

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

January 2005

Updated August 2010 by City of Fort Wayne

2005 Prepared by:



Clark Dietz, Inc.
9000 Keystone Crossing
Suite 350
Indianapolis, IN 46240

*In
Association
With*



AMEC Earth & Environmental
201 S. Capitol Ave.
Suite 200
Indianapolis, IN 46225

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.....	16

List of Tables

Table 1	Pre-Approved Post Construction BMPs	8
---------	---	---

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.

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.

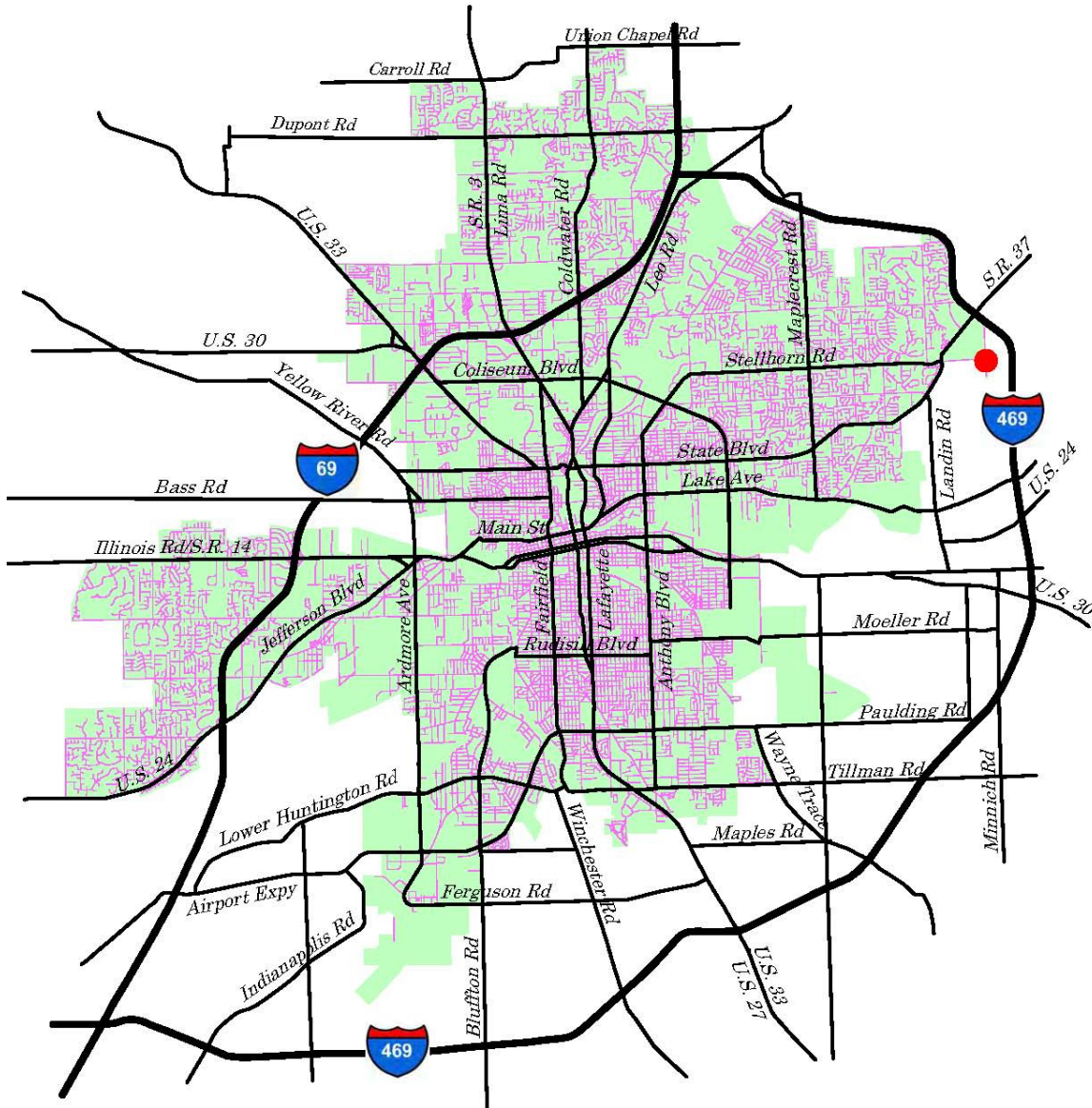


Figure 1 – Fort Wayne MS4 Boundary Map
(MS4 area shown as green shaded area)

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 Stelhorn, 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

ArchHydro 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.

