

Rule 13 Stormwater Quality Management Plan
Part C: Program Implementation
Muncie, IN
May 2005

SECTION 1 –Introduction

1.1 Purpose

The purpose of this Storm Water Quality Management Plan (SWQMP) is to describe the programs, practices and responsibilities adopted by the Muncie Sanitary District (MSD) to implement the Municipal Separate Storm Sewer System (MS4) National Pollutant Discharge Elimination System (NPDES) Permit No. INR040085 in accordance with 327 IAC 15-13. The SWQMP describes the activities that will be performed to comply with the NPDES permit conditions, provides measurable goals for key activities, and outlines staffing and funding responsibilities for the permittee. The SWQMP will apply to the 5-year duration of the current NPDES permit. Annual modifications will be provided as necessary with the required annual reports to address changes in proposed program elements or conditions in the permit area.

1.2 Authorization

This SWQMP is authorized by new stormwater requirements resulting from the United States Environmental Protection Agency (EPA) regulation entitled “Nation Pollutant Discharge Elimination System (NPDES) – Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges” (Federal Register, Volume 64, Number 235, pages 68722 – 68852) on December 8, 1999 as required by section 402(p) of the Clean Water Act (CWA).

The program is administered by the Indiana Department of Environmental Management with the adoption of 327 IAC 15-5 for Storm Water Run-off Associated with Construction Activity, 327 IAC 15-6 Storm Water Run-off Associated with Industrial Activity, and 327 IAC 15-13 for Storm Water Run-off Associated with Municipal Separate Storm Sewer System (MS4) Conveyances.

1.3 Area of Coverage

The area of coverage as defined in the NPDES Permit is the corporate boundary of the City of Muncie. A description and map of the corporate boundary can be found in Section 3.5 and Figure 3-1. The permit coverage area will be adjusted to include the entire service area of the Muncie Sanitary District when the first annual report is filed.

1.4 Period of Performance

This SWQMP applies to the 5-year effective period of the NPDES permit, or from November 3, 2003 to November 2, 2008. The SWQMP refers to Permit Years when specifying when various activities are scheduled to occur. Permit Years are defined as follows:

Permit Year	Start	End
Permit Year 1	November 3, 2003	November 2, 2004
Permit Year 2	November 3, 2004	November 2, 2005
Permit Year 3	November 3, 2005	November 2, 2006
Permit Year 4	November 3, 2006	November 2, 2007
Permit Year 5	November 3, 2007	November 2, 2008

Submittal dates for this permit are:

Item	Date Submitted
Part A Notice of Intent	November 3, 2003
Part B Baseline Characterization and Report	May 1, 2004
Part C Program Implementation	May 9, 2005

SECTION 2 – Legal Authority

2.1 Introduction and Rationale

This section addresses the requirement in 327 IAC 15-13-6 that the MS4 have legal authority to develop and implement the SWQMP within its permit area. The objective is to provide documentation that the Muncie Sanitary District currently has adequate legal authority to conduct all necessary activities required by the Muncie Sanitary District's permit.

2.2 Existing Legal Authority

The City operates its stormwater system through the Muncie Sanitary District operating under authority of Indiana Code 36-9-25.

2.3 Additional Required Legal Authority

If review of current resolutions of the MSD identifies deficiencies in the ability to implement the SWQMP programs, a plan for addressing those deficiencies will be developed.

2.4 Measurable Goals

Existing legal authority will be documented by the MS4 Operator and reviewed by legal counsel. The SWQMP will also be reviewed by counsel and a plan developed to revise or create additional legal mechanisms if necessary. The MS4 Operator will keep up-to-date records on all related legal documentation. (See following chart)

Permit Year	Measurable Goal/Milestone
Permit Year 1	Assemble existing legal authority and if necessary, develop plan for addressing deficiencies in current legal authority
Permit Year 2	If necessary, address legal authority for Post Construction Storm Water Run-off MCM

SECTION 3 – Storm Water Quality Management Plan

3.1 West Fork White River TMDL

The West Fork White River from Muncie to the Hamilton-Marion County line has a total maximum daily load report for e-coli dated February 4, 2004. The stormwater program implementation will address and comply with issues from the report.

3.2 Initial Evaluation of Storm Water Program

This section addresses the requirement in 327 IAC 15-13-8(a)(1) that the MS4 provide an initial evaluation of the storm water program, which includes information on all known structural and nonstructural BMPs utilized. An evaluation of all known structural and nonstructural BMPs utilized in the MS4 area can be found in Appendix C of the Muncie Sanitary District's Part B: Baseline Characterization and Report submittal.

