

I. INTRODUCTION

The 1987 amendments to the Clean Water Act required the US Environmental Protection Agency (EPA) to establish the National Pollutant Discharge Elimination System (NPDES) permitting program. In 1999, the EPA published Phase II of the NPDES program entitled *Storm Water Phase I Final Rule*. Under this rule, the Town of Speedway (Town) has been designated as a Phase II Municipal Separate Storm Sewer System (MS4) community and is required to obtain NPDES permit coverage for all storm water discharges from the Town's storm water system pursuant to 327 IAC 15-13. This report has been developed in compliance with the requirements of the Phase II Storm Water Permit Program. In a staged implementation of this program, larger communities, such as City of Indianapolis, fall under Phase I, and smaller communities, such as Town of Speedway, fall under Phase II. Phase I of the Storm Water Program required MS4s serving an urban population greater than 100,000 people to comply with permitting requirements. Phase II extends storm water regulation to entities with a population of 7,000 or greater. The requirements of Phase II are also sequentially staged, with Part A being the community's notification of intent to comply with the regulations, Part B being a Baseline Characterization and Assessment of the MS4, and Part C, being implementation of the Storm Water Quality Management Plan (SWQMP). The Town is required to develop a SWQMP as part of the Phase II Storm Water Program, which includes a detailed description for each of the following 6 (six) Minimum Control Measures (MCMs): 1) Public Education and Outreach, 2) Public Participation and Outreach, 3) Illicit Discharge Elimination, 4) Construction Site Runoff Control, 5) Post-Construction Runoff Control, and 6) Pollution Prevention and Good Housekeeping.

II. IDENTIFICATION AND MAPPING OF MS4 ENTITY

A. Town of Speedway

The Town of Speedway is located in central Indiana in west-central Marion County west of downtown Indianapolis and is entirely surrounded by the City of Indianapolis metropolitan area. The Town is served by Interstate Highways 465 and 74, as well as Highway 136. The Town covers an area of approximately five square miles. According to the 2000 census report, the Town's population is 12,881.

B. Town of Speedway Storm Water System

The Town's storm water system consists of storm sewers, combined sewers, and open channels, which all discharge to three receiving waters: Big Eagle Creek, Little Eagle Creek, and Dry Run.

C. Town of Speedway Receiving Waters

1. Big Eagle Creek:

The Town is located within the Big Eagle Creek Watershed with Big Eagle Creek running along the west and south side of the Town. Big Eagle Creek is located within the White River Basin with headwaters located in Hamilton County. The creek flows from Hamilton County southwest to Boone County and into Marion County to the Eagle Creek Reservoir. Discharge from the reservoir flows southeast through Speedway to the White River in Indianapolis. Speedway is located approximately five miles downstream of the Eagle Creek Reservoir.

Big Eagle Creek has a drainage area of approximately 176 square miles. There are 8 known storm water outfalls to Big Eagle Creek from the Town's storm water system.

2. Little Eagle Creek

Little Eagle Creek originates in northwestern Marion County, just east of Eagle Creek Reservoir and is part of the Big Eagle Creek Watershed. Little Eagle Creek flows southeast where it is joined by Guion Creek and Falcon Creek to the north of the Town of Speedway, and then flows south, running along the eastern edge of the Town. Little Eagle Creek has a drainage area of approximately 17.4 square miles.

There are 7 known storm water outfalls to Little Eagle Creek from the Town's storm water system.

3. Dry Run

Dry Run originates just east of Eagle Creek Reservoir, and is also part of the Big Eagle Creek Watershed. Dry Run flows southeast through the center of Town, and joins Little Eagle Creek southeast of the Town. Dry Run has a drainage area of approximately 4.4 square miles.

There are 30 known storm water outfalls to Dry Run from the Town's storm water system.

III. LAND USE

A. Land Use Map

A current land use map displays the current area land use designations for the Town. This information is from the Marion County Department of Metropolitan Development.

B. Rule 6 Entities – Industrial NPDES Permits Program

Currently there are three entities within the Town that are required to comply with the requirements of the State of Indiana Industrial NPDES permits program known as *Rule 6*. These entities with permits for storm water discharges are shown in Table 1 below, categorized by their Standard Industrial Classification (SIC) codes.

Table 1
Rule 6 Entities

Entity	Permit Number	SIC Code Number	Receiving Water
Allison Transmission	INR00A155	3568 – power transmission	Big Eagle Creek, Little Eagle Creek
PRAXAIR Surface Tech., Inc.	INR00P135	3479 – metal finishing	Dry Run Creek
Tri - State Coca-Cola Bottling Company	INR00C214	2086 – soft drink manufacturers and bottlers	Dry Run Diversion Ditch

C. Land Use Conclusions

As previously stated, the Town of Speedway is surrounded entirely by the City of Indianapolis. Both the Town and the areas around the Town have been fully developed.

The industrial zoned area at the southeast portion of the Town may have the potential for elevated pollutant levels in storm water runoff. However, the industrial area is located within the combined sewer area, which means that storm water is collected and conveyed to the Town's wastewater treatment plant (WWTP). Portions of wet weather flow are treated at the plant, with the remaining flow discharging to Big Eagle Creek through Combined Sewer Overflow (CSO) No. 002. The Town has completed a CSO Long Term Control Plan (LTCP) to address this discharge.