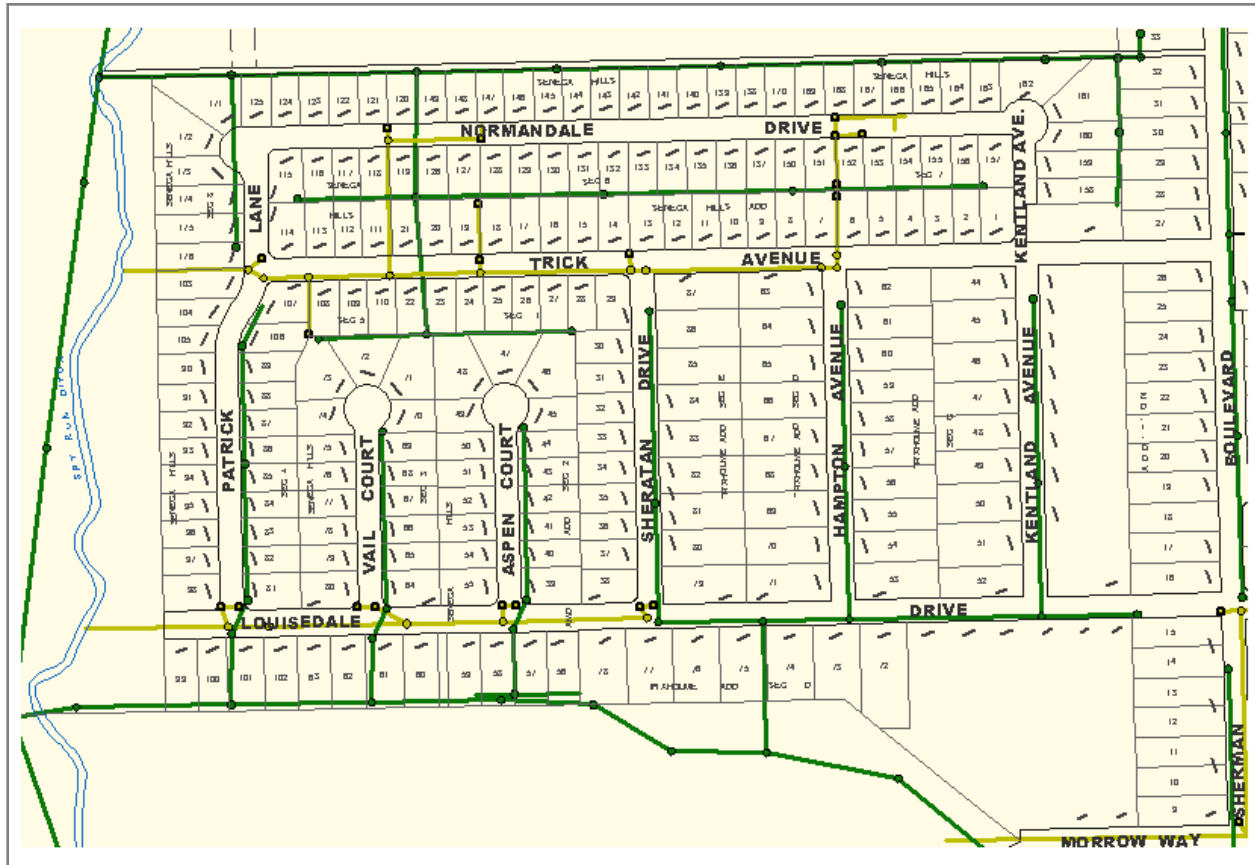


Figure 2 – GIS Excerpt Showing Storm Sewers
(Note: storm sewers are shown as tan colored lines)

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 2.76 million feet, or 522 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	2,758, 219 linear ft
Ditches (2-foot or wider bottom)	2,120, 536 linear ft
Total	4,878,755 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
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.
- 2 Refers to open channel practices not designed for water quality.

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.

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 2009 through 2013. 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 2008 IDEM approved Rule 13 NPDES Permit Number INR040029 for the City of Fort Wayne, IN.

The City of Fort Wayne has several existing 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. A summary of existing 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 citizens and businesses understand the impacts that stormwater discharges have on local water bodies and the things citizens can do to reduce stormwater pollution.

