

Stormwater Quality Management Plan Part C: Program Implementation

327 IAC 15-13 IDEM Rule 13 Stormwater Run-Off Associated with Municipal Separate Storm Sewer Conveyances



City of Fort Wayne

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Table of Contents

1.0 INTRODUCTION	2
2.0 ONGOING CHARACTERIZATION SCHEDULE.....	3
3.0 MS4 BOUNDARY DESCRIPTION	3
4.0 MS4 CONVEYANCE ESTIMATE.....	5
5.0 STRUCTURAL BMPS FOR NEW AND RE-DEVELOPMENT	8
6.0 SELECTION CRITERIA AND PERFORMANCE STANDARDS FOR BMPS	9
7.0 STORMWATER BUDGET	9
8.0 MCM - BMPS AND MEASURABLE GOALS.....	10
9.0 PROGRAMMATIC INDICATORS.....	17
10.0 Co-Permittee Goals	18

List of Tables

Table 1	Pre-Approved Post Construction BMPs	8
Table 2	Programmatic Indicators Required by Rule 13.....	17

List of Figures

Figure 1	Fort Wayne MS4 Boundary	4
Figure 2	GIS Excerpt Showing Storm Sewers	6

Appendices

Appendix A	Public Education and Outreach - BMPs and Measurable Goals
Appendix B	Public Participation and Involvement - BMPs and Measurable Goals
Appendix C	Illicit Discharge Detection and Elimination - BMPs and Measurable Goals
Appendix D	Construction Site Runoff Control - BMPs and Measurable Goals
Appendix E	Post Construction Runoff Control - BMPs and Measurable Goals
Appendix F	Pollution Prevention and Good Housekeeping - BMPs and Measurable Goals

1.0 INTRODUCTION

This report presents the Stormwater Quality Management Plan (SWQMP) Part C: Program Implementation, as required under 327 IAC 15-13-8, for the following entities covered under IDEM Rule 13 Permit Number INR040029:

- City of Fort Wayne (MS4 Operator)
- Indiana University-Purdue University Fort Wayne
- Ivy Tech State College
- Indiana Institute of Technology
- University of Saint Francis

The purpose of this report is to identify the implementation plan for the six Minimum Control Measures that serve as the focus of the City's SWQMP. This report also includes the other elements required under 327 IAC 15-13-8. This report is organized to follow the order of the requirements identified under 327 IAC 15-13-8 and includes the following sections:

1.0	Introduction	Provides an overview of this document.
2.0	On-Going Characterization Schedule	Includes for the on-going characterization of Fort Wayne's receiving streams.
3.0	MS4 Boundary Description	Provides both a map and narrative description of the City's MS4 area.
4.0	MS4 Conveyance Estimate	Includes an estimate of the length of storm sewers 12 inches and larger and ditches with a bottom width of 2 feet or more.
5.0	Structural BMPs for New Development and Redevelopment	Describes the types of structural BMPs that will be allowed in new development and redevelopment sites.
6.0	Selection Criteria and Performance Standards for Structural BMPs	Summarizes selection criteria and performance standards for structural BMPs.
7.0	Stormwater Budget	Includes the City's current and projected stormwater budget along with funding sources.
8.0	MCM Measurable Goals	Identifies specific measurable goals for each of the six MCMs. Several appendices are referenced in this section detailing the BMPs.
9.0	Programmatic Indicators	Lists the programmatic indicators applicable to Fort Wayne's program and identifies reasons if a specific indicator is not applicable.
10.	Co-Permittees	Includes specific goals for Co-Permittees

2.0 ONGOING CHARACTERIZATION SCHEDULE

Fort Wayne's defined watersheds include several water bodies and the entire land area that drains into them. The USGS has subdivided these watersheds into hydrologic units (HU). The smallest unit is a 14-digit unit. These HUs are also the basis for identifying stream segments. IDEM uses these segment identifiers to report water quality in their 303(d) and 305(b) reports. Allen County has further subdivided watersheds into areas that can be identified with local ditches and streams.

In addition to the weekly river sampling program conducted by the City of Fort Wayne, the City and IDEM initiated a joint river sampling program in 2002. The program collects data on Cedar Creek and the St. Mary's, St. Joseph and Maumee Rivers. Samples are collected once a month on a regular schedule; therefore, dry and wet weather samples are not separated in this study. During the recreational season, the City collects samples for the monthly IDEM program as part of the Weekly Sampling Program.

3.0 MS4 BOUNDARY DESCRIPTION

The City of Fort Wayne's MS4 Boundary corresponds to its corporate limits (i.e. area of jurisdiction). This area is shown in the Figure 1. The gray shaded area depicts the current corporate limits with respect to major streets, thoroughfares and interstate highways in the City.

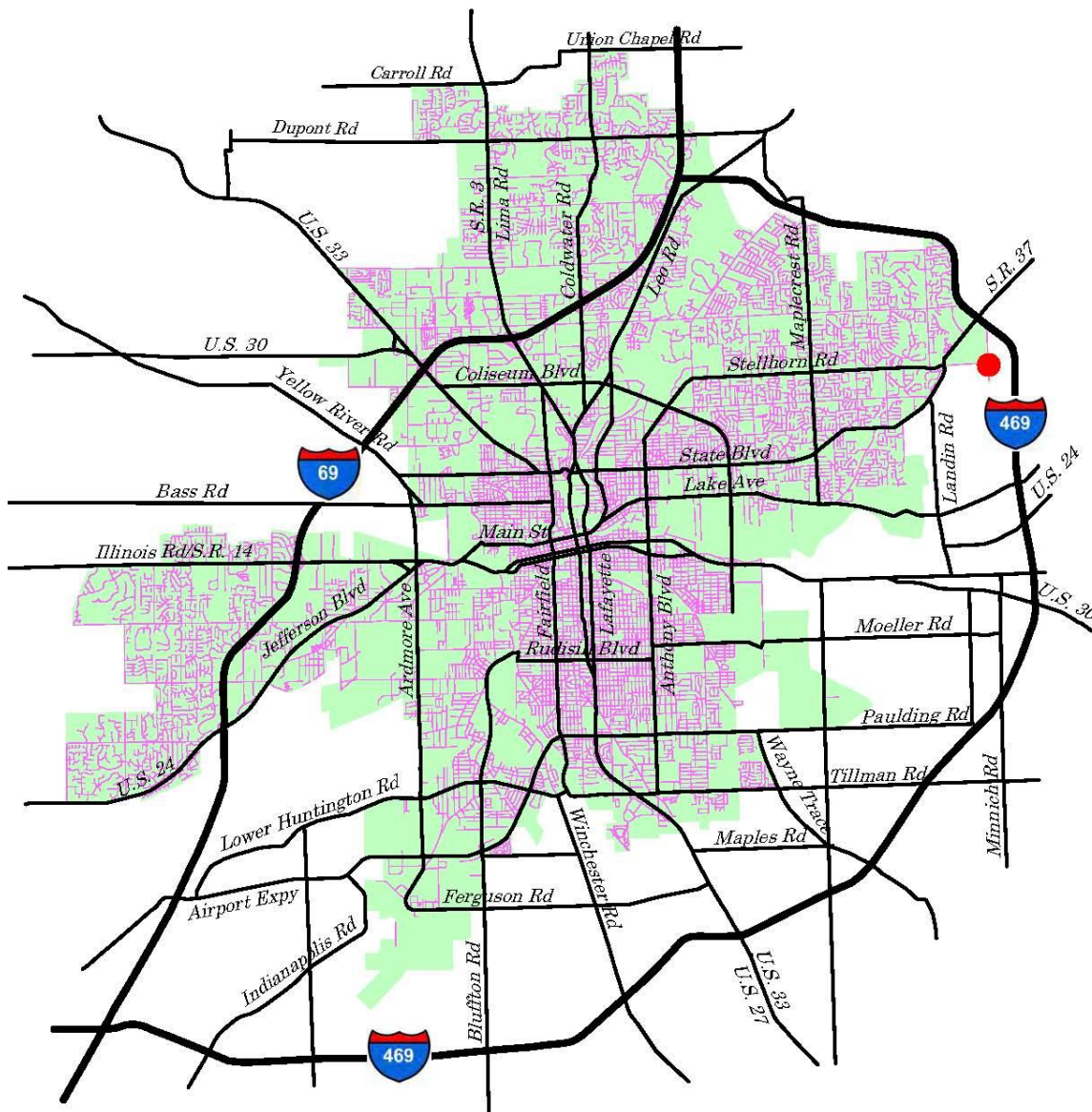


Figure 1 – Fort Wayne MS4 Boundary Map
(MS4 area shown as green shaded area)

The following is a narrative description of the MS4 boundary. The starting point is shown as the red dot on Figure 1 and proceeds around the MS4 boundary in a counterclockwise direction.

Starting at the intersection of Schwartz Road and Stellhorn Road, proceed north to Interstate 469, north/northwest to Wheelock Road, south to Rothman Road, west to Hazelett Avenue, south 3,000 ft, west 1,700 ft, north to Rothman Road, west to Tanbark Lane, north to Interstate 469, northwest to St. Joe Road, southwest to a point 300 ft northeast of Northwest Drive, northwest to St. Joseph River, follow river 1,400 ft, northwest to intersection of North Clinton Street and Diebold Road, continue north to State Road 1, west to Parkview Plaza Drive, north to Corporate Drive, west to I-69, north to Northway Drive, west to Auburn Road, north 1,300 ft, west 2,540 ft, north 1,300 ft, east 860 ft, north to Union Chapel Road, west to State Road 327, south 2,640 ft, west 1,340 ft, south to Badiac Road, west 1,300 ft, south

1,400 ft, west to State Road 3, north to Carroll Road, west to Bethel Road, south to Dupont Road, east 4,000 ft to abandoned CSX Railroad, south 8,750 ft, west 1,150 ft, south 1,300 ft, west 1,000 ft, south to Cook Road, west to Goshen Road/U.S. 33, southeasterly along Goshen Road to Downy Avenue, west to Merlin Drive, south to Washington Center Road, east 1,320 ft, south to West U.S. Highway 30, west 3,900 ft, south 960 ft, east to Kroemer Road, south to California Road, east 3,600 ft, south to Interstate 69, northeasterly along Interstate 69 500 ft, south to Butler Road, east to Hillegas Road, south to Bass Road, east 610 ft, south 1,500 ft, east to Lindenwood Avenue, south to Illinois Road, northwest 8,770 ft, south to Illinois Road, west 1,350 ft, north 2,200 ft, west to Hadley Road, south 1000 ft, west to Deer Cliff Run, south 340 ft, west to Blackthorn Cove, north to Spring Forest Drive, west 1,340 ft, north 770 ft, west 2,670 ft, south to Shorewood Trail, west 1,950 ft, south to Illinois Road, west to Sycamore Hills Parkway, south 530 ft, west 530 ft, southwesterly to Covington Road, east to Homestead Road, south to Aboite Center Road, east to Live Oak Boulevard, south 2,600 ft, west 7,880 ft, south to U.S. Highway 24, east/northeast along U.S. Highway 24/Jefferson Boulevard 6,790 ft, south 560 ft, northeasterly 5,870 ft, north to Jefferson Boulevard, northeasterly to Engle Road, southeasterly along Engle Road 2,210 ft, northeasterly along Taylor Street 3,540 ft, north 1,000 ft, east 650 ft, north 260 ft, east to Fountain Avenue, south to Engle Road, west 1,650 ft, south 2,150 ft, east 700 ft, south 1,620 ft, northeast 7,160 ft, south to Knoll Road, east to Ardmore Avenue, south to Lower Huntington Road, west to Smith Road, south to Airport Expressway, east 1,640 ft, south to Northwest Perimeter Road, west 1,690 ft, south to West Ferguson Road, east 1,310 ft, south to Indianapolis Road, northeast 1,080 ft, southeasterly 540 ft, south 1,980 ft, west 1,320 ft, south 1,250 ft, west to Smith Road, south to Winters Road, east 1,560 ft, southwest 3,400 ft, southeast 1,660 ft, northeast to Winters Road, east 4,200 ft, north 2,560 ft, east 1,600 ft, north to Ferguson Road, east to Bluffton Road, north to Dunkelberg Road, east 2,600 ft, north 2,650 ft, east 1,200 ft, southeast 2,000 ft to Kinnerk Road, northeast to Boggs Avenue, northwest 1,270 ft, northeast to Lower Huntington Road, east to Tillman Road, southeast 7,000 ft to Maples Road, north 2,000 ft, east 9,800 ft, north to Tillman Road, east to Wayne Trace, northwest to Bueter Road, north to Sherwood Terrace, northeast to intersection of McKinnie Avenue and Meyer Road, east along Hoevel Road 1,370 ft, south to Paulding Road, east 5,300 ft, northeast 3,500 ft, northwest 6,660 ft, north 5,200 ft, west to Meyer Road, north to Old Lincoln Highway, east 2,600 ft, north 800 ft to Maumee River, follow river 16,500 ft to point near North River Road, north to Shordon Road, west to Long Road, north to Maysville Road, northeast to Stellhorn, east to starting point.

