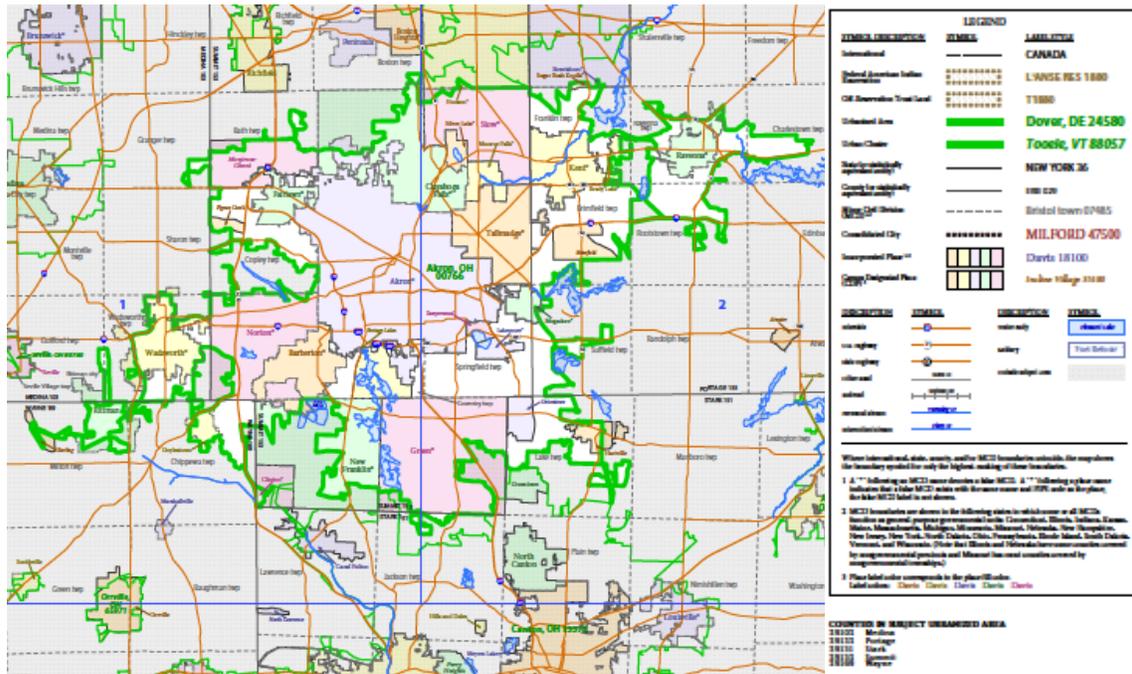
Under the Phase II Rule and through the Ohio EPA NPDES Permit No. OHQ000001 for MS4s, Wayne County was required to:

- Develop, implement and enforce a storm water management program designed to reduce the discharge of pollutants from conveyance systems to

the maximum extent practical, to protect water quality and to satisfy the appropriate water quality requirements of the CWA.

- Include in the storm water management program the following six minimum control measures: public education, public involvement, illicit discharge detection and elimination, construction site runoff control, post-construction runoff control and pollution prevention / good housekeeping
- Identify a selection of Best Management Practices and measurable goals in the permit application.

**FIGURE 1-1. AKRON, OHIO URBANIZED AREA (UA)**



### 1.4.3 OHIO REVISED CODE SECTION 307.79

The County has authority to regulate erosion control, sediment and stormwater management under Section 307.79 of the Ohio Revised Code (ORC). This section gives authority to the Board of County Commissioners to adopt, amend, and repeal regulations to abate soil erosion and water pollution by soil sediment caused by land development. As part of ORC Section 307.79, the County is given the authority by the State of Ohio to make rules to implement Phase II of the Storm Water Program of the NPDES consistent with those rules adopted by the EPA under 40 C.F.R. Part 122.

## 1.5 REFERENCES

EPA 833-F-00-007 Storm Water Phase II Final Rule, Illicit Discharge Detection and Elimination Minimum Control Measure, Fact Sheet 2.5, January 2000 (revised December 2005).

OEPA, Authorization for Small Municipal Separate Storm Sewer Systems to Discharge Storm Water under the National Pollutant Discharge Elimination System, NPDES Permit No. OHQ000001, December 2002.

Wayne County, Phase II Storm Water Management Program, May 2004.

US EPA MS4 Website: <http://cfpub1.epa.gov/npdes/Stormwater/munic.cfm>

OEPA Storm Water Website <http://www.epa.state.oh.us/dsw/storm/index.html>

## **SECTION TWO**

### **ILLICIT DISCHARGE ELIMINATION PROGRAM**

#### **2.1 OVERVIEW**

The objective of the Illicit Discharge Elimination (IDE) Program is to develop, implement and enforce a policy to detect and eliminate illicit discharges into the waters of Wayne County. The IDE program utilizes information provided by residents, Wayne County Maintenance Employees and Wayne County and Township Officials to identify occurrences of illicit discharges.

#### **2.2 ILLICIT DISCHARGES**

Illicit discharges are any releases of water that is not entirely composed of storm water. Sources of illicit discharges include, but are not limited to, sanitary wastewater, septic tank effluent, car wash and laundry wastewaters, spills from roadway accidents and improper disposal of auto and household toxics. The IDE Program does not apply to the following categories of discharges unless the Water Management Engineer identifies them as being a significant contributor of pollutants:

- water line flushing
- landscape irrigation
- diverted stream flows
- rising ground waters
- uncontaminated ground water infiltration
- uncontaminated, pumped ground water
- discharges from potable water sources
- foundation drains
- air conditioning condensation
- irrigation water
- springs
- water from crawl spaces
- footing drains
- lawn watering
- individual residential car washing
- flows from riparian habitats and wetlands
- dechlorinated swimming pool discharges
- street wash water

It should be noted that while the above discharges are not classified as illicit, the impact of such discharges may be considered nuisances if, for example, they adversely affect open waterways and adjacent properties. The Water Management Engineer has the discretion to refer such discharges to the Prosecutor's Office. To avoid any potential problems, contact the Water Management Engineer to review any questionable discharges.

## 2.3 ILLICIT CONNECTIONS

The construction, use, maintenance or continued existence of illicit connections to the MS4 are expressly prohibited. This includes connections made in the past, regardless of whether they were permitted at the time of connection. Illicit connections are physical means by which non-storm water flow is conveyed to a storm water system. This can include, but is not limited to, pipes, ditches, swales and sump pump discharges.

## 2.4 CONTROL OF MATERIALS

Toxic materials, hazardous materials or other debris must be prevented from entering the waters of the County and State. The following practices must be implemented to control materials and debris:

- At construction sites, an appropriately sized covered dumpster shall be made available for the proper disposal of construction site waste materials, garbage, plaster, drywall, grout, gypsum, etc. A second covered dumpster shall be provided for the proper disposal of toxic and hazardous materials.
- The washing of excess concrete material into a street, catch basin, or other public facility or natural resource is prohibited.
- All fuel tanks and drums shall be stored in marked storage areas. A dike shall be constructed around this storage area with a minimum capacity equal to 110% of the volume of the largest container in the storage area. If the fuel tanks have a self-contained "dike," the plug shall be kept in the "dike" tank at all times.
- Any toxic or hazardous material and contaminated soils shall be disposed of properly. Runoff from contaminated sites shall not be allowed to leave the site.
- Proper permits shall be obtained for earth-disturbing activity on solid waste landfill sites.

