

**NPDES PHASE II  
GENERAL PERMIT APPLICATION  
STORM WATER QUALITY MANAGEMENT PLAN  
PART C: PROGRAM IMPLEMENTATION**



**HAMILTON COUNTY, INDIANA**

**PERMIT #INR040066**

**JANUARY 31, 2005**



**NPDES PHASE II  
STORM WATER QUALITY MANAGEMENT PLAN (SWQMP)  
PART C: PROGRAM IMPLEMENTATION**

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**Hamilton County, Indiana**

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CBBEL Project Number 03-389A

**Hamilton County, City of Carmel, Town of Cicero, Indiana**  
**SWQMP Part C: Program Implementation**

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**1.0**

**INTRODUCTION**

As part of the 1987 amendments to the federal Clean Water Act (CWA), the United States Congress added Chapter 402(p) to the CWA to address the water quality impacts of stormwater discharges from industrial facilities and large to medium municipal separate storm sewer systems (MS4s). Large to medium MS4s were defined as communities serving populations of 100,000 or more and are regulated by the Environmental Protection Agency (EPA) under the National Pollutant Discharge Elimination System's (NPDES) Storm Water Phase I Program.

In addition to these amendments, Congress directed the Environmental Protection Agency (EPA) to issue further regulations to identify and regulate additional stormwater discharges that were considered to be contributing to national water quality impairments. On December 8, 1999, the EPA issued regulations that expanded the existing NPDES Storm Water Program to include discharges from small MS4s in "urbanized areas" serving populations of less than 100,000 and stormwater discharges from construction activities that disturb more than one acre of land. These regulations are referred to as the NPDES Phase II Storm Water Program. The urbanized area portion of Hamilton County met these criteria and was consequently designated as an MS4 entity.

In the State of Indiana, the Indiana Department of Environmental Management (IDEM) is responsible for the development and oversight of the NPDES Phase II Program. The IDEM initiated adoption of the Phase II Rules that were ultimately codified as 327 IAC 15-13 (Rule 13). Rule 13 became effective on August 6, 2003 and requires designated MS4 entities to apply for permit coverage by submitting a Notice of Intent (NOI) and developing Storm Water Quality Management Plans (SWQMPs) through a phased submittal process. The IDEM's phased submittal requirements for the SWQMP include the following three components:

- Part A: Initial Application
- Part B: Baseline Characterization Report
- Part C: Program Implementation Plan

All MS4s were required to submit NOI and SWQMP Part A documents to the IDEM by November 5, 2003. SWQMP Part B and Part C documents were required to be submitted by May 3, 2004 and November 5, 2004, respectively. Hamilton County, the City of Carmel, and the Town of Cicero are working as Co-Permittees to fulfill the requirements of Rule 13, and throughout this document the phrase "the Co-Permittees" will be used to refer to the three entities. The Co-Permittees' NOI and SWQMP Part A documents were submitted to IDEM on November 3, 2003 and the SWQMP Part B document was submitted to IDEM on May 3, of 2004. On August 29, 2004, the Co-Permittees submitted a letter requesting a 90 day extension for submitting their SWQMP Part C. IDEM granted the extension and the Co-Permittees' new due date is January 31, 2005.

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This report has been prepared to address Rule 13 requirements for completing the SWQMP Part C: Program Implementation Report, its corresponding certification form, and certification forms for each of the six Minimum Control Measures (MCMs). This report includes the following information:

- An initial evaluation of the storm water program for the Co-Permittees' MS4 area, including information on all known structural and nonstructural storm water BMPs utilized,
- A detailed program description for each of the six MCMs, including measurable goals with results that are related to an environmental benefit and Programmatic Indicators,
- A timetable for program implementation milestone, which includes milestones for each of the six MCMs,
- SWQMP-Part B: Baseline Characterization Report conclusions (BMP recommendations, additional protective measures for sensitive areas, and correcting identified water quality problems),
- A narrative and mapped description of the MS4 area boundaries that indicate responsible MS4 entity areas for each MCM, including specific (sectional/street) boundaries of the MS4 area,
- An estimate of the linear feet of MS4 conveyances within the MS4 area, segregated by MS4 type, including open ditch and pipe,
- A summary of which structural BMP types will be allowed in new development and redevelopment for the MS4 area,
- A summary of the storm water structural BMP selection criteria and, where appropriate, associated performance standards that must be met after installation to indicate BMP effectiveness, and
- A summary of the current storm water budget, funding source, and a projection of the budget for each year within the five (5) year permit term.

In addition, the IDEM's SWQMP Part C: Program Implementation Report Certification Checklist and certification forms for each of the six MCMs are included in **Appendices E through K** of this report.

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**2.0 MS4 AREA DESCRIPTION**

Rule 13 requires a narrative and mapped description of the MS4 area boundaries and an estimate of the linear feet of MS4 conveyances within the MS4 area. The following discussion provides an evaluation the municipal stormwater conveyance system within the Co-Permittees' MS4 area. A map of the MS4 area boundaries is **Exhibit 1** of this report.

**2.1 NARRATIVE DESCRIPTION OF MS4 AREA**

Hamilton County, Carmel, and Cicero are working under a joint permit to fulfill requirements of Rule 13. The MS4 area covered by this permit includes all unincorporated areas of Washington, Delaware, Noblesville, Wayne, Adams, White River and Fall Creek Townships, all of Clay Township, including the City of Carmel, and all unincorporated areas of Jackson Township, including the Town of Cicero. Since the submittal of the Co-Permittees' Part B: Baseline Characterization Report their MS4 area has been expanded to include all incorporated areas of Adams and White River Townships.

The Notice of Intent (NOI) and Stormwater Quality Management Plan (SWQMP) Part A: Initial Application identified known receiving waters to which the Co-Permittees directly discharge stormwater. Further evaluation of the Co-Permittees' MS4 area as part of the Co-Permittees' Baseline Characterization resulted in revisions to the Co-Permittees' official list of receiving waters. Since the Part B submittal, the Copermittees' official list of receiving waters has been expanded again to include those receiving waters within Adams and White River Townships. The revised list of stormwater receiving waters found in **Table 2-1** includes all known receiving waters within the Co-Permittees' MS4 area and should be the considered the Copermittees' official list of receiving waters.

**Table 2-1  
Co-Permittee MS4 Area Receiving Waters**

| <b>MS4 Area</b>     | <b>Receiving Water</b> |
|---------------------|------------------------|
| Carmel              | Blue Woods Creek       |
| Carmel              | Carmel Creek           |
| Carmel              | Center Creek           |
| Carmel              | Elliot Creek           |
| Carmel              | Hiway Run              |
| Carmel              | Hot Lick Creek         |
| Carmel              | Little Cool Creek      |
| Carmel              | Well Run               |
| Carmel              | Williams Creek         |
| Carmel              | Woodland Addition Lake |
| Carmel              | Lake Woodland          |
| Hamilton Co./Carmel | Cool Creek             |

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|                     |                              |
|---------------------|------------------------------|
| Hamilton Co./Carmel | Kirkendall Creek             |
| Hamilton Co./Carmel | White River                  |
| Hamilton Co./Carmel | Ams Run                      |
| Hamilton Co./Carmel | Clay Creek                   |
| Hamilton Co./Carmel | Crooked Creek                |
| Hamilton Co./Carmel | Delaware Creek               |
| Hamilton Co./Carmel | Henley Creek                 |
| Hamilton Co./Carmel | Hoover Run                   |
| Hamilton Co./Carmel | Vestal Ditch                 |
| Hamilton Co./Carmel | Long Branch                  |
| Hamilton Co./Carmel | Ream Creek                   |
| Hamilton Co./Carmel | Spring Mill Run              |
| Hamilton Co./Carmel | Will Creek                   |
| Hamilton Co./Carmel | Ream Creek                   |
| Hamilton Co./Carmel | Mitchner Ditch               |
| Hamilton Co./Cicero | Cicero Creek                 |
| Hamilton Co./Cicero | Bear Slide Creek             |
| Hamilton Co./Cicero | Hinkle Creek                 |
| Hamilton Co./Cicero | Little Cicero Creek          |
| Hamilton Co./Cicero | Morse Reservoir              |
| Hamilton Co.        | Fall Creek                   |
| Hamilton Co.        | Flatfork Creek               |
| Hamilton Co.        | Mount Zion Branch            |
| Hamilton Co.        | Taylor Creek                 |
| Hamilton Co.        | Thor Run                     |
| Hamilton Co.        | Thorpe Creek                 |
| Hamilton Co.        | Woodruff Branch              |
| Hamilton Co.        | Ingerman Ditch               |
| Hamilton Co.        | East Fork Sly Run            |
| Hamilton Co.        | Mud Creek                    |
| Hamilton Co.        | Lindley Ditch                |
| Hamilton Co.        | Jones Ditch                  |
| Hamilton Co.        | William Lock Ditch           |
| Hamilton Co.        | William Lehr Ditch           |
| Hamilton Co.        | Finley Creek                 |
| Hamilton Co.        | Unnamed Tributary to Sly Run |
| Hamilton Co.        | Sand Creek                   |
| Hamilton Co.        | Overdorff Branch             |
| Hamilton Co.        | Stony Creek                  |
| Hamilton Co.        | Grassy Branch                |
| Hamilton Co.        | Bee Camp Creek               |
| Hamilton Co.        | Bills Branch                 |
| Hamilton Co.        | Boone Creek                  |

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|              |                      |
|--------------|----------------------|
| Hamilton Co. | Kreager Ditch        |
| Hamilton Co. | Little Eagle Creek   |
| Hamilton Co. | Lion Creek           |
| Hamilton Co. | Geist Reservoir      |
| Hamilton Co. | Lick Creek           |
| Hamilton Co. | Weasel Creek         |
| Hamilton Co. | West Fork Bear Creek |
| Hamilton Co. | Bear Creek           |
| Hamilton Co. | Lamberson Ditch      |
| Hamilton Co. | Pipe Creek           |
| Hamilton Co. | Duck Creek           |
| Hamilton Co. | Dyers Creek          |
| Hamilton Co. | Sugar Run            |
| Hamilton Co. | Long Branch          |
| Hamilton Co. | Deer Creek           |
| Hamilton Co. | Jay Ditch            |
| Hamilton Co. | Symons Ditch         |
| Hamilton Co. | McKinzie Ditch       |
| Hamilton Co. | Pearce Ditch         |
| Hamilton Co. | Mathews Ditch        |
| Hamilton Co. | Prairie Creek        |
| Hamilton Co. | Weaver Creek         |
| Hamilton Co. | Behner Creek         |
| Hamilton Co. | Shoemaker Ditch      |
| Hamilton Co. | Cheaney Creek        |
| Hamilton Co. | Delight Creek        |
| Hamilton Co. | Eller Run            |
| Hamilton Co. | Finley Run           |
| Hamilton Co. | Home Run             |
| Hamilton Co. | Light Branch         |
| Hamilton Co. | Smock Creek          |
| Hamilton Co. | Britton Branch       |

**2.2 DESCRIPTION OF MS4 CONVEYANCE SYSTEMS**

A conveyance is defined by the IDEM as any structural process for transferring stormwater between at least two (2) points. The term includes piping, ditches, swales, curbs, gutters, catch basins, channels, storm drains, roadside ditches. IDEM further defines MS4 conveyance systems as outfall conveyance systems with a pipe diameter of twelve (12) inches or larger and open ditches with a two foot or larger bottom width. Although this definition includes only the main trunks of pipes or open ditches that lead to each regulated outfall, mapping of the total conveyance system that would include tributaries to the main trunks would aid in illicit discharge detection and elimination

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efforts. **Table 2-1** through **2-3** list the estimated linear feet of conveyance systems within the Co-Permittees' MS4 area broken down by type and individual entity. This estimate will be used to determine the amount of MS4 conveyances to be mapped each year for compliance. Rule 13 requires that 25% of the total conveyance system be mapped each year, in years 2 through 5.

**Table 2-2  
Conveyance Systems Maintained by Hamilton County**

| Conveyance Type  | Estimated Linear Feet of Conveyance | % of Total Conveyance System |
|------------------|-------------------------------------|------------------------------|
| Open Storm Drain | 1,575,997.53 ft                     | 27%                          |
| Enclosed Pipe    | 4,214,975.32 ft                     | 73%                          |
| <b>Total</b>     | <b>5,790,972.5</b>                  | <b>100%</b>                  |

**Table 2-3  
Conveyance Systems Maintained by the City of Carmel**

| Conveyance Type  | Estimated Linear Feet of Conveyance | % of Total Conveyance System |
|------------------|-------------------------------------|------------------------------|
| Open Storm Drain | N/A                                 | N/A                          |
| Enclosed Pipe    | 750,000 ft                          | 100%                         |
| <b>Total</b>     | <b>750,000 ft</b>                   | <b>100%</b>                  |

**Table 2-4  
Conveyance Systems Maintained by the Town of Cicero**

| Conveyance Type  | Estimated Linear Feet of Conveyance | % of Total Conveyance System |
|------------------|-------------------------------------|------------------------------|
| Open Storm Drain | N/A                                 | 0                            |
| Enclosed Pipe    | 5,563 ft (24" – 36")                | 18%                          |
|                  | 1,250 ft (18")                      | 4%                           |
|                  | 11,750 ft (15")                     | 39%                          |
|                  | 11,688 (12")                        | 39%                          |
| <b>Total</b>     | <b>30,251 ft</b>                    | <b>100%</b>                  |

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**2.3 Part B Conclusions and Priority Watersheds**

The Rule 13 SWQMP-Part B required the identification of areas having reasonable potential for or actually causing stormwater quality problems based upon relevant land use data and identified sensitive areas, as well as, existing and available water quality data. These areas are required to be given the highest priority for the selection of BMPs and the prohibition of new or significantly increased MS4 discharges.

The Co-Permittees identified the County Highway Department Maintenance Facility, the Carmel Street Department Maintenance Facility, and the Cicero Street and Utilities Department Maintenance Facility as specific locations requiring the implementation of structural BMPs in their Part B submittal. As a result of this determination these facilities have been targeted for implementation of the following BMPs, which are discussed in detail in **Section 8.2**:

- Implementation of secondary containment devices
- Implementation of wash water management BMPs
- Implementation of chemical spill response plans

The Co-Permittees also identified urban and rural land uses as potential problem areas in their Part B submittal. In order to address potential water quality impacts associated with agricultural land use, the Co-Permittees will work with the Hamilton County Soil and Water Conservation District (SWCD) to provide educational outreach and assistance to agricultural landowners. This relationship is discussed in detail in **Section 3.2**. A copy of the Memorandum of Agreement (MOU) that the Hamilton County Commissioners and SWCD have entered into is included in **Appendix C**.

Regarding urban land uses, the Co-Permittees recognize that the main goal of Rule 13 is to minimize the water quality impacts associated with stormwater runoff from small and medium sized MS4s in urbanized areas and is confident that the comprehensive list of BMPs identified in this plan will effectively minimize the impacts that urban land uses have on water quality.

The Part B submittal also identified over 30,000 acres of highly erodible soils within the Co-Permittees' MS4 area. New and redevelopment occurring on these areas will likely be prioritized for site inspections as a part of the Co-Permittees' Construction Site Runoff Control Program. Priorities for construction activities are discussed in more detail in **Section 6.2**.

The Co-Permittees' Part B submittal also identified 15 priority watersheds. The Co-Permittees original intent was to focus initial stormwater program implementation within these priority watersheds. However, after further evaluation, the Co-Permittees have determined that all watersheds within their MS4 area will be considered priorities for initial program implementation. This approach will simplify program implementation and should maximize the overall benefit that the Co-Permittees' stormwater program has on all local receiving waters.

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In the event that future funding for implementation of the stormwater program becomes strained, the Co-Permittees will focus program implementation towards priority watersheds identified in their Part B submittal. However, as long as adequate funding is available the Co-Permittees will consider all watersheds within their MS4 area to be priorities.

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**3.0**

**MINIMUM CONTROL MEASURE #1  
PUBLIC EDUCATION AND OUTREACH**

Rule 13 requires that residents, visitors, public service employees, commercial and industrial facilities, and construction site personnel within the MS4 area be informed about the impacts that polluted storm water runoff have on water quality and ways they can minimize their impact on storm water quality. A reasonable attempt must be made to reach all constituents within the MS4 area. An initial assessment of the MS4 area constituents must be conducted to determine initial constituent knowledge and practices as they relate to storm water quality. The following discussion provides information on the Co-Permittees' Public Education and Outreach Program.

**3.1 EXISTING PUBLIC EDUCATION AND OUTREACH BMPs**

Compliance with this MCM requires MS4s to demonstrate that residents, visitors, public service employees, commercial and industrial facilities, and construction site personnel within the MS4 are educated about the impacts of polluted stormwater runoff on MS4 area receiving streams.

Existing Public Education and Outreach programs and activities performed by **Hamilton County** are as follows:

- Many local departments participate in community clean-up and volunteer events. In 2003 and 2004 the Surveyor's Office provided laminated aerial maps of the clean-up area for the White River Clean-Up Project.
- The Hamilton County Emergency Management Agency, in conjunction with the Hamilton County Local Emergency Planning Committee (LEPC), has developed and is distributing an educational brochure addressing the proper use, disposal, and recycling of common household products.
- In July of 2003, the Hamilton County Surveyor's Office and SWCD distributed educational stormwater brochures at the Hamilton County 4-H Fairgrounds. In total, more than 350 brochures were distributed. (Stormwater Pollution-The Difference is You-119 Distributed, Take the Stormwater Runoff Challenge-114 Distributed, Test your H2O IQ quiz and Voting Booth-113 Distributed).
- In July of 2004, the Hamilton County Surveyor's Office and SWCD distributed educational stormwater brochures and Stormwater Surveys at the Hamilton County 4-H fair. (Stormwater Survey – 64 Completed, Stormwater Pollution-The Difference is You – 24 Distributed, Take the Stormwater Runoff Challenge – 22 Distributed).
- The Parks and Recreation Department promotes education and good land stewardship practices to the public through informational brochures, park

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programs, and speaking engagements.

- The Hamilton County Health Department and the Hamilton County Household Hazardous Waste Program have ongoing public education programs involving pollution prevention and regularly promote Household Hazardous Waste services.
- Several pre-cast storm drain inlets with the phrase “Dump No Waste-Drains to River” have been installed in Hamilton County Regulated Drains.
- The Hamilton County Surveyor’s Office and the Soil and Water Conservation District have hosted several workshops and seminars to educate builders, developers, engineers and plan reviewers and inspectors about erosion and sediment control requirements and have published several articles in local newspapers to inform the public about stormwater pollution prevention and the County’s stormwater program.
- Over the past several years, the County has initiated several significant watershed studies, which have involved public education and outreach activities (Mud Creek Watershed Study, Cool Creek Watershed Study, and Stony Creek Watershed Study).
- The Hamilton County Commissioners have funded River Clean-Up, Inc., an annual river restoration project in Hamilton County.
- In 2004, the Hamilton County Surveyor’s Office developed stormwater and wellhead webpages. A variety of educational materials can be downloaded from these sites. These sites will continue to be updated in the future.

Existing Public Education and Outreach programs and activities performed by the **City of Carmel** are as follows:

- The Carmel Department of Community Relations publishes a bimonthly newsletter and other informational materials, which can be used to educate local citizens on a wide variety of subjects. This newsletter is sent to everyone with a Carmel mailing address.
- The City of Carmel has a local government cable access television channel, which is managed by the Department of Community Relations. Programming focuses on a variety of municipal activities and programs.
- The City of Carmel has produced promotional and educational videos focusing on the City’s Household Hazardous Waste Facility (HHW).
- Many of Carmel’s municipal departments distribute educational materials to local

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citizens at the annual Carmel Fest. These materials cover a variety of issues relating to Stormwater Phase II including disposal of household hazardous waste and participation in volunteer programs and events.

- The Carmel Department of Community Relations works in cooperation with other City Departments and community groups on various special projects and promotional activities.
- The Carmel Department of Community Relations produces utility bill enclosures to inform ratepayers of important news. In addition, the City maintains a brochure rack in many City departments, which provide additional opportunities for distributing information regarding local news and issues.
- The Carmel-Clay Parks and Recreation Department posts park rules at all park facilities. Included in the rules are requirements for cleaning up after pets and properly disposing of trash.
- The Central Park Masterplan includes plans to create more than nine acres of wetland, which will include an on-site "storm water treatment train."
- The Carmel Street Department promotes their Recycling Center on the City's website.

Existing Public Education and Involvement programs and activities performed by the **Town of Cicero** are as follows:

- The Cicero Fire Department provides citizens with information promoting the Hamilton County Household Hazardous Waste facility.
- Several Town Departments and various local groups participate in annual community clean up events.
- The Cicero Friends of the Park is a local volunteer organization dedicated to assisting the Cicero Parks Department with the operation and management of Park grounds.
- The Town of Cicero recently partnered with the SWCD and Boy Scouts to install stormwater stencils on Town stormwater inlets.

The Co-Permittees' existing Public Education and Outreach activities will help ensure their compliance with requirements of Rule 13. However, these activities are currently not sufficient to address the requirements of Rule 13.

### **3.2 PROPOSED PUBLIC EDUCATION AND OUTREACH BMPs**

In an effort to form a regional stormwater education partnership, the Town of

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Arcadia, the Town of Westfield, the City of Noblesville, and the Co-Permittees have formed the Hamilton County Phase II Public Education Steering Committee. The Steering Committee's purpose is to develop and implement Public Education and Outreach and Public Participation and Involvement programs and activities throughout Hamilton County that are consistent and complimentary in nature.

In order to ensure the successful development and implementation of Public Education and Outreach and Public Participation and Involvement Programs in compliance with Rule 13, the Co-Permittees and the communities listed above have entered into a Memorandum of Understanding (MOU). A fully executed copy of the MOU is included in **Appendix D** of this report. The Town of Fishers is also actively participating with the Steering Committee, although they have not signed the MOU as of submittal time. If for any reason, the Co-Permittees decide that the terms of the MOU are no longer in their best interest, they will terminate the agreement and will be responsible for implementing and/or revising the Public Education and Outreach and Public Participation and Involvement BMPs as outlined below.

**Table 3-1** provides a summary of the Education and Outreach BMPs to be implemented and identifies the measurable goals, timelines, documentation and tracking needs, and responsible parties associated with each BMP. A detailed description of each BMP is provided below.

### **Hamilton County Phase II Public Education Steering Committee**

To ensure the effective development and implementation of Public Education and Outreach programs and activities, Hamilton County Phase II communities (Hamilton County, the City of Carmel, the Town of Cicero, the City of Noblesville, the Town of Westfield, and the Town of Arcadia) formed a partnership called the Hamilton County Phase II Public Education Steering Committee. The Committee's purpose is to develop and implement Public Education and Outreach and Public Participation and Involvement programs and activities throughout Hamilton County that are consistent and complimentary in nature.

The Steering Committee has met six times during the development of this plan and will continue to meet monthly throughout 2005 to ensure effective implementation of Public Education and Outreach and Public Participation and Involvement BMPs as outlined in this plan. The Steering Committee will meet monthly or as needed throughout the remainder of the permit term. The Co-Permittees will document the number and description of each meeting, the number in attendance at each meeting, as well as all progress made by the Steering Committee in their annual SWQMP report.

While committed to carrying out the BMPs outlined in this plan, the Hamilton County Public Education Steering Committee and the Co-Permittees will continue to identify new methods and opportunities for educating local residents throughout this permit term. In the event that educational BMPs besides those listed in this plan are implemented during this permit term, the Co-Permittees will report them to IDEM in annual SWQMP reports as either additions or substitutions to BMPs listed in this plan.

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**Public Meetings**

In July and August of 2004, three Public Meetings were held in Hamilton County (July 8, 2004), Cicero (July, 14, 2004), and Carmel (August 4, 2004) to discuss the development of the Co-Permittees' Storm Water Quality Management Plan (SWQMP). The purpose of the meetings was to educate citizens on the impacts that their daily activities have on stormwater quality, to solicit public input on the development of the SWQMP, and to solicit public participation in the implementation of the SWQMP. All meetings complied with applicable public notice requirements, and were also advertised via local websites, utility bill inserts, media releases, and marquees. Similar meetings will be held in 2005 and throughout the remainder of the permit term. The frequency of meetings for the remainder of the permit term will be determined in 2005. The Co-Permittees will document the total number of meetings held and the attendance at each meeting. Meeting minutes will also be recorded. This information will be included in the Co-Permittees' annual SWQMP report.

The Co-Permittees anticipate that the Hamilton County Phase II Public Education Steering Committee will facilitate future meetings. In the event that they do not, the Co-Permittees will ensure that public meetings addressing stormwater quality are developed and implemented within the Co-Permittees' MS4 area.

**Stormwater Survey**

The Co-Permittees developed a Stormwater Quality Survey in July of 2004 to assess the public's initial knowledge and understanding of stormwater issues and to assist them in developing a public education program that is as efficient and effective as possible. During the months of July through October 2004 staff from Hamilton County, the Town of Cicero, and the City of Carmel distributed the Stormwater Quality Survey at local events including the Hamilton County 4-H Fair (July 29-30, 2004), a Stormwater Quality Public Education Meeting conducted in the City of Carmel (August 4, 2004), a Builders Meeting conducted in the Town of Cicero (July 30, 2004), a Neighborhood Association Network Meeting (August 19, 2004), and a Carmel Small Business Network Meeting (August 25, 2004). The Survey was also distributed to public employees. Survey results were compiled during December of 2004 and were evaluated in January of 2005. The results will be used to better target future education and outreach programs and activities. The results of the survey as well as any conclusions drawn will be included with the Co-Permittees' first annual SWQMP report, which will be submitted to the IDEM in January of 2006. Co-Permittee residents will be surveyed throughout the permit term to evaluate and monitor the effectiveness of the Co-Permittees' stormwater education program. Surveys will likely be distributed during local events, at public meetings, via stormwater websites, and as inserts to local utility bills.

**Stormwater Brochures**

The Hamilton County Phase II Public Education Steering Committee will develop and distribute stormwater brochures designed to educate residents, visitors, public service employees, commercial and industrial facilities, and construction site personnel about

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the impacts polluted stormwater runoff can have on water quality and the ways in which each constituency can minimize their impacts on stormwater quality. Among other things, the brochures will include targeted outreach information on erosion and sediment control practices, illicit connections to the storm sewer system, improperly functioning septic systems, Household Hazardous Waste services, and Report-A-Polluter Programs. Additional brochures will be developed as topics and targeted activities necessitate them. Brochures will likely be disseminated via mass mailings, at local places of business, at City, Town, and County offices, and at various local events. Members of the Hamilton County Phase II Public Education Steering Committee will develop and help disseminate the brochures. Copies of the brochures along with the total number of brochures distributed will be documented and included in the Co-Permittees' annual SWQMP report.

The Co-Permittees' anticipate that the Hamilton County Phase II Public Education Steering Committee will develop these brochures. In the event that they do not, the Co-Permittees' will ensure that stormwater brochures are developed and distributed as outlined above.

**Newsletter Articles**

The Hamilton County Soil and Water Conservation District (SWCD) currently publishes and disseminates a quarterly newsletter entitled *Town & Country*. The newsletter includes a variety of information on agricultural programs, conservation practices, and erosion and sediment control practices. In addition, the City of Carmel, the Town of Westfield, and the Hamilton County Parks Department, and various other local organizations publish newsletters, which are designed to keep citizens informed on a variety of local programs, activities, and events. These newsletters will now include articles that discuss various stormwater topics such as, erosion and sediment control measures, agricultural issues related to stormwater quality, opportunities for citizens to get involved with stormwater events such as community clean up events and storm drain marking events, and other relevant information designed to enhance the urban and rural community's understanding of stormwater issues. The Hamilton County Public Education Steering Committee will be responsible for drafting these articles. The Co-Permittees' will document the total number of articles published, the topics of each article, and the total number of newsletters disseminated. This information will be included in the Co-Permittees' first annual SWQMP report to be submitted in January 2006.

