



**Ferguson Township**  
Centre County, PA

# **MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)**

# **STORMWATER MANAGEMENT PROGRAM**

Last Update – May 2019

**Table of Contents**

Table of Contents ..... 2

I. PUBLIC EDUCATION AND OUTREACH PROGRAM ..... 3

    General ..... 3

    Educational Strategies ..... 3

    Outreach Programs ..... 4

II. PUBLIC INVOLVEMENT AND PARTICIPATION PROGRAM..... 5

    General ..... 5

    Public Notification ..... 5

    Public Participation ..... 5

III. ILLICIT DISCHARGE DETECTION and ELIMINATION program ..... 7

    General ..... 7

    Prohibition of Illicit Discharges ..... 7

    Illicit Discharge Detection and Elimination Program ..... 7

IV. CONSTRUCTION SITE STORM WATER RUNOFF CONTROL PROGRAM..... 9

    General ..... 9

V. POST CONSTRUCTION STORMWATER MANAGEMENT (PCSM) IN NEW AND RE-DEVELOPMENT ACTIVITIES ..... 10

    General ..... 10

VI. POLLUTION PREVENTION / GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS..... 11

    General ..... 11

    Evaluation of Existing BMP Inventory and O&M Programs ..... 11

    Training Programs ..... 12

VII. POLLUTION REDUCTION PLANS ..... 13

    General ..... 13

## I. PUBLIC EDUCATION AND OUTREACH PROGRAM

### General

**Scope.** This chapter outlines the general approach Ferguson Township takes in educating and informing the residents of the Township on the entire extent of the Stormwater Management Program through inclusion in the development, implementation, evaluation, and updating of this plan.

**Intent.** The purpose of this plan is to include, so far as practical, all those affected by the stormwater management rules and regulations of the Township through the education and outreach programs as described throughout this document.

### Educational Strategies

**Educational Materials.** Ferguson Township distributes new and existing educational materials developed by the Pennsylvania Department of Environmental Protection (DEP) that contain information on stormwater Best Management Practices (BMPs) and environmental impacts of stormwater. The materials are distributed at a minimum on a yearly basis. In addition to DEP educational materials, the Township may research and compile fact sheets, educational brochures, and stormwater videos. Educational materials may be distributed via electronic mailing, Township newsletters, posted on the Township website, or available at the Township office. Target groups will include businesses, schools, the development and construction community, and residents or visitors of Ferguson Township.

**Newsletters.** Ferguson Township publishes a semi-annual newsletter that is distributed to all residents and businesses within the Township and is used to provide information on the township stormwater management plan and to promote stormwater BMPs. An individual mailing is performed to all property owners.

**Brochures.** The Township distributes an educational brochure entitled “Stormwater Pollution Prevention” with all applications for zoning permits. The brochure explains the negative impacts of construction stormwater runoff. The brochure is targeted towards any property owner or contractor performing construction projects in the Township.

**Posters.** Ferguson Township displays posters from various sources that highlight the importance of clean stormwater runoff as well as other watershed issues. These posters are displayed at various times throughout the year in both the Township business office lobby and the public meeting room. These are targeted to visitors at the Township building.

**Spring Creek Watershed Map.** Ferguson Township participates with the other MS4 permit holders within the Centre Region to publish and distribute the Spring Creek Watershed Map which identifies the boundaries of the watershed and discusses protecting and promoting a healthy watershed. These maps are distributed by MS4 Partners at

## FERGUSON TOWNSHIP MS4 STORMWATER MANAGEMENT PROGRAM

various community events. The maps are also available at the Township offices. These are targeted to visitors at the Township building.

***Fact Sheets.*** Ferguson Township reviews fact sheets that have been developed by other municipalities and organizations for different BMPs, including detention and retention ponds, bioretention areas, filter strips, and others. In addition, the Township researches fact sheets targeted towards local homeowners that provide information on steps they can take to minimize stormwater pollutant runoff from their properties. The Township compiles fact sheets determined applicable to educational needs of the stormwater management plan. These select fact sheets may be distributed to residents via newsletter, available at the Township office, or placed on the Township web site at [www.twp.ferguson.pa.us](http://www.twp.ferguson.pa.us).

**Educational Programs.** Ferguson Township contracts with ClearWater Conservancy to conduct public education for Ferguson Township in cooperation with the Centre Region MS4 Partners, which includes the State College Borough, Penn State University, and surrounding townships. The MS4 Partners also design a newspaper advertisement and have it printed in the Centre Daily Times. The MS4 Partners may conduct other public meetings and educational presentations and may create additional newspaper advertisements and educational materials for Ferguson Township.