- Measures shall be taken to prevent soil transport onto public roads, or surfaces where runoff is not checked by sediment controls. Gravel construction entrance(s) shall be implemented as required by the Water Management Engineer and the Ohio EPA.
- At construction sites where soil is transported onto a public road surface, the roads shall be cleaned thoroughly at the end of each day, or more frequently, in order to ensure public safety. Soil shall be removed from paved surfaces by shoveling or sweeping. Street washing shall be allowed only after shoveling or sweeping has removed most of the sediment.

Additional practices should be adopted as necessary to comply with the requirement of controlling materials and debris. Consult the Water Management Engineer for review of practices and recommendations on controls.

## 2.5 WATERCOURSE PROTECTION

Every person that owns, operates and/or maintains property within the unincorporated areas of Wayne County through which a watercourse passes is responsible for maintaining that part of the watercourse within the property as free of trash, debris, excessive, obstructive vegetation and other obstacles. A water course is any definite channel with bed and banks that water continuously or intermittently flows through. Examples of watercourses are streams, creeks and brooks. The purpose of the maintenance is to keep the watercourse free of materials, natural or man-made, that would pollute, contaminate or significantly retard the flow of water through the watercourse.

All vehicles, including construction and recreational vehicles, shall be kept out of water courses. Vehicles shall also be kept out of water resources including wetlands, watercourses and riparian areas. When vehicles must enter and/or cross areas repeatedly, written approval by the Water Management Engineer is required. In such cases, all efforts should be taken to minimize the impact of the vehicle on the resource.

## 2.6 NOTIFICATION OF SPILLS

The following sections contain the procedures for reporting, investigating and eliminating illicit discharges and procedures for enforcement actions and reporting requirement to the Ohio EPA.

### 2.6.1 REPORTING ILLICIT DISCHARGES

Reports of suspected illicit discharges are to be directed to the Wayne County Emergency Management Agency. Reports can be made anonymously and may be mailed or faxed to the following:

Wayne County Emergency Management Agency  
201 West North Street  
Wooster, Ohio 44691  
Phone: 330-262-9817  
Fax: 330-262-2686  
24-hour: 330-287-5700

### **2.6.2 INVESTIGATING ILLICIT DISCHARGES**

The Water Management Engineer fully investigates reports of illicit discharges. Investigations include, as appropriate, site visits, water sampling and testing, soil sampling and testing, photographs and interviews of interested parties. Where an illicit discharge occurs or has occurred, the Water Management Engineer works to identify the party/parties responsible for the violation. The investigation and results are documented and maintained in the Wayne Soil and Water Conservation District Office for a minimum of ten (10) years from the close of the investigation.

### **2.6.3 ENFORCEMENT ACTIONS**

Any illicit discharge under the rule adopted by the Wayne County Storm Water Management Regulations is subject Article 8 of the Wayne County Storm Water Management Regulations. Article 8 of these Regulations authorizes the Water Management Engineer to issue Notices of Violation and Stop Work Orders. Notices and orders are used to prevent discharges and minimize damage to watercourses.

### **2.6.4 ELIMINATION OF ILLICIT DISCHARGES**

The Wayne County Storm Water Management Regulations authorize Wayne County to seek elimination of discharges and connections through injunction or other appropriate relief granted by the Wayne County Court of Common Pleas.

### **2.6.5 REPORTING**

IDE Program activity is reported to the Wayne County Commissioners by the Water Management Engineer on an annual basis. In addition, activity under the IDE Program that occurred in the UA is included in the Annual Report submitted to Ohio EPA by the Wayne Soil and Water Conservation District for the storm water permit. Illicit Discharges that are sanitary in nature and occur within a Wayne County NPDES permit for sanitary sewers are reported by The Wayne Soil and Water Conservation District or Environmental Services in a timeframe consistent with the report requirements of such violations.

## **2.7 REFERENCES**

EPA 833-F-00-007 Storm Water Phase II Final Rule, Illicit Discharge Detection and Elimination Minimum Control Measure, Fact Sheet 2.5, January 2000 (revised December 2005).

OEPA, Authorization for Small Municipal Separate Storm Sewer Systems to Discharge Storm Water under the National Pollutant Discharge Elimination System, NPDES Permit No. OHQ000001, December 2002.

Wayne County, Phase II Storm Water Management Program, May 2004.

## **SECTION THREE**

### **CONSTRUCTION AND POST CONSTRUCTION STORM WATER MANAGEMENT PROGRAM**

#### **3.1 OVERVIEW**

The Construction and Post Construction Storm Water Management Program establishes the basis to control storm water runoff from construction sites and storm water runoff after construction is completed. Earth-disturbing activities within the unincorporated areas of Wayne County are subject to the construction and post-construction storm water management requirements of the Storm Water Management Regulations. The regulations were developed to protect and preserve the streams and rivers. Storm water runoff from construction sites polluted with sediment, fuels and other construction-related substances can quickly erode the quality of rivers and streams. Storm water runoff from areas undergoing new development or re-development can significantly affect waterbodies. Changes in volumes and rates of flow can scour and erode the natural stream beds, exceed the capacity of the systems and deposit pollutants in the waterways.

#### **3.2 STORM WATER CONSTRUCTION (SWC) PERMIT**

A Storm Water Construction (SWC) Permit is required prior to any earth-disturbing activities. The Water Management Engineer may recommend the Wayne County Commissioners grant a variance when evidence shows a hardship exists and compliance is not appropriate based on unusual topographic or other peculiar physical conditions, that the peculiar conditions did not result from previous actions by the owner/operator and that literal interpretation of the regulations would deprive a property owner of rights that are enjoyed by other property owners. Adverse economic conditions is not a basis for a variance. Variances will not be granted where activities may defeat the purposes of the Storm Water program.

The Water Management Engineer may recommend the Wayne County Commissioners grant a waiver of the Storm Water Construction Permit for earth disturbing activities where proposed work does not meet the post-construction storm water management requirements of the regulations. Examples of work that may qualify for a waiver include construction of a single-family home that is not part of a larger development and construction involving the disturbance of less than 1-acre of land that does not meet the definition of a large construction site.

No SWC Permit or SWC Permit Waiver is required for emergency activities needed to protect life, property or natural resources as determined by the Water Management Engineer, or for existing permitted nursery and agricultural

operations, cemetery graves, public highway, transportation or drainage improvement or maintenance projects meeting the sponsoring governmental entity's standard sediment control policies. A SWC Permit or SWC Permit Waiver is not required for sign installation, fences over six feet in height, or activities that do not require a Building Permit from the Wayne County Building Department except grading or filling of 10,000 square feet or more or the creation of 20,000 square feet or more of new impervious area. A SWC Permit or SWC Permit Waiver is not required for a residential building, structure or addition that is not a dwelling and is 600 square feet or less, except swimming pools and attached garages. A SWC Permit or SWC Permit Waiver is not required for a non-residential building, structure or addition that is not adapted for carrying on business and is 600 square feet or less.

Failure to obtain a SWC Permit is a violation of the Storm Water Management Regulations. Penalties of violating these regulations include issuance of stop work orders, issuance of notice of violations and injunctions. Violators may be subject to fines, penalties, compensatory actions and requirements to abate impacts of illegal activities.

### **3.2.1 PERMIT APPLICATION**

Applications for a SWC Permit are available from the Wayne Soil and Water Conservation District. To apply for a permit or permit waiver, applicants must submit a Construction Application for Permit (CAP) a minimum of thirty (30) days prior to the scheduled start of construction to the Water Management Engineer. Requirements of the Wayne County SWC Permit are intended to be consistent with those required by the Ohio EPA for General Storm Water Construction Permits, with several notable exceptions related to Post-Construction Storm Water Management. Failure to meet these requirements can result in the rejection of the CAP.