During the first permit term, Fort Wayne and the Allen County Partnership for Water Quality worked cooperatively to develop two brochures each year on stormwater-related topics. The City and Partnership provided public education through school classroom demonstrations using Project WET materials and shared information and resources at local events such as the Three Rivers Festival, Earth Day, the Fort Wayne Farm Show, and the Johnny Appleseed Festival.

Both the Partnership and the City developed websites during the first permit term that a variety of information on water resources, stormwater and pollution prevention. The City and Partnership websites are linked to each other and to other websites that provide additional information and resources.

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; Sewer 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 for the second permit term 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

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.

Fort Wayne City Utilities works closely with a long-serving group of volunteers known as the Sewer Advisory Group. Many members of the group have served on advisory boards for City Utilities for as long as 15 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, 15 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 78 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 hrs 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.

In the spring of 2010, the Greenways Department added 6 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.

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.

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.

Outfall screening program is incorporated in IDDE 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. 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 where citizens can easily report an illicit discharge or pollution concern. 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 will be 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.

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 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.

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.

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.

The City has many existing activities to take credit for under the Pollution Prevention/Good Housekeeping for its Municipal Operations. These include:

- 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; 7 to 8 per day; two trucks).
- 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 three City locations in domed storage buildings. The main complex yard drains to catch basins in both the combined and separate storm sewer system. Runoff from the other two 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.

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 will provide 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. During the second permit term, general stormwater awareness training using an on-line format will be 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.

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 2008 IDEM approved Rule 13 NPDES Permit Number INR040029 for the City of Fort Wayne, IN.

10.1 Indiana Institute of Technology

Existing Activities as of 2010

Public Education and Outreach

- Education and outreach opportunities are e-mailed to the campus community quarterly.
- Education and or outreach opportunities are published in campus newspaper quarterly.
- 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.

Public Involvement/Participation

- Advertise volunteer opportunities quarterly in campus newspaper and emails.
- Improved coordination and tracking of volunteer activities.

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.

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.

Post Construction Site Runoff Control

- Indiana Tech will not allow any non-vegetated areas to remain without proper erosion control precautions.

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.

General

- Provide the City with information required for each annual report.
- Participate in the development of Part C of the SWQMP.
- Provide input and feedback on the City's development of ordinances for the control of construction and post construction stormwater runoff.

Future Goals

Public Education and Outreach

- An environmental section will be added to our web page with a page devoted to storm water issues, including links to partner's storm water pages.
 - **Implemented by:** spring of 2011
- Annually Host ACPWQ's ECO Film Fest
 - **Implemented by:** spring of 2011
- Participate in City's Cease the Grease program. We plan to provide this program to incoming dorm residents each fall.
 - **Implemented by:** Fall of 2011
- Add posts to Indiana Tech's Facebook page with storm water information or volunteer opportunities.
 - **Implemented by:** spring 2011
- Tech's Elementary Education Dept. will work with ACPWQ in the elementary schools when schedules allow.
 - **Implemented by:** spring 2012

Public Involvement/Participation

- An environmental section will be added to our web page, with a page devoted to volunteer work or community service with information for volunteer opportunities and contact information.
 - **Implemented by:** spring of 2011

Illicit Discharge Detection & Elimination

- Increase awareness of our SPCC, SWPP plans and general pollution prevention practices with our contractors.

- **Implemented by:** Fall of 2011
- Maintain employee training and understanding and increase student awareness of IDDE.
 - **Implemented by:** Fall of 2011

Construction Site Runoff Control

- During construction Indiana Tech will perform bi weekly inspections of erosion control measures and require the contractor to keep them make repairs if needed..
 - **Implemented by:** Fall of 2011

Post Construction Site Runoff Control

- Maintain the contractors existing erosion control measures until non-vegetated areas have achieved sufficient growth to control erosion.
 - **Implemented by:** Fall of 2010

Pollution Prevention/Good Housekeeping

- Maintain our current procedures and training with yearly reviews by our EMS committee
 - **Implemented by:** spring of 2012

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. The University is also distributing “Cease the Grease” materials provided by the City to all resident students in the spring of 2011.

Public Participation and Involvement

For the fourth year in a row, the University of Saint Francis is holding an “Electronics Recycle Day” open to the general public with the help of the ECO Student Club.