### **Outreach Programs.**

***Storm Drain Stenciling.*** Ferguson Township may develop a storm drain stenciling program to help make residents aware that materials dumped in storm drains may eventually flow to streams, rivers and lakes. Under this program, storm drain labels that say “No Dumping, Drains to Stream” or “No Dumping, Drains to Drinking Water” would be made available to volunteer groups within the Township. The labels may also include Pennsylvania DEP’s toll free number to report spills. Accompanying door hangers could be provided for volunteers to distribute during the labeling process to educate homeowners about the purpose of the program and the need for community action to protect water quality. Volunteer groups may be utilized to affix the storm drain labels and place the educational door hangers. The goals of this program include educating the participants and the public about how water quality is impacted by runoff that enters storm drains, getting the public involved in a volunteer activity that promotes water quality, and changing the public’s behavior regarding undesirable discharges to storm drains. Achievement of these goals will help reduce levels of pollutants entering storm drains and, eventually, local streams. The implementation of this strategy is dependent upon volunteer groups offering to perform the service.

## II. PUBLIC INVOLVEMENT AND PARTICIPATION PROGRAM

### General

**Scope.** This chapter outlines the approach that Ferguson Township takes in order to provide opportunities for Township residents and other stakeholders to participate in the development and implementation of the Township's Stormwater Management Plan. In the following sections, details are provided on public notification procedures, stormwater related meetings that are open to the public, and stormwater programs in which the public can directly participate.

### Public Notification

**Legal Notices.** Notices of public meetings of the Board of Supervisors are published in the *Centre Daily Times* including action that may be taken on changes to the Stormwater Management Ordinance. The public is provided an opportunity to be involved at these meetings.

**Press Releases.** Press releases may be issued by the Township or ClearWater Conservancy in advance of stormwater related meetings and events such as watershed meetings and volunteer stream clean-ups to encourage general attendance.

**Web Sites.** Information regarding upcoming meetings and special events, as well as copies of stormwater-related documents, is made available to the general public on the Township web site [www.twp.ferguson.pa.us](http://www.twp.ferguson.pa.us).

**Newsletters.** In addition to press releases and web sites, information on how the public can become more involved in the stormwater management program is provided in the *Ferguson Township Newsletter* developed and distributed by Ferguson Township. This newsletter includes information on upcoming events (e.g., public meetings, clean-ups), stories about different stormwater management programs, and suggestions on how those interested can become more involved. For each issue, approximately 7000 copies are printed and distributed to residents and business owners. The Township utilizes the newsletter to present information related to stormwater, its impacts on water quality, and what can be done to control it.

**Electronic Mailing List.** Ferguson Township maintains an electronic mailing list that is used to present timely information to those that request it. E-mails can be sent to all members of the mailing list for stormwater related press releases, in advance of public meetings and special events, and when the newsletter is completed. Anyone interested in receiving this kind of information can join the mailing list by visiting [www.twp.ferguson.pa.us](http://www.twp.ferguson.pa.us) and clicking on the "Sign Up for E-mail Alerts" or by sending an email to [info@twp.ferguson.pa.us](mailto:info@twp.ferguson.pa.us)

### Public Participation

**Public Work Groups / Committees.** There are independent local work groups and committees that discuss issues that at least partially relate to stormwater. These are open to the public, and publicized in several ways, including through media press releases, newsletters, and web sites. The Township may coordinate efforts with these local works groups and offer assistance with

## FERGUSON TOWNSHIP MS4 STORMWATER MANAGEMENT PROGRAM

advertisement of volunteer activities and program organization assistance. A working relationship with the local work groups will allow the Township to gain valuable input from citizens that are already involved in the community and are interested in the quality of the environment. The input gained could be utilized to develop successful stormwater related public participation activities.

One such example of a public committee is the Spring Creek Watershed Commission. The commission meets regularly to discuss issues related to the watershed and develop programs to promote the watershed. As a member, Ferguson Township actively participates on the Watershed Commission and helps to fund these activities.

**Storm Drain Stenciling.** Ferguson Township may establish a storm drain stenciling program for the Township watershed within the urbanized area boundary. In the future, this program may be extended to remaining portions of the Township. Accompanying door hangers may be provided during the labeling process to educate homeowners about the purpose of the program and the need for community action to protect water quality. In an effort to get the public more involved in this program, the Township may, with assistance from ClearWater Conservancy, 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 stormwater issues while they work on a project designed to reduce stormwater impacts on stream quality. This program is dependent upon volunteers.