The Co-Permittees' anticipate that the Hamilton County Phase II Public Education Steering Committee will develop these articles. In the event that they do not, the Co-Permittees' will work with local newsletter publishers to incorporate stormwater articles into their respective newsletters.

**Stormwater Website**

The Co-Permittees have developed stormwater websites. The websites will continue to be updated and will be designed to educate residents, visitors, public service employees, commercial and industrial facilities, and construction site personnel about

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the impacts polluted stormwater runoff have on water quality and the ways in which each constituency can minimize their impacts on stormwater quality. The websites will provide dates, times, and sponsors of stormwater related events such as workshops, clean-up events, and public meetings. The websites will include copies of the Co-Permittees' SWQMP, stormwater related ordinances, and other relevant information. The websites may also include a counter to track the number of "hits" the site receives. In addition, the websites will have an e-mail function by which citizens can ask questions or report problems regarding stormwater.

In addition, the Websites will also provide links to stormwater websites developed by other Stormwater Phase II Communities in Hamilton County and throughout the State of Indiana. As appropriate, the total number of "hits", along with any questions or comments received, and all responses to questions or comments will be documented and submitted with the Co-Permittees' annual SWQMP report.

**Household Hazardous Waste and Recycling Program Promotions**

In order to educate community members on the importance of pollution prevention and recycling programs, the Hamilton County Phase II Public Education Steering Committee will frequently advertise and promote the activities and services of the Household Hazardous Waste (HHW) Facilities operated by the City of Carmel and the Hamilton County Solid Waste Management District. Effective advertisement will help minimize illegal dumping activities and improper disposal of household hazardous wastes. The Hamilton County HHW facility distributes a variety of educational brochures related to proper disposal of hazardous wastes and conducts a variety of educational programs for local schools and civic groups. The City of Carmel also operates a HHW program. Like the Hamilton County HHW facility, the Carmel HHW facility distributes a variety of educational materials and brochures and conducts a variety of educational programs. Advertisements and promotions for these services will occur on stormwater websites and brochures to be developed as part of the Co-Permittees' SWQMP. Both facilities currently track the amount of waste collected at their facilities. All educational activities, programs, and literature conducted and distributed and all waste collected at both facilities will be documented and included in the Co-Permittees' annual SWQMP report.

The Co-Permittees anticipate that the Hamilton County Phase II Public Education Steering Committee will advertise Household Hazardous Waste services. In the event that they do not, the Co-Permittees will promote and advertise those services as outlined above.

**Soil and Water Conservation District (SWCD) Activities**

Agricultural land uses account for approximately 89% of land uses within the Co-Permittees' MS4 Area. As concluded in Part B, to minimize potential impacts associated with agricultural land uses, agricultural producers need to be educated on and encouraged to use stormwater BMPs. The SWCD will encourage local agricultural producers to implement agricultural BMPs including, but not limited to, conservation tillage, nutrient and pesticide management, buffer strips, and wetland restoration. Day-to-day contacts with the agricultural community will be enhanced to include discussions

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on stormwater BMPs. The SWCD will include articles in their quarterly newsletter, *Town & Country*, on some of the following issues, erosion and sediment control practices, agricultural issues related to stormwater quality as discussed above, opportunities for citizens to get involved with stormwater events such as community clean up events and storm drain marking events, or other relevant stormwater information designed to enhance the urban and rural community's understanding of stormwater issues. In addition, the Hamilton County SWCD will continue to hold its annual erosion and sediment control workshops, which are designed to educate public employees and developers on erosion and sediment control practices. All program activities will be documented in the Co-Permittees' annual SWQMP report.

### **Mass Media Solicitation**

Public Service Announcements (PSAs) have proven to be a very effective way to provide stormwater education to a large and diverse portion of the population. Local radio stations, TV stations, and newspapers will be contacted by the Hamilton County Phase II Public Education Steering Committee by November 2005 about the possibility of running stormwater quality PSAs. The Co-Permittees will track the number of PSAs produced and the number of airings and publications. As this activity progresses, details will be included with the Co-Permittees' annual SWQMP report.

The Co-Permittees anticipate that the Hamilton County Phase II Public Education Steering Committee will conduct mass media solicitations. In the event that they do not, the Co-Permittees will contact local media outlets about the possibility of running stormwater PSAs.

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**Table 3-1  
Public Education and Outreach BMPs**

| Best Management Practice (BMP)   | Measurable Goals  | Timeline  | Documentation and Tracking   | Responsible Party  |
|--|---|---|--|--|
| <p><b>Hamilton County Phase II Public Education Steering Committee</b></p> | <ul style="list-style-type: none"> <li>Attend and participate in monthly Steering Committee meetings to ensure the effective development and implementation of educational BMPs.</li> </ul> | <p>Ongoing participation began in 2004.</p> <p>Participation will continue through 2005 at a minimum.</p> | <ul style="list-style-type: none"> <li>Document dates of meetings attended.</li> <li>Track attendees at each meeting.</li> <li>Record meeting minutes.</li> <li>Track financial contributions.</li> <li>Track with Programmatic Indicator #1, #2, and #3</li> </ul>  | <p><b>County Surveyor's Office</b></p> <p><b>Cicero Parks Department</b></p> <p><b>Carmel Engineering Department</b></p> <p><b>Hamilton County Phase II Public Education Steering Committee.</b></p> |
| <p><b>Public Meetings</b></p>  | <ul style="list-style-type: none"> <li>Conduct additional public meetings to educate citizens on stormwater quality and to solicit participation in stormwater programs.</li> </ul>         | <p>Additional Public meetings conducted by July 2005.</p>   | <ul style="list-style-type: none"> <li>Document the date, time, attendance and outcome of each meeting.</li> <li>Record meeting minutes.</li> <li>Include checkboxes on all sign up sheets allowing attendees to classify themselves as residents, visitors, public service employees, commercial and industrial employees, or construction site employees.</li> <li>Track using Programmatic Indicators #1, #2, #3</li> </ul> | <p><b>County Surveyor's Office</b></p> <p><b>Cicero Parks Department</b></p> <p><b>Carmel Engineering Department</b></p> <p><b>Hamilton County Phase II Public Education Steering Committee.</b></p> |

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| <b>Best Management Practice (BMP)</b>   | <b>Measurable Goals</b>  | <b>Timeline</b>   | <b>Documentation and Tracking</b>  | <b>Responsible Party</b>   |
|---|--|---|--|--|
| <b>Stormwater Survey</b>                | <ul style="list-style-type: none"> <li>▪ Compile Survey results by February 2005, in order to identify existing constituent knowledge of stormwater issues.</li> </ul> | <p>Survey conducted July 2004 – November 2004.</p> <p>Results evaluated in February 2005.</p> | <ul style="list-style-type: none"> <li>▪ Document the number of surveys distributed and methods used for distribution.</li> <li>▪ Track survey responses.</li> <li>▪ Track using Programmatic Indicators #1 and #2.</li> </ul> | <p><b>County Surveyor's Office</b></p> <p><b>Cicero Parks Department</b></p> <p><b>Carmel Engineering Department</b></p> <p><b>Hamilton County Phase II Public Education Steering Committee.</b></p> |
| <b>Stormwater Educational Brochures</b> | <ul style="list-style-type: none"> <li>▪ Develop the first stormwater brochures by November 2005.</li> </ul>   | <p>Begin distributing brochures by January 2006.</p>  | <ul style="list-style-type: none"> <li>▪ Document the total number of each brochure that is distributed and methods used to distribute them.</li> <li>▪ Track using Programmatic Indicator #1.</li> </ul>                      | <p><b>County Surveyor's Office</b></p> <p><b>Cicero Parks Department</b></p> <p><b>Carmel Engineering Department</b></p> <p><b>Hamilton County Phase II Public Education Steering Committee.</b></p> |
| <b>Stormwater Newsletters</b>           | <ul style="list-style-type: none"> <li>▪ Work with the SWCD and other local entities to publish stormwater articles in existing newsletters.</li> </ul>                | <p>Begin publishing stormwater articles during the first quarter of 2005.</p>                 | <ul style="list-style-type: none"> <li>▪ Track number of articles printed, and the number of articles disseminated.</li> <li>▪ Save a copy of each newsletter</li> </ul>   | <p><b>County Surveyor's Office</b></p> <p><b>Cicero Parks Department</b></p>   |

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| Best Management Practice (BMP)      | Measurable Goals   | Timeline                                   | Documentation and Tracking  | Responsible Party   |
|-------------------------------------|--|--|---|---|
|                                     |  |  | containing educational stormwater information for inclusion in annual reports. <ul style="list-style-type: none"> <li>▪ Track using Programmatic Indicator #1.</li> </ul>   | <b>Carmel Engineering Department</b><br><br><b>Hamilton County Phase II Public Education Steering Committee</b>   |
| <b>Stormwater Website</b>           | <ul style="list-style-type: none"> <li>▪ Develop a regional stormwater website to educate constituents on their potential impacts to stormwater quality</li> </ul>     | Beginning in 2005, then ongoing.           | <ul style="list-style-type: none"> <li>▪ Track the number of “hits” the site receives.</li> <li>▪ Document all questions and comments received via the webpage.</li> <li>▪ Document all responses made to questions and comments received.</li> <li>▪ Track using Programmatic Indicator #1.</li> </ul>                 | <b>County Surveyor’s Office</b><br><br><b>Carmel Engineering Department</b><br><br><b>Cicero Parks Department</b><br><br><b>Hamilton County Phase II Public Education Steering Committee.</b> |
| <b>HHW and Recycling Promotions</b> | <ul style="list-style-type: none"> <li>▪ Promote the HHW facilities operated by the City of Carmel and the Hamilton County Solid Waste Management District.</li> </ul> | Promotions to begin in 2005, then ongoing. | <ul style="list-style-type: none"> <li>▪ Continue to track the amount of material collected at HHW facilities.</li> <li>▪ Document dates, times, and attendance at all presentations to citizen and school groups that incorporate stormwater quality discussions.</li> <li>▪ Track the number of stormwater</li> </ul> | <b>County Surveyor’s Office</b><br><br><b>Cicero Parks Department</b><br><br><b>Carmel Engineering Department</b><br><br><b>Carmel Utilities</b>  |

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| Best Management Practice (BMP)                                | Measurable Goals  | Timeline   | Documentation and Tracking  | Responsible Party   |
|---|---|--|---|---|
|   |   |  | brochures distributed on an annual basis.<br><ul style="list-style-type: none"> <li>▪ Track using indicator #2, #3, #10, #11, and #12.</li> </ul>   | <b>Department</b><br><br><b>Hamilton County Solid Waste Management District</b><br><br><b>Hamilton County Phase II Public Education Steering Committee.</b> |
| <b>Soil and Water Conservation District (SWCD) Activities</b> | <ul style="list-style-type: none"> <li>▪ Coordinate with the SWCD to:                             <ul style="list-style-type: none"> <li>▪ Publish stormwater articles in quarterly newsletters.</li> <li>▪ Provide education and outreach programs targeted towards the agricultural community.</li> <li>▪ Conduct annual erosion and sediment control trainings and workshops.</li> </ul> </li> </ul> | Ongoing and annual activities beginning in 2005. | <ul style="list-style-type: none"> <li>▪ Track number of stormwater related articles published.</li> <li>▪ Track the number and type of educational programs and activities conducted targeting the agricultural community.</li> <li>▪ Document dates, times, and attendance at all workshops/trainings focused on stormwater quality related issues.</li> <li>▪ Track using Programmatic Indicator #1, #2, and #3</li> </ul> | <b>County Surveyor's Office</b><br><br><b>Cicero Parks Department</b><br><br><b>Carmel Engineering Department</b><br><br><b>Hamilton County SWCD</b>        |

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| <b>Best Management Practice (BMP)</b> | <b>Measurable Goals</b>   | <b>Timeline</b>                 | <b>Documentation and Tracking</b>   | <b>Responsible Party</b>  |
|---------------------------------------|---|---------------------------------|---|---|
| <b>Mass Media Solicitation</b>        | <ul style="list-style-type: none"> <li>▪ Contact local media outlets about running stormwater PSAs and articles.</li> </ul> | Contacts made in November 2005. | <ul style="list-style-type: none"> <li>▪ Document number of contacts made and the number of stormwater articles or PSAs released per year.</li> </ul> | <b>County Surveyor's Office</b><br><br><b>Cicero Parks Department</b><br><br><b>Carmel Engineering Department</b><br><br><b>Hamilton County Phase II Public Education Steering Committee.</b> |

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**4.0 MINIMUM CONTROL MEASURE #2  
PUBLIC PARTICIPATION AND INVOLVEMENT**

Rule 13 requires that documented opportunities are given to constituents within the MS4 area to participate in the storm water management program development and implementation. The MS4 entity must comply with public notice requirements to allow public comment. An initial assessment of MS4 area constituents must be conducted to identify interested individuals for participation in the MS4 area stormwater program.

**4.1 EXISTING PUBLIC PARTICIPATION AND INVOLVEMENT BMPs**

Compliance with this MCM requires MS4s to demonstrate that residents, visitors, public service employees, commercial and industrial facilities, and construction site personnel within the MS4 are educated about the impacts of polluted stormwater runoff on MS4 area receiving waters.

Existing Public Participation and Involvement program performed by **Hamilton County** are as follows:

- The SWCD has ordered a large quantity of stormwater inlet stencils and has begun to solicit interest in inlet stenciling projects with various departments.
- The Hamilton County EMA provides communications support for various White River Clean-up events.

Existing Public Participation and Involvement program performed by the **City of Carmel** are as follows:

- The Carmel Street Department manages the City's Recycling Center program.
- The Carmel Clay Parks & Recreation Department offer a variety of volunteer opportunities including Trailblazers, Hazel Landing Cleanup, Picking up the Parks, Tidying the Trail, and many others. These volunteer opportunities are promoted on the City's website.
- The Carmel Fire Department has a training coordinator who is responsible for scheduling and arranging a variety of public education events and activities.
- The Carmel Department of Community Services manages the City's Adopt-A-Street program.

Existing Public Participation and Involvement programs performed by the **Town of Cicero** are as follows:

- The Town of Cicero recently partnered with the SWCD and Boy Scouts to install

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stormwater stencils on town storm sewer inlets.

- Several town departments and various local groups participate in annual community clean up events (Street and Utilities, Parks, Fire, Key Bank, Seventh Day Adventist).

The Co-Permittees' existing Public Education and Outreach activities will help ensure the County's compliance with requirements of Rule 13. However, these activities are currently not sufficient to address the requirements of Rule 13.

#### **4.2 PROPOSED PUBLIC PARTICIPATION AND INVOLVEMENT BMPs**

As mentioned in Section 3.2, in an effort to form a regional stormwater education partnership, the Town of Arcadia, the Town of Westfield, the City of Noblesville, and the Co-Permittees have formed the Hamilton County Phase II Public Education Steering Committee. The Committee's purpose is to develop and implement Public Education and Outreach and Public Participation and Involvement programs and activities throughout Hamilton County that are consistent and complimentary in nature.

In order to ensure the successful development and implementation of Public Education and Outreach and Public Participation and Involvement Programs in compliance with Rule 13, the Co-Permittees and the communities listed above have entered into a Memorandum of Understanding (MOU). A fully executed copy of the MOU is included in Appendix D of this report. The Town of Fishers is also actively participating with the Steering Committee, although they have not signed the MOU as of submittal time. If for any reason, the Co-Permittees decide that the terms of the MOU are no longer in their best interest, they will terminate the agreement and will be responsible for implementing and/or revising the Public Education and Outreach and Public Participation and Involvement BMPs as outlined below.

Reduction goal percentages associated with this MCM are correlated to the amount of constituent participation. Greater constituent participation will result in greater reductions in certain stormwater pollutants.

**Table 4-1** provides a summary of the Public Participation and Involvement BMPs to be implemented and identifies the measurable goals, timelines, documentation and tracking needs, and responsible parties associated with each BMP. A detailed description of each BMP is provided below.

#### **Hamilton County Phase II Public Education Steering Committee**

To ensure the effective development and implementation of Public Education and Outreach programs and activities, Hamilton County Phase II communities (Hamilton County, the City of Carmel, the Town of Cicero, the City of Noblesville, the Town of Westfield, and the Town of Arcadia) formed a partnership called the Hamilton County Phase II Public Education Steering Committee. The Committee's purpose is to develop

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and implement Public Education and Outreach and Public Participation and Involvement programs and activities throughout Hamilton County that are consistent and complimentary in nature.

The Steering Committee has met six times during the development of this plan and will continue to meet monthly or as needed throughout 2005 to ensure effective implementation of Public Education and Outreach and Public Participation and Involvement BMPs as outlined in this plan. The frequency of meetings for the remainder of the permit term will be determined in the final quarter of 2005. The Co-Permittees will document the number and description of each meeting, the number in attendance at each meeting, as well all progress made by the Steering Committee in their annual SWQMP report.

While committed to carrying out the BMPs outlined in this plan, the Hamilton County Public Education Steering Committee and the Co-Permittees will continue to identify new methods and opportunities for educating local residents throughout this permit term. In the event that educational BMPs besides those listed in this plan are implemented during this permit term, the Co-Permittees will report them to IDEM in annual SWQMP reports as either additions or substitutions to BMPs listed in this plan.

**Storm Drain Marking**

Beginning in September 2005, the Hamilton County Public Education Steering Committee will organize and conduct storm drain marking activities. These events will increase citizen awareness of local stormwater programs through public participation. The Hamilton County Phase II Public Education Steering Committee will identify locations such as subdivisions, commercial parks, and other areas located in MS4 areas throughout Hamilton County that warrant storm drain marking and will be tasked with coordinating and advertising these events and programs as well as identifying local volunteers and sponsors interested in participating in the programs. The Co-Permittees will document the number of volunteers that participate in storm drain marking events as well as the number and location of storm drains marked or cast. This information will be included in the Co-Permittees' annual SWQMP report.

The Co-Permittees anticipate that the Hamilton County Phase II Public Education Steering Committee will organize and conduct storm drain activities. In the event that they do not, the Co-Permittees will organize and conduct storm drain marking activities within their MS4 area.

**Clean-Up Events**

Beginning in 2005, the Hamilton County Phase II Public Education Committee will assist various groups with administering annual community clean-up events. These events will increase citizen awareness of local stormwater programs through participation. The Steering Committee will identify locations (common areas, stream segments, etc.) throughout Hamilton County that warrant such activities. Clean-up events will occur in conjunction with "Earth Day", the "Great American Clean-Up", the County 4-H Fair, Carmel Fest, and/or the White River Clean-Up. The Steering Committee will promote

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and advertise these events and programs as well as identify local volunteers and sponsors interested in participating in the events. The Co-Permittees will document the number of volunteers that participate in these events, as well as, the amount of waste collected as a result of these events. This information will be included in the Co-Permittees' annual SWQMP report.

The Co-Permittees anticipate that the Hamilton County Phase II Public Education Steering Committee will assist local groups with administering local community clean-up events. In the event that they do not, the Co-Permittees will assist local groups with conducting and administering annual community clean-up events within their MS4 area.

**Household Hazardous Waste and Recycling Program Promotions**

In order to educate community members on the importance of pollution prevention and recycling programs, the Hamilton County Phase II Public Education Steering Committee will frequently advertise and promote the activities and services of the Household Hazardous Waste (HHW) Facilities operated by the City of Carmel and the Hamilton County Solid Waste Management District. Effective advertisement will help minimize illegal dumping activities and improper disposal of household hazardous wastes. The Hamilton County HHW facility distributes a variety of educational brochures related to proper disposal of hazardous wastes and conducts a variety of educational programs for local schools and civic groups. The City of Carmel also operates a HHW program. Like the Hamilton County HHW facility, the Carmel HHW facility distributes a variety of educational materials and brochures and conducts a variety of educational programs. Advertisements and promotions for these services will occur on stormwater websites and brochures to be developed as part of the Co-Permittees' SWQMP. Both facilities currently track the amount of waste collected at their facilities. All educational activities, programs, and literature conducted and distributed and all waste collected at both facilities will be documented and included in the Co-Permittees' annual SWQMP report.

The Co-Permittees anticipate that the Hamilton County Phase II Public Education Steering Committee will advertise Household Hazardous Waste services. In the event that they do not, the Co-Permittees will promote and advertise those services as outlined above.

**Soil and Water Conservation District (SWCD) Activities**

Agricultural land uses account for approximately 89% of land uses within Hamilton Co-Permittees' MS4 Area. As concluded in Part B, to minimize potential impacts associated with agricultural land uses, agricultural producers need to be educated on and encouraged to use BMPs. The SWCD will encourage local agricultural producers to implement agricultural BMPs including, but not limited to, conservation tillage, nutrient and pesticide management, buffer strips, and wetland restoration. Day-to-day contacts with the agricultural community will be enhanced to include discussions on stormwater BMPs. The SWCD will include articles in their quarterly newsletter, *Town & Country*, on some of the following issues, the Co-Permittees' SWQMP, erosion and sediment control practices, agricultural issues related to stormwater quality as discussed above, opportunities for citizens to get involved with stormwater events such as community

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clean-up events and storm drain marking events, or other relevant stormwater information designed to enhance the urban and rural community's understanding of stormwater issues. In addition, the Hamilton County SWCD will continue to hold its annual erosion and sediment control workshops, which are designed to educate public employees and developers on erosion and sediment control practices. All program activities will be documented in the Co-Permittees' annual SWQMP report.

**Rule 13 Public Participation Lists**

Beginning in 2005, the Phase II Public Education Steering Committee will identify those groups and individuals that would be most likely to have an interest in local Stormwater Programs. They will also develop a list of volunteer activities, such as, water quality monitoring, storm drain marking, and community clean-up events that identified groups and individuals would most likely participate in. These lists will be used to document that sufficient opportunities were allotted to involve all constituents interested in participating in stormwater programs. Public participation lists, number of contacts made to individuals and groups, and volunteer hours donated will be included with the Co-Permittees' annual SWQMP report.

The Co-Permittees anticipate that the Hamilton County Phase II Public Education Steering Committee will develop Public Participation Lists. In the event that they do not, the Co-Permittees will develop public participation lists specific to their MS4 area.

**"Report-A-Polluter" Program**

Beginning in 2005, the Hamilton County Phase II Public Education Steering Committee will implement a "Report-A-Polluter" program to field complaints from the public on illegal dumping, illicit discharges, poor erosion control practices, and other activities that negatively impact stormwater quality. Citizens will have the opportunity to submit such complaints through an e-mail hotline. The program will improve public involvement and will serve as an education tool to inform the public about hazards associated with illicit discharges and illegal dumping.

The associated e-mail hotline will be advertised on the Stormwater websites discussed above and through the various stormwater brochures to be developed as part of the Co-Permittees' SWQMP. The Co-Permittees will document the number of complaints received, and document follow up actions taken on all reports. All of this information will be compiled and included in the Co-Permittees' annual SWQMP report.

The Co-Permittees anticipate that the Hamilton County Phase II Public Education Steering Committee will develop and implement a Report-A-Polluter program. In the event that they do not, the Co-Permittees will organize a Report-A-Polluter program specific to their MS4 area.

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**Table 4-1  
Public Participation and Involvement BMPs**

| Best Management Practice (BMP)                                      | Measurable Goals  | Timeline  | Documentation and Tracking   | Responsible Party  |
|---|---|---|--|--|
| <b>Hamilton County Phase II Public Education Steering Committee</b> | <ul style="list-style-type: none"> <li>▪ Attend and participate in monthly Steering Committee meetings to ensure the effective development and implementation of educational BMPs.</li> </ul> | <p>Ongoing participation began in 2004.</p> <p>Participation will continue through 2005 at a minimum.</p> | <ul style="list-style-type: none"> <li>▪ Document dates of meetings attended.</li> <li>▪ Track attendees at each meeting.</li> <li>▪ Record meeting minutes.</li> <li>▪ Track financial contributions.</li> <li>▪ Track with Programmatic Indicator #1, #2, and #3</li> </ul>  | <p><b>County Surveyor's Office</b></p> <p><b>Cicero Parks Department</b></p> <p><b>Carmel Engineering Department</b></p> <p><b>Hamilton County Phase II Public Education Steering Committee.</b></p> |
| <b>Storm Drain Marking</b>  | <ul style="list-style-type: none"> <li>▪ Develop and implement an annual storm drain marking event by October 2005.</li> </ul>  | <p>Begin in 2005, then on-going.</p>  | <ul style="list-style-type: none"> <li>▪ Document the date, time, and attendance, at each event.</li> <li>▪ Number and location of all marked inlets and marking method used.</li> <li>▪ Include checkboxes on all sign up sheets allowing attendees to classify themselves as residents, visitors, public service employees, commercial and industrial employees, or construction site employees.</li> <li>▪ Track using Programmatic Indicators #1, #2, # 3, and #4</li> </ul> | <p><b>County Surveyor's Office</b></p> <p><b>Cicero Parks Department</b></p> <p><b>Carmel Engineering Department</b></p> <p><b>Hamilton County Phase II Public Education Steering Committee</b></p>  |

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| <b>Best Management Practice (BMP)</b> | <b>Measurable Goals</b>   | <b>Timeline</b>                               | <b>Documentation and Tracking</b>   | <b>Responsible Party</b>   |
|---------------------------------------|---|---|---|--|
| <b>Clean-Up Events</b>                | <ul style="list-style-type: none"> <li>▪ Promote and advertise existing community and stream cleanups events through stormwater newsletter articles, brochures, and websites.</li> <li>▪</li> </ul> | Begin in 2005, then ongoing.                  | <ul style="list-style-type: none"> <li>▪ Document the date, time, and attendance, at each event.</li> <li>▪ Include checkboxes on all sign up sheets allowing attendees to classify themselves as residents, visitors, public service employees, commercial and industrial employees, or construction site employees.</li> <li>▪ Track using Programmatic Indicators #1, #2, and #3.</li> </ul>                               | <p><b>County Surveyor's Office</b></p> <p><b>Cicero Parks Department</b></p> <p><b>Carmel Engineering Department</b></p> <p><b>Hamilton County Phase II Public Education Steering Committee</b></p>  |
| <b>HHW and Recycling Promotions</b>   | <ul style="list-style-type: none"> <li>▪ Promote the HHW facilities operated by the City of Carmel and the Hamilton County Solid Waste Management District.</li> </ul>                              | Promotions to continue in 2005, then ongoing. | <ul style="list-style-type: none"> <li>▪ Continue to track the amount of material collected at HHW facilities.</li> <li>▪ Document dates, times, and attendance at all presentations to citizen and school groups that incorporate stormwater quality discussions.</li> <li>▪ Track the number of stormwater brochures distributed on an annual basis.</li> <li>▪ Track using indicator #2, #3, #10, #11, and #12.</li> </ul> | <p><b>County Surveyor's Office</b></p> <p><b>Cicero Parks Department</b></p> <p><b>Carmel Engineering Department</b></p> <p><b>Carmel Utilities Department</b></p> <p><b>Hamilton County Solid Waste Management District</b></p> <p><b>Hamilton County Phase II Public Education Steering Committee.</b></p> |

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| <b>Best Management Practice (BMP)</b>                         | <b>Measurable Goals</b>   | <b>Timeline</b>  | <b>Documentation and Tracking</b>  | <b>Responsible Party</b>   |
|---|---|--|--|--|
| <b>Soil and Water Conservation District (SWCD) Activities</b> | Coordinate with the SWCD to: <ul style="list-style-type: none"> <li>▪ Publish stormwater articles in quarterly newsletter.</li> <li>▪ Provide education and outreach programs targeted towards the agricultural community.</li> <li>▪ Hold annual ESC workshops and trainings.</li> </ul> | On-going and annual activities beginning in first quarter of 2005. | <ul style="list-style-type: none"> <li>▪ Document the number of stormwater related articles published.</li> <li>▪ Document the number and type of educational programs and activities conducted targeting the agricultural community.</li> <li>▪ Document dates, times, and attendance at all workshops/trainings focused on stormwater quality.</li> <li>▪ Track using Programmatic Indicators #1, #2, #3.</li> </ul> | <b>County Surveyor's Office</b><br><br><b>Cicero Parks Department</b><br><br><b>Carmel Engineering Department</b><br><br><b>Hamilton County SWCD</b>   |
| <b>Rule 13 Public Participation List</b>                      | Identify all groups and individuals likely to have an interest in participating in stormwater programs.   | Beginning in 2005, then ongoing.                                   | <ul style="list-style-type: none"> <li>▪ Document interested groups and individuals and submit this list in annual SWQMP reports.</li> <li>▪ Track using Programmatic Indicator #1, #2, and #3.</li> </ul>   | <b>County Surveyor's Office</b><br><br><b>Cicero Parks Department</b><br><br><b>Carmel Engineering Department</b><br><br><b>Hamilton County Phase II Public Education Steering Committee</b> |

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| <b>Best Management Practice (BMP)</b> | <b>Measurable Goals</b>  | <b>Timeline</b>          | <b>Documentation and Tracking</b>   | <b>Responsible Party</b>  |
|---------------------------------------|--|--------------------------|---|---|
| <b>“Report-A-Polluter” Program</b>    | <ul style="list-style-type: none"> <li>▪ Develop and implement “Report-A-Polluter” program by March 2005.</li> <li>▪ Include promotional material on the stormwater brochures developed under MCM #2.</li> </ul> | Implement by March 2005. | <ul style="list-style-type: none"> <li>▪ Document the number of complaints received and all follow up actions taken on reports.</li> <li>▪ Track using Programmatic Indicators #2 and #3.</li> <li>▪</li> </ul> | <p><b>County Surveyor’s Office</b></p> <p><b>Cicero Parks Department</b></p> <p><b>Carmel Engineering Department</b></p> <p><b>Hamilton County Phase II Public Education Steering Committee</b></p> |

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**5.0**

**MINIMUM CONTROL MEASURE #3**  
**ILLCIT DISCHARGE DETECTION AND ELIMINATION**

Rule 13 requires the development and implementation of a strategy to detect and eliminate illicit discharges to the MS4 conveyance. A storm sewer system map showing the location of all outfalls and MS4 conveyances under the MS4 operator's control and the names and locations of all waters that receive discharges from those outfalls must be developed. Through an ordinance or other regulatory mechanism, illicit discharges must be prohibited from entering the MS4 conveyances and appropriate enforcement procedures and actions are required.

