

# Stormwater Quality Management Plan Part C: Program Implementation

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



**City of Fort Wayne**

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**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.....	1
2.0 INITIAL STORMWATER PROGRAM EVALUATION.....	2
3.0 ONGOING CHARACTERIZATION SCHEDULE.....	10
4.0 MS4 BOUNDARY DESCRIPTION .....	10
5.0 MS4 CONVEYANCE ESTIMATE .....	12
6.0 STRUCTURAL BMPS FOR NEW AND RE-DEVELOPMENT .....	16
7.0 SELECTION CRITERIA AND PERFORMANCE STANDARDS FOR BMPS .....	17
8.0 STORMWATER BUDGET .....	17
9.0 MCM - BMPS AND MEASURABLE GOALS .....	19
10.0 PROGRAMMATIC INDICATORS.....	23

### **List of Tables**

Table 1	Pre-Approved Post Construction BMPS .....	16
Table 2	Current (2004) Stormwater Utility Budget.....	17
Table 3	Fort Wayne Projected Budget – New Activities for MS4 Program .....	19
Table 4	Programmatic Indicators and Corresponding MCMs .....	24

### **List of Figures**

Figure 1	Fort Wayne MS4 Boundary .....	11
Figure 2	GIS Excerpt Showing Storm Sewers.....	13
Figure 3	Future Annexation Areas .....	15

### **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	Initial Stormwater Program Evaluation	Identifies a "starting point" for the City's SWQMP and existing activities that are relevant to stormwater quality.
3.0	On-Going Characterization Schedule	Includes a schedule for on-going characterization of Fort Wayne's receiving streams.
4.0	MS4 Boundary Description	Provides both a map and narrative description of the City's MS4 area.
5.0	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.
6.0	Structural BMPs for New Development and Redevelopment	Describes the types of structural BMPs that will be allowed in new development and redevelopment sites.
7.0	Selection Criteria and Performance Standards for Structural BMPs	Summarizes selection criteria and performance standards for structural BMPs.
8.0	Stormwater Budget	Includes the City's current and projected stormwater budget along with funding sources.
9.0	MCM Measurable Goals	Identifies specific measurable goals for each of the six MCMs. Several appendices are referenced in this section detailing the BMPs.
10.0	Programmatic Indicators	Lists the programmatic indicators applicable to Fort Wayne's program and identifies reasons if a specific indicator is not applicable.

## **2.0 INITIAL STORMWATER PROGRAM EVALUATION**

### **2.1 Existing Activities – City of Fort Wayne**

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.

#### **2.1.1 Public Education and Outreach**

Fort Wayne currently has a proactive Public Education and Outreach program that will be expanded as needed to address the requirements of this MCM. Existing activities include:

- The City of Fort Wayne, City of New Haven, and Allen County have partnered to jointly create the Allen County Partnership for Water Quality (ACPWQ). The partnership created a position of Water Resource Education Specialist. This position is designed to serve as a liaison to the public, civic groups, and schools and provide information and outreach on watershed based issues, activities, and services. The ACPWQ focuses its work on education and outreach efforts related to combined sewer overflows as well as stormwater pollution, conservation efforts, drinking water protection and other water resource issues.

The Partnership provides public education opportunities through: presentations at neighborhood association meetings; classroom demonstrations and workshops; displays and information at local events such as the Three Rivers Festival, Earth Day Celebration, the Fort Wayne Farm Show, and the Allen County 4-H Fair. The Partnership has sought and used grant funding to distribute a documentary on water quality and associated material to teachers.

- The City's web page ([www.ci.ft-wayne.in.us](http://www.ci.ft-wayne.in.us)) contains links to various City departments that post information related to stormwater quality. The telephone directory for the water and sewer department includes a "water quality hotline".
- Several civic and environmental organizations exist that can be used to coordinate distribution of educational materials:
  - St. Joe Watershed Initiative
  - Sewer Advisory Group
  - Community Service Council
  - Annual River Clean Up Program
  - Adopt a River Greenway Program
  - Greenway Consortium Group
  - Hoosier Riverwatch
  - Wetland Training Center
- Several public festivals and events, such as the Three Rivers Festival, Earth Day, and others provide an opportunity to distribute educational materials.

- A stormwater education book has been produced by the Allen County Partnership for Water Quality in conjunction with students at Fort Wayne's Anthis Career Center. The book is designed for students in Kindergarten through third grade and explains how stormwater affects our lives. The book is free to all schools and residents in Fort Wayne, Allen County and New Haven. The book was featured in IDEM's *The Notepad*, an e-newsletter for Indiana Educators. The Partnership has given away approximately 4000 books in Allen County and has sold over 4,000 to other communities.

### **2.1.2 Public Involvement/Participation**

The City of Fort Wayne, through various departments and organizations, undertakes several public involvement and participation activities related to water quality. These include:

- The Fort Wayne Parks and Recreation manages an "Adopt a Greenway" program. Organizations agree to adopt a two-mile section of the Rivergreenway Trail, which is a 15-mile long linear park along the banks of the St. Mary's, St. Joseph, and Maumee Rivers. The trails are used for recreation, fitness and conservation. Participating organizations agree to clean their two-mile section of Rivergreenway Trail three times a year for a two-year period. In exchange for a group's assistance, a sign is placed along their section recognizing them. This program helps keep trash and debris from entering the adjacent rivers. Current participant organizations include:
  - Downtown Rotary Club
  - Essex Employee Club
  - Fort Wayne Central Lion's Club
  - Koehlinger Cycling & Fitness
  - Mayor's Youth Council
  - Northeast Indiana Juvenile Correctional Facility
  - Sigma Pi Fraternity - Gamma Kappa Chapter
  - Stress Operations Group
  - Summit City Bicycle & Fitness
  - Three Rivers Velo Sports Club
- The City of Fort Wayne's Solid Waste Office organizes an annual spring cleanup as part of the Great American Cleanup. This program includes activities such as litter cleanups, litter prevention education, river cleanups, etc., that help keep trash from migrating into the City's waterways. In the May 15, 2004 event, more than 2,400 volunteers participated, representing nearly 90 neighborhood associations, schools, churches, businesses, and non-profit organizations.
- There are various advisory groups that the City of Fort Wayne has worked with in the past and plans to continue to work with in the future. Though these groups may work with the City on a variety of issues, stormwater quality issues are sometimes discussed. Specific groups the City has participated with include:
  - St. Joe Watershed Initiative
  - Sewer Advisory Group
  - Community Service Council

- Greenway Consortium Group
- Maumee River Basin Partnership of Local Governments (MRBPLG)
- Hoosier Riverwatch

### **2.1.3 Illicit Discharge Detection & Elimination**

The City has an existing ordinance, Chapter 53 (Stormwater Management Department) of Title V (Public Works) of the City Code that contains language prohibiting illicit discharges. Section 53.12(B) contains language stating "...it is determined to be a violation of this chapter to permit, allow, or engage in the dumping or disposal of materials other than stormwater into the city's municipal separate stormwater system." There is also a penalty clause (Section 53.13) stating that "Any user found in violation of 53.12(B) shall be subject to a fine of up to \$2,500 per day. 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."

As part of its Part 1 NPDES application for an individual Phase I permit (Fort Wayne has subsequently been designated a Phase II NPDES – Rule 13 regulated entity), the City (at that time) field screened all known major outfalls (36 inches and larger in diameter plus those outfalls in industrial areas that were 12 inches and larger in diameter). Approximately 135 major outfalls were identified and field screened in 1994. The City generally has adequate storm sewer mapping from which to conduct an illicit discharge field screening program (see Section 5.0). As part of the field screening program completed in 1994, the City developed a "Manual of Operation for Field Screening of the Municipal Storm Sewer System" and "Manual of Operation for Field Investigation of Illicit Connections and Illegal Discharges". These manuals, in conjunction with more recent guidance manuals made available through organizations such as the Center for Watershed Protection, will provide a good starting point for the City to undertake an Illicit Discharge Detection and Elimination Program.

### **2.1.4 Construction Site Runoff Control**

The City's stormwater ordinance (Chapter 53: Stormwater Management Department, Fort Wayne City Code) previously provided minimal requirements and guidance for construction site runoff control. The ordinance is being revised to reflect the requirements of Rule 13 and provide the City with the proper legal authority for its construction site runoff control program.

Previously (and until the City's SWQMP Part C is approved), construction site runoff control, including plan review, inspection and enforcement, was implemented by the Allen County Soil and Water Conservation District office (under Rule 5). As the City's construction site runoff control program is implemented, this responsibility will be transferred to the City's plan review and inspection staff. The Allen County SWCD will remain responsible for reviewing and inspecting "City-owned" construction projects that disturb one or acre or more of land.

### **2.1.5 Post Construction Site Runoff Control**

Currently, Fort Wayne's program for managing the stormwater quality side of Post Construction Runoff Control is minimal. However, every proposed site development (excluding home construction on individual platted lots) receives a detailed review to determine how stormwater quantity can best be managed. In general, post construction runoff is limited to a release rate of 0.18 cubic feet per second (cfs) per acre for a 100-year storm event and 0.05 cfs per acre for a 10-year storm event. In areas where the capacity of the receiving stream is limited, lower release rates may be required. In general, the intent is that stormwater from any increased impervious surface must be managed on-site until capacity is available in the stormwater conveyance system.

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 a zoning district that helps direct growth away from sensitive areas. A River Greenway 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 river greenway 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 River Greenway Committee to ensure that land alteration is consistent with the intent of the Greenway District.

### **2.1.6 Pollution Prevention/Good Housekeeping**

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

- The City Parks 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 14,000 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 (approx. 50,000 feet in the northeast portion of the City).
- The City currently has a street sweeping program that covers a good portion of 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 City yards and is covered with tarpaulins. Yard drains for this area drain to catch basins in the combined sewer system.
- City Operations & Maintenance Department trucks are washed outdoors; however, wash water drains to the combined sewer system and is treated at the wastewater treatment plant. Most vehicles are stored inside to protect equipment. Inlets in vehicle storage areas have oil water separators. These areas are also located in the combined sewer area. The vehicle refueling station is covered and has a concrete floor and a containment area.
- 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 on a weekly basis. The same company provides curbside recycling on the same day as trash collection but on a bi-weekly basis. Each household is provided with two recycling bins – one for newspapers, magazines, catalogues, cardboard, fiberboard and phonebooks and the other for glass, plastic and metal recyclables. Information on what can be recycled is provided through annual flyers and utility bill stuffers, mailings to newly annexed residents, the City website and cooperative publications with the Allen County Solid Waste District.
  - A special area on the City's website provides information on disposal of unusual items that are not acceptable for garbage collection or recycling. 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 three weeks in each area on a rotating basis. 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. The Street Maintenance Department uses herbicides to control roadside vegetation. Applicators are licensed through the State Chemist's Office.
- Channel stabilization work is completed as problems arise. The City generally completes about one channel project per year. The City has five stormwater detention basin sites it controls (Hamilton Park, Southgate, Summerfield, Camp Scott, and Washington Natural Drain #6). Water quality has generally not been included in flood management projects.

## **2.2 Existing Activities – University Co-Applicants**

The four university co-applicants each have existing programs and activities in place that represent a good starting point for the implementation of most of the minimum control measures. The following sections provide descriptions of those programs and activities.

### **2.2.1 Public Education and Outreach**

The University of Saint Francis provides information to the Campus community regarding the damage that can be done by disposal of chemicals into the storm drains and by pouring used motor oil onto stone drives. The University is also distributing copies of City-provided fliers on the hazards of contaminating storm water.

Indiana University Purdue University Fort Wayne currently sponsors Public Education via the Biology and Geology departments, and provides community programs and speakers from staff and students in these departments. The University also sponsors an Earth Day forum and event that encourages knowledge of water quality issues through the distribution of brochures, speakers, and displays.

Ivy Tech State College has no current public outreach program related to stormwater quality, but plans to participate in the activities identified in the City's stormwater quality management program.

The Indiana Institute of Technology has no current public outreach program related to stormwater quality, but plans to participate in the activities identified in the City's stormwater quality management program.

### **2.2.2 Public Participation and Involvement**

The University of Saint Francis has no current public involvement program related to stormwater quality, but plans to participate in the activities identified in the City's stormwater quality management program.

Indiana University Purdue University Fort Wayne staff and faculty are involved in litter clean-up days and river clean-up days. The biology club is involved in numerous activities that promote the awareness of water quality issues.