**Water Resources Monitoring Project.** The Water Resources Monitoring Project was initiated in 1997 by the Spring Creek Watershed Commission. Its goal is to gather baseline information about the quantity and quality of the water resources in the Spring Creek Watershed that can be used for the long-term protection of these resources. Most activities performed for the project are completed by volunteers. They currently monitor 18 stream sites, 3 well sites, and 7 spring sites throughout Centre County. Test results are entered into a computer database, which can be accessed by the public. More information about the program can be found on their website at <http://www.springcreekmonitoring.org>.

**Volunteer Clean-Up Programs.** ClearWater Conservancy coordinates an annual volunteer stream clean-up. The organization has been coordinating this event since 1996 and has been growing in success each year. The Centre Region MS4 permit holders have been involved and have offered man-power, equipment and financial assistance. Ferguson Township will continue this relationship with Clearwater for as long as the program is successful. Collaboration with Clearwater could also open doors for more cleanup programs in future years.

**Public Meeting.** A public meeting will be held annually to review the Township Stormwater Management Program to receive input on the program, edit as appropriate, and report on activities and violations that occurred during the prior year. This year the public meeting was held at the May 6, 2019 Board of Supervisors Meeting.

### III. ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM

#### General

**Scope.** The Illicit Discharge Detection and Elimination Program involves all areas within the Urbanized Area boundary of Ferguson Township. Both the Township and residents participate in this program. The Township participates through approvals, inspections, maintenance and other enforcement measures covered in the rules and regulations referred to in this section. Residents participate through public involvement meetings and training, observations, and complaints. Open lines of communication between the residents and the Township are essential to the success of the tasks contained in this section.

**Mapping of Township Storm Sewer System.** Ferguson Township has developed a map of all storm sewer outfalls and receiving streams within the Ferguson Township Urbanized Area. This map is updated and submitted to Pennsylvania DEP as part of the annual report. The Township records outfall location information and other attribute data, including pipe size, inlet types, material and condition. Additionally, if flow is noted during dry weather, it is recorded and investigated. In an effort to keep the map up to date, developers are required to submit record plan information in electronic format for all new developments so that the storm sewer systems may be integrated into the Township's GIS storm sewer database. Township staff then maps all new storm sewer systems after the Township accepts new roadways, as well as capital project modifications to the system.

#### Prohibition of Illicit Discharges

**Storm Sewer System Prohibited Discharges.** The Ferguson Township stormwater ordinance includes language from the DEP model ordinance prohibiting illicit discharges to storm sewer systems, as well as provisions for enforcement and penalties.

#### Illicit Discharge Detection and Elimination Program

**Procedures for Identifying Priority Areas.** Potential priority areas for illicit discharges were reviewed to determine if there are areas that should be targeted:

1. The few areas where there are on-lot septic systems are already included in a Sewage Management District that requires periodic pumping and inspection. These are not seen as priority areas.
2. The public sewer system is well maintenance without any known ongoing problem areas within the MS4 Urban Area. This is not seen as a priority area.
3. Areas of concentrated industrial activity including any current or future permits to discharge industrial waste under a NPDES permit and any current or future NPDES permitted discharges of storm water associated with industrial activities were reviewed. There are no industrial permits in our MS4 area. This is not seen as a priority area.

Based upon the above, there are no priority areas within the MS4 permit area. All portions of the MS4 system are treated with equal importance.

## FERGUSON TOWNSHIP MS4 STORMWATER MANAGEMENT PROGRAM

**Field Inspections.** Field inspections of all MS4 outfalls are completed at least once per MS4 permit cycle. Any outfall that exhibits illicit or questionable flow will continue to be inspected annually thereafter until two consecutive inspections reveal no issues. The inspections will be performed during dry weather to aid in determining illicit discharges.

Ferguson Township personnel involved in conducting field inspections under this program will be trained to identify potential sources of illicit discharges and to identify illicit discharges. If an illicit discharge is detected, appropriate steps will be taken to eliminate the discharge including testing of a sample to aid in determining the source of the discharge. Additional steps will be specific to the type of discharge detected. Storm sewer system maps can be used to trace the discharge to the source.

**Complaints.** Illicit discharge complaints regarding storm sewer systems will be addressed by Ferguson Township. Every complaint will be documented in a log book to be maintained by the Township specifically for that purpose. If necessary, site visits will be made to gather additional information. Spills or illegal dumping activities will be reported to Pennsylvania DEP. If necessary, other entities will be consulted, which may include; the local fire department, Centre Region Emergency Management Agency, County Emergency Communication Center, SCBWA, and UAJA. For complaints that are found to be valid, a Notice of Violation will be delivered to the responsible party(ies) containing orders to make the appropriate corrections.