A plan must be developed to detect, address, and eliminate illicit discharges, including illegal dumping into the MS4 conveyance. This plan must locate problem areas via dry weather screening or other means, determine the source, remove or otherwise correct illicit connections, and document actions taken. The plan must also identify all active industrial facilities within the MS4 area that discharge into the MS4 conveyance.

All public employees, businesses, and the general public must be educated about the hazards associated with illicit discharges and the improper disposal of waste. The educational effort must include informational brochures and guidances for specific audiences and school curricula and the public reporting of illicit discharges and spills. In order to give the public alternatives to improper disposal of wastes, the MS4 entities must initiate or help coordinate existing recycling programs in the MS4 area for commonly dumped wastes, such as motor oil, antifreeze, and pesticides.

**5.1 EXISTING ILLICIT DISCHARGE DETECTION AND ELIMINATION BMPs**

Compliance with this MCM requires MS4s to develop and implement a strategy to detect and eliminate illicit discharges to the MS4 conveyance system. To this end, the Co-Permittees will need to develop a storm sewer system map that identifies specified conveyances and outfalls. In addition, to maximize effectiveness, it will be important for relevant field staff to receive training and education regarding illicit discharges to ensure that staff identify and respond to illicit discharges appropriately.

Existing Illicit Discharge Detection and Elimination activities performed by **Hamilton County** are as follows:

- The Hamilton County Surveyor's Office has mapped all county regulated drains.
- The Hamilton County Surveyor's Office maintains GPS units that could be used to locate and map stormwater outfalls.
- Riverview Hospital has CADD drawings of stormwater conveyances for their entire campus.

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- The Health Department has the ability to conduct water quality monitoring that could support illicit discharge detection efforts. The Health Department currently conducts E.coli water quality monitoring at or near public access points to recreational waterbodies.
- The Parks and Recreation Department monitors water quality at Morse Reservoir Beach and Cool Creek Park.
- The Hamilton County EMA has developed a spill response plan.
- Hamilton County has an Ordinance (Sec 14-25-1-1) prohibiting industrial cooling waters or unprocessed waters from being discharged into any unregulated ditch, subsurface drain, stormwater or natural outlet which is located within any right of way.

Existing Illicit Discharge Detection and Elimination activities performed by the **City of Carmel** are as follows:

- The Carmel Street Department manages the City's Recycling Center program.
- The Carmel Street Department documents the amount of material brought to the City Recycling Center through weekly tonnage reports.
- The Carmel Utilities Department does occasional video inspections of the storm sewer system.
- The Carmel DIS provides short and long-term support and maintenance of the City's wireless network providing wireless laptop computer service to the Police, Fire and Community Services Departments. This will be useful in responding to hazardous spills and accidents.
- The Carmel Fire Department performs inspections of all town businesses, and tracks all Sara Title III facilities. Inspected facilities storing Hazardous Materials are reported to dispatch. Dispatch records and documents those facilities, so that the department is aware of all risks associated with responding to emergency calls from these facilities.
- The Carmel Fire Department tracks the number of Haz-Mat runs made on an annual basis. Additionally, the department documents how they respond during each run.

Existing Illicit Discharge Detection and Elimination activities performed by **Town of Cicero** are as follows:

- In 1992, the Cicero Street and Utilities Department conducted video monitoring and dye and smoke testing on the sanitary sewer system in the old part of Town.

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- The Cicero Street and Utilities Department does occasional video monitoring of the storm sewer system.
- The Cicero Fire Department performs inspections on all town businesses, and tracks all Sara Title III facilities. Inspected facilities storing Hazardous Materials are referred to IDEM and the Hamilton County Emergency Management Agency.

The existing Illicit Discharge Detection and Elimination activities discussed above will help ensure the Co-Permittees' compliance with requirements of Rule 13. However, these activities are currently not sufficient to address the requirements of Rule 13.

## **5.2 PROPOSED ILLICIT DISCHARGE DETECTION AND ELIMINATION BMPs**

The following Storm Water Illicit Discharge Detection and Elimination (IDDE) BMPs will be developed and implemented by the Co-Permittees in order to comply with the minimum requirements of this MCM. Existing BMPs identified in subsection 5.1 with any needed enhancements, as well as, any new BMPs are included in this section. The Copermitees' reduction goal is to remove 25% of known illicit discharges from their conveyance system each year for permit years two through five. However, the political and socioeconomic circumstances often associated with illicit discharges may limit the Copermitees' ability to meet this goal.

**Table 5-1** provides a summary of the IDDE BMPs listed below and identifies the measurable goals, timelines, documentation and tracking needs, and responsible parties associated with each BMP. A detailed description of each BMP is provided below.

### **Stormwater System Map**

As required by Rule 13, the Co-Permittees will develop a storm sewer system map that identifies the locations of all outfalls and conveyances under the MS4 operator's control. The Hamilton County Surveyor's Office is currently under contract with Woolpert LLP to map stormwater conveyances and outfalls under the County's control. Woolpert has also recently completed a pilot project within the City of Carmel to conduct stormwater conveyance and outfall mapping and dry weather screening within the Bluewoods Creek Watershed. If this project proves to be successful, the City will likely work with Woolpert to conduct mapping of the City's entire storm sewer system. The Town of Cicero is currently in discussions with Woolpert and other firms regarding the development of a map of the Town's stormwater conveyances and outfalls.

Upon completion of maps specific to each individual community, the Co-Permittees will work with their contractors to develop a comprehensive stormwater conveyance map that identifies all stormwater conveyances and outfalls under the Co-Permittees' control. Having an accurate and comprehensive map of the Co-Permittees' MS4 conveyance system will increase the effectiveness and efficiency of responses to illicit discharges

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entering the storm sewer system. Only conveyance systems with a pipe diameter of twelve inches or larger and open ditches with a two foot or larger bottom width will be mapped. All mapping activities will be documented and included in the Co-Permittees' annual SWQMP report.

**Illicit Discharge Detection and Elimination Ordinance**

As required by Rule 13, the Co-Permittees have developed and will implement and enforce Illicit Discharge Detection and Elimination (IDDE) ordinances, which provide legal authority to keep illicit discharges out of the stormwater conveyance system. The County Surveyor's Office will be responsible for enforcing the requirements of their IDDE ordinance within unincorporated areas of Hamilton County. The Carmel Engineering Department will be responsible for enforcing the requirements of their IDDE ordinance within the City's jurisdiction. The Cicero Street and Utilities Department will be responsible for enforcing the requirements of the ordinance within the Town's jurisdiction. The Co-Permittees' IDDE ordinance is bound separately as supplemental material.

**Illicit Discharge Detection and Elimination Plan**

The Co-Permittees have developed an IDDE Plan, which is bound separately as supplemental material, to ensure effective detection and elimination of illicit discharges to the Co-Permittees' separate storm sewer system. The IDDE Plan identifies the methods for detecting, addressing, and eliminating illicit discharges, including illegal dumping, into the MS4 conveyance system. The plan includes specifics on dry weather screening, methods for determining the source of illicit discharges, removing or correcting illicit connections and documenting actions taken. Only conveyance systems with a pipe diameter of twenty-four inches or larger and open ditches with a two foot or larger bottom width will be screened. In addition, the IDDE Plan identifies all active industrial facilities within the MS4 area that discharge into the Co-Permittees' storm sewer system. The presumptive approach and reduction goal is to remove 25% of cross connections and illicit discharges from the conveyance system each year for permit years two through five. Program adjustments will be documented in the Co-Permittees' annual SWQMP report. A listing of active industrial facilities in the MS4 area, contact information, and standard industrial classification codes are contained in **Appendix L.**

**"Report-A-Polluter" Program**

Beginning in 2005, the Hamilton County Phase II Public Education Steering Committee will implement a "Report-A-Polluter" program to field complaints from the public on illegal dumping, illicit discharges, poor erosion control practices, and other activities that negatively impact stormwater quality. Citizens will have the opportunity to submit such complaints through an e-mail hotline. The program will improve public involvement and will serve as an education tool to inform the public about hazards associated with illicit discharges and illegal dumping.

The associated e-mail "hot-line" will be advertised on the Stormwater websites discussed above and through the various stormwater brochures to be developed as part

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of the Co-Permittees' SWQMP. The Co-Permittees will document the number of complaints received, and document follow up actions taken on all reports. All of this information will be compiled and included in the Co-Permittees' annual SWQMP report.

The Co-Permittees anticipate that the Hamilton County Phase II Public Education Steering Committee will develop and implement a Report-A-Polluter program. In the event that they do not, the Co-Permittees will organize a Report-A-Polluter program specific to their MS4 area.

**Storm Drain Marking**

Beginning in September 2005, the Hamilton County Public Education Steering Committee will organize and conduct storm drain marking activities. These events will increase citizen awareness of the local stormwater programs through public participation. The Hamilton County Phase II Public Education Steering Committee will identify locations such as subdivisions, commercial parks, and other areas located in MS4 areas throughout Hamilton County that warrant storm drain marking and will be tasked with coordinating and advertising these events and programs as well as identifying local volunteers and sponsors interested in participating in the programs. The Co-Permittees will document the number of volunteers that participate in storm drain marking events as well as the number and location of storm drains marked or cast. This information will be included in the Co-Permittees' annual SWQMP report. All newly installed stormwater inlets will be required to be pre-cast with "Dump No Waste - Drains to River" or similar message.

The Co-Permittees anticipate that the Hamilton County Phase II Public Education Steering Committee will organize and conduct storm drain activities. In the event that they do not, the Co-Permittees will organize and conduct storm drain marking activities within their MS4 area.

**Household Hazardous Waste and Recycling Program Promotions**

In order to educate community members on the importance of pollution prevention and recycling programs, the Co-Permittees will frequently advertise and promote the activities and services of the Household Hazardous Waste (HHW) Facilities operated by the City of Carmel and the Hamilton County Solid Waste Management District. Effective advertisement will help minimize illegal dumping activities and improper disposal of household hazardous wastes. The Hamilton County HHW facility distributes a variety of educational brochures related to proper disposal of hazardous wastes and conducts a variety of educational programs for local schools and civic groups. The City of Carmel also operates a HHW program. Like the Hamilton County HHW Facility the Carmel HHW Facility distributes a variety of educational materials and brochures and conducts a variety of educational programs. Advertisements and promotions for these services will occur on stormwater websites and brochures to be developed as part of the Co-Permittees' SWQMP. Both facilities currently track the amount of waste collected at their facilities. All educational activities, programs, and literature conducted and distributed and all waste collected at both facilities will be documented and included in the Co-Permittees' annual SWQMP report.

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The Co-Permittees anticipate that the Hamilton County Phase II Public Education Steering Committee will advertise Household Hazardous Waste services. In the event that they do not, the Co-Permittees will promote and advertise those services as outlined above.

**Annual IDDE, Good Housekeeping, and Pollution Prevention Staff Training**

The Co-Permittees will conduct training for relevant staff on the hazards associated with illicit discharges and improper disposal of waste and pollution prevention, including ways to manage activities to prevent substantial quantities of chemicals and water from entering the conveyance system. Appropriate MS4 entity staff will be trained beginning in 2005 and periodic refresher sessions will be conducted at least annually. The Co-Permittees will document training opportunities provided and attendees. Trainings will emphasize how substantial quantities of chemicals and water can lead to elevated levels of nutrients and toxins in receiving waters. Additional topics will include proper storage and disposal of hazardous wastes, vegetative waste handling, fertilizer and pesticide application, and the function of implemented BMPs. The number of trainings, number of staff attending trainings, and information presented will be tracked and reported in the Co-Permittees' annual SWQMP report.

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**Table 5-1  
Illicit Discharge Detection and Elimination BMPs**

| <b>Best Management Practice (BMP)</b>                               | <b>Measurable Goals</b>  | <b>Timeline</b>  | <b>Documentation and Tracking</b>   | <b>Responsible Party</b>  |
|---|--|--|---|---|
| <b>Stormwater System Map</b>  | <ul style="list-style-type: none"> <li>Map 25% of the conveyance system on an annual basis between 2005 and 2008.</li> </ul> | Begin January 2005, then ongoing.                              | <ul style="list-style-type: none"> <li>Track using Programmatic Indicators #5 and #6.</li> </ul>      | <b>County Surveyor's Office</b><br><br><b>Cicero Street and Utilities Department</b><br><br><b>Carmel Engineering Department</b>  |
| <b>Illicit Discharge Detection and Elimination (IDDE) Ordinance</b> | <ul style="list-style-type: none"> <li>Adopt an IDDE ordinance by February 2005</li> </ul>                                   | February 2005.   | <ul style="list-style-type: none"> <li>Track using Programmatic Indicators #7, #8, and #9.</li> </ul> | <b>County Surveyor's Office</b><br><br><b>Cicero Streets and Utilities Department</b><br><br><b>Carmel Engineering Department</b> |
| <b>IDDE Plan</b>  | <ul style="list-style-type: none"> <li>Identify and eliminate illicit storm sewer connections.</li> </ul>                    | Implementation beginning February 2005, then updated annually. | <ul style="list-style-type: none"> <li>Track using Programmatic Indicators #7, #8, and #9.</li> </ul> | <b>County Surveyor's Office</b><br><br><b>Cicero Street and Utilities Department</b>  |

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| <b>Best Management Practice (BMP)</b> | <b>Measurable Goals</b>  | <b>Timeline</b>              | <b>Documentation and Tracking</b>   | <b>Responsible Party</b>   |
|---------------------------------------|--|------------------------------|---|--|
|                                       |  |                              |   | <b>Carmel Engineering Department.</b>  |
| <b>“Report-A-Polluter” Program</b>    | <ul style="list-style-type: none"> <li>▪ Develop and implement “Report A Polluter” program by March 2005.</li> <li>▪ Include promotional material on the stormwater brochures developed under MCM #2.</li> </ul> | Implement by March 2005.     | <ul style="list-style-type: none"> <li>▪ Document the number of complaints received and all follow up actions taken on complaints.</li> <li>▪ Track using Programmatic Indicators #2 and #3.</li> </ul>   | <b>County Surveyor’s Office</b><br><br><b>Cicero Street and Utilities Department</b><br><br><b>Carmel Engineering Department.</b><br><br><b>Hamilton County Phase II Public Education Steering Committee</b> |
| <b>Storm Drain Marking</b>            | <ul style="list-style-type: none"> <li>▪ Develop and implement an annual storm drain marking event by October 2005.</li> </ul>   | Begin in 2005, then ongoing. | <ul style="list-style-type: none"> <li>▪ Document the date, time, and attendance, at each event.</li> <li>▪ Number and location of all marked inlets and marking method used.</li> <li>▪ Include checkboxes on all sign up sheets allowing attendees to classify themselves as residents, visitors, public service employees, commercial and industrial employees, or construction site employees.</li> <li>▪ Track Using Programmatic Indicators #1, #2 #3, and #4.</li> </ul> | <b>County Surveyor’s Office</b><br><br><b>Cicero Street and Utilities Department</b><br><br><b>Carmel Engineering Department.</b><br><br><b>Hamilton County Phase II Public Education Steering Committee</b> |

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| <b>Best Management Practice (BMP)</b>  | <b>Measurable Goals</b>   | <b>Timeline</b>                               | <b>Documentation and Tracking</b>   | <b>Responsible Party</b>  |
|--|---|---|---|---|
| <b>HHW and Recycling Promotions</b>  | <ul style="list-style-type: none"> <li>▪ Continue promoting the HHW facilities operated by the City of Carmel and the Hamilton County Solid Waste Management District in 2005.</li> </ul>       | Promotions to continue in 2005, then ongoing. | <ul style="list-style-type: none"> <li>▪ Continue to track the amount of material collected at HHW facilities.</li> <li>▪ Document dates, times, and attendance at all presentations to citizen and school groups that incorporate stormwater quality discussions.</li> <li>▪ Track the number of stormwater brochures distributed on an annual basis.</li> <li>▪ Track using indicator #2, #3, #10, #11, and #12.</li> </ul> | <p><b>County Surveyor's Office</b></p> <p><b>Cicero Parks Department</b></p> <p><b>Carmel Engineering Department</b></p> <p><b>Hamilton County Phase II Public Education Steering Committee.</b></p>  |
| <b>Annual IDDE, Good Housekeeping, &amp; Pollution Prevention Staff Training</b> | <ul style="list-style-type: none"> <li>▪ Develop and implement an annual IDDE and Good Housekeeping training program by November 2005.</li> <li>▪ Conduct annual refresher training.</li> </ul> | Trainings held in 2005, then annual updates.  | <ul style="list-style-type: none"> <li>▪ Document number of staff trained, number of training events held, and the curriculum covered in each training session.</li> <li>▪ Track using Programmatic Indicator #2 and #3.</li> </ul>   | <p><b>County Surveyor's Office</b></p> <p><b>County Highway Department</b></p> <p><b>County Parks Department</b></p> <p><b>County Building and Grounds Department</b></p> <p><b>Riverview Hospital</b></p> <p><b>Carmel Street Department</b></p> |

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| <b>Best Management Practice (BMP)</b> | <b>Measurable Goals</b> | <b>Timeline</b> | <b>Documentation and Tracking</b> | <b>Responsible Party</b>   |
|---------------------------------------|-------------------------|-----------------|-----------------------------------|--|
|                                       |                         |                 |                                   | <b>Carmel Utilities Department</b><br><br><b>Cicero Street and Utilities Department</b><br><br><b>Cicero Parks Department.</b> |

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**6.0 MINIMUM CONTROL MEASURE #4  
CONSTRUCTION SITE STORMWATER RUNOFF CONTROL**

Rule 13 requires the development of an ordinance or other regulatory mechanism and establishment of a construction program that controls polluted runoff from construction activities that disturb one or more acres of land in the MS4 area. This construction program must include a permitting process, erosion control plan review process, site inspections, and enforcement. The permitting process must include a requirement for the construction project site owner to submit a copy of the permit application directly to IDEM. MS4 entities must provide an opportunity to the local SWCD to provide comments and recommendations to the MS4 operator on individual projects.

The construction program must include requirements for the implementation of appropriate BMPs on construction sites to control sediment, erosion, and other waste. MS4 entities must review and approve construction plans submitted by the construction site operator before construction activity commences. Procedures must be developed for site inspection and enforcement to ensure that BMPs are properly installed. These procedures must include a means to identify priority sites for inspection and enforcement, as well as, a means to receive and consider public inquiries, concerns, and information submitted regarding local construction activities. A tracking process must be implemented in which submitted public information is documented and then given to appropriate staff for follow up. MS4 area personnel responsible for plan review, inspection, and enforcement of construction activities shall receive annual training.

**6.1 EXISTING CONSTRUCTION SITE STORMWATER RUNOFF CONTROL BMPs**

Compliance with this MCM requires MS4s to develop, implement, manage, and enforce an erosion and sediment control program for construction activities that disturb one or more acres of land within the MS4 area. In Hamilton County, Stormwater Runoff Controls for all construction activities are currently regulated under the Subdivision Control Ordinance, County Highway Road Construction Standards, the Surveyor's Office Regulated Drain Design Standards, and the State of Indiana's Rule 5 requirements. In the City of Carmel, Stormwater Runoff Controls for all construction activities are currently regulated via the Subdivision Control Ordinance and the State of Indiana's Rule 5 requirements. In the Town of Cicero, Stormwater Runoff Controls for all construction activities are currently regulated via the Zoning Ordinance and the State of Indiana's Rule 5 requirements.

Existing local Construction Site Runoff Control activities implemented by **Hamilton County** are as follows:

- The Surveyor's Office has created a Stormwater Standards Task Force to create standards for construction site runoff, post-construction runoff, and ordinance development.

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- The Plan Commission reviews site development plans to ensure compliance with the Comprehensive Plan, Zoning Ordinance, and Subdivision Control Ordinance.
- The Surveyor's Office conducts plan reviews regarding new construction, including plat reviews, detention requirements, construction plans, engineer estimates, and permit applications.
- The Soil and Water Conservation District reviews and approves erosion and sediment control plans according to Rule 5 requirements (sites disturbing 1 acres or more of land) for Hamilton County, Noblesville, Carmel, Fishers, etc.
- The County Highway Department conducts plan reviews and issues permits for construction projects in County right of ways or on any County roads.
- The Plan Commission enforces easements and right-of-ways along regulated drains, waterways, and ditches.
- The Plan Commission coordinates the Technical Advisory Committee (TAC) meetings to complete plan reviews with input from all appropriate departments.
- The Highway Department requires both its contractors and in-house crews to adhere to County Highway's Road Construction Standards, which includes an erosion and sediment control program for construction activities. Standards include the following:
  - Prohibition of filling of curb and gutter storm sewer lines.
  - Requirement for repairing/ replacing of all sod, swales, side ditches, shoulders, and other improvements during construction within right of way.
  - Requirement that anyone who damages a stormwater drain must notify the Highway Department and then repair the drain as directed by a county inspector.
  - Prohibition of dragging or depositing mud or soil onto a county road from any construction site.
  - Prohibition of erosion of soils from a construction site onto a county roadway or into a county roadway drainage system.
  - Prohibition of construction materials or the cleaning of equipment directly or indirectly into any county roadway drainage system.
  - All requirements/prohibitions enforceable as an ordinance violation punishable up to \$2,500 dollars. It also requires restitution of all damages.
- County ordinance prohibits the filling of land in floodplains.
- County ordinance requires developers working on land traversed by a watercourse to repair all stream bank erosion resulting from their work.
- The Surveyor's office has created a Wellhead Protection Task Force and a wellhead protection ordinance to control development within wellhead protection

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areas. The Town of Cicero is covered by this ordinance.

- Hamilton County requires pre-cast storm drain inlets to be installed in new developments. Inlets must include “Do Not Dump – Drains to River” or a similar message.

Existing local Construction Site Runoff Control activities implemented by the **City of Carmel** are as follows:

- Carmel is participating in the Hamilton County Stormwater Standards Task Force.
- The Department of Information Services provides short and long-term support and maintenance of the City’s LAN-based data management software (*Pentamation*). *Pentamation* is designed to assist local governments with tracking and reporting on development projects.
- The City of Carmel has a Wellhead Protection Ordinance.
- The Community Services Department meets with the development community on a project by project basis.
- A Technical Advisory Committee (TAC) process is used to provide plan reviews and collect comments from all City departments, the Hamilton County Surveyor’s Office and the SWCD.
- Stormwater management (water quantity) is considered in the current plan review process. The SWCD is currently reviewing ESC Plans for compliance with Rule 5 requirements. Historically, stop work orders have been issued by the City of Carmel on the behalf of the SWCD when they have had ESC concerns.
- Section 3.9 of Chapter 5 of the Subdivision Control Ordinance requires the submission of an erosion control plan that identifies methods to control erosion and sedimentation before, during and following development and construction. These methods may include temporary seeding, sediment detention basins, erosion prevention devices and other similar means that meet the Hamilton County SWCD guidelines for urban development.
- The Hamilton County Soil and Water Conservation District (SWCD) reviews and approves erosion and sediment control plans according to Rule 5 requirements for sites disturbing one (1) acre or more.

Existing local Construction Site Runoff Control activities implemented by the **Town of Cicero** are as follows:

- Cicero is participating in the Hamilton County Stormwater Standards Task Force.

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- Article 7; Section 10 of the Zoning Ordinance identifies “Environmental Standards (EN)”. These standards include surface water; drainage; preservation of natural/historic features; erosion prevention; alterations to shoreline; retention, detention, and pond edges; and projects affecting regulated drains. Maintaining the natural drainage and existing topography is encouraged where possible. On-site detention of 100-yr storm event unless the Town Engineer or County Surveyor suggest otherwise. All drainage plans are to be approved and reviewed by Town Engineer, Cicero Building and Public Works, or the County Surveyor. Areas cleared must be graded and seeded within 30 days to prevent soil erosion. Ponds for retention and detention must be maintained with a buffer of natural plantings, and rip rap is only allowed at inlet/outlet structures.
- The Plan Commission coordinates the development review process with the Surveyor’s Office, SWCD, and the Health Department.
- The Town has recently adopted an ordinance prohibiting the accumulation of mud on Town streets.
- The Plan Commission reviews site development plans; erosion and sediment control plans; and conduct site reviews to ensure compliance with the Comprehensive Plan and Zoning Ordinance.
- Brochures addressing issues related to septic systems, drainage, and growth and development are available to citizens at the Hamilton County Judicial Center in the Plan Commission office.
- New subdivisions are required to connect to the Town’s sewer and water systems.
- The Hamilton County Soil and Water Conservation District (SWCD) reviews and approves erosion and sediment control plans according to Rule 5 requirements for sites disturbing one (1) acre or more.
- Plan Commission staff are available to speak to landowners and developers by appointment or at regularly scheduled Plan Commission meetings. The department also schedules regular meetings (twice a year) with the development community to review development issues.

The existing Construction Site Stormwater Control activities discussed above will help ensure the Co-Permittees’ compliance with requirements of Rule 13. However, these activities are currently not sufficient to address the requirements of Rule 13.