The Part B analysis revealed the dominant land uses within the watersheds. Residential and commercial developments dominated the MS4 service area. Agricultural uses dominated the land uses of the watersheds. The principal contaminants to be expected are sedimentation from construction sites and e-coli from animals. Other urban contaminants are also to be expected from automobiles, commercial establishments, and industrial sites. The Muncie stormwater program targets these sites and sources.

3.2 Detailed Program Description for Each MCM

A detailed program description for each of the 6 minimum control measures given in 327 IAC 15-13-12 thru 327 IAC 15-13-17 can be found in Sections 6-11 of this document.

3.3 Timetable for Program Implementation

The current schedule for program implementation follows the compliance schedule set forth in 327 IAC 15-13-11 and Section 5.2 of this document.

3.4 Schedule For On-going Receiving Water Characterization

The Muncie Sanitary District plans to utilize the bi-annual biological (fish and macroinvertebrates) surveys from its Bureau of Water Quality to provide an on-going characterization of their receiving waters. The MSD will continue to collect water quality data from outside sources as it becomes available, on each of the receiving waters and submit to the department with the corresponding annual report.

3.5 Description of MS4 Boundary

The MS4 boundary will be the corporate limits of the City of Muncie. The current MS4 area contains all or parts of the following Sections:

Township 21 North – Range 10 East

- Sections 28, 29, and 31-36

Township 20 North – Range 9 East

- Sections 1, 13, 24

Township 20 North – Range 10 East

- Sections 1-24, 26, 27, and 28

Township 20 North – Range 11 East

- Section 7

Figure 3-1 at the end of this section shows in more detail the existing MS4 boundary. Included in the MS4 boundary and this program is the municipally owned Wastewater Treatment Plant. The permit coverage area will be adjusted to include the entire service area of the Muncie Sanitary District when the first annual report is filed.

3.6 Estimate of Linear Feet of MS4

Muncie has approximately 617,800 ft of storm sewers and approximately 389,700 ft of ditches within the MS4 boundary.

3.7 Summary of Allowed Structural BMP Types in New Development and Redevelopment

The MSD will use the Indiana Stormwater Quality Manual to evaluate structural BMPs to be utilized in new development and redevelopment areas. The program will monitor the performance of the BMPs installed.

3.8 Structural BMP Selection Criteria and Performance Standards

The MSD will use the Indiana Stormwater Quality Manual to evaluate structural BMPs to be utilized in new development and redevelopment areas. The program will monitor the performance of the BMPs installed. The MSD will evaluate the effectiveness of the allowable BMPs annually and make recommendations for modifications.

3.9 Stormwater Budget

The Muncie Sanitary District plans to incorporate its current stormwater quality related activities with the activities necessary to comply with 327 IAC 15-13. The proposed stormwater budget for the activities associated with the Muncie Sanitary District's Stormwater Quality Management Plan can be found in Table 3-1 at the end of this section.

3.10 Measurable Goals

The Muncie stormwater program has developed measurable goals in compliance with Indiana Rule 13 requirements. Educational programs are an essential component of successful nonstructural Best Management Practices. Many water quality impairments result due to carelessness or ignorance. It is hoped that by educating people of the impacts of personal behavior that individuals will behave responsibly and adapt new methods or use alternate materials to reduce water quality impairments. Measurable goals in all six minimum control measures focus on education. Educating and involving people--both municipal employees and general citizens—should lead to accelerated implementation of the stormwater program and lead to improved stormwater quality.

Measurable goals in the Illicit Discharge Detection and Elimination program are more specific to locating, identifying, and taking corrective action to prevent water quality impairments. The removal of contaminants will improve water quality by preventing materials from entering the stormwater collection system. Accurate system maps improve knowledge of the piping network for staff. Prohibiting discharges provides a local regulatory enforcement mechanism. Providing convenient programs for recycling and household hazardous waste should prevent water quality impairing material from entering the stormwater system.

Construction sites present a significant source of contaminants that could create water quality impairments. Here the measurable goals focus on education, project tracking, site inspection, and program management. Specific structural best management practices will prevent sedimentation. Effective program management will lead to a better working relationship with construction site operators and lead to greater compliance.

A primary guideline for post construction controls is to prevent the new development from creating water quality effects significantly different from the preconstruction site. Once construction site controls are built, they must be maintained. The post construction measurable goals focus on making sure structural best management practices are properly maintained and staff members are properly trained. Limitations on development to protect sensitive environmental areas and riparian zones may be appropriate methods to reduce water quality impairments from occurring. Planning controls that maintain open spaces and minimize soil and vegetative disturbance provide similar environmental benefits.

Education, training, and maintenance measurable goals in the municipal operations pollution prevention and good housekeeping target behaving responsibly on water quality issues. The activities should reduce the contaminant loading on public property like streets, parks, and building sites. When others notice the practice of municipal employees, they may begin to appreciate the stormwater program goals with a better understanding.