**Procedures for Eliminating Illicit Discharges.** Procedures for tracing the source and eliminating an illicit discharge will be dependent upon the type of discharge.

When tracing a source, all available information will be considered, including stream maps, any existing storm sewer maps, maps of on-site sewage systems, sanitary sewer maps, knowledge of area businesses upstream of the source, aerial photos of Ferguson Township, parcel information, land use, topography and other information.

When an illicit discharge has been identified, appropriate steps will be taken to eliminate the source as soon as practical. The steps to be taken to eliminate the source and the entities to be involved in eliminating the source are also dependent upon the specific circumstances of the discharge.

**Educational Outreach.** Ferguson Township newsletters that are developed under MCM#1 will occasionally include educational information on Illicit Discharges. These newsletters will be distributed to target audiences including residents, businesses, and staff at local schools.

**Processing of Solid Wastes.** Ferguson Township participates in a solid waste contract that includes mandatory refuse and recycling for all properties. The contract and program is managed by the Centre Region Council of Governments.



#### IV. CONSTRUCTION SITE STORM WATER RUNOFF CONTROL PROGRAM

##### General

**Scope.** This chapter outlines the approach Ferguson Township takes to ensure that Best Management Practices (BMPs) are implemented as part of construction related activities.

**Program.** Ferguson Township relies upon Pennsylvania's Department of Environmental Protection statewide program to meet the permit requirements of this activity. All activities are administered, permitted, tracked, inspected, and enforced by DEP or their agent, the Centre County Conservation District (CCCD). All inquiries regarding construction site stormwater runoff are directed to the CCCD.

**Understanding of Responsibilities.** Ferguson Township and the CCCD have entered into a Memorandum of Understanding (MOU) with respect to the relative responsibilities under this program. The MOU was authorized to be signed by the Chairman of the Township Board of Supervisors by Resolution 2015-04 on February 2, 2015, and signed by the CCCD on February 11, 2015.

V. POST CONSTRUCTION STORMWATER MANAGEMENT (PCSM) IN  
NEW AND RE-DEVELOPMENT ACTIVITIES

**General**

**Scope.** This chapter outlines the general approach Ferguson Township takes to ensure that Best Management Practices (BMPs) are implemented as part of Storm Water Management Site Plans related to construction activities and that the BMPs are being properly operated and maintained by the responsible party.

**Storm Water Ordinance.** Ferguson Township has enacted an ordinance for stormwater management that includes requirements for PCSM implementation. The ordinance (No. 1018) was last updated with approval on June 6, 2016. This ordinance is used as a stormwater management standard for all land development and is presently implemented by contracting an engineering firm to review and approve all plans for compliance with the standard.

**Low Impact Development.** Ferguson Township encourages low impact development as addressed in Section 301. H of its Stormwater Management ordinance.

**Develop Maps.** Ferguson Township maintains a map of all BMPs that have been approved and constructed due to construction related activities since March 10, 2003. This map is updated as new projects 'as-built' record plans are completed. Copies of the Post Construction Stormwater Management Plan for each construction activity are also filed in a separate folder for convenience during inspections.

**Inspection Procedures.** Ferguson Township has identified the location of all BMPs that were constructed since March 10, 2003; and updates the map as well as BMP inventory table annually with newly completed BMPs. Each year, 20% of the BMP sites will be inspected so that all BMP sites are inspected at least once in the 5-year permit cycle. Each year as the inspections are completed, the BMP inventory table will be updated to reflect all required information. The BMP inventory table was developed in Excel and updated annually. As time permits, the Excel BMP inventory table will be migrated into GIS as an attribute table.

**Enforcement Procedures.** Annually as inspections are completed, any BMP found not to be in compliance with the approved plan shall result in a Notice of Violation being provided to the property owner, and if appropriate copied to the entity responsible for maintenance. The requirements of the Notice of Violation and any follow up action shall be in accordance with the Township Stormwater Management Ordinance.

**Tracking System.** The BMP inventory table shall be used as a tracking mechanism to assure that all BMPs are inspected within the permit cycle, and shall indicate violations, corrections, and any necessary enforcement action.

## VI. POLLUTION PREVENTION / GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

### General

**Scope.** Ferguson Township Public Works (FTPW) operations utilize Best Management Practices (BMPs) to prevent pollution. Ferguson Township annually re-examines the existing inventory of BMPs of the operation and maintenance program, making improvements to the program in order to reduce the amount of pollutant runoff from Township operations. To accomplish this, existing programs are reviewed, recommendations for improvement are made and training programs updated for employees.