All reports, certifications or information either submitted to the Water Management Engineer or that these regulations require to be maintained by the permittee shall be signed as follows:

- For a corporation, by a president, secretary, treasurer or vice-president of the corporation in charge of a principal business function or any other person who performs similar policy or decision-making functions for the corporation or by a manager who is authorized to make management decisions;
- For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
- For a municipality, State, Federal or other public agency, by either a principal executive officer or ranking elected official.

All reports required by the permits and other information requested by the Water Management Engineer shall be signed by such person or by a duly authorized

representative of that person. A person is a duly authorized representative only if the authorization is made in writing, the written authorization is submitted to the Water Management Engineer and the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of manager, operator of a well or well field, superintendent, position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the company. A duly authorized representative may be either a named individual or any individual occupying a named position.

If an authorization is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the signatory requirements of these regulations shall be submitted to the Water Management Engineer prior to or together with any reports, information or applications to be signed by an authorized representative.

### **3.2.2 CONSTRUCTION APPLICATION FOR PERMIT (CAP)**

Submission of a CAP is required by the operator/owner to obtain a SWC Permit for any land-disturbance, with the exception of the activities listed in Section 3.2. The CAP applies to all aspects of construction within the unincorporated areas of Wayne County. Requirements set forth by other regulating agencies are not affected by the CAP requirements.

The CAP requires submission of the following, as applicable:

- Any documents obtained and/or permits submitted to and/or approved by Wayne County Government entities
- Storm Water Pollution Prevention Plan (SWP3)
- Fees
- Right of entry

It is the responsibility of the applicant to obtain documents or permits required outside of the Wayne County Government including, but not limited to, United States Army Corps of Engineers (USACE) permits and Wetlands permit applications, as applicable.

The CAP includes a section whereby the operator/owner grants access to the proposed project site to duly authorized agents of Wayne County for the purposes of inspection. Failure to grant right of entry is a basis for CAP denial.

The CAP can include the following components depending on the size and/or nature of the land-disturbance:

- Floodplain Development (Wayne County Floodplain Regulations)
- Drainage Plan (Wayne County Engineering Code for Subdivision Development)

- Erosion and Sedimentation Control Plan (Wayne County Engineering Code for Subdivision Development)

The Technical Review Committee Organization Chart, included in Appendix A, and each applicable regulation are used to determine which components are applicable.

### **3.2.3 DUTIES**

The permittee shall comply with all conditions of the SWC Permit and all other applicable regulations which apply to uses within the jurisdiction of these regulations. Any permit noncompliance constitutes a violation and is grounds for enforcement action. It is not a defense in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the SWC Permit.

The permittee shall inform all contractors and subcontractors who shall be involved in the implementation of any or all parts of the SWC Permit, of the terms and conditions of the SWC Permit prior to commencement of any earth-disturbing activity.

The owner, developer, engineer, contractor and other principal parties of the proposed project shall meet with the Wayne SWCD for a Pre-Construction Meeting no less than two (2) days prior to earth-disturbing activity at a site with an approved SWC Permit.

### **3.2.4 PERMIT NOTIFICATION**

Permit holders shall notify the Water Management Engineer 48-hours prior to the start of and upon completion of earth-disturbing activities

Upon completion of work and final stabilization of the site, a certification letter and/or a report shall be submitted to the Water Management Engineer certifying that all post-construction storm water management facilities have been completed, installed and/or constructed in accordance with the conditions of the approved SWP3 and all other specifications. The certification letter and/or report shall be prepared by an Engineer and submitted with accompanying as-built data. The certification letter and/or report shall include a specific listing of all approved changes and modifications.

### **3.2.5 PERMIT APPLICATION REVIEW AND APPROVAL**

The CAP approval is a streamlined process managed by the Water Management Engineer in the Wayne Soil and Water Conservation District Office.

Upon receipt of the CAP, the Water Management Engineer prepares a copy of all the CAP components. The original is filed in the Wayne Soil and Water Conservation District Office. The Water Management Engineer forwards copies of the application to appropriate departments for review and approval. The Water Management Engineer will notify the applicant within 10 business days if the CAP is incomplete. Review of individual CAP attachments shall begin once

the attachment is complete. Incomplete CAPs will be returned to the applicant with a list of missing items.

The Water Management Engineer coordinates between the different departments to facilitate CAP approval. Within thirty (30) calendar days, the Water Management Engineer notifies the applicant that the CAP is approved and signed by each applicable department and SWC Permit or SWC Permit Waiver is issued, that the CAP must be resubmitted with additional information and/or modification requirements or that the CAP is denied. The thirty (30) calendar day review period begins when the CAP is complete.

The roles of each department related to the CAP are outlined in Appendix A. A signature of approval is required by each department. A final signature by the Water Management Engineer indicates that the review and approval process is complete and that a SWC Permit is issued.

The SWC Permit or Permit Waiver is picked up at the Wayne Soil and Water Conservation District Office during normal business hours. The permit or permit waiver can be mailed at the permittee's request pending an additional mailing fee payable to Wayne Soil and Water Conservation District. A copy of the permit is maintained on file in the Wayne Soil and Water Conservation District Office.

If the CAP required to be resubmitted is resubmitted, it is subject to another thirty (30) day review and approval process. Failure to provide additional information and/or modifications required results in CAP denial. Work is not authorized to begin until a SWC Permit is signed and issued.

An applicant can appeal the denial of a SWC Permit through the Court of Common Pleas.

### **3.2.6 PERMIT MAINTENANCE**

Maintaining a valid SWC Permit requires all temporary controls be maintained and repaired as needed to ensure performance and compliance with self-inspection and reporting requirements. Construction site self-inspection is required weekly and within 24-hours after a rain event of 0.5-inches or more. The inspection frequency may be reduced to at least once every month if the entire site is temporarily stabilized or runoff is unlikely due to weather conditions (e.g., site is covered with snow, ice or the ground is frozen).

A waiver of inspection requirements is available until one month before thawing conditions are expected to result in a discharge if all of the following conditions are met: the project is located in an area where frozen conditions are anticipated to continue for extended periods of time (i.e., more than one month); land disturbance activities have been suspended; and the beginning and ending dates of the waiver period are documented in the SWP3.

Once a definable area has been finally stabilized, this area may be marked on the SWP3 and no further inspection requirements shall apply to that portion of the site.

Following each inspection, a checklist must be completed and signed by the qualified inspection personnel representative. At a minimum, the self-inspection report must include:

- the inspection date;
- names, titles and qualifications of personnel making the inspection;
- weather information for the period since the last inspection (or since commencement of construction activity if the first inspection) including a best estimate of the beginning of each storm event, duration of each storm event, approximate amount of rainfall for each storm event (in inches), and whether any discharges occurred;
- weather information and a description of any discharges occurring at the time of the inspection;
- location(s) of discharges of sediment or other pollutants from the site;
- location(s) of BMPs that need to be maintained;
- location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location;
- location(s) where additional BMPs are needed that did not exist at the time of inspection; and
- corrective action required including any changes to the SWP3 necessary and implementation dates.

The self-inspection checklist shall be submitted to the Water Management Engineer within five (5) days of the inspection. Inspection forms are submitted with a letter certifying accuracy and are signed by Qualified Inspection Personnel.