Measurable goals for each Minimum Control Measure (MCM) can be found in Section 6–11 of this document. The measurable goals are given for each year of the current NPDES general permit.

3.11 Certification Forms

Certification forms for 4 of the 6 MCMs listed in 327 IAC 15-13 can be found in Appendix A of this document. The remaining certification forms will be submitted when the construction site stormwater run-off control and post-construction stormwater run-off control local regulatory mechanisms are passed and the respective programs are operational.

3.12 Programmatic Indicators

A list of programmatic indicators segregated by MCM can be found in Section 4 of this document.

SECTION 4 – Programmatic Indicators

4.1 Introduction and Rationale

This section addresses the requirement in 327 IAC 15-13-8 that the MS4 must identify programmatic indicators grouped by corresponding MCM. The following programmatic indicators are not fully implemented currently. Updated data for each of these indicators will be submitted in each annual report.

4.2 MCM 1 – Public Education and Outreach

The following items are programmatic indicators for MCM 1 – Public Education and Outreach:

- Number or percentage of citizens, segregated by type of constituent as referenced in section 12(a) of 327 IAC 15-13, that have an awareness of storm water quality issues.

4.3 MCM 2 – Public Involvement and Participation

The following items are programmatic indicators for MCM 2 – Public Involvement and Participation:

- Number and description of meetings, training sessions, and events conducted to involve citizen constituents in the storm water program.
- Number or percentage of citizen constituents that participate in storm water quality improvement programs
- Number and location of storm drains cast with anti-pollution messages

4.4 MCM 3 – Illicit Discharge Detection and Elimination

The following items are programmatic indicators for MCM 3 – Illicit Discharge Detection and Elimination:

- Estimated or actual linear feet or percentage of MS4 mapped and indicated on an MS4 area map
- Number and location of MS4 area outfalls mapped
- Number and location of MS4 area outfalls screened for illicit discharges
- Number and location of illicit discharges detected
- Number and location of illicit discharges eliminated
- Number of and estimated or actual amount of material, segregated by type, collected from Household Hazardous Waste (HHW) collection in the MS4 area
- Number and location of constituent drop-off centers for automotive fluid recycling

- Number or percentage of constituents that participate in the HHW collections

4.5 MCM 4 – Construction Site Storm Water Run-off Control

The following items are programmatic indicators for MCM 4 – Construction Site Storm Water Run-off Control:

- Number of construction sites obtaining an MS4 entity-issued storm water run-off permit in the MS4 area
- Number of construction sites inspected
- Number and type of enforcement actions taken against construction site operators
- Number of, and associated construction site name and location, for public information requests received
- Number, type, and location of structural BMPs installed
- Number, type, and location of structural BMPs inspected
- Number, type, and location of structural BMPs maintained or improved to function properly
- Type of nonstructural BMPs utilized

4.6 MCM 5 – Post Construction Storm Water Run-off Control

The following items are programmatic indicators for MCM 5 – Post Construction Storm Water Run-off Control:

- Estimated or actual acreage or square footage of open space preserved and mapped in the MS4 area, if applicable
- Estimated or actual acreage or square footage of pervious and impervious surfaces mapped in the MS4 area, if applicable
- 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 and/or that have installed storm water BMPs

4.7 MCM 6 – Municipal Operations Pollution Prevention and Good Housekeeping

The following items are programmatic indicators for MCM 6 – Municipal Operations Pollution Prevention and Good Housekeeping:

- Number and location of MS4 entity facilities that have containment for accidental releases of stored polluting materials
- 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
- Estimated or actual linear feet or percentage and location of unvegetated swales and ditches that have an appropriately sized vegetated filter strip

- Estimated or actual linear feet or percentage and location of MS4 conveyances cleaned or repaired
- Estimated or actual linear feet or percentage and location of roadside shoulders and ditches stabilized, if applicable
- Number and location of storm water outfall areas remediated from scouring conditions, if applicable
- Number and location of deicing salt and sand storage areas covered or otherwise improved to minimize storm water exposure
- Estimated or actual amount, in tons, of salt and sand used for snow and ice control
- Estimated or actual amount of material by weight collected from catch basin, trash rack, or other structural BMP cleaning
- Estimated or actual amount of material by weight collected from street sweeping, if utilized
- Number or percentage and location of canine parks sited at least one hundred fifty feet away from a surface water body

4.8 Reporting

The MSD will submit an annual report of its stormwater program in accordance with 327 IAC 15-13.

SECTION 5 – Compliance Schedule

5.1 Introduction and Rationale

This section addresses the requirement in 327 IAC 15-13-11 that the MS4 operator must comply with the schedule set forth in this section for the implementation of this rule.

