Report

Storm Water Quality Management Plan

Part C: Program Implementation

April 2005

Prepared for:

Vanderburgh County

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Table of Contents

List of Tables

List of Figures

Appendices

1.0 INTRODUCTION

This report represents the Storm Water Quality Management Plan (SWQMP) Part C: Program Implementation, as required by 327 IAC 15-13-8 for Vanderburgh County as covered under the Indiana Department of Environmental Management (IDEM) Rule 13 Permit Number INR040030.

This report is an implementation plan meant to satisfy the six Minimum Control Measures (MCMs) addressed in Vanderburgh County's SWQMP as well as the other aspects of 327 IAC 15-13-8. The report is organized as follows, and includes the required components as outlined in the Rule 13 Regulation:

1.0	Introduction	Explains the overview of this document
2.0	Initial Stormwater Program Evaluation	Provides a "starting point" for Vanderburgh County's SWQMP and identifies current measures relating to stormwater quality.
3.0	On-going Characterization Schedule	Develops a schedule for any on-going characterization needed throughout Vanderburgh County.
4.0	MS4 Conveyance Boundary Description	Provides a narrative description and map of the County's regulated area.
5.0	MS4 Conveyance Estimate	Includes a storm sewer length estimate within Vanderburgh County regulation of storm sewers with a diameter of twelve inches (12") or larger and ditches with a bottom width of two feet (2') or more.
6.0	Structural BMPs for New Development and Re-development	Explains the types of structural BMPs acceptable for new development and re-development in Vanderburgh County.
7.0	Selection Criteria and Performance Standards for Structural BMPs	Describes the criteria for selecting structural BMPs and the acceptable performance standards and maintenance requirements for post construction BMPs.
8.0	Stormwater Budget	Outlines the current and projected stormwater budget for Vanderburgh County and identifies the funding sources.
9.0	MCM – BMPs and Measurable Goals	Describes each of the six MCMs and their corresponding BMPs and measurable goals.
10.0	Programmatic Indicators	Identifies all programmatic indicators satisfied by each of the six MCMs.

2.0 INITIAL STORMWATER PROGRAM EVALUATION

Several existing programs have been initiated in Vanderburgh County that relate to stormwater quality. Many of these programs are directly applicable to the SWQMP Part C: Program Implementation. The following is a summary of the current stormwater programs organized Minimum Control Measure (MCM).

2.1 Public Education and Outreach

The Vanderburgh County Surveyor's office has developed a website, www.riverfriendly.com, to display general stormwater quality information and is a primary resource for public education information, headed by an Education and Public Outreach Coordinator.

The Vanderburgh County Surveyor's office has partnered with the Vanderburgh County Soil and Water Conservation District (SWCD) and the Westside Improvement Association (WIA) to develop the WAVE (Water Awareness for the Vanderburgh Environment) organization dedicated to water quality awareness.

"WAVE is a not-for-profit community organization whose mission is dedicated to promoting a better quality of life by bringing environmental water awareness to the residents of Vanderburgh County."

The County Surveyor's office is the lead agency for WAVE – calling community meetings, setting agendas, transcribing meeting minutes, conducting all group communications, and providing a link from www.riverfriendly.com to information regarding the organization.

The program has been involved with various educational events around Vanderburgh County, including:

- "Pickin' on the Pigeon," a Canoe Evansville sponsored event dedicated to water quality and the celebration of Earth Day. WAVE displayed a booth at this event on April 24th, 2004 and their participation was advertised on websites of the SWCD, the Vanderburgh County Surveyor, and the Westside Improvement Association.

- The Project WET Workshop has been endorsed through the Vanderburgh County Surveyor in previous years and is currently working with WAVE to promote water quality education.

- The Annual Night Out sponsored by the National Association of Town Watch (NATW) which includes citizens, neighborhood organizations, law enforcement agencies, businesses, and local officials. The County Surveyor's office staff and the WIA jointly addressed water quality awareness at this event in 2003 and 2004. The latter occasion included a WAVE organization banner, handout literature based on Project Wet themes, and prizes for children who participated in hands-on Project Wet activities.

The Riverfriendly BMP Team, through the Vanderburgh County Surveyor's office, is available for comments, complaints, inquiries, and reports related to local stormwater pollution. The Surveyor's office currently operates a hot line (telephone number) via www.riverfriendly.com for any informational contributions, complaints, and inquiries on the topics of construction site runoff,

stormwater management, and water pollution. Once a response is received, the County Surveyor's staff enters the information on a form and then either provides guidance, service, or forwards any information along to the appropriate staff or agency for follow-up action. The office procedures for receiving, logging, tracking, and responding to public input are currently in accordance with Rule 13 regulation and Vanderburgh County plans to continue practicing these techniques.

Several water quality-related website links are provided on www.riverfriendly.com or the Vanderburgh County government website (www.vanderburghgov.org). Program links include:

- WAVE
- Project WET (Water Education for Teachers)
- Project WILD (Department of Natural Resources)
- Hoosier Riverwatch
- Vanderburgh County SWCD (BMP information)
- USEPA Student Center
- Healthy Water, Healthy People (Water Quality Education)
- Ohio Watershed Network (Virtual Watershed Tour)
- Purdue Extension Water Quality Program

2.2 Public Involvement/Participation

WAVE first officially met on January 28, 2004 to begin forming a task force dedicated to involving the community in water quality issues for Vanderburgh County. Prior to this initial meeting, an article in the local newspaper invited all interested citizens of Vanderburgh County to attend the meeting. Local organizations that were in attendance included:

- Project WET
- Vanderburgh County SWCD
- City of Evansville Engineering Department
- Oak Hill Neighborhood Association
- Canoe Evansville
- Vanderburgh County Surveyor's Office
- University of Southern Indiana
- Wesselman Woods
- Scott Township Government
- Howell Wetlands
- 4 Rivers Resource Conservation and Development
- Evansville EPA
- Westside Improvement Association
- Environmental Management Corporation CSO Project
- IDNR Division of Soil Conservation
- Vanderburgh County Engineering Department
- Residents of Vanderburgh County

Additionally, the Public Involvement and Input Coordinator for WAVE is involved with other items such as stream revitalization through Adopt-a-Stream, volunteer stream monitoring, and reporting of illicit discharges of stormwater pollutants around the area.

2.3 Illicit Discharge Detection & Elimination

Vanderburgh County does not have a current illicit discharge ordinance adopted. A draft of the regulation has been developed and includes sections on prohibited discharges, exemptions, storage,

maintenance, spills, inspections, and enforcement. The new ordinance is targeted for adoption by Vanderburgh County prior to the submittal of SWQMP Part C: Program Implementation Report.

Limited storm sewer mapping is available for Vanderburgh County. New subdivision developments generally have available storm sewer maps. However, many regulated areas of the County have limited MS4 mapping. New programs will be developed for the mapping of MS4 conveyances and outfall locations.

2.4 Construction Site Runoff Control

A new Construction Site Stormwater Runoff Ordinance has recently been drafted for Vanderburgh County by the County Surveyor. Once adopted, this ordinance will be located in Section 5 (Construction Site Storm Water Runoff Control) of Title 13 (Public Services) of the County Code. The ordinance language meets or exceeds the requirements in 327 IAC 15-5 (Rule 5) as stated in Rule 13 regulation. The directives in this ordinance relate to land disturbance, drainage plans, post-construction stormwater pollution prevention, erosion and sediment control measures, and inspection and enforcement. Specifically, any construction site with a total disturbed area of one (1) acre or more is considered a major project site and must submit proper construction plans which include stormwater drainage, erosion and sediment control, and stormwater pollution prevention plans. Currently, the Vanderburgh County Soil and Water Conservation District (SWCD) performs plan reviews and inspections for the County. The MS4 Operator of the County will be assuming these responsibilities starting in Year 2 of the permit.

2.5 Post-Construction Site Runoff Control

The proposed Construction Site Stormwater Ordinance mentioned above includes Section 9 (Construction Plan Requirements for a Major Project Site), Subsection K, includes requirements for a post-construction stormwater pollution prevention plan. The subsection includes potential pollutant source descriptions by proposed land use, as well as stormwater quality measures, including BMPs, specifications, construction details, measurable goals, and implementation schedules for all projects that disturb one (1) or more acres of land. Links are provided in the ordinance to technical manuals, in the absence of the Indiana Stormwater Quality Manual, which supply necessary specifications and detail drawings for post-construction BMPs.

The County also has a Stormwater Drainage Control Ordinance (Title 13, Section 13.04) that addresses the *quantity* of post-construction runoff. The ordinance requires that the post development controlled peak release rate of stormwater runoff during a 25-year return period storm shall not exceed the peak release rate during a 10-year return period storm from the same land area prior to its development.