4.0 MS4 CONVEYANCE ESTIMATE

The purpose of having MS4 conveyance mapping is to aid in the investigation of illicit discharges and determine appropriate placement of best management practices. The requirement is to map all known outfall conveyance systems with a pipe diameter of twelve (12) inches or larger and open ditches with a two (2) foot or larger bottom within the first five (5) year permit term. Subsequent permit terms will require that all remaining outfall conveyance systems are mapped.

An estimate of the City of Fort Wayne's MS4 conveyances of storm pipe with a diameter of 12 inches or larger was made using a combination of existing paper maps, Geographic Information System (GIS) data, and field investigations. The stream (ditch) network was developed using a combination of two separate analyses in GIS: 1) Visual interpretation of aerial photographs, contours, and digital elevation model (DEM) data, and 2) Interpretation of the DEM using the ArcHydro extension. A third component, field verification, was utilized to refine this desktop methodology. The ditches are digitized but not yet incorporated into our GIS system. MS4 conveyances include storm pipe with a diameter of 12 inches or larger and ditches with a bottom width of 2 feet or greater.

The City has paper maps of its storm sewer system on a series of quarter section maps. The maps primarily show the underground pipe system. Ditch systems will be incorporated into the quarter section maps.

Outfalls are identified by a unique alpha-numeric identifier. An excerpt from the GIS is shown in Figure 2 below. Separate storm sewers are shown in the yellow colored lines. The green lines are sanitary sewers.

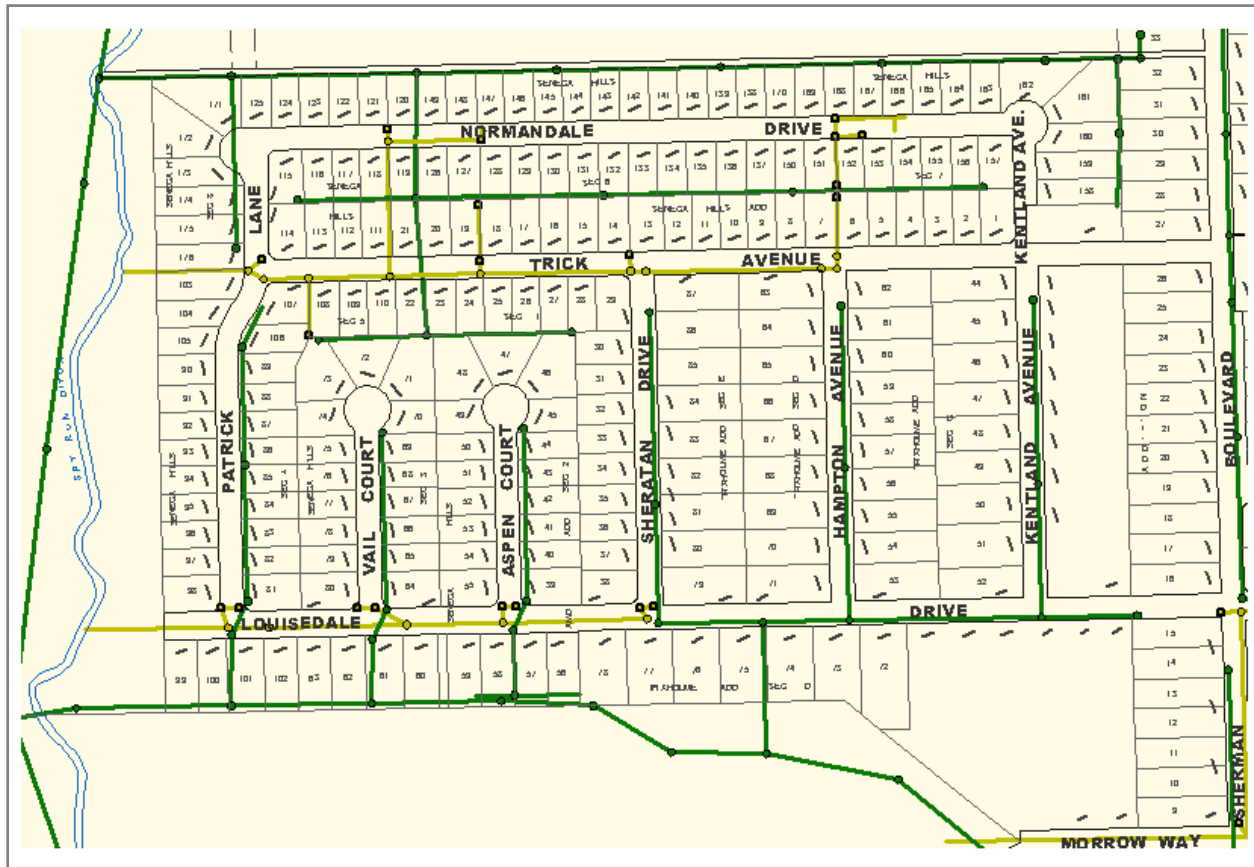


Figure 2 – GIS Excerpt Showing Storm Sewers
(Note: storm sewers are shown as tan colored lines)

The length of storm sewer closed pipe was estimated by querying the GIS. The GIS contains the storm sewer segment length as an attribute. A summation of all storm sewer segment lengths in the database showed a total length of approximately 2.83 million feet, or 563 miles. With a total MS4 area of approximately 111 square miles, there is an average length of 24,849 feet of storm sewer per square mile of MS4 area.

The length of ditch network was estimated by methods described above. A summation of ditch network lengths shows a total length of approximately 1.29 million feet, or 244 miles. This ditch network was added to our existing stream network making a total of 2.12 million feet of open conveyance with bottoms of 2 feet or larger.

To summarize, the City has an adequate map of its storm sewer system. The activities related to the MS4 mapping requirement will be primarily verification of the existing mapping, changes due to separation projects, new construction projects and in upcoming annexation areas. The information except for the ditches is contained in a GIS which allows for easy identification of outfall coordinates and access to information needed to follow up on potential illicit discharges. The estimated length of storm sewers and ditches are summarized below as follows:

Storm Sewers	2,830,080 linear ft
Ditches (2-foot or wider bottom)	2,120, 536 linear ft
Total	4,950,616 linear ft

5.0 STRUCTURAL BMPs FOR NEW AND RE-DEVELOPMENT

Pursuant to Indiana’s Rule 5 and Rule 13, the City of Fort Wayne requires “best management practices” (BMP) in new development and re-development areas, to reduce sediment in stormwater runoff after construction has been completed and the site has been stabilized. BMPs must be capable of removing 80% of total suspended solids (TSS) from a first-flush⁽¹⁾ storm event (see Section 7.0), which is the City’s adopted rate.

The City of Fort Wayne has approved 22 BMP manufactured or site-built structures and methods, which may be used alone or in treatment chains to achieve the 80% TSS removal rate. These BMPs and their approved TSS removal rates are listed in Table 1, below.

Table 1
Pre-Approved Post Construction BMPs

BMP Description	Anticipated Average % TSS Removal Rate
Quality Control Pond	3
Dry Extended Detention Pond	61
Wet Extended Detention Pond	50-90
Multiple-Pond System	91
Wet Ponds	80
Shallow Marsh	83
Extended Detention Wetland	67
Pond/Wetland System	71
Submerged Gravel Wetland	83
Organic Filter	88
Perimeter Sand Filter	79
Surface Sand Filter	87
Vertical Sand Filter	70
Bioretention	90
Infiltration Trench	90
Porous Pavement	95
Ditches ⁽¹⁾	31
Grass Channel	68
Dry Swale	81
Wet Swale	74
Swirl Separator	80
Oil-Grit Separator	40

Notes to Table 1:

1 Based on capture of 0.5-inch of runoff volume.

Sources: USEPA, 2005; and the Indiana Storm Water Quality Manual, October 2007 (numbers in bold)

Proposed BMPs not on the Pre-Approved list must be certified by a professional engineer licensed in the State of Indiana and approved through the City of Fort Wayne. ASTM standard methods must be followed when verifying performance of new measures. To be considered, new BMPs, individually or in combination, must meet the 80% TSS removal rate of particles in the 50-125 micron range (silt/fine sand) without re-entrainment, and must have a low-to-medium maintenance requirement. Testing of manufactured BMPs to establish the TSS removal rate must be conducted by an independent testing facility, not the BMP manufacturer.

Fort Wayne City Utilities has adopted a supplement to the Stormwater Design Standards that provide guidance for implementing green and sustainable design practices. These standards apply to stormwater management projects designed by the City and also private development and redevelopment projects. The supplement document provides an approach to land development that uses various land planning, design practices and technologies to simultaneously conserve and protect natural resource systems. It is an innovative multi-step storm water management approach that 1) utilizes thoughtful site planning and 2) manages rainfall at its source through the use of integrated and distributed micro-scale storm water practices (green infrastructure). Some of the on-site practices include: cisterns, green roofs, rain gardens, and permeable pavement.

6.0 SELECTION CRITERIA AND PERFORMANCE STANDARDS FOR STRUCTURAL BMPS

The City of Fort Wayne has adopted an ordinance that the control of stormwater runoff quality will be based on the management of Total Suspended Solids (TSS). This policy is being adopted as the basis of the City of Fort Wayne's stormwater quality management program for all areas of the City. A minimum TSS removal rate of 80% is the performance standard for post construction structural BMPs. Any project that includes clearing, grading, excavation, and other land disturbing activities resulting in the disturbance of one acre or more will be required to implement structural BMPs to control post construction runoff.

TSS was selected as the performance standard for BMPs because many pollutants are highly associated with TSS. These pollutants include heavy metals, phosphorus, nitrogen, pesticides, trash and debris, and oxygen-demanding substances. Reducing TSS will improve water quality. High levels of TSS can cause streams to lose their ability to support diverse aquatic organisms. Suspended solids can also directly impact aquatic life by clogging fish gills, reducing growth rates and decreasing resistance to disease. Excessive sediment deposited in the stream bed can prevent egg and larvae development. Hence, controlling TSS on new development and re-development will have a positive impact on water quality.

7.0 STORMWATER BUDGET

The majority of the City of Fort Wayne's stormwater budget comes from the City Utilities Division, which includes the Water Utility, Sewer Utility, and Stormwater Utility. The City's Stormwater Utility generates revenue from a stormwater user fee. The City's Stormwater budget is attached and referenced in the IDEM approved NPDES permit NOI.

Some of the activities that will be performed under implementation of the SWQMP are provided by departments outside City Utilities. These departments include Community & Economic Development (Planning) and Public Works (flood control, street maintenance, solid waste, fleet management). Existing activities that have a positive impact to stormwater quality that these departments perform include planning and zoning, street sweeping, curbside recycling, leaf collection and others. For those activities

performed by other departments, it is difficult to estimate how much of the departmental budgets can be defined as stormwater quality management, other than to say that the amounts are relatively minor. As such, budget figures for these activities by the other departments are not included.

Funds needed to implement the MS4 program will primarily come from revenue generated by the City's Stormwater Utility. Other supplementary sources may include plan review and inspection fees. The four University Co-Applicants will also be allocating resources toward implementation of the Rule 13 MCMs, through in-kind services and facilities operations budgets.

8.0 MCM – BMPS AND MEASUREABLE GOALS

This section presents the City of Fort Wayne's proposed program for each of the six Minimum Control Measures for the permit term spanning the years 2014 through 2019. For each MCM, an overview and program objectives are provided. Corresponding BMPs are provided in Appendices A through F. Each of the proposed BMPs is organized on a single page that includes a description, identified measurable goal(s), responsibility assignments and record keeping requirements.

The four University Co-Permittees will also be participating in implementation of the BMPs and measurable goals presented herein. These activities are described in Section 10.0 Co-Permittee Responsibilities as well as in the Shared Responsibilities and Services Agreement Stormwater NPDES Phase II General Permit for each individual university co-applicant. These agreements are attachments to the October 2013 IDEM approved Rule 13 NPDES Permit Number INR040029 for the City of Fort Wayne, IN.

The City of Fort Wayne has numerous activities that provide a positive impact to stormwater quality and that the City desires to take credit for in its SWQMP Part C: Program Implementation. Overall MCM Objectives have been identified so that BMPs complement each other, work toward a common and easily quantifiable goal, and meet regulatory requirements.

A summary of activities is presented below and organized by Minimum Control Measure. The following sections, along with Appendices A through F present the MS4 program for the City.

8.1 Public Education and Outreach

When the Phase I stormwater rule was published in December 1990, the USEPA identified public education as one of the three areas where MS4 entities could see the quickest return in their stormwater quality management programs. The City of Fort Wayne has a very strong public education, outreach, and involvement program. The public education program makes use of both traditional and innovative public awareness tools, such as utility bill stuffers, activity / coloring books, informational displays at public events and public service announcements. The program includes outreach activities to help target audiences understand the impacts that stormwater discharges have on local water bodies and the things citizens can do to reduce stormwater pollution. The main messages of the materials are targeted towards homeowners, rural landowners, and businesses. To have the most impact on local issues the following areas are targeted: : rain gardens, rain barrels, septic systems, pet waste, and landscaping. The City of Fort Wayne developing a social indicator survey to further refine the stormwater message for the local audience and understand the best way to change behaviors and identify sources of concern. The results of the survey will be used to evaluate the level of awareness and participation in stormwater issues and target future efforts.

Fort Wayne has worked to develop brochures, hand-outs, and website information on stormwater-related topics. The City continues to review and update these materials and create new materials, as necessary, to meet the needs of the MS4.