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, Custodial, Grounds, 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.

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. Summer of 2011 the

University plans to start bio-dredge Mirror Lake to provide additional detention capacity for future development projects.

Pollution Prevention / Good Housekeeping

The University of Saint Francis performed a shoreline stabilization project in 2009/10, rip-rapping the entire shore to protect against erosion. (Except for the environmental nature area) 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

- Make the Electronic Recycling an annual event.
- Add another Rain Garden.
- Convert our Best Practices into Operations written policies.

10.3 IVY Tech Community College

Public Education and Outreach

Ivy Tech Community College/ Northeast promotes an encompassing recycling program including: cardboard, paper, computer/electronic equipment, fluorescent lighting, scrap metal from welding lab and used fluids from the automotive labs. In addition, the college recycled 83% of construction demolition materials from a recent project and has constructed two LEED buildings. Ivy Tech's web site has a link to a "Going Green" initiative which promotes environmental issues. Future goals include: creating a link on the college web site to a MS4 appropriate "target link" for college students and staff.

Public Participation and Involvement

Ivy Tech Community College/Northeast has been increasing the amount of public participation to include the distribution of Stormwater fliers at the annual "Mustang/Ford Car Show". In addition, a college work-study assisted the maintenance department in labeling over 50 stormwater drains. Other stormwater posters are distributed throughout the college including "high potential areas" such as the automotive and machine tool labs. Future goals include the development of a new MS4 committee at the college to include a cross functional representation of the college. This new committee will investigate and participate in one major and one minor MS4 and/or environmentally related activity per year.

Illicit Discharge and Elimination

Ivy Tech Community College/ Northeast has provided MS4 training at the college at a broad level including the maintenance staff, to the Technology Division faculty, to the senior level administration. The training was customized depending on the audience. The college utilizes many BMP that are typical to an educational facility. Future goals include expanding the MS4 training to other departments including housekeeping and groundskeeping.

Pollution Prevention and Good Housekeeping

Goals: improve the bulk salt storage area to prevent unwanted water runoff. Continue to utilize "Green initiatives" for recycling and other environmental issues.

10.4 Indiana University Purdue University Fort Wayne

Public Education and Outreach

- Establish a campus wide "Green Council" or storm water advisory committee before the end of this permit cycle.
- Fully implement campus single stream recycling for all academic and student housing buildings by the end of this permit cycle.
- Fully build out the University sustainability web site to include all references to the Rule 13 partners in Fort Wayne by the end of this permit cycle.

Public Involvement and Participation

- Expand the distribution of public information leaflets and pamphlets to include all of the University faculty, staff, and students by the end of this permit cycle.

Illicit Discharge Detection and Elimination

- Set up a GIS database of all the illicit discharge data and have available to the university population by the end of this permit cycle.

Construction Site Storm Water Run-off Control

- Increase the effectiveness of construction site inspection by creating a one week turnaround requirement for all site runoff violations by the end of this permit cycle.

Post-construction Storm Water Management in New Development and Redevelopment

- Expand and refine the opportunities for directing storm water away from the river via rain gardens, porous pavement, and other BMP's by the end of this permit cycle.

Pollution Prevention and Good Housekeeping

- Conduct semi-annual training of facilities staff for storm water pollution prevention to educate all new staff for proper storm water treatment by the end of this permit cycle.

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 - 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 and needed and new materials focused on stormwater quality will be developed and added to the City's resource list.

Measurable Goals

1. Produce and distribute one (1) new item of public information material addressing a stormwater-related topic annually. Possible topics might include:
 - using rain gardens for stormwater management
 - report a polluter
 - no dumping
 - pet waste management
 - recycling/litter control
 - urban pollution sources
2. Produce and mail a City Utilities bill stuffer one (1) time per year on a stormwater quality topic
3. Update and republish existing brochures as needed
4. Cooperate with other MS4 programs to distribute 500 pieces of stormwater related public information material annually in the Fort Wayne area.
5. Cooperate with other MS4 programs to distribute 200 stormwater-related activity books annually.

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
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 number of stormwater-related activity books distributed annually.

BMP Owner:

Fort Wayne City Utilities

PE - 2 Make Stormwater Program Information Available Through the City's Website

BMP Description

The City will utilize its website and links to other pertinent websites to disseminate information about the City's stormwater management programs. Public information produced under PE-1 will be posted on the website.