Construction site inspection is performed by the Water Management Engineer or his representative, as necessary, to ensure compliance with the Regulations. The Water Management Engineer provides identification to the operator/owner or person in charge upon entering any land. Where inspection access is denied, the Commissioners can apply for, and a judge of the Court of Common Pleas for Wayne County can issue, an appropriate inspection warrant.

Inspection records for both the self-inspection and County performed inspection are maintained for three (3) years following final stabilization of the site by the Water Management Engineer. The following information, at a minimum, is to be included in the record: date of inspection, inspector, qualifications of inspector, observations, certification of compliance and notification of violations.

As a condition of permit maintenance, the permittee is required to maintain the storm water management controls in good working condition. Control practices in need of repair, with the exception of sediment settling ponds, must be repaired within three (3) calendar days of the inspection. Sediment settling ponds shall be repaired within ten (10) calendar days. Where inspection identifies that a planned control practice has not been implemented, the control must be installed within ten (10) calendar days.

In the event that the controls do not perform to the extent intended or is determined to be unnecessary, the permit holder must make necessary changes to bring the performance of the system into compliance. The permittee can work with the Water Management Engineer to identify appropriate changes to the storm water controls. Modifications to the storm water control systems are documented in a revised CAP and signed by the Water Management Engineer. Failure to make necessary revisions is viewed as a violation of the Storm Water Management Regulations.

As a condition of permit maintenance, under no circumstances shall solid or liquid waste, including, but not limited to, building materials, chemicals, litter and sanitary waste be discharged in storm water runoff. Under no circumstances shall concrete truck wash out, stucco, paint, form release oils, curing compounds and other construction materials be discharged into a drainage channel, storm sewer, waters of the State or in any location where overland flow will carry the wash out to a drainage channel, storm sewer or waters of the State. Within the construction site, all necessary controls shall be implemented to prevent the discharge of non-sediment pollutants to the drainage system of the site or waters of the State. Waste materials shall not be exposed to storm water. Off-site tracking of sediments and dust generation by vehicles must be minimized.

### **3.2.7 PERMIT RENEWAL**

The SWC Permit is valid for one (1) year from the issue date. Permit renewal requires submittal of a CAP with the renewal option selected and appropriate renewal fees. Renewal applications are submitted to the Water Management Engineer not more than eight (8) weeks or less than thirty (30) days prior to the expiration date.

Continuation of earth-disturbing activities after a permit has expired constitutes a violation of the Storm Water Management Regulations. Application for coverage under an expired permit requires the submittal of a new CAP including all plans, permits and initial fees and is subject to the same time tables as an original CAP submittal.

### **3.2.8 PERMIT TERMINATION**

Once a construction site reaches final stabilization, a Notice of Termination (NOT) is submitted to the Water Management Engineer. The NOT is accompanied by as-built drawings of all storm water facilities, a statement from a Professional Engineer certifying that the facilities are constructed in accordance with the SWC Permit and a copy of the post-construction operation and maintenance plan submitted with the SWP3, including a completed cover/signature page provided by the Soil and Water Conservation District. The operation and maintenance plan shall be modified, as necessary, to include approved modifications made during construction. The operator/owner shall also submit with the NOT a copy of the deed or plat covenants, easements and restrictions or Easement Agreement for review by the Water Management Engineer. Acceptance of the NOT is based upon constructed facilities complying with the design submitted and approved under the SWC Permit. The SWC

Permit terminates upon acceptance of the NOT. The NOT form may be obtained from the Soil and Water Conservation District Office.

### **3.2.9 AMENDMENTS**

Amendments to the SWC Permit are submitted to the Water Management Engineer by filing a CAP with the amendment option selected and appropriate amendment fees. Amendments are processed, reviewed and approved or disapproved by the appropriate department under the same guidelines and timetables as original CAP submittals. Field modifications of a minor nature can be authorized by the Water Management Engineer by written permission to the permittee. No modifications are made without the approval of the Water Management Engineer. All modifications are reflected in the final as-built drawings.

### **3.2.10 PUBLIC DOCUMENT**

The Water Management Engineer is provided with any information which he or she requests to determine compliance with the SWC Permit and copies of records kept by this permit. The individual plan and permit components of the CAP and the SWC Permit are required to be available immediately upon request of the Water Management Engineer or authorized representative during regular working hours.

All plans and permits are considered reports that are available to the public in accordance with the Ohio Public Records Law. SWC Permit documents are made available to the public upon request for review or a copy is provided to the public, at cost. Requests submitted in writing are acted upon within ten (10) days. However, the permittee can claim any component of the SWC Permit as confidential in accordance with Ohio Law.

### **3.2.11 PERMIT TRANSFER**

Coverage under the SWC Permit is transferable. Transfer applications are available from the Water Management Engineer. Transfer applications are submitted a minimum of thirty (30) days prior to the date of transfer. New permit holders are subject to the requirements of the original SWC Permit. Variation from the original SWC Permit requires submittal and approval of an amendment.

## **3.3 STORM WATER POLLUTION PREVENTION PLAN**

A Storm Water Pollution Prevention Plan (SWP3) is a document that provides Wayne County with the information needed to evaluate the impacts of proposed earth-disturbing activities. Any construction activity involving the disturbance of one (1) or more acres of land or will disturb less than one (1) acre, but is part of a larger common plan of development or sale which will disturb one (1) or more acres of land or qualifies as a Large Construction Site per Section 3.3.4.1. The SWP3 MUST be sealed by a Professional Engineer licensed by the State of Ohio. A SWP3 consists of:

- Site Description
- Typical subdivision lot erosion and sediment control drawing, if applicable
- Description of construction-related erosion, runoff and sediment control methods
- Post-Construction storm water management practices

### **3.3.1 SITE DESCRIPTION**

A Storm Water Pollution Prevention Plan (SWP3) contains the site description and site plan information related to the project site.

The descriptive section of the SWP3 should be submitted in a type-written format using a 12-point font and single line spacing.

The site description included in the SWP3 shall consist of:

- a. A description of the nature and type of the construction activity (e.g., low density residential, shopping mall, highway, etc.);
- b. Total area of the site and the area of the site that is expected to be disturbed (i.e., grubbing, clearing, excavation, filling or grading, including off-site borrow areas);
- c. A calculation of the runoff coefficients for both the pre-construction and post-construction site conditions;
- d. An estimate of the impervious area and percent imperviousness created by the construction activity;
- e. Existing data describing the soil and, if available, the quality of any discharge from the site;
- f. A description of prior land uses at the site;
- g. An implementation schedule which describes the sequence of major construction operations (i.e., designation of vegetative preservation areas, grubbing, excavating, grading, utilities and infrastructure installation) and the implementation of erosion, sediment and storm water management practices or facilities to be employed during each operation of the sequence;
- h. The name and/or location of the immediate receiving stream or surface water(s) and the first subsequent named receiving water(s) and the areal extent and description of wetlands or other special aquatic sites at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project. For discharges to a Municipal Separate Storm Sewer System (MS4), the point of discharge to the MS4 and the location where the MS4 ultimately discharges to a stream or State surface water must be indicated;
- i. Location and description of any storm water discharges associated with dedicated asphalt and dedicated concrete plants, structure painting, structure

cleaning, demolition debris disposal, drilling and blasting operations, material storage, slag, solid waste, hazardous waste, contaminated soils, sanitary and septic wastes, vehicle fueling and maintenance activities and landscaping operations covered by this permit and the best management practices to address pollutants in these storm water discharges and methods to limit the exposure of these pollutants to precipitation, storm water runoff and snow melt and to minimize the discharge of pollutants from vehicle washing, wheel wash water and other wash waters;

j. A cover page or title identifying the name and location of the site, the name and contact information of all construction site operators, the name and contact information for the person responsible for authorizing and amending the SWP3, preparation date and the estimated dates that construction will start and be complete; and

k. A log documenting grading and stabilization activities as well as amendments to the SWP3, which occur after construction activities commence.