Ivy Tech State College has no current public involvement program related to stormwater quality, but plans to participate in the activities identified in the City's stormwater quality management program.

The Indiana Institute of Technology has no current public involvement program related to stormwater quality, but plans to participate in the activities identified in the City's stormwater quality management program.

### **2.2.3 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 Chief of Security has instructed the Campus Community to contact him in reference to all potentially hazardous materials that need to be disposed of.

Indiana University Purdue University Fort Wayne currently has in place mapping of the entire campus storm water system. The University has recycling programs for oil, used batteries, and other hazardous materials. The University maintains a hazardous material storage location that is managed and inspected by campus Radiological and Environmental Management (REM) staff. This information is on file with local agencies.

Ivy Tech State College currently collects used motor oil and antifreeze and disposes of these products through approved disposal companies.

The Indiana Institute of Technology currently recycles all used motor oil consumed by the maintenance and grounds departments. The Institute also maintains a list of locations on campus where hazardous materials are used and stored. The locations are inspected annually.

### **2.2.4 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.

Indiana University Purdue University Fort Wayne currently adheres to and maintains all requirements set forth by IDEM for construction project erosion control. This includes the preparation of ESCP's that are submitted to Soil and Water Conservation District staff and that are inspected by IDEM field personnel.

Ivy Tech State College requires all site development contractors to provide erosion & sediment control during construction.

The Indiana Institute of Technology currently requires all contractors to follow all current IDEM rules and regulations related to erosion and sediment control.

### **2.2.5 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 brownfields clean-up. The university also plans to enlarge its on-campus lake to provide additional detention capacity for future development projects.

Indiana University Purdue University Fort Wayne has a qualitative master plan (available on the University web site) that indicates areas to be preserved as open space and several sensitive areas to be protected. This document is maintained on a constant basis. The University also maintains storm water detention in areas that have been developed, most recently with Student Housing construction which now possesses a fully Rule 13 compliant detention and infiltration basin.

Ivy Tech State College requires the Architect of Record to inspect post-construction runoff controls.

The Indiana Institute of Technology currently requires all contractors to follow all current IDEM rules and regulations for post construction controls as required by Rule 5.

### **2.2.6 Pollution Prevention / Good Housekeeping**

The University of Saint Francis preformed a shoreline stabilization project in 2004. A clean up project behind the lake was performed jointly by Physical Plant personnel and students from an environmental science class. The university maintains the lake shoreline and recently rip-rapped the shore to protect against erosion. Grounds personnel understand the importance of prohibiting grass from being discharged into the lake.

Indiana University Purdue University Fort Wayne currently performs daily litter pick-up of the campus and weekly street sweeping. The University maintains all shoulder and ditch structures to a high level of repair. The University has enclosed storage for deicing sand

and salt mix. The University has a standard operation procedure (SOP) for spill containment and clean-up. The University provides sanitary sewer drains as a BMP for vehicle wash facilities. The University promotes campus-wide recycling of paper and aluminum.

Ivy Tech State College contracts daily with an outside contractor for litter pick up and annually contracts for leaf disposal.

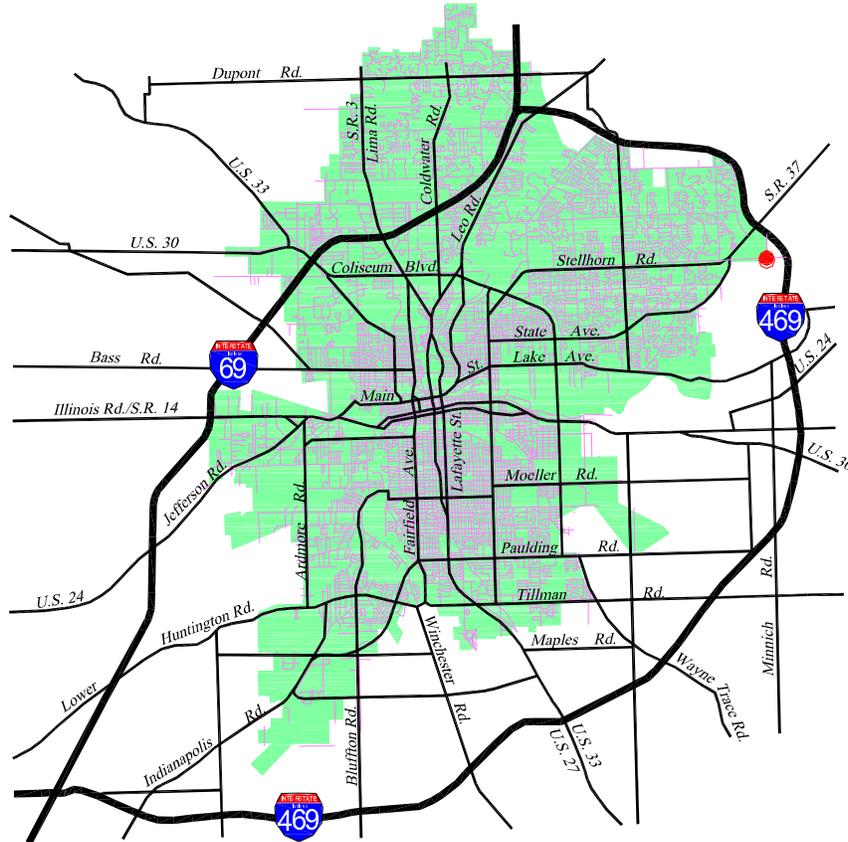
The Indiana Institute of Technology currently performs periodic litter pick up and pavement sweeping. The Institute has a standard operating procedure for spill prevention and clean-up during fueling operations. The Institute has a minimal use policy in place for pesticides and does not currently apply any restricted use products that require an applicators license.

### **3.0 ONGOING CHARACTERIZATION SCHEDULE**

To be completed upon resolution of Part B Notice of Deficiency.

### **4.0 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, south 4,600 ft, west 1,200 ft, south to Till Road, west to CSX Railroad, south 5,300 ft, west 1,150 ft, south 1,300 ft, west 1,000 ft, south to Ludwig Road, west to Goshen Road, due south (not following Goshen Road) to U.S. 30, west 3,870 ft, south 960 ft, east to Kroemer Road, south to California Road, east 3,600 ft, south to Butler Road, east to Hillegas Road, south

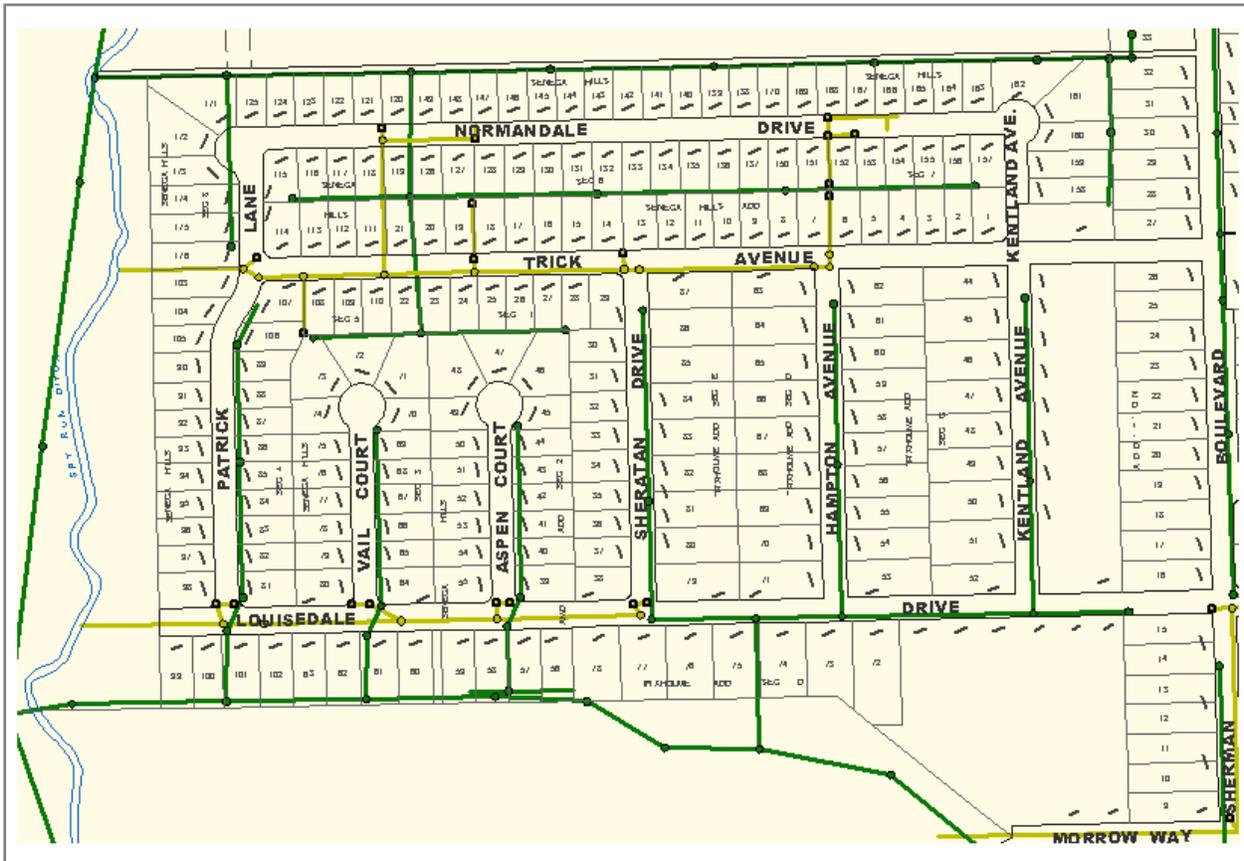
6,865 ft, east to Lindenwood Avenue, south to Scholtz Road, northwest 8,770 ft, south to Illinois Road, west 1,350 ft, north 2,200 ft, west to I-69, south 5,500 ft, east 1,040 ft, south to West Jefferson Boulevard, northeast to Covington Road, east to South Bend Road, southwest to Fairway Drive, south to Langford Lane, east to Anneta Avenue, south 400 ft, east to Smith Road, south to Engle Road, west 3,200 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 2,130 ft, west to Smith Road, south 2,660 ft, southeast to Keller Road, 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, southeast 7,300 ft to intersection of Paulding Road and Adams Center Road, northeast 4,600 ft, northwest 6,660 ft, north 5,200 ft, west to Meyer Road, north to Old Lincoln Highway, east 2,600 ft, north 800 ft to Maumee River, follow river 16,500 ft to point near North River Road, north to Shordon Road, west to Long Road, north to Maysville Road, northeast to Stellhorn, east to starting point.

## **5.0 MS4 CONVEYANCE ESTIMATE**

The purpose of providing an estimate of MS4 conveyances is to determine the amount that will need to be mapped each year of the Rule 13 permit. 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 rule requirement is for 25% of the conveyance system to be mapped each year in years 2 through 5 of the City's first permit term (Note: The permit term began with the submittal of the Notice of Intent, on November 3, 2003; hence, Year 2 of the permit began on November 4, 2004.). For the City of Fort Wayne, most of the storm sewer system is already mapped, so the 25% will apply to ditch mapping (2-foot and larger bottom width) and mapping of storm sewers and ditches in newly annexed areas.

An estimate of the City of Fort Wayne's MS4 conveyances was made using a combination of existing paper maps, Geographic Information System (GIS) data, and field investigations. MS4 conveyances include storm sewers 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 are generally not shown. Outfalls are identified by a unique alpha-numeric identifier. The storm sewers were recently digitized and incorporated into the City's GIS. An excerpt from the GIS is shown in Figure 2 below. Separate storm sewers are shown in the tan colored lines. The green lines are sanitary sewers.