**6.2 PROPOSED CONSTRUCTION SITE STORMWATER RUNOFF CONTROL BMPs**

The following Construction Site Stormwater Runoff Control BMPs will be developed and

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implemented by the Co-Permittees in order to comply with the minimum requirements of this MCM. Existing BMPs identified in subsection 6.1 with any needed enhancements, as well as, any new BMPs are included in this section. It is anticipated that by March 2005, the Co-Permittees will initiate the implementation of a Construction Site Stormwater Runoff Control Program as part of this Part C Plan, which outlines the overall strategy for gradually implementing the program and its corresponding BMPs over the next four years. The program is designed to minimize the amount of sediment and other pollutants from being discharged from construction sites. The presumptive approach of implementing this program assumes that these pollutants will be reduced each year.

**Table 6-1** provides a summary of the Construction Site BMPs to be implemented and identifies the measurable goals, timeline, documentation and tracking needs, and responsible parties associated with each BMP. A detailed description of each BMP is provided below.

**Erosion and Sediment Control Ordinance**

To minimize water quality impacts of development occurring within the Co-Permittees' MS4 area and to ensure that new and redevelopment is managed as efficiently as possible, the Co-Permittees have developed Stormwater Runoff ordinances fulfilling the requirements of 327 IAC 15-5 (Rule 5). Within unincorporated areas of Hamilton County and the Town of Cicero the ordinances will be enforced by the County Surveyor's Office. Within the City of Carmel the ordinance will be enforced by the Carmel Engineering Department. These ordinances address both construction site runoff and post-construction site runoff. The Co-Permittees will review their ordinances annually to ensure they meet the minimum requirements of Rule 5.

**Plan Review, Site Inspection, and Enforcement**

Plan reviews for projects occurring within unincorporated portions of Hamilton County and within the Town of Cicero will be reviewed for compliance by staff from either the Hamilton County Plan Commission or the Hamilton County Surveyor's Office. Construction plans for projects occurring within the City of Carmel will be reviewed by staff from the Carmel Engineering Department. These departments will also be responsible for conducting site inspections to ensure that practices listed in the construction plan are being installed properly in the field and are in compliance with local ordinances. Within the City of Carmel, the Department of Community Services' Division of Building and Code Enforcement will also assist with conducting site inspections. Copies of submitted plans will be made available to the Hamilton County SWCD upon request. Beginning in 2005, the Co-Permittees intend to review 100% of construction plans and inspect 100% of construction sites with land disturbances greater than or equal to one acre occurring within their MS4 area. Construction site operator compliance will be documented by tracking the number of requests made for construction plan revisions, corrections made in response to inspection reports, and enforcement action required corrections. All such activities will be documented in the Co-Permittees' annual SWQMP report.

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**Staff Training**

The Co-Permittees will ensure that an adequate amount of skilled staff is in place to account for increased workloads associated with performing erosion and sediment control plan review, inspection, and enforcement as mandated by Rule 13. All Co-Permittee staff involved in plan review and site inspection activities will receive IDNR or equivalent training. The training program content will include at minimum information on construction and post-construction BMPs. All training activities including the specific curriculum, as well as the number of staff trained, will be included in the Co-Permittees' annual SWQMP report. In order to ensure that Co-Permittee staff responsible for plan review and inspection were adequately trained to conduct plan review and inspections associated with Rule 5 requirements, the Hamilton County SWCD held plan review and inspection training sessions in 2004. This event was attended by the Co-Permittees' current plan review and inspection staff.

**Erosion and Sediment Control and Post-Construction BMP Tracking Database**

Beginning in 2005, the Co-Permittees will develop and implement a database to track the status of construction projects, erosion and sediment control activities, and post-construction BMPs. The database will ensure efficient management and accurate reporting on the status of development within the Co-Permittees' MS4 area. The database will be utilized to track and document erosion and sediment control violations, community complaints, and public informational requests. The database will serve as an aid to inspection staff for follow-up inspections and, if necessary, enforcement actions. The Co-Permittees will submit updates made to the database to the IDEM monthly. All activities associated with the database will be summarized and included in the Co-Permittees' annual SWQMP report.

**Procedure for Prioritizing Construction Activities**

The Co-Permittees will develop a written procedure for prioritizing construction activities for the plan review, inspection, and enforcement. This process will ensure that construction and development site inspections are as effective as possible. Sites greater than or equal to 10 acres in size and sites containing slopes greater than or equal to 4%, wetlands, or endangered, threatened, or rare species will likely be prioritized for more frequent inspections. A copy of the written procedure will be submitted to the IDEM in the Co-Permittees' annual SWQMP report.

**Inspection and Enforcement Documentation**

The Co-Permittees will adopt the IDNR standard Inspection and Enforcement Form for Erosion and Sediment Control inspectors to complete following each site inspection. The form will ensure that Co-Permittee inspection procedures are consistent with State's Rule 5 program. To improve program compliance, all developers will be given a copy of the form following each inspection and required to sign suggesting their understanding and willingness to address any BMP inadequacies identified. If follow-up inspections prove that the identified BMP inadequacies were not addressed, the form will outline enforcement measures to be taken by the Co-Permittees. The IDNR standard Inspection and Enforcement form will be implemented in 2005. The form will

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be submitted with the Co-Permittees' first annual report in January 2006. Subsequent annual reports will include a copy of each form completed during each site inspection.

**Training for Construction Professionals**

The Co-Permittees will advertise and promote education and training opportunities for local construction and development professionals. IDNR, the Hamilton County SWCD and various other organizations around the state are planning to hold a variety of training modules on erosion and sediment control and post-construction policies and technologies. Appropriately trained professionals will improve the effectiveness of construction and post-construction planning, which will hopefully minimize the water quality impacts associated with new and redevelopment. The Co-Permittees will document all training programs promoted and will work with sponsoring agencies to track the participation and attendance of local construction and development professionals in such events. All relevant information will be included in the Co-Permittees' annual SWQMP report.

**Quality Assurance/Quality Control (QA/QC) of overall program**

In order to ensure consistency with the State's Rule 5 program and maintain overall program quality, the Co-Permittees will comply with Rule 5 on Co-Permittee-owned and operated projects. In 2005, the Co-Permittees will work with IDEM & IDNR to seek approval for the QA/QC program and to review projects owned and operated by the Co-Permittees. The Co-Permittees will continue to review the QA/QC program with agencies on an annual basis and will forward any changes to IDEM in their annual SWQMP report. The Co-Permittees will track the number of projects subject to Rule 5, the number of IDNR and IDEM meetings, and information discussed during the meetings. This action will allow the Co-Permittees to correct any program deficiencies or make updates based on new information or technology.

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**Table 6-1  
Construction Site Stormwater Runoff Control BMPs**

| <b>Best Management Practice (BMP)</b>                         | <b>Measurable Goals</b>  | <b>Timeline</b>  | <b>Documentation and Tracking</b>   | <b>Responsible Party</b>  |
|---|--|--|---|---|
| <b>Erosion and Sediment Control Ordinance</b>                 | <ul style="list-style-type: none"> <li>Adopt and begin implementing ESC Ordinances by March 2005.</li> </ul>   | The ordinances will be adopted by March 2005, and will be reviewed and updated annually. | <ul style="list-style-type: none"> <li>Document the number of construction sites occurring within the Co-Permittees' MS4 area.</li> </ul>   | <b>County Surveyor's Office</b><br><br><b>Carmel Engineering Department</b><br><br><b>Hamilton County Plan Commission</b>   |
| <b>Plan Review, Site Inspection, and Enforcement</b>          | <ul style="list-style-type: none"> <li>Review 100% of construction plans and inspect 100% of construction sites disturbing greater than or equal to one acre of land.</li> </ul> | Beginning 2005, then on-going.   | <ul style="list-style-type: none"> <li>Document the number of plans reviewed, the number of site inspections made and the number of enforcement actions taken.</li> </ul>   | <b>County Surveyor's Office</b><br><br><b>Carmel Engineering Department</b><br><br><b>Carmel Department of Community Services</b><br><br><b>Hamilton County Plan Commission</b> |
| <b>Staff Training</b>   | <ul style="list-style-type: none"> <li>Co-Permittee staff will attend annual trainings beginning in 2005.</li> </ul>   | Beginning in 2005 and occurring annually thereafter.                                     | <ul style="list-style-type: none"> <li>Document the date of the training, the issues covered at the training, and the number of staff members participating in the trainings.</li> <li>Track using Programmatic Indicators #2 and #3</li> </ul> | <b>County Surveyor's Office</b><br><br><b>Carmel Engineering Department</b><br><br><b>Hamilton County Plan Commission</b>   |
| <b>Erosion and Sediment Control and Post-construction BMP</b> | <ul style="list-style-type: none"> <li>Develop a tracking system by March 2005 to ensure</li> </ul>  | Beginning March 2005, then ongoing.  | <ul style="list-style-type: none"> <li>Document the number of plans reviewed, the number of site inspections made and the</li> </ul>  | <b>County Surveyor's Office</b>   |

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| <b>Best Management Practice (BMP)</b>                     | <b>Measurable Goals</b>  | <b>Timeline</b>                   | <b>Documentation and Tracking</b>   | <b>Responsible Party</b>   |
|---|--|-----------------------------------|---|--|
| <b>Tracking Database</b>                                  | effective management of active construction projects.  |                                   | <p>number of enforcement actions taken, the location of structural BMPs installed, inspected, and maintained or improved.</p> <ul style="list-style-type: none"> <li>▪ Submit monthly reports to IDEM.</li> <li>▪ Track using Programmatic Indicators #13, #14, #15, #16, #17, #18, and #19, #20, and #21.</li> </ul> | <p><b>Carmel Engineering Department</b></p> <p><b>Hamilton County Plan Commission</b></p>  |
| <b>Procedure for Prioritizing Construction Activities</b> | <ul style="list-style-type: none"> <li>▪ Develop a procedure for prioritizing construction sites for plan review and inspection by November 2005.</li> </ul> | November 2005                     | <ul style="list-style-type: none"> <li>▪ Submit procedure to the IDEM in first annual SWQMP report.</li> <li>▪ Track using Programmatic Indicator #15.</li> </ul>   | <p><b>County Surveyor's Office</b></p> <p><b>Carmel Engineering Department</b></p> <p><b>Hamilton County Plan Commission</b></p> |
| <b>Inspection and Enforcement Documentation</b>           | <ul style="list-style-type: none"> <li>▪ Adopt standard IDNR inspection forms to ensure effective management of active construction projects.</li> </ul>     | March 2005                        | <ul style="list-style-type: none"> <li>▪ Save a copy of all plan review and site inspection forms for submittal with the Co-Permittees' first annual SWQMP report.</li> </ul>   | <p><b>County Surveyor's Office</b></p> <p><b>Carmel Engineering Department</b></p> <p><b>Hamilton County Plan Commission</b></p> |
| <b>Training for Construction Professionals</b>            | <ul style="list-style-type: none"> <li>▪ Promote and advertise training programs and modules conducted by IDNR and other</li> </ul>                          | Beginning in 2005, then on-going. | <ul style="list-style-type: none"> <li>▪ Document the date of the trainings, the issues covered at the trainings, and the number participants attending the trainings.</li> </ul>   | <p><b>County Surveyor's Office</b></p> <p><b>Carmel Engineering Department</b></p>   |

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| <b>Best Management Practice (BMP)</b> | <b>Measurable Goals</b>  | <b>Timeline</b>      | <b>Documentation and Tracking</b>  | <b>Responsible Party</b>  |
|---------------------------------------|--|----------------------|--|---|
|                                       | organizations.   |                      |  | <b>Hamilton County Plan Commission</b>  |
| <b>QA/QC of Overall Program</b>       | <ul style="list-style-type: none"> <li>▪ Comply with Rule 5 on County owned and operated projects.</li> <li>▪ Review program with agencies at least annually.</li> </ul> | 2005, then annually. | <ul style="list-style-type: none"> <li>▪ Document dates, times and attendance at each meeting.</li> <li>▪ Document the number of Co-Permittee managed projects subject to Rule 5.</li> </ul> | <b>County Surveyor's Office</b><br><br><b>Carmel Engineering Department</b><br><br><b>Hamilton County Plan Commission</b> |

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**7.0 MINIMUM CONTROL MEASURE #5  
POST-CONSTRUCTION STORMWATER RUNOFF CONTROL**

Rule 13 requires the development of an ordinance or other regulatory mechanism and establishment of a post-construction program that addresses runoff from new development and redevelopment areas that disturb one or more acres of land in the MS4 area. This program must include a permitting process, plan review process, site inspections, and enforcement. MS4 area personnel responsible for plan review, inspection, and enforcement of Post-Construction BMPs shall receive annual training.

Where appropriate, MS4 entities must use a combination of storage, infiltration, filtering, or vegetative practices to reduce the impact of pollutants in storm water runoff on receiving waters in areas that are the responsibility of the MS4 entity. A written Operational and Maintenance (O&M) Plan must be developed and implemented for all existing storm water structural BMPs, which are under the control of the MS4 entity. As new Post-Construction BMPs are added to areas under the control of the MS4 entity, the O&M Plan must be updated accordingly.

**7.1 EXISTING POST-CONSTRUCTION SITE STORMWATER RUNOFF CONTROL BMPs**

Compliance with this MCM requires MS4s to develop a program for managing post-construction Best Management Practices (BMPs) that will ensure adequate, long-term stormwater quality benefits in new development and redevelopment activities. Once construction is complete, post-construction practices specified by the MS4 must be implemented to ensure adequate stormwater quality is maintained from the developed site via an enforceable ordinance or other regulatory mechanism.

Existing Post-Construction Site Stormwater Runoff Control activities implemented by Hamilton County are as follows:

- County Highway's Road Construction Standards, the Surveyor's Office Regulated Drain Design Standards, and the State of Indiana's Rule 5 requirements all provide detailed specifications for some post-construction BMPs.
- Hamilton County's proposed Wellhead Protection Ordinance precluded the use of infiltration practices, which is required by Rule 13.
- In February of 2004, a vortex separator was installed at the intersection of 216th St. and Little Chicago Road. The separator is believed to be functioning properly.
- A bio-swale for treating parking lot runoff is currently being constructed at the new County Park near Strawtown. The Swale is believed to be functioning

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properly.

- Cox Hall for the Hamilton County Parks has a restored wetland with prairie buffer.

Existing Post-Construction Site Stormwater Runoff Control activities implemented by the **City of Carmel** are as follows:

- The location of the proposed methods of storm drainage (storm drain and/or surface drainage) is required as part of the Requirements for Preliminary Plat (Chapter 5 Section 2 of the Subdivision Control Ordinance). This information is also required as part of the Final Plat (Chapter 5 Section 4) and Construction Plans (Chapter 5 Section 6).
- Riparian areas, 100-yr floodplain, wetlands, and “unique natural features” are identified throughout the 2020 Vision Plan as areas to be protected and preserved during the development review process.
- The Flood Hazard District identified in Chapter 22 Section 1 of the Zoning Ordinance (as part of the Indiana Legislature statute) recommends uninterrupted greenways along waterways to control flooding, improve water quality by filtering waterborne pollutants, and contain wetland areas.
- No development is allowed in SFHA without first obtaining an Improvement Location Permit (ILP) from the Director of the Department of Community Services (Chapter 22 Section 5 of the Zoning Ordinance). Permission must be granted from IDNR if the site is located in the identified floodway. The Director may issue an ILP for development in the floodway fringe providing such development does not increase the elevation of the regulatory flood and any buildings are located above the flood protection grade (2 feet above the 100-year elevation). If the site is located in an identified floodplain where the limits of the floodway and floodway fringe and the upstream drainage area is greater than 1 square mile, the applicant must forward plans to IDNR for review and comment. If the upstream drainage area is less than 1 square mile than the applicant must provide an engineering analysis showing the limits of the floodway, floodway fringe, and 100-year elevation for the site.
- Chapter 22 Section 6 of the Zoning Ordinance addresses Preventing Increased Damages from development in the floodplain. It states that no development in the SFHA shall create a damaging or potentially damaging increase in flood heights, velocity, or threat to public health and safety. No storage of chemicals is allowed in SFHA unless in flood proof containers.
- The supporting data that is required as part of the Preliminary Plat (Chapter 5 Section 3.4 of the Subdivision Control Ordinance) includes the potential for flooding on the site; the design of a stormwater system to handle a 10-year

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storm; the elevations of building pads (above the 100-year flood elevation); the expected impact of the proposed development's stormwater runoff on any receiving stream or downstream property; and the approximate location, size, and capacity of any retention basins to be located on site. The Hamilton County Drainage Board must provide comments to any alterations or use of legal drains. If the drainage area is greater than 1 square mile than comments and approval must be received from IDNR. This information is also required as part of the Final Plat (Chapter 5 Section 4) and Construction Plans (Chapter 5 Section 6).

- Chapter 7 of the Subdivision Control Ordinance outlines Open Space Standards for Major Subdivisions. These standards emphasize the protection of natural areas. Section 5.4 requires the protection of all FEMA identified floodway and floodway fringe areas. The removal of vegetation from floodway and floodway fringe areas is prohibited unless by the Hamilton County Drainage Board or Carmel Public Works. Federal jurisdictional wetlands that are one-quarter acre or greater are to also be preserved in their entirety and protected with a 50-foot buffer. Wetland mitigation is only allowed with approval from IDEM and the Commission (Chapter 7 Section 5.5). Maintaining a 100-foot White River Greenway buffer is a priority to improve the quality of the water and wildlife habitat (Chapter 7 Section 5.6). The greenway is identified as the community's most significant natural and cultural resource. All woodlands are to be evaluated by an arborist, landscape architect, or horticulturist prior to any subdivision development. These include mature, young, and scrub woodlands. Percentages restricting the amount of land that can be cleared for development include mature (15%), young (30%), and scrub (50%) woodland areas (Chapter 7 Section 5.7). Development in and around wooded areas is protected through Section 7.2 of Chapter 7 Woodland Protection Practices. These practices limit disturbance to the root zone during earthwork, limit storage of materials and equipment, and grade changes. A formula exists to replace trees in Natural Open Space through Afforestation and Reforestation (Chapter 7 Section 7.3).
  
- Chapter 8 identifies Standards of Required Improvements including Storm Drainage, Curb and Gutter, and Alternative Transportation. Storm drainage requirements include the development of an adequate stormwater system (and easements) in accordance with the City's standards; open ditches are allowed only where curb and gutter don't exist; and swales must be designed in accordance to the Hamilton County SWCD guidelines (Chapter 8 Section 7). Curb and gutter are required on all streets in accordance to City standards (Chapter 8 Section 8). Sidewalks are discussed under the heading Alternative Transportation. Sidewalks are mandatory in all subdivision developments; they must be 5 feet minimum width and located on both sides of the street (Chapter 7 Section 9).
  
- Designed Open Spaces include: greens, boulevards, greenbelts, planting strips, trails, paths, golf courses, and stormwater ponds (Chapter 7 Section 7.9 of the Subdivision Control Ordinance).

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Existing Post-Construction Site Stormwater Runoff Control activities implemented by **Town of Cicero** are as follows:

- According to the “Ranked Cumulative Needs” from the public input section of the Comprehensive Plan, “improve stormwater drainage” was the number one concern of Cicero residents.
- The Land Use section of the Comprehensive Plan identifies “Environmentally Sensitive Areas” that should be preserved through development standards. These areas include wetlands, floodplains, water features, riparian corridors, large tree lots, and unique vegetation.
- The Environmental section of the Comprehensive Plan addresses water quality, soil quality and management, wetland protection, woodland protection, stream and bank protection, and flood management.
- Ponds for retention and detention must be maintained with a buffer of natural plantings. Rip rap is only allowed at inlet/outlet structures.
- On-site detention of 100-yr storm event is required unless the Town Engineer or County Surveyor suggest otherwise.
- The Town of Cicero promotes growth and development as directed in the current Code of Land Use Ordinances.

The existing Post-Construction Stormwater Runoff Control activities discussed above will help ensure the Co-Permittees’ compliance with requirements of Rule 13. However, these activities are currently not sufficient to address the requirements of Rule 13.

**7.2 PROPOSED POST-CONSTRUCTION SITE STORMWATER RUNOFF CONTROL BMPs**

The following Post-Construction Site Stormwater Runoff Control BMPs will be developed and implemented by the Co-Permittees in order to comply with the minimum requirements of this MCM. Existing BMPs identified in subsection 7.1 with any needed enhancements, as well as, any new BMPs are included in this section. It is anticipated that by March 2005, the Co-Permittees will have initiated the implementation of a Post-Construction Site Stormwater Runoff Control Program as part of this Part C Plan, which outlines the overall strategy for gradually implementing the program and its corresponding BMPs over the next four years. The Co-Permittees’ program is designed to ensure adequate stormwater quality is maintained from developed sites. The presumptive approach of implementing this program assumes that overall stormwater quality will improve each year. The draft Hamilton County Drainage Standards Manual contains specific reduction goal percentages for each BMP.

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**Table 7-1** provides a summary of the Post-Construction Site Runoff BMPs to be implemented and identifies the measurable goals, timelines, documentation and tracking needs and responsible parties associated with each BMP. A Detailed description of each BMP is provided below.

**Post-Construction Control Ordinance**

The comprehensive runoff ordinances discussed in Section 6.2 includes Post Construction provisions that meet the minimum requirements of 327 IAC 15-13 (Rule 13). The Post-Construction provisions will minimize the water quality impacts from new/redevelopment occurring within the Co-Permittees' MS4 area and ensure that new and redevelopment within the MS4 area is managed as efficiently as possible. The Co-Permittees are currently developing the Hamilton County Drainage Standards Manual, which will be the Co-Permittees' official technical standards document.

The Co-Permittees will adopt a policy that controls stormwater runoff quality on Total Suspended Solids (TSS). This requirement is being adopted as the basis of their stormwater quality management program for all areas of jurisdiction.

The draft Hamilton County Drainage Standards Manual currently identifies twelve preapproved BMP methods to be used alone or in combination to achieve the stormwater quality goals for a given project. BMP measures likely to appear include, but may not be limited to the measures listed below.

- Bioretention
- Catch Basin inserts
- Cistern
- Wetland
- Underground Detention
- Wet Detention
- Extended Dry Detention
- Infiltration Basin
- Infiltration Trench
- Media Filtration Underground Sand
- Media Filtration Surface Sand
- Filter Strips

Note that a single BMP measure may not be adequate to achieve the water quality goals for a project. It is for this reason that a "treatment train", a number of BMPs in a series, is often required for a project.

Details regarding the pollutant removal rates and the applicability and design of these pre-approved BMPs are contained within the draft Hamilton County Drainage Standards Manual. The information provided establishes performance criteria for stormwater quality management and procedures to be followed when preparing a BMP plan for compliance. Post-construction BMPs must be sized to treat the water quality volume,  $WQ_v$ , for detention-based BMPs or the water quality discharge,  $Q_wq$ , for flow-through BMPs. The draft Hamilton County Drainage Standards Manual provides the methodology for calculating the water quality volume and water quality discharge values.

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According to the draft Hamilton County Drainage Standards Manual, BMPs not previously accepted by the Co-Permittees must be certified by a professional engineer licensed in State of Indiana and accepted through Hamilton County, the City of Carmel, or the Town of Cicero. American Society of Testing and Materials (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 re-entrainment and must have a low to medium maintenance requirement to be considered by the Co-Permittees. Testing to establish the TSS removal rate must be conducted by an independent testing facility, not the BMP manufacturer.

Within Hamilton County and the Town of Cicero, the ordinances will be enforced by the County Surveyor's Office. Within the City of Carmel, the ordinance will be enforced by the Engineering Department. The Co-Permittees will review their ordinance annually to ensure it meets the minimum requirements of Rule 5.

The draft Hamilton County Drainage Standards Manual referenced above is currently still under development and is anticipated to be completed in the spring of 2005.

**Plan Review, Site Inspection, and Enforcement**

Beginning in 2005, the Co-Permittees will conduct post-construction BMP plan reviews in conjunction with Erosion and Sediment Control plan reviews, post-construction BMP inspections in conjunction with construction site inspections, and if necessary will refer sites for enforcement actions. Plans will be reviewed to ensure that BMPs are being installed properly and are in compliance with the technological standards required as part of the Co-Permittees' ordinances containing specific reduction goal percentages for each BMP. Construction site operator compliance improvement will be documented via requested plan revisions made, corrections made in response to inspection reports and forms requests, and enforcement action required corrections. Enforcement actions include requiring corrective actions, fines, and/or stop work orders.

**Staff Training**

The Co-Permittees will ensure that an adequate amount of skilled staff is in place to account for increased workloads associated with performing erosion and sediment control and post-construction plan review, inspection, and enforcement as mandated by Rule 13. All Co-Permittee staff involved in plan review and site inspection activities will receive IDNR or equivalent training. The training program content will include at minimum information on construction and post-construction BMPs. All training activities including the specific curriculum, as well as the number of staff trained, will be included in the Co-Permittees' annual SWQMP report.

**Inspection and Enforcement Documentation**

The Co-Permittees will develop an inspection and enforcement form for Post-construction BMP inspectors to complete following each site inspection. The form will require inspectors to document Post-Construction BMP adequacies and inadequacies identified during each visit. All construction site managers will be given a copy of the

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form following each inspection and be required to sign suggesting their understanding and willingness to address any BMP inadequacies identified. If follow-up inspections prove that the identified BMP inadequacies were not addressed, the form will identify enforcement measures to be taken by the Co-Permittees. The form will be reviewed by an IDNR Stormwater Specialist and will be submitted with the Co-Permittees' first annual report.

**Post-Construction BMP Operation and Maintenance Plan**

The County will develop and implement an Operation and Maintenance (O&M) Plan for Co-Permittee-owned and -operated Post-Construction BMPs to ensure long-term effectiveness and adequacy of newly installed BMPs. Maintenance activities will be documented and included in the Co-Permittees' annual SWQMP report.

**Erosion and Sediment Control and Post-Construction BMP Tracking Database**

Beginning in March 2005, the Co-Permittees will begin implementing a database to track the status of construction projects, erosion and sediment control activities, and post-construction BMPs. The database will ensure efficient management and accurate reporting on the status of development within the Co-Permittees' MS4 area. The database will be utilized to track and document erosion and sediment control violations, community complaints, and public informational requests. The database will serve as an aid to inspection staff for follow-up inspections and, if necessary, enforcement actions. The Co-Permittees will submit updates made to the database to the IDEM monthly. All activities associated with the database will be summarized and included in the Co-Permittees' annual SWQMP report.

**Training for Construction Professionals**

The Co-Permittees will advertise and promote education and training opportunities for local construction and development professionals. IDNR, the Hamilton County SWCD and various other organizations around the state are planning to hold a variety of training modules on erosion and sediment control and post-construction policies and technologies. Appropriately trained professionals will improve the effectiveness of construction and post-construction planning, which will hopefully minimize the water quality impacts associated with new and redevelopment. The Co-Permittees will document all training programs promoted and will work with sponsoring agencies to track the participation and attendance of local construction and development professionals in such events. All relevant information will be included in the Co-Permittees' annual SWQMP report.