Moving forward, the City of Fort Wayne is developing a consistent style and message for the extensive catalogue of outreach materials to develop a “brand” with a standardized header, color palate, font, and font size and bear the appropriate logo(s) of City Utilities. This branding will be utilized to obtain recognition and response to the program and demonstrate that messages, priorities, activities, staff, and departments are in alignment within the program.

Fort Wayne is fortunate to have many active local watershed, civic, service and neighborhood groups that help the City coordinate the distribution of educational material including: the St. Joseph River Watershed Initiative; Utility Advisory Group – Stormwater Sub-Committee; Greenway Consortium; Neighborhood Partnerships and Neighborhood Presidents; Friends of the Rivers; Maumee River Basin Partnership of Local Governments and others.

The BMPs for the Public Education and Outreach program are provided in Appendix A. Each BMP contains the prefix “PE” for Public Education. The individual BMP elements each have measurable goals that the element will accomplish in support of the overall objective. All of the BMPs represent a continuation and/or expansion of successful programs.

8.2 Public Participation and Involvement

Through volunteer activities, reporting, and survey responses, the public has provided valuable input and assistance to the development and implementation of the City’s stormwater program and will continue to be a vital asset to the City. The advantages of active public involvement include reduced pollutant loads, increased program support, and vigilant protection of water bodies. The City has focused this MCM on creating opportunities for public input, public participation in local activities and on making the public aware of these opportunities. The social indicator survey, developed in 2015, will be an important tool in gauging the effectiveness of the program and modifying efforts as needed.

Fort Wayne City Utilities works closely with a long-serving group of volunteers known as the Utility Advisory Group. Many members of the group have served on advisory boards for City Utilities for as long as 20 years. The advisory group has created a Stormwater Sub-Committee that has been active in reviewing, commenting on and helping to implement the City’s stormwater management program and MCMs.

Not all of Fort Wayne’s activities that involve the public in water resource protection activities are conducted by Fort Wayne City Utilities. For example, the City’s Greenways and Trails program manages an “Adopt A Greenway” volunteer effort in which organizations agree to adopt a two-mile long stretch of a riverside trail. Participating organizations clean their assigned section of the greenway two times each year, thus reducing the amount of trash and debris that is carried by stormwater into the City’s rivers. Currently, more than a dozen organizations participate in this program.

Additionally, the Greenways Department also manages a Volunteer Greenway Ranger program. Greenway Rangers are responsible for patrolling a ½ mile - 1 mile section of trail at least once a week from April to October. Rangers provide light trash clean up and report any issues with the trails to the Greenways Department. There are currently nearly 100 Greenway Rangers and the program continues to expand as additional trails are built. Greenway Rangers receive an hour orientation regarding safety and responsibilities on the trail.

The Greenways Department also partners with Catholic Charities Senior Aides Program. Catholic Charities provides the Greenways Department with 2 Senior Aides who spend 20 hours a week during the trail season, April to October, helping maintain the trails with light maintenance work such as cutting back brush, picking up litter and blowing off the trails.

Due, in part, to the success of the Adopt A Greenway, Volunteer Greenway Ranger, and Senior Aides programs, Fort Wayne is considering piloting a Storm Drain Steward program to allow volunteer to adopt storm drains. Volunteers would be trained to routinely inspect, clear, and document the condition of their adopted storm drain. Volunteers would be provided with information and basic materials.

Since the spring of 2010, the Greenways and Parks Department has added several pet waste bag dispensers along trails across Fort Wayne with hopes of encouraging responsible pet owners to clean up after their pets. The program has been well received and the Greenways Department hopes to include additional dispensers as the trail network continues to expand.

Fort Wayne's Solid Waste Department organizes an annual spring clean-up as part of the Great American Clean-Up. The program includes activities such as litter and leaf cleanup, the removal of construction and other debris from neighborhoods and clean-up of designated riverbank areas. The Solid Waste Department provides trash containers for neighborhood clean-ups throughout the year. The opportunity to participate in these activities is promoted on the City's website.

The Allen County, Solid Waste Management District is the local entity responsible for conducting a mercury collection and recycling program, a household hazardous waste disposal program, automotive fluid recycling and used tire collection and disposal. The District also works with several local police departments, volunteer agencies and businesses to conduct unused medication collection events. Fort Wayne City Utilities promotes these public involvement opportunities on its website and will continue to work with the Solid Waste Management District on programs related to stormwater.

The BMPs for the Public Participation and Involvement program are provided in Appendix B. Each BMP contains the prefix "PI" for Public Involvement. The individual BMP elements each have measurable goals that will be accomplished in support of the overall objective of this MCM. All of the BMPs in this section represent a continuation or expansion of successful programs already underway.

8.3 Illicit Discharge Detection and Elimination

The City of Fort Wayne's program to detect and eliminate illicit discharges will rely on a number of programs. The City has an Illicit Discharge Detection and Elimination (IDDE) Plan and Manual. This written plan in conjunction with guidance manuals made available through organizations such as the Center for Watershed Protection, are used to detect and eliminate illicit discharges. The City's IDDE Plan addresses program requirements. This program will be reviewed and revised (if necessary) to comply with stormwater regulations and changing work processes. To coordinate departments in IDDE efforts, a flow chart has been developed and maintained. The IDDE flow chart is utilized as a communication, training, tracking and implementation tool and is updated as necessary. The flow chart illustrates reporting and identification of illicit discharges, referral of stormwater issues, testing, enforcement, and follow up.

The IDDE program receives its authorization from the City's stormwater ordinance (Chapter 53: Stormwater Management Department, Fort Wayne City Code) of Title V (Public Works). This Chapter contains language prohibiting illicit discharges. Section 53.42(C) contains language stating "It shall be a violation of this Chapter to permit, allow or engage in the discharge of any pollutant into any waterway of the United States, including but not limited to, the St. Mary's River, the St. Joseph River, the Maumee

River, any of their tributaries or streams or any streets, storm sewers or drains, ditches or drainage ways leading to any such waterway of the United States. There is also *an enforcement chapter (Section 53.70) containing enforcement language from; a verbal warning to the responsible party/parties to make corrections; to suspension of access to the stormwater drainage system due to the detection of illicit discharge; to a civil penalty stating any violator shall be subject to a fine of up to \$2,500 per day per violation. In addition, that user may also be held responsible for any costs incurred by the city in rectifying a situation of pollution to the waterways of the United States and/or for repairing any damage to the public stormwater facility and/or the stormwater system.*”

In order to implement both an effective illicit discharge detection and elimination program and a comprehensive water quality planning program it is important to have accurate mapping of outfall locations and the storm drainage system. The City has very good digital mapping of its MS4 and outfalls (refer to section 5.0). The activities related to the MS4 mapping requirement will be primarily verification of the existing mapping, changes due to separation projects, new construction projects and in upcoming annexation areas.

An outfall screening program is incorporated in IDDE plan. The plan details procedures to follow to correctly screen outfalls during dry weather. These procedures outline test parameters for flowing outfalls; physical characteristics for non-flowing outfalls; and follow-up procedures for suspect outfalls. The plan also includes a guide for suspect pollutants for various types of land use and test parameters to sample.

A complaint hotline is established through the City's 311 service center where citizens can easily report an illicit discharge or pollution concern. The City is looking into developing a report-a-polluter mobile device application (Ap) to further promote involvement and pinpoint complaint locations. Department staff will also report potential illicit discharges observed during other field activities. Complaints will be followed up by trained inspectors within 24 hours if possible.

The potential industrial pollution sources are organized in a database as a potential pollution source attribute. These industries will include the Rule 6 permittees and other significant pollutant sources as identified by the City for this program.

Allen County has a well-defined household hazardous waste and recycling program. There is currently a Tox-Away Day and vendors have been identified that accept recyclable or household waste products, such as oil, batteries, paint, etc. This information is available on the City's website. Fort Wayne City Utilities works with the county to promote waste and recycling programs that benefit stormwater.

Outreach to City employees, businesses and the general public is a very important element of Fort Wayne's IDDE program. The City's Pollution Prevention/Good Housekeeping training for municipal employees incorporates training on detecting and reporting illicit discharges. Outreach to businesses with high potential to impact water quality and the general public is part of the City's IDDE program.

The BMPs for the Illicit Discharge Detection and Elimination program are provided in Appendix C. Each BMP contains the prefix “ID” for Illicit Discharge. The individual BMP elements each have measurable goals that the element will accomplish in support of the overall objective.

8.4 Construction Site Runoff Control

The City of Fort Wayne currently has a comprehensive erosion and sediment control program. The City's construction site runoff control program includes an ordinance, plan review, site inspection, enforcement,

and technical guidance criteria for the design, installation and maintenance of erosion and sediment control measures during site construction activities.

The City has drafted updates and modifications to its current stormwater ordinance (Chapter 53, Stormwater Management Department of Title V of the City Code) to reflect the requirements of this MCM. The stormwater ordinance provides requirements and guidance for construction site runoff control, reflects the requirements of Rule 13 and provides the City with proper legal authority for its construction site runoff control program. The City has an agreement that defines roles and responsibilities for compliance with "Rule 5" (327 IAC 15-5) with either the Indiana Department of Natural Resources (IDNR) - Division of Soil Conservation or the Allen County Soil and Water Conservation District (SWCD), for reviewing the erosion control plans. As this program continues to be implemented, the responsibility is coordinated by the City's plan review and inspection staff. "City-owned" construction projects that disturb one acre or more of land will continue to be reviewed and inspected by the Allen County SWCD.

The BMPs for the Construction Site Runoff Control program are provided in Appendix D. Each BMP contains the prefix "CS" for construction site. The individual BMP elements each have measurable goals that the element will accomplish in support of the overall objective.

8.5 Post Construction Runoff Control

The City currently has a comprehensive post construction runoff control program. The City has drafted updates and modifications to its current stormwater ordinance (Chapter 53, Stormwater Management Department of Title V of the City Code) to reflect the requirements of this MCM. Additionally, the City has developed a manual for the control of post construction runoff control.

Fort Wayne City Utilities has adopted a supplement to the Stormwater Design Standards that provide guidance for implementing green and sustainable design practices. These standards apply to stormwater management projects designed by the City and also private development and redevelopment projects. The supplement document provides an approach to land development that uses various land planning, design practices and technologies to simultaneously conserve and protect natural resource systems. It is an innovative multi-step storm water management approach that 1) utilizes thoughtful site planning and 2) manages rainfall at its source through the use of integrated and distributed micro-scale storm water practices (green infrastructure). Some of the on-site practices include: cisterns, green roofs, rain gardens, and permeable pavement.

Grading plans are also reviewed for every site development to ensure that drainage will not cause flooding or damage to public property or to private property owned by others. Where developments are required to provide stormwater detention, owners also agree to operate and maintain their detention facilities in compliance with City standards and specifications. Fort Wayne has created a Development Criteria/Standards Manual that provides guidance for meeting the stormwater management provisions of the City Code and Stormwater Utility Rules and Regulations.

The City has set the water quality goal at 80% removal of total suspended solids (TSS). The program will be a performance-based program. In order to ensure the anticipated performance, maintenance requirements will be prescribed for all new BMPs that will be built in the City of Fort Wayne. To track stormwater BMPs, post construction BMPs are entered into GIS during plan review. Plan information is attached to the GIS map location in the database.

The City has a zoning district that helps direct growth away from sensitive areas. A Rivergreenway Overlay District is provided in Section 157.180 of the City Code. It includes lands abutting the Maumee, St. Joseph, and St. Mary's Rivers, Spy Run Creek, and other creeks and tributaries that may be designated by the Plan Commission. The boundaries of the district are 100 feet from the riverbank. "Riverbank" is defined as the landward edge of the floodway area as determined by the Indiana Department of Natural Resources and/or Federal Emergency Management Agency, on both sides of the river or creek. If any portion of a lot or parcel is within that boundary, the entire lot or parcel is included. The intent of the district is to "provide for maximum public benefit from any future development of these areas through a sharing of river orientation, with emphasis on the opportunity for enjoyment of river vistas, continuity of Rivergreenway paths, and access to the rivers and banks to the maximum number of citizens. It is further the purpose of this subchapter to eliminate or minimize adverse environmental impacts and to improve scenic and aesthetic controls." Any development in these areas requires special review by the Rivergreenway Overlay Committee to ensure that land alteration is consistent with the intent of the Greenway District.

The BMPs for the Post Construction Site Runoff Control program are provided in Appendix E. Each BMP contains the prefix "PC" for Post Construction. The individual BMP elements each have measurable goals that the element will accomplish in support of the overall objective.

8.6 Municipal Operations Pollution Prevention and Good Housekeeping

The City currently has several existing programs that remove potential stormwater pollution before it enters the MS4 and these activities will continue. Modified record keeping for some existing programs will allow the City to quantify how effective these programs are and will help in future prioritization of services. Many municipal activities have the potential to positively or negatively impact stormwater runoff quality. In order to minimize negative impact those activities have on stormwater runoff quality, standard operating procedures will be modified and / or developed that provide guidance on how to perform these activities with stormwater pollution prevention in mind. Training programs have been developed for staff that are targeted to the types of pollution or pollution prevention opportunities that staff may encounter in the performance of their jobs.