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

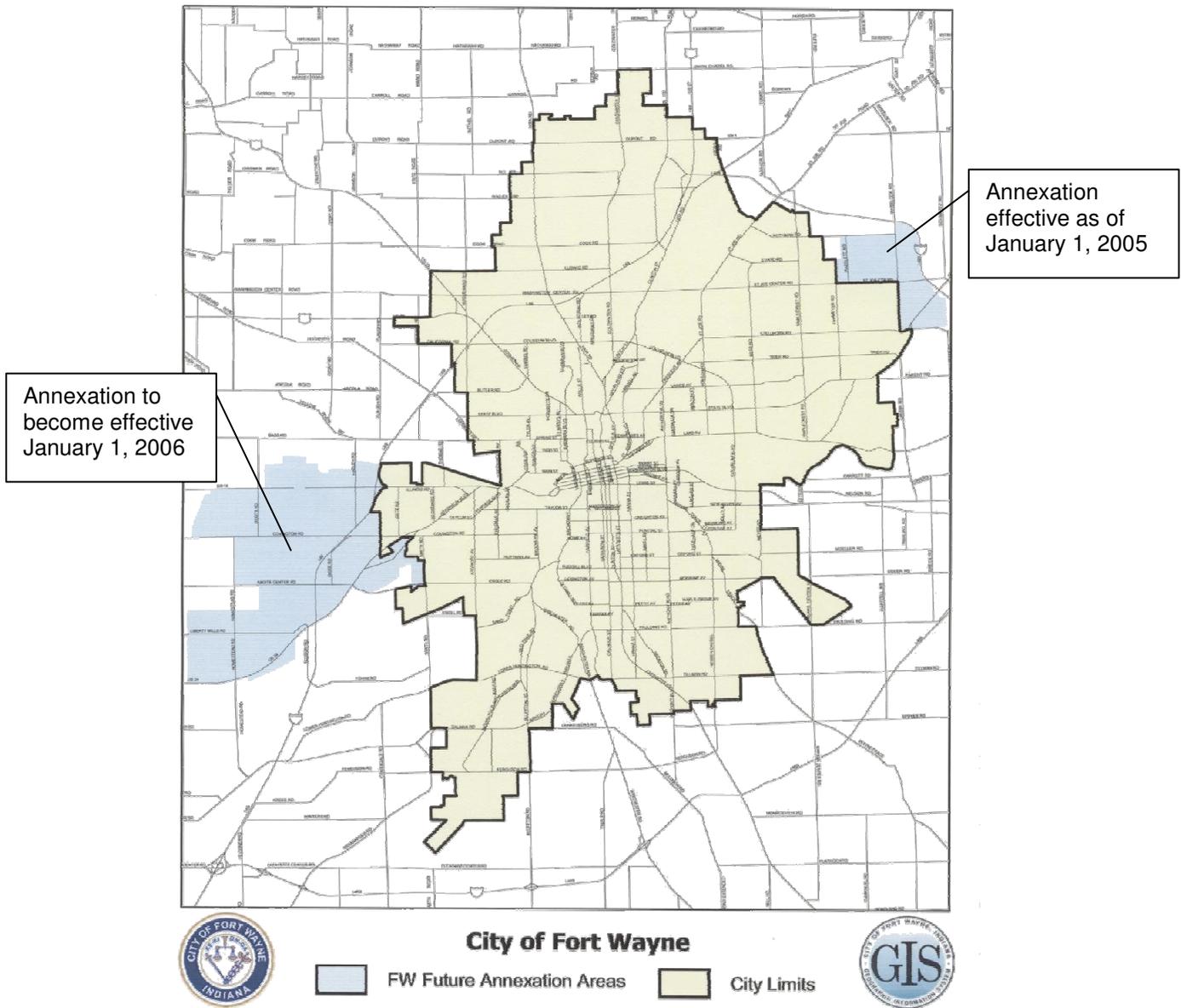
The length of storm sewer was estimated by querying the GIS. The GIS contains the storm sewer segment length as an attribute. A summation of all storm sewer segment lengths in the database showed a total length of approximately 1.9 million feet, or 360 miles. With a total MS4 area of approximately 72.4 square miles, there is an average length of 26,250 feet of storm sewer per square mile of MS4 area.

Most ditches are not shown on either the paper quarter section maps or the GIS. To estimate the length of ditch conveyances, representative quarter section map areas were selected and field investigations were performed to physically measure the length of ditches (2-foot and larger bottom width). The information gathered in the field investigations was used to determine a unit ditch length per square mile for each land use type (i.e., residential, commercial, industrial, undeveloped, recreational, and institutional). This information was extrapolated using total acreage for each land use type across the remainder of the MS4 area to arrive at a total estimate of the length of ditches in the MS4 area. Based on this sampling and extrapolation, the estimated length of ditches with 2-foot and wider bottom is 760,000 feet, which equates to an average of 10,500 feet per square mile of MS4 area. It should also be noted that the City now has 2-foot contour mapping as part of its GIS. This data, along with aerial photography will greatly aid the mapping of ditches.

In addition to mapping ditches, the City will need to map MS4 conveyances (both storm sewers and ditches) for upcoming annexation areas. These areas are shown as the blue shaded area in Figure 3 and comprise approximately 15 square miles. There are two annexation areas shown, the Northeast Phase V and the Southwest Extended. The Northeast Phase V became part of the City on January 1, 2005. The Southwest Extended area is scheduled to become part of the City in January 2006. Based on the average length of storm sewer found in the current City limits, an estimated 300,000 feet of storm sewer and 160,000 feet of ditches will need to be mapped in the recently annexed and upcoming annexation areas.

To summarize, the City already has an adequate map of its storm sewer system. The information 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. Ditch mapping does not currently exist, but identification of ditches will be facilitated by the orthophotography and 2-foot contour information contained in the City's GIS. The estimated length of storm sewers and ditches (ditches in the City's current MS4 area plus both storm sewers and ditches in the upcoming annexation areas) that have yet to be mapped into the City's GIS is as follows:

Storm Sewers	300,000 ft
Ditches (2-foot or wider bottom)	920,000 ft (i.e. 760,000 + 160,000)
<b>Total</b>	<b>1,220,000 ft</b>



**Figure 3 – Future Annexation Areas**  
(Source: Fort Wayne Planning Department)

## 6.0 STRUCTURAL BMPs FOR NEW AND RE-DEVELOPMENT

The City of Fort Wayne will allow for a variety of structural BMPs in new development and re-development areas to address post construction runoff. The BMPs must, however, be capable of providing targeted pollutant removal, that being removal of 80% of Total Suspended Solids (see Section 7.0). Post construction BMPs will be required in new development and re-development to treat stormwater after construction has been completed and the site has been stabilized.

The City of Fort Wayne has designated a list of 12 pre-approved BMP methods to be used alone or in combination to achieve the 80% TSS removal goal. These BMPs, along with their average TSS removal rates, are listed in Table 1 below. A single BMP may not be adequate to achieve the target removal rates. A series of BMPs, or treatment train approach, may be needed to achieve the goal.

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

BMP Description	Anticipated Average % TSS Removal Rate <sup>(3)</sup>
Bioretention <sup>(1)</sup>	75
Constructed Wetland	65
Underground detention	70
Extended Dry Detention	72
Infiltration Basin <sup>(1)</sup>	87
Infiltration Trench <sup>(1)</sup>	87
Media Filtration – Underground Sand	80
Media Filtration – Surface Sand	83
Filter Strip	48
Vegetated Swale	60
Wet Detention	80

Notes to Table 1:

- 1 Based on capture of 0.5-inch of runoff volume as best available data. Effectiveness directly related to captured runoff volume, increasing with larger capture volumes.
- 2 NA may indicate that the BMP is not applicable for the pollutant, but may also indicate that the information is simply Not Available. Independent (third party) testing should be provided, rather than the manufacturer's testing data. Testing must follow ASTM standard methods.
- 3 Removal rates are dependant on proper installation and maintenance.

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 at 50 – 125 micron range (silt/fine sand) without re-entrainment and must have a low to medium maintenance requirement. Testing to establish the TSS removal rate must be conducted by an independent testing facility, not the BMP manufacturer.

## **7.0 SELECTION CRITERIA AND PERFORMANCE STANDARDS FOR STRUCTURAL BMPS**

The City of Fort Wayne has adopted a policy 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. Additionally, new gasoline outlets and refueling areas (or existing facilities that replace their tanks) must install appropriate practices to reduce lead, copper, zinc, and polyaromatic hydrocarbons in stormwater 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.

## **8.0 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, which provides approximately \$5.1 million annually in revenue. The 2005 budget for the Stormwater Utility is summarized in Table 2.

**Table 2**  
**Current (2005) Stormwater Utility Budget**

<b>Item</b>	<b>Budget</b>
Engineering	183,000
Maintenance	3,209,000
General & Administration	1,029,000
Capital	3,097,000
<b>Stormwater Total</b>	<b>\$7,518,000</b>

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.

In Year 1 of the permit (2004), the City primarily allocated Rule 13 compliance budget to the development of Parts B and C of its SWQMP. This expenditure was approximately \$165,000. Fort Wayne budget estimates for new programs that will need to be implemented over the remaining four years of the permit are summarized in Table 3.

**Table 3**  
**Fort Wayne Projected Budget – New Activities**  
**MS4 Program**

Compliance Area	2005	2006	2007	2008
Annual Report Preparation	\$20,000	\$20,000	\$20,000	\$75,000
Program Management	\$40,000	\$40,000	\$40,000	\$40,000
Public Education and Outreach	\$15,000	\$15,000	\$15,000	\$15,000
Public Participation and Involvement	\$15,000	\$15,000	\$15,000	\$15,000
Illicit Discharge Detection/Elimination	\$200,000	\$200,000	\$200,000	\$200,000
Construction Site Runoff Control	\$85,000	\$100,000	\$90,000	\$90,000
Post Construction Runoff Control	\$50,000	\$30,000	\$30,000	\$30,000
Municipal Operations Pollution Prevention and Good Housekeeping	\$30,000	\$30,000	\$30,000	\$30,000
<b>TOTALS</b>	<b>\$455,000</b>	<b>\$450,000</b>	<b>\$440,000</b>	<b>\$495,000</b>

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.

## **9.0 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 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, a schedule for implementation, defined reporting and record keeping requirements, an owning department assignment, supporting department assignments, and an indication as to whether the BMP is an on-going or new initiative.

The four University Co-Applicants will also be participating in implementation of the BMPs and measurable goals presented herein. The City of Fort Wayne and the four University Co-Applicants entered into Service Agreements prior to the submittal of the SWQMP Part A. These Service Agreements summarized obligations on the part of the City and each University MS4. These obligations are summarized below.

### City of Fort Wayne’s Obligations:

- Serve as, and perform all tasks required of, the NOI designated MS4 Operator.
- Prepare and submit to IDEM the NOI, and Parts A, B, and C of the SWQMP.
- Prepare and submit to IDEM annual reports in accordance with 327 IAC 15-13-18.
- Prepare and submit to IDEM monthly reports on Rule 13-regulated construction sites.
- Share programmatic materials for, and provide assistance to the Universities in implementing public education and outreach and public involvement and participation activities.
- Perform field screening of Universities’ outfalls.
- Provide assistance to the Universities in locating the source of any potential illicit discharges detected during field screening of the Universities outfalls.

### Universities’ Obligations:

- Provide the City with monthly reports regarding Rule 13-regulated construction sites on the Universities’ property.
- 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.
- Comply with the City’s ordinances and standards for construction and post construction runoff control, once adopted and in effect.
- Share programmatic materials and provide assistance to the City in implementing public education and outreach and public involvement and participation activities.
- Develop and implement pollution prevention and good housekeeping measures, including BMPs, as appropriate, on University properties consistent with Rule 13.

The following sections, along with Appendices A through F present the MS4 program for the City and its University Co-Applicants.

## **9.1 Public Education and Outreach**

Public education was identified by USEPA as one of the three areas where cities could see the quickest return in their stormwater quality management programs when the Phase I stormwater rule was published in December 1990. The City of Fort Wayne, by itself and in conjunction with Allen County and the City of New Haven, has a very strong public education, outreach, and involvement program. Since 2002, the Allen County Partnership for Water Quality has been staffed by a full-time coordinator who is jointly funded by the three entities. The public education program makes use of both traditional and innovative public awareness tools, such as fliers, activity / coloring books, and training programs at local home supply stores. The proposed public education and outreach program will include the distribution of educational materials to the community, as well as outreach activities on the impacts that stormwater discharges have on local water bodies and the role that the citizens can take to reduce stormwater pollution.

The objective of the Public Education and Outreach section of the SWQMP – Part C is as follows:

*To develop a program that includes methods and measurable goals that will be used to inform residents, visitors, public service employees, commercial and industrial facilities, and construction site personnel within the MS4 area about the impacts polluted stormwater run-off can have on water quality and ways they can minimize their impact on stormwater quality. The MS4 operator shall ensure, via documentation, that a reasonable attempt was made to reach all constituents within the MS4 area to meet this measure.*

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

## **9.2 Public Participation and Involvement**

The public can provide valuable input and assistance to the development and implementation of the City’s stormwater program. The advantages of active public involvement include reduced pollutant loads, increased program support, and vigilant protection of water bodies. The City and local organizations have focused this MCM on creating opportunities for public involvement in local activities and on making the public aware of these opportunities.