Measurable Goals

1. Update information in the stormwater and pollution prevention areas of the City's website monthly or more often if needed.
2. Post new public education materials on the City's stormwater website and maintain the existing on-line library of public information material.
3. Maintain existing links to other stormwater quality related websites including but not limited to the Allen County Partnership for Water Quality, Allen County Solid Waste Management District and area watershed protection groups .
4. Add links to additional stormwater-related websites including but not limited to the Center for Watershed Protection, IDEM, and US EPA.
5. Maintain "News You Can Use" articles on the City's website and add one newsletter article on a stormwater related topic annually.
6. E-mail one "News You Can Use" article to the City's neighborhood association contact list annually.
7. Maintain information about the availability of speakers on the City Utilities web site.

Record Keeping

1. Track new information added to the website in each annual report.
2. Track new public education materials added to the website with each annual report.
3. Track new links added to the website with each annual report.
4. Track the new "News You Can Use" article annually.
5. Track the date when "News You Can Use" articles are sent to neighborhood associations.
6. Track hits on the stormwater program web page and report annually.

BMP Owner

- 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 eight (8) presentations to groups such as neighborhood associations, businesses, schools, and civic groups annually. 2. Make city neighborhood leaders aware of the availability of speakers by e-mailing a speakers bureau listing to the City's contract list of neighborhood associations annually. 3. Provide a speaker for each of the City's four (4) Area Partnerships once per year. 4. Attend one (1) meeting per year of the City's neighborhood association presidents to announce the availability of speakers from the City. 		
<p><i>Reporting and Record Keeping</i></p> <ol style="list-style-type: none"> 1. Track the date and number of attendees at each stormwater related presentation given and report annually. 2. Track the date on which the speaker's bureau listing is e-mailed to neighborhood association contacts. 3. Track the dates when presentations are made to Area Partnerships along with the specific topic and number of attendees. 4. Track the date of the meeting with neighborhood association presidents and the number of presidents attending the meeting. 		
<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, with assistance from the Allen County Partnership for Water Quality, 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. Ideally, the following events will be targeted:
 - Earth Day
 - Johnny Appleseed Festival
 - Home and Garden Show
 - Three Rivers Festival or RiverFest
 - Black Expo

Reporting and Record Keeping

1. Track the events where a stormwater related informational booth or activity was provided.
2. Track the types and numbers of materials distributed at each event.
3. Track the number of attendees at each event.

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 have established wet weather-related programs in Allen County. The Allen County Partnership for Water Quality was jointly created by the City of Fort Wayne, Allen County, and the City of New Haven to help coordinate local wet weather programs and enhance communication between the program owners.

Measurable Goals

1. Meet with the other participants in the Allen County Partnership for Water Quality at least quarterly as part of the Partnership Board meeting.
2. City staff members involved in various aspects of the MS4 program will attend the annual State MS4 meeting (if those continue to be held).
3. The City will organize and host quarterly meetings with its co-permittees.
4. The City will maintain membership in a stormwater professional organization for one City employee.

Reporting and Record Keeping

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

BMP Owner:

- Fort Wayne City Utilities

BMP Support:

- Allen County Partnership for Water Quality
- 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.

Measurable Goals

1. Conduct a survey of the public's awareness of wet weather issues once during the permit term in year four (4).

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 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..

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.
3. Promote the appropriate disposal of household hazardous wastes using door hangers distributed as part of the Storm Drain Marking Program (see PI-5).
4. Track the number of Household Hazardous Waste brochures distributed annually and the number of hits to the pollution prevention area of the City Utilities website.

Record Keeping

1. Track the number of door hangers distributed as part of the City's Storm Drain Marking Program .
2. Track the number of Household Hazardous Waste brochures distributed.
3. City will obtain from the Allen County Solid Waste Management the number of participants in Tox-Away Day and the amount of material collected.
4. Track the number of visitors to the pollution prevention area of the City's website.