The site plan included in the SWP3 shall consist of:

a. A site plan with a maximum scale of 1"=200';

b. Limits of earth-disturbing activity of the site including associated off-site borrow or spoil areas that are not addressed by a separate Storm Water Construction Permit and associated SWP3;

c. Soils types should be depicted for all areas of the site, including locations of unstable or highly erodible soils;

d. Existing and proposed contours at 2-ft intervals. A delineation of drainage watersheds expected during and after major grading activities as well as the size of each drainage watershed, in acres;

e. Surface water locations including springs, wetlands, streams, lakes, water wells, etc., on or within 200 feet of the site, including the boundaries of wetlands or stream channels and first subsequent named receiving water(s) the permittee intends to fill or relocate for which the permittee is seeking approval from the Army Corps of Engineers and/or Ohio EPA;

f. Existing and planned locations of buildings, roads, parking facilities and utilities;

g. The location of all erosion and sediment control practices, including the location of areas likely to require temporary stabilization during the course of site development;

h. Sediment and storm water management basins noting their sediment

settling volume and contributing drainage area;

i. The location of permanent storm water management practices to be used to control pollutants in storm water after construction operations have been completed;

j. Areas designated for the storage or disposal of solid, sanitary and toxic wastes, including dumpster areas, areas designated for cement truck washout, and vehicle fueling;

k. The location of designated construction entrances where the vehicles will access the construction site; and

l. The location of any in-stream activities including stream crossings.

### **3.3.2 INDIVIDUAL LOT EROSION AND SEDIMENT CONTROL PLAN.**

For subdivided developments that do not use a centralized sediment control system, a detailed drawing of a typical individual lot showing standard individual lot erosion and sediment control practices that will be used during construction is required. This does not remove the responsibility to designate specific erosion and sediment control practices in the SWP3 for critical areas such as steep slopes, stream banks, drainage ways and riparian zones.

### **3.3.3 EROSION, RUNOFF AND SEDIMENT CONTROLS**

The SWP3 must contain a description of the controls appropriate for each construction operation covered by this permit and the operator(s) must implement such controls. The SWP3 must clearly describe for each major construction activity:

a) appropriate control measures and the general timing (or sequence) during the construction process that the measures will be implemented; and

b) which contractor is responsible for implementation (e.g., contractor A will clear land and install perimeter controls and contractor B will maintain perimeter controls until final stabilization).

The SWP3 shall identify the subcontractors engaged in activities that could impact storm water runoff. The SWP3 shall contain signatures from all of the identified subcontractors indicating that they have been informed and understand their roles and responsibilities in complying with the SWP3. The primary site operator should review the SWP3 with the primary contractor prior to commencement of construction activities and keep a SWP3 training log to demonstrate that this review has occurred.

Erosion, sediment, and storm water management practices used to satisfy the conditions of this permit, should meet the standards and specifications in the

current edition of Ohio's Rainwater and Land Development manual or other standards acceptable to the Water Management Engineer. For informational purposes, a copy of Rainwater and Land Development Manual is included as Appendix B.

Exceptions from implementing controls may be issued by the Water Management Engineer. Requests for exceptions are reviewed and approved on a case-by-case basis. Conditions that may qualify for an exception include specific site conditions that prohibit implementation of a control and specific site conditions that will result in no environmental benefit from an implemented control.

The controls shall include the following minimum components:

**3.3.3.1 Non-Structural Preservation Methods.** The erosion, sediment and runoff controls must make use of practices which preserve the existing natural condition as much as feasible. Such practices may include: preserving riparian areas adjacent to waters of the State, preserving existing vegetation and vegetative buffer strips, phasing of construction operations in order to minimize the amount of disturbed land at any one time and designation of tree preservation areas or other protective clearing or grubbing practices. A fifty (50) foot permanent buffer for intermittent streams and a seventy-five (75) foot permanent buffer for a perennial stream, measured from the ordinary high water mark, should be left undisturbed.

**3.3.3.2 Erosion Control Practices.** The erosion, sediment and runoff controls must make use of erosion controls that are capable of providing cover over disturbed soils unless an exception is approved. A description of control practices designed to restabilize disturbed areas after grading or construction shall be included in the SWP3. The SWP3 must provide specifications for stabilization of all disturbed areas of the site and provide guidance as to which method of stabilization will be employed for any time of the year. Such practices may include: temporary seeding, permanent seeding, mulching, matting, sod stabilization, vegetative buffer strips, phasing of construction operations, use of construction entrances and the use of alternative ground cover.

Disturbed areas must be stabilized as specified in the following tables below. Where vegetative stabilization techniques may cause structural instability or are otherwise unobtainable, alternative stabilization techniques must be employed and noted in the SWP3.

**Table 3-1: Permanent Stabilization**

Area requiring permanent stabilization	Time frame to apply erosion controls
Any areas that will lie dormant for one year or more	Within seven days of the most recent disturbance
Any areas within 50 feet of a water of the State and at final grade	Within two days of reaching final grade
Any other areas at final grade	Within seven days of reaching final grade within that area

**Table 3-2: Temporary Stabilization**

Area requiring temporary stabilization	Time frame to apply erosion controls
Any disturbed areas within 50 feet of a water of the State and not at final grade	Within two days of the most recent disturbance if the area will remain idle for more than 14 days
For all construction activities, any disturbed areas that will be dormant for more than 14 days but less than one year, and not within 50 feet of a water of the State	<p>Within seven days of the most recent disturbance within the area</p> <p>For residential subdivisions, disturbed areas must be stabilized at least seven days prior to transfer of permit coverage for the individual lot(s).</p>
Disturbed areas that will be idle over winter	Prior to the onset of winter weather

Permanent stabilization of conveyance channels is required. Operators shall undertake special measures to stabilize channels and outfalls and prevent erosive flows. Measures may include seeding, dormant seeding (as defined in the most current edition of the Rainwater and Land Development Manual), mulching, erosion control matting, sodding, riprap, natural channel design with bioengineering techniques or rock check dams.

**3.3.3.3 Runoff Control Practices.** The SWP3 shall incorporate measures which control the flow of runoff from disturbed areas so as to prevent erosion from occurring. Such practices may include rock check dams, pipe slope drains, diversions to direct flow away from exposed soils and protective grading practices. These practices shall divert runoff away from disturbed areas and steep slopes where practicable. Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel to provide non-erosive flow velocity from the structure to a water course so that the natural

physical and biological characteristics and functions are maintained and protected (e.g., no significant changes in the hydrological regime of the receiving water).

**3.3.3.4 Sediment Control Practices.** The SWP3 shall include a description of structural practices that shall store runoff allowing sediments to settle and/or divert flows away from exposed soils or otherwise limit runoff from exposed areas. Structural practices shall be used to control erosion and trap sediment from a site remaining disturbed for more than 14 days. Such practices may include, among others: sediment settling ponds, silt fences, earth diversion dikes or channels which direct runoff to a sediment settling pond and storm drain inlet protection. All sediment control practices must be capable of ponding runoff in order to be considered functional. Earth diversion dikes or channels alone are not considered a sediment control practice unless those are used in conjunction with a sediment settling pond. The SWP3 must contain detail drawings for all structural practices.