The objective of the Public Participation and Involvement section of the SWQMP – Part C is as follows:

*To develop an SWQMP that includes provisions to allow opportunities for constituents within the MS4 area to participate in the stormwater management program development and implementation. An MS4 operator shall ensure, via documented efforts, that sufficient opportunities were allotted to involve all constituents interested in participating in the program process to meet this measure.*

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.

### **9.3 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 that are, for the most part, already in place. The City has very good digital mapping of its in-ground MS4 and outfalls. The activities related to the MS4 mapping requirement will be primarily verification of the existing mapping and the addition of that portion of the MS4 made up of open ditches and MS4 mapping in annexation areas.

During NPDES Phase I, the City developed in-house guidance on field screening and the follow-up actions to be employed when suspected illicit discharges are discovered. This program will be reviewed, revised (if necessary) and implemented in conjunction with the requirements to screen the MS4 outfalls during dry weather and to eliminate illicit connections and discharges that are found.

The potential industrial pollution sources will be organized in a database and then will be geo-referenced and added to the City's mapping 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.

The objective of the Illicit Discharge Detection and Elimination section of the SWQMP – Part C is as follows:

*To develop and implement a strategy to detect and eliminate illicit discharges to the MS4 conveyances.*

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.

### **9.4 Construction Site Runoff Control**

The City of Fort Wayne does not currently have a comprehensive erosion and sediment 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. However, the updated/modified ordinance has not been adopted at the time of the submittal of the Part C SWQMP. The City plans to present the updated Chapter 53 to Council for approval in the first quarter of 2005. The City will pursue a Memorandum of 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. Until the City's program is in place, the Allen County SWCD will continue to provide plan review and inspection/enforcement for construction sites disturbing one or more acres (as it currently does under Rule 5).

Once in place, the City's construction site runoff control program will include 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 objective of the Construction Site Runoff Control section of the SWQMP – Part C is as follows:

*To develop, implement, manage, and enforce an erosion and sediment control program for construction activities that disturb one (1) or more acres of land within the MS4 area.*

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.

### **9.5 Post Construction Runoff Control**

Similar to the Construction Site Runoff Control, the City does not currently have 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. However, the updated/modified ordinance has not been adopted at the time of the submittal of the Part C SWQMP. The City plans to present the updated Chapter 53 to Council for approval in the first quarter of 2005. Until the City's program is in place, the Allen County SWCD will continue to provide plan review and inspection/enforcement for post construction runoff control for sites disturbing one or more acres (as it currently does under Rule 5).

The cornerstone of the Post Construction Runoff Control program will be the adoption (through modifications to Chapter 53 of the City Code) of post construction runoff control requirements. The City will also be developing a manual for the control of post construction runoff control. The new manual will be either an update of the City's existing manual, adoption of the Indiana Water Quality Manual that is currently in production by the Indiana Department of Natural Resources (INDNR), or the adoption of a composite of the two manuals.

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 insure the anticipated performance, maintenance requirements will be prescribed for all new BMPs that will be built in the City of Fort Wayne.

The following is the objective of the Post Construction Runoff Control section of the SWQMP – Part C.

*To develop, implement, manage, and enforce a program to address discharges of post construction stormwater run-off from new development and redevelopment areas that disturb one (1), or more, acre of land, or disturbances of less than one (1) acre of land that are part of a larger common plan of development or sale if the larger common plan will ultimately disturb one (1) or more acres of land, within the MS4 area.*

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.

## **9.6 Municipal Operations Pollution Prevention and Good Housekeeping**

The City currently has programs for street sweeping, catch basin maintenance and cleaning, and litter removal during right-of-way maintenance. These programs 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 will be 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 objective of the Municipal Operations Pollution Prevention and Good Housekeeping section of the SWQMP – Part C is as follows:

*To develop and implement a program to prevent or reduce pollutant runoff from municipal operations within the MS4 area.*

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.

## **10.0 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. Table 4 provides a listing of the 34 programmatic indicators required by Rule 13. The corresponding applicability to each MCM is also provided in the table.

**Table 4**  
**Programmatic Indicators and Corresponding MCMs**

Programmatic Indicator	MCM					
	Public Education and Outreach	Public Participation and Involvement	Illicit Discharge Detection/ Elimination	Construction Site Runoff Control	Post Construction Runoff Control	Pollution Prevention / Good Housekeeping
1. Number or percentage of citizens, segregated by type of constituent as referenced in section 327 IAC 15-13-12(a) of Rule 13, that have an awareness of stormwater quality issues.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Number and description of meetings, training sessions, and events conducted to involve citizen constituents in the stormwater program.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Number or percentage of citizen constituents that participate in stormwater quality improvement programs.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Number and location of storm drains marked or cast, segregated by marking method.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Estimated or actual linear feet or percentage of MS4 mapped and indicated on an MS4 area map.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Number and location of MS4 area outfalls mapped.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Number and location of MS4 area outfalls screened for illicit discharges.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Number and location of illicit discharges detected.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Number and location of illicit discharges eliminated.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Number of, and estimated or actual amount of material, segregated by type, collected from Household Hazardous Waste collections in the area.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Number and location of constituent drop-off centers for automotive fluid recycling.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Number or percentage of constituents that participate in the HHW Collection program.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Number of construction sites obtaining an MS4 entity-issued stormwater run-off permit in the MS4 area.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Number of construction sites inspected.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Number and type for enforcement actions taken against construction site operators.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Number of, and associated construction site name and location for, public information requests received.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Programmatic Indicator	MCM					
	Public Education and Outreach	Public Participation and Involvement	Illicit Discharge Detection/ Elimination	Construction Site Runoff Control	Post Construction Runoff Control	Pollution Prevention / Good Housekeeping
17. Number, type and location of structural BMPs installed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
18. Number, type and location of structural BMPs inspected.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
19. Number, type and location of structural BMPs maintained or improved to function properly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
20. Type and location of nonstructural BMPs utilized.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
21. Estimated or actual acreage or square footage of open space preserved and mapped in the MS4 area, if applicable.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
22. Estimated or actual acreage or square footage of pervious and impervious surfaces mapped in the MS4 area, if applicable.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
23. Number and location of new retail gasoline outlets or municipal, state, federal or institutional refueling areas, or outlets or refueling areas that replaced existing tank systems that have installed stormwater BMPs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
24. Number and location of MS4 entity facilities that have containment for accidental releases of stored polluting materials.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
25. Estimated or actual acreage or square footage, amount, and location where pesticides and fertilizers are applied by a regulated MS4 entity to places where stormwater can be exposed within the MS4 area.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
26. Estimated or actual linear feet or percentage and location of unvegetated swales and ditches that have an appropriately-sized vegetated filter strip.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
27. Estimated or actual linear feet or percentage and location of MS4 conveyances cleaned or repaired.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
28. Estimated or actual linear feet or percentage and location of roadside shoulders and ditches stabilized, if applicable.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
29. Number and location of stormwater outfall areas remediated from scouring conditions, if applicable.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
30. Number and location of deicing salt and sand storage areas covered or otherwise improved to minimize stormwater exposure.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
31. Estimated or actual amount, in tons, of salt and sand used for snow and ice control.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Programmatic Indicator	MCM					
	Public Education and Outreach	Public Participation and Involvement	Illicit Discharge Detection/ Elimination	Construction Site Runoff Control	Post Construction Runoff Control	Pollution Prevention / Good Housekeeping
32. Estimated or actual amount of material by weight collected from catch basin, trash rack, or other structural BMP cleaning.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
33. Estimated or actual amount of material by weight collected from street sweeping, if utilized.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
34. If applicable, number or percentage and location of canine parks sited at least one hundred fifty (150) feet away from a surface water body.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Appendix A

### Public Education and Outreach BMPs and Measurable Goals

PE - 1	Public Information Materials .....	A-1
PE - 2	Posting of Public Education Materials on City Web Site .....	A-2
PE - 3	Develop Speakers' Bureau Resource Materials .....	A-3
PE - 4	Promote Stormwater Program at Community Functions .....	A-4
PE - 5	Coordinate With Other Wet Weather Education Programs .....	A-5
PE - 6	Assess the Public's Existing Awareness Level 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

<b>PE - 1 Public Information Materials</b>		
<p><b><i>BMP Description</i></b></p> <p>The City of Fort Wayne, in conjunction with the Allen County Partnership for Water Quality, has numerous public information programs in place that are intended to educate and notify the public of water quality concerns and programs. The public information programs related to stormwater management and stormwater quality have been very successful. Those programs focused on stormwater quality management and pollution prevention will be continued through the term of the second NPDES permit.</p>		
<p><b><i>Measurable Goals</i></b></p> <ol style="list-style-type: none"> <li>1. Produce and distribute at least two (2) documents with stormwater related topics annually. The topics will include:               <ul style="list-style-type: none"> <li>• septic tank maintenance</li> <li>• green landscaping</li> <li>• household hazardous wastes</li> <li>• drinking water supply protection</li> <li>• West Nile Virus</li> <li>• Stormwater pollution</li> <li>• Stormwater pollution prevention at home</li> </ul> </li> <li>2. Produce and distribute a stormwater activity book with stormwater and/or environmental related topics.</li> </ol>		
<p><b><i>Responsibility</i></b></p> <ol style="list-style-type: none"> <li>1. Utility Administration, with assistance from the Allen County Partnership for Water Quality, will be responsible for the implementation of this BMP.</li> </ol>		
<p><b><i>Schedule</i></b></p> <ol style="list-style-type: none"> <li>1. Annually produce and distribute at least two (2) brochures.</li> <li>2. Produce an activity book in Year 1 and distribute throughout the five year period.</li> </ol>		
<p><b><i>Reporting and Record Keeping</i></b></p> <ol style="list-style-type: none"> <li>1. Track number of publications created and distributed to public.</li> <li>2. Include copies of the public education materials in the annual reports required by the NPDES stormwater discharge permit.</li> </ol>		
<p><b><i>BMP Owner:</i></b></p> <ul style="list-style-type: none"> <li>• Utility Administration</li> </ul>	<p><b><i>BMP Support:</i></b></p> <ul style="list-style-type: none"> <li>• Allen County Partnership for Water Quality</li> </ul>	<p><input checked="" type="checkbox"/> Current Program <input type="checkbox"/> New Program</p>

**PE - 2 Posting of Public Education Materials on City Web Site**

***BMP Description***

The City will utilize its website and the website of the Allen County Partnership for Water Quality to disseminate information on the City's stormwater management programs, including the brochures and coloring book that will be produced under PE-1.

***Measurable Goals***

1. Create a stormwater page on the City's website.
2. Create a link to the Allen County Partnership for Water Quality website.
3. Post public education materials on the City's stormwater website.
4. Post public meeting notifications on the City's stormwater website.

***Responsibility***

1. Utility Administration and the Public Information Office will be responsible for the implementation of this BMP. The City's webmaster and the Allen County Partnership for Water Quality will assist as needed to complete each task.

***Schedule***

1. Establish stormwater web page in Year 1.
2. Create link to ACPWQ website in Year 1.
3. Post materials throughout Years 1 – 5.
4. Post public meeting notices throughout Years 1 – 5.

***Reporting and Record Keeping***

1. Create the stormwater web site.
2. Track items placed on the stormwater web site.
3. Track hits on specific stormwater program web pages and report annually.

***BMP Owner:***

- Utility Administration

***BMP Support:***

- Allen County Partnership for Water Quality
- City webmaster
- Public Information Office

- Current Program
- New Program

**PE - 3 Develop Speakers' Bureau Resource Materials**

***BMP Description***

The City and the Allen County Partnership for Water Quality have collected "speaker's bureau" materials to inform agencies, school and civic organizations about stormwater issues and how they are being addressed in the City of Fort Wayne and Allen County. This program will be enhanced with additional materials and information.

***Measurable Goals***

1. Develop PowerPoint presentations and other materials for staff who speak about stormwater related topics throughout the City. The materials will be targeted to specific audiences, such as neighborhood associations, businesses, schools, and civic groups.