5.2 Compliance Schedule

The following compliance schedule will followed in the implementation of the Muncie Sanitary District’s Stormwater Quality Management Plan:

Rule Requirement	Compliance Deadline (from initial NOI letter receivership date)
Storm Water Quality Management Plan	Components throughout term of permit
Part A: Initial Application submitted	With NOI Letter
Part B: Baseline Characterization and Report submitted	180 days
Part C: Program Implementation submitted	1 year
Public Education and Outreach MCM implementation	Throughout term of permit
Public education and outreach program development certification submitted	1 year
Public Involvement/Participation MCM implementation	Throughout term of permit
Public involvement and participation program development certification submitted	1 year
Illicit Discharge Detection/Elimination MCM implementation	Throughout term of permit
Illicit discharge plan and regulatory mechanism certification submitted	1 year
25% of storm water outfalls systems mapped	Each year after 1 year
All known storm water outfalls systems, with pipe diameters 12 inches or greater or open ditches with 2 feet or larger bottom width, mapped	5 years
Construction Site Run-Off Control MCM implementation	Throughout term of permit
Construction site program plan and regulatory mechanism certification submitted	1 year
Postconstruction Run-off Control MCM implementation	Throughout term of permit
Operational and maintenance plan certification submitted	2 years
Postconstruction program plan and regulatory mechanism certification submitted	2 years
Municipal operations pollution prevention and good housekeeping MCM implementation	Throughout term of permit
Operations pollution prevention program development certification submitted	1 year

SECTION 6 – Public Education and Outreach

6.1 Introduction and Rationale

This section describes the public education and outreach activities of the Muncie Sanitary District in response to 327 IAC 15-13-12. The rationale for the program is to inform the general public of the importance of storm water quality issues, and to influence behavior in a way that benefits regional water quality. Activities selected take advantage of existing programs of Muncie and the surrounding communities to target specific water quality problems and specific audiences within the area.

6.2 Informational Program for Constituents

The following activities will be part of the public education and outreach program.

- a) **MS4 Coordinator.** The Muncie Sanitary District has chosen to employ a full time coordinator to oversee, implement, and document the Public Education and Outreach program. The coordinators job description will be reviewed and adjusted as needed to comply with permit regulations as well as components of the SWQMP.
- b) **Printed Materials.** The Muncie Sanitary District will work with other MS4 entities in the Delaware County area to develop, produce or distribute printed materials (e.g., SWCD brochures, flyers, promotional items) for specific topics related to storm water quality. The MS4 entities will evaluate areas of concern periodically throughout the term of the permit and develop or modify printed materials as necessary. The MSD will work in cooperation with Ball State University, Delaware County, Town of Daleville, and the Town of Yorktown to broaden exposure of printed materials and present a unified message.
- c) **Watershed Management Plans.** The MSD was instrumental in the development from 2001-2004, of Watershed Management Plans for three of the sub watersheds within the area of coverage. The Muncie Sanitary District will continue to assist in implementation and encourage development of additional Watershed Management Plans in cooperation with other local MS4s and organizations.
- d) **Community Events.** The Muncie Sanitary District will continue to use major community events as opportunities for education and outreach to youth and adults. Booths will be staffed by local volunteers, staff of the Muncie Sanitary District and/or other local MS4s and organizations (e.g., Soil and Water Conservation District, Minnetrista Cultural Center, etc), who will hand out informational materials and answer questions.

- e) **Community Questionnaire.** The MSD will develop and distribute a community questionnaire to conduct an initial assessment to determine constituent’s initial knowledge and practices as they relate to water quality.
- f) **Community Organizations.** The staff of the Muncie Sanitary District will continue to be active in other organizations in the area that promote inter-agency cooperation and have outreach and education functions (e.g., White River Watershed Project, Indiana Water Environment Association, etc.).
- g) **School Programs.** The Muncie Sanitary District will continue its current grade school, secondary and post-secondary classroom educational programs and will work to expand the educational opportunities as possible (e.g., Recycling, forestry, and watershed education). The Muncie Sanitary District will coordinate with other MS4s and organizations to best utilize existing local educational resources.
- h) **Website.** The Muncie Sanitary District will continue to maintain and update a website to provide information to the public on storm water issues, water quality issues, educational opportunities, construction program, illicit discharge reporting and links to other related websites.
- i) **Educator Education.** The MSD will work with Minnetrista Cultural Center, Ball State University and local school corporations to utilize existing Indiana Department of Natural Resources teacher education programs such as Project WET, HoosierRiverwatch, and GoFishIN.
- j) **Construction, Industrial and Public Employee Program.** The Muncie Sanitary District will conduct education and outreach activities targeting construction industry organizations (developers, contractors, engineers), permitted industries and public employees on their respective programs described in the SWQMP.