2.6 Pollution Prevention/Good Housekeeping

Vanderburgh County has implemented some pollution prevention/good housekeeping practices. A widespread recycling program exists that includes 42 County-wide drop-off locations for common recycling items. In addition, there are 12 sites for motor oil recycling, and one that accepts municipal waste six days a week (at BFI Sanitary Landfill). Additional programs include an annual "Tox Away Day" for hazardous wastes, Tire Amnesty Day held twice annually, and an annual Computer and Electronics Recycling Day. Holiday Recycling is also held in early January in conjunction with the City of Evansville, focusing on holiday cards, wrapping paper, batteries, etc. and includes free on-site chipping of Christmas trees for residents to take home as mulch.

The County is responsible for salting and sanding the streets following significant snowfall and currently covers these storage areas. Additionally, periodic cleaning of the storm drain inlets and trash and debris removal from area ditches and receiving streams is performed.

3.0 ON-GOING CHARACTERIZATION SCHEDULE

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

4.0 MS4 CONVEYANCE BOUNDARY DESCRIPTION

The urbanized area boundary for Vanderburgh County is shown on Figure 1. However, Rule 13 requires County regulated areas to be extended beyond the urbanized area boundary to at least the nearest section line. Figure 2 shows Vanderburgh County's regulated boundary, as extended to the nearest section line. The following is a narrative description of this border (all distances are approximate), beginning on the west side of the Ohio River, at its crossing with the southeast corner of SEC 35, TWP 6 S, RNG 11 W.

The boundary travels west 26,820 feet to the southwest corner of SEC 31, TWP 6 S, RNG 11 W (the most southwestern point of the regulation area) and heads north 21,600 feet to the northwest corner of SEC 18, TWP 6 S, RNG 11 W. Continuing east 12,715 feet to the northeast corner of SEC 17, TWP 6 S, RNG 11 W, the border goes north 5,200 feet to the northwest corner of SEC 9, TWP 6 S, RNG 11 W, and east 10,450 feet to the northeast corner of SEC 10, TWP 6 S, RNG 11 W. Next, the boundary proceeds north 5,250 feet to the northwest corner and continues east 5,250 feet to the northeast corner of SEC 2, TWP 6 S, RNG 11 W. From here, it travels 10,580 feet north to the northwest corner of SEC 25, TWP 5 S, RNG 11 W; 9,845 feet east to the northeast corner of SEC 30, TWP 5 S, RNG 10 W; and ends 5,250 feet north at the intersection of SEC 20, TWP 5 S, RNG 10W with the southern boundary of Darmstadt city limits. Then, Vanderburgh County follows these limits by traveling east 2,365 feet to the southeast corner of the Darmstadt limits; and 10,565 feet north to its northeast corner, a point 985 feet east of the northwest corner of SEC 8, TWP 5 S, RNG 10 W. This northern point of the regulated area then continues east 9,500 feet to the northeast corner of SEC 9, TWP 5 S, RNG 10 W and heads 5,250 feet south to the southeast corner of the same Section. Next, the boundary travels east 10,400 feet to the northeast corner of SEC 14, TWP 5 S, RNG 10 W; south 5,250 feet to its southeastern corner; and then west 5,100 feet to the northeast corner of SEC 22, TWP 5 S, RNG 10 W. The limits of Vanderburgh County then continue south 5,250 feet to the southeast corner of SEC 22, TWP 5 S, RNG 10 W; east 5,175 feet to the northeast corner of SEC 26, TWP 5 S, RNG 10 W; and south 5,250 feet to the southeast corner of the same Section. Next, the boundary turns west 5,200 feet to the northeast corner of SEC 34, TWP 5 S, RNG 10W; and south 5,250 feet to the southeast corner, followed by a turn east 10,500 feet to the northeast corner of SEC 1, TWP 6 S, RNG 10 W. The path continues 21,325 feet south to the northwest corner of SEC 30, TWP 6 S, RNG 9 W followed by 6,900 feet east to the easternmost point in the regulated area, the northeastern corner of this same Section. The boundary then heads south 13,125 feet to the crossing of SEC 6, TWP 7 S, RNG 9 W with the Indiana state limits (Ohio River); traveling along the boundary in a southwesterly direction to a point 2,625 feet east of the southwest corner of this Section; and ending 27,900 feet west at a point 4,100 feet west of the southeast corner of SEC 5, TWP 7S, RNG 10W. Next, the path continues approximately 2,000 feet northwest along the section limits to the southwest corner of SEC 5, TWP 7 S, RNG 10 W; north 3,600 feet to the northwest corner of the same section; and west 1,800 feet to the southwest corner of SEC 31, TWP 6 S, RNG 10 W at its crossing with the Indiana state limits. Finally, in conclusion, the boundary runs 2,130 feet north/northwest to the crossing with the Ohio River, and continues 24,000 feet around the northern boundary of the Ohio River to the starting point at the southeast corner of SEC 35, TWP 6 S, RNG 11 W. The total linear feet of this outer boundary is approximately

311,000 feet. The inner boundary for the Vanderburgh County regulated area is the existing City of Evansville limits.