**3.3.3.5 Sediment Settling Ponds.** Concentrated storm water runoff and runoff from drainage areas, which exceed the design capacity of silt fence, inlet protection or other sediment barriers, shall pass through a sediment settling pond, also referred to as a sediment basin or sediment trap. For common drainage locations that serve an area with five (5) or more acres disturbed at one time, a temporary (or permanent) sediment settling basin must be provided until final stabilization of the site. The Water Management Engineer may consider allowing use of alternative controls if it can be demonstrated that the alternative controls are equivalent in effectiveness to a sediment settling pond. It is recommended for drainage locations serving less than five (5) acres, smaller sediment basins or sediment traps should be used.

Sediment settling ponds shall be dewatered at the pond surface using a skimmer or equivalent device, if feasible. The sediment settling pond volume consists of both a dewatering zone and sediment storage zone. The volume of the dewatering zone shall be a minimum of 1800 cubic feet (ft<sup>3</sup>) per acre of drainage (67 yd<sup>3</sup>/acre) with a minimum 48-hour drain time for sediment basins serving a drainage area over 5 acres. The volume of the sediment storage zone shall be calculated by one of the following methods: Method 1: the volume of the sediment storage zone shall be 1000 ft<sup>3</sup> per disturbed acre within the watershed of the basin. OR Method 2: The volume of the sediment storage zone shall be the volume necessary to store the sediment as calculated with RUSLE or a similar generally accepted erosion prediction model. The accumulated sediment shall be removed from the sediment storage zone once it is full. A stake marking this cleanout depth shall be located in the center of the pond. When determining the total contributing drainage area, off-site areas and areas which remain undisturbed by construction activity must be included unless runoff from these areas is diverted away from the sediment settling pond and is not co-mingled

with sediment-laden runoff. The depth of the sediment settling pond must be less than or equal to five feet. The configuration between inlets and the outlet of the basin must provide at least two units of length for each one unit of width (> 2:1 length:width ratio), however, a length to width ratio of 4:1 is recommended. If necessary, baffles shall be added to achieve the length to width ratio. When designing sediment settling ponds, the permittee must consider public safety, especially as it relates to children, as a design factor for the sediment basin and alternative sediment controls must be used where site limitations would preclude a safe design. The use of a combination of sediment and erosion control measures in order to achieve maximum pollutant removal is encouraged.

**3.3.3.6 Silt Fence and Diversions.** Sheet flow runoff from denuded areas shall be intercepted by silt fence or diversions to protect adjacent properties and water resources from sediment transported via sheet flow. Where intended to provide sediment control, silt fence shall be placed on a level contour downslope of the disturbed area. This permit does not preclude the use of other sediment barriers designed to control sheet flow runoff. The relationship between the maximum drainage area to silt fence for a particular slope range is shown in the Table 3-3.

**Table 3-3 Silt Fence Drainage Areas**

<b>Maximum drainage area (in acres) to 100 linear feet of silt fence</b>	<b>Range of slope for a particular drainage area (in percent)</b>
0.5	< 2%
0.25	> 2% but < 20%
0.125	> 20% but < 50%

Placing silt fence in parallel series does not extend the size of the drainage area. Storm water diversion practices shall be used to keep runoff away from disturbed areas and steep slopes where practicable. Such devices, which include swales, dikes or berms, may receive storm water runoff from areas up to 10 acres.

**3.3.3.7 Inlet Protection.** Other erosion and sediment control practices shall minimize sediment laden water entering active storm drain systems, unless the storm drain system drains to a sediment settling pond. All inlets receiving runoff from drainage areas of one or more acres will require a sediment settling pond.

**3.3.3.8 Waters of the State Protection.** If construction activities disturb areas adjacent to streams, structural practices shall be designed and implemented on site to protect all adjacent waters of the State from the impacts of sediment runoff. No structural sediment controls (e.g., the installation of silt fence or a sediment settling pond) shall be used in a water of the State. For all construction activities immediately adjacent to waters of the state, a fifty (50) foot permanent

buffer setback from an intermittent stream and a seventy-five (75) foot permanent buffer setback from a perennial stream, as measured from the ordinary high water mark of the surface water, should be maintained in its natural state. Where impacts within this setback area are unavoidable due to the nature of the construction activity (e.g., stream crossings for roads or utilities), the project shall be designed such that the number of stream crossings and the width of the disturbance within the setback area are minimized.

**3.3.3.9 Trench and Ground Water Control.** There shall be no turbid discharges to waters of the State resulting from dewatering activities. If trench or ground water contains sediment, it shall pass through a sediment settling pond or other equally effective sediment control device, prior to being discharged from the construction site. Alternatively, sediment may be removed by settling in place or by dewatering into a sump pit, filter bag or comparable practice. Ground water dewatering which does not contain sediment or other pollutants is not required to be treated prior to discharge. Care shall be taken when discharging ground water to ensure that it does not become pollutant-laden by traversing over disturbed soils or other pollutant sources.

**3.3.3.10 Timing.** Sediment control structures shall be functional throughout the course of earth disturbing activity. Sediment basins and perimeter sediment barriers shall be implemented prior to grading and within seven days from the start of grubbing. They shall continue to function until the up-slope development area is restabilized. As construction progresses and the topography is altered, appropriate controls must be constructed or existing controls altered to address the changing drainage patterns.

**3.3.3.11 Modifying Controls.** If periodic inspections or other information indicates a control has been used inappropriately or incorrectly, the permittee must replace or modify the control for site conditions.

### **3.3.4 POST-CONSTRUCTION STORM WATER MANAGEMENT**

Post-construction storm water management is the control of storm water runoff leaving a site after construction is completed. The purpose of storm water management practices is to provide for the continual control of discharges that may adversely impact watercourse and/or adjacent properties. Adverse impacts that are the target of this effort include erosion from increased speed and quantity of water, sedimentation from the movement of soil or the deposition of roadway materials and pollution such as oil and grease. Examples of post-construction storm water controls include, but are not limited to, catch basins, detention basins and swales.

The SWP3 must contain, at a minimum:

- A description of the method used to manage storm water after development;
- The rationale for the selection of the controls;

- A discussion of anticipated impacts on the channel, floodplain, hydrology, water quality and adjacent and downstream properties;
- Detailed drawings; and
- Post-Construction Operation and Maintenance Plan.

To be accepted by the County, design of the post-construction controls must be practical and provide for the long-term operation of the system. Controls sized to meet the letter of the Storm Water Management Regulations but do not allow for long-term operation do not, in fact, satisfy Storm Water Management Regulations. Control practices must be maintained and repaired as needed to ensure continued performance. To be accepted, the SWP3 must identify anticipated operation and maintenance activities and identify parties responsible for the execution of those activities.

To ensure that storm water management systems function as they were designed and constructed, the post construction operation and maintenance plan must be a stand-alone document, which contains: (1) a designated entity for storm water inspection and maintenance responsibilities; (2) the routine and non-routine maintenance tasks to be undertaken; (3) a schedule for inspection and maintenance; (4) any necessary legally binding maintenance easements and agreements; and (5) a map showing all access and maintenance easements. The entity identified in the maintenance agreement shall be responsible for operation and maintenance of post-construction practices once coverage under this permit is terminated.

For sites located within a community with a regulated municipal separate storm sewer system (MS4), the Storm Water Construction permittee, land owner or other entity with legal control of the property may be required to develop and implement a maintenance plan to comply with the requirements of the MS4.