D. Identification of Known Sensitive Areas

The State of Indiana NPDES general permit rule, known as *Rule 13*, defines a sensitive area as an area that meets one of the following conditions: 1) an area having threatened or endangered species or their habitat, 2) a public surface water intake, 3) a public swimming area, or 4) a water classified as an exceptional use water as found in 327 IAC 2-1-11(b) or an outstanding state resource water as found in 327 IAC 2-1-2(3). Sensitive areas within the MS4 community are to be given the highest priority in the development and implementation of community Best Management Practices (BMPs), i.e., exemplary practices which communities are mandated to adopt.

E. Town of Speedway Water Sources

The Town's drinking water treatment plant currently draws a portion of its water supply from an intake in Big Eagle Creek located just upstream from the 10th Street Bridge. Creek water quality in this area as well as upstream from the water treatment plant is a concern.

IV. BASELINE CHARACTERIZATION – PART B RESULTS

The Town and other organizations have been collecting data for many years in the Speedway area to monitor stream water quality, establishing a baseline for later measurement of change. Both chemical monitoring and more recently biological monitoring have been performed in an attempt to establish baseline water quality in the streams affected by the MS4 area.

A. Chemical Data

The Town, Eagle Creek Watershed Task Force, and Marion County Health Department have all collected chemical data as described in the following sections.

1. Combined Sewer Overflow (C SO) Program Data

The Town has several years of stream sampling data taken as part of the CSO program. The Town completed stream sampling from April 1995 to July 2002 as part of the Stream Reach Characterization and Evaluation Report (SRCER).

2. The Eagle Creek Watershed Task Force

The Eagle Creek Watershed Task Force (ECWTF) is a subsidiary of the Upper White River Watershed Alliance, an organization that focuses its efforts towards water quality monitoring and whose goal is to, "obtain better and more cost-efficient data and enhance the value and quality of locally collected information." The organization has developed several storm water management practices and performed several monitoring studies within the

White River Watershed. This information is available online at the following site:

<http://www.whiteriveralliance.org/index.html>

The Eagle Creek Watershed Task Force has collected monitoring data for several parameters and from multiple locations throughout the watershed upstream from the Town of Speedway.

3. Marion County Health Department

The Marion County Health Department (MCHD) performs several monitoring tests throughout the Eagle Creek Watershed area. The MCHD has many available monitoring studies and data on the Eagle Creek Watershed. This information is located at the following site:

http://www.mchd.com/wq/EagleCrk/Html/Eag_h2o.htm

The primary parameters studied on the Eagle Creek Watershed are E coli and Chemical Chloride. The data collected by the MCHD covers the length of Eagle Creek through Marion County and may be utilized to assess both upstream and downstream water quality.

4. Matrix of Existing Monitoring Data

Table 2 shows the available monitoring data that that has been identified as part of the initial characterization of the Town's receiving waters.

**Table 2
Existing Monitoring Data**

Sampling Entity	Sampling Location	Dates Sampled	Tested Parameters
Speedway	Eagle Creek at 10 th Street	October 1996 – October 2002	D.O., pH, TSS, NH3-N, Fecal Coli form, CBOD5
Speedway	Eagle Creek at Lynhurst Drive	December 1995 – Present	D.O., pH, TSS, NH3-N, Fecal Coli form, CBOD5
Speedway	Eagle Creek at Washington Street	December 1995 – Present	D.O., pH, TSS, NH3-N, Fecal Coli form, CBOD5
MCHD	Eagle Creek at Ford Road	2002 – Present	E coli, Chemical Chloride
MCHD	Eagle Creek at 79 th Street	2002 – Present	E coli, Chemical Chloride
MCHD	Eagle Creek at 56 th Street	2002 – Present	E coli, Chemical Chloride

Sampling Entity	Sampling Location	Dates Sampled	Tested Parameters
MCHD	Eagle Creek at Crawfordsville Road	2002 – Present	E coli, Chemical Chloride
MCHD	Eagle Creek at 10 th Street	2002 – Present	E coli, Chemical Chloride
MCHD	Eagle Creek at Grande Avenue	2002 – Present	E coli, Chemical Chloride
MCHD	Eagle Creek at McCarty Street	2002 – Present	E coli, Chemical Chloride
MCHD	Eagle Creek at Raymond Street	2002 – Present	E coli, Chemical Chloride
MCHD	Eagle Creek at West Washington Street	1998 – Present	Various Macroinvertebrate Data
MCHD	Eagle Creek at Belmont	1998 – Present	Various Macroinvertebrate Data
MCHD	Little Eagle Creek at West Washington St.	1998	Various Macroinvertebrate Data

B. Biological Data

In October 2004, the Town completed a Stormwater Baseline Characterization study using the Index of Biotic Integrity (IBI) scoring system and protocols established by U.S. EPA. Commonwealth Biomonitoring performed this work. Six sites were selected for monitoring including both upstream and downstream sites: (2) Big Eagle Creek, (2) Little Eagle Creek, and (2) Dry Run Creek. The biological condition of the streams was evaluated based on both aquatic habitat parameters and an evaluation of macroinvertebrate communities.