BMP Owner:

- Fort Wayne City Utilities

PE - 8 Pollution Reporting Program		
<p><i>BMP Description</i></p> <p>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 is promoted in the community as the number for citizens to use for non-emergency calls to the City.</p>		
<p><i>Measurable Goals</i></p> <ol style="list-style-type: none"> 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. Develop and distribute public information materials about illicit discharges, illegal dumping and other water quality problems and how to report them. (See PE-1) 		
<p><i>Record Keeping</i></p> <ol style="list-style-type: none"> 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. 		
<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"> • 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. Using an Environmental Education Grant from the USEPA, the Allen County Partnership for Water Quality has assembled the equipment necessary for teachers and homeschoolers to teach several modules of Project WET. The Partnership makes other teaching material available through its resource library that features water testing kits, videos, books, and educational supplies. The Partnership's Education Specialist is also available to take these materials into classrooms for interactive presentations. City Utilities is developing teaching modules that will teach students in grades K – 12 about urban stormwater runoff and the use of rain gardens for stormwater management.

Measurable Goals

1. Complete development of urban stormwater/rain garden education modules in year (2) two of second permit term.
2. Provide at least (1) one teacher training workshop to help teachers integrate the modules into their classrooms.
3. Distribute rain garden education modules to at least two (2) schools with rain gardens on their school property.
4. Promote the use of Project WET by posting information about the program on the City's website
5. Integrate Project WET activities in three (3) classrooms annually with 100 students reached per year

Record Keeping

1. Track the number of educators that request the Project WET materials or materials from the resource library for their classes.
2. Track the ways in which Project WET is promoted and the hours spent.
3. Track the number of classes that have used Project WET activities and the number of students in the classes.
4. Track the dates of teacher training workshops and the number of attendees.
5. Track the number of schools receiving urban stormwater/rain garden education modules.

BMP Owner:

- Fort Wayne City Utilities

BMP Support:

- Allen County Partnership for Water Quality

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 - 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 the citizen advisory committee. 2. Maintain an e-mail list of regular attendees so that meeting notices, agendas and minutes may be distributed. 3. Plan and facilitate citizen advisory committee meetings at least two times per year. 4. Advertise citizen advisory committee meetings on the City's website. 5. 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. Post stormwater advisory committee agendas and meeting minutes on the City web page. 		
<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 clean up 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 Adopt a Greenway sponsors. 		
<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, other government agencies or the Allen County Partnership for Water Quality.

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.
3. Provide exit questionnaire for participants to provide input and suggestions on workshop.

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 storwmater 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 of web page hits to City web site containing volunteer information. 3. 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 provide the materials, safety vests, etc. for use by drain marking volunteers in neighborhoods and at local businesses.</p>		
<p><i>Measurable Goals</i></p> <ol style="list-style-type: none"> 1. Organize one storm drain marking presentation in each of the City’s four (4) Area Partnerships annually for a total of four (4) presentations per year. 		
<p><i>Record Keeping</i></p> <ol style="list-style-type: none"> 1. Track the number of storm drain marking presentations held annually and the number of neighborhoods participating. 2. Track the number of storm drains marked. 3. Track the number of educational door hangers distributed in neighborhoods where drain are being marked. 		
<p><i>BMP Owner:</i></p> <ul style="list-style-type: none"> • 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 map 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. Track the number of miles of storm sewers mapped.
2. Track the number of miles of open ditches mapped.
3. Continue to inventory unvegetated ditches / swales with and without buffers.
4. Track outfalls found.

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.

Measurable Goals

1. Verification of the illicit discharge detection and elimination plan.
2. Continue implementating the illicit discharge detection and elimination plan.

Record Keeping

1. Track number of illicit discharges found.
3. Track number of illicit discharges eliminated.

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 and eliminated.

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 annually.
2. Monitor use of the database in tracking down pollution sources.

Record Keeping

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

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

BMP Description

The City is implementing an erosion and sediment control BMP 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 structural and non-structural BMPs.

Measurable Goals

1. Implement and apply standards to all applicable projects.

Record Keeping

1. Keep copy of BMP manual on file.

BMP Owner:

- 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 requirements such as 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. 		
<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

BMP Description

The City of Fort Wayne has a comprehensive construction site inspection program. During the construction phase of development projects on-site routine or periodic inspections to verify conformance and/or enforce the erosion and sediment control plan are performed.

Measurable Goals

1. Continue to implement an inspection program for construction site runoff controls.
2. Continue to train the inspectors on the new construction site runoff controls.
3. Continue to implement the construction site runoff control inspection program.

Record Keeping

1. Document training programs for construction site inspection staff.
2. Track monthly and annually how many construction sites are inspected how contractors are properly installing and maintaining construction site runoff controls.