Activities included in the Pollution Prevention/Good Housekeeping program for municipal operations are:

- The City's Greenway Department maintains the greenway trails and there is also an "Adopt a Greenway" program where volunteers help clean up debris and trash along trails.
- The City cleans all drainage inlets and catch basins every 2½ years. A total of over 15,000 structures are cleaned during this cycle (5,600 per year).
- The City performs sewer cleaning and televising. The primary focus of the cleaning and televising program is in the sanitary and combined sewer area; however some separate storm sewer systems have been televised.
- The City currently has a street sweeping program that covers most City streets within the MS4 area. The City has seven sweepers, one for downtown and six for the outlying areas. Downtown streets are swept weekly while residential streets are swept four times per year. Public parking lots and municipal yards are also swept periodically.

- De-icing salt is stored at four City locations in domed or completely enclosed storage buildings. The main complex yard drains to catch basins in both the combined and separate storm sewer system. Runoff from the other three outlying facilities is contained on site.
- City Operations & Maintenance Department trucks are washed mostly indoors when possible; wash water drains to the combined sewer system and is treated at the wastewater treatment plant. BMPs are in place for those few that are washed outdoors. Most vehicles are stored inside to protect equipment. Inlets in some vehicle storage areas have oil water separators. All vehicle storage areas contain spill kits with absorbent and inlet protection to prevent spills from entering drains. The vehicle refueling station is covered and has a concrete floor with spill kits and drain protection.
- The City provides weekly garbage pickup and has curbside recycling, yard waste collection, and fall leaf collection programs.
 - The City of Fort Wayne employs a private firm to collect trash/garbage from residential properties on a weekly basis. The same company provides recycling collection on a bi-weekly basis, on the same day as trash collection. Each household is provided with a lidded cart into which all recyclables may be placed. Information on what can be recycled can be found imprinted on the cart. Utility bill stuffers, mailings to newly annexed residents, the City website and publications produced in cooperation with the Allen County Solid Waste Management District also provide information about the City's recycling program.
 - A special area on the City's website provides information on disposal of unusual items that are not acceptable for garbage collection or recycling. Pickup of unusual items may be requested through the City's 311 "One Call to City Hall" service center. The City encourages private collection companies to keep charges as reasonable as possible to discourage illegal dumping.
 - Yard waste, except leaves, can be placed with the garbage for collection all year long. Grass clippings may be bagged in plastic bags or placed in refuse containers. Biodegradable yard bags may also be used. One City-operated site and one privately-operated site are also available for yard waste disposal. The City-operated yard waste recycling facility accepts leaves, garden waste, prunings, vines, grass clippings and brush. There is a small charge for dumping at both sites. Fort Wayne's Solid Waste Department encourages property owners to mulch grass clippings rather than put them out for trash collection.
 - The City's Street Department operates a neighborhood leaf collection program annually from mid-October through mid-December. The City is divided into three areas, north, central and south, and leaf collection crews spend seven weeks in each area on a rotating basis. City crews pick up twice during those seven weeks. Residents receive utility bill stuffers notifying them of the dates when leaf crews will be in their area of the City. Residents are asked to rake their leaves to the curb but not into the street. Leaves may also be placed in biodegradable yard waste bags and placed at the curb. Street Department crews use front end loaders to collect the leaves, placing them in dump trucks for transport to the City's yard waste recycling facility. In some areas, particularly areas with unimproved streets, leaf vacuums are used to collect leaves. A street sweeper also follows each leaf collection crew.

- The City Parks Department uses pesticides, herbicides and fertilizers, but minimizes their use. Various City Departments use herbicides to control roadside vegetation. Applicators are licensed through the State Chemist’s Office.
- Standard Operating Procedures (SOPs) have been developed to clearly define stormwater pollution prevention practices and record keeping. SOPs are covered in training sessions and implemented at applicable facilities. In addition to SOPs, IDDE training is provided for City employees.

Outreach to City employees is a very important element of Fort Wayne’s Pollution Prevention/Good Housekeeping program. On an annual basis, the City of Fort Wayne’s maintenance employees receive training relating to pollution prevention/good housekeeping for municipal operations and illicit discharge detection and reporting. The training provides information regarding how municipal operations can result in the discharge of contaminants, steps that can be taken to prevent these discharges from municipal operations, and techniques to detect illicit discharges. General stormwater awareness training using an on-line format is provided to all City employees.

The BMPs for the Municipal Operations Pollution Prevention and Good Housekeeping program are provided in Appendix F. Each BMP contains the prefix “GH” for Good Housekeeping. The individual BMP elements each have measurable goals that the element will accomplish in support of the overall objective.

9.0 PROGRAMMATIC INDICATORS

Programmatic indicators refer to any data collected by an MS4 entity that is used to indicate implementation of one (1) or more MCM. These indicators will be used during the term of the permit to track the collection of data that will be submitted with annual reports to IDEM. These indicators may be adjusted during the term of the permit to be more reflective of local conditions and practices. Programmatic Indicators were examined in the development of the SWQMP and are addressed in Appendices A-F. Table 2 provides the programmatic indicators required by Rule 13 and the related BMP. Record keeping has been adapted to meet annual reporting requirements.

Table 2
Programmatic Indicators Required by Rule 13 and Associated BMP Reference

Number or percentage of citizens, segregated by type of constituent, that have an awareness of storm water quality issues. PE-6
Number and description of meetings, training sessions, and events conducted to involve citizen constituents in the storm water program. PE-3 PE-4 PE-5 PE-7 PE-9 PI-1 PI-2 PI-3 PI-5 CS-4 GH-8
Number or percentage of citizen constituents that participate in storm water quality improvement programs. PE-6 PE-7 PE-8 PI-2 PI-5
Number and location of storm drains marked or cast, segregated by marking method. PI-5
Estimated or actual linear feet or percentage of MS4 mapped and indicated on an MS4 area map. ID-1
Number and location of MS4 area outfalls mapped. ID-1
Number and location of MS4 area outfalls screened for illicit discharges. ID-3
Number and location of illicit discharges detected. ID-2 ID-3
Number and location of illicit discharges eliminated. ID-2 ID-3
Number of and estimated or actual amount of material, segregated by type, collected from HHW collections in the MS4

area. PE-7
Number and location of constituent drop-off centers for automotive fluid recycling. PE-7
Number or percentage of constituents that participate in the HHW collections. PE-7
Number of construction sites obtaining an MS4 entity-issued storm water run-off permit in the MS4 area. CS-2
Number of construction sites inspected. CS-3
Number and type of enforcement actions taken against construction site operators. CS-3
Number of, and associated construction site name and location for, public informational requests received. PE-8
Number, type, and location of structural BMPs installed. PC-5
Number, type, and location of structural BMPs inspected. PC-3
Number, type, and location of structural BMPs maintained or improved to function properly. PC-3
Type and location of nonstructural BMPs utilized. PC-5
Estimated or actual acreage or square footage of open space preserved and mapped in the MS4 area, if applicable. PC-5
Estimated or actual acreage or square footage of pervious and impervious surfaces mapped in the MS4 area, if applicable. PC-5
Number and location of new retail gasoline outlets or municipal, state, federal, or institutional refueling areas, or outlets or refueling areas that replaced existing tank systems that have installed storm water BMPs. PC-5
Number and location of MS4 entity facilities that have containment for accidental releases of stored polluting materials. GH-9
Estimated or actual acreage or square footage, amount, and location where pesticides and fertilizers are applied by a regulated MS4 entity to places where storm water can be exposed within the MS4 area. GH-5
Estimated or actual linear feet or percentage and location of unvegetated swales and ditches that have an appropriately sized vegetated filter strip. PC-5
Estimated or actual linear feet or percentage and location of MS4 conveyances cleaned or repaired. GH-3
Estimated or actual linear feet or percentage and location of roadside shoulders and ditches stabilized, if applicable. GH-10
Number and location of storm water outfall areas remediated from scouring conditions, if applicable. GH-10
Number and location of deicing salt and sand storage areas covered or otherwise improved to minimize storm water exposure. GH-9
Estimated or actual amount, in tons, of salt and sand used for snow and ice control. GH-4
Estimated or actual amount of material by weight collected from catch basin, trash rack, or other structural BMP cleaning. GH-3
Estimated or actual amount of material by weight collected from street sweeping. GH-1
If applicable, number or percentage and location of canine parks sited at least one hundred fifty (150) feet away from a surface waterbody. PC-5

10.0 Co-Permittee Responsibilities

The following section demonstrates current activities and goals for each of the City's Co-Permittees (Indiana Institute of Technology, University of Saint Francis, Ivy Tech and Indiana University Purdue University Fort Wayne). It is the responsibility of each co-permitted university to implement control measures described below and as agreed to in the Shared Responsibilities and Services Agreement Stormwater NPDES Phase II General Permit. These agreements are attachments to the October 2013 IDEM approved Rule 13 NPDES Permit Number INR040029 for the City of Fort Wayne, IN.

The City works diligently to ensure Co-Permittees are kept up to date on email communication from IDEM, future training opportunities, and compliance initiatives.

10.1 Indiana Institute of Technology

Existing Activities as of 2015

Public Education and Outreach

- Education and outreach opportunities are e-mailed to the campus community, Staff that could have an impact on storm water are trained annually.
- Flyers posted on residence hall bulletin boards, and e-mails are sent to students prior to student move in and move out. Information regarding what is acceptable for the landfill and what must be recycled is detailed
- Share programmatic materials and provide assistance to the City in implementing public education and outreach and public involvement and participation activities.
- An environmental section added to our web page with storm water issues, including links to partner's storm water pages.
- Participate in City's Cease the Grease program. We provide this program to incoming dorm residents each fall.

Public Involvement/Participation

- Advertise volunteer opportunities on Foresite page and emails.
- Improve coordination and tracking of volunteer activities.
- An environmental section will be added to our web page, with volunteer work or community service information for volunteer opportunities and contact information.

Illicit Discharge Detection & Elimination

- Indiana Tech has implemented a SPCC, and a SWPPP plan. These plans require regular inspections of all possible sources of illicit discharge and secondary containment for all storage of fuel, grease and oil. A spill response team has been designated and receives training annually. Spill response equipment is readily available, and procedures are in place to respond to any illegal dumping.
- All security, maintenance and grounds personnel have been trained how to respond if an illicit discharge is detected.
- Indiana Tech has started several recycling programs, reducing or eliminating the potential for an illicit discharge.
- Increase awareness of our SPCC, SWPP plans and general pollution prevention practices with our contractors.
- Maintain employee training and understanding and increase student awareness of IDDE.

Construction Site Runoff Control

- All construction documents will be routed through planning and approved by the City of Fort Wayne before construction begins.
- Indiana Tech will follow all erosion control requirements required by the City of Fort Wayne.
- Indiana tech will submit monthly erosion control inspection reports to the City of Fort Wayne.
- During construction Indiana Tech will perform bi weekly inspections of erosion control measures and require the contractor to maintain them make repairs as needed.

Post Construction Site Runoff Control

- Indiana Tech will not allow any non-vegetated areas to remain without proper erosion control precautions.
- Maintain the contractors existing erosion control measures until non-vegetated areas have achieved sufficient growth to control erosion.

Pollution Prevention/Good Housekeeping

- Litter is picked up on the grounds and parking areas Monday through Friday.

- Parking lot sweeping is done monthly or as needed (weather permitting).
- Monitor salt and ice melting compound usage.
- Catch basins are inspected annually and cleaned as needed.
- Essential personnel trained in our SWPPP, SPCC and general good housekeeping/ pollution prevention plans.
- All contractors providing services on campus are required to follow our SWPPP and SPCC plans during the application of pesticides, fertilizers or any other activity that requires it.
- Maintain our current procedures and training with yearly reviews by our EMS committee

Future Goals

Public Education and Outreach

- Working with Human resources to have mandatory training for all full and part time staff through our ADP website.
Be in effect by summer of 2016
- After a successful presentation by Save the Maumee, working to organize an annual event to be held on campus.
Be in effect by summer of 2016
-

Public Involvement/Participation

- After a successful presentation by Save the Maumee, working to organize an annual event to be held on campus.
Be in effect by summer of 2016
- Sustainability committee working with Athletic department to organize competitions with students on environmental issues
Be in effect by spring of 2017

Illicit Discharge Detection & Elimination

Construction Site Runoff Control

- Oetting services will sweep the lots quarterly, this is on top of when Tech employees sweep on an as needed basis.
Be in effect by the fall of 2015

Post Construction Site Runoff Control

Pollution Prevention/Good Housekeeping

- Oetting services will sweep the lots quarterly, this is on top of when Tech employees sweep on an as needed basis.
- **Be in effect by the fall of 2015**

10.2 University of Saint Francis

Public Education and Outreach

The University of Saint Francis provides information to the Campus community regarding the damage that can be done by disposal grease and harmful chemicals into the storm drains.

Public Participation and Involvement

The University of Saint Francis has held an annual “Electronics Recycle Day” open to the general public with the help of the ECO Student Club since 2010.