#### Evaluation of Existing BMP Inventory and O&M Programs

Ferguson Township currently addresses pollutant runoff from township operations through written procedures and guidelines for township operations and maintenance activities. A description of the existing activities currently being conducted is provided below:

***Fleet Maintenance Operations.*** The Ferguson Township Public Works Department conducts several programs that are designed to minimize the amount of pollutants entering the storm sewer system from fleet maintenance.

***Antifreeze Recycling.*** Used antifreeze drained from Township vehicles and equipment is collected and stored. The stored antifreeze is then collected by a company which recycles the antifreeze.

***Motor Oil Recycling.*** Used motor oil, gear oil, hydraulic oil, transmission fluid, power steering fluid, and brake fluid drained from Township vehicles and equipment is collected and stored in a steel tank. The storage tank is later emptied by a company which recycles the oil and fluids.

***Vehicle Oil Filters.*** The Fleet Maintenance Department currently drains the used oil filters and then stores the filters in a steel drum for future recycling.

***Floor Drains:*** Floor drains in the maintenance facility (FTPW Buildings 1 and 4) are connected to the public sanitary sewer system. The floor drains are equipped with oil/water separators and are cleaned as needed by a septic cleaning service.

***Vehicle Washing:*** All vehicle washing is performed in the maintenance facilities that drain to the sanitary sewer system. An outside washing pit that drains into a rock sump with overflow into a grass lined swale is used to hose off mud and large debris prior to entering the maintenance facilities. No vehicle washing is permitted in the parking lot or FTPW Buildings 2 and 3.

## FERGUSON TOWNSHIP MS4 STORMWATER MANAGEMENT PROGRAM

***Fleet Fueling Operations.*** Ferguson Township owns and maintains its own vehicle fueling tanks and pumps. The tanks have leak monitoring systems. Fuel spill control supplies are stored in the adjacent building.

***Salt Storage/Application.*** Ferguson Township currently stores all road salt in an enclosed salt storage building. The trucks are loaded outside on a large asphalt pad. Road salt spillage during truck loading operations is minimal. Any spill salt is cleaned up with a wheel loader. The Township owns and operates sophisticated salt application equipment, including ground speed control units, designed to deliver the appropriate amount of salt to the roadway to maintain safe roadways.

***Preparedness, Prevention, and Contingency Plan; and Spill Prevention, Control, and Countermeasures Plan (PPC/SPCC)*** A PPC/SPCC plan has been prepared and will start implementation in 2018 with full implementation in 2019. The plan will be reviewed annually or as changes merit to update information and improve the plan. Annual training on the plan will be conducted.

***Road / Storm Sewer System Maintenance.*** Street sweeping is conducted throughout the Urbanized Area of Ferguson Township that greatly reduces the sediment and debris that enters the storm sewer system. Township personnel conduct routine and scheduled maintenance of the storm sewer system. Scheduled maintenance is based on storm sewer inventory and inspection database, which includes multiple attributes pertaining to the conditions of a particular storm sewer element. Routine maintenance is performed as needed and includes cleaning catch basins and outfalls as needed.

***Waste Collection.*** Curbside trash collection and recycling is mandatory throughout the entire township. Ferguson Township utilizes the Centre Region Council of Governments to contract for curbside trash collection and recycling. The Centre County Solid Waste Authority operates recycling drop-off centers in different parts of the County some of which are located within the Township. The Township Public Works Department performs leaf and brush collection throughout the year. Volunteers participating in the Ferguson Township Adopt-A-Road program conduct litter collection up to four times per year along approximately 35 miles of township roadways.

### **Training Programs**

The Township has developed a pollution prevention / good housekeeping training program for employees. Existing training materials available through Pennsylvania DEP and other agencies, organizations and municipalities were utilized as much as practical. The township annually performs refresher training for employees. Training related to storm sewer system maintenance also incorporates training to detect illicit storm water discharges.

## VII. POLLUTION REDUCTION PLANS

### General

**Scope.** Ferguson Township has prepared a Chesapeake Bay Pollution Reduction Plan (CBPRP) in accordance with the requirements of DEP. This plan identifies BMPs to be implemented toward improving the water quality within the Chesapeake Bay and locally impaired waterways. The CBPRP was submitted to DEP for approval in February 2018 with the application to renew our MS4 permit. The permit was expected in June 2018 but is still pending.

**Program Implementation.** After permit issuance/PRP approval from DEP, work will begin with design and permitting of select BMPs to meet the target pollutant reductions. Construction of BMPs will occur within the 5-year permit period.

**Planning for the Future.** Ferguson Township will continue to look for opportunities to implement BMPs to improve stormwater quality. Future permit requirements will be evaluated after proposed rule makings are published.