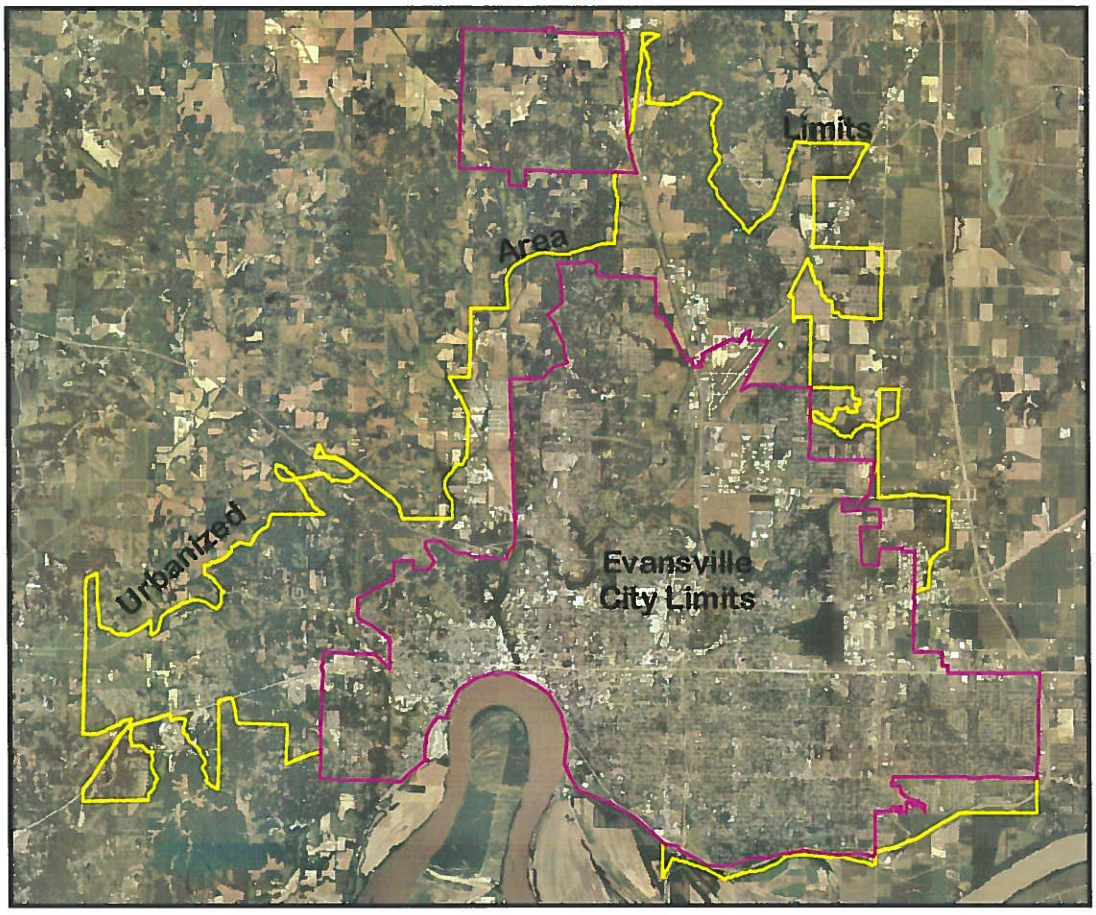

Figure 1: Vanderburgh County Urbanized Area Limits

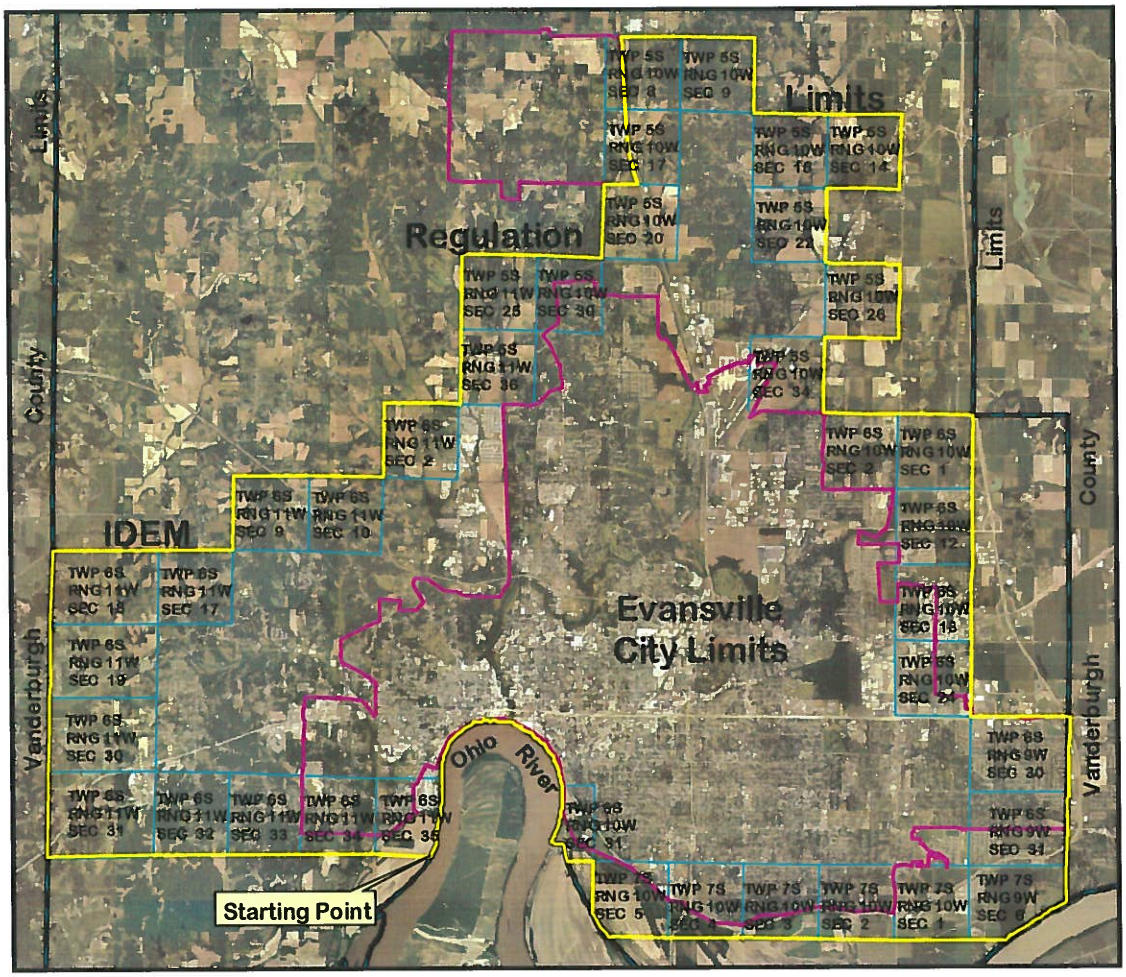

Figure 2: Vanderburgh County IDEM Regulation Limits

The adopted County stormwater ordinance applies to the entire area of Vanderburgh County. Public Education and Outreach and Participation/Involvement programs will generally be conducted County-wide. The Illicit Discharge Detection and Elimination (IDDE) program (including MS4 mapping) as well as Pollution Prevention/Good Housekeeping practices will be limited to the regulated area shown above in yellow.

5.0 MS4 CONVEYANCE ESTIMATE

Due to the lack of known conveyance lengths and locations, an estimate was established with a comparison to other towns within Indiana. Assessments were performed for Fort Wayne and Martinsville producing very narrow estimates with an average of 20,000 ft/mi^2. Each of these towns has an approximate population density of 2,500 persons/mi^2. The regulated area of Vanderburgh County, however, is a similar in area but incorporates an extreme amount of agricultural land, producing a population density of only 530 persons/mi^2, approximately 20% of the comparison cities. This was taken into account when estimating the length of MS4 conveyances in Vanderburgh County; using 4,000 ft/mi^2 (one-fifth (20% of 20,000 ft/mi^2)) with 48 square miles (mi^2) of regulated area producing 192,000 feet. The numerical estimate used for permitting issues is 200,000 feet of storm sewer with 25% or 5,000 feet to be completed each of the four (4) permit years.

6.0 STRUCTURAL BMPS FOR NEW DEVELOPMENT AND RE-DEVELOPMENT

A variety of BMPs will be allowed for new development and re-development areas (one acre or greater). Due to the different site conditions around Vanderburgh County, several types of BMPs are appropriate for implementation. There are limitations to every BMP, such as existing and required ground slope, pollutant types, soil type, cost, maintenance, ease of construction, and the ability to retrofit existing conditions to accommodate the BMP. After review of the Environmental Protection Agency's website and their "Menu of BMPs" (http://www.epa.gov/menuofbmps), some acceptable BMPs were determined for the area. BMPs will be targeted to control Total Suspended Solids (TSS) (see Section 7.0) in stormwater after the construction site is stabilized.

Vanderburgh County has designated 12 pre-approved BMP methods to be used alone or in combination to achieve the 80% TSS removal goal. These post construction BMPs will be provided in new development and re-development to treat stormwater after construction has been completed and the site has been stabilized. 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[5]
Bioretention[1]	75
Constructed Wetland	65
Underground detention	70
Extended Dry Detention[2]	72
Infiltration Basin[1]	87
Infiltration Trench[1]	87
Media Filtration – Underground Sand	80
Media Filtration – Surface Sand	83
Storm Drain Insert[4]	NA[3]
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	Test results are for three types of ponds: extended wet detention, wet pond and extended dry detention
3	NA may indicate that the BMP is not applicable for the pollutant, but may also indicate that the information is simply Not Available. Independent testing should be provided, rather than the manufacturer's testing data.
4	Must provide vendor data for removal rates.
5	Removal rates are dependent on proper installation and maintenance.

BMPs not currently approved must be done prior to implementation by a certified Professional Engineer licensed in the State of Indiana and accepted by Vanderburgh County. ASTM Standard methods must be followed when verifying performance of new measures. New BMPs, individually or in combination, must meet the 80% TSS removal rate at 50 – 125 micron range (silt/fine sand) without entrainment and must have a low to medium maintenance requirement to be considered. 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

Each BMP proposed in the regulated area of Vanderburgh County must meet pre-determined performance standards for implementation. Vanderburgh County plans to adopt the requirement based on the management of Total Suspended Solids (TSS). An 80% TSS removal standard will be implemented for post-construction BMPs.

TSS removal was targeted as the performance standard due to its association with a number of pollutants. Heavy metals, phosphorus, nitrogen, pesticides, trash, debris, and oxygen-demanding substances are primarily found where high levels of TSS exist. By implementing 80% TSS removal, concentrations of these pollutants are reduced. Removing sediment will also help protect macroinvertebrates and other aquatic organisms that can be impacted by sediments deposited in receiving streams.

Any project including one (1) acre or more of clearing, grading, excavation, or other land disturbance, will be required to develop a stormwater pollution prevention plan and implement structural and non-structural BMPs for post-construction runoff control. Additionally, new requirements state that installation of proper practices at all new and re-developed gasoline outlets or refueling centers are necessary to reduce lead, copper, zinc, and polyaromatic hydrocarbons.

8.0 STORMWATER BUDGET

Vanderburgh County's current budget for stormwater management related activities is approximately $150,000.

In Year 1 of the Rule 13 permit, the County's expenditures were primarily related to development of its SWQMP. Approximately $120,000 was spent on this effort. An estimate of the cost of the "new" activities needed to comply was developed. Table 2 summarizes these budget estimates for new activities over the remaining four years of the first five-year term of the permit.