Illicit Discharge Detection and Elimination

The University of Saint Francis has made all of the Physical Plant personnel aware of the risks and damage to the environment; that can result from illicit discharges and improper disposal. This includes Security, Maintenance, and Print Shop. The Security Department while patrolling campus has been instructed to watch for potential hazardous materials that could come in contact with the storm drain system. The new student handbook states no maintenance work of student vehicles may take place on campus property that involves motor oil, gasoline or antifreeze. The University of Saint Francis contracts all vehicle maintenance for its vehicle fleet to local repair shops. No vehicle maintenance occurs at the University.

The Security and Maintenance departments also participate in annual Storm Water Management, Hazardous Waste and Hazardous Communication training.

The University also ensures that contracted services for Grounds and Custodial services are aware of the risks and damage to the environment that can result from illicit discharges and improper disposal by ensuring that those services provide proper training to their employees.

The Director of Environmental Health, Safety and Risk Management conducts monthly audits of various areas of the campus during which one of the items that is looked at are evidence of illicit discharges and improper disposal of materials.

Construction Site Runoff Control

The University of Saint Francis oversees campus construction projects and explains to its contractors the university’s concern that they follow all guidelines relating to erosion and sediment control during construction.

Post-Construction Runoff Control

The University of Saint Francis currently has several programs in place that are intended to control development. The activities currently in place are buffer stream restrictions, open space preservation, lands set aside from future growth, and Brownfield clean-up.

Pollution Prevention / Good Housekeeping

The environmental nature area was expanded as a Brownfield was also cleaned up and wild flowers and native grasses were used in this area. The university’s grounds department maintains a buffer around the lake shoreline where fertilizers and herbicides are not permitted.

Future Goals

- Add another Rain Garden (TBD).
- Convert our Best Practices into Operations written policies and procedures.

10.3 IVY Tech Community College

Public Education and Outreach

Ivy Tech Community College/ Northeast promotes all aspects of sustainability including Storm Water Pollution Prevention issues. The college’s web site has a link for specific Storm Water Pollution topics and issues at Ivy Tech. In addition, innovative teaching initiatives encourage learning specific themes. The academic year 2014-15, “Water” was the theme in which several classes included projects and

participated in presentations from experts in the field. In addition, the college has a recycling program of cardboard, paper, printer cartridges, computer/electronic equipment, fluorescent lighting, scrap metal from surplus and the welding department. Lastly, recent construction projects resulted in two LEED buildings and was highlighted by 83% of construction demolition materials being recycled.

Public Participation

Ivy Tech Community College/ Northeast distributes Storm Water related materials at targeted events including annual Earth Day Celebration, Mustang Car Show, SouthFest and Ivy Days. Each event mentioned has high traffic and the intended audiences do not overlap. In addition, Storm Water BMP's are posted in "high risk areas" around the college in areas like the automotive labs, machine tool lab and maintenance areas. The Great American Cleanup Day sponsored by the City of Fort Wayne continues to be a positive participation event for Ivy Tech. For the past several years, two organizations from the college have participated in the event doing "litter cleanup" on Coliseum Blvd; one of the busiest roads in the city. A short narrative on Storm Water Pollution is included in the activity. In addition, Earth Week activities with the Green Team and Student Government highlight sustainability issues including Storm Water related videos and fliers. Future goals include continued participation and involvement in Earth Week activities and Great American Cleanup.

Illicit Discharge and Elimination

Ivy Tech Community College/ Northeast has provided training to the maintenance staff, housekeeping staff, security and other high risk areas like the Technology Department (including the automotive lab) and senior level administration. The training was customized for the intended audience. The college utilizes many BMP's that are typical to an educational facility of similar size. The Illicit Discharge Program and storm water mapping showing all outfalls is complete and available on the college web site.

Pollution Prevention and Good Housekeeping

Ivy Tech Community College/ Northeast has a SWPPP with future plans of adding it to the college web site. Training has been provided for appropriate personnel including maintenance, security and the Technology Department (including the automotive lab). BMP's are in place that are typical to an educational facility of similar size. Schooldude is an educational specific facility management software program that is used to track various activities related to Storm Water Pollution Prevention and Good Housekeeping BMP's. Future goals include improving bulk salt storage issues.

10.4 Indiana University Purdue University Fort Wayne

Existing Activities 2015

Public Education and Outreach

- Education and outreach opportunities are e-mailed and posted on campus social media sites for distribution to the campus community.
- Pamphlets coordinated with the City of Fort Wayne are distributed and flyers are posted on residence hall bulletin boards before move-in and throughout the year. These materials outline sanitary disposal and landfill regulations for the City.
- Campus Storm water advisory committee meets to review storm water related issues.
- Campus single stream recycling for all academic and student housing is operating in its 4th year.

Public Involvement and Participation

- Volunteer river clean-up and "green day" activities are coordinated through the University Special Events department.

Illicit Discharge Detection and Elimination

- The University has an in-house database of all the illicit discharge data collected (with help from the City) that is available to staff.
- Facilities staff are trained to watch and report any instances of suspected illicit discharge to Administration.

Construction Site Storm Water Run-off Control

- Construction storm water control is handled in-house by Project Management and adheres to inspection and management routines set forth by the State.
- Construction projects are inspected routinely by the inspector from Department of Homeland Security.

Post-construction Storm Water Management in New Development and Redevelopment

- The University has expanded the use of temporary detention; bio-swales; and rain gardens to reduce direct discharge to the riverine system.
- Large portion of North Campus athletic fields and new Parking Structure are detained on-site and allowed to infiltrate to water table.

Pollution Prevention and Good Housekeeping

- Facilities staff are instructed on a semi-annual basis for storm water pollution prevention and proper storm water treatment.

Future Goals

Public Education and Outreach

- *Develop curricula with our Education Department student teaching programs to incorporate environmental awareness into their teaching materials.*
- *Increase exposure for storm water education through University Summer Camps and Upward Bound programs.*
- *Increase use of University social media managers to disburse storm water information to students and faculty/staff.*

Public Involvement and Participation

- *Investigate Sustainable online participation games to be used in conjunction with campus social media.*

Illicit Discharge Detection and Elimination

- *Tie illicit discharge detection into online games and locate back to wayfinding landmarks to be set up by the University Facilities group.*

Construction Site Storm Water Run-off Control

- *Continue to work closely with homeland security in monitoring construction run-off.*
- *Use newer cloud-based construction management applications for record-keeping and maintaining tight control of construction sites.*

Post-construction Storm Water Management in New Development and Redevelopment

- *Further expand use of detention, rain garden, and bio tech features of land development for campus.*
- *Integrate new pervious technologies into campus construction standards to improve infiltration of storm water*

Pollution Prevention and Good Housekeeping

- *Automate training for employees in Good Housekeeping roles*

- *Continue researching use of “non-polluting” de-icing compounds on campus walks and roadways.*

Appendix A

Public Education and Outreach BMPs and Measurable Goals

PE - 1 Public Information Materials	A-1
PE - 2 Make Stormwater Program Information Available Through the City’s Website	A-2
PE - 3 Speakers’ Bureau Resource	A-3
PE - 4 Promote Stormwater Program at Community Events	A-4
PE - 5 Coordinate With Other Wet Weather Education Programs	A-5
PE - 6 Assess the Public’s Awareness of Wet Weather Issues	A-6
PE - 7 Promote Household Hazardous Waste Programs	A-7
PE - 8 Promote A Public Reporting Program	A-8
PE - 9 Promote Water Quality Education in the Schools	A-9
PE – 10 Interpretive Signage	A-10
PE – 11 Horse Manure Management.....	A-11
PE – 12 Internship Program	A-12
PE – 13 Capitalize on Outreach/Education Opportunities as They Arise	A-13
PE – 14 Develop New Stormwater Education/Outreach Program	A-14

PE - 1 Public Information Materials

BMP Description

The City of Fort Wayne has numerous public information programs in place that are intended to educate and notify the public of water quality concerns and programs. The City has developed a number of public information materials to further its educational programs. Materials will be updated as needed and new materials focused on stormwater quality will be developed and added to the City's resource list.

Measurable Goals

1. Distribute a City Utilities bill stuffer at least one time per year on a stormwater quality topic
2. Update and republish existing materials as needed
3. Distribute and cooperate with other MS4 programs to distribute stormwater related public information material annually in the Fort Wayne area.
4. Annually provide stormwater public information materials to branches of the Allen County Public Library, Visit Fort Wayne (visitors' bureau) and the Downtown Improvement District for distribution to residents and visitors to the City.
5. Expand the range of materials available to non English-speaking residents by translating public information materials into other languages.
- 6.
7. Expand the range of materials available to non-English speaking residents by translating public information materials into other languages.

Record Keeping

1. Maintain a file of copies of the public education materials created or updated .
2. Track the number of new items of public information material created annually, if needed
3. Maintain a file of copies of the annual utility bill stuffer.
4. Track the number of pieces of public information material distributed annually.
5. Track the topic and number of publications translated into other languages annually.

BMP Owner:

Fort Wayne City Utilities

PE - 2 Make Stormwater Program Information Available Through the City's Website		
<p><i>BMP Description</i></p> <p>The City will utilize its website, links to other pertinent websites, and the City's Fencepost page to disseminate information about the City's stormwater management programs. Public information produced under PE-1 will be posted on the website.</p>		
<p><i>Measurable Goals</i></p> <ol style="list-style-type: none"> 1. Maintain information and announcements in the stormwater and pollution prevention areas of the City's website and on the City's Fencepost page. Review content quarterly and update the following content as necessary: <ul style="list-style-type: none"> • Newly developed public education materials and announcements • On-line library of public information material • Links to other stormwater quality related websites including but not limited to the Allen County Solid Waste Management District, area watershed protection groups, Center for Watershed Protection, IDEM, and US EPA • Annual "News You Can Use" article • Information about the availability of speakers on the City Utilities web site 2. E-mail one "News You Can Use" article to the City's neighborhood association contact list annually. 3. Work to increase website traffic by including website address on all new stormwater outreach materials. 		
<p><i>Record Keeping</i></p> <ol style="list-style-type: none"> 1. Track new information added to the website and Fencepost page and maintenance of existing information. 2. Track the date when "News You Can Use" articles are sent to neighborhood associations. 3. Track inclusion of website address on all new stormwater outreach materials. 4. Track hits on the stormwater program website. 		
<p><i>BMP Owner</i></p> <ul style="list-style-type: none"> • Fort Wayne City Utilities 		

PE - 3 Speakers' Bureau		
<p><i>BMP Description</i></p> <p>Fort Wayne City Utilities has developed a variety of materials that can be used by employees when they are invited to address agencies, schools and civic organizations about stormwater issues and how they are being addressed in the City of Fort Wayne. The City promotes the availability of speakers.</p>		
<p><i>Measurable Goals</i></p> <ol style="list-style-type: none"> 1. Use speaker's bureau material including PowerPoint presentations and table top displays developed during Permit Term 1 to give presentations upon request to groups such as neighborhood associations, businesses, schools, and civic groups. 2. Make city neighborhood leaders, the City's four (4) Area Partnerships, and the City's neighborhood associations aware of the availability of speakers by e-mailing a speakers bureau listing to the City's contact list annually. 3. Each year select one stormwater topic as the focus for that year and market presentations on that topic. 4. 		
<p><i>Reporting and Record Keeping</i></p> <ol style="list-style-type: none"> 1. Track the topic selected each year and the methods used to market speakers on that topic. 2. Track the date and number of attendees at each stormwater related presentation given and report annually. 3. Track the date on which the speaker's bureau listing is e-mailed to neighborhood association, the City's (4) Area Partnership, and the City's neighborhood association contacts. 4. 		
<p><i>BMP Owner:</i></p> <ul style="list-style-type: none"> • Fort Wayne City Utilities 		

PE - 4 Promote Stormwater Program at Community Events

BMP Description

Community events, particularly those near Fort Wayne's rivers, provide excellent opportunities to share information with attendees about stormwater quality related topics. The City of Fort Wayne will host informational booths or activities at community events to increase community awareness of stormwater issues.

Measurable Goals

1. Participate in four (4) community events annually with information or activities related to stormwater quality.

Reporting and Record Keeping

1. Track the events where a stormwater related informational booth or activity was provided.

BMP Owner:

- Fort Wayne City Utilities

PE - 5 Coordinate With Other Wet Weather Education Programs

BMP Description

A wide variety of organizations and government entities, such as Allen County, the City of New Haven, the IDEM through the MS4 Annual Meeting, Clear Choices Clean Water, and the City's co-permittees, have established wet weather-related programs. The City will communicate with these entities as needed to help coordinate local wet weather programs and enhance communication between the program owners.

Measurable Goals

1. City staff members involved in various aspects of the MS4 program will attend the annual State MS4 meeting (if those continue to be held).
2. The City will organize and host quarterly meetings with its co-permittees.
3. The City will maintain membership in a stormwater professional organization.

Reporting and Record Keeping

1. Track the date on which the State's annual MS4 meeting was held and how many City employees attended.
2. Maintain agendas and meeting notes for each meeting with co-permittees.
3. Track the name of the stormwater-related professional association in which the City maintains a membership.

BMP Owner:

- Fort Wayne City Utilities

BMP Support:

- IDEM

PE - 6 Assess the Public's Awareness Level of Wet Weather Issues

BMP Description

Citizens receive information from a variety of sources about numerous environmental issues. The City will evaluate the public's level of awareness of wet weather issues and the effectiveness of its public information efforts. The purpose of the evaluation is two-fold: first to observe how the public's awareness changes over time and second to determine how to tailor the public information programs in the future.