**3.3.4.1 Applicability.** Post-construction storm water management has two categories of applicability: large construction site and small construction site. A large construction site is defined as:

- Any construction disturbing five (5) or more acres or will disturb less than five (5) acres but is part of a plan of development or sale which will disturb five (5) or more acres;
- Any major subdivision where new impervious surface comprises 20% or more of any drainage area within the lot;
- Any other subdivision consisting of 20,000 square feet or more of new impervious area that comprises 20% or more of any drainage area within the lot; or
- Any grubbing and land clearing with 20,000 square feet or more of new impervious surface.

Small construction sites are those not defined as a large construction sites. With respect to detention, water quality and groundwater recharge requirements, owners of projects classified as large construction sites may petition the Water Management Engineer to allow compliance with post-construction storm water management requirements under the terms applied to small construction sites. To petition, the Owner must submit to the Water Management Engineer a report developed by the Owner's Engineer addressing the need for storm water detention and water quality and groundwater recharge requirements with respect to the County's concerns of protecting natural resources, adjacent and downstream properties, public health and safety.

**3.3.4.2 Large Construction Storm Water Detention.** For large construction sites, increased peak rates and volumes of runoffs from post-construction development shall be controlled such that the peak discharge rate of runoff from the critical storm and all more frequent storms occurring under post-development conditions shall not exceed the peak discharge rate of runoff from a one-year storm frequency, 24-hour duration storm occurring on the same development drainage area under pre-development conditions.

Storms of less frequent occurrence (longer return periods) than the critical storms up to the 100-year storm have peak runoff discharge rates no greater than the peak runoff rates from equivalent size storms under pre-development conditions. Consideration of the one (1), two (2), five (5), ten (10), twenty-five (25), fifty (50), and one-hundred (100) year storms shall be considered adequate in designing and developing the storm water management facilities to meet these standards. Rainfall data shall be based on the Precipitation – Frequency Atlas of the United States, NOAA Atlas 14 available at the National Weather Service Website <http://hdsc.nws.noaa.gov/hdsc/pfds/>, inputting the longitude and latitude of the project site.

The critical storm for a specific development drainage area shall be determined by using the Natural Resources Conservation Service (NRCS) TR-55, "Urban Hydrology for Small Watersheds" or equivalent approved method to determine the total runoff volume (acre-feet) from a one (1) year, twenty-four (24) hour storm occurring on the development drainage area before and after development. The peak discharge rate of runoff under post-development conditions must be calculated using the hydrologic soil group one level more severe than the pre-development hydrologic soil group using NRCS TR-55. The percent increase in volume of runoff due to development shall be determined and the twenty-four hour critical storm shall be selected from Table 3-4:

**Table 3-4 Critical Storm Selection**

If the percentage of increase in volume of runoff is:		The critical storm will be:
Equal to or greater than:	Less than:	
--	10	1 year
10	20	2 year
20	50	5 year
50	100	10 year
100	250	25 year
250	500	50 year
500	--	100 year

**3.3.4.3 Large Construction Water Quality Requirements.** For large construction sites, structural post-construction storm water controls shall be capable of capturing the Water Quality Volume (WQv) and draining it over a prescribed number of hours to detain storm water runoff for protection of the stream channels, stream erosion control, and improved water quality. The BMP's chosen shall be compatible with the site and soil conditions. Structural (designed) post-construction storm water treatment practices shall be incorporated into the permanent drainage system for the site. The controls chosen are to be sized to treat the WQv and ensure compliance with Ohio's Water Quality Standards in OAC Chapter 3745-1. The WQv shall be equivalent to the volume of runoff from a 0.75-inch rainfall and shall be determined according to the following equation:

$$WQv = C * P * A / 12$$

where,

WQv = water quality volume in acre-feet

C = runoff coefficient appropriate for storms less than 1 inch using the following equation or Table 3-5:

$$C = 0.858i^3 - 0.78i^2 + 0.774i + 0.04$$

where,

i = fraction of post-construction impervious surface

P = 0.75 inch precipitation depth

A = area draining into the BMP in acres

**Table 3-5. Runoff Coefficients Based on the Type of Land Use**

Land Use	Runoff Coefficient
Industrial & Commercial	0.8
High Density Residential (>8 dwellings/acre)	0.5
Medium Density Residential (4 to 8 dwellings/acre)	0.4
Low Density Residential (<4 dwellings/acre)	0.3
Open Space and Recreational Areas	0.2

Where the land use will be mixed, the runoff coefficient shall be calculated using a weighted average. For example, if 60% of the contributing drainage area to the storm water treatment structure is Low Density Residential, 30% is High Density Residential, and 10% is Open Space, the runoff coefficient is calculated as  $(0.6)(0.3) + (0.3)(0.5) + (0.1)(0.2) = 0.35$ .

An additional volume equal to twenty (20) percent of the WQv shall be incorporated into the control for sediment storage. Controls shall be designed according to the methodology included in the most current addition of the Rainwater and Land Development manual.

Controls shall be designed such that the drain time is long enough to provide treatment, but short enough to provide storage available for successive rainfall events and avoid the creation of nuisance conditions. The outlet structure for the post-construction BMP must not discharge more than the first half of the WQv or extended detention volume (EDv) in less than one-third of the drain time. The EDv is the volume of storm water runoff that must be detained by a structural post-construction BMP. The EDv is equal to 75 percent of the WQv for wet extended detention basins, but is equal to the WQv for all other BMPs listed in Table 3-6.

**Table 3-6. Structural Post-Construction BMP's and Associated Drain Times**

Best Management Practice	Drain Time of WQv
Infiltration Basin and Trench <sup>1</sup>	48 hours
Permeable Pavement – Infiltration <sup>1</sup>	48 hours
Permanent Pavement – Extended Detention	24 hours
Dry Extended Detention Basin <sup>2</sup>	48 hours
Wet Extended Detention Basin <sup>3</sup>	24 hours

Constructed Wetland (above permanent pool) <sup>4</sup>	24 hours
Sand & Other Media Filtration <sup>5</sup>	24 hours
Bioretention Area/Cell <sup>5,6</sup>	24 hours
Pocket Wetland <sup>7</sup>	24 hours

<sup>1</sup> Practices that are designed to fully infiltrate the WQv (basin, trench, permeable pavement) shall empty within 48 hours to provide storage for the subsequent storm events.

<sup>2</sup> Dry basins must include forebay and micropool each sized at 10% of the WQv.

<sup>3</sup> Provide both a permanent pool and an EDv above the permanent pool, each sized at 0.75 WQv

<sup>4</sup> Extended detention shall be provided for the full WQv above the permanent water pool.

<sup>5</sup> The surface ponding area (WQv) shall completely empty within 24 hours so that there is no standing water. Shorter drawdown times are acceptable as long as design criteria in Ohio's Rainwater and Land Development manual have been met.

<sup>6</sup> This would include Grassed Linear Bioretention which was previously called Enhanced Water Quality Swale.

<sup>7</sup> Pocket wetlands must have a wet pool equal to the WQv, with 25% of the WQv in a pool and 75% in marshes. The EDv above the permanent pool must be equal to the WQv.

Approval may be requested from the Water Management Engineer to use alternative structural post-construction BMP's if the permittee can demonstrate that the alternative BMP's are equivalent in effectiveness to those listed in Table 3-6. Construction activities shall be exempt from this condition if it can be demonstrated that the WQv is provided within an existing structural post-construction BMP that is part of a larger common plan of development or if structural post-construction BMPs are addressed in a regional or local storm water management plan. A municipally operated regional storm water BMP can be used as a post-construction BMP provided that the BMP can detain the WQv from its entire drainage area and release it over a 24 hour period.