6.3 Initial Assessment of Constituents

An initial assessment of area constituents will be conducted to determine knowledge of practices as they relate to storm water quality. Existing data as well as other assessment avenues will be utilized to assess constituents.

6.4 Target Outreach or Reduction Goal Percentages

All outreach and education activities have similar priorities and all will be conducted each permit year unless otherwise stated. Measurable goals are defined in the following table.

Permit Year	Measurable Goal/Milestone
Permit Year 1	• Complete and submit Part B: Baseline Characterization and Report

	<p>as required by 327 IAC 15-13-7.</p> <ul style="list-style-type: none"> • Complete and submit Part C: Program Implementation as required by 327 IAC 15-13-8.
Permit Year 2	<ul style="list-style-type: none"> • Prepare community questionnaire for initial assessment of constituents • Educate local government officials • Conduct initial assessment of constituents knowledge as they relate to storm water quality • Make educational materials available • Address stormwater issues at a minimum of 1 public meeting • Staff to attend at least 1 educational training session • Document and publish accomplishments in annual report
Permit Year 3	<ul style="list-style-type: none"> • Make educational materials available • Address stormwater issues at a minimum of 1 public meeting • Staff to attend at least 1 educational training session • Document and publish accomplishments in annual report
Permit Year 4	<ul style="list-style-type: none"> • Make educational materials available • Address stormwater issues at a minimum of 1 public meeting • Staff to attend at least 1 educational training session • Document and publish accomplishments in annual report
Permit Year 5	<ul style="list-style-type: none"> • Make educational materials available • Address stormwater issues at a minimum of 1 public meeting • Staff to attend at least 1 educational training session • Document and publish accomplishments in annual report • Review and update SWQMP Education and Outreach Program permit submittal

SECTION 7 – Public Involvement and Participation

7.1 Introduction and Rationale

This section describes the public involvement and participation activities of the Muncie Sanitary District in response to 327 IAC 15-13-13. The rationale for the program is to allow for sufficient opportunities for interested constituents within the MS4 area to participate in the storm water management program development and implementation. Activities selected take advantage of existing programs of Muncie and surrounding communities to target specific water quality problems and specific audiences within the area.

7.2 Public Participation Program

The following activities will be part of the public participation and involvement program.

- a) **MS4 Coordinator.** The Muncie Sanitary District has chosen to employ a full-time coordinator to oversee, implement, and document the Public Participation and Involvement program. The coordinators job description will be reviewed and adjusted as needed to comply with permit regulations as well as components of the SWQMP.
- b) **Community Events.** The Muncie Sanitary District will continue to use major community events as opportunities for participation and involvement of youth and adults. Booths will be staffed by local volunteers and staff of the Muncie Sanitary District and/or other local MS4s and organizations (e.g., Soil & Water Conservation District, Minnetrista Cultural Center, etc.), who will become involved by participating in these events.
- c) **Public Meetings.** The Muncie Sanitary District will continue to advertise its regularly scheduled meetings in accordance with open door meeting laws. Prior to adopting key components of the storm water management program, the MSD will allow community leaders, stakeholders, technical experts and the general public to present the issues and proposed solutions and ask for comment and discussion.
- d) **Community Questionnaire.** The MSD will develop and distribute a community questionnaire to conduct an initial assessment to identify interested individuals for participation in stormwater program.
- e) **Citizens “Hotline”.** The Muncie Sanitary District will update their website to provide opportunities for citizens to become involved, such as illicit discharge reporting, citizen input, volunteer monitoring, etc. A telephone “hotline will also be developed along with procedures for follow-up for all inquiries.

- f) **School Programs.** The Muncie Sanitary District will continue its current grade school, secondary and post-secondary classroom educational programs and will work to expand the participation and involvement opportunities as possible. The Muncie Sanitary District will coordinate with other MS4's and organizations to best utilize existing local educational resources.
- g) **Community Clean-ups.** The Muncie Sanitary District will continue to work with local organizations and citizens groups to perform neighborhood and river clean-up programs.
- h) **Stakeholder Meetings.** The Muncie Sanitary District has been part of the opportunity for citizens to participate in various stakeholder groups concerning water quality (e.g., watershed stakeholder groups, citizens advisory committee, etc.)
- i) **Educator Education.** The Muncie Sanitary District will work with Minnetrista Cultural Center, Ball State University and local school corporations to utilize existing Indiana Department of Natural Resources teacher education programs such as Project WET, HoosierRiverwatch, and GoFishIN, etc.
- j) **Website.** The Muncie Sanitary District will update their website to provide opportunities for citizens to become involved, such as illicit discharge reporting, citizen input, volunteer monitoring, etc.
- k) **District Forester.** The Muncie Sanitary District employs a District Forester to manage reforestation programs.
- l) **Construction, Industry and Public Employee Programs.** The Muncie Sanitary District will encourage the participation of the construction industry, local industrial, and the public employees in the development and implementation of the storm water management plan.