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**Table 7-1  
Post-Construction Site Stormwater Runoff Control BMPs**

| <b>Best Management Practice (BMP)</b>                | <b>Measurable Goals</b>  | <b>Timeline</b>   | <b>Documentation and Tracking</b>   | <b>Responsible Party</b>  |
|--|--|---|---|---|
| <b>Post-Construction Control Ordinance</b>           | <ul style="list-style-type: none"> <li>▪ Develop and implement post construction ordinance by March 2005.</li> </ul>   | The ordinance will be adopted by March 2005, and will be reviewed and updated annually. | <ul style="list-style-type: none"> <li>• Document the number of construction sites occurring within the Co-Permittees' MS4 area.</li> </ul>   | <b>County Surveyor's Office</b><br><br><b>Carmel Engineering Department</b><br><br><b>Hamilton County Plan Commission</b> |
| <b>Plan Review, Site Inspection, and Enforcement</b> | <ul style="list-style-type: none"> <li>▪ Review 100% of construction plans and inspect 100% of construction sites disturbing greater than or equal to one acre of land.</li> </ul> | Beginning March 2005, then on-going.  | <ul style="list-style-type: none"> <li>▪ Document the number of plans reviewed, the number of site inspections made and the number of enforcement actions taken.</li> </ul>               | <b>County Surveyor's Office</b><br><br><b>Carmel Engineering Department</b><br><br><b>Hamilton County Plan Commission</b> |
| <b>Staff Training</b>                                | <ul style="list-style-type: none"> <li>▪ Conduct annual staff trainings beginning in 2005.</li> </ul>  | Beginning in 2005, and occurring annually thereafter.                                   | <ul style="list-style-type: none"> <li>▪ Document the date of the training, the issues covered at the training, and the number of staff members participating in the training.</li> </ul> | <b>County Surveyor's Office</b><br><br><b>Carmel Engineering Department</b><br><br><b>Hamilton County Plan Commission</b> |
| <b>Inspection and Enforcement Documentation</b>      | <ul style="list-style-type: none"> <li>▪ Develop plan review and inspection forms by March 2005.</li> </ul>  | Develop by March 2005.  | <ul style="list-style-type: none"> <li>▪ Save a copy of all plan review and site inspection forms for submittal with the Co-</li> </ul>   | <b>County Surveyor's Office</b>   |

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| <b>Best Management Practice (BMP)</b>   | <b>Measurable Goals</b>  | <b>Timeline</b>                     | <b>Documentation and Tracking</b>   | <b>Responsible Party</b>  |
|---|--|-------------------------------------|---|---|
|   |  |                                     | Permittees' annual SWQMP report.  | <b>Carmel Engineering Department</b><br><br><b>Hamilton County Plan Commission</b>  |
| <b>Post-Construction BMP Operation and Maintenance Plan</b>                     | <ul style="list-style-type: none"> <li>▪ Develop and begin implementing plan by November 2005.</li> </ul>  | November 2005                       | <ul style="list-style-type: none"> <li>▪ Document all maintenance activities conducted on an annual basis.</li> <li>▪ Track using Programmatic Indicator #19</li> </ul>   | <b>County Surveyor's Office</b><br><br><b>County Highway Department</b><br><br><b>Carmel Engineering Department</b><br><br><b>Carmel Street Department</b><br><br><b>Cicero Street and Utilities Department</b> |
| <b>Erosion and Sediment Control and Post-Construction BMP Tracking Database</b> | <ul style="list-style-type: none"> <li>▪ Develop a tracking system by March 2005 to ensure effective management of active construction projects.</li> <li>▪</li> </ul> | Beginning March 2005, then ongoing. | <ul style="list-style-type: none"> <li>▪ Document the number of plans reviewed, the number of site inspections made and the number of enforcement actions taken, the location of structural BMPs installed, inspected, and maintained or improved.</li> <li>▪ Submit monthly reports to IDEM.</li> <li>▪ Track using Programmatic Indicators #13, #14, #15, #16,</li> </ul> | <b>County Surveyor's Office</b><br><br><b>Carmel Engineering Department</b><br><br><b>Hamilton County Plan Commission</b>   |

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| <b>Best Management Practice (BMP)</b>          | <b>Measurable Goals</b>  | <b>Timeline</b>                   | <b>Documentation and Tracking</b>  | <b>Responsible Party</b>   |
|--|--|-----------------------------------|--|--|
| <b>Training for Construction Professionals</b> | <ul style="list-style-type: none"> <li>▪ Promote and advertise training programs and modules conducted by IDNR and other organizations.</li> </ul> | Beginning in 2005, then on-going. | <p align="center">#17, #18, and #19, #20, #21</p> <ul style="list-style-type: none"> <li>▪ Document the date of the trainings, the issues covered at the trainings, and the number participants attending the trainings.</li> <li>▪</li> </ul> | <p><b>County Surveyor's Office</b></p> <p><b>Carmel Engineering Department</b></p> <p><b>Hamilton County Plan Commission</b></p> |

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**8.0**

**MINIMUM CONTROL MEASURE #6**  
**POLLUTION PREVENTION AND GOOD HOUSEKEEPING**

Rule 13 requires the development and implementation of a program to prevent or reduce polluted runoff from municipal operations within the MS4 area. The program must include written documentation of maintenance activities, maintenance schedules, and long term inspection procedures for BMPs to reduce floatables and other pollutants discharged from the separate storm sewers.

Controls must be implemented for reducing or eliminating the discharge of pollutants from operational areas, including roads, parking lots, maintenance and storage yards, and waste transfer stations. Written procedures must be developed and implemented for the proper disposal of waste or materials removed from separate storm sewer systems and operational areas. New flood management projects must be assessed via written documentation for their impacts on water quality and existing flood management projects must be examined for incorporation of additional water quality protection devices or practices. MS4 entity employees must be properly trained on various topics, such as, fertilizer and pesticide application, and the function of BMPs. Such training must be documented in writing.

**8.1 EXISTING POLLUTION PREVENTION AND GOOD HOUSEKEEPING BMPs**

Compliance with this MCM requires MS4s to develop and implement a program to prevent or reduce pollutant runoff from municipal operations within the MS4 Area. Hamilton County, Carmel and Cicero are currently implementing a number of recommended Stormwater Pollution Prevention BMPs.

Existing Pollution Prevention and Good Housekeeping BMPs implemented by **Hamilton County** are as follows:

- The Hamilton County Health Department, in conjunction with the Solid Waste Management District, operates a Household Hazardous Waste Center that has been well received by County residents.
- The Health Department and Highway Department respond to environmental complaints including:
  - Failing septic systems
  - Trash dumping
  - Complaint driven river/ stream sampling (Health Department only)
- The Emergency Management Agency provides hazardous waste handling and disposal training for the County Hazardous Materials Task Force.
- The Buildings and Grounds Maintenance division has installed secondary containment around diesel fuel storage areas for backup generators at all

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facilities.

- The Buildings and Grounds Maintenance division conducts storm drain cleaning and video inspections at County facilities on an as needed basis, including the Old Highway Department Facility, Household Hazardous Waste Facility, EMA Offices, Judicial Center, Old Court House, etc.
- The Buildings and Grounds Department requires clean up of litter, waste, and manure in rental agreements for 4-H buildings and grounds.
- Interior drains at most county facilities are connected to the sanitary sewer, rather than storm sewers (except for the old Highway Department garage and 4-H Fairgrounds).
- The Highway Department's road salt is stored in a covered facility with drains that lead to brine tanks, which are pumped out on an as needed basis. These devices are believed to be functioning properly.
- The Highway Department's vehicle maintenance facility is using secondary containment devices to prevent leaks or spills from stored barrels of oil and other petroleum products. These devices are believed to be functioning properly.
- The Highway Department's vehicle maintenance facility is connected to the sanitary sewer system. This ensures that accidental chemical spills outside of secondary containment devices do not end up in storm sewers.
- The Highway Department has developed a new policy that reduces the amount of sand applied to roads during winter weather events.
- The Plan Commission limits development in the 100-year floodplain. Current Floodplain District language of the Zoning Ordinance requires a permit or letter of recommendation from DNR; buildings and additions to have flood protective grades at least two feet above the regulatory flood, and does not allow for an increase in the base flow of the regulatory flood (no net loss of flood storage).
- The Parks and Recreation Department regularly acquires floodplain property for parkland and restricts mowing along stream banks.
- The Parks and Recreation Department educates maintenance staff on proper handling and storage of all chemicals and equipment fuels.
- The County Highway Department currently maintains all drainage areas that are not regulated drains and are associated with a county road or the county's right of way.
- The County Highway Department responds to internal and external requests

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and/or complaints to clean up trash and accumulated litter.

- The Surveyor's Office administers the Classified Filter Strip Program, which entitles landowners who implement filter strips along county drains and natural streams to a tax break on those lands (\$0) when they register those filter strips with the County Surveyor, County Auditor, and Assessor. This program is largely responsible for the more than 25 linear miles of county regulated drain that have maintained vegetative buffers in Hamilton County.
- The Surveyor's Office uses cameras to inspect drains that are subject to complaints.
- The Safety & Risk Management Department visits the HHW facility and other department facilities on a biannual basis or by request, to ensure that they are implementing proper spill containment and prevention techniques, such as the protection of storm drain outlets.
- The Safety & Risk Management Department manages the Hazardous Communication & Emergency Action Program in which County employees are trained for compliance with OSHA safety standards.
- The Safety & Risk Management Department responds to spills from company equipment by acting as liaison between County and private companies that perform the clean-up work.
- Riverview Hospital provides a hazardous materials training program for all new staff employees. Each staff member is trained in handling, storage, and disposal of such wastes. The hospital also requires employees to go through a refresher program and to pass a hazardous material exam on an annual basis.
- Riverview Hospital disposes of all radioactive waste as required through licensing under the Nuclear Regulatory Commission.
- Riverview Hospital is taking steps to eliminate all mercury from hospital facilities.
- Riverview Hospital is under contract with Heritage Environmental Services for hazardous waste collection and disposal.
- All automobile maintenance for Riverview Hospital's fleet is done off site at privately owned facilities.
- Riverview Hospital's aboveground and underground storage tanks are double walled and monitored for leak protection.
- Riverview stores small quantities of fuel for the visitor transport cart and maintenance equipment in cabinets designed for flammable containment and

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storage.

- Spill kits are easily accessible in areas throughout the hospital in which hazardous materials are handled and/or stored.
- Chemicals for boilers are stored in double walled storage tanks within the hospital.

Existing Pollution Prevention and Good Housekeeping BMPs implemented by the **City of Carmel** are as follows:

- The Parks Department is currently under contract with Safety Management Group (SMG). SMG provides facility inspections and workplace safety and chemical storage training. Inspections of Carmel-Clay Park facilities will lead to the creation of a safety guidebook specific to those facilities.
- Most City departments outsource the majority of their vehicle maintenance to local facilities.
- The Central Park Masterplan includes plans to stabilize stream banks along portions of Carmel Creek.
- The Fire Department participates in the county's Hazardous Materials Task Force.
- The Fire Department performs inspections on all businesses, and tracks all SARA Title III facilities. The Fire Department responds to accidents and incidents involving the spillage of hazardous materials and chemicals and ensures that the all chemicals are properly contained.
- All City Firefighters are trained to the "Operations Level" regarding Hazardous Materials. This training is refreshed annually.
- Twenty-four (24) firefighters are trained to the "Technician Level" regarding hazardous materials. All Technicians receive quarterly competency testing through the County Haz-Mat Team.
- The Fire Department has a vehicle dedicated solely to hazardous response.
- The Street Department has two street sweepers that operate every day. The department keeps a daily log documenting which City roads are swept.
- All road salt stored at the Street Department's facility is stored in a covered facility. The facility is believed to be functioning properly.
- The Street Department's Diesel Fuel Tanks are stored in diked containers.

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- The Parks and Street Departments have Certified Chemical Applicators on Staff.
- The Fire Department keeps records on all hazardous response and cleanup. Record keeping is based on National Fire Inventory Reporting System (NFIRS).
- The Street Department's vehicle washing bays are connected to the sanitary sewer and run through a sand filter prior to discharging into the sewer system.
- The Street Department stores used oil and chemicals internally in a diked room which drains through a sand filter prior to entering the sanitary sewer system.

Existing Pollution Prevention and Good Housekeeping BMPs implemented by the **Town of Cicero** are as follows:

- The vehicle maintenance facilities at the Fire, Street and Utilities Department are connected to the sanitary sewer system. This ensures that accidental chemical spills outside of secondary containment devices do not end up in storm sewers.
- The Street, Utilities and the Parks Departments are using secondary containment devices for storage of some chemicals and petroleum products to prevent leaks or spills from entering the storm sewer system. These devices are believed to be functioning properly.
- The Town maintains covered salt and sand storage facilities. The facilities are believed to be functioning properly.
- The Parks Department Director is a certified applicator and provides training in fertilizer and pesticide application to departmental employees.
- The Parks department has trash receptacles available at all town park facilities, which are changed on a daily basis.
- The Parks Department performs litter and trash clean up at park facilities on a regular basis.
- With the exception of routine maintenance procedures such as oil changes, the vast majority of maintenance on town owned vehicles is contracted out to local repair shops.
- The Cicero Fire Department promotes use of the County's Household Hazardous Waste Facility.
- The Fire Department participates in the County's Hazardous Materials Task Force.

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- The Cicero Fire Department performs inspections on all businesses, and tracks all Sara Title III facilities. Facilities storing Hazardous Materials are referred to IDEM and the Hamilton Count Emergency Management Agency.
- The Fire Department responds to accidents and incidents involving the spillage of hazardous materials and chemicals and ensures that the all chemicals are properly contained.
- All Town Firefighters are trained to the "Awareness in Operations" level regarding hazardous material clean up and response. All firefighter complete this program on an annual basis.
- The fire department keeps records on hazardous response and cleanup. Record keeping is based on National Fire Inventory Reporting System (NFIRS).

The existing Pollution Prevention and Good Housekeeping programs and activities discussed above will help ensure the County's compliance with requirements of Rule 13. However, these activities are currently not sufficient to address the requirements of Rule 13.

## **8.2 PROPOSED POLLUTION PREVENTION AND GOOD HOUSEKEEPING BMPs**

The following Pollution Prevention and Good Housekeeping BMPs will be developed and implemented by the Co-Permittees in order to comply with the minimum requirements of this MCM. Existing BMPs identified in subsection 8.1 with any needed enhancements, as well as, any new BMPs are included in this section. The Co-Permittees have initiated the implementation of a Pollution Prevention and Good Housekeeping Program as part of this Part C Plan, which outlines the overall strategy for gradually implementing the program and its corresponding BMPs over the next four years. The program is designed to address the quality of stormwater discharges from Co-Permittee activities to their MS4 conveyance system. The presumptive approach of implementing this program assumes that overall stormwater quality will improve each year by reducing the amounts of pollutants entering the conveyance system. Reduction goal percentages will be correlated to amounts of BMPs installed, amounts of material collected from BMPs, and plans implemented. For example, when a certain amount of street sweeping material is collected, it is assumed that the unknown total amount of material entering the conveyance system is reduced by the amount collected.

**Table 8-2** provides a summary of the Pollution Prevention and Good Housekeeping BMPs to be implemented and identifies the measurable goals, documentation and tracking needs, timelines, and responsible parties associated with each BMP. A detailed description of each BMP is provided below.

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**MS4 Conveyance System Maintenance Plan and Documentation**

Hamilton County currently documents all maintenance conducted on County Regulated Drains. Beginning in 2005, the Co-Permittees will begin tracking MS4 Conveyance System Maintenance activities in a maintenance database. The database will track activities associated with Pollution Prevention and Good Housekeeping BMPs. Maintenance schedules will be kept at maintenance areas and updated annually. Scheduling and tracking of activities will increase overall program effectiveness. The database will track all good housekeeping measures performed by the Co-Permittees including, street sweeping, periodic litter pickups, periodic BMP and catch basin cleaning, storm sewer inspections conducted, roadside shoulder and ditch stabilization, storm sewer maintenance and remediation performed, pesticides/fertilizers applied, secondary containment devices installed, and salt and sand storage areas that have been enhanced. All activities performed will be documented in Co-Permittees' annual SWQMP reports.

**Table 8-1  
Storm Sewer System Maintenance Schedules**

|  |  |
|--|--|
| A. Periodic Litter Pickup                          | Co-Permittee staff will annually conduct litter pickup events along major thoroughfares, at stormwater outfalls, and other areas to be prioritized during the first permit term. |
| B. Periodic BMP Structure Cleaning                 | MS4 owned and operated structural stormwater BMPs will be maintained as specified in their corresponding O&M manuals.  |
| C. Periodic Pavement Sweeping                      | At a minimum, main thoroughfares with curbs and gutters and bridge decks will be swept once per year.  |
| D. Roadside Shoulder and Ditch Stabilization       | Roadside shoulder and ditches will be inspected annually. Repairs will be prioritized and all work conducted will be documented.   |
| E. Planting and Proper Care of Roadside Vegetation | Roadside inspections will include vegetative inspections.  |
| F. Remediation of Outfall Scouring                 | All stormwater outfalls will be evaluated for scouring and erosion in the first permit term. Decisions for remedial actions will be made at the time of problem identification.  |

**Secondary Containment**

Beginning in January 2005, the Co-Permittees will begin implementing secondary containment measures within all facilities that store hazardous chemicals. Within Hamilton County, these facilities include, but are not limited to, Highway Department Maintenance Facilities, Parks and Recreation Department Maintenance Facilities, the 4-

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H Fairground Maintenance Facilities, and the Household Hazardous Waste Facility. Within the City of Carmel, these facilities include, but are not limited to, Street Department Maintenance Facilities, Fire Department Maintenance Facilities, Police Department Maintenance Facilities, Utility Department Maintenance Facilities, and Parks Department Maintenance Facilities. Within the Town of Cicero, these facilities include, but are not limited to, the Street and Utilities Maintenance Facilities, and Parks Department Maintenance Facilities. Implementation of secondary containment devices will reduce the potential impact of accidental spills of concentrated solutions, acids, alkalies, salts, oils, or other polluting materials that could contaminate stormwater runoff. In the event that other Co-Permittee owned and operated facilities begin storing hazardous chemicals in the future, secondary containment measures will be implemented at those facilities. The types of secondary containment devices implemented, the location of such BMPs, and any information specific to these devices will be included in the Co-Permittees' annual SWQMP report.

**Oil and Water Separator Maintenance Plan**

Vehicle maintenance areas can be significant sources of stormwater pollutants. To minimize the impacts that vehicle maintenance areas have on stormwater runoff many Co-Permittee facilities where vehicle maintenance is conducted have installed oil and water separators, oil and grit separators, or sand filters. In order to ensure long-term operation of these BMPs, staff will conduct maintenance on the BMPs as specified by their manufacturer's guidelines. Relevant staff will receive training on the function and importance of the BMPs, how to maintain them, and how to properly dispose of all waste collected. The Co-Permittees will report all annual maintenance activities performed in their annual SWQMP report.

**Salt and Sand Storage**

Currently all salt stockpiles maintained by the Co-Permittees are stored in covered facilities, which minimize the ability of these stockpiles to impact stormwater runoff quality. Beginning in 2005, the Co-Permittees will document the amount of salt that is applied to roadways on an annual basis. Also, relevant staff will be instructed to contain salt spilled during mixing and loading in order to maintain cleanliness and minimize the risks to stormwater runoff.

The Town of Cicero's Street Department stores its sand stockpiles in a covered facility. However, at many Co-Permittee facilities stockpiles of sand are stored in three sided concrete bay structures that do not provide overhead cover. These sand storage areas will be inspected on a monthly basis and after rain events in order to ensure that runoff from these areas are not leaving the site. Maintenance will be performed on these areas when inspections identify potential problems. Potential maintenance activities to be performed at these sites may include, but are not limited to the following procedures, parking lot sweeping, installation and maintenance of silt fence, or installation sediment removing catch basins.

In addition, once snow and/or ice has melted, Co-Permittee personnel will sweep, as necessary, those areas of the maintenance facilities that have accumulated salt, sand,

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and other debris as a result of day-to-day operations. The amount of salt applied and the frequency of sweeping will be documented in the Co-Permittees' annual SWQMP report.

**Chemical Spill Response**

Beginning in 2005, the Co-Permittees will post spill response plans at all facilities where refueling activities occur or hazardous materials, fuels and other chemicals are used, mixed, and/or stored. The posting of these plans will ensure efficient and effective responses to accidental chemical spills, thereby reducing the potential for spills to come into contact with stormwater runoff. Relative Co-Permittee maintenance staff members will be required, to receive annual training on proper spill response techniques. All facilities in which hazardous materials are stored will be evaluated annually for safety. In the event a facility is determined to pose a risk to stormwater quality runoff, the Co-Permittees will take the proper steps to ensure that the hazardous materials are stored properly, that secondary containment measures are in place, and that spill clean-up and containment equipment such as drain covers and absorbent are available. The Co-Permittees will document all activities associated with chemical spill response training and inspections. This information will be included in the Co-Permittees' annual SWQMP report.

**Wash Water Management**

All wash waters and wastewaters are currently prohibited from entering waters of the state without a valid NPDES Wastewater Permit. Beginning in 2005, the Co-Permittees will implement procedures and/or policies to prevent vehicle wash waters from gaining direct access to nearby receiving waters or stormwater conveyance systems. The Co-Permittees will require all Co-Permittee owned vehicles to be washed within facilities that are connected to the sanitary sewer, at commercial car wash facilities, on impervious areas without direct access to the stormwater conveyance system, or by routing vehicle wash waters through other appropriate BMPs. The Co-Permittees will report on progress made to minimize the impact of vehicle wash waters on stormwater runoff quality in their annual SWQMP reports.

**Waste Disposal**

Removal of accumulated materials (wastes) is part of routine maintenance of any stormwater conveyance system. Wastes are also generated as part of the day to day activities occurring at various municipal maintenance facilities and areas. Beginning in 2005, the Co-Permittees will ensure that all wastes collected are disposed of in a manner that prevents them from contaminating stormwater runoff. Such wastes include, but are not limited to, dredge spoil, accumulated sediments, floatables, and debris. Co-Permittee staff will determine if the waste generated can be reused, recycled, or requires disposal in a sanitary landfill. The Co-Permittees will contract with a private firm for those wastes that require disposal in a landfill. The Co-Permittees will document all activities associated with waste disposal, including the types of waste generated, the amount of waste generated, and the method by which the waste was disposed. This information will be included in the Co-Permittees' annual SWQMP report.

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**Street Sweeping Program**

Regular Street Sweeping reduces the amount of sediment and other various pollutants that have access to local receiving waters. Beginning in 2005, the Co-Permittees will sweep all roads within their MS4 area on an annual basis and will track the total number of curb miles swept or will document the weight of material collected as a result of street sweeping activities. The waste collected is considered a solid waste and will be disposed of at local landfills. All information related to the Co-Permittees' street sweeping program will be submitted in the Co-Permittees' annual SWQMP report.

**Snow Disposal Areas**

Beginning in 2005, any snow that is cleared and pushed into large piles from Co-Permittee roads and operational areas, will be located away from stormwater inlets and conveyances to ensure that there is minimal potential for pollutant runoff impact on MS4 area receiving waters.

**Annual IDDE, Good Housekeeping, and Pollution Prevention Staff Training**

Beginning in January 2005, the Co-Permittees will ensure that appropriate staffs are trained on the hazards associated with illicit discharges, improper disposal of waste, and pollution prevention practices. The training will include discussions on ways to manage activities to prevent substantial quantities of chemicals and water from entering the stormwater conveyance system. Training will be conducted annually and will emphasize how substantial quantities of chemicals and water can lead to elevated levels of nutrients and toxins in receiving waters. Additional topics will include proper storage and disposal of hazardous wastes, vegetative waste handling, fertilizer and pesticide application, proper spill response procedures, recycling programs, and the function of Co-Permittee operated and maintained structural stormwater BMPs. The number of trainings, number of staff attending trainings, and information presented will be tracked and reported in the Co-Permittees' annual SWQMP report.

**Fertilizer and Pesticide Management**

Currently a variety of Co-Permittee Departments and representatives utilize fertilizers and pesticides in their day to day operations. Within Hamilton County, the Parks and Recreation Department, Buildings and Grounds Department, Highway Department or their contracted landscaping firms utilize fertilizers and/or pesticides. Within the Town of Cicero, the Parks Department and Street and Utilities Department utilize fertilizers and/or pesticides. Within the City of Carmel, the Parks Department, and Street Department utilize pesticides and/or fertilizers. In order to minimize the impacts that these chemicals have on stormwater quality runoff, the Co-Permittees will comply with requirements of the State Chemists Office and ensure that all Co-Permittee staff utilizing fertilizers and pesticides attend an annual training session on the proper handling, mixing, use, and storage of fertilizers and pesticides. In addition, contracting landscaping companies will be required to provide documentation that they are in compliance with the State Chemists Office. The Co-Permittees will document all activities associated with fertilizer and pesticide management including the areas within the MS4 area on which herbicides are utilized and an estimate of the amount of each material utilized and the total acreage where pesticides and fertilizers are applied. All

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information specific to herbicide management will be included in the Co-Permittees' annual SWQMP report.

**Flood Management Projects**

The Co-Permittees will document that new flood management projects are assessed for their impacts on water quality and that existing flood management projects are examined for incorporation of additional water quality protection devices or practices. During the pre-construction phase for new projects, a determination will be made to see if a practice can be modified to address the reduction of pollutants associated with stormwater runoff or if additional BMPs can be designed into the watershed of the project to improve water quality. This preliminary review will better use limited resources to plan for water quality BMPs before a project is constructed since water quality and water quantity issues are interrelated.

Existing flood management projects and structural BMPs built to address storm water quantity problems will be reviewed to determine if it is feasible to retrofit them with storm water quality control measures. Each existing project and BMP may not support a retrofit, but the review will be conducted and results will be reported in the Co-Permittees' annual SWQMP report.

**Canine Park Location**

Pet waste has been shown to be a major contributor of stormwater pollution. If applicable and necessary, the Co-Permittees will require that all canine parks be sited at least one hundred fifty (150) feet away from a surface waterbody. The Co-Permittees will track the number or percentage and location of canine parks sited at least one hundred fifty (150) feet away from a surface waterbody.