1. Measurable Goals Conduct a survey of the public's awareness of wet weather issues once during the permit term.

Record Keeping

1. Track the number of participants in each survey.
2. Based on the type of survey created, track the general interest level, and evaluate the public education program content, its target audiences, and the frequency based on the trends identified by comparing with surveys done in the First Permit Term.
3. Maintain a file of summary reports generated from the surveys.

BMP Owner:

- Fort Wayne City Utilities

PE - 7 Promote Household Hazardous Waste and Unused Medication Disposal Programs

BMP Description

The Allen County Solid Waste Management District runs and maintains operations to accept household hazardous waste. There is an annual household hazardous waste turn-in day (Tox Away Day) that allows homeowners to turn in a variety of waste and unused products for proper disposal by the District. There are also a number of private businesses around the City and County that will accept used automotive fluids for recycling. These private companies are identified in an annual publication produced by the District. While Fort Wayne City Utilities does not operate or control these programs, the City is committed to helping to promote them. In addition a representative from City Utilities is on the board for TRIAD – a consortium that includes local police departments, local healthcare and social service agencies – that promotes the appropriate disposal of unused prescription medications.

Measurable Goals

1. Maintain a link on the City’s website to the Allen County Solid Waste Management District.
2. Place information on the City’s website in September of each year to promote and publicize the District’s annual Tox-Away Day. Work with Allen County Solid Waste Management to advertise disposal opportunities.
3. Track the number of Household Hazardous Waste brochures distributed annually.
4. Promote and participate in TRIAD-sponsored activities and events that collect and properly dispose of unused prescription medications.

Record Keeping

1. Track the number of Household Hazardous Waste brochures distributed.
2. City will obtain from the Allen County Solid Waste Management the number of participants in Tox-Away Day and the amount of material collected.
- 3.
4. City will obtain from TRIAD the amount of unused prescription medication collected and disposed of annually.

BMP Owner:

- Fort Wayne City Utilities

PE - 8 Pollution Reporting Program

BMP Description

Fort Wayne uses its 311 “One Call to City Hall” service delivery system to receive, route and respond to reports of non-emergency spills, illegal dumping and construction site management issues. This system for non-emergency reports complements the statewide hot-line number goes to IDEM for reporting spills and dumping. Calls related to hazardous or emergency spills within the City of Fort Wayne are routed to the Fire Department. Most industries know the proper number to call and spills are taken care of promptly. 311 continues to be promoted to the community as the contact number for citizens to use for non-emergency calls to the City. The City is investigating the use of a mobile device application (Ap).

Measurable Goals

1. Continue to publicize 311 as the number to call to report non-emergency spills, illicit discharges, illegal dumping, construction site runoff issues, and other water quality problems.
2. Maintain and distribute public information materials about illicit discharges, illegal dumping and other water quality problems and how to report them. (See PE-1)
3. Investigate the use of a report-a-polluter mobile device application to better solicit and communicate stormwater issues.

Record Keeping

1. Track the number of emergency and non-emergency spill reports received and actions taken.
2. Track the dumping and construction site reports received through 311 and the action(s) taken.

BMP Owner:

- Fort Wayne City Utilities

BMP Support:

- 311 call center

PE - 9 Promote Water Quality Education in the Schools

BMP Description

The City of Fort Wayne is committed to working with local teachers, schools and parents to help them integrate information about water resources into classrooms and into their children's learning experiences. Teaching modules are maintained at Science Central, Fort Wayne's interactive science museum, that educate students in grades K – 12 about urban stormwater runoff and the use of rain gardens and other practices for stormwater management.

Measurable Goals

1. Maintain Project WET teaching modules at Science Central.
2. Maintain Rain Garden modules at those schools that have rain gardens.
3. Provide teacher training workshops upon request to help new teachers integrate the modules into their classrooms.
4. Promote the use of Project WET modules by posting information about the program on the City's website

Record Keeping

1. Track the number of educators that request materials.
2. Track the dates of teacher training workshops and the number of attendees.
3. Track the number of schools receiving urban stormwater/rain garden education modules.

BMP Owner:

- Fort Wayne City Utilities

BMP Support:

- Science Central

PE – 10 Interpretive Signage		
<p><i>BMP Description</i></p> <p>Fort Wayne has more than 60 miles of walking and biking trails, many of those miles located along the City’s three main rivers. Estimates are that more than 60,000 people use the trails every year. The quality of the three rivers are significantly impacted by stormwater runoff. The placement of interpretive signs along the greenways will be used to help educate the public about stormwater quality issues and how individual activities can help to reduce river water pollution.</p>		
<p><i>Measurable Goals</i></p> <ol style="list-style-type: none"> 5. Year 1 – budget for design and production of signs and coordinate with Greenways Department for permission to post. Subsequent goals are dependent on having funding available and receiving permission from the Greenways Department to post signs. 6. Year 2 – design signs and draft sign copy for three (3) signs and select three (3) locations on each of the rivers – St. Mary’s, St. Joseph and Maumee. 7. Year 3 – produce and post nine (9) signs at locations selected in year 1, and select an additional three (3) locations on each river. Post sign locations on City’s website. 8. Year 4 – produce and post nine (9) signs at locations selected in year 2. Post sign locations on City’s web site. 9. Year 5 – evaluate program to determine if there is interest and funding for additional signs; maintain existing signs. Maintain information about signs on City’s website. 		
<p><i>Reporting and Record Keeping</i></p> <ol style="list-style-type: none"> 5. Track the number and location of interpretive signs 		
<p><i>BMP Owner:</i></p> <ul style="list-style-type: none"> • Fort Wayne City Utilities 		

PE – 11 Horse Manure Management		
<p><i>BMP Description</i></p> <p>Some shopping areas in the northern part of Fort Wayne are frequented by residents who use horse and buggy for transportation. These shopping areas provide hitching rails. Horse manure is left at these locations and may be washed into nearby storm inlets and waterways. Good manure management techniques should be encouraged.</p>		
<p><i>Measurable Goals</i></p> <ol style="list-style-type: none"> 1. Year 1 – compile a list of hitching post locations and contact owners of the properties on which the hitching posts are located to request permission to post signs. Ask property owners if they will provide, maintain and empty containers for collection and disposal of horse manure. 2. Year 2 – If property owners identified in Year 1 are willing to cooperate, budget for design and production of signs encouraging individuals to pick up and properly dispose of horse manure. 3. Year 3 – produce and install signs. 		
<p><i>Reporting and Record Keeping</i></p> <ol style="list-style-type: none"> 1. Track the number and location of signs. 		
<p><i>BMP Owner:</i></p> <ul style="list-style-type: none"> • Fort Wayne City Utilities 		

PE – 12 Internship Program		
<p><i>BMP Description</i></p> <p>Fort Wayne City Utilities frequently employs a summer intern in the Education/Outreach program. Assigning interns responsibilities related to Stormwater Public Education and Outreach can provide hands-on learning experiences for the interns and expand the capability of City Utilities to implement stormwater outreach and education.</p>		
<p><i>Measurable Goals</i></p> <ol style="list-style-type: none"> 1. Request funding annually for a summer intern who can assist with stormwater education/outreach. 2. In years when funding is allocated for a summer intern, develop a project for the intern to complete related to stormwater outreach and education. 		
<p><i>Reporting and Record Keeping</i></p> <ol style="list-style-type: none"> 1. Track the annual funding allocation for an intern. 2. Document the annual intern project with measurable goals. 3. Track the hours worked by the intern. 4. Track intern accomplishments. 		
<p><i>BMP Owner:</i></p> <ul style="list-style-type: none"> • Fort Wayne City Utilities 		

PE – 13 Capitalize on Outreach/Education Opportunities as They Arise

BMP Description

Because the government of the City of Fort Wayne is large and multi-faceted, new initiatives and programs are constantly being developed that may include unanticipated opportunities for educating citizens about stormwater quality. City Utilities should maintain flexibility and readiness to take advantage of these opportunities as they present themselves. Some recent examples include the creation of the Riverpalooza event, the opening of the Envision Center related to riverfront development and the advent of pontoon boat rides as part of the annual Three Rivers Festival.

Measurable Goals

1. Incorporate stormwater education and outreach into unplanned initiatives and events as they become available.

Reporting and Record Keeping

1. Track the number of new events and initiatives where stormwater outreach and education are incorporated.
2. Track the number of individuals who receive stormwater-related information and education through these venues.

BMP Owner:

- Fort Wayne City Utilities

PE – 14 Develop New Stormwater Education and Outreach Programs

BMP Description

As human and financial resources are available, City Utilities will develop plans for new stormwater education and outreach programs.

Measurable Goals

1. Year 1 – Investigate enrolling in the Clear Choices Clean Water campaign.
2. Year 2 – Investigate and design a water resources stewardship program that could be used to educate the faith-based community and involve faith-based groups in stormwater quality improvement.
3. Year 3 – Develop and pilot an Adopt-A-Stream program

Reporting and Record Keeping

1. Track the number and type of new stormwater education and outreach programs that are investigated
2. Track the number and type of new stormwater education and outreach programs that are developed
3. Track the number of new stormwater education and outreach programs that are implemented. For those programs that are not implemented following development, track the reasons that they are not implemented.

BMP Owner:

- Fort Wayne City Utilities

Appendix B

Public Participation and Involvement BMPs and Measurable Goals

PI - 1 Citizen Advisory Committee	B-1
PI - 2 Stream And Greenway Clean-Up Programs	B-2
PI - 3 Wet Weather Program Workshops	B-3
PI - 4 Advertise Volunteer Opportunities Related To Stormwater	B-4
PI – 5 Storm Drain Marking	B-5
PI – 6 Storm Drain Steward Program	B-5

PI - 1 Citizen Advisory Committee		
<p><i>BMP Description</i></p> <p>The City has utilized and continues to utilize citizen advisory committees related to several programs, including the NPDES stormwater permit. The City intends to continue to utilize citizens in advisory roles.</p>		
<p><i>Measurable Goals</i></p> <ol style="list-style-type: none"> 1. Maintain an e-mail list of regular attendees so that meeting notices, agendas and minutes may be distributed. 2. Plan and facilitate citizen advisory committee meetings at least two times per year. 3. Advertise citizen advisory committee meetings on the City's website. 4. Post citizen advisory committee meeting agendas and meeting notes on City website. 		
<p><i>Record Keeping</i></p> <ol style="list-style-type: none"> 1. Track the number of advisory committee meetings and the number of attendees. 2. Maintain records of advisory committee agendas and meeting minutes. 		
<p><i>BMP Owner:</i></p> <ul style="list-style-type: none"> • Fort Wayne City Utilities 		

PI - 2 Stream And Greenway Clean-Up Programs		
<p><i>BMP Description</i></p> <p>Stream and Greenway Clean-up Programs have operated for a number of years within the City of Fort Wayne. These programs have provided an opportunity for the public to be involved in pollution prevention along the streams. <i>These programs are not initiatives of Fort Wayne’s MS4 program, but are supported and promoted by Fort Wayne City Utilities.</i></p>		
<p><i>Measurable Goals</i></p> <ol style="list-style-type: none"> 1. Assist with the promotion of the annual Great American Clean-Up. 2. Publicize volunteer cleanup programs organized by other groups. 		
<p><i>Record Keeping</i></p> <ol style="list-style-type: none"> 1. Track the number of volunteers participating in Fort Wayne’s Great American Clean-Up, the number of sites cleaned up and the amount of debris removed. 2. Track number of clean-up activities organized by other groups that City Utilities has helped to promote. 3. Track the number of Greenway miles that have been adopted. 		
<p><i>BMP Owner:</i></p> <ul style="list-style-type: none"> • Fort Wayne City Utilities 	<p><i>BMP Support:</i></p> <ul style="list-style-type: none"> • Fort Wayne Solid Waste Department • Fort Wayne Greenways Program 	

PI - 3 Wet Weather Program Workshops

BMP Description

Fort Wayne City Utilities will provide workshops and educational programs geared to specific audiences on stormwater quality-related topics. Subject matter that may be covered in workshops for homeowners, business owners, developers, engineers and contractors includes: stormwater ordinance updates, stormwater permit processing, stormwater management for homeowners, techniques for reducing polluted stormwater runoff for business owners. Workshops may be held in conjunction with watershed protection groups, professional organizations, or other government agencies.

Measurable Goals

1. Host at least one workshop annually.
2. Advertise workshops on the City's web site, through mailings, e-mail notifications and through communication with partner agencies.

Record Keeping

1. Track the topic for any workshops that have been held along with the target audience and the number of participants.
2. Track how the workshops have been publicized.