Table 2
Preliminary Budget Estimates for *New* Activities
Required For Rule 13 Compliance – Vanderburgh County

Compliance Area	2005	2006	2007	2008
Annual Report Preparation	$20,000	$25,000	$30,000	$35,000
Program Management	$73,500	$75,700	$78,000	$80,300
Public Education and Outreach	$20,600	$21,200	$21,900	$22,500
Public Participation and Involvement	$20,600	$21,200	$21,900	$22,500
Illicit Discharge Detection/Elimination	$51,500	$53,100	$54,700	$56,300
Construction Site Runoff Control	$51,500	$70,000	$104,600	$74,300
Postconstruction Runoff Control	$25,000	$20,000	$20,600	$21,200
Municipal Operations Pollution Prevention and Good Housekeeping	$30,000	$30,900	$31,900	$32,900
TOTALS	**$292,700**	**$317,100**	**$363,600**	**$345,000**

9.0 MCM – BMPS AND MEASURABLE GOALS

9.1 Public Education and Outreach

The implemented Stormwater Quality Management Plan (SWQMP) must include techniques to inform the public in Vanderburgh County about current stormwater issues. Since the population residing in the County is large, a variety of programs must be implemented to reach all community sectors. These elements inform the public about the effects stormwater pollution has on water quality and simple ways they can minimize their negative influence on the environment.

A pollution prevention brochure, fact sheets, and other education materials help improve public awareness of common pollution prevention techniques by outlining common stormwater pollution sources, describing how these sources affect the environment, and suggesting activities the public can perform to help reduce impacts to the environment. Public education materials will be developed and distributed with a wide audience in mind, including residents, visitors, public service employees, commercial and industrial facilities, and construction site personnel. Distribution of public education and outreach materials will be performed in a variety of ways, including use of direct mail, distribution on the County's website, distribution at local events, and making materials available at convenient locations accessed by the public. Records of the distribution efforts will be tracked and reported in annual reports.

In order to provide a baseline understanding of stormwater awareness, public feedback is required. Residents will be asked to complete a brief survey related to stormwater pollution topics. This will provide an assessment of the amount of people with an understanding of stormwater pollution issues.

Although children do not have a direct effect on most household stormwater pollution, it is beneficial to educate at a young age. Information presented at schools will be transferred to the parents, helping to raise awareness on common household contamination problems. Instilling excitement about the environment at the elementary level can lead to greater pollution awareness in the future. School assemblies, after school activities, field trips, and handout materials all promote class participation. A fair containing games about environmental issues is one example that may increase student interest. Each activity description will be kept on file, along with the distribution methods and the number of participants. ProjectWET is a widespread organization dedicated to Water Education for Teachers (WET) and student programs that Vanderburgh County will incorporate into their curriculum.

The current recycling and hazardous waste program in Vanderburgh County is a very important BMP for improving stormwater quality. Promotion of these events through distribution and advertising can lead to an increase in participation for the programs by listing drop-off centers and collection days in the area.

In order to increase the attendance at stormwater quality events, topics shall be incorporated into existing public meeting and gatherings. This is accomplished by integrating stormwater issues into County board meetings, school functions, and civic organizations. Additionally, continuing to have display booths at local events like the County fair and others will help to reach residents not usually interested in environmental meetings. Educational materials shall be posted on County websites so the public can access the information at their convenience. The following BMPs will help achieve these goals; each labeled with the prefix "PE" for Public Education and followed by either "new" or "current," depicting the program type.

PE – 1: Distribute Public Information Materials (new)

Target Audience:	Vanderburgh County occupants (residential, commercial, industrial, etc.)
Target Topics:	*(Residential)* – Minor car maintenance and clean-up, chemical storage, pet waste disposal, household hazardous waste disposal, trash management, lawn care, pesticide application, yard waste removal *(Commercial and Industrial)* – Truck washing, fertilizer and herbicide application, trash management, vehicle storage, vehicle repair, materials storage and handling
Measurable Goal:	Produce and distribute at least one (1) brochure or fact sheet annually beginning in 2006.

PE – 2: Assess the Public's Existing Awareness Level on Wet Weather Issues (new)

Target Audience:	Vanderburgh County occupants
Target Topics:	General stormwater pollution issues
Measurable Goal:	Conduct an initial survey to estimate the level of awareness of stormwater quality issues in 2005.

PE – 3: Incorporate Water Quality Education in the Schools (new)

Target Audience:	Vanderburgh County teachers and home educators
Target Topics:	Pollution, water conservation, recycling, clean-up and other related stormwater issues
Measurable Goal:	Establish at least one (1) educational seminar/event in the classroom regarding a variety of stormwater topics annually beginning in 2006.

PE – 4: Promote Household Hazardous Waste Programs (current)

Target Audience:	Vanderburgh County residents and homeowners
Target Topics:	Motor oil, household chemical, and pesticide disposal; recycling drop-off locations; and collection times
Measurable Goal:	Continue promoting the existing program through distribution of brochures and/or advertisements using local media beginning in 2006.

PE – 5: Publish Public Education Materials on Community Websites (current)

Target Audience:	Vanderburgh County residents
Target Topics:	"PE – 1" topics, public meeting notification, committee meeting minutes, agendas
Measurable Goal:	Continue to post information on the County website (www.vanderburghgov.org) and/or the WAVE website (www.riverfriendly.com) beginning in 2005.

PE – 6: Include Stormwater Program at Community Functions (current)

Target Audience:	Vanderburgh County occupants and participants in current environmental functions
Target Topics:	General stormwater quality information, storm drain castings, pollution prevention
Measurable Goal:	Continue displaying at least one (1) booth or presentation annually beginning in 2006.

9.2 Public Involvement/Participation

Providing opportunities for public participation spreads knowledge and allows feedback and input on the County's stormwater program. Currently, there is not a formal public involvement program established. WAVE provides links on their website to a variety of organizations which promote participation; however, Vanderburgh County plans to establish more community-wide events.

Before implementation, a baseline needs to be established to determine the level of interest the public has in participating in such affairs. This will determine the amount of programs established, including the type of events desired. A survey or short questionnaire in conjunction with item "PE – 2" previously described will aid in this effort.

A variety of environmental awareness functions occur county-wide. Incorporating stormwater quality awareness into these functions will provide an opportunity for citizens to provide feedback and participate in the process. Volunteer opportunities will be provided on County website (www.vanderburghgov.org), WAVE (www.riverfriendly.com) and through local media outlets. Potential opportunities include stream clean-up programs, adopt-a-stream, volunteer stream monitoring, etc.

In order to provide an opportunity for the public to report complaints such as improper erosion control, illicit discharges, illegal dumping, etc., a hotline (telephone number) and website link will be developed. Feedback received from the public will be tracked and included in annual reports.

Marking storm drains will be another program that helps raise awareness and involves the public. Storm drain markers or stencils can be installed utilizing local community organizations, such as boy scouts and girl scouts, classrooms, inmates and other volunteers. The WAVE organization has considered similar program implementation and will work with the County to involve volunteers. This will minimize the financial burden on the County while providing an event for the public to become involved.

The following BMPs will help to accomplish these tasks and are labeled with the prefix "PI" for Public Involvement. Each is followed by either "new" or "current" to indicate the type of program implementation.

PI – 1: Assess Current Interest in Volunteer Programs (new)

Timeline:	Year 2	Evaluate interest in public participation and involvement activities as part of the survey developed in PE-2.
	Years 3-5	Continually re-evaluate the changing community interest in volunteer activities
Measurable Goal:	Assess the percentage of residents interested in participating in volunteer activities as a baseline for program implementation.	

PI – 2: Advertise Volunteer Initiatives Related to Stormwater (current)

Timeline:	Years 2-5	Coordinate with the County website, WAVE, and local media for announcements and advertising of local events
Measurable Goal:	Continue advertising public participation and involvement opportunities. Track number of opportunities provided.	

PI – 3: Stream Clean-up Programs (new)

Timeline:	Years 2-5	Plan and implement a public pollution prevention event
Measurable Goal:	Conduct one (1) stream clean up program during the permit term for Vanderburgh County receiving streams as permitted by property owners.	

PI – 4: Establish a Stormwater Complaint and Information Hotline (new)

Timeline:	Year 2	Determine resources needed for a hotline
	Years 3-5	Promote and maintain the information/complaint hotline
Measurable Goal:	Create a hotline to address public complaints (erosion control, illicit discharge, illegal dumping, etc.) and inquiries about stormwater issues. Track the number of calls received and follow up activities in response to calls.	

PI – 5: Implement Storm Drain Markings (new)

Timeline:	Year 2	Work with WAVE to begin a storm drain marking program
	Years 2-5	Promote WAVE program through County resources
Measurable Goal:	Coordinate with WAVE to begin a program to involve the public (volunteer organizations) in marking storm drains with an environmental awareness message (e.g. "no dumping – drains to creek"). Record number marked and cast per year.	

9.3 Illicit Discharge Detection & Elimination

Illicit discharges release polluted substances directly into the receiving streams or other portions of the storm sewer system. These highly concentrated pollutant emissions pose a threat to the water quality. A program will be developed to detect and eliminate illicit discharges that are found.