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**Table 8-2  
Pollution Prevention and Good Housekeeping BMPs**

| Best Management Practice (BMP)                                  | Measurable Goals  | Timeline                      | Documentation and Tracking  | Responsible Party  |
|---|---|-------------------------------|---|--|
| <b>MS4 Conveyance System Maintenance Plan and Documentation</b> | <ul style="list-style-type: none"> <li>▪ Develop a storm sewer system maintenance schedule and track activities to document the amount of pollution that has been kept from local receiving waters as a result of the Co-Permittees' stormwater program.</li> </ul> | January 2005, then ongoing    | <ul style="list-style-type: none"> <li>▪ Document the amount of litter picked up as a result of periodic litter pickup events.</li> <li>▪ Document the amount of materials removed from the Co-Permittees' storm sewer system and how that material is disposed of.</li> <li>▪ Document the total amount of material collected and number of curb miles swept by the Co-Permittees' Street Sweeping Program.</li> <li>▪ Document all improvements made to roadside shoulders and ditches.</li> <li>▪ Document all improvements made to stormwater outfalls.</li> <li>▪ Track using Programmatic Indicators #23, #24, #25, #26, #27, #28, #29, #30, #31, #32, #33</li> </ul> | <b>County Surveyor's Office</b><br><br><b>County Highway Department</b><br><br><b>Carmel Street Department</b><br><br><b>Carmel Utilities Department</b><br><br><b>Carmel Engineering Department</b><br><br><b>Cicero Streets and Utilities Department</b><br><br><b>Cicero Parks Department</b> |
| <b>Secondary Containment</b>                                    | <ul style="list-style-type: none"> <li>▪ Implement secondary containment devices around areas of chemical storage.</li> </ul>   | Begin in 2005, then on-going. | <ul style="list-style-type: none"> <li>▪ Document the number of devices installed, the location of installed devices, and the amount of material collected or contained by the secondary containment</li> </ul>   | <b>All Co-Permittee Departments managing facilities within which chemicals are stored</b>  |

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| <b>Best Management Practice (BMP)</b> | <b>Measurable Goals</b>  | <b>Timeline</b>                  | <b>Documentation and Tracking</b>   | <b>Responsible Party</b>   |
|---------------------------------------|--|----------------------------------|---|--|
|                                       |  |                                  | <p>devices.</p> <ul style="list-style-type: none"> <li>Track using Programmatic Indicators #24 and #32.</li> </ul>  | <p>or refueling activities are conducted.</p>  |
| <b>Oil and Water Separator</b>        | <ul style="list-style-type: none"> <li>Conduct maintenance on all Co-Permittee owned and operated oil and water separators as specified by the manufactures specifications.</li> </ul> | Beginning in 2005, then ongoing. | <ul style="list-style-type: none"> <li>Document all maintenance conducted.</li> <li>Track using Programmatic Indicator #24.</li> </ul>  | <b>All Co-Permittee Facilities with Oil and Water Separators.</b>  |
| <b>Sand and Salt Storage</b>          | <ul style="list-style-type: none"> <li>Conduct regular maintenance and sweeping around salt and sand storage areas.</li> </ul>   | Beginning in 2005, then ongoing. | <ul style="list-style-type: none"> <li>Document all containment and maintenance BMPs implemented.</li> <li>Document the amount of salt and sand applied to Co-Permittee roads on an annual basis.</li> <li>Track using Programmatic Indicator #30 and #31.</li> </ul> | <p><b>County Highway Department</b></p> <p><b>County Parks Department</b></p> <p><b>County Buildings and Grounds Department</b></p> <p><b>Carmel Street Department</b></p> <p><b>Cicero Streets and Utilities Department</b></p> |
| <b>Chemical Spill Response Plan</b>   | <ul style="list-style-type: none"> <li>Implement Spill Response Plan by November 2005 to minimize the potential</li> </ul>   | November 2005.                   | <ul style="list-style-type: none"> <li>Document all facilities where the response plan is posted and number of staff trained in proper spill response techniques.</li> </ul>  | <b>All Co-Permittee Departments managing facilities within which</b>   |

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| <b>Best Management Practice (BMP)</b> | <b>Measurable Goals</b>  | <b>Timeline</b> | <b>Documentation and Tracking</b>  | <b>Responsible Party</b>   |
|---------------------------------------|--|-----------------|--|--|
|                                       | for chemical spills to contaminate stormwater runoff.  |                 | <ul style="list-style-type: none"> <li>Track using Programmatic Indicator #24.</li> </ul>  | <b>chemicals are stored or refueling activities are conducted.</b>   |
| <b>Disposal of Waste</b>              | <ul style="list-style-type: none"> <li>Develop and begin implementing procedures to ensure the proper disposal of waste by November 2005.</li> </ul> | November 2005.  | <ul style="list-style-type: none"> <li>Document all activities associated with waste disposal including the types of waste generated, the amount of waste generated, and the method by which the waste was disposed.</li> <li>Track using Programmatic Indicator #32.</li> </ul> | <b>County Highway Department</b><br><br><b>County Building and Grounds Department</b><br><br><b>Carmel Street Department</b><br><br><b>Cicero Streets and Utilities Department</b> |
| <b>Street Sweeping Program</b>        | <ul style="list-style-type: none"> <li>Begin tracking street sweeping activities by January 2005.</li> </ul>   | January 2005    | <ul style="list-style-type: none"> <li>Document the number of curb miles swept and the weight of material collected via the Co-Permittees' Street Sweeping Program.</li> <li>Track using Programmatic Indicator #33</li> </ul>   | <b>County Highway Department</b><br><br><b>Carmel Street Department</b><br><br><b>Cicero Streets and Utilities Department</b>  |

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| <b>Best Management Practice (BMP)</b> | <b>Measurable Goals</b>  | <b>Timeline</b>                  | <b>Documentation and Tracking</b>   | <b>Responsible Party</b>   |
|---------------------------------------|--|----------------------------------|---|--|
| <b>Wash Water Management</b>          | <ul style="list-style-type: none"> <li>▪ Ensure that vehicle wash waters are routed through appropriate BMPs prior to accessing the storm sewer system.</li> </ul> | Beginning in 2005, then ongoing. | <ul style="list-style-type: none"> <li>▪ Document that all vehicle and equipment washing is conducted in areas without direct access to the Co-Permittees' storm sewer system.</li> </ul> | <b>All Co-Permittee Departments with vehicle and equipment fleets.</b>   |
| <b>Snow Disposal Areas</b>            | <ul style="list-style-type: none"> <li>▪ Dispose of snow in designated areas to minimize runoff from snowmelt.</li> </ul>  | In 2005 and on-going.            | Document that plowed snow is stored in areas that minimize the potential impact to stormwater runoff.   | <b>County Highway Department</b><br><br><b>Cicero Street and Utilities Department</b><br><br><b>Carmel Street Department</b> |

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| <b>Best Management Practice (BMP)</b>   | <b>Measurable Goals</b>  | <b>Timeline</b>                                     | <b>Documentation and Tracking</b>   | <b>Responsible Party</b>   |
|---|--|---|---|--|
| <p><b>Annual IDDE, Good Housekeeping, &amp; Pollution Prevention Staff Training</b></p> | <ul style="list-style-type: none"> <li>▪ Develop and implement an annual IDDE and Good Housekeeping training program.</li> <li>▪ Conduct annual refresher training.</li> </ul> | <p>Trainings held in 2005, then annual updates.</p> | <ul style="list-style-type: none"> <li>▪ Document number of staff trained, number of training events held, and the curriculum covered in each training session.</li> <li>▪ Track using Programmatic Indicator #2 and #3.</li> </ul> | <p><b>County Surveyor's Office</b></p> <p><b>County Highway Department</b></p> <p><b>County Parks Department</b></p> <p><b>County Buildings and Grounds Department</b></p> <p><b>County Health Department</b></p> <p><b>Carmel Street Department</b></p> <p><b>Carmel Utilities Department</b></p> <p><b>Carmel Engineering Department</b></p> <p><b>Cicero Streets and Utilities Department</b></p> <p><b>Cicero Parks Department</b></p> |

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| <b>Best Management Practice (BMP)</b>      | <b>Measurable Goals</b>  | <b>Timeline</b>                   | <b>Documentation and Tracking</b>   | <b>Responsible Party</b>   |
|--|--|-----------------------------------|---|--|
| <b>Fertilizer and Pesticide Management</b> | <ul style="list-style-type: none"> <li>▪ Train appropriate staff on appropriate use of fertilizers and pesticides.</li> </ul>  | Beginning 2005, then ongoing.     | <ul style="list-style-type: none"> <li>▪ Document all trainings conducted.</li> <li>▪ Document that contractors have appropriate certifications through the OISC.</li> <li>▪ Track using programmatic indicator #25.</li> </ul> | <b>County Highway Department</b><br><br><b>County Parks Department</b><br><br><b>Carmel Parks Department</b><br><br><b>Carmel Street Department</b><br><br><b>Cicero Parks Department</b><br><br><b>Cicero Street and Utilities Department</b> |
| <b>Flood Management Projects</b>           | <ul style="list-style-type: none"> <li>▪ Document that all new flood management projects are assessed for incorporation of additional water quality devices or practices.</li> </ul> | Future Flood Management Projects. | <ul style="list-style-type: none"> <li>▪ Document that all new flood management projects are assessed for incorporation of additional water quality devices or practices.</li> </ul>  | <b>County Surveyor's Office</b><br><br><b>Carmel Engineering Department</b><br><br><b>Cicero Street and Utilities Department</b>   |
| <b>Canine Park Location</b>                | <ul style="list-style-type: none"> <li>▪ If and when applicable, the Co-Permittees will track the number or percentage and</li> </ul>  | If and when necessary.            | <ul style="list-style-type: none"> <li>▪ Track using Programmatic Indicator #34.</li> </ul>   | <b>County Parks Department</b>   |

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| Best Management Practice (BMP) | Measurable Goals  | Timeline | Documentation and Tracking | Responsible Party |
|--------------------------------|---|----------|----------------------------|-------------------|
|                                | location of canine parks sited at least one hundred fifty (150) feet away from a surface waterbody. |          |                            |                   |

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**9.0**

**MS4 PROGRAM COSTS**

Rule 13 requires a summary of the current storm water budget, expected or actual funding sources, and a projection of the budget for each year within the five (5) year permit term. Resources used for developing and implementing the storm water program should be documents in order to demonstrate that monies, equipment, and staff are being and will be utilized for the program.

The overall fiscal impact of the requirement of Rule 13 may be grouped under three categories: SWQMP Development costs, Part C Implementation costs, and “other” compliance costs. This chapter details the cost of plan implementation (Part C) and it includes the additional expense for developing the SWQMP, continuous characterization, and data reporting. In the numbers detailed below, no monetary value is placed on volunteer hours.

**9.1 SWQMP DEVELOPMENT COSTS**

The development of the SWQMP must be completed by the end of the first year of the permit term. Tasks include completion of a Notice of Intent (NOI), and completion of Part A, Part B, and Part C (this document) of the SWQMP.

NOI and Part A and Stormwater Phase II Needs Analysis and Feasibility Study: The costs associated with completion of the NOI and Part A are mainly organizational and administrative. An initial list of known receiving waters was compiled. Public Notice was published in the local newspaper. Preliminary estimates of existing and expected budgets had to be included, and an MS4 Operator was identified. In addition to these costs the Co-Permittees paid a combined \$35,000 to a consulting firm to conduct an analysis of their individual needs for complying with requirements of Stormwater Phase II.

Part B Baseline Characterization: Part B involved collection and assessment of existing data for the receiving waters identified in Part A. This data was then used to characterize the baseline water quality conditions in the MS4 area, identify sensitive areas, and guide the development of Part C. Existing BMPs had to be identified and their effectiveness evaluated. The tasks associated with Part B were research, analysis, and report writing. In addition to costs associated with developing the Co-Permittees’ Part B, a large amount of time and effort was spent pursuing grant programs that would be beneficial to the Co-Permittees’ Stormwater Program and coordinating with other Hamilton County Phase II communities on the development of complimentary stormwater programs and ordinances. Total costs associated with completing these tasks totaled approximately \$36,000.

Development of the Part C Implementation Plan: The cost associated with developing a SWQMP Part C: Implementation Plan is \$50,000. This total includes fees for engineering consultants, but does not include time and materials contributed by Co-

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Permittee staff. Dozens of meetings and discussions were held by Co-Permittee representatives in order to ensure that all staff were aware of the impact that the new Phase II requirements would have on their Departments.

**9.2 DETAILED PART C IMPLEMENTATION COSTS BY MCM FROM 2004-2008**

This section details the cost of implementing the program described in this document. There are 6 MCMs within the implementation plan. Costs for each individual MCM are summarized below. Since different plan elements have different start-up timelines, costs are also broken down by permit year, January - December. All estimated costs represent the combined cost to the Co-Permittees.

MCM #1 Public Education and Outreach: The cost to implement this MCM throughout the first 5-year permit term is estimated to be \$248,000. Most of the implementation deadlines for this MCM are in the second permit year (2005). The annual average costs for this MCM is estimated to be \$62,000. These costs will cover such tasks as reproduction and distribution of educational brochures, web site development and maintenance, and other tasks as outlined in Chapter 3. The Co-Permittees will work with the Hamilton County Phase II Public Education Steering Committee to complete the BMPs in this plan, however implementation of these BMPs is the sole responsibility of the Co-Permittees.

MCM #2 Public Participation and Involvement: The cost to implement MCM #2 throughout the first 5-year permit term is estimated to be \$100,000. Most of the implementation deadlines for this MCM are in the second permit year. The annual average costs for this MCM is estimated to be \$25,000. This cost will cover such tasks as promoting Clean-Up Events and the "Report-A-Polluter" Program, and implementing Storm Drain Marking events. The Co-Permittees will work with the Hamilton County Phase II Public Education Steering Committee to implement the BMPs identified in this plan, however ensuring the implementation of these BMPs is the sole responsibility of the Co-Permittees.

MCM #3 Illicit Discharge Detection and Elimination: The cost to implement MCM #3 throughout the first 5-year permit term is estimated to be \$3,047,400. The implementation deadlines for this MCM occur mainly in the second permit year, with some start-up costs beginning in the first permit year. Annual costs associated with this MCM are estimated to be \$383,400 for the first year (2004), \$668,400 for permit year two (2005), and \$665,200 per year for permit years three (2006) through five (2008). \$450,000 of the total annual costs associated with this MCM for permit years two (2005) through 5 (2008) are associated with existing funding for the Household Hazardous Waste Facilities operated by the City of Carmel and the Hamilton County Solid Waste Management District, and do not represent additional costs to the Co-Permittees. The remaining costs are primarily associated with developing comprehensive storm sewer system maps as required by this MCM. Other costs are associated with conducting dry weather screening events and identifying and eliminating illicit discharges to the storm sewer system.

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MCM #4 Construction Site Runoff Control: The cost to implement MCM #4 throughout the first 5-year permit term is estimated to be \$1,274,200. The implementation deadlines for this MCM occur mainly in the second permit year, with some preparation work beginning in the first permit year. Annual costs for this MCM are estimated be \$1,400 for the first year (2004), and \$318,200 per year for permit years two (2005) through five (2008). These costs are associated with the development of an erosion and sediment control ordinance and a plan review and inspection program, the addition of 5 full time staff persons to perform plan reviews and inspections, and providing training for plan reviewers and site inspectors.

MCM #5 Post-Construction Stormwater Management: The cost to implement MCM #5 throughout the first 5-year permit term is estimated to be \$97,200. The implementation deadlines for this MCM occur mainly in the second permit year, with some preparation work beginning in the first permit year. Annual costs for this MCM are estimated to be \$1,200 for the first year (2004), and \$24,000 per year for permit years two (2005) through five (2008). These costs are associated with the development of an ordinance for post-construction stormwater quality management and a plan review and inspection program, as well as providing training for plan reviewers and site inspectors. However, the majority of the costs associated with plan review and inspection are represented in MCM # 4 costs.

MCM #6 Pollution Prevention and Good Housekeeping: The cost to implement MCM #6 throughout the first 5 year permit term is estimated to be \$2,792,000. The implementation deadlines for this MCM are entirely delayed until after the first permit year. Average annual costs associated with this MCM are estimated to be \$698,000 per year for permit years two (2005) through five (2008). These costs are associated with the implementation of Salt and Sand Storage BMPs, developing an MS4 Conveyance System Maintenance Plan, conducting storm sewer system maintenance, purchasing a street sweeper and vacuum truck and, providing training to maintenance and field staff. \$400,000 of these annual costs are associated with existing regulated drain and storm sewer system maintenance conducted by the Co-Permittees.

**9.3 OTHER COMPLIANCE COSTS 2005 – 2008**

Beyond development and implementation of the SWQMP, Rule 13 requires ongoing MS4 area characterization, monthly and annual status reports, and renewal of permit application at the end of the 5 year permit term.

Ongoing Characterization: Rule 13 requires regulated communities to continue collecting and evaluating data on water quality throughout the permit life. The cost for this ongoing characterization assumes that the county will conduct one watershed (14 digit) study per year, and is estimated at \$100,000 for each year. These watershed studies will only be conducted as funding allows.

Status Reporting: Much of the data collection and data management cost of this task is absorbed by the implementation of the MCMs. The estimated cost to compile and organize the volume of data that will be generated is \$15,000 dollars per year. For each

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annual report, some additional time and effort will be needed to evaluate the effectiveness of the plan and to determine if adjustments are needed to the BMPs and/or measurable goals.

Ongoing Technical Assistance: Throughout the term of the permit, the Co-Permittees may require assistance in the form of professional engineering services in order to address tasks associated with NPDES Phase II compliance issues. These tasks may include, but are not limited to, BMP evaluation, MS4 conveyance mapping, plan reviews, inspections, training modules, ordinances, and coordination with IDEM. The cost for ongoing technical assistance is estimated to be \$25,000 per year.

Permit Application Renewal: At the end of this five-year permit term, the Co-Permittees will need to evaluate the effectiveness of their plan. Additional BMPs can be added and ineffective BMPs can be dropped. It is expected that the level of effort needed to complete the evaluation of the existing program, make changes, and submit a permit renewal application to IDEM will be similar to the effort required for the original Part C application. Therefore, the estimated cost to prepare the permit renewal application is \$50,000.

**9.4 TOTAL SWQMP PROGRAM COSTS 2004 – 2008**

**Table 9-1** summarizes total program costs, which includes the costs for all tasks described above in Sections 9.1, 9.2, and 9.3. The total estimated cost of compliance with Rule 13 is \$8.29 million for the first 5-year permit term.

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**Table 9-1  
Total Program Cost**

|   | 2004             | Jan. 2005-<br>Jan. 2006 | Jan. 2006-<br>Jan. 2007 | Jan. 2007-<br>Jan. 2008 | Jan. 2008-<br>Nov. 2008 | Total              |
|---|------------------|-------------------------|-------------------------|-------------------------|-------------------------|--------------------|
| NOI and SWQMP Part A and Needs Assessment | \$35,000         |                         |                         |                         |                         | \$35,000           |
| SWQMP Part B and General Assistance       | \$36,000         |                         |                         |                         |                         | \$36,000           |
| SWQMP Part C (development)                | \$50,000         |                         |                         |                         |                         | \$50,000           |
| Implement MCM1                            | N/A              | \$62,000                | \$62,000                | \$62,000                | \$62,000                | \$248,000          |
| Implement MCM2                            | N/A              | \$25,000                | \$25,000                | \$25,000                | \$25,000                | \$100,000          |
| Implement MCM3                            | \$383,400        | \$668,400               | \$665,200               | \$665,200               | \$665,200               | \$3,047,400        |
| Implement MCM4                            | \$1,400          | \$318,200               | \$318,200               | \$318,200               | \$318,200               | \$1,274,200        |
| Implement MCM5                            | \$1,200          | \$24,000                | \$24,000                | \$24,000                | \$24,000                | \$97,200           |
| Implement MCM6                            | N/A              | \$698,000               | \$698,000               | \$698,000               | \$698,000               | \$2,792,000        |
| Ongoing Characterization                  | N/A              | \$100,000               | \$100,000               | \$100,000               | \$100,000               | \$400,000          |
| Annual Report                             | N/A              | \$15,000                | \$15,000                | \$15,000                | \$15,000                | \$60,000           |
| Ongoing Technical Assist.                 | N/A              | \$25,000                | \$25,000                | \$25,000                | \$25,000                | \$100,000          |
| Permit Renewal                            | N/A              |                         |                         |                         | \$50,000                | \$50,000           |
| <b>Total</b>                              | <b>\$507,000</b> | <b>\$1,935,600</b>      | <b>\$1,932,400</b>      | <b>\$1,932,400</b>      | <b>\$1,982,400</b>      | <b>\$8,289,800</b> |

**9.5 BUDGETARY NEEDS**

Some of the activities, programs, and tasks required by Rule 13 are already being conducted by the Co-Permittees (e.g. HHW Facilities, Conveyance Maintenance, Salaries associated with existing staff person's attendance at meetings.) or are very similar to existing operations and therefore represent a reduced cost for implementation. Therefore, in order to achieve compliance with Rule 13, approximately \$4.3 million must be generated over the next four years. The Co-Permittees will continue to investigate the most efficient way to fully fund the requirements of this program, and are currently considering using their General Funds or establishing Stormwater Utilities. The Town of Cicero has already developed a Stormwater Utility to assist them in funding the requirements of this program.

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**10.0 SUMMARY**

Implementation of the Co-Permittees' SWQMP will improve the overall quality of stormwater discharges entering into the Co-Permittees' separate storm sewer system. In order to successfully implement the Rule 13 program, the Co-Permittees must pay attention to reporting requirements contained in the Programmatic Indicators, adhere to mandated time lines, and be aware of next steps beyond the Part C document.

**10.1 PROGRAMMATIC INDICATORS**

As a visual aid to Hamilton County and to help evaluate Rule 13 permit compliance, **Table 10-1** lists the Programmatic Indicators that are required in Rule 13. The table further identifies those required and chosen BMPs that will fulfill these required Programmatic Indicators.

| Programmatic Indicator | Description   | BMP Addressing Programmatic Indicator   |
|------------------------|---|---|
| 1                      | Number or percentage of citizens, segregated by type of constituent that have an awareness of storm water quality issues.               | <ul style="list-style-type: none"> <li>▪ Stormwater Website</li> <li>▪ Hamilton County Phase II Public Education Steering Committee</li> <li>▪ Rule 13 Public Participation Lists</li> <li>▪ Public Meetings</li> <li>▪ SWCD Activities</li> <li>▪ Storm Drain Marking</li> <li>▪ Clean-up Events</li> <li>▪ Stormwater Survey</li> <li>▪ Stormwater Brochures</li> <li>▪ Stormwater Newsletter</li> <li>▪ Mass Media Solicitations</li> </ul>  |
| 2                      | Number and description of meetings, training sessions, and events conducted to involve citizen constituents in the storm water program. | <ul style="list-style-type: none"> <li>▪ HHW Promotions</li> <li>▪ Rule 13 Public Participation Lists</li> <li>▪ Hamilton County Phase II Public Education Steering Committee</li> <li>▪ Public Meetings</li> <li>▪ SWCD Activities</li> <li>▪ Storm Drain Marking</li> <li>▪ Report-A-Polluter Program</li> <li>▪ Annual IDDE, Good Housekeeping, &amp; Pollution Prevention Staff Training</li> <li>▪ Clean-up Events</li> <li>▪ Stormwater Survey</li> <li>▪ Erosion and Sediment Control and Post-</li> </ul> |

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|    |  | Construction Training  |
|----|--|--|
| 3  | Number or percentage of citizen constituents that participate in storm water quality improvement programs. | <ul style="list-style-type: none"> <li>▪ Clean-Up Events</li> <li>▪ SWCD Activities</li> <li>▪ Rule 13 Public Participation Lists</li> <li>▪ Hamilton County Phase II Public Education Steering Committee</li> <li>▪ Public Meetings</li> <li>▪ Storm Drain Marking</li> <li>▪ "Report-A-Polluter" Program</li> <li>▪ Annual IDDE, Good Housekeeping, &amp; Pollution Prevention Staff Training</li> <li>▪ Erosion and Sediment Control and Post Construction Staff Training</li> <li>▪ Report-A-Polluter Program</li> <li>▪ HHW Promotions</li> </ul> |
| 4  | Number and location of storm drains marked or cast, segregated by marking method.                          | <ul style="list-style-type: none"> <li>▪ Storm Drain Marking</li> <li>▪ Stormwater System Map</li> </ul>   |
| 5  | Estimated or actual linear feet or percentage of MS4 mapped and indicated on an MS4 area map.              | <ul style="list-style-type: none"> <li>▪ Stormwater System Map</li> </ul>  |
| 6  | Number and location of MS4 area outfalls mapped.   | <ul style="list-style-type: none"> <li>▪ Stormwater System Map</li> </ul>  |
| 7  | Number and location of MS4 area outfalls screened for illicit discharges.                                  | <ul style="list-style-type: none"> <li>▪ Illicit Discharge Detection and Elimination Ordinance</li> <li>▪ Illicit Discharge Detection and Elimination Plan</li> </ul>  |
| 8  | Number and location of illicit discharges detected.  | <ul style="list-style-type: none"> <li>▪ Illicit Discharge Detection and Elimination Ordinance</li> <li>▪ Illicit Discharge Detection and Elimination Plan</li> </ul>  |
| 9  | Number and location of illicit discharges eliminated.  | <ul style="list-style-type: none"> <li>▪ Illicit Discharge Detection and Elimination Ordinance</li> <li>▪ Illicit Discharge Detection and Elimination Plan</li> </ul>  |
| 10 | Number of and estimated or actual amount of material, segregated by type, collected                        | <ul style="list-style-type: none"> <li>▪ HHW Promotions</li> </ul>   |

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|    |  |   |
|----|--|---|
|    | from HHW collections in the MS4 area.  |   |
| 11 | Number and location of constituent drop-off centers for automotive fluid recycling.                        | <ul style="list-style-type: none"> <li>▪ HHW Promotions</li> </ul>  |
| 12 | Number or percentage of constituents that participate in the HHW collections.                              | <ul style="list-style-type: none"> <li>▪ HHW Promotions</li> </ul>  |
| 13 | Number of construction sites obtaining an MS4 entity-issued storm water run-off permit in the MS4 area.    | <ul style="list-style-type: none"> <li>▪ Erosion and Sediment Control and Post-Construction BMP Tracking Database</li> </ul>  |
| 14 | Number of construction sites inspected.  | <ul style="list-style-type: none"> <li>▪ Erosion and Sediment Control and Post-Construction BMP Tracking Database</li> </ul>  |
| 15 | Number and type of enforcement actions taken against construction site operators.                          | <ul style="list-style-type: none"> <li>▪ Erosion and Sediment Control and Post-Construction BMP Tracking Database</li> <li>▪ Procedures for Prioritizing Construction Activities</li> </ul> |
| 16 | Number of, and associated construction site name and location for, public informational requests received. | <ul style="list-style-type: none"> <li>▪ Erosion and Sediment Control and Post-Construction BMP Tracking Database</li> </ul>  |
| 17 | Number, type, and location of structural BMPs installed.   | <ul style="list-style-type: none"> <li>▪ Erosion and Sediment Control and Post-Construction BMP Tracking Database</li> </ul>  |
| 18 | Number, type, and location of structural BMPs inspected.   | <ul style="list-style-type: none"> <li>▪ Erosion and Sediment Control and Post-Construction BMP Tracking Database</li> </ul>  |
| 19 | Number, type, and location of structural BMPs maintained or improved to function properly.                 | <ul style="list-style-type: none"> <li>▪ Erosion and Sediment Control and Post-Construction BMP Tracking Database</li> <li>▪ Post-Construction BMP O&amp;M Plan</li> </ul>                  |
| 20 | Type and location of nonstructural BMPs utilized.  | <ul style="list-style-type: none"> <li>▪ Erosion and Sediment Control and Post-Construction BMP Tracking Database</li> </ul>  |
| 21 | Estimated or actual acreage or   | <ul style="list-style-type: none"> <li>▪ Erosion and Sediment Control and Post-Construction BMP Tracking Database</li> </ul>  |

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|    |  |   |
|----|--|---|
|    | square footage of open space preserved and mapped in the MS4 area, if applicable.  |   |
| 22 | Estimated or actual acreage or square footage of pervious and impervious surfaces mapped in the MS4 area, if applicable.   | <ul style="list-style-type: none"> <li>▪ N/A - The Co-Permittees are currently not capable of tracking this information,</li> </ul>   |
| 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 storm water BMPs. | <ul style="list-style-type: none"> <li>▪ MS4 Conveyance System Maintenance Plan and Documentation</li> </ul>  |
| 24 | Number and location of MS4 entity facilities that have containment for accidental releases of stored polluting materials.  | <ul style="list-style-type: none"> <li>▪ MS4 Conveyance System Maintenance Plan and Documentation</li> <li>▪ Secondary Containment</li> <li>▪ Oil and Water Separator Installation and Maintenance</li> <li>▪ Chemical Spill Response Plan</li> </ul> |
| 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 storm water can be exposed within the MS4 area.                 | <ul style="list-style-type: none"> <li>▪ Fertilizer and Pesticide Management</li> <li>▪ MS4 Conveyance System Maintenance Plan and Documentation</li> </ul>   |
| 26 | Estimated or actual linear feet or percentage and location of unvegetated swales and ditches that have an appropriately-sized vegetated filter strip.  | <ul style="list-style-type: none"> <li>▪ MS4 Conveyance System Maintenance Plan and Documentation</li> </ul>  |
| 27 | Estimated or actual linear feet or percentage and location of MS4 conveyances cleaned or repaired.   | <ul style="list-style-type: none"> <li>▪ MS4 Conveyance System Maintenance Plan and Documentation</li> </ul>  |

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|    |   |   |
|----|---|---|
| 28 | Estimated or actual linear feet or percentage and location of roadside shoulders and ditches stabilized, if applicable.                     | <ul style="list-style-type: none"> <li>▪ MS4 Conveyance System Maintenance Plan and Documentation</li> </ul>  |
| 29 | Number and location of storm water outfall areas remediated from scouring conditions, if applicable.  | <ul style="list-style-type: none"> <li>▪ MS4 Conveyance System Maintenance Plan and Documentation</li> </ul>  |
| 30 | Number and location of deicing salt and sand storage areas covered or otherwise improved to minimize storm water exposure.                  | <ul style="list-style-type: none"> <li>▪ Salt and Sand Storage</li> <li>▪ MS4 Conveyance System Maintenance Plan and Documentation</li> </ul>                           |
| 31 | Estimated or actual amount, in tons, of salt and sand used for snow and ice control.  | <ul style="list-style-type: none"> <li>▪ Salt and Sand Storage</li> <li>▪ MS4 Conveyance System Maintenance Plan and Documentation</li> </ul>                           |
| 32 | Estimated or actual amount of material by weight collected from catch basin, trash rack, or other structural BMP cleaning.                  | <ul style="list-style-type: none"> <li>▪ MS4 Conveyance System Maintenance Plan and Documentation</li> <li>▪ Secondary Containment</li> <li>▪ Waste Disposal</li> </ul> |
| 33 | Estimated or actual amount of material by weight collected from street sweeping, if utilized.   | <ul style="list-style-type: none"> <li>▪ Street Sweeping Program</li> <li>▪ MS4 Conveyance System Maintenance Plan and Documentation</li> </ul>                         |
| 34 | If applicable, number or percentage and location of canine parks sited at least one hundred fifty (150) feet away from a surface waterbody. | <ul style="list-style-type: none"> <li>▪ Canine Park Location</li> </ul>  |

**10.2 Master Timeline**

The following Master Time outlines all BMPs that have been and will be completed by the Co-Permittees during their first five year permit term.