BMP Owner:

- Fort Wayne City Utilities

PI - 4 Advertise Volunteer Opportunities Related To Stormwater		
<p><i>BMP Description</i> The City will help local citizen groups and other agencies to publicize activities and volunteer opportunities that could have a positive impact on stormwater quality.</p>		
<p><i>Measurable Goals</i></p> <ol style="list-style-type: none"> 1. Post information on about the activities of local volunteer groups and agencies that could positively impact water quality on the City’s website and government access channel. 2. Post links to groups organizing volunteer activities related to stormwater quality on City web site. 3. Maintain an e-mail list of interested persons and advise them by e-mail of volunteer opportunities related to stormwater. 		
<p><i>Record Keeping</i></p> <ol style="list-style-type: none"> 1. Track the number of volunteer opportunities posted on the City’s website and the dates of posting. 2. Track the number and nature of volunteer opportunities e-mailed to interested parties. 		
<p><i>BMP Owner:</i></p> <ul style="list-style-type: none"> • Fort Wayne City Utilities 		

PI – 5 Storm Drain Marking		
<p><i>BMP Description</i></p> <p>Citizens sometimes believe that all drainage inlets go to the wastewater plant, particularly in a city where some drainage inlets do go to the treatment plant in the combined sewer service area. One of the most effective methods of “getting the word out” about this erroneous assumption is by marking stormwater inlets. The City will continue to make available the materials, safety vests, etc. for use by drain marking volunteers in neighborhoods and at local businesses as requested.</p>		
<p><i>Measurable Goals</i></p> <ol style="list-style-type: none"> 1. Utilize website to promote volunteer opportunities for storm drain marking. 		
<p><i>Record Keeping</i></p> <ol style="list-style-type: none"> 1. Track the number of annual requests for storm drain marking materials. 2. Track the number of storm drains marked by volunteers. 		
<p><i>BMP Owner:</i></p> <ul style="list-style-type: none"> • Fort Wayne City Utilities 		

PI – 6 Storm Drain Steward Program

BMP Description

The City will investigate implementing a Storm Drain Steward Program to train volunteers to routinely inspect and clear storm drains in designated areas.

Measurable Goals

1. Develop procedures for volunteers to become Storm Drain Stewards.
2. Solicit and track volunteers for the Storm Drain Steward Program.

Record Keeping

1. Maintain information on the website on the Storm Drain Steward Program.
2. Track the number of volunteers and storm drains enrolled.

BMP Owner:

- Fort Wayne City Utilities

Appendix C

Illicit Discharge Detection and Elimination BMPs and Measurable Goals

ID - 1 Storm Sewer Mapping	C-1
ID - 2 Illicit Discharge Detection and Elimination Plan	C-3
ID - 3 Dry Weather Outfall Observation	C-4
ID - 4 Industrial Facility Program	C-5

ID - 1 Storm Sewer Mapping

BMP Description

In order to implement both an effective illicit discharge detection and elimination program and a comprehensive water quality planning program it is important to have accurate mapping of outfall locations and the storm drainage system. The City has very good digital mapping of its MS4 and outfalls. The activities related to the MS4 mapping requirement will be to primarily verify the existing mapping, due to potential and other unknown changes to separation projects, new construction projects and in potential annexation areas.

Measurable Goals

1. The City will maintain the map of the entire (known) municipal separate storm sewer system (MS4) that discharges to waters of the state through all size pipes and through ditches with at least a two foot bottom width.

Record Keeping

1. Maintain completed mapping and track the number of miles of storm sewers mapped t
2. Track the number of miles of open ditches mapped.

BMP Owner:

- Fort Wayne City Utilities

ID - 2 Illicit Discharge Detection and Elimination Plan

BMP Description

The City has an Illicit Discharge Detection and Elimination Plan. This written plan includes procedures to respond to complaints; to track source of illicit discharges and to eliminate illicit discharges. The plan outlines tracking and record keeping. The plan will be reviewed and updated to verify its continued applicability under Rule 13 and work processes. A flow chart has been developed and maintained to illustrate coordination between departments and the process of reporting, identifying, referring, testing, enforcement, and follow-up on illicit discharges.

Measurable Goals

1. Verification of the illicit discharge detection and elimination plan and flow chart
2. Continue implementing the illicit discharge detection and elimination plan.

Record Keeping

1. Track number of illicit discharges found.
 2. Track number of illicit discharges eliminated.
 3. Track number of illegal dumping incidents after which educational material was distributed in the surrounding area.
- Track number of spills

BMP Owner:

- Fort Wayne City Utilities

- 311 call center and Fort Wayne City Utilities Stakeholder Relations

ID - 3 Dry Weather Outfall Observation

BMP Description

The City has outfall screening procedures outlined in the written Illicit Discharge Detection and Elimination Plan. The plan details procedures to follow to correctly screen outfalls. These procedures outline test parameters for flowing outfalls; physical characteristics for non-flowing outfalls; and follow-up procedures for suspect outfalls.

Measurable Goals

1. Implement dry weather screening of outfalls as described in IDDE plan.
2. Implement illicit discharge follow-up procedures as described in IDDE plan.

Record Keeping

1. Track number of outfalls screened
2. Track outfalls grouped by subwatershed
3. Track outfalls that have suspect discharges
4. Track number of illicit discharges found

BMP Owner:

- Fort Wayne City Utilities

BMP Support:

- Water Resources Department
- Health Department

ID - 4 Industrial Facility Program

BMP Description

The City of Fort Wayne has an industrial facilities database of all facilities subject to Rule 6 provided by IDEM. The data sources for this database may include the Rule 6 database and other databases containing information on industries with SIC codes identified in the regulation that have the potential to contribute to stormwater pollution.

Measurable Goals

1. Update the industrial pollutant source database on an ongoing basis.
2. Maintain database for use in identifying potential pollutant sources as needed.

Record Keeping

1. Track number of industrial pollution sources added and deleted.

BMP Owner:

- Fort Wayne City Utilities

BMP Support:

- Indiana Department of Environmental Management
Rule 6 Coordinator
- Industrial Pretreatment

Appendix D

Construction Site Runoff Control BMPs and Measurable Goals

CS - 1 Erosion and Sediment Control BMP Manual	D-1
CS - 2 Plan Review Process Modification	D-2
CS - 3 Construction Site Inspection Program	D-3
CS - 4 Construction Site Runoff Control Training	D-4
CS - 5 Coordination with IDEM, IDNR, and SWCD	D-5
CS - 6 Construction Site Public Information Program	D-6

CS - 1 Erosion and Sediment Control BMP Manual		
<p><i>BMP Description</i></p> <p>The City uses a stormwater design manual that complements its stormwater ordinance. The manual provides acceptable BMPs for erosion and sediment control with the Fort Wayne city limits. It also provides design and construction guidelines for each of the BMPs with example drawings and submittal checklists. The City will continue to update its list of approved structural and non-structural BMPs.</p>		
<p><i>Measurable Goals</i></p> <ol style="list-style-type: none"> 1. Update erosion and sediment control BMP manual to continually improve effectiveness. 		
<p><i>Record Keeping</i></p> <ol style="list-style-type: none"> 1. Keep copy of BMP manual on file. 		
<p><i>BMP Owner:</i></p> <ul style="list-style-type: none"> • Fort Wayne City Utilities 		

CS - 2 Plan Review Process Modification		
<p><i>BMP Description</i></p> <p>The City of Fort Wayne has well-defined site plan review and approval procedures. General provisions include submittal requirements, design approach guidelines, utility coordination procedures, surveying and easement requirements, drafting standards, design criteria, reference data, computation methods, detention requirements, and erosion and sediment control requirements.</p>		
<p><i>Measurable Goals</i></p> <ol style="list-style-type: none"> 1. Continue to train staff on plan review procedures as appropriate. 2. Continue to implement plan review procedures and update as needed. 		
<p><i>Record Keeping</i></p> <ol style="list-style-type: none"> 1. Document how new plan review procedures were modified. 2. Document that training programs for plan review staff were completed. 		
<p><i>BMP Owner:</i></p> <ul style="list-style-type: none"> • Development Services 	<p><i>BMP Support:</i></p> <ul style="list-style-type: none"> • Planning Department 	

CS - 3 Construction Site Inspection Program		
<p><i>BMP Description</i></p> <p>The City of Fort Wayne has a comprehensive construction site inspection program. During the construction phase of development projects, routine or periodic inspections of sites to verify conformance and/or enforce the erosion and sediment control plan are performed.</p>		
<p><i>Measurable Goals</i></p> <ol style="list-style-type: none"> 1. Maintain an inspection program for construction site runoff controls with random inspections and verification of self-inspection requirements. 2. Ensure that inspectors receive annual training on construction site runoff controls. 		
<p><i>Record Keeping</i></p> <ol style="list-style-type: none"> 1. Document training programs for construction site inspection staff. 2. Track annually how many construction sites are inspected. 		
<p><i>BMP Owner:</i></p> <ul style="list-style-type: none"> • Fort Wayne City Utilities 		

CS - 4 Construction Site Runoff Control Training		
<p><i>BMP Description</i></p> <p>The City provides training for staff, developers, engineers, and inspectors for the construction site runoff control portion of the stormwater ordinance. The training is provided at two levels of detail. An executive or overview training is provided for staff members that need to know what the sediment and erosion control program is about but that will not be involved in design, plan review, or inspections. A more in-depth training is provided for inspectors, plan reviewers, developers, contractors and engineers. The City will encourage certification (Envirocert or Forester University Online) for internal staff.</p>		
<p><i>Measurable Goals</i></p> <ol style="list-style-type: none"> 1. Maintain training materials for an overview training session and an in-depth training session with updated information on sediment and erosion control. 2. Continue to provide annual training. 		
<p><i>Record Keeping</i></p> <ol style="list-style-type: none"> 1. Document the number of training sessions that were provided. 2. Track the number of people attending the training sessions. 		
<p><i>BMP Owner:</i></p> <ul style="list-style-type: none"> • Fort Wayne City Utilities 		

CS - 5 Coordination with IDEM, IDNR, and SWCD

BMP Description

The City of Fort Wayne is required to coordinate the construction site runoff control program with the Indiana Department of Environmental Management (IDEM), the Indiana Department of Natural Resources (INDNR) Division of Soil Conservation, and with the Allen County Soil and Water Conservation District (SWCD). The SWCD will be offered the opportunity to provide timely comments on permit applications and plans for all projects that disturb one (1) or more acres (qualifying projects). For all qualifying projects not owned by the City the project owners will submit NOIs to IDEM. For all qualifying projects owned by the City, the city submits plans for review to either INDNR, SWCD, or another third party entity.

Measurable Goals

1. Make certain that NOIs for qualifying projects are submitted to IDEM.
2. Provide SWCD the opportunity to provide timely review of plans for projects not owned by the City.
3. Continue working with INDNR, SWCD, or a qualified third party to provide review of the construction site controls of all City-owned qualifying projects.

Record Keeping

1. Track and report numbers of qualifying projects.
2. Track the number of instances where SWCD, INDNR, or a third party plan reviewer provided plan reviews and the number of timely responses.

BMP Owner:

- Fort Wayne City Utilities

CS - 6 Construction Site Public Information Program

BMP Description

The City utilizes the 311 system to receive comments and complaints about active construction sites. The City will respond to those inquires with appropriate information.

Measurable Goals

1. Utilize the City's 311 and Hansen systems to track citizen inquiries regarding construction site erosion and the response.

Record Keeping

1. Document the number of public information requests and citizen inquiries made.

BMP Owner:

- Fort Wayne City Utilities

Appendix E

Post Construction Runoff Control BMPs and Measurable Goals

PC - 1 Post Construction BMP Manual	E-1
PC - 2 Plan Review Procedure.....	E-2
PC - 3 BMP Inspections	E-3
PC - 4 BMP Operation Manuals	E-4
PC - 5 BMP Database	E-5

PC - 1 Post Construction BMP Manual		
<p><i>BMP Description</i></p> <p>The City has a BMP manual that contains acceptable designs and design methodology for post construction runoff controls. The manual uses the practices identified in the <i>Indiana Storm Water Quality Manual</i>.</p> <p>The City has adopted a supplement to the Stormwater Design Standards that provides guidance for implementing green and sustainable design practices. The supplement document provides an approach to land development that uses various land planning, design practices and technologies to simultaneously conserve and protect natural resource systems.</p>		
<p><i>Measurable Goals</i></p> <ol style="list-style-type: none"> 1. Implement and apply standards to all applicable projects. 2. Implement and apply supplement document to all applicable projects. 		
<p><i>Record Keeping</i></p> <ol style="list-style-type: none"> 1. Track additional BMPs approved for addition to the manual. 2. Track additional Green and Sustainable design practices. 		
<p><i>BMP Owner:</i></p> <ul style="list-style-type: none"> • Fort Wayne City Utilities 		

PC - 2 Plan Review Procedure		
<p><i>BMP Description</i></p> <p>The plan review process addresses the requirements for best management practices (BMPs) as required by the BMP manual and accompanying policies. Training is provided for plan reviewers.</p>		
<p><i>Measurable Goals</i></p> <ol style="list-style-type: none"> 1. Continue to implement plan review procedures and update as needed. 2. Use post construction checklists for all applicable projects. Continue to provide on-going training for plan reviewers, inspectors, developers and engineers addressing the design, installation, and maintenance of BMPs. 		
<p><i>Record Keeping</i></p> <ol style="list-style-type: none"> 1. Track the attendance of the plan review and inspector training sessions. 2. Track the attendance by local engineers, architects, and other design professionals for the designer / developer training (also under CS-4) 		
<p><i>BMP Owner:</i></p> <ul style="list-style-type: none"> • Fort Wayne City Utilities 		