Transportation Projects: The construction of new roads and roadway improvement projects by public entities (i.e., the state, counties, townships, cities, or villages) may implement post-construction BMP's in compliance with the current version of the Ohio Department of Transportation's "Location and Design Manual, Volume Two Drainage Design" that has been accepted by Ohio EPA as an alternative to the conditions of these regulations.

Redevelopment Projects: Sites that have been previously developed where no post-construction BMP's were installed shall either ensure a 20 percent net reduction of the site impervious area, provide for treatment of at least 20 percent of the WQv, or a combination of the two. A one-for-one credit towards the 20

percent net reduction of impervious area can be obtained through the use of green roofs. Where projects are a combination of new development and redevelopment, the total WQv that must be treated shall be calculated by a weighted average based on acreage, with the new development at 100 percent WQv and redevelopment at 20 percent WQv.

**Non-Structural Post-Construction BMP's:** The size of the structural post-construction can be reduced by incorporating non-structural post-construction BMP's into the design. Practices such as preserving open space will reduce the runoff coefficient and, thus, the WQv. Practices which reduce storm water runoff include permeable pavements, green roofs, rain barrels, conservation development, smart growth and low-impact development.

**Use of Alternative Post-Construction BMP's:** Permittees must request approval from Ohio EPA to use alternative post-construction BMP's if the permittee can demonstrate that the alternative BMP's are equivalent in effectiveness to those listed in Table 3-6 above. To demonstrate this equivalency, the permittee must show that the alternative BMP has a minimum total suspended solids (TSS) removal efficiency of 80 percent. Also, the WQv discharge rate from the practice must be reduced to prevent stream bed erosion and protect the physical and biological stream integrity unless there will be negligible hydrological impact to the receiving surface water of the State. The discharges will have a negligible impact if the permittee can demonstrate that one of the following four conditions exist:

- i. The entire WQv is recharged to groundwater;
- ii. The larger common plan of development or sale will create less than one acre of impervious surface;
- iii. The project is a redevelopment project within an ultra-urban setting (i.e., a downtown area or on a site where 100 percent of the project area is already impervious surface and the storm water discharge is directed into an existing storm sewer system); or
- iv. The storm water drainage system of the development discharges directly into a large river (fourth order or greater) or to a lake and where the development area is less than 5 percent of the watershed area upstream of the development site, unless a TMDL identified water quality problems in the receiving surface waters of the State.

The Water Management Engineer shall only consider the use of alternative BMP's on projects where the permittee can demonstrate that the implementation of the BMP's listed in Table 3-6 is infeasible due to physical site constraints that prevent the ability to provide functional BMP design. Alternative practices may include, but are not limited to, underground detention structures, vegetated swales and vegetated filter strips designed using water quality flow, natural depressions, rain barrels, permeable pavements, green roofs, rain gardens, catch basin inserts and hydrodynamic separators.

Innovative or experimental post-construction storm water management technologies must be approved by the Ohio EPA prior to their use.

**3.3.4.4 Large Construction Ground Water Recharge.** For large construction sites, the SWP3 must consider the viability of using ground water recharge to control post-construction storm water runoff. Where technically-feasible and economically-viable, ground water recharge methods should be employed. The SWP3 must contain a written argument on the viability of ground water recharging and, if viable, contain a drawing and a description of maintenance.

**3.3.4.5 Small Construction Site Post-Construction Requirements.** For small construction sites, the SWP3 must contain a description of measures that will be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed. Structural measures should be placed on upland soils to the degree attainable.

Such practices may include, but are not limited to: storm water detention structures (including wet basins), storm water retention structures, flow attenuation by use of open vegetated swales and natural depressions, infiltration of runoff onsite or bioretention cells, rain barrels, permeable pavements, stream buffers and riparian preservation and sequential systems (which combine several practices). The SWP3 shall include an explanation of the technical basis used to select the practices to control pollution where flows exceed pre-development levels. Design methods for storm water detention and water quality requirements shall be consistent with those required for large construction activities described in Sections 3.3.4.2 and 3.3.4.3.

## 3.4 FEES

Permit fees for plan review, permit processing and field inspection cover costs expended by Wayne County. Appropriate fees are due at the time the CAP is submitted or the SWC Permit is amended, transferred or renewed. The fees are set by the schedule of fees adopted by the Wayne County Commissioners. Fees will be deposited into a General Fund Account or a Permit Fund Account, which will be administered by the Water Management Engineer.

## 3.5 REFERENCES

OEPA Authorization for Storm Water Discharges Associated with Construction Activity Under the National Pollutant Discharge Elimination System, Permit No. OHC000003, Effective April 21, 2008

Wayne County Engineer's Office, Engineering Code for Subdivision Development, Current Edition

Wayne County Department of Planning, Subdivision Regulations, Effective September 8, 2008

EPA 833-F-00-008 Storm Water Phase II Final Rule, Construction Site Runoff Control Minimum Control Measure, Fact Sheet 2.6, January 2000

EPA 833-F-00-009 Storm Water Phase II Final Rule, Post-construction Runoff Control Minimum Control Measure, Fact Sheet 2.7, January 2000 (revised December 2005)

## **SECTION FOUR**

### **FACILITY MAINTENANCE PROGRAM**

#### **4.1 OVERVIEW**

The Facility Maintenance Program provides for the perpetual operation and maintenance of post-construction (permanent) storm water management structures. The Facility Maintenance Program includes:

- Storm water easements
- Storm water facility maintenance
- Operation and maintenance petitions

#### **4.2 STORM WATER EASEMENTS**

Storm water easements are intended to provide for the long-term free flow of storm water and for the access needed to properly operate and maintain storm water facilities. As such, it is a violation of the Storm Water Management Regulations for property owners whose lots are crossed by storm water easements to plant plantings with woody growth characteristics such as trees and shrubbery or to construct structures such as buildings, garages, barns, sheds, fences and walls. Removal of such plants and structures from the easement by the County will be at the property owner's expense.

#### **4.3 STORM WATER FACILITY MAINTENANCE**

Permanent maintenance of storm water facilities is provided for by the Storm Water Management Regulations. All storm water management facilities must be maintained to meet the design standards. Failure to maintain facilities is a violation of the Storm Water Management Regulations. An owner of land who would benefit from the construction of an "improvement," as defined in Ohio Revised Code 6131.01, to a storm water practice that has been in operation, may petition the Board of County Commissioners in accordance with Ohio Revised Code 6131.04 and request the construction of an improvement. All costs of engineering, construction and future maintenance will be assessed to the benefiting parcels of land.

Acceptance of the Notice of Termination (NOT) marks the beginning of a twelve (12) month storm water warranty period. During this period, the permittee retains the responsibility to operate and maintain all storm water facilities. This includes, but is not limited to, performing routine maintenance such as leaf removal, facility repairs such as re-seeding and slope stabilization, inspections and record keeping duties. Failure to maintain facilities through the warranty period is a violation of the Storm Water Management Regulations. Following the warranty

period, the owner/operator named in the post-construction operation and maintenance plan shall continue to perform maintenance outlined in the plan. The owner/operator of a storm water management facility in the Municipal Separate Storm Sewer System (MS4) area in Chippewa Township shall submit to the Water Management Engineer once a year an inspection report of the storm water facility. The inspection report shall address items outlined in the facility's post-construction operation and maintenance plan.

#### 4.4 REFERENCES

Wayne County Engineer's Office, Engineering Code for Subdivision Development, Current Edition

Wayne County Department of Planning, Floodplain Regulations, Effective January 23, 2004.