7.3 Initial Assessment of Constituents

An initial assessment of area constituents will be conducted to identify interested individuals for participation in the MS4 area stormwater program. Existing data as well as other assessment avenues will be utilized to assess constituents.

7.4 Public Involvement and Reduction Goal Percentages and Timetables

All participation and involvement activities have similar priorities and all will be conducted each permit year unless otherwise stated. Measurable goals are defined in the following table.

Permit Year	Measurable Goal/Milestone
Permit Year 1	• Complete and submit Part B: Baseline Characterization and Report

	<p>as required by 327 IAC 15-13-7.</p> <ul style="list-style-type: none"> • Complete and submit Part C: Program Implementation as required by 327 IAC 15-13-8.
Permit Year 2	<ul style="list-style-type: none"> • Prepare community questionnaire to identify interested participants in the stormwater program • Conduct initial assessment of constituents to identify interested individuals for participation in the stormwater program • Accept public input on stormwater program issues • Publicize dates and times for meetings where stormwater related issues are discussed • Address stormwater issues at a minimum of 1 public meeting • Staff to attend at least 1 educational training session • Document and publish accomplishments in annual report
Permit Year 3	<ul style="list-style-type: none"> • Accept public input on stormwater program issues • Publicize dates and times for meetings where stormwater related issues are discussed • Address stormwater issues at a minimum of 1 public meeting • Staff to attend at least 1 educational training session • Document and publish accomplishments in annual report
Permit Year 4	<ul style="list-style-type: none"> • Accept public input on stormwater program issues • Publicize dates and times for meetings where stormwater related issues are discussed • Address stormwater issues at a minimum of 1 public meeting • Staff to attend at least 1 educational training session • Document and publish accomplishments in annual report
Permit Year 5	<ul style="list-style-type: none"> • Accept public input on stormwater program issues • Publicize dates and times for meetings where stormwater related issues are discussed • Address stormwater issues at a minimum of 1 public meeting • Staff to attend at least 1 educational training session • Document and publish accomplishments in annual report • Review and update SWQMP Public Involvement and Participation Program permit submittal

SECTION 8 – Illicit Discharge Detection and Elimination

8.1 Introduction and Rationale

This section describes the illicit discharge detection and elimination activities of the Muncie Sanitary District in response to 327 IAC 15-13-14. The rationale for the program is the commitment to develop and implement a strategy to detect and eliminate illicit discharges to the MS4 conveyance system. The strategy includes the development of a storm sewer system and conveyance map. Activities selected take advantage of existing programs of the Muncie Sanitary District and surrounding communities, target specific water quality problems, and target specific audiences within the area.

8.2 Storm Sewer Map

The Muncie Sanitary District will develop a storm sewer system map showing the location of all outfalls and MS4 conveyances within the MS4 area under the MS4 operator's control. A system map will be completed at a minimum of the rule-required rate of 25% per year with 100% system completed by 2008. The identification of system conveyance and outfall locations will be documented via Global Positioning System (GPS) utilizing a mapping-grade accuracy of a minimum of five (5) meters and will include metadata fully compliant with FGDC standards. The Muncie Sanitary District will document all located conveyances and outfalls on its GIS mapping system.

8.3 Local Regulatory Mechanism to Prohibit Illicit Discharges

The Muncie Sanitary District has local regulatory mechanisms prohibiting illicit connections to the storm sewer system.

8.4 Detect, Address, and Eliminate Illicit Discharges

As outfalls are located the Muncie Sanitary District will perform dry weather screening. Field personnel may use a field testing kit or other appropriate methods to analyze for pollutants of concern and other parameters, such as pH, conductivity, or nitrogen-ammonia, used to identify possible pollutant sources. All screening data will be documented within the GIS storm system map.

The active industrial NPDES permit holders within the jurisdiction have been mapped and tabulated in the Part B submittal. This data will be kept current and up to date on a regular basis.

The Muncie Sanitary District will host a telephone hotline and web-reporting tool. Legitimate reports of illicit discharges and illegal dumping will be tracked, investigated, and enforced if necessary.

8.5 Education Program for Public Employees, Businesses, and the General Public about Illicit Discharge Hazards

The MSD plans to use IDEM and Delaware County SWCD brochures to educate public employees, businesses and the general public about illicit discharge hazards.

8.6 Recycling Program for Commonly Dumped Wastes

The MSD in partnership with East Central Recycling sponsors a Household Hazardous Waste Disposal Program. Free citizen drop-off is open Monday – Saturday. The MSD also distributes educational materials on the program. The current program will be continued. Curbside recycling programs also exist in the MS4 area.