The first step in the process will be to develop a map of its MS4 system for the regulated area. The map will provide information on potential sources of illicit discharges in the event a discharge is detected. Outfalls will be defined as the location where a storm sewer, or ditch with a bottom width of two feet or wider, discharges into a receiving stream as listed in Part A of the County's SWQMP.

Existing recycling and hazardous waste disposal programs will be an important component of IDDE efforts for the County. This program helps minimize detrimental materials from being discharged into the receiving streams. If not disposed of properly, hazardous wastes are likely to end up affecting water quality. Promotion of the existing programs and continuing efforts will help to minimize pollution.

According to Rule 13 Part C language, all active industrial facilities which discharge into an MS4 conveyance must be identified. An initial list of the companies located within the regulated region of Vanderburgh County, along with their address, telephone number, and Standard Industrial Classification (SIC) Code are located in Appendix A. This list was obtained from Purdue University during the development of this SWQMP Part C. The list will be updated annually.

An Illicit Discharge Ordinance is currently being developed by Vanderburgh County. The ordinance provides language prohibiting illicit discharges and providing the County with inspection and enforcement authority. An Illicit Discharge Detection and Elimination (IDDE) Plan will be developed that identifies priorities for IDDE investigations, outlines methods for performing dry weather field screening, identifies potential sources of illicit discharges, identifies follow up investigation methods (to track the source of discharge), and identifies follow up enforcement actions. Model IDDE manuals have been created that can be utilized by Vanderburgh County to develop its plan. These include a manual published by the Center for Watershed Protection (www.cwp.org) titled "Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments", October 2004. A second recent resource document was published by the New England Interstate Water Pollution Control Commission (www.neiwpcc.org), titled "Illicit Discharge Detection and Elimination Manual: A Handbook for Municipalities", January 2003.

The following BMPs are included to implement the County's IDDE program. Each BMP is labeled with a prefix "ID" for Illicit Discharge and followed by either "new" or "current" depending on the program type.

ID – 1: Map Storm Sewer Conveyance (new)

Timeline:	Years 2-5	Complete MS4 mapping, at least 25% each year
Measurable Goal:	Develop mapping of the known municipal separate storm sewer system (MS4) that discharges to area receiving streams through storm sewers (12-inch and larger) and ditches (2-foot and wider bottom width). At least 25% of the mapping will be completed each year in Years 2, 3, 4, and 5.	

ID – 2: Promote Household Hazardous Waste and Recycling (current)

Timeline:	Ongoing	
Measurable Goal:	Continue the existing household hazardous waste and recycling programs in the County. Promote and publicize the program, including the hazards associated with illicit discharges and improper disposal of waste. This effort will be completed through the Pubic Education and Outreach program. The outreach program will be targeted to public employees, businesses, and the general public.	

ID – 3: Adopt Illicit Discharge Ordinance (new)

Timeline:	Year 2	Create and adopt an illicit discharge ordinance
	Years 2-5	Enforce the ordinance
Measurable Goal:	Adopt the proposed Illicit Discharge Ordinance for Vanderburgh County. Publicize the ordinance through the Public Education and Outreach efforts. Enforce the ordinance.	

ID – 4: Develop Illicit Discharge Detection and Elimination (IDDE) Plan (new)

Timeline:	Year 2	Develop an IDDE plan
	Years 2-5	Enforce the IDDE plan

Measurable Goal: Develop a plan outlining the steps needed to implement an IDDE program to detect and eliminate illicit discharges and illegal dumping into the County's regulated MS4 conveyances. The plan will also include necessary employee training for staff involved with IDDE efforts.

ID – 5: Perform Dry Weather Outfall Screening (new)

Timeline: Year 2 Develop a procedure for dry weather outfall screening
Years 2-5 Implement dry weather screening
Measurable Goal: Conduct dry weather outfall screening in accordance with the plan developed in ID-4. All known outfalls (sewers 12-inch and larger and ditches 2-foot and wider bottom width) will be screened at least once during the term of the permit. Identify and eliminate contaminated dry weather discharges to the MS4.

ID – 6: Update Industrial Facilities Database (new)

Timeline: Years 2-5 Update list
Measurable Goal: Update annually the list of industrial facilities within the MS4 area. The initial list is included in Appendix A of this document.

9.4 Construction Site Runoff Control

Construction sites, although temporary, have permanent effects on stormwater quality if managed incorrectly. Erosion and polluted runoff entering the system are large factors that threaten water quality. Vanderburgh County is in the process of implementing their Construction Site Stormwater Runoff Control Ordinance which includes both construction and post-construction techniques for sites that disturb one (1) or more acre of land (or less than one acre if the disturbance is part of a larger common plan of development that will ultimately disturb more than one acre). The program will meet the minimum requirements of 327 IAC 15-5 (Rule 5).

To ensure that appropriate erosion control BMPs are implemented, Vanderburgh County plans adopt the Indiana Stormwater Quality Manual (currently under development) as a reference guide for construction site BMPs. Some typical BMPs for implementation and use during construction which apply to the County include:

- Construction entrances
- Sodding
- Riprap
- Temporary stream crossings
- Construction phasing
- Dust control
- Silt fencing and inlet protection
- Spill prevention and control plan
- Vehicle maintenance and wash areas
- Construction waste management initiatives

The Vanderburgh County Soil and Water Conservation Department (SWCD) currently reviews construction plans and erosion and sediment control techniques under Rule 5, including utility coordination, surveying and easement requirements, reference data, design calculations, and detention requirements. Additionally, inspections include the ability to routinely check any construction site for proper conformance and enforce any violation the inspector deems appropriate according to the penalties outlined in the stormwater ordinance. This responsibility will be transferred to the County during the

second year of the permit term. The SWCD will be provided an opportunity to provide comments and recommendations to the County on individual construction projects. The SWCD (or IDNR Division of Soil Conservation) will also provide plan review/approval and inspection for County-owned projects disturbing one or more acres.

Construction sites will be prioritized (for inspection and enforcement) based on factors such as the type and extent of construction, the amount of disturbance, soil types, topography, receiving water quality, and other relevant factors. Violations will be dealt with according to the ordinance, including a series of violation warnings, followed by a monetary fee, and finally a stop work order if noncompliance continues. Any public comments or complaints regarding construction site activity will be directed to the inspection and enforcement personnel for follow up activities. Public inquiries and responses will be tracked.

Vanderburgh County will make annual training for staff, developers, engineers, and inspectors related to runoff control in accordance with Section 17 of the proposed Construction Site Stormwater Runoff Control Ordinance (MS4 personnel qualifications, certifications, and education).

For all projects disturbing greater than one (1) acre, construction plans need to be approved by the Vanderburgh County SWCD. For all qualifying projects not owned by Vanderburgh County, the owners of the project must submit NOIs to IDEM for approval. All qualifying projects owned by the County (the MS4 Operator), must submit plans for review by IDNR, the SWCD, or a separate third party entity. This coordination between entities is crucial for an acceptable review process to occur.

The following BMPs are included to implement the County's Construction Site Runoff Control program. Each BMP is labeled with a prefix "CS" for Construction Site and followed by either "new" or "current" depending on the program.

CS – 1: Adopt Drafted Construction Site Storm Water Runoff Control Ordinance (current)

Timeline:	Year 2	Adopt the proposed Chapter 5 (Construction Site Storm Water Runoff Control) of Title 13 (Public Services) of the County Code
	Years 2-5	Implement and enforce the requirements of the ordinance
Measurable Goal:	Implement the proposed stormwater ordinance, outlining construction site runoff controls, plan reviews, inspections, and enforcement techniques. Develop procedures to track and respond to public complaints regarding construction site erosion control required by the ordinance.	

CS – 2: Incorporate Construction Site BMP Manual (new)

Timeline:	Year 2	Review and adopt the Indiana Stormwater Quality Manual and the EPA's Phase II Menu of BMPs
	Years 2-5	Publicize, implement, and enforce the requirements of the manual
Measurable Goal:	Adopt the Indiana Stormwater Quality Manual and the EPA's Phase II Menu of BMPs to serve as the technical design standards for new BMPs in Vanderburgh County.	

CS – 3: Implement Plan Review Process (current)

Timeline:	Year 2	Adopt the current plan review process outlined in the Construction Site Storm Water Runoff Control Ordinance
	Years 2-5	Implement plan review procedures

Measurable Goal: Implement proposed plan review procedures, including training of staff involved with plan review for construction site runoff control projects.