C. Conclusions

While a significant amount of chemical monitoring data exists for the receiving streams, identifying storm water quality problem areas based on these data is difficult given the number of pollutant sources in the watershed and the variability in conditions between sample events. Besides noting significant variability in stream water quality when comparing similar dry weather conditions and when comparing similar wet weather conditions, no correlative conclusions can be drawn from these data.

The biological monitoring indicated that two sites upstream from Town of Speedway stormwater discharges had the most degraded water quality. The remaining sites did not have seriously degraded water quality. Based on these results, it appears that stormwater discharges from the Town of Speedway do not have a negative impact on the water quality of Big Eagle Creek, Little Eagle Creek, and Dry Run Creek. Again,

identifying specific sources of pollution causing degradation is difficult given the variable conditions within the watershed.

V. PROGRAM DESCRIPTION FOR EACH MCM

In an attempt to improve storm water quality, the Town must address the following six Minimum Control Measures (MCMs): 1) Public Education and Outreach, 2) Public Participation and Outreach, 3) Illicit Discharge Elimination, 4) Construction Site Runoff Control, 5) Post-Construction Runoff Control, and 6) Pollution Prevention and Good Housekeeping A description of the Town's plan for each MCM follows.

A. MCM No. 1 – Public Education and Outreach

As part of the SWQMP Plan, all constituents within the Town of Speedway with the potential to impact the quality of the storm water must be informed of the effects of their impact and ways they can minimize that impact. The primary purpose of the public education and outreach program is to develop and document awareness about storm water quality impacts by the Town's constituency.

The Town of Speedway has identified BMPs currently implemented in regard to public education and outreach and developed future BMPs to address public education and outreach.

B. MCM No. 2 – Public Participation/Involvement

All constituents interested in participating in the Town's storm water program must be given the opportunity to participate. Thus, storm water program and development and implementation meetings must be open to the public, with proper notification provided. Public comments, input, and involvement will be solicited and efforts documented.

The Town of Speedway has identified BMPs currently implemented in regard to public participation and involvement and developed implementation of future BMPs to address public participation and involvement.

C. MCM No. 3 – Illicit Discharge Detection and Elimination

As part of the Town's SWQMP, Speedway developed a strategy to detect and eliminate illicit discharges to the MS4 conveyance system. The strategy is enforceable through the development of an ordinance that regulates illicit discharges throughout the Town. The strategy includes detection procedures, illicit discharger notification procedures, and enforcement procedures.

The Town of Speedway has developed or modified several BMPs to address the Illicit Discharge Detection and Elimination Program.

D. MCM No. 4 – Construction Site Runoff Control

As part of the SWQMP the Town has developed a program to regulate storm water discharges from construction site activities into the Town's conveyance system. The Town passed a new Erosion Control Ordinance on January 10, 2005.

The Town of Speedway has identified current and future BMPs that will be implemented as part of the construction site runoff control program.

E. MCM No. 5 – Post-Construction Stormwater Runoff Control

The Town's SWQMP also addresses post-construction requirements that will ensure adequate, long-term storm water quality from discharges from new development and redevelopment construction site activities into the Town's conveyance system. The Town passed a new Post Construction Runoff Control Ordinance on September 12, 2005.

The Town of Speedway has identified current and future BMPs that will be implemented as part of the post construction runoff control program.

F. MCM No. 6 – Municipal Operations Pollution Prevention/Good Housekeeping

As part of the SWQMP the Town will regulate storm water discharges from Town activities into the Town's conveyance system. The Town of Speedway has identified current and future BMPs to implement as part of the good housekeeping program.

VI. PROGRAMMATIC INDICATORS

According to the rule language, a listing of programmatic indicators must be developed and provided to IDEM. IAC 15-13-8 Subsection (b) provides a minimum listing that the Town must address and track with data collection.

VII. ONGOING CHARACTERIZATION

In an attempt to monitor improvements in stream water quality as a result of the implementation of the SWQMP, the Town will repeat the monitoring completed for the Stormwater Baseline Characterization study one time each permit cycle.

VIII. BUDGET

The Town of Speedway has its own storm water utility. The Speedway Stormwater Management Board oversees the utility and is responsible for developing and implementing the requirements of the Stormwater Quality Management Plan (Rule 13).

The utility is funded by a property tax levy and a distribution of gambling revenue from the State of Indiana. The current SWQMP annual budget is outlined as follows:

• Public Education and Outreach	\$3,000.00
• Public Participation/Involvement	\$ 500.00
• Illicit Discharge Detection & Elimination	\$2,000.00
• Construction Site Run-Off Control	\$ 500.00
• Postconstruction Run-Off Control	\$ 500.00
• Pollution Prevention/Good Housekeeping	\$ 500.00
• On-Going Water Quality Characterization	\$ 500.00

The projected total annual cost is \$7,500.00.

Costs are kept to a minimum by using existing Town of Speedway personnel and resources to implement and complete the requirements of the Storm Water Quality Management Plan.