8.7 Outreach and Reduction Goal Percentages and Timetables

All illicit discharge detection and elimination activities have similar priorities and all will be conducted each permit year unless otherwise stated. Measurable goals are defined in the following table.

Permit Year	Measurable Goal/Milestone
Permit Year 1	<ul style="list-style-type: none"> • Complete and submit Part B: Baseline Characterization and Report as required by 327 IAC 15-13-7. • Complete and submit Part C: Program Implementation as required by 327 IAC 15-13-8. • Develop and adopt a local regulatory mechanism prohibiting illicit connections to the storm sewer system
Permit Year 2	<ul style="list-style-type: none"> • Map 25% of storm sewer system • Develop policies, procedures and documentation tools for illicit discharge inspections, enforcement and tracking • Perform dry weather screenings to detect illicit discharges and document the number and location of outfalls screened and the number of illicit discharges detected and eliminated • Promote household hazardous waste recycling • Require storm drain markings for new development • Make educational materials available • Staff to attend at least 1 educational training session • Document and publish accomplishments in annual report
Permit Year 3	<ul style="list-style-type: none"> • Map 25% of storm sewer system • Perform dry weather screenings to detect illicit discharges and document the number and location of outfalls screened and the number of illicit discharges detected and eliminated • Promote household hazardous waste recycling • Require storm drain markings for new development • Make educational materials available • Staff to attend at least 1 educational training session

	<ul style="list-style-type: none"> • Document and publish accomplishments in annual report
Permit Year 4	<ul style="list-style-type: none"> • Map 25% of storm sewer system • Perform dry weather screenings to detect illicit discharges and document the number and location of outfalls screened and the number of illicit discharges detected and eliminated • Promote household hazardous waste recycling • Require storm drain markings for new development • Make educational materials available • Staff to attend at least 1 educational training session • Document and publish accomplishments in annual report
Permit Year 5	<ul style="list-style-type: none"> • Map 25% of storm sewer system • Perform dry weather screenings to detect illicit discharges and document the number and location of outfalls screened and the number of illicit discharges detected and eliminated • Promote household hazardous waste recycling • Require storm drain markings for new development • Make educational materials available • Staff to attend at least 1 educational training session • Document and publish accomplishments in annual report • Review and update SWQMP Illicit Discharge Detection and Elimination permit submittal

SECTION 9 – Construction Site Storm Water Run-off Control

9.1 Introduction and Rationale

This section describes the construction site stormwater run-off control activities of the Muncie Sanitary District in response to 327 IAC 15-13-15. The rationale for the program is the commitment to develop and implement a strategy to develop, implement, manage, and enforce an erosion and sediment control program for construction activities that disturb one (1) or more acres of land within the MS4 area. The strategy includes the development of an ordinance that controls polluted run-off from construction sites, and development of procedures for plan review, site inspection and enforcement of control measures. Activities selected take advantage of existing programs, and target specific water quality problems and target audiences within the area.

9.2 Local Regulatory Mechanism That Controls polluted Run-off from Construction Sites

Muncie has an existing stormwater and erosion control ordinance and will continue to develop and adopt local regulatory mechanisms in the city and county that controls polluted run-off from construction sites in the MS4 area. A plan duplicating Indiana's Rule 5 will be in place by the end of 2005.

9.3 SWCD Input

The Muncie Sanitary District will allow the Delaware County Soil and Water Conservation District to review new construction projects for erosion and sediment control issues until the MSD's program is considered acceptable by the other state agencies involved in the process. The SWCD review will run concurrently with the MS4 review period.

9.4 Requirements to Control Construction Site Sediment, Erosion, and Other Wastes

The Muncie Sanitary District will develop a program duplicating the existing Rule 5 plan review and approval process. The same submittal forms that have been developed by the Indiana Department of Natural Resources and used for the past several years will be used for the Muncie program. The plan, forms, and procedure to be used for plan review are included in Appendix B.

9.5 Procedures for Plan Review, Site Inspection (Including Prioritization of Sites) and Enforcement of Control Measures

The Muncie Sanitary District will develop a program duplicating the existing Rule 5 plan review and approval process. Plan review will be done by a joint City-County Stormwater Specialist. Site inspections will be done by the MSD/Engineering Department. Monthly reports of construction site Notice Of Intent sites will be submitted to the Indiana Department of Environmental Management. Enforcement will be done by the local City Engineer, and/or Sanitary District. The forms and procedure to be used for plan review are included in Appendix B. The forms to be used for site inspection are included in Appendix C.

Priority construction sites will receive increased scrutiny during plan review, inspection, and enforcement of the MSD’s program to control construction site stormwater run-off. Construction sites will be considered priority sites if they contain any of the following elements.