CS – 4: Begin Construction Site Inspection Program (current)

Timeline:	Year 2	Adopt the current inspection program in the Construction Site Storm Water Runoff Control Ordinance
	Years 2-5	Continue implementation of inspection and training process

Measurable Goal: Implement proposed inspection program including routine or periodic inspections, site prioritization, BMP enforcement for sediment and erosion control, and appropriate staff training.

CS – 5: Develop Construction Site Runoff Control Training (new)

Timeline:	Year 2	Develop training materials and topics to cover the stormwater ordinance requirements
	Years 2-5	Conduct training sessions for relevant personnel

Measurable Goal: Develop training materials regarding the stormwater ordinance, erosion and sediment control BMPs, and inspection program requirements to satisfy the stormwater ordinance. Conduct training courses for developers, engineers, inspectors, and staff.

CS – 6: Coordination with IDEM, IDNR, and SWCD (current)

Timeline:	Year 2	Continue existing agreements or develop new agreements as needed between entities as outlined in the stormwater ordinance
	Years 2-5	Enforce existing reviews for the SWCD and IDNR

Measurable Goal: Continue and enforce the reviewing entity as the County (for qualifying projects), and either the SWCD or IDNR (for County-owned projects).

9.5 Post-Construction Site Runoff Control

The post-construction program for Vanderburgh County will be largely based on the adoption of the drafted Construction Site Stormwater Runoff Control Ordinance. Section 9(K) outlines the post-construction requirements for qualifying projects. The requirements set forth are in accordance with Rule 5: Stormwater Runoff Associated with Construction Activity, as located in 327 IAC 15-5-6.5(a)(8). These requirements are to be included in an erosion and sediment control plan review, outlining potential pollutant sources, the identity, locations, dimensions, and maintenance of each stormwater quality measure implemented on the site which improves water quality, and the long-term function of each BMP. Examples of structural BMPs that Vanderburgh County will consider implementing can be found in *Section 6.0: Structural BMPs for New Development and Re-development*. A few non-structural techniques which can improve stormwater quality are:

- Open space conservation easements
- Minimization of land disturbance and impervious area
- Buffer zone construction/improvements

Vanderburgh County plans to follow the Indiana State Stormwater Manual as well as the EPA's Stormwater Phase II Menu of BMPs for technical design standards for new BMPs.

Vanderburgh County will provide training related to post-construction techniques and BMP implementation. Plan review, inspection, and enforcement will be covered for all personnel associated with these topics including County employees and the development community. This training will be provided annually for all inspectors and plan reviewers to cover design, installation, and maintenance of

post-construction BMPs. Similarly, at least one training session will be given annually, targeted at the development community to introduce the options for post-construction BMPs and their design and implementation.

Specifically, an inspection process will be implemented for BMPs that are installed and maintained, ensuring that each technique meets the criteria set forth by the stormwater manual. A crucial portion of this inspection process is the development of an implementation schedule and record-keeping. A matrix, outlining inspection priorities and a schedule of all inspection and maintenance, will be developed to ensure annual observation. All inspections (both compliant and deficient), along with any maintenance deficiencies by the Owner and required maintenance performed by the County shall be documented for enforcement.

The following post-construction BMPs are targeted at fulfilling the abovementioned goals. Each is labeled with the prefix "PC" for Post-construction, followed by either "new" or "current," designating the program type.

PC – 1: Adopt Post-Construction Stormwater Runoff Ordinance (current)

Timeline:	Year 2	Adopt the proposed stormwater ordinance
	Years 3-5	Promote the ordinance and provide training
	Years 3-5	Require compliance with post-construction requirements of the stormwater ordinance and enforce punishments for violators
Measurable Goal:	Implement the proposed stormwater ordinance, outlining post-construction site runoff controls, plan reviews, inspections, and enforcement techniques.	

PC – 2: Incorporate Post-Construction BMP Manual (new)

Timeline:	Year 2	Review the Indiana Stormwater Quality Manual and the EPA's Phase II Menu of BMPs
	Years 2-5	Implement and enforce the manual
Measurable Goal:	Adopt the Indiana Stormwater Quality Manual and the EPA's Phase II Menu of BMPs to provide the technical design standards for new BMPs in the County.	

PC – 3: Implement Plan Review Process (current)

Timeline:	Year 2	Adopt the current plan review process outlined in the ordinance
	Years 2-5	Implement plan review procedures and enforce post-construction techniques
Measurable Goal:	Implement proposed plan review procedures, including training of staff involved with plan review for post-construction techniques.	

PC – 4: Begin BMP Inspection Program (current)

Timeline:	Year 2	Adopt the current inspection program located in the stormwater ordinance
	Years 2-5	Continue implementation of the inspection and training process
Measurable Goal:	Implement the proposed inspection process, priority matrix, and annual scheduling for BMPs.	

PC – 5: Develop Post-Construction Site Runoff Control Training (new)

Timeline:	Year 2	Develop training materials and topics to comply with the stormwater ordinance

	Years 2-5	Conduct annual training sessions for inspectors and plan reviewers
	Years 2-5	Conduct at least one (1) training session for the development community
Measurable Goal:	Provide training sessions to address design, installation, and maintenance of post-construction BMPs. Conduct an annual training session for plan reviewers and inspectors. Conduct an annual training session for the development community.	

9.6 Pollution Prevention/Good Housekeeping

Various activities performed in the MS4 area contribute to stormwater pollution. Proper maintenance of the County's MS4 is needed to reduce the potential for pollutants to be exposed to stormwater runoff. These programs are often called source controls, as they capture potential pollutants at their source before they enter area receiving streams. Enhanced good housekeeping practices will need to address, as appropriate:

- Periodic litter pickup
- Periodic BMP structure cleaning
- Periodic pavement sweeping
- Roadside shoulder and ditch stabilization
- Planting and proper care of roadside vegetation
- Remediation of locations where outfall scour has occurred.

Operational areas maintained by the County will also be investigated and improved over the term of the permit to reduce the discharge of pollutants from roads, parking lots, maintenance and storage yards, and waste transfer stations. Controls must include:

- Covering deicing salt or sand storage piles
- Providing facilities for containment of accidental losses of concentrations solutions (acids, alkalies, salts, oils, or other polluting materials)
- Standard operating procedures (SOPs) for spill prevention and clean up during fueling operations
- BMPs for vehicle maintenance areas
- Prohibiting the release of equipment or vehicle wash waters and concrete or asphalt hydrodemolition waste waters into the MS4
- Minimizing the use of pesticides and fertilizers (in compliance with Indiana state chemist's guidance requirements)
- Properly disposing of animal waste (if applicable)

Vanderburgh County's Pollution Prevention and Good Housekeeping program will also require that all wastes collected from the MS4 be properly disposed, through recycling or disposal in accordance with applicable solid waste disposal regulations.

Lastly any flood control projects initiated by Vanderburgh County will be evaluated to determine their effects on water quality and examined to determine if additional water quality protection devices or practices can be incorporated.

The mentioned plans will require proper training of all involved persons with the above programs.

The following are BMPs and measurables that will be implemented over the term of the permit. Each BMP is labeled with a prefix "GH" for Good Housekeeping and either "new" or "current" to designate the program type.

GH – 1: Increase Litter Pick-up

Timeline:	Year 2	Develop a litter pick-up program
	Years 3-5	Implement the litter pick-up program
Measurable Goal:	Utilize the litter pick-up program to pick up trash along thoroughfares throughout the regulated area of Vanderburgh County. Track the number of litter pick-up activities.	

GH – 2: Develop a Street Sweeping Program (new)

Timeline:	Year 2	Establish cooperation between the County and the City of Evansville to extend the existing street sweeping program into the regulated area
	Years 3-5	Implement the new street sweeping program
Measurable Goal:	Coordinate with the City of Evansville to effectively extend street sweeping of major thoroughfares in Vanderburgh County.	

GH – 3: Begin Catch Basin Cleaning (new)

Timeline:	Year 2	Develop a program and determine equipment needs for catch basin cleaning
	Years 3-5	Implement the new catch basin clean-out program
Measurable Goal:	Begin a new program to clean catch basins and inlets as needed with flow reducing blockage. Track the number of inlets or catch basins cleaned along with the amount of material removed.	

GH – 4: Implement Storm Sewer and BMP Structure Cleaning (new)

Timeline:	Year 2	Develop a program for prioritizing inspection and cleaning of storm sewers that become blocked with debris and no longer drain properly. Most BMPs are privately owned and their maintenance will be addressed in the Operations and Maintenance (O & M) documents produced by the developer. BMPs owned by the County will be maintained if filled with sediment and no longer function properly
	Years 3-5	Implement the program to cover storm sewers with significant blockage
Measurable Goal:	Begin a storm sewer cleaning program to provide clean-out of conveyances with flow reducing blockage. Track the length of sewers cleaned and the amount of debris removed. Track the number of County owned structural BMPs cleaned.	