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| Permit Year | MCM | BMP   |
|-------------|-----|---|
| 2004        | 1   | <ul style="list-style-type: none"> <li>Primarily delayed until 2005.</li> </ul>   |
|             | 2   | <ul style="list-style-type: none"> <li>Primarily delayed until 2005.</li> </ul>   |
|             | 3   | <ul style="list-style-type: none"> <li>Illicit Discharge Detection &amp; Elimination (IDDE) Ordinance Development</li> <li>Illicit Discharge Detection and Elimination Plan Development</li> <li>Hamilton County Regulated Drain Mapping</li> </ul>   |
|             | 4   | <ul style="list-style-type: none"> <li>Erosion &amp; Sediment Control (ESC) Ordinance Development</li> </ul>  |
|             | 5   | <ul style="list-style-type: none"> <li>Post-Construction Control Ordinance Development</li> </ul>   |
|             | 6   | <ul style="list-style-type: none"> <li>Delayed until 2005</li> </ul>  |
| 2005        | 1   | <ul style="list-style-type: none"> <li>Hamilton County Phase II Public Education Steering Committee</li> <li>Public Meetings</li> <li>Stormwater Survey</li> <li>Stormwater Brochures</li> <li>Newsletter Articles</li> <li>HHW and Recycling Program Promotions</li> <li>Stormwater Website</li> <li>SWCD Activities</li> <li>Mass Media Solicitation</li> </ul> |
|             | 2   | <ul style="list-style-type: none"> <li>Hamilton County Phase II Public Education Steering Committee</li> <li>Clean-up Events</li> <li>Storm Drain Marking</li> <li>HHW and Recycling Program Promotions</li> <li>SWCD Activities</li> <li>Rule 13 Public Participation Lists</li> <li>Report-A-Polluter</li> </ul>  |
|             | 3   | <ul style="list-style-type: none"> <li>Stormwater System Map</li> <li>IDDE Ordinance</li> <li>IDDE Plan Implementation</li> <li>Report-A-Polluter</li> <li>Storm Drain Marking</li> <li>HHW and Recycling Program Promotions</li> <li>Annual IDDE, Good Housekeeping, and Pollution Prevention Staff Training</li> </ul>  |

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|      |   |  |
|------|---|--|
|      | 4 | <ul style="list-style-type: none"> <li>• Erosion and Sediment Control Ordinance</li> <li>• Plan Review, Site Inspection, and Enforcement</li> <li>• Staff Training</li> <li>• Erosion &amp; Sediment Control and Post-construction BMP Tracking Database</li> <li>• Training for Construction Professionals</li> <li>• Procedure for Prioritizing Construction Activities</li> <li>• Inspection and Enforcement Documentation</li> <li>• QA/QC of Overall Program</li> </ul>                                       |
|      | 5 | <ul style="list-style-type: none"> <li>• Post-Construction Control Ordinance</li> <li>• Plan Review, Site Inspection, and Enforcement</li> <li>• Staff Training</li> <li>• Post-Construction BMP O&amp;M Manual</li> <li>• Inspection and Enforcement Documentation</li> <li>• Training for Construction Professionals</li> <li>• Erosion &amp; Sediment Control and Post-construction BMP Tracking Database</li> </ul>  |
|      | 6 | <ul style="list-style-type: none"> <li>• MS4 Conveyance System Maintenance Plan and Documentation</li> <li>• Secondary Containment</li> <li>• Oil &amp; Water Separator</li> <li>• Salt and Sand Storage</li> <li>• Chemical Spill Response</li> <li>• Disposal of Waste</li> <li>• Street Sweeping Program</li> <li>• Wash Water Management</li> <li>• Snow Disposal</li> <li>• Fertilizer and Pesticide Management</li> <li>• Annual IDDE, Good Housekeeping, and Pollution Prevention Staff Training</li> </ul> |
| 2006 | 1 | <ul style="list-style-type: none"> <li>• Hamilton County Phase II Public Education Steering Committee</li> <li>• Public Meetings</li> <li>• Stormwater Survey</li> <li>• Stormwater Brochures</li> <li>• Newsletter Articles</li> <li>• HHW and Recycling Program Promotions</li> <li>• Stormwater Website</li> <li>• SWCD Activities</li> <li>• Mass Media Solicitation</li> </ul>  |

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|   |  |
|---|--|
| 2 | <ul style="list-style-type: none"> <li>• Hamilton County Phase II Public Education Steering Committee</li> <li>• Clean-up Events</li> <li>• Storm Drain Marking</li> <li>• HHW and Recycling Program Promotions</li> <li>• SWCD Activities</li> <li>• Rule 13 Public Participation Lists</li> <li>• Report-A Polluter</li> </ul>   |
| 3 | <ul style="list-style-type: none"> <li>• Stormwater System Map</li> <li>• IDDE Ordinance</li> <li>• IDDE Plan Implementation</li> <li>• Report-A-Polluter</li> <li>• Storm Drain Marking</li> <li>• HHW and Recycling Program Promotions</li> <li>• Annual IDDE, Good Housekeeping, and Pollution Prevention Staff Training</li> </ul>   |
| 4 | <ul style="list-style-type: none"> <li>• Erosion and Sediment Control Ordinance</li> <li>• Plan Review, Site Inspection, and Enforcement</li> <li>• Staff Training</li> <li>• Erosion &amp; Sediment Control and Post-construction BMP Tracking Database</li> <li>• Training for Construction Professionals</li> <li>• Procedure for Prioritizing Construction Activities</li> <li>• Inspection and Enforcement Documentation</li> <li>• QA/QC of Overall Program</li> </ul>                                       |
| 5 | <ul style="list-style-type: none"> <li>• Post-construction Control Ordinance</li> <li>• Plan Review, Site Inspection, and Enforcement</li> <li>• Staff Training</li> <li>• Inspection and Enforcement Documentation</li> <li>• Training for Construction Professionals</li> <li>• Erosion &amp; Sediment Control and Post-construction BMP Tracking Database</li> </ul>  |
| 6 | <ul style="list-style-type: none"> <li>• MS4 Conveyance System Maintenance Plan and Documentation</li> <li>• Secondary Containment</li> <li>• Oil &amp; Water Separator</li> <li>• Salt and Sand Storage</li> <li>• Chemical Spill Response</li> <li>• Disposal of Waste</li> <li>• Street Sweeping Program</li> <li>• Wash Water Management</li> <li>• Snow Disposal</li> <li>• Fertilizer and Pesticide Management</li> <li>• Annual IDDE, Good Housekeeping, and Pollution Prevention Staff Training</li> </ul> |

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|      |   |  |
|------|---|--|
| 2007 | 1 | <ul style="list-style-type: none"> <li>• Hamilton County Phase II Public Education Steering Committee</li> <li>• Public Meetings</li> <li>• Stormwater Survey</li> <li>• Stormwater Brochures</li> <li>• Newsletter Articles</li> <li>• HHW and Recycling Program Promotions</li> <li>• Stormwater Website</li> <li>• SWCD Activities</li> <li>• Mass Media Solicitation</li> </ul>  |
|      | 2 | <ul style="list-style-type: none"> <li>• Hamilton County Phase II Public Education Steering Committee</li> <li>• Clean-up Events</li> <li>• Storm Drain Marking</li> <li>• HHW and Recycling Program Promotions</li> <li>• SWCD Activities</li> <li>• Report A Polluter</li> <li>• Rule 13 Public Participation Lists</li> </ul>   |
|      | 3 | <ul style="list-style-type: none"> <li>• Stormwater System Map</li> <li>• IDDE Ordinance</li> <li>• IDDE Plan Implementation</li> <li>• Report-A-Polluter</li> <li>• Storm Drain Marking</li> <li>• HHW and Recycling Program Promotions</li> <li>• Annual IDDE, Good Housekeeping, and Pollution Prevention Staff Training</li> </ul>   |
|      | 4 | <ul style="list-style-type: none"> <li>• Erosion and Sediment Control Ordinance</li> <li>• Plan Review, Site Inspection, and Enforcement</li> <li>• Staff Training</li> <li>• Erosion &amp; Sediment Control and Post-construction BMP Tracking Database</li> <li>• Training for Construction Professionals</li> <li>• Procedure for Prioritizing Construction Activities</li> <li>• Inspection and Enforcement Documentation</li> <li>• QA/QC of Overall Program</li> </ul> |
|      | 5 | <ul style="list-style-type: none"> <li>• Post-construction Control Ordinance</li> <li>• Plan Review, Site Inspection, and Enforcement</li> <li>• Staff Training</li> <li>• Inspection and Enforcement Documentation</li> <li>• Training for Construction Professionals</li> <li>• Erosion &amp; Sediment Control and Post-construction BMP Tracking Database</li> </ul>  |

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|      |   |  |
|------|---|--|
|      | 6 | <ul style="list-style-type: none"> <li>• MS4 Conveyance System Maintenance Plan and Documentation</li> <li>• Secondary Containment</li> <li>• Oil &amp; Water Separator</li> <li>• Salt and Sand Storage</li> <li>• Chemical Spill Response</li> <li>• Disposal of Waste</li> <li>• Street Sweeping Program</li> <li>• Wash Water Management</li> <li>• Snow Disposal</li> <li>• Fertilizer and Pesticide Management</li> <li>• Annual IDDE, Good Housekeeping, and Pollution Prevention Staff Training</li> </ul> |
| 2008 | 1 | <ul style="list-style-type: none"> <li>• Hamilton County Phase II Public Education Steering Committee</li> <li>• Public Meetings</li> <li>• Stormwater Survey</li> <li>• Stormwater Brochures</li> <li>• Newsletter Articles</li> <li>• HHW and Recycling Program Promotions</li> <li>• Stormwater Website</li> <li>• SWCD Activities</li> <li>• Mass Media Solicitation</li> </ul>  |
|      | 2 | <ul style="list-style-type: none"> <li>• Hamilton County Phase II Public Education Steering Committee</li> <li>• Clean-up Events</li> <li>• Storm Drain Marking</li> <li>• HHW and Recycling Program Promotions</li> <li>• SWCD Activities</li> <li>• Report A Polluter</li> <li>• Rule 13 Public Participation Lists</li> </ul>   |
|      | 3 | <ul style="list-style-type: none"> <li>• Stormwater System Map</li> <li>• IDDE Ordinance</li> <li>• IDDE Plan Implementation</li> <li>• Report-A-Polluter</li> <li>• Storm Drain Marking</li> <li>• HHW and Recycling Program Promotions</li> <li>• Annual IDDE, Good Housekeeping, and Pollution Prevention Staff Training</li> </ul>   |

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|   |  |
|---|--|
| 4 | <ul style="list-style-type: none"> <li>• Erosion and Sediment Control Ordinance</li> <li>• Plan Review, Site Inspection, and Enforcement</li> <li>• Staff Training</li> <li>• Erosion &amp; Sediment Control and Post-construction BMP Tracking Database</li> <li>• Training for Construction Professionals</li> <li>• Procedure for Prioritizing Construction Activities</li> <li>• Inspection and Enforcement Documentation</li> <li>• QA/QC of Overall Program</li> </ul>                                       |
| 5 | <ul style="list-style-type: none"> <li>• Post-construction Control Ordinance</li> <li>• Plan Review, Site Inspection, and Enforcement</li> <li>• Staff Training</li> <li>• Inspection and Enforcement Documentation</li> <li>• Training for Construction Professionals</li> <li>• Erosion &amp; Sediment Control and Post-construction BMP Tracking Database</li> </ul>  |
| 6 | <ul style="list-style-type: none"> <li>• MS4 Conveyance System Maintenance Plan and Documentation</li> <li>• Secondary Containment</li> <li>• Oil &amp; Water Separator</li> <li>• Salt and Sand Storage</li> <li>• Chemical Spill Response</li> <li>• Disposal of Waste</li> <li>• Street Sweeping Program</li> <li>• Wash Water Management</li> <li>• Snow Disposal</li> <li>• Fertilizer and Pesticide Management</li> <li>• Annual IDDE, Good Housekeeping, and Pollution Prevention Staff Training</li> </ul> |

**10.3 NEXT STEPS**

As progress is made in implementing the Co-Permittees' Storm Water Quality Management Plan, elements contained in required annual program reports, monthly construction reports, and on-going water quality characterizations will need to be tracked. Rule 13 does provide program flexibility in that if a BMP proves to be ineffective or infeasible, then the Co-Permittees may change their program and incorporate a different BMP.

**Annual Reports**

Starting in January 2006, the Co-Permittees must submit annual reports to IDEM on their Rule 13 permit program. In subsequent permit terms, reports must be submitted only in years two and four.

Annual Reports must include:

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- Progress towards development, implementation, and enforcement of all MCMs, including updated Programmatic Indicator data;
- A summary of complaints received and follow-up investigation results related to storm water quality issues;
- Updated measurable goals;
- Storm water BMPs installed or initiated;
- Follow-up or additional water quality characterization information;
- An updated active industrial facilities list;
- Implementation problems encountered, including BMP changes due to ineffectiveness or infeasibility;
- Funding sources and expenditures;
- Changes to MS4 area boundaries, including land areas added to the MS4 area via annexation or other similar means;
- Identified storm water quality improvement projects; and
- Updated receiving water information.

### **Monthly Construction Site Activity Reports**

The Co-Permittees must submit monthly construction site project summary reports no later than the last day of the following month to IDEM. If no projects occur within a given month, a report does not need to be submitted. Reports must include those projects for which there has been a new permit application or termination notice and must contain:

- A list of all construction and post-construction project site names;
- Project site addresses;
- Project site construction duration timeframes; and
- An indication of enforcement actions undertaken.

### **Agency Inspections**

To evaluate Rule 13 permit compliance, IDEM and/or IDNR staff may periodically inspect the Co-Permittees and review their stormwater program. The MS4 Operator for should be prepared to answer questions and provide documentation of program elements. The point of contact for such inspections will be the County Surveyor's Office. The Surveyor's Office may call upon responsible entities identified in the BMP tables for assistance in such inspections. IDEM may request data to facilitate the identification or qualification of pollutants that may be released to the environment from an MS4 conveyance or to determine effectiveness of the MCMs.

### **On-going Water Quality Characterization**

As new water quality information becomes available and updates are made to data sources that were reviewed as part of the County's SWQMP – Part B: Baseline Water Quality Report, Hamilton County will review that information and adjust their Rule 13 program accordingly. For example, when IDEM publishes the "2006 303(d) List of Impaired Waterbodies" and/or generates an updated 305(b) Basin Water Quality Report for 2006. The Indiana Water Quality 305(b) Report is submitted to USEPA in even-numbered years. A more informal update is prepared in odd-numbered years. As reports such as this become available, the Co-Permittees can review this information

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and compare it to their list of priority watersheds identified in their Part B submittal. If different areas are identified as needing additional measures, then the Co-Permittees will adjust their priorities for program implementation or adjust or add program elements to address newly identified concerns. In addition, the Co-Permittees will utilize results of dry weather screening events to help characterize receiving water quality. As funding allows, the Co-Permittees will conduct studies of 14-digit watersheds within Hamilton County.

**Ongoing Regional Coordination**

In April of 2002, the Co-Permittees and other Hamilton County Stormwater Phase II communities developed the Hamilton County Stormwater Phase II Steering Committee. The Steering Committee has been dedicated to maximizing consistency in Stormwater Programs throughout Hamilton County ever since. Monthly meetings have allowed Phase II communities throughout Hamilton County to share ideas and strategize on how to develop optimally efficient and effective stormwater programs. The Copermitees plan to continue actively participating in the Steering Committee throughout this permit term.

**Rule 13 Permit Renewal**

Permit renewal applications are due at least sixty days prior to the expiration date for the Rule 13 permit. The Co-Permittees' permit renewal will be due on November 31, 2008. Permit coverage under the renewed NOI will begin on the date of expiration from the previous five year permit term. IDEM may reissue permits on a watershed basis, which may change these dates. Subsequent permits will require the Co-Permittees to maintain and, where possible, improve their performance in implementing the six MCMs

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**Appendix A**

**REFERENCES**

Christopher B. Burke Engineering, Ltd. NPDES Phase II General Permit Application, Storm Water Quality Management Plan, Part B: Baseline Characterization Report, Hamilton County, Indiana. May 2004.

Goode & Associates. Stormwater Phase II Needs Analysis and Feasibility Study. December 2002.

Indiana Department of Environmental Management. 327 IAC 15-13 Final Rule. August 2003.

Indiana Department of Environmental Management. Rule 13 Guidance Document. May 2003.

U.S. EPA – Office of Water. Storm Water Phase II Compliance Assistance Guide. March 2000.

U.S. EPA – Office of Water, Storm Water Phase II Final Rule. January 2000.

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**Appendix B**

**GLOSSARY OF TERMS**

Although all of the acronyms and definitions listed below may have not been used in this document, the additional terminology is provided to assist the user of the document in understanding technical terminology associated with IDEM Rule 13 and NPDES Phase II regulations.

**ACRONYMS**

|                |   |
|----------------|---|
| <b>ASTM</b>    | American Society of Testing and Materials       |
| <b>BMP</b>     | Best Management Practice                        |
| <b>CBBEL</b>   | Christopher B. Burke Engineering, Ltd.          |
| <b>COE</b>     | United States Army Corps of Engineers           |
| <b>CWA</b>     | Clean Water Act                                 |
| <b>EPA</b>     | Environmental Protection Agency                 |
| <b>FEMA</b>    | Federal Emergency Management Agency             |
| <b>GIS</b>     | Geographical Information System                 |
| <b>GPS</b>     | Global Positioning System                       |
| <b>HHW</b>     | Household Hazardous Waste                       |
| <b>IDDE</b>    | Illicit Discharge Detection and Elimination     |
| <b>IDEM</b>    | Indiana Department of Environmental Management  |
| <b>IDNR</b>    | Indiana Department of Natural Resources         |
| <b>MCM</b>     | Minimum Control Measure                         |
| <b>MS4</b>     | Municipal Separate Storm Sewers                 |
| <b>NOI</b>     | Notice of Intent                                |
| <b>NPDES</b>   | National Pollution Discharge Elimination System |
| <b>O&amp;M</b> | Operation and Maintenance                       |
| <b>POTW</b>    | Publicly Owned Treatment Works                  |

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|              |                                      |
|--------------|--------------------------------------|
| <b>Qwq</b>   | Water Quality Discharge              |
| <b>SWCD</b>  | Soil and Water Conservation District |
| <b>SWMD</b>  | Solid Waste Management District      |
| <b>SWQMP</b> | Storm Water Quality Management Plan  |
| <b>TSS</b>   | Total Suspended Solids               |
| <b>WQv</b>   | Water Quality Volume                 |

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**DEFINITIONS**

**Base Flow.** Stream discharge derived from groundwater sources as differentiated from surface runoff. Sometimes considered to include flows from regulated lakes or reservoirs.

**Buffer Strip.** An existing, variable width strip of vegetated land intended to protect water quality and habitat.

**Catch Basin.** A chamber usually built at the curb line of a street for the admission of surface water to a storm sewer or subdrain, having at its base a sediment sump designed to retain grit and detritus below the point of overflow.

**Channel.** A portion of a natural or artificial watercourse which periodically or continuously contains moving water, or which forms a connecting link between two bodies of water. It has a defined bed and banks which serve to confine the water.

**Conveyance.** Any structural method for transferring stormwater between at least two points.

**County Surveyor.** A constitutional officer of the County, elected to a 4-year term from the County at large. Primary duties of the surveyor include maintaining annexation descriptions, legal survey book, and section corner record book. Surveyor is also an ex-officio member of the County Drainage Board and the technical authority on the construction, reconstruction, and maintenance of all regulated drains or proposed regulated drains in the County. Other major responsibilities of the surveyor include administering filter strip programs, membership in the County Plan Commission, and certification to the Indiana Alcoholic Beverage Commission.

**Detention.** Managing stormwater runoff by temporary holding and controlled release.

**Discharge.** Usually the rate of water flow. A volume of fluid passing a point per unit time commonly expressed as cubic feet per second, cubic meters per second, gallons per minute, or millions of gallons per day.

**Ditch.** A man-made, open drainageway in or into which excess surface water or groundwater drained from land, stormwater runoff, or floodwaters flow either continuously or intermittently.

**Drain.** A buried slotted or perforated pipe or other conduit (subsurface drain) or a ditch (open drain) for carrying off surplus groundwater or surface water.

**Drainage.** The removal of excess surface water or groundwater from land by means of ditches or subsurface drains. Also see Natural drainage.

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**Drainage Area.** The area draining into a stream at a given point. It may be of different sizes for surface runoff, subsurface flow and base flow, but generally the surface runoff area is considered as the drainage area.

**Drainage Board.** A board consisting of three to five persons including the County executive (commissioners) or members appointed by the executive body (at least one of the Board member must be a County executive). The County Surveyor serves on the Board as an ex-officio, non-voting member. In a County having a consolidated city, the department of public works of the consolidated city comprises the drainage board. The Board is responsible for adopting drain classifications and a long-range plan, and for making decisions regarding the design, construction, reconstruction, and/or maintenance of regulated drains in the County.

**Environment.** The sum total of all the external conditions that may act upon a living organism or community to influence its development or existence.

**Erosion.** The wearing away of the land surface by water, wind, ice, gravity, or other geological agents. The following terms are used to describe different types of water erosion:

- *Accelerated erosion*--Erosion much more rapid than normal or geologic erosion, primarily as a result of the activities of man.
- *Channel erosion* --An erosion process whereby the volume and velocity of flow wears away the bed and/or banks of a well-defined channel.
- *Gully erosion* --An erosion process whereby runoff water accumulates in narrow channels and, over relatively short periods, removes the soil to considerable depths, ranging from 1-2 ft. to as much as 75-100 ft.
- *Rill erosion*--An erosion process in which numerous small channels only several inches deep are formed; occurs mainly on recently disturbed and exposed soils (see Rill).
- *Splash erosion*--The spattering of small soil particles caused by the impact of raindrops on wet soils; the loosened and spattered particles may or may not be subsequently removed by surface runoff.
- *Sheet erosion*--The gradual removal of a fairly uniform layer of soil from the land surface by runoff water.

**Filter Strip.** Usually a long, relatively narrow area (usually, 20-75 feet wide) of undisturbed or planted vegetation used to retard or collect sediment for the protection of watercourses, reservoirs, or adjacent properties. See also Classified Filter Strip.

**Floatable.** Any solid waste that will float on the surface of the water.

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**Flood or Flood Waters.** A general and temporary condition of partial or complete inundation of normally dry land areas from the overflow, the unusual and rapid accumulation, or the runoff of surface waters from any source.

**Floodplain.** The channel proper and the areas adjoining the channel which have been or hereafter may be covered by the regulatory or 100-year flood. Any normally dry land area that is susceptible to being inundated by water from any natural source. The floodplain includes both the floodway and the floodway fringe districts.

**Floodway.** The channel of a river or stream and those portions of the flood plains adjoining the channel which are reasonably required to efficiently carry and discharge the peak flow of the regulatory flood of any river or stream.

**Grade.** (1) The slope of a road, a channel, or natural ground. (2) The finished surface of a canal bed, roadbed, top of embankment, or bottom of excavation; any surface prepared to a design elevation for the support of construction, such as paving or the laying of a conduit. (3) To finish the surface of a canal bed, roadbed, top of embankment, or bottom of excavation, or other land area to a smooth, even condition.

**Habitat.** The environment in which the life needs of a plant or animal are supplied.

**Household Hazardous Waste.** Solid waste generated by households that is ignitable, toxic, reactive, corrosive, or otherwise poses a threat to human health or the environment.

**Illicit Discharge.** Any discharge to an MS4 conveyance that is not composed entirely of stormwater.

**Impervious.** Not allowing infiltration.

**INDOT.** Indiana Department of Transportation. Generally used here to refer to specifications contained in the publication "INDOT Standard Specifications."

**Infiltration.** Passage or movement of water into the soil.

**Minimum Control Measure (MCM).** Minimum measures required by the NPDES Phase II program. The six (6) MCMs are: Public Education and Outreach, Public Participation and Involvement, Illicit Discharge Detection and Elimination, Construction Site Runoff Control, Post-Construction Runoff Control, and Pollution Prevention and Good Housekeeping.

**MS4 Operator.** The person responsible for development, implementation, or enforcement of the MCMs for a designated MS4 area.

**Municipal Separate Storm Sewer System.** An MS4: (1) is a conveyance or system of conveyances owned by the state, County, city, town, or other public entity; (2)

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discharges to waters of the U.S.; (3) is designed or used for collecting or conveying stormwater; (4) is not a combined sewer; and, (5) is not part of a Publicly Owned Treatment Works (POTWs).

**National Pollution Discharge Elimination System.** A permit developed by the U.S. EPA through the Clean Water Act. In Indiana, the permitting process has been delegated to IDEM. This permit covers aspects of municipal stormwater quality.

**Nutrient(s).** (1) A substance necessary for the growth and reproduction of organisms. (2) In water, those substances (chiefly nitrates and phosphates) that promote growth of algae and bacteria.

**Open Drain.** A natural watercourse or constructed open channel that conveys drainage water.

**Open Space.** Any land area devoid of any disturbed or impervious surfaces created by industrial, commercial, residential, agricultural, or other manmade activities.

**Outfall.** The point, location, or structure where wastewater or drainage discharges from a pipe or open drain to a receiving body of water.

**Outlet.** The point of water disposal from a stream, river, lake, tidewater, or artificial drain.

**Pervious.** Allowing movement of water.

**Pesticides.** Chemical compounds used for the control of undesirable plants, animals, or insects. The term includes insecticides, herbicides, algicides, rodenticides, nematicides, fungicides, and growth regulators.