BMP Owner:

- 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.</p>		
<p><i>Measurable Goals</i></p> <ol style="list-style-type: none"> 1. Continue the training course(s). 2. Continue to provide annual training. 		
<p><i>Record Keeping</i></p> <ol style="list-style-type: none"> 1. Document that training materials. 2. Document the number of training sessions that were provided. 3. 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, INDNR, 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 Management 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 a process will be agreed upon whereby the city submits plans for review by either INDNR, by the 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 and 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 has a website for the receipt and dissemination of information on active construction sites. The program will provide information on request on active permits and will provide citizens the opportunity to register inquiries about construction sites where problems have been observed.

Measurable Goals

1. The City's 311 and Hansen systems track citizen inquiries regarding construction site erosion
2. The City responds to public information requests.

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 Water Quality Manual</i> that is currently in production by the Indiana Department of Natural Resources (INDNR).</p>		
<p><i>Measurable Goals</i></p> <ol style="list-style-type: none"> 1. Implement and apply standards 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 . 		
<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. Implement plan review procedures that address requirements for post construction BMPs. 2. 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. 		
<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 BMPs approved under the stormwater ordinance continues to be developed to insure 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. Continue to develop an inspection priority matrix for BMPs. 2. Continue to train inspectors. 3. Continue to inspect all high priority post construction BMPs annually. 		
<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 property owner of any new BMP, public or private, be provided with 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. Require production of BMP owner manuals in the stormwater ordinance or supporting policies 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

BMP Description

The City continues to develop a database and GIS coverage of structural and non-structural BMP related information to facilitate annual reporting on its NPDES stormwater permit. This information is currently tracked through an alternate process not yet included in GIS.

Information tracked includes:

- 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.

Measurable Goals

1. Maintain information on BMPs that have been constructed or implemented in compliance with the regulations and policies of the City of Fort Wayne.

Record Keeping

1. Track status of the BMP database for the annual report annually.

BMP Owner:

- 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 - 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. 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

BMP Description

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.

Measurable Goals

1. Clean at least 5600 catch basins and/or inlets per year.

Reporting and Record Keeping

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.

BMP Owner:

- Fort Wayne City Utilities

GH - 3 Storm Sewer Cleaning & Maintenance		
<p><i>BMP Description</i> The City cleans its storm sewers whenever there is sufficient blockage to reduce the capacity of a particular portion of the drainage system.</p>		
<p><i>Measurable Goals</i></p> <ol style="list-style-type: none"> 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. 		
<p><i>Record Keeping</i></p> <ol style="list-style-type: none"> 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. 3. Track streambank and channel stabilization projects required near MS4 outfalls. 		
<p><i>BMP Owner:</i></p> <ul style="list-style-type: none"> • 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.

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

BMP Description

The City Parks Department uses pesticides, herbicides and fertilizers, but minimizes their use. The Street Maintenance Department uses herbicides to control roadside vegetation. Flood Control contracts weed control for ten miles of levees. Stormwater Maintenance uses herbicides periodically. Applicators are licensed through the State Chemists Office.

Measurable Goals

1. Minimize the use of pesticides and herbicides in the stormwater runoff through use of certified applicators.
2. Track the use of pesticide and fertilizers.

Reporting and Record Keeping

1. Document that applicators have proper training and certification.
2. Track the chemical types, locations and application amounts.

BMP Owner:

- Street Department
- Parks Department
- Flood Control
- Stormwater Maintenance Department

BMP Support:

- 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:
 - Vehicle and Equipment Maintenance Operations
 - Materials Management
 - Fuel Dispensing Operations
 - Roadway / Right-of-Way Maintenance (includes litter and erosion control)
 - Stormwater System Maintenance Operations (includes channel and bank stabilization)
 - Facilities Maintenance Operations

Record Keeping

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

BMP Owner:

- Fort Wayne City Utilities

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. 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. A staff training program will be developed that includes both general training on stormwater pollution prevention, and job specific training.
2. General awareness training for all employees will be provided annually through an on-line learning format beginning in January 2011.
3. Employees will be given pre and post training surveys to determine if the training is effective in increasing stormwater quality awareness.
4. Job specific training will be made 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 difference in composite scores on the pre-and post-test survey and, based on scores, assess the effectiveness of the training.
3. Track the dates and attendance at job specific training sessions.

BMP Owner:

- Fort Wayne City Utilities

BMP Support:

- Fort Wayne Human Resources Department