- Steep slopes
- Highly erodible soils
- Mass land stripping/grading activities

9.6 Annual Training for MS4 Personnel

The Muncie Sanitary District will participate in annual training of staff members associated with the program.

9.7 Procedures for Receipt and Consideration of Public Inquires, Concerns, and Information

The Muncie Sanitary District will set up a record keeping system to allow for public review of records associated with erosion control permitted sites within the MS4 jurisdiction where the MSD has conducted the review and received the Notice Of Intent from the construction site operator.

9.8 Outreach, Compliance, and Implementation Goals and Timetables

The MSD will work with local developers, engineers, and builders to communicate the goals and procedures of the program. Compliance is expected to improve as the local building community learns about the program. The program will be implemented in calendar year 2005. Measurable goals are defined in the following table.

Permit Year	Measurable Goal/Milestone
Permit Year 1	<ul style="list-style-type: none"> • Complete and submit Part B: Baseline Characterization and Report as required by 327 IAC 15-13-7. • Complete and submit Part C: Program Implementation as required by 327 IAC 15-13-8. • Develop a local regulatory mechanism that controls polluted run-off from construction sites in the MS4 area

Permit Year 2	<ul style="list-style-type: none"> • Implement a regulatory mechanism that controls polluted run-off from construction sites in the MS4 area • Submit monthly construction site project summary • Reference the latest version of the Indiana Stormwater Quality Manual as the technical manual of reference for the MSD's sediment control program • Review all new development plans for compliance with grading and erosion control regulations, subdivision ordinance and technical guidance. • Train plan review and inspection staff on erosion and sediment control • Incorporate erosion and sediment control complaints into existing sewer maintenance complaint system. Track complaint type, date, inspection date and action taken • Develop and implement an ongoing erosion and sediment control inspection program, assigning responsibilities, establishing policies, and developing procedures • Develop policies and procedures for the enforcement program • Document and publish accomplishments in annual report
Permit Year 3	<ul style="list-style-type: none"> • Submit monthly construction site project summary • Reference the latest version of the Indiana Stormwater Quality Manual as the technical manual of reference for the MSD's sediment control program • Review all new development plans for compliance with grading and erosion control regulations, subdivision ordinance and technical guidance. • Train plan review and inspection staff on erosion and sediment control • Track erosion and sediment control complaint type, date, complaint, inspection date and action taken • Revise if necessary and implement an ongoing erosion and sediment control inspection program, assigning responsibilities, establishing policies, and developing procedures • Revise and implement policies and procedures for the enforcement program, if necessary • Document and publish accomplishments in annual report
Permit Year 4	<ul style="list-style-type: none"> • Submit monthly construction site project summary • Reference the latest version of the Indiana Stormwater Quality Manual as the technical manual of reference for the MSD's sediment control program • Review all new development plans for compliance with grading and erosion control regulations, subdivision ordinance and technical guidance. • Train plan review and inspection staff on erosion and sediment control

	<ul style="list-style-type: none"> • Track erosion and sediment control complaint type, date, complaint, inspection date and action taken • Revise if necessary and implement an ongoing erosion and sediment control inspection program, assigning responsibilities, establishing policies, and developing procedures • Revise and implement policies and procedures for the enforcement program, if necessary • Document and publish accomplishments in annual report
Permit Year 5	<ul style="list-style-type: none"> • Submit monthly construction site project summary • Reference the latest version of the Indiana Stormwater Quality Manual as the technical manual of reference for the MSD's sediment control program • Review all new development plans for compliance with grading and erosion control regulations, subdivision ordinance and technical guidance. • Train plan review and inspection staff on erosion and sediment control • Track erosion and sediment control complaint type, date, complaint, inspection date and action taken • Revise if necessary and implement an ongoing erosion and sediment control inspection program, assigning responsibilities, establishing policies, and developing procedures • Revise and implement policies and procedures for the enforcement program, if necessary • Document and publish accomplishments in annual report • Review and update SWQMP Construction Site Stormwater Run-off Control permit submittal

SECTION 10 – Post Construction Storm Water Run-off Control

10.1 Introduction and Rationale

This section describes the potential post construction stormwater run-off control activities of the Muncie Sanitary District in response to 327 IAC 15-13-16. The program outlined in this section is in draft form and will be finalized within 730 days of the submission of the Notice of Intent. The rationale for the program is the commitment to develop, implement, manage, and enforce a program to address discharges of post-construction stormwater runoff from new development and redevelopment areas that disturb one or more acres of land or disturbances of less than one acre of land that are part of a larger common plan of development or sale if the larger common plan will ultimately disturb one or more acres of land within the MS4 area.

10.2 Local Regulatory Mechanism that Requires the Implementation of Planning