**pH.** A numerical measure of hydrogen ion activity, the neutral point being 7.0. All pH values below 7.0 are acid, and all above 7.0 are alkaline.

**Piping.** The formation of "pipes" by underground erosion. Water in the soil carries the fine soil particles away, and a series of eroded tubes or tunnels develop. These openings will grow progressively larger and can cause a dam failure.

**Professional Engineer.** A person licensed under the laws of the State of Indiana to practice professional engineering.

**Programmatic Indicator.** Any data collected by an MS4 entity that is used to indicate implementation of one (1) or more minimum control measures.

**Publicly Owned Treatment Works.** A municipal operation that breaks down and removes contaminants in wastewater prior to discharging to a stream through primary and/or secondary treatment systems.

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**Receiving Stream.** The body of water into which runoff or effluent is discharged.

**Recharge.** Replenishment of groundwater reservoirs by infiltration and transmission from the outcrop of an aquifer or from permeable soils.

**Redevelopment.** Alterations of a property that change a site or building in such a way that there is disturbances of one (1) acre or more of land.

**Regulated Drain.** A drain, either open channel or closed tile/sewer, subject to the provisions of the Indiana Drainage Code, I.C.-36-9-27.

**Regulatory Flood.** The discharge or elevation associated with the 100-year flood as calculated by a method and procedure which is acceptable to and approved by the Indiana Department of Natural Resources and the Federal Emergency Management Agency. The "regulatory flood" is also known as the "base flood".

**Reservoir.** A natural or artificially created pond, lake or other space used for storage, regulation or control of water. May be either permanent or temporary. The term is also used in the hydrologic modeling of storage facilities.

**Runoff.** That portion of precipitation that flows from a drainage area on the land surface, in open channels, or in stormwater conveyance systems.

**Sand.** (1) Soil particles between 0.05 and 2.0 mm in diameter. (2) A soil textural class inclusive of all soils that are at least 70% sand and 15% or less clay.

**Sediment.** Solid material (both mineral and organic) that is in suspension, is being transported, or has been moved from its site of origin by air, water, gravity, or ice and has come to rest on the earth's surface.

**Slope.** Degree of deviation of a surface from the horizontal, measured as a numerical ratio or percent. Expressed as a ratio, the first number is commonly the horizontal distance (run) and the second is the vertical distance (rise)--e.g., 2:1. However, the preferred method for designation of slopes is to clearly identify the horizontal (H) and vertical (V) components (length (L) and Width (W) components for horizontal angles). Also note that according to international standards (Metric), the slopes are presented as the vertical or width component shown on the numerator--e.g., 1V:2H. Slope expressions in this handbook follow the common presentation of slopes--e.g., 2:1 with the metric presentation shown in parenthesis--e.g., (1V:2H). Slopes can also be expressed in "percents". Slopes given in percents are always expressed as  $(100 \cdot V/H)$  - e.g., a 2:1 (1V:2H) slope is a 50% slope.

**Soil.** The unconsolidated mineral and organic material on the immediate surface of the earth that serves as a natural medium for the growth of land plants. Also see alluvial

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soil, Clay, Cohesive soil, Loam, Permeability (soil), Sand, Silt, Soil horizon, Soil profile, Subsoil, Surface soil, Topsoil.

**Soil and Water Conservation District (SWCD).** A public organization created under state law as a special-purpose district to develop and carry out a program of soil, water, and related resource conservation, use, and development within its boundaries. A subdivision of state government with a local governing body.

**Solid Waste.** Any garbage, refuse, debris, or other discarded material.

**Stormwater.** Water resulting from rain, melting or melted snow, hail, or sleet.

**Stormwater Runoff.** The water derived from rains falling within a tributary basin, flowing over the surface of the ground or collected in channels or conduits.

**Stormwater Quality Management Plan (SWQMP).** A comprehensive written document that addresses stormwater runoff quality within an MS4 area. The SWQMP is divided into three (3) submittal parts: Part A – Initial Application, Part B – Baseline Characterization and On-going Monitoring Plan, and Part C – Program Implementation.

**Storm Sewer.** A sewer that carries stormwater, surface drainage, street wash, and other wash waters but excludes sewage and industrial wastes. Also called a storm drain.

**Subwatershed.** A watershed subdivision of unspecified size that forms a convenient natural unit.

**Swale.** An elongated depression in the land surface that is at least seasonally wet, is usually heavily vegetated, and is normally without flowing water. Swales conduct stormwater into primary drainage channels and may provide some groundwater recharge.

**Tributary.** Based on the size of the contributing drainage area, a smaller watercourse which flows into a larger watercourse.

**Urbanized Area.** A land area comprising one (1) or more places that together have a residential population of at least fifty thousand (50,000) and an overall population density of at least five hundred (500) people per square mile.

**Water Quality.** A term used to describe the chemical, physical, and biological characteristics of water, usually in respect to its suitability for a particular purpose.

**Watercourse.** Any river, stream, creek, brook, branch, natural or man-made drainageway in or into which stormwater runoff or floodwaters flow either continuously or intermittently.

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**Watershed.** The region drained by or contributing water to a specific point that could be along a stream, lake or other stormwater facilities. Watersheds are often broken down into subareas for the purpose of hydrologic modeling.

**Watershed Area.** All land and water within the confines of a drainage divide. See also Watershed.

**Weir.** A channel-spanning structure for measuring or regulating the flow of water.

**Wetlands.** Areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions and/or those wetland areas that are under the COE jurisdiction.

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**Appendix C Memorandum of Agreement Between the Hamilton County Soil and  
Water Conservation District and  
Hamilton County Board of Commissioners**

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Appendix D Public Education and Outreach Memorandum of Understanding

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**Appendix E      SWQMP PART C: PROGRAM IMPLEMENTATION  
CERTIFICATION CHECKLIST**

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**Appendix F CERTIFICATION OF THE INFORMATIONAL PROGRAM  
FOR THE PUBLIC EDUCATION AND OUTREACH MCM**

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**Appendix G CERTIFICATION OF THE PUBLIC PARTICIPATION AND  
INVOLVEMENT PROGRAM FOR THE PUBLIC PARTICIPATION  
AND INVOLVEMENT MCM**

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**Appendix H CERTIFICATION OF THE PLAN TO DETECT, ADDRESS  
AND ELIMINATE ILLICIT DISCHARGES FOR THE ILLICIT  
DETECTION AND ELIMINATION MCM**

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**Appendix I**

**CERTIFICATION OF THE DEVELOPMENT,  
IMPLEMENTATION, MANAGEMENT AND ENFORCEMENT  
OF AN EROSION AND SEDIMENT CONTROL PROGRAM FOR THE  
CONSTRUCTION SITE STORMWATER RUN-OFF CONTROL MCM**

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**Appendix J      CERTIFICATION OF THE DEVELOPMENT,  
IMPLEMENTATION, MANAGEMENT AND ENFORCEMENT  
OF A POST-CONSTRUCTION STORMWATER RUNOFF CONTROL  
PROGRAM FOR THE POST-CONSTRUCTION SITE STOMRATER  
RUN-OFF CONTROL MCM**

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**Appendix K      CERTIFICATION OF THE DEVELOPMENT AND  
IMPLEMENTATION OF A PROGRAM TO REDUCE POLLUTANT  
RUN-OFF FROM MUNICIPAL OPERATIONS FOR THE MUNICIPAL  
OPERATIONS POLLUTION PREVENTION AND GOOD HOUSEKEEPING MCM**

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APPENDIX L

LISTING OF ACTIVE INDUSTRIAL FACILITIES

**Hamilton County, City of Carmel, Town of Cicero, Indiana  
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**Listing of Industrial Facilities within the MS4 Area**

| <b>Facility Name</b>           | <b>Mailing Address</b>       | <b>Mailing City</b> | <b>Mail ZIP</b> | <b>Primary_SIC Code</b> | <b>Phone</b> | <b>Street Address</b>        | <b>Street City</b> | <b>County</b> |
|--------------------------------|------------------------------|---------------------|-----------------|-------------------------|--------------|------------------------------|--------------------|---------------|
| A J Witham Sign Production     | 26266 Devaney Rd             | Arcadia             | 46030           | 3993                    | 317-984-3765 | 26266 Devaney Rd             | Arcadia            | Hamilton      |
| Advanced Metalworking Practice | 401 Industrial Dr            | Carmel              | 46032           | 3399                    | 317-843-1499 | 401 Industrial Dr            | Carmel             | Hamilton      |
| Air-Conn                       | PO Box 472                   | Cicero              | 46034           | 3714                    | 317-984-6613 | 330 Bay View Dr              | Cicero             | Hamilton      |
| American Feeding Systems Inc   | 3497 Conner St               | Noblesville         | 46060           | 3537                    | 317-773-5517 | 3497 Conner St               | Noblesville        | Hamilton      |
| American Propulsion Systems    | PO Box 90287                 | Indianapolis        | 46290           | 3429                    | 317-575-2294 | 9655 Bauer Dr                | Indianapolis       | Hamilton      |
| Ameriflo Inc                   | 478 Gradle Dr                | Carmel              | 46032           | 3494                    | 317-844-2019 | 478 Gradle Dr                | Carmel             | Hamilton      |
| Applied Fabricators Inc        | 222 Gradle Dr                | Carmel              | 46032           | 3444                    | 317-844-4230 | 222 Gradle Dr                | Carmel             | Hamilton      |
| Apptech Inc                    | 363 W Greyhound Pass         | Carmel              | 46032           | 3571                    | 317-844-8828 | 363 W Greyhound Pass         | Carmel             | Hamilton      |
| Bacompt Systems Inc            | 12742 Hamilton Crossing Blvd | Carmel              | 46032           | 2759                    | 317-574-7474 | 12742 Hamilton Crossing Blvd | Carmel             | Hamilton      |
| Ball Systems Inc               | 622 S Range Line Rd          | Carmel              | 46032           | 3825                    | 317-848-0205 | 622 S Range Line Rd          | Carmel             | Hamilton      |
| Bastine Pottery Inc            | 16509 Cyntheanne Rd          | Noblesville         | 46060           | 3263                    | 317-776-0210 | 16509 Cyntheanne Rd          | Noblesville        | Hamilton      |
| Bellwether Inc                 | 9102 Fall View Dr            | Fishers             | 46038           | 2731                    | 317-576-0790 | 9102 Fall View Dr            | Fishers            | Hamilton      |
| Biddle Precision Components    | 701 S Main St                | Sheridan            | 46069           | 3599                    | 317-758-4451 | 701 S Main St                | Sheridan           | Hamilton      |
| Bundy & Co Inc                 | 16506 Strawtown Ave          | Noblesville         | 46060           | 3949                    | 317-776-0553 | 16506 Strawtown Ave          | Noblesville        | Hamilton      |
| Cable Concepts Inc             | 468 Gradle Dr                | Carmel              | 46032           | 3679                    | 317-587-1200 | 468 Gradle Dr                | Carmel             | Hamilton      |
| Carmel Concrete Products Co    | 12368 Hancock St             | Carmel              | 46032           | 3273                    | 317-844-5157 | 12368 Hancock St             | Carmel             | Hamilton      |
| Carmel Engineering Inc         | PO Box 826                   | Westfield           | 46074           | 3599                    | 317-896-9367 | 17650 Spring Mill Rd         | Westfield          | Hamilton      |
| Carmel Signs                   | 13815 N Meridian St          | Carmel              | 46032           | 3993                    | 317-846-6036 | 13815 N Meridian St          | Carmel             | Hamilton      |
| Cave & Co Printing             | 104 W Main St                | Westfield           | 46074           | 2752                    | 317-896-5337 | 104 W Main St                | Westfield          | Hamilton      |
| Chapdell's Tree & Plant Desig  | 11480 E 111th St             | Fishers             | 46038           | 3999                    | 317-845-9980 | 11480 E 111th St             | Fishers            | Hamilton      |
| Christian Tape Library Inc     | 330 N Range Line Rd          | Carmel              | 46032           | 3695                    | 317-844-9999 | 330 N Range Line Rd          | Carmel             | Hamilton      |
| Cisco Systems Inc              | 11711 N Meridian St # 250    | Carmel              | 46032           | 3577                    | 317-816-5200 | 11711 N Meridian St # 250    | Carmel             | Hamilton      |
| CNHI Media                     | 535 W Carmel Dr              | Carmel              | 46032           | 2721                    | 317-848-9495 | 535 W Carmel Dr              | Carmel             | Hamilton      |
| Componentech Sales             | 597 Industrial Dr Ste 306    | Carmel              | 46032           | 3469                    | 317-844-3591 | 597 Industrial Dr Ste 306    | Carmel             | Hamilton      |
| Cookie Jar Inc                 | 25 W Main St                 | Carmel              | 46032           | 2051                    | 317-844-1919 | 25 W Main St                 | Carmel             | Hamilton      |
| Cytec Industries Inc           | 301 E Carmel Dr Ste D100     | Carmel              | 46032           | 2899                    | 317-705-6565 | 301 E Carmel Dr Ste D100     | Carmel             | Hamilton      |
| Da Jac Inc                     | 17152 Shadoan Way            | Westfield           | 46074           | 3647                    | 317-867-1888 | 17152 Shadoan Way            | Westfield          | Hamilton      |
| Davis Tool & Machine Inc       | 19224 Eagletown Rd           | Westfield           | 46074           | 3599                    | 317-896-9278 | 19224 Eagletown Rd           | Westfield          | Hamilton      |
| Different Drummer              | 10912 E 166th St             | Noblesville         | 46060           | 2499                    | 317-773-1201 | 10912 E 166th St             | Noblesville        | Hamilton      |
| Douglas Dye & Associates Inc   | 501 Industrial Dr            | Carmel              | 46032           | 2434                    | 317-844-1709 | 501 Industrial Dr            | Carmel             | Hamilton      |
| Engineered Cooling Systems In  | 201 W Carmel Dr              | Carmel              | 46032           | 3564                    | 317-846-3438 | 201 W Carmel Dr              | Carmel             | Hamilton      |
| Express Graphics               | 620 S Range Line Rd          | Carmel              | 46032           | 2672                    | 317-580-9500 | 620 S Range Line Rd          | Carmel             | Hamilton      |
| Express Manufacturing          | 1420 Chase Ct                | Carmel              | 46032           | 3599                    | 317-571-0990 | 1420 Chase Ct                | Carmel             | Hamilton      |
| Fas-Weld Corp                  | 1776 E 116th St              | Carmel              | 46032           | 2844                    | 317-844-7331 | 1776 E 116th St              | Carmel             | Hamilton      |

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| Facility Name                 | Mailing Address             | Mailing City | Mail ZIP | Primary_SIC Code | Phone        | Street Address              | Street City  | County   |
|-------------------------------|-----------------------------|--------------|----------|------------------|--------------|-----------------------------|--------------|----------|
| Federal Heath Sign LLC        | 11711 N College Ave # 143   | Carmel       | 46032    | 3679             | 317-581-7790 | 11711 N College Ave # 143   | Carmel       | Hamilton |
| Field Rubber Products Inc     | 3211 Conner St              | Noblesville  | 46060    | 2821             | 317-773-3787 | 3211 Conner St              | Noblesville  | Hamilton |
| Financialware Inc             | 12800 N Meridian St # 150   | Carmel       | 46032    | 3578             | 317-816-2360 | 12800 N Meridian St # 150   | Carmel       | Hamilton |
| Firestone Building Products C | 525 Congressional Blvd      | Carmel       | 46032    | 2952             | 317-575-7000 | 525 Congressional Blvd      | Carmel       | Hamilton |
| Frame Decor                   | 1368 S Range Line Rd        | Carmel       | 46032    | 2499             | 317-848-3080 | 1368 S Range Line Rd        | Carmel       | Hamilton |
| Fullerton Inc                 | 940 3rd Ave SW              | Carmel       | 46032    | 2391             | 317-844-2357 | 940 3rd Ave SW              | Carmel       | Hamilton |
| Heat Recovery Systems Inc     | 505 Industrial Dr           | Carmel       | 46032    | 3564             | 317-848-2745 | 505 Industrial Dr           | Carmel       | Hamilton |
| Hubs Chub Inc                 | 2451 W 246th St             | Sheridan     | 46069    | 3949             | 317-758-5494 | 2451 W 246th St             | Sheridan     | Hamilton |
| Indiana Seal                  | PO Box 780                  | Carmel       | 46082    | 3498             | 317-844-8700 | 1075 3rd Ave SW             | Carmel       | Hamilton |
| Info-Partners International   | PO Box 427                  | Carmel       | 46082    | 2741             | 317-815-0401 | 9 Shore Cir                 | Carmel       | Hamilton |
| Innovative Corp               | 833 W Carmel Dr             | Carmel       | 46032    | 2434             | 317-846-2018 | 833 W Carmel Dr             | Carmel       | Hamilton |
| Integrator.com                | 8001 E 196th St             | Noblesville  | 46060    | 3823             | 317-776-3500 | 8001 E 196th St             | Noblesville  | Hamilton |
| Iris Rubber Co Inc            | PO Box 737                  | Cicero       | 46034    | 3069             | 317-984-3561 | 10 E Jackson St             | Cicero       | Hamilton |
| Jazz It Up Screen Printing    | 525 Industrial Dr           | Carmel       | 46032    | 2396             | 317-574-0066 | 525 Industrial Dr           | Carmel       | Hamilton |
| Kauffman Products Inc         | 1092 3rd Ave SW             | Carmel       | 46032    | 3469             | 317-574-9009 | 1092 3rd Ave SW             | Carmel       | Hamilton |
| Kwik Kopy Printing            | 12955 Old Meridian St # 103 | Carmel       | 46032    | 2752             | 317-844-6629 | 12955 Old Meridian St # 103 | Carmel       | Hamilton |
| Laser Graphics Midwest        | 160 W Carmel Dr             | Carmel       | 46032    | 2791             | 317-582-1969 | 160 W Carmel Dr             | Carmel       | Hamilton |
| Lasting Impressions Hot Stamp | 620 S Range Line Rd # P     | Carmel       | 46032    | 2789             | 317-846-3123 | 620 S Range Line Rd # P     | Carmel       | Hamilton |
| Lone Star Industries Inc      | 10401 N Meridian St # 400   | Indianapolis | 46290    | 3273             | 317-706-3300 | 10401 N Meridian St # 400   | Indianapolis | Hamilton |
| Luisi Enterprises Inc         | 303 W Carmel Dr             | Carmel       | 46032    | 2759             | 317-844-9171 | 303 W Carmel Dr             | Carmel       | Hamilton |
| Maco Press Inc                | PO Box 329                  | Carmel       | 46082    | 2796             | 317-846-5567 | 560 3rd Ave SW              | Carmel       | Hamilton |
| Magnetic Concepts Corp        | 611 3rd Ave SW              | Carmel       | 46032    | 3993             | 317-580-4020 | 611 3rd Ave SW              | Carmel       | Hamilton |
| Mecom Ltd                     | 813 W Carmel Dr             | Carmel       | 46032    | 3161             | 317-571-3898 | 813 W Carmel Dr             | Carmel       | Hamilton |
| Metal Powder Products Co      | 11595 N Meridian St # 510   | Carmel       | 46032    | 3499             | 317-580-2420 | 11595 N Meridian St # 510   | Carmel       | Hamilton |
| Modular Devices Inc           | 503 W Carmel Dr             | Carmel       | 46032    | 3845             | 317-818-4480 | 503 W Carmel Dr             | Carmel       | Hamilton |
| Moore Services Inc            | 12262 Hancock St            | Carmel       | 46032    | 2761             | 317-571-9800 | 12262 Hancock St            | Carmel       | Hamilton |
| Moore's Country Wood Crafting | PO Box 389                  | Arcadia      | 46030    | 2499             | 317-984-3326 | 115-119 W Main St           | Arcadia      | Hamilton |
| Motorola Inc                  | 12254 Hancock St            | Carmel       | 46032    | 3674             | 317-571-0400 | 12254 Hancock St            | Carmel       | Hamilton |
| Nelson Impressions Inc        | 1363 Sumac Ct               | Carmel       | 46033    | 2396             | 317-846-3444 | 1363 Sumac Ct               | Carmel       | Hamilton |
| Noble Industries Inc          | PO Box 578                  | Noblesville  | 46061    | 3441             | 317-773-1926 | 3333 Conner St              | Noblesville  | Hamilton |
| Oehler's Woods                | 1481 W 136th St             | Carmel       | 46032    | 2511             | 317-848-2698 | 1481 W 136th St             | Carmel       | Hamilton |
| Omni Industries               | 1595 W 246th St             | Sheridan     | 46069    | 3479             | 317-758-4512 | 1595 W 246th St             | Sheridan     | Hamilton |
| Paradigm Industries Inc       | 12236 Hancock St            | Carmel       | 46032    | 2842             | 317-574-8590 | 12236 Hancock St            | Carmel       | Hamilton |
| Pennyroyal Papers & Publicati | 1148 W 146th St             | Westfield    | 46074    | 2731             | 317-846-7916 | 1148 W 146th St             | Westfield    | Hamilton |
| Perfecto Manufacturing Inc    | PO Box 539                  | Noblesville  | 46061    | 3231             | 317-773-6627 | 20975 Creek Rd              | Noblesville  | Hamilton |

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| Facility Name                 | Mailing Address           | Mailing City | Mail ZIP | Primary_SIC Code | Phone        | Street Address            | Street City  | County   |
|-------------------------------|---------------------------|--------------|----------|------------------|--------------|---------------------------|--------------|----------|
| Pillsbury Co                  | 3077 E 98th St Ste 260    | Indianapolis | 46280    | 2041             | 317-580-1924 | 3077 E 98th St Ste 260    | Indianapolis | Hamilton |
| Poyser Kelshaw Group LLC      | 4936 Regency Pl           | Carmel       | 46033    | 3366             | 317-894-3915 | 4936 Regency Pl           | Carmel       | Hamilton |
| Preformance Publishing        | 409 Industrial Dr         | Carmel       | 46032    | 2731             | 317-575-4255 | 409 Industrial Dr         | Carmel       | Hamilton |
| Qsp Printing Inc              | 162 W Carmel Dr           | Carmel       | 46032    | 2752             | 317-846-6000 | 162 W Carmel Dr           | Carmel       | Hamilton |
| Quality Drapery Corp          | 3525A State Road 32 W     | Westfield    | 46074    | 2391             | 317-896-2522 | 3525A State Road 32 W     | Westfield    | Hamilton |
| R W Pickett & Sons            | 1061 E 236th St           | Sheridan     | 46069    | 2087             | 317-758-4331 | 1061 E 236th St           | Sheridan     | Hamilton |
| Reeder & Kline Machine Co Inc | 340 1st Ave SW            | Carmel       | 46032    | 3599             | 317-846-6591 | 340 1st Ave SW            | Carmel       | Hamilton |
| Regal Printing Inc            | 485 Gradle Dr             | Carmel       | 46032    | 2752             | 317-844-1723 | 485 Gradle Dr             | Carmel       | Hamilton |
| RFC Franchising LLC           | 12400 N Meridian St # 190 | Carmel       | 46032    | 2026             | 317-819-0700 | 12400 N Meridian St # 190 | Carmel       | Hamilton |
| Ritron Inc                    | PO Box 1998               | Carmel       | 46082    | 3669             | 317-846-1201 | 505 W Carmel Dr           | Carmel       | Hamilton |
| Riverwood Stairsystems & Mill | 14000 Olio Rd             | Noblesville  | 46060    | 2431             | 317-773-9695 | 14000 Olio Rd             | Noblesville  | Hamilton |
| Rockwell Automation           | 600 E Carmel Dr # 200     | Carmel       | 46032    | 3823             | 317-334-9592 | 600 E Carmel Dr # 200     | Carmel       | Hamilton |
| Rough Notes Co Inc            | PO Box 1990               | Carmel       | 46082    | 2731             | 317-582-1600 | 11690 Technology Dr       | Carmel       | Hamilton |
| SePRO Corp                    | 11550 N Meridian St # 600 | Carmel       | 46032    | 2879             | 317-580-8282 | 11550 N Meridian St # 600 | Carmel       | Hamilton |
| Shelf Tag Supply Corp         | 611 3rd Ave SW            | Carmel       | 46032    | 2679             | 317-580-4030 | 611 3rd Ave SW            | Carmel       | Hamilton |
| Sheridan Manufacturing Co Inc | 508 S Main St             | Sheridan     | 46069    | 3599             | 317-758-6000 | 508 S Main St             | Sheridan     | Hamilton |
| Shi Ru Originals              | 3481 Sugar Loaf Ct        | Carmel       | 46033    | 2335             | 317-848-1091 | 3481 Sugar Loaf Ct        | Carmel       | Hamilton |
| Signal Golf Inc               | 10988 Windjammer Trce     | Indianapolis | 46256    | 3949             | 317-577-9765 | 10988 Windjammer Trce     | Indianapolis | Hamilton |
| Strawtown Pottery & Antiques  | 12738 Strawtown Ave       | Noblesville  | 46060    | 3269             | 317-984-5080 | 12738 Strawtown Ave       | Noblesville  | Hamilton |
| Team Pride Custom Apparel Inc | PO Box 414                | Arcadia      | 46030    | 2396             | 317-984-3242 | 103 W Main St             | Arcadia      | Hamilton |
| Telamon Corp                  | 1000 E 116th St           | Carmel       | 46032    | 3661             | 317-818-6888 | 1000 E 116th St           | Carmel       | Hamilton |
| Tiger Equipment Co            | 13211 Griffin Run         | Carmel       | 46033    | 3549             | 317-844-2335 | 13211 Griffin Run         | Carmel       | Hamilton |
| T-Metal Works Inc             | PO Box 1383               | Carmel       | 46082    | 3444             | 317-848-2936 | 415 Industrial Dr         | Carmel       | Hamilton |
| Triple Crest Enterprises Inc  | 620 S Range Line Rd Ste N | Carmel       | 46032    | 2752             | 317-844-4449 | 620 S Range Line Rd Ste N | Carmel       | Hamilton |
| UN Printing & Mailing Inc     | 1429 Chase Ct             | Carmel       | 46032    | 2752             | 317-844-8622 | 1429 Chase Ct             | Carmel       | Hamilton |
| Uniform Hood Lace Inc         | PO Box 364                | Westfield    | 46074    | 2399             | 317-896-9555 | 18881 US Highway 31 N     | Westfield    | Hamilton |
| Vibcon Corp                   | PO Box 542                | Arcadia      | 46030    | 3569             | 317-984-3543 | 6660 E 266th St           | Arcadia      | Hamilton |
| Violin Shop of Old Carmel     | 1001 W Main St            | Carmel       | 46032    | 3931             | 317-876-1805 | 1001 W Main St            | Carmel       | Hamilton |
| Voege Precision Mch Pdts LLC  | 17808 Commerce Dr         | Westfield    | 46074    | 3548             | 317-867-4699 | 17808 Commerce Dr         | Westfield    | Hamilton |
| W D M Group Inc               | 620 S Range Line Rd Ste J | Carmel       | 46032    | 2395             | 317-846-7157 | 620 S Range Line Rd Ste J | Carmel       | Hamilton |
| Weas Engineering Inc          | PO Box 550                | Westfield    | 46074    | 2899             | 317-867-4477 | 17819 Commerce Dr         | Westfield    | Hamilton |
| Westfield Manufacturing Corp  | PO Box 773                | Westfield    | 46074    | 3599             | 317-844-7991 | 15602 N Gray Rd           | Westfield    | Hamilton |
| Woods Industries Inc          | 510 3rd Ave SW            | Carmel       | 46032    | 3699             | 317-844-7261 | 510 3rd Ave SW            | Carmel       | Hamilton |
| Young Enterprises Inc         | 12555 Lantern Rd          | Fishers      | 46038    | 3089             | 317-849-7592 | 12555 Lantern Rd          | Fishers      | Hamilton |