***Responsibility***

1. Utility Administration, with assistance from the Allen County Partnership for Water Quality, will be responsible for the implementation of this BMP. Other departments will assist as needed.

***Schedule***

1. Ongoing

***Reporting and Record Keeping***

1. Track number of presentations and information materials that are produced and that are requested annually.

***BMP Owner:***

- Utility Administration

***BMP Support:***

- Allen County Partnership for Water Quality

- Current Program
- New Program

**PE - 4 Promote Stormwater Program at Community Functions**

***BMP Description***

The City and the Allen County Partnership for Water Quality are sponsors and participants in Earth Day activities and the Three Rivers Festival. Typically, at least one booth has been focused on water quality issues and how the local wet weather programs are addressing those issues.

***Measurable Goals***

1. Participate in the Earth Day activities with at least one stormwater related booth.
2. Participate in the Three Rivers Festival with at least one stormwater related booth.

***Responsibility***

1. Utility Administration, with assistance from the Allen County Partnership for Water Quality, will be responsible for the implementation of this BMP.

***Schedule***

1. Annual Events.

***Reporting and Record Keeping***

1. Track participation at Earth Day activities.
2. Track participation at Three Rivers Festival.
3. Record the types and numbers of materials distributed.

***BMP Owner:***

- Utility Administration

***BMP Support:***

- Allen County Partnership for Water Quality

- Current Program
- New Program

**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 for the specific purpose to coordinate with these entities to better organize local wet weather programs.

***Measurable Goals***

1. Meet with public information/public education officers at the Indiana Department of Environmental Management, Indiana Department of Natural Resources, Allen County Health Department, the Soil and Water Conservation District and other organizations as necessary in order to coordinate and expand existing water quality related public education efforts.

***Responsibility***

1. Utility Administration, with assistance from the Allen County Partnership for Water Quality, will be responsible for the implementation of this BMP.

***Schedule***

1. Meet semi-annually as a group.

***Reporting and Record Keeping***

1. Develop a comprehensive list of public education efforts in the County annually.
2. Maintain meeting notes for each coordination meeting.

***BMP Owner:***

- Utility Administration

***BMP Support:***

- Allen County Partnership for Water Quality

- Current Program
- New Program

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

***BMP Description***

The public has been informed about stormwater issues through numerous programs over the years. The Allen County Partnership for Water Quality has been surveying the community to determine the general awareness level of stormwater quality issues. The City will evaluate the effectiveness of the public information efforts to determine how to tailor the public information programs in the future through the process of surveying the public early in the compliance program and then again near the end of the permit term.

***Measurable Goals***

1. Conduct an initial survey to estimate the level of awareness of wet weather issues at the start of the permit term.
2. Conduct survey during the final year of the permit term to assess trends in the level of public awareness of wet weather issues.

***Responsibility***

1. Utility Administration and the Public Information Office will be responsible for the implementation of this BMP.

***Schedule***

1. Year 2 – Develop and perform survey.
2. Year 5 – Perform second survey and compare results.

***Reporting and Record Keeping***

1. Track the number and constituent type of participants in each survey.
2. Based on the type of survey created, track the number of questions answered correctly, assess the general interest level, and evaluate the public education program content, its target audiences, and the frequency based on the trends developed from the second survey.
3. Keep copies of the survey forms on file.

***BMP Owner:***

- Utility Administration

***BMP Support:***

- Allen County Partnership for Water Quality
- Public Information Office

- Current Program
- New Program

**PE - 7 Promote Household Hazardous Waste Programs**

***BMP Description***

Allen County 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 city. 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 a brochure produced by the Allen County Partnership for Water Quality.

***Measurable Goals***

1. Promote and publicize recycling and proper disposal of household hazardous waste to reduce the potential for improper disposal and illegal dumping.

***Responsibility***

1. The Solid Waste Department, Public Information Office, and then Allen County Partnership for Water Quality will be responsible for developing information promoting the household hazardous waste programs available to the residents of the City of Fort Wayne and Allen County.

***Schedule***

1. Ongoing.

***Reporting and Record Keeping***

1. Provide a copy with the first annual report.
2. Track number of household hazardous waste brochures distributed.
3. Document other public notices of the event.

***BMP Owner:***

- Solid Waste Department

***BMP Support:***

- Allen County Partnership for Water Quality
- Public Information Office

- Current Program  
 New Program

**PE - 8 Promote A Public Reporting Program**

***BMP Description***

Currently a statewide hot-line number goes to IDEM for reporting spills and dumping. Calls related to spills within the City of Fort Wayne would generally be routed to the Fire Department. Most industries know the proper number to call and spills are taken care of promptly. This BMP will be to develop and implement a process to be used to report non-emergency spills or dumping to complement the other spill response numbers.

***Measurable Goals***

1. Develop and publicize a process for reporting non-emergency spills, illicit discharges, illegal dumping, construction site runoff issues, and other water quality problems.

***Responsibility***

1. The Public Information Office will be responsible for promoting telephone access to City offices .

***Schedule***

1. Year 2 – Develop non-emergency notification procedures and publicize.
2. Years 2-5 – Implement new procedures.

***Reporting and Record Keeping***

1. Report on number of emergency and non-emergency spill and dumping reports and the action(s) taken.
2. Report on the trend in reports and incident responses.

***BMP Owner:***

- Public Information Office

***BMP Support:***

- Allen County Partnership for Water Quality
- Water Resource Department

- Current Program
- New Program

**PE - 9 Promote Water Quality Education in the Schools**

***BMP Description***

The Allen County Partnership for Water Quality (ACPWQ) recently received an Environmental Education Grant from the USEPA. The grant will allow teachers and home school educators in Allen County to attend one of six free water education workshops called Project WET: Water Education for Teachers. After attending the workshop, attendees will receive the Project WET curriculum and activity guide. The attendees will also have access to the ACPWQ's new water resource education library that features water testing kits, videos, books, and educational supplies.

***Measurable Goals***

1. Provide access to nationally supported curriculum guides and materials to facilitate the development of water resources education in local schools.

***Responsibility***

1. Utility Administration, with assistance from the Allen County Partnership for Water Quality, will be responsible for the implementation of this BMP.

***Schedule***

1. Year 1 – Provide six workshops for teachers and home school educators in the City and County.
2. Years 2-5 – Provide support to educators that elect to incorporate the Project WET curriculum into their classrooms.

***Reporting and Record Keeping***

1. Report the number of attendees at the Project WET introductory workshops.
2. Report the number of educators that request the Project WET materials for their classes.
3. Report on the number of schools and classes that have integrated Project WET into their curricula annually beginning in Year 2, and the number of students in the classes.

***BMP Owner:***

- Utility Administration

***BMP Support:***

- Allen County Partnership for Water Quality

- Current Program
- New Program

## Appendix B

### Public Participation and Involvement BMPs and Measurable Goals

PI - 1 Public Involvement Programs .....	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

<b>PI - 1 Public Involvement Programs</b>		
<p><b><i>BMP Description</i></b></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 and is reviewing the structure and functions of the current committees for possible modification, reorganization or consolidation.</p>		
<p><b><i>Measurable Goals</i></b></p> <ol style="list-style-type: none"> <li>1. Create a citizens advisory committee.</li> <li>2. Facilitate meetings with citizen advisory committee.</li> <li>3. Advertise citizen advisory committee meetings.</li> <li>4. Post citizen advisory committee meeting agendas on website.</li> </ol>		
<p><b><i>Responsibility</i></b></p> <ol style="list-style-type: none"> <li>1. Utility Administration will be responsible creating the citizen group.</li> <li>2. Water Resources will be responsible for facilitating meetings of the group.</li> <li>3. Utility Administration and the Public Information Office will be responsible for advertising meetings.</li> <li>4. Public Information Office and webmaster will be responsible for posting agendas.</li> </ol>		
<p><b><i>Schedule</i></b></p> <ol style="list-style-type: none"> <li>1. Year 2 – Set up citizen advisory committee.</li> <li>2. Years 2-5 – Facilitate citizen advisory committee.</li> </ol>		
<p><b><i>Reporting and Record Keeping</i></b></p> <ol style="list-style-type: none"> <li>1. Track the number of advisory committee meetings and attendees.</li> <li>2. Post stormwater advisory committee agendas and meeting minutes on the City web page.</li> </ol>		
<p><b><i>BMP Owner:</i></b></p> <ul style="list-style-type: none"> <li>• Utility Administration</li> <li>• Water Resources Department</li> </ul>	<p><b><i>BMP Support:</i></b></p> <ul style="list-style-type: none"> <li>• Public Information Office</li> </ul>	<p><input checked="" type="checkbox"/> Current Program <input type="checkbox"/> New Program</p>

<b>PI - 2 Stream And Greenway Clean-Up Programs</b>		
<p><b><i>BMP Description</i></b></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. <b><i>These programs are not City of Fort Wayne initiatives, but are supported by the City through public service announcements and by providing solid waste removal services for the groups.</i></b></p>		
<p><b><i>Measurable Goals</i></b></p> <ol style="list-style-type: none"> <li>1. Organize one volunteer cleanup activity per year.</li> <li>2. Publicize and volunteer clean up program and recruit volunteers.</li> <li>3. Provide disposal of materials and/or supplies as requested.</li> <li>4. Promote Adopt-A-Greenway.</li> </ol>		
<p><b><i>Responsibility</i></b></p> <ol style="list-style-type: none"> <li>1. The Solid Waste Department will lead this initiative with support from Water Resources, Parks, and Public Information as appropriate based on the selected volunteer event(s).</li> <li>2. The Allen County Partnership for Water Quality will assist in publicizing the events and coordinating volunteers.</li> </ol>		
<p><b><i>Schedule</i></b></p> <ol style="list-style-type: none"> <li>1. Annually.</li> </ol>		
<p><b><i>Reporting and Record Keeping</i></b></p> <ol style="list-style-type: none"> <li>1. Track number of clean-up activities, number of volunteers, and amount of trash removed by each group annually.</li> <li>2. Track number of Adopt a Greenway sponsors.</li> </ol>		
<p><b><i>BMP Owner:</i></b></p> <ul style="list-style-type: none"> <li>• Parks Department</li> <li>• Water Resources Department</li> </ul>	<p><b><i>BMP Support:</i></b></p> <ul style="list-style-type: none"> <li>• Allen Co. Partnership for WQ</li> <li>• Solid Waste</li> </ul>	<p><input checked="" type="checkbox"/> Current Program <input type="checkbox"/> New Program</p>

**PI - 3 Wet Weather Program Workshops**

***BMP Description***

The Allen County Partnership for Water Quality has started an outreach and involvement program through which citizens, particularly home and business owners, are provided “how to” instruction on a variety of topics. The City will continue to provide this service and will diversify the subject matter of the workshops that are available.

***Measurable Goals***

1. Host at least one workshop annually.
2. Advertise workshops on the City’s web site, through mailings, and public service announcements.

***Responsibility***

1. The Water Resources, in conjunction with the Allen County Partnership for Water Quality will be responsible for the implementation of this BMP. Other departments will assist as needed to complete each task.

***Schedule***

1. Annually.

***Reporting and Record Keeping***

1. Track number of participants.
2. Provide exit questionnaire for participants to provide input and suggestions on workshop.

***BMP Owner:***

- Water Resources Department

***BMP Support:***

- Allen Co Partnership for Water Quality
- Flood Control

- Current Program
- New Program

**PI - 4 Advertise Volunteer Opportunities Related To Stormwater**

***BMP Description***

The City will help local citizen groups publicize their activities related to wet weather programs.

***Measurable Goals***

1. Post information on volunteer opportunities with local volunteer groups on the City's website, local newspapers, government access channel, and other venues.
2. Post links to local citizen groups on City web site.

***Responsibility***

1. Utility Administration and the Public Information Office will be responsible for the implementation of this BMP.
2. The Allen County Partnership for Water Quality will be responsible for coordinating with volunteer organizations.

***Schedule***

1. Start in Year 2 and continue through the permit term.

***Reporting and Record Keeping***

1. Track number of web page hits to City web site containing volunteer information.

***BMP Owner:***

- Utility Administration
- Public Information Office

***BMP Support:***

- Allen Co Partnership for Water Quality
- City Webmaster

- Current Program  
 New Program

**PI – 5 Storm Drain Marking**

***BMP Description***

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 with inlet stencils or placards. By placing a placard on storm inlets the City will reduce the incidence of improper disposal in the storm drainage system. This BMP has two phases; first is to identify the criteria for determining the inlets that should be marked, and the second phase is the actual inlet marking. The city will provide the materials, safety vests, etc. for use by drain marking volunteers.

***Measurable Goals***

1. Develop the drain marking program plan.
2. Select and procure stencils or placards.
3. Recruit and train volunteers.
4. Install stencils or placards.

***Responsibility***

1. The Water Resources Department will be the primary responsible department. The Allen County Partnership for Water Quality will assist by soliciting help from community service organizations, such as the girl and boy scouts.

***Schedule***

1. Year 2 – Planning and procurement of materials.
2. Years 2-5 – Recruit and train volunteers and install placards or stencils.

***Reporting and Record Keeping***

1. Track number of storm drains marked.
2. Track number of volunteers involved – number and constituent type.

***BMP Owner:***

- Water Resources Department

***BMP Support:***

- Allen County Partnership for Water Quality
- Stormwater Maintenance Department
- Public Information Office

- Current Program
- New Program

## Appendix C

### Illicit Discharge Detection and Elimination BMPs and Measurable Goals

ID - 1 Storm Sewer Mapping .....	C-1
ID - 2 Illicit Discharge Ordinance .....	C-2
ID - 3 Illicit Discharge Detection and Elimination Plan .....	C-3
ID - 4 Dry Weather Outfall Observation .....	C-4
ID - 5 Industrial Facility Program .....	C-5
ID - 6 Household Hazardous Waste And Recycling .....	C-6

<b>ID - 1 Storm Sewer Mapping</b>		
<p><b><i>BMP Description</i></b></p> <p>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 in-ground MS4 and outfalls. The activities related to the MS4 mapping requirement will be primarily verification of the existing mapping and the addition of that portion of the MS4 made up of open ditches and MS4 mapping in upcoming annexation areas.</p>		
<p><b><i>Measurable Goals</i></b></p> <ol style="list-style-type: none"> <li>1. The City will map the entire (known) municipal separate storm sewer system (MS4) that discharges to waters of the state through pipes with at least a twelve inch diameter (or equivalent) or through ditches with at least a two foot bottom width.</li> <li>2. The goal of the mapping program is to map 25% of the MS4 in Years 2, 3, 4, and 5.</li> </ol>		
<p><b><i>Responsibility</i></b></p> <ol style="list-style-type: none"> <li>1. The Water Resources Department, Water Pollution Control Maintenance, and GIS will be responsible for the mapping of the MS4.</li> </ol>		
<p><b><i>Schedule</i></b></p> <ol style="list-style-type: none"> <li>1. Years 2, 3, 4, and 5 – perform 25% of the mapping annually.</li> </ol>		
<p><b><i>Reporting and Record Keeping</i></b></p> <ol style="list-style-type: none"> <li>1. Track the number of miles of storm sewers mapped.</li> <li>2. Track the number of open ditches mapped.</li> <li>3. Track unvegetated ditches / swales with and without buffers.</li> <li>4. Track outfalls found.</li> <li>5. Report the percent of mapping completed at the end of each year.</li> </ol>		
<p><b><i>BMP Owner:</i></b></p> <ul style="list-style-type: none"> <li>• GIS</li> </ul>	<p><b><i>BMP Support:</i></b></p> <ul style="list-style-type: none"> <li>• Water Pollution Control Maintenance</li> <li>• Water Resources Department</li> </ul>	<p><input checked="" type="checkbox"/> Current Program <input type="checkbox"/> New Program</p>

<b>ID - 2 Illicit Discharge Ordinance</b>		
<p><b><i>BMP Description</i></b> The City has a Comprehensive Stormwater Management Ordinance that includes language prohibiting illicit discharges, and addresses enforcement procedures and penalties.</p>		
<p><b><i>Measurable Goals</i></b></p> <ol style="list-style-type: none"> <li>1. Verify consistency of the ordinance with the Combined Sewer Overflow Operations Plan (CSOOP) and a Long Term Control Plan (LTCP).</li> <li>2. Publicize the ordinance through the public education and outreach program.</li> <li>3. Enforce the illicit discharge ordinance.</li> </ol>		
<p><b><i>Responsibility</i></b></p> <ol style="list-style-type: none"> <li>1. Utility Administration is responsible for overseeing the revisions to and implementation of the illicit discharge ordinance.</li> </ol>		
<p><b><i>Schedule</i></b></p> <ol style="list-style-type: none"> <li>1. Year 1 - 2 – Ordinance revision and adoption.</li> <li>2. Years 2-5 – Ordinance enforcement.</li> </ol>		
<p><b><i>Reporting and Record Keeping</i></b></p> <ol style="list-style-type: none"> <li>1. Certify that the review of the CSOOP and the LTCP were performed.</li> <li>2. Track methods used to publicize the ordinance.</li> <li>3. Track the number of violations reported or found each year.</li> </ol>		
<p><b><i>BMP Owner:</i></b></p> <ul style="list-style-type: none"> <li>• Utility Administration</li> </ul>	<p><b><i>BMP Support:</i></b></p> <ul style="list-style-type: none"> <li>• Legal Department</li> </ul>	<p><input checked="" type="checkbox"/> Current Program <input type="checkbox"/> New Program</p>

**ID - 3 Illicit Discharge Detection and Elimination Plan**

***BMP Description***

The City developed a plan to detect, address, and eliminate illicit discharges, including illegal dumping, into the MS4 conveyance system several years ago. The plan will be reviewed to verify its continued applicability under Rule 13. Once developed, the plan will be implemented on a city-wide basis.

***Measurable Goals***

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

***Responsibility***

1. Stormwater Maintenance will verify the illicit discharge detection and elimination plan.
2. Stormwater Maintenance will implement the illicit discharge detection and elimination plan.

***Schedule***

1. Years 1-2 – Review and verify the illicit discharge detection and elimination plan.
2. Years 2-5 – Implement the plan.

***Reporting and Record Keeping***

1. Document the plan was created.
2. Track number of illicit discharges found.
3. Track number of illicit discharges eliminated.

***BMP Owner:***

- Stormwater Maintenance

***BMP Support:***

- Water Resources Department
- Legal Department
- Health Department

- Current Program  
 New Program

<b>ID - 4 Dry Weather Outfall Observation</b>		
<p><b><i>BMP Description</i></b></p> <p>The City will verify and then implement the procedures and documentation process needed to perform dry-weather screening for all of the MS4 outfalls. Each outfall will be screened visually to determine if a dry weather discharge exists or if there is an indication that contaminated discharges existed in the past.</p>		
<p><b><i>Measurable Goals</i></b></p> <ol style="list-style-type: none"> <li>1. Implement dry weather screening of outfalls as described in the plan described in ID-3.</li> <li>2. Implement illicit discharge follow-up procedures as described in the plan described in ID-3.</li> </ol>		
<p><b><i>Responsibility</i></b></p> <ol style="list-style-type: none"> <li>1. Stormwater Maintenance will review and verify the procedures and screen the outfalls.</li> <li>2. Stormwater Maintenance will identify the discharge sources and eliminate illicit discharges.</li> </ol>		
<p><b><i>Schedule</i></b></p> <ol style="list-style-type: none"> <li>1. Year 2 – Review and verify procedures and plan dry weather screening.</li> <li>2. Years 2-5 – Implement plan and screen prioritized outfalls.</li> </ol>		
<p><b><i>Reporting and Record Keeping</i></b></p> <ol style="list-style-type: none"> <li>1. Track number of outfalls screened.</li> <li>2. Track number of illicit discharges found and eliminated.</li> </ol>		
<p><b><i>BMP Owner:</i></b></p> <ul style="list-style-type: none"> <li>• Stormwater Maintenance</li> </ul>	<p><b><i>BMP Support:</i></b></p> <ul style="list-style-type: none"> <li>• Water Resources Department</li> <li>• Health Department</li> </ul>	<p><input type="checkbox"/> Current Program <input checked="" type="checkbox"/> New Program</p>

<b>ID - 5 Industrial Facility Program</b>		
<p><b><i>BMP Description</i></b></p> <p>The City of Fort Wayne will create an industrial facilities database of all facilities subject to Rule 6 and other potentially significant pollutant sources in the City. The data sources for this database will 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.</p>		
<p><b><i>Measurable Goals</i></b></p> <ol style="list-style-type: none"> <li>1. Create the initial industrial pollutant source database.</li> <li>2. Update the industrial pollutant source database annually.</li> </ol>		
<p><b><i>Responsibility</i></b></p> <ol style="list-style-type: none"> <li>1. Industrial Pretreatment and the Water Resources Department will be responsible for creation and maintenance of the industrial pollution source database.</li> </ol>		
<p><b><i>Schedule</i></b></p> <ol style="list-style-type: none"> <li>1. Year 2 – Develop the initial industrial pollution source database.</li> <li>2. Years 3-5 – Maintain the database.</li> </ol>		
<p><b><i>Reporting and Record Keeping</i></b></p> <ol style="list-style-type: none"> <li>1. Report on the initial development of the industrial pollutant source database.</li> <li>2. Report on number of industrial pollution sources added and deleted annually.</li> <li>3. Report annually on the use of the database in tracking down pollution sources.</li> </ol>		
<p><b><i>BMP Owner:</i></b></p> <ul style="list-style-type: none"> <li>• Industrial Pretreatment</li> </ul>	<p><b><i>BMP Support:</i></b></p> <ul style="list-style-type: none"> <li>○ Water Resources Department</li> <li>○ Allen County Emergency Management</li> <li>○ GIS</li> </ul>	<p><input type="checkbox"/> Current Program <input checked="" type="checkbox"/> New Program</p>

**ID - 6 Household Hazardous Waste And Recycling**

***BMP Description***

Allen County 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 County. There are also a number of private businesses around the City and County that will accept used automotive fluids, batteries, tires, etc. for recycling. These private companies are identified in a brochure produced by the Allen County Partnership for Water Quality (ACPWQ).

***Measurable Goals***

1. Promote and publicize recycling and household hazardous programs in Fort Wayne.
2. Promote and publicize proper disposal of non-hazardous wastes, such as used oil and antifreeze, to reduce the potential for improper disposal and illegal dumping.

***Responsibility***

1. The Allen County Solid Waste Management District will be responsible for providing the annual household hazardous waste program, with coordination from the Water Resources Department.
2. The Allen County Partnership for Water Quality will provide information to the community on drop-off sites for non-hazardous household wastes.

***Schedule***

1. Year 2 – Work with Allen County officials to “track” drop-offs at Tox Away Day and other events from City of Fort Wayne residents.
2. Years 3-5 – Distribute the flyer to key businesses and provide flyers at fairs and festivals, and advertise on the City’s website.

***Reporting and Record Keeping***

1. Document promotion/advertisement of the household hazardous waste program.
2. Track number of Fort Wayne citizens that participated.
3. Report the turn-in numbers (hazardous materials) from Allen County Solid Waste.

***BMP Owner:***

- Water Resources Department

***BMP Support:***

- Allen County Solid Waste Management District
- Allen County Partnership for Water Quality
- Solid Waste Management Department
- Webmaster

- Current Program
- New Program

## Appendix D

### Construction Site Runoff Control BMPs and Measurable Goals

CS - 1 Stormwater Ordinance .....	D-1
CS - 2 Erosion and Sediment Control BMP Manual .....	D-2
CS - 3 Plan Review Process Modification .....	D-3
CS - 4 Construction Site Inspection Program .....	D-4
CS - 5 Construction Site Runoff Control Training .....	D-5
CS - 6 Coordination with IDEM, IDNR, and SWCD .....	D-6
CS - 7 Construction Site Public Information Program .....	D-7

<b>CS - 1 Stormwater Ordinance</b>		
<p><b><i>BMP Description</i></b></p> <p>The City has developed a comprehensive stormwater ordinance that requires erosion and sediment control plans for all new development and redevelopment that disturb one (1) or more acres of land surface. The ordinance provides controls for construction site and post construction site runoff, requires plan review and inspections, and defines enforcement penalties.</p>		
<p><b><i>Measurable Goals</i></b></p> <ol style="list-style-type: none"> <li>1. Develop an ordinance that addresses reduction of sediment and erosion from construction site runoff.</li> <li>2. Publicize the ordinance and its requirements to the development, engineering, and construction communities.</li> </ol>		
<p><b><i>Responsibility</i></b></p> <ol style="list-style-type: none"> <li>1. Utility Administration will be responsible for coordinating with the Legal Department to get the sediment and erosion control requirements written and adopted.</li> <li>2. The Water Resources Department will be responsible for representing the City in the joint efforts to develop, publicize, and enforce the ordinance.</li> </ol>		
<p><b><i>Schedule</i></b></p> <ol style="list-style-type: none"> <li>1. Year 1 – Develop the ordinance language.</li> <li>2. Year 2 – Adopt the ordinance.</li> <li>3. Years 2-5 – Publicize and enforce the ordinance.</li> </ol>		
<p><b><i>Reporting and Record Keeping</i></b></p> <ol style="list-style-type: none"> <li>1. Document the ordinance was adopted by the City Council.</li> <li>2. Document how the ordinance was publicized (copies of the ads or articles).</li> <li>3. Track the types of violations encountered and enforcement actions were taken.</li> </ol>		
<p><b><i>BMP Owner:</i></b></p> <ul style="list-style-type: none"> <li>• Utility Administration</li> </ul>	<p><b><i>BMP Support:</i></b></p> <ul style="list-style-type: none"> <li>• Legal Department</li> <li>• Water Resources Department</li> </ul>	<p><input type="checkbox"/> Current Program <input checked="" type="checkbox"/> New Program</p>

**CS - 2 Erosion and Sediment Control BMP Manual**

***BMP Description***

The City intends to adopt an erosion and sediment control BMP manual that complements its stormwater ordinance. The manual will provide acceptable BMPs for erosion and sediment control with the Fort Wayne city limits. It will also provide design and construction guidelines for each of the BMPs with example drawings and submittal checklists. The intent is to adopt the practices in the *Indiana Water Quality Manual* that is currently in production by the Indiana Department of Natural Resources (INDNR).

***Measurable Goals***

1. Adopt a BMP manual for erosion and sediment control that complements the stormwater ordinance.

***Responsibility***

1. The Water Resources Department will oversee the adoption of the BMP manual.

***Schedule***

1. Years 1 - 2 – Adopt BMP manual.
2. Years 2 - 5 – Publicize manual to engineering and development community.

***Reporting and Record Keeping***

1. Keep copy of BMP manual on file.

***BMP Owner:***

- Water Resources Department

***BMP Support:***

- Public Information Officer
- Water & Sewer Permits
- Planning Department
- Transportation Engineering Services

- Current Program  
 New Program

<b>CS - 3 Plan Review Process Modification</b>		
<p><b><i>BMP Description</i></b></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. The intent is to modify those criteria to be consistent with the new construction site runoff control ordinance and the soon to be adopted BMP Manual.</p>		
<p><b><i>Measurable Goals</i></b></p> <ol style="list-style-type: none"> <li>1. Modify the existing plan review procedures.</li> <li>2. Train staff on the modified plan review procedures.</li> <li>3. Implement the modified plan review procedures.</li> </ol>		
<p><b><i>Responsibility</i></b></p> <ol style="list-style-type: none"> <li>1. Development Services and the Planning Department will oversee the revision of the plan review process in the city.</li> </ol>		
<p><b><i>Schedule</i></b></p> <ol style="list-style-type: none"> <li>1. Years 1 &amp; 2 – Revise the plan review process.</li> <li>2. Year 2 – Train plan reviewers on the new plan review process.</li> <li>3. Year 2 – 5 – Implement the new plan review process.</li> </ol>		
<p><b><i>Reporting and Record Keeping</i></b></p> <ol style="list-style-type: none"> <li>1. Document how new plan review procedures were modified.</li> <li>2. Document that training programs for plan review staff were completed.</li> </ol>		
<p><b><i>BMP Owner:</i></b></p> <ul style="list-style-type: none"> <li>• Development Services</li> </ul>	<p><b><i>BMP Support:</i></b></p> <ul style="list-style-type: none"> <li>• Planning Department</li> </ul>	<input checked="" type="checkbox"/> Current Program <input type="checkbox"/> New Program

<b>CS - 4 Construction Site Inspection Program</b>		
<p><b><i>BMP Description</i></b></p> <p>The City of Fort Wayne does not have a comprehensive construction site inspection program at the current time. During the construction phase of development projects on-site inspections are made only for pipe systems and final walk-throughs. Routine or periodic inspection to verify conformance and/or enforce the erosion and sediment control plan is not currently performed. This BMP will add the inspection program for the sediment and erosion controls.</p>		
<p><b><i>Measurable Goals</i></b></p> <ol style="list-style-type: none"> <li>1. Develop an inspection program for construction site runoff controls.</li> <li>2. Train the inspectors on the new construction site runoff controls.</li> <li>3. Implement the construction site runoff control inspection program.</li> </ol>		
<p><b><i>Responsibility</i></b></p> <ol style="list-style-type: none"> <li>1. The Water Resources Department will oversee the development and roll-out of a construction site runoff control inspection program.</li> </ol>		
<p><b><i>Schedule</i></b></p> <ol style="list-style-type: none"> <li>1. Years 1 &amp; 2 – Revise the construction site runoff control inspection program.</li> <li>2. Year 2 – Provide training on the construction site runoff control inspection program.</li> <li>3. Years 2 - 5 – Implement the construction site runoff control inspection program.</li> </ol>		
<p><b><i>Reporting and Record Keeping</i></b></p> <ol style="list-style-type: none"> <li>1. Document how new construction site inspection procedures were modified.</li> <li>2. Document that training programs for construction site inspection staff were completed.</li> <li>3. Track monthly and annually how many construction sites are inspected how contractors are properly installing and maintaining construction site runoff controls.</li> </ol>		
<p><b><i>BMP Owner:</i></b></p> <ul style="list-style-type: none"> <li>• Water Resources Department</li> </ul>	<p><b><i>BMP Support:</i></b></p>	<p><input type="checkbox"/> Current Program <input checked="" type="checkbox"/> New Program</p>

<b>CS - 5 Construction Site Runoff Control Training</b>		
<p><b><i>BMP Description</i></b></p> <p>The City will provide training for staff, developers, engineers, and inspectors for the construction site runoff control portion of the stormwater ordinance. The training will be provided at two levels of detail. An executive or overview training will be 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 will be provided for inspectors, plan reviewers, developers, contractors and engineers.</p>		
<p><b><i>Measurable Goals</i></b></p> <ol style="list-style-type: none"> <li>1. Development of a training course(s).</li> <li>2. Provide annual training.</li> </ol>		
<p><b><i>Responsibility</i></b></p> <ol style="list-style-type: none"> <li>1. Utility Administration will be responsible for developing and providing the training sessions.</li> </ol>		
<p><b><i>Schedule</i></b></p> <ol style="list-style-type: none"> <li>1. Years 1 &amp; 2 – Develop training materials.</li> <li>2. Years 2-5 – Conduct training courses for developers, engineers, inspectors and staff.</li> </ol>		
<p><b><i>Reporting and Record Keeping</i></b></p> <ol style="list-style-type: none"> <li>1. Document that training materials were developed.</li> <li>2. Document the number of training sessions that were provided.</li> <li>3. Track the number of people attending the training sessions.</li> </ol>		
<p><b><i>BMP Owner:</i></b></p> <ul style="list-style-type: none"> <li>• Utility Administration</li> </ul>	<p><b><i>BMP Support:</i></b></p> <ul style="list-style-type: none"> <li>• Water Resources Department</li> </ul>	<p><input type="checkbox"/> Current Program <input checked="" type="checkbox"/> New Program</p>

**CS - 6 Coordination with IDEM, IDNR, and SWCD**

***BMP Description***

The City of Fort Wayne is required to coordinate the construction site runoff control program with the Indiana Department of Environmental Management (IDEM), the Indiana Department of Natural Resources (INDNR) Division of Soil Conservation, and with the Allen County Soil and Water 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. Develop a MOA with INDNR, SWCD, or a qualified third party to provide review of the construction site controls of all City-owned qualifying projects.

***Responsibility***

1. Utility Administration will oversee the development and implementation of these agreements.

***Schedule***

1. Years 1 & 2 – Enter into agreements as needed.
2. Years 2 - 5 – Provide SWCD a chance to review construction site runoff control portion of qualifying plans.
3. Years 2 – 5 – Have either SWCD or INDNR review plans for qualifying city-owned projects.

***Reporting and Record Keeping***

1. Keep agreements or MOAs on file.
2. Track and report numbers of qualifying projects.
3. Track and report the number of instances where SWCD, INDNR, or a third party plan reviewer provided plan reviews and the number of timely responses.
4. Track enforcement actions resulting from the inspection program.

***BMP Owner:***

- Utility Administration

***BMP Support:***

- Current Program  
 New Program

**CS - 7 Construction Site Public Information Program**

***BMP Description***

The will develop a program 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 complaints about construction sites where problems have been observed.

***Measurable Goals***

1. Develop Standard Operating Procedures to track and respond to public complaints regarding construction site erosion
2. Develop Standard Operating Procedures to respond public information requests.

***Responsibility***

1. Utility Administration will be responsible for coordinating the public information and complaints programs development.

***Schedule***

1. Year 2 – Develop the public information and public complaints programs.
2. Years 3-5 – Implement the public information and complaints SOPs.

***Reporting and Record Keeping***

1. Document the number of public information requests and public complaints made.

***BMP Owner:***

- Utility Administration

***BMP Support:***

- Water Resources Department

- Current Program  
 New Program

## Appendix E

### Post Construction Runoff Control BMPs and Measurable Goals

PC - 1 Post Construction Runoff Ordinance .....	E-1
PC - 2 Post Construction BMP Manual .....	E-2
PC - 3 Plan Review Procedure.....	E-3
PC - 4 BMP Inspections .....	E-4
PC - 5 BMP Operation Manuals .....	E-5
PC - 6 BMP Database .....	E-6

<b>PC - 1 Post Construction Runoff Ordinance</b>		
<p><b><i>BMP Description</i></b></p> <p>The City of Fort Wayne is developing a stormwater ordinance that will address the quality of post construction runoff. This ordinance will require that post construction controls be installed at qualifying newly developed sites. This ordinance will require ongoing maintenance and inspections of BMPs approved and constructed or installed after the effective date of the ordinance. The City will provide training for staff, developers, engineers, and inspectors. Qualifying development sites are those sites that disturb one (1), or more, acre of land, or disturbances of less than one (1) acre of land that are part of a larger common plan of development or sale if the larger common plan will ultimately disturb one (1) or more acres of land.</p>		
<p><b><i>Measurable Goals</i></b></p> <ol style="list-style-type: none"> <li>1. Develop and adopt a post construction runoff control ordinance.</li> <li>2. Publicize the adoption of the ordinance.</li> <li>3. Provide support materials for the ordinance (FAQ and technical manual).</li> <li>4. Enforce the terms of the ordinance through the plan review and inspection process and through imposition of penalties for offenders.</li> </ol>		
<p><b><i>Responsibility</i></b></p> <p>The Legal Department in conjunction with the Water Resources Department will be responsible for developing and supporting the ordinance.</p>		
<p><b><i>Schedule</i></b></p> <ol style="list-style-type: none"> <li>1. Years 1-2 – Develop the ordinance and supporting training materials.</li> <li>2. Years 3-5 – Publicize the ordinance and provide training for staff, developers, engineers and inspectors.</li> <li>3. Years 3-5 – Enforce the ordinance.</li> </ol>		
<p><b><i>Reporting and Record Keeping</i></b></p> <ol style="list-style-type: none"> <li>1. Provide documentation that the ordinance was adopted by the City Council.</li> <li>2. Report the publication of the ordinance adoption.</li> <li>3. Report the training for the new ordinance, including attendance.</li> <li>4. Report on enforcement actions that were necessary during the years 3, 4, and 5.</li> </ol>		
<p><b><i>BMP Owner:</i></b></p> <ul style="list-style-type: none"> <li>• Legal Department</li> </ul>	<p><b><i>BMP Support:</i></b></p> <ul style="list-style-type: none"> <li>• Water Resources Department</li> <li>• Planning Department</li> <li>• Development Services</li> </ul>	<p><input type="checkbox"/> Current Program <input checked="" type="checkbox"/> New Program</p>

<b>PC - 2 Post Construction BMP Manual</b>		
<p><b><i>BMP Description</i></b></p> <p>The City will adopt a BMP manual that contains acceptable designs and design methodology for post construction runoff controls. The manual will use 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><b><i>Measurable Goals</i></b></p> <ol style="list-style-type: none"> <li>1. Adopt a BMP manual to provide technical guidance to designers and developers on the approved BMPs, including design criteria, operations and maintenance requirements, and owner information.</li> </ol>		
<p><b><i>Responsibility</i></b></p> <ol style="list-style-type: none"> <li>1. The Water Resources Department will oversee the adoption of the BMP manual.</li> </ol>		
<p><b><i>Schedule</i></b></p> <ol style="list-style-type: none"> <li>1. Years 1-2 – Adopt the BMP manual.</li> <li>2. Years 3-5 – Continue to identify BMPs for approval and addition to the manual.</li> </ol>		
<p><b><i>Reporting and Record Keeping</i></b></p> <ol style="list-style-type: none"> <li>1. Report that a BMP manual was adopted.</li> <li>2. Report the publication / notification of the adoption of the manual.</li> <li>3. Report the additional BMPs approved for addition to the manual in years 3, 4, and 5.</li> </ol>		
<p><b><i>BMP Owner:</i></b></p> <ul style="list-style-type: none"> <li>• Water Resources Department</li> </ul>	<p><b><i>BMP Support:</i></b></p> <ul style="list-style-type: none"> <li>• Development Services</li> </ul>	<p><input type="checkbox"/> Current Program <input checked="" type="checkbox"/> New Program</p>

<b>PC - 3 Plan Review Procedure</b>		
<p><b><i>BMP Description</i></b></p> <p>The plan review process will be modified to address the requirements for best management practices (BMPs) as required by the BMP manual and accompanying policies. Training will be provided for plan reviewers.</p>		
<p><b><i>Measurable Goals</i></b></p> <ol style="list-style-type: none"> <li>1. Develop new plan review procedures that address requirements for post construction BMPs.</li> <li>2. Develop and provide training for plan reviewers.</li> <li>3. Implement the plan review procedures.</li> <li>4. Provide on-going training for plan reviewers, inspectors, developers and engineers addressing the design, installation, and maintenance of BMPs.</li> </ol>		
<p><b><i>Responsibility</i></b></p> <ol style="list-style-type: none"> <li>1. The Water Resources Department and Development Services will insure that the revised plan review process is developed and that training is provided.</li> </ol>		
<p><b><i>Schedule</i></b></p> <ol style="list-style-type: none"> <li>1. Year 2 – Develop the plan review program.</li> <li>2. Years 3-5 – Provide training to the plan review and inspection staff annually.</li> <li>3. Years 3-5 – Provide training to the design and development community annually.</li> </ol>		
<p><b><i>Reporting and Record Keeping</i></b></p> <ol style="list-style-type: none"> <li>1. Report that the training program has been developed.</li> <li>2. Report the annual attendance of the plan review and inspector training sessions.</li> <li>3. Report the attendance by local engineers, architects, and other design professionals showed up for the designer / developer training.</li> <li>4. Report information on approved BMP types, developed site characteristics (PC – 6)</li> </ol>		
<p><b><i>BMP Owner:</i></b></p> <ul style="list-style-type: none"> <li>• Water Resources Department</li> </ul>	<p><b><i>BMP Support:</i></b></p> <ul style="list-style-type: none"> <li>• Development Services</li> <li>• Planning Department</li> </ul>	<p><input type="checkbox"/> Current Program <input checked="" type="checkbox"/> New Program</p>

<b>PC - 4 BMP Inspections</b>		
<p><b><i>BMP Description</i></b></p> <p>An inspection program for BMPs approved under the new stormwater ordinance will 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><b><i>Measurable Goals</i></b></p> <ol style="list-style-type: none"> <li>1. Develop an inspection priority matrix for BMPs.</li> <li>2. Train inspectors.</li> <li>3. Inspect all high priority post construction BMPs annually.</li> </ol>		
<p><b><i>Responsibility</i></b></p> <ol style="list-style-type: none"> <li>1. The Water Resources Department will be responsible for the inspection program for post construction BMPs.</li> </ol>		
<p><b><i>Schedule</i></b></p> <ol style="list-style-type: none"> <li>1. Year 2 - Develop the Post Construction BMP inspection program.</li> <li>2. Years 3-5 - Perform Post Construction BMP inspections.</li> </ol>		
<p><b><i>Reporting and Record Keeping</i></b></p> <ol style="list-style-type: none"> <li>1. Track the number of new BMPs installed annually.</li> <li>2. Track inspections and deficiencies of installed BMPs.</li> <li>3. Track maintenance violations by owners to determine type and frequency.</li> <li>4. Track maintenance performed by the City, when needed.</li> </ol>		
<p><b><i>BMP Owner:</i></b></p> <ul style="list-style-type: none"> <li>• Water Resources Department</li> </ul>	<p><b><i>BMP Support:</i></b></p>	<p><input type="checkbox"/> Current Program <input checked="" type="checkbox"/> New Program</p>

<b>PC - 5 BMP Operation Manuals</b>		
<p><b><i>BMP Description</i></b></p> <p>The City of Fort Wayne will require 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><b><i>Measurable Goals</i></b></p> <ol style="list-style-type: none"> <li>1. Require production of BMP owner manuals in the stormwater ordinance or supporting policies.</li> <li>2. Develop owner manual templates for the BMPs recommended for use in the Stormwater BMP Manual.</li> <li>3. Insure that innovate or alternative BMPs that are approved for use have owner manuals provided by the developer.</li> <li>4. Add a checklist item to the plan review process to see that BMP owner manuals are provided.</li> </ol>		
<p><b><i>Responsibility</i></b></p> <ol style="list-style-type: none"> <li>1. The Water Resources Department is responsible for the implementation of this BMP, with assistance from Development Services.</li> </ol>		
<p><b><i>Schedule</i></b></p> <ol style="list-style-type: none"> <li>1. Years 1-2 – Develop the policy and user manual templates for approved BMPs.</li> <li>2. Years 1-2 – Modify the plan review checklist to include a requirement that the BMP user manual(s) be submitted with construction plans for review.</li> </ol>		
<p><b><i>Reporting and Record Keeping</i></b></p> <ol style="list-style-type: none"> <li>1. Report on completion of the BMP user manual requirement and inclusion in the plan review process.</li> <li>2. Track the number of innovative or alternative BMPs for which user manuals were approved and keep copies of those user manuals.</li> </ol>		
<p><b><i>BMP Owner:</i></b></p> <ul style="list-style-type: none"> <li>• Water Resources Department</li> </ul>	<p><b><i>BMP Support:</i></b></p> <ul style="list-style-type: none"> <li>• Development Services</li> </ul>	<p><input type="checkbox"/> Current Program <input checked="" type="checkbox"/> New Program</p>

**PC - 6 BMP Database**

***BMP Description***

The City will create a database and GIS coverage of structural and non-structural BMP related information to facilitate annual reporting on its NPDES stormwater permit. Information to be 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.

***Responsibility***

1. The Water Resources Department is responsible for the implementation of this BMP, with assistance from Development Services.

***Schedule***

1. Year 2 – Develop the policy and user manual templates for approved BMPs.
2. Years 2 -5 – Keep track of all new BMP related information in the City of Fort Wayne.

***Reporting and Record Keeping***

1. Report on status of the BMP database for the annual report annually.

***BMP Owner:***

- Water Resources Department

***BMP Support:***

- Development Services

- Current Program  
 New Program

## 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

<b>GH - 1 Street Sweeping</b>		
<p><b><i>BMP Description</i></b></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 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. <b><i>This BMP is only an obligation to report on an existing program that impacts water quality.</i></b></p>		
<p><b><i>Measurable Goals</i></b></p> <ol style="list-style-type: none"> <li>1. Sweep downtown streets weekly and residential streets four times per year.</li> </ol>		
<p><b><i>Responsibility</i></b></p> <ol style="list-style-type: none"> <li>1. The Street Department will be responsible for the street sweeping program.</li> </ol>		
<p><b><i>Schedule</i></b></p> <ol style="list-style-type: none"> <li>1. Ongoing.</li> </ol>		
<p><b><i>Reporting and Record Keeping</i></b></p> <ol style="list-style-type: none"> <li>1. Curb miles of streets swept annually in the MS4 area.</li> <li>2. Volume or mass of material removed from the MS4 area annually.</li> </ol>		
<p><b><i>BMP Owner:</i></b></p> <ul style="list-style-type: none"> <li>• Street Department</li> </ul>	<p><b><i>BMP Support:</i></b></p>	<p><input checked="" type="checkbox"/> Current Program <input type="checkbox"/> New Program</p>

**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. ***This BMP is only an obligation to report on an existing program that impacts water quality.***

***Measurable Goals***

1. Clean at least 5100 catch basins and/or inlets per year.

***Responsibility***

1. The Stormwater Maintenance Department will be responsible for the catch basin cleaning program.

***Schedule***

1. On-going.

***Reporting and Record Keeping***

1. Record the number of catch basins and inlets cleaned annually in the MS4 area.
2. Track the mass or volume of material removed by the cleaning program in the MS4 area.

***BMP Owner:***

- Stormwater Maintenance Department

***BMP Support:***

- Street Department

- Current Program
- New Program

**GH - 3 Storm Sewer Cleaning & Maintenance**

***BMP Description***

The City cleans its storm sewers whenever there is sufficient blockage to reduce the capacity of a particular portion of the drainage system. ***This BMP is only an obligation to report on an existing program that impacts water quality.***

***Measurable Goals***

1. Remove sediment and coarse solid materials from storm sewers before they leave the drainage system as part of the operation and maintenance of the storm sewer system when system capacity is impaired.

***Responsibility***

1. The Stormwater Maintenance Department will be responsible for the storm sewer cleaning program.

***Schedule***

1. On-going.

***Reporting and Record Keeping***

1. Record the length of storm sewer cleaned and/or repaired annually.
2. Estimate 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.

***BMP Owner:***

- Stormwater Maintenance Department

***BMP Support:***

- Current Program  
 New Program

**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. This program will continue but is not part of the stormwater program. ***This BMP is only an obligation to report on an existing program that impacts water quality.***

***Measurable Goals***

1. Manage the use of winter weather roadway deicers to minimize adverse environmental impacts to the maximum extent practicable.

***Responsibility***

1. The Street Department and the Parks Department are responsible for the winter weather chemical application program.

***Schedule***

1. On-going.

***Reporting and Record Keeping***

1. Record the number of spreaders calibrated annually.
2. Track the amount of salt and calcium chloride applied to roadways annually.

***BMP Owner:***

- Street Department
- Parks Department

***BMP Support:***

- Current Program
- New Program

**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.

***Responsibility***

1. The Street, Parks, Stormwater Maintenance, and Flood Control Departments will minimize use of pesticides and herbicides.

***Schedule***

1. Ongoing.

***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

- Current Program  
 New Program

**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.

The SOPs will include a schedule of periodic inspections for the facilities.

***Measurable Goals***

1. Prepare 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

***Responsibility***

1. All departments maintaining vehicles and equipment.

***Schedule***

1. Year 2 – develop the SOPs.
2. Years 2-5 – implement the SOPs.

***Reporting and Record Keeping***

1. Document that SOPs were developed.
2. Track number of periodic inspections performed.
3. Track number and type of deficiencies found and corrected.

***BMP Owner:***

- Departments performing maintenance

***BMP Support:***

- Water Resources Department

- Current Program  
 New Program

**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.

***Responsibility***

1. All City Engineering Departments are responsible for the continued implementation of this BMP.

***Schedule***

1. Ongoing

***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 Engineering Departments

***BMP Support:***

- Stormwater Maintenance Department

- Current Program  
 New Program

**GH – 8 Staff Training on Stormwater Pollution Prevention**

***BMP Description***

The success of the city's stormwater quality management program is dependent on leading by example. To insure that this example can be made staff should be trained to recognize the impact that the execution of their tasks may have on the quality of stormwater runoff.

***Measurable Goals***

- a. A staff training program will be developed that includes both general training on stormwater pollution prevention, and job specific training.
- b. Training will be made available annually.

***Responsibility***

1. The Water Resources Department is responsible for the continued implementation of this BMP.

***Schedule***

1. Annual

***Reporting and Record Keeping***

1. Track the dates and attendance for the training sessions.

***BMP Owner:***

- Water Resources Department

***BMP Support:***

- Allen Co. Partnership for Water Quality
- All impacted departments

- Current Program  
 New Program