GH – 5: Update Winter Weather Deicing Applications (current)

Timeline:	Year 2	Evaluate existing storage facilities
	Years 2-5	Enforce the program to maintain minimal runoff contamination
Measurable Goal:	Evaluate winter weather deicing application procedures and incorporate covered storage facilities if necessary for improving stormwater quality.	

GH – 6: Minimize Fertilizer and Herbicide Applications (current)

Timeline:	Years 2-5	Promote the importance of minimizing herbicide applications
	Years 2-5	Begin and continue certification of herbicide applicators employed by Vanderburgh County
Measurable Goal:	Inform and enforce the minimization of herbicide applications to applicable departments within Vanderburgh County.	

GH – 7: Develop Standard Operating Procedures (SOPs) and Training for County Operations

Timeline:	Year 2	Develop SOPs that outline the need, specific practices, proper disposal, and recordkeeping and tracking for various County Operations that will be conducted to control pollutants in stormwater runoff
	Years 3-5	Train staff on the SOPs and begin implementing the SOPs

Measurable Goal: Develop SOPs covering the following areas:

- Vehicle and Equipment Maintenance Operations
- Materials Management
- Fuel Dispensing Operations
- Roadway / Right-of-Way Maintenance
- Stormwater System Maintenance Operations
- Facilities Maintenance Operations

Provide initial staff training on the SOPs in Year 3 and refresher courses annually in Years 4-5.

GH – 8: Evaluate Flood Control Projects for Opportunities to Address Water Quality

Timeline:	Years 2-5	Evaluate opportunities for water quality improvements on County flood control projects.
Measurable Goal:	For new flood control projects, evaluate the potential to address water quality issues. Track the number of projects evaluated and the results of the evaluation (whether water quality could be addressed and how).	

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 3 provides a listing of the 34 programmatic indicators required by Rule 13. The corresponding applicability to each MCM is also provided below.

Table 3
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.	☒	☒	☐	☐	☐	☐
2. Number and description of meetings, training sessions, and events conducted to involve citizen constituents in the stormwater program.	☐	☒	☐	☐	☐	☐
3. Number or percentage of citizen constituents that participate in stormwater quality improvement programs.	☐	☒	☐	☐	☐	☐
4. Number and location of storm drains marked or cast, segregated by marking method.	☐	☒	☒	☐	☐	☐
5. Estimated or actual linear feet or percentage of MS4 mapped and indicated on an MS4 area map.	☐	☐	☒	☐	☐	☐
6. Number and location of MS4 area outfalls mapped.	☐	☐	☒	☐	☐	☐
7. Number and location of MS4 area outfalls screened for illicit discharges.	☐	☐	☒	☐	☐	☐
8. Number and location of illicit discharges detected.	☐	☐	☒	☐	☐	☐
9. Number and location of illicit discharges eliminated.	☐	☐	☒	☐	☐	☐
10. Number of, and estimated or actual amount of material, segregated by type, collected from Household Hazardous Waste collections in the area.	☐	☐	☒	☐	☐	☒
11. Number and location of constituent drop-off centers for automotive fluid recycling.	☐	☐	☒	☐	☐	☒
12. Number or percentage of constituents that participate in the HHW Collection program.	☐	☐	☒	☐	☐	☒
13. Number of construction sites obtaining an MS4 entity-issued stormwater run-off permit in the MS4 area.	☐	☐	☐	☒	☐	☐
14. Number of construction sites inspected.	☐	☐	☐	☒	☐	☐
15. Number and type of enforcement actions taken against construction site operators.	☐	☐	☐	☒	☐	☐
16. Number of, and associated construction site name and location for, public information requests received.	☐	☒	☐	☒	☐	☐
17. Number, type and location of structural BMPs installed.	☐	☐	☐	☐	☒	☐
18. Number, type and location of structural BMPs inspected.	☐	☐	☐	☐	☒	☐
19. Number, type and location of structural BMPs maintained or improved to function properly.	☐	☐	☐	☐	☒	☐
20. Type and location of nonstructural BMPs utilized.	☐	☐	☐	☐	☒	☐
21. Estimated or actual acreage or square footage of open space preserved and mapped in the MS4 area, if applicable.	☐	☐	☐	☐	☐	☐

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
22. Estimated or actual acreage or square footage of pervious and impervious surfaces mapped in the MS4 area, if applicable.	☐	☐	☐	☐	☐	☐
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.	☐	☐	☐	☐	☒	☐
24. Number and location of MS4 entity facilities that have containment for accidental releases of stored polluting materials.	☐	☐	☐	☐	☐	☒
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.	☐	☐	☐	☐	☐	☒
26. Estimated or actual linear feet or percentage and location of unvegetated swales and ditches that have an appropriately-sized vegetated filter strip.	☐	☐	☐	☐	☐	☐
27. Estimated or actual linear feet or percentage and location of MS4 conveyances cleaned or repaired.	☐	☐	☐	☐	☐	☒
28. Estimated or actual linear feet or percentage and location of roadside shoulders and ditches stabilized, if applicable.	☐	☐	☐	☐	☐	☒
29. Number and location of stormwater outfall areas remediated from scouring conditions, if applicable.	☐	☐	☐	☐	☐	☒
30. Number and location of deicing salt and sand storage areas covered or otherwise improved to minimize stormwater exposure.	☐	☐	☐	☐	☐	☒
31. Estimated or actual amount, in tons, of salt and sand used for snow and ice control.	☐	☐	☐	☐	☐	☒
32. Estimated or actual amount of material by weight collected from catch basin, trash rack, or other structural BMP cleaning.	☐	☐	☐	☐	☐	☒
33. Estimated or actual amount of material by weight collected from street sweeping, if utilized.	☐	☐	☐	☐	☐	☐
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.	☐	☐	☐	☐	☐	☐

The programmatic indicators not fulfilled by one (1) of the six MCMs exhibits a row of blank boxes. These indicators are deemed "N/A" because they do not apply to the Vanderburgh County regulated area for the reasons discussed below, each designated with the prefix "PI" for Programmatic Indicator.

PI – 21:

Due to the amount of agriculture and private development, open space conservation is not applicable to Vanderburgh County's regulated area. Open space is not feasible or profitable for agricultural farmers and subdivision development is performed privately throughout the County.

PI – 22:

The data required to determine areas of pervious and impervious surface is not readily available for Vanderburgh County. Due to the high amount of private development in these areas, electronic plats for area calculation is not easily accessible.

PI – 26:

Since Vanderburgh County mapping is currently unavailable, the amount of total unvegetated swales and ditches is unknown. Therefore, calculation of a percentage or linear feet cannot be figured until all of the mapping is complete in the regulated area. This programmatic indicator is not feasible for completion until after the permit term is complete.

PI – 33:

Since the regulated area of Vanderburgh County lies on the outskirts of the City of Evansville, it is not cost-effective for the County to purchase separate equipment and perform street sweeping. Some type of cooperative program will be established to extend the existing sweeping program into the regulated area of the County. This type of coordination will impair the ability to determine the amount of material collected, if utilized.

PI – 34:

There are no canine parks sited near a surface water body in Vanderburgh County.