PC - 3 BMP Inspections		
<p><i>BMP Description</i></p> <p>An inspection program for City owned and operated BMPs approved under the stormwater ordinance continues to be developed to ensure that BMPs are installed and maintained per the criteria in the stormwater manual. The maintenance of the BMPs is a crucial step to assure that the BMPs perform as expected on the ground, which is essential to the implementation of a performance-based BMP program.</p>		
<p><i>Measurable Goals</i></p> <ol style="list-style-type: none"> 1. Maintain the list of BMPs and rank them by priority of inspection. 2. Continue to train inspectors on BMP maintenance. Update training materials based on types of BMPs installed 3. Continue to inspect BMPs during installation and then as-needed 		
<p><i>Record Keeping</i></p> <ol style="list-style-type: none"> 1. Track the number of new BMPs installed annually. 2. Track inspections and deficiencies of installed BMPs. 3. Track maintenance violations by owners to determine type and frequency. 4. Track maintenance performed by the City, when needed. 		
<p><i>BMP Owner:</i></p> <ul style="list-style-type: none"> • Fort Wayne City Utilities 		

PC - 4 BMP Operation Manuals		
<p><i>BMP Description</i></p> <p>The City of Fort Wayne requires that the project owner of any new BMP, public or private, provides a user’s manual for each BMP that describes the function of the BMP, the operations and maintenance requirements, and provides a copy of an inspection checklist that should be used for annual inspections of the BMP.</p>		
<p><i>Measurable Goals</i></p> <ol style="list-style-type: none"> 1. Maintain a file of BMP owner manuals for all applicable projects and BMPs installed. 		
<p><i>Record Keeping</i></p> <ol style="list-style-type: none"> 1. Track completion of the BMP user manual requirement and inclusion in the plan review process. 2. Track the number of innovative or alternative BMPs for which user manuals were approved and keep copies of those user manuals. 		
<p><i>BMP Owner:</i></p> <ul style="list-style-type: none"> • Fort Wayne City Utilities 		

PC - 5 BMP Database		
<p><i>BMP Description</i></p> <p>The City maintains a database and GIS coverage of structural and non-structural BMP related information to facilitate annual reporting on its NPDES stormwater permit. Information tracked includes:</p> <ul style="list-style-type: none"> • Total imperviousness in the City of Fort Wayne. • Estimated preserved open space in the City of Fort Wayne. • Type and location of approved non-structural BMPs. • Type and location of approved structural BMPs. • New and/or renovated retail or government gas dispensing station BMPs. • Industries (known) with secondary containment for (potential) pollutants. • Canine parks – total number and number within 150 feet of a receiving water body. 		
<p><i>Measurable Goals</i></p> <ol style="list-style-type: none"> 1. Maintain GIS database on BMPs that have been constructed or implemented in compliance with the regulations and policies of the City of Fort Wayne. 		
<p><i>Record Keeping</i></p> <ol style="list-style-type: none"> 1. Track status of the BMP database for the annual report annually. 		
<p><i>BMP Owner:</i></p> <ul style="list-style-type: none"> • Fort Wayne City Utilities 		

Appendix F

Pollution Prevention and Good Housekeeping BMPs and Measurable Goals

GH - 1 Street Sweeping	F-1
GH - 2 Catch Basin Cleaning	F-2
GH - 3 Storm Sewer Cleaning	F-3
GH - 4 Winter Weather Chemical Applications	F-4
GH - 5 Pesticide and Herbicide Applications	F-5
GH - 6 Standard Operating Procedures (SOPs) for Municipal Operations	F-6
GH - 7 Evaluate Flood Control Projects For Water Quality Issues	F-7
GH - 8 Staff Training on Stormwater Pollution Prevention	F-8
GH - 9 Facility Inspections	F-9
GH - 10 Roadside Shoulder, Ditch, and Outfall Stabilization	F-10

GH - 1 Street Sweeping		
<p><i>BMP Description</i></p> <p>Street sweeping programs assist municipal water quality management programs by reducing the loads of floatable materials and solids on street surfaces that would otherwise be washed into the storm sewers. The City of Fort Wayne has a street sweeping program that sweeps downtown streets three times weekly and residential streets four times a year. The City continually prioritizes its sweeping program to insure that identified hot spots for solids accumulation are swept more frequently than others.</p>		
<p><i>Measurable Goals</i></p> <ol style="list-style-type: none"> 1. Sweep downtown streets three times weekly and residential streets four times per year. 2. Record mass of material removed from MS4 area annually. 		
<p><i>Record Keeping</i></p> <ol style="list-style-type: none"> 1. Track frequency of areas swept annually in the MS4 area. 2. Track mass of material removed from the MS4 area annually. 		
<p><i>BMP Owner:</i></p> <ul style="list-style-type: none"> • Street Department 		

GH - 2 Catch Basin Cleaning		
<p><i>BMP Description</i></p> <p>The City of Fort Wayne has over 15,000 inlets and catch basins in its storm drainage collection system. Currently catch basins and inlets are cleaned on a two and a half year cycle. There is an existing program for catch basin cleaning that focuses on the cleaning of grate tops and the cleaning of catch basin vaults. The grate top cleaning portion of the program maintains the inlet capacity by removing materials that are “strained” from the stormwater runoff entering the drainage system through the grates. The vault cleaning portion of this program removes materials captured in the vaults that were small enough or flexible enough to enter through the grates but coarse enough to be captured.</p>		
<p><i>Measurable Goals</i></p> <ol style="list-style-type: none"> 1. Clean at least 5,600 catch basins and/or inlets per year. 2. Clean all catch basins and inlets every 2.5 years. 3. Follow the SOP for catch basin cleaning (see GH-6) 		
<p><i>Reporting and Record Keeping</i></p> <ol style="list-style-type: none"> 1. Track the number of catch basins and inlets cleaned annually in the MS4 area. 2. Track the mass of material removed by the cleaning program in the MS4 area. 		
<p><i>BMP Owner:</i></p> <ul style="list-style-type: none"> • Fort Wayne City Utilities 		

GH - 3 Storm Sewer Cleaning & Maintenance

BMP Description

The City cleans its storm sewers whenever there is sufficient blockage to reduce the capacity of a particular portion of the drainage system.

Measurable Goals

1. Remove sediment and coarse solid materials from storm sewers before they leave the drainage system as part of the operation and maintenance of the storm sewer system when system capacity is impaired.
2. Follow the SOP for storm sewer cleaning and maintenance (see GH-6)

Record Keeping

1. Track the length of storm sewer cleaned and/or repaired annually.
2. Track the estimate of the mass of material removed by the storm sewer cleaning program in the MS4 area.

BMP Owner:

- Fort Wayne City Utilities

GH - 4 Winter Weather Chemical Applications

BMP Description

The City of Fort Wayne uses salt and calcium chloride to deice roadways during winter weather events in order to maintain safe driving conditions. The salt storage areas are protected from the storm drainage system. On an annual basis the salt spreading equipment is electronically calibrated for the proper spreading rate when the hoppers are installed on the trucks for the winter season. When hauling of snow is required the City has designated snow disposal areas where the snow is dumped.

Measurable Goals

1. Manage the use of winter weather roadway deicers to minimize adverse environmental impacts to the maximum extent practicable.
2. Continue to work with the Street and Parks Departments on protocol and record keeping for winter weather chemical application.

Record Keeping

1. Track the amount of salt and calcium chloride applied to roadways annually.

BMP Owner:

- Street Department
- Parks Department

GH - 5 Pesticide and Herbicide Applications		
<p><i>BMP Description</i></p> <p>The City Parks Department uses pesticides, herbicides and fertilizers, but minimizes their use. The Street Maintenance Department uses herbicides or calcium chloride to control roadside vegetation periodically. Flood Control contracts weed control for ten miles of levees. Stormwater Maintenance uses herbicides as needed. Applicators are licensed through the State Chemists Office.</p>		
<p><i>Measurable Goals</i></p> <ol style="list-style-type: none"> 1. Minimize the use of pesticides and herbicides in the stormwater runoff through use of certified applicators. 2. Track the use of pesticides and fertilizers. 3. Continue to work with the Street, Parks, Flood Control, and Stormwater Maintenance Departments on protocol and record keeping for pesticide and herbicide application. 		
<p><i>Reporting and Record Keeping</i></p> <ol style="list-style-type: none"> 1. Document that applicators have proper training and certification. 2. Track the chemical types, locations and application amounts. 		
<p><i>BMP Owner:</i></p> <ul style="list-style-type: none"> • Street Department • Parks Department • Flood Control • Stormwater Maintenance Department 	<p><i>BMP Support:</i></p> <ul style="list-style-type: none"> • Property Manager 	

GH - 6 Standard Operating Procedures (SOPs) for Municipal Operations

BMP Description

The City of Fort Wayne manages and maintains vehicles and equipment, material storage, fuel dispensing operations, storm sewer systems, and various other facilities. Several departments are involved in these activities. The City will develop standard operating procedures (SOPs) to be used by each of the departments that address issues related to pollution prevention, materials management, and good housekeeping at its maintenance facilities. The SOPs will address maintenance facilities and associated activities, such as washing areas, fueling operations, and storage areas for fluids, parts, and vehicles and equipment awaiting maintenance.

Measurable Goals

1. SOPs covering the following areas are incorporated into facility SWPPPs as applicable to respective departments
 - Vehicle and Equipment Maintenance Operations
 - Materials Management
 - Fuel Dispensing Operations
 - Stormwater System Maintenance Operations (includes channel and bank stabilization)
 - Facilities Maintenance Operations
 - Catch Basin Cleaning
 - Storm Sewer Cleaning and Maintenance

Record Keeping

1. Track number of inspections performed
2. Track number and type of deficiencies found

BMP Owner:

- Fort Wayne City Utilities
- Parks Department
- Fleet Management
- Public Works

BMP Support:

- Municipal Facility Departments

GH – 7 Evaluate Flood Control Projects For Water Quality Issues

BMP Description

As new storm drainage and flood control projects are being planned, designed and constructed, the City will continue to identify how water quality considerations can be incorporated into the designs.

Measurable Goals

1. All new storm drainage and flood control projects will be evaluated for the potential to address water quality issues within the projects.

Reporting and Record Keeping

1. Track new storm drainage and flood control projects and the results of the evaluation of the projects for water quality control opportunities.

BMP Owner:

- All City Engineering Departments

GH – 8 Staff Training on Stormwater Quality and Pollution Prevention

BMP Description

All City employees will be provided with stormwater quality awareness training so that they will understand how their activities both at work and at home can impact the quality of stormwater runoff. Employees in municipal operations departments will receive specific training on how their activities can impact stormwater runoff and their responsibilities in reducing the potential for municipal operations to negatively impact stormwater quality.

Measurable Goals

1. The staff training program that includes both general training on stormwater pollution prevention, and job specific training will be maintained and updated as needed.
2. General awareness training for all employees will be provided through an on-line learning format.
3. Job specific training will be provided annually to employees involved in municipal operations that could impact stormwater quality.

Record Keeping

1. Track the number of City employees who have participated in the on-line learning.
2. Track the dates and attendance at job specific training sessions.

BMP Owner:

- Fort Wayne City Utilities

BMP Support:

- Fort Wayne Human Resources Department

GH - 9 Facility Inspections

BMP Description

Facilities owned and/or operated by the City of Fort Wayne will be inspected for compliance with the SWQMP. Facilities will be prioritized according to pollution potential with low priority facilities conducting self inspections and submitting them to Fort Wayne City Utilities. High priority facilities will be inspected by Fort Wayne City Utilities. Inspections at municipal facilities will be conducted to ensure the following:

- The potential for polluted storm water run-off from deicing salt or sand storage piles is reduced.
- Facilities are provided with containment of any accidental losses of concentrated solutions, acids, alkalies, salts, oils, or other polluting materials.
- Standard operating procedures for spill prevention and clean-up during fueling operations are implemented.
- BMPs for vehicular maintenance areas are implemented.

Measurable Goals

1. Prioritize all facilities by potential for storm water pollution
2. Conduct inspections of all facilities during the permit term, utilizing self-inspection for low priority facilities.
3. Implement stormwater pollution prevention measures at all City facilities.
4. Maintain list of facilities and their potential for stormwater pollution

Reporting and Record Keeping

1. Track number of inspections performed
2. Track number and type of deficiencies identified.

BMP Owner:

- Fort Wayne City Utilities

BMP Support:

- Municipal Facility Departments

GH - 10 Roadside Shoulder, Ditch, and Outfall Stabilization		
<p><i>BMP Description</i> City-owned rights-of-way are maintained by the Street Department. Areas are re-seeded and erosion control practices are applied as needed.</p>		
<p><i>Measurable Goals</i></p> <ol style="list-style-type: none"> 1. Maintain vegetated rights-of-way 		
<p><i>Reporting and Record Keeping</i></p> <ol style="list-style-type: none"> 1. Track estimated or actual linear feet or percentage and location of roadside shoulders and ditches stabilized. 2. Track number and location of storm water outfall areas remediated from scouring conditions. 		
<p><i>BMP Owner:</i></p> <ul style="list-style-type: none"> • Fort Wayne City Utilities • Street Department 	<p><i>BMP Support:</i></p> <ul style="list-style-type: none"> • Municipal Facility Departments 	