APPENDIX A

LIST OF ACTIVE INDUSTRIAL DISCHARGERS LOCATED IN VANDERBURGH COUNTY

Company/Institution Name	Mail Address	Mail City	Mail Zip	Primary SIC	Phone	Street Address	Street City	County
Ad-Craft Inc	PO Box 3872	Evansville	47737-3872	3993	812-479-9660	2545 Eastside Park Rd	Evansville	Vanderburgh
Airgas Mid-America Inc	PO Box 5229	Evansville	47716-5229	2813	812-474-0440	2300 N Burkhardt Rd	Evansville	Vanderburgh
All Weather Products Inc	8346 Baumgart Rd	Evansville	47725	3442	812-867-6403	8346 Baumgart Rd	Evansville	Vanderburgh
AlphaGraphics Printshops	6220 Vogel Rd	Evansville	47715	2752	812-471-7100	6220 Vogel Rd	Evansville	Vanderburgh
Anchor Industries Inc	PO Box 3477	Evansville	47733-3477	2394	812-867-2421	1100 Burch Dr	Evansville	Vanderburgh
Artisan Sheet Metal Corp	PO Box 4065	Evansville	47724-0065	3444	812-422-7393	1609 Allens Ln Ste C	Evansville	Vanderburgh
Artsin Woodcrafters Inc	1134 Indy Ct	Evansville	47725	2434	812-867-7991	1134 Indy Ct	Evansville	Vanderburgh
Bondline Adhesives Inc	500 N Woods Ave	Evansville	47712	2891	812-423-4651	500 N Woods Ave	Evansville	Vanderburgh
Burch & Lamb Inc	7703 Baumgart Rd	Evansville	47725	3535	812-867-2404	7703 Baumgart Rd	Evansville	Vanderburgh
C & C Sports	130 N Rosenberger Ave	Evansville	47712	2396	812-429-0220	130 N Rosenberger Ave	Evansville	Vanderburgh
Creative Embroidery Designs	2545 Mjm Industrial Dr	Evansville	47715	2395	812-479-8280	2545 Mjm Industrial Dr	Evansville	Vanderburgh
Creative Signs	5716 Boonville Hwy	Evansville	47715	3993	812-476-5958	5716 Boonville Hwy	Evansville	Vanderburgh
David Robertson Co	5546 Great Lakes Dr N	Evansville	47715	3993	812-473-5806	5546 Great Lakes Dr N	Evansville	Vanderburgh
Delux Industries Inc	1187 Burch Dr	Evansville	47725	3599	812-867-7485	1187 Burch Dr	Evansville	Vanderburgh
Dexterous Mold & Tool Inc	2535 Locust Creek Dr	Evansville	47720	3544	812-422-8046	2535 Locust Creek Dr	Evansville	Vanderburgh
DSM Engineering Plastics Inc	PO Box 3333	Evansville	47732-3333	3083	812-435-7500	2267 W Mill Rd	Evansville	Vanderburgh
Enovation Graphic Systems Inc	2211 N Burkhardt Rd Ste E	Evansville	47715	3555	812-473-3223	2211 N Burkhardt Rd Ste E	Evansville	Vanderburgh
Evana Automation Specialists	PO Box 5437	Evansville	47716-5437	3569	812-479-8246	5825 Old Boonville Hwy	Evansville	Vanderburgh
Evansville Tool & Die Inc	4900 N Saint Joseph Ave	Evansville	47720	3544	812-422-7101	4900 N Saint Joseph Ave	Evansville	Vanderburgh
Fisher Tool & Design Inc	8231 Burch Park Dr	Evansville	47725	3544	812-867-8350	8231 Burch Park Dr	Evansville	Vanderburgh
General Signals Inc	5611 E Morgan Ave	Evansville	47715	3669	812-474-4256	5611 E Morgan Ave	Evansville	Vanderburgh
Ggg Digital Graphics Ltd	2212 Glenview Dr	Evansville	47720	2752	812-428-6996	2212 Glenview Dr	Evansville	Vanderburgh
Horseshoe Bend Carriage Co Inc	2825 Little Schmuck Rd	Evansville	47720	3599	812-421-8851	2825 Little Schmuck Rd	Evansville	Vanderburgh
Husk Companies Inc	1115 Indy Ct	Evansville	47725	3993	812-473-2000	1115 Indy Ct	Evansville	Vanderburgh
IMI Southwest Inc	6000 Oak Grove Rd	Evansville	47715	3273	812-476-1242	6000 Oak Grove Rd	Evansville	Vanderburgh
Indiana Tube Corp	PO Box 3005	Evansville	47730-3005	3498	812-424-9028	2100 Lexington Rd	Evansville	Vanderburgh
Industrial Tool & Die Corp	2201 Lexington Rd	Evansville	47720	3559	812-424-9971	2201 Lexington Rd	Evansville	Vanderburgh
Jubilee Harps Inc	2405 Diefenbach Rd	Evansville	47720	3931	812-426-2547	2405 Diefenbach Rd	Evansville	Vanderburgh
Kwik Kopy Printing	8601 N Kentucky Ave Ste B	Evansville	47725	2759	812-867-9390	8601 N Kentucky Ave Ste B	Evansville	Vanderburgh
Lively Machine Co	4404 Upper Mount Vernon Rd	Evansville	47712	3599	812-425-5060	4404 Upper Mount Vernon Rd	Evansville	Vanderburgh
Lloyd's Machine Co	2214 Saint Joseph Ind Park Dr	Evansville	47720	3599	812-422-7064	2214 Saint Joseph Ind Park Dr	Evansville	Vanderburgh
Marx Mold & Tool Inc	12320 N Green River Rd	Evansville	47725	3544	812-867-2123	12320 N Green River Rd	Evansville	Vanderburgh
Metal-Morphose Machining Inc	2005 Allens Ln	Evansville	47720	3599	812-422-2787	2005 Allens Ln	Evansville	Vanderburgh
Mid-America Clutch Co Inc	5600 Upper Mount Vernon Rd	Evansville	47712	3714	812-425-0869	5600 Upper Mount Vernon Rd	Evansville	Vanderburgh
O W G Inc	1033 E Mount Pleasant Rd	Evansville	47725	2452	812-867-9362	1033 E Mount Pleasant Rd	Evansville	Vanderburgh
Over Hill & Dale Sign Studio	1100 Indy Ct	Evansville	47725	3993	812-867-1664	1100 Indy Ct	Evansville	Vanderburgh
Plastic Extrusions Co	6500 Newburgh Rd	Evansville	47715-4457	3089	812-479-3232	6126 Maxwell Ave # D	Evansville	Vanderburgh
QTR Inc	PO Box 6135	Evansville	47719-0135	3089	812-429-0901	2301 Saint Joseph Ind Park Dr	Evansville	Vanderburgh
Rexam Closures & Containers	3245 Kansas Rd	Evansville	47725	2671	812-867-6671	3245 Kansas Rd	Evansville	Vanderburgh
Rick A Rideout	3747 Hogue Rd	Evansville	47712	3089	812-426-1749	3747 Hogue Rd	Evansville	Vanderburgh
S & S Machine Co	2212 W Mill Rd	Evansville	47720	3599	812-426-2599	2212 W Mill Rd	Evansville	Vanderburgh
Schuckers Ornamental Iron Wrks	PO Box 6049	Evansville	47719-0049	3441	812-422-7057	2211 Glenview Dr	Evansville	Vanderburgh
Schutte Lithography Inc	2716 Kotter Ave	Evansville	47715	2752	812-469-3500	2716 Kotter Ave	Evansville	Vanderburgh
Sign Concepts Inc	PO Box 6329	Evansville	47719-0329	3993	812-424-9040	1930 Allens Ln	Evansville	Vanderburgh
Specialty Tooling Inc	2391 Lexington Rd	Evansville	47720	3599	812-464-8521	2391 Lexington Rd	Evansville	Vanderburgh

Company/Institution Name	Mail Address	Mail City	Mail Zip	Primary SIC	Phone	Street Address	Street City	County
Spectrum Container Inc	PO Box 4327	Evansville	47724-0327	2653	812-422-0502	1625 Allens Ln	Evansville	Vanderburgh
Stephen Candy Libs Co Inc	6225 Vogel Rd	Evansville	47715	2066	812-473-0048	6225 Vogel Rd	Evansville	Vanderburgh
Sterling Boiler & Mechanical	PO Box 8004	Evansville	47716-8004	3441	812-479-5447	1420 Kimber Ln	Evansville	Vanderburgh
Sternberg International Ideal	8950 N Kentucky Ave	Evansville	47725	3715	812-867-0077	8950 N Kentucky Ave	Evansville	Vanderburgh
T L Kerchief Inc	8230 Burch Park Dr	Evansville	47725	3296	812-867-6750	8230 Burch Park Dr	Evansville	Vanderburgh
Temme Mold & Engineering Inc	2415 Locust Creek Dr	Evansville	47720	3559	812-424-5840	2415 Locust Creek Dr	Evansville	Vanderburgh
Triplet Tool & Die Co Inc	8039 Burch Park Dr	Evansville	47725	3599	812-867-2494	8039 Burch Park Dr	Evansville	Vanderburgh
Tri-State Machine Co Inc	2410 N Burkhardt Rd	Evansville	47715	3599	812-479-3159	2410 N Burkhardt Rd	Evansville	Vanderburgh
Tri-Tool Inc	7809 Baumgart Rd	Evansville	47725	3599	812-867-3506	7809 Baumgart Rd	Evansville	Vanderburgh
Utility Pipe Sales Co Inc	8117 Burch Park Dr	Evansville	47725	3494	812-867-7471	8117 Burch Park Dr	Evansville	Vanderburgh
Wabash Plastics Inc	1300 Burch Dr	Evansville	47725	3089	812-867-2447	1300 Burch Dr	Evansville	Vanderburgh
Weber Foods Inc	7813 Baumgart Rd	Evansville	47725	2099	812-867-2479	7813 Baumgart Rd	Evansville	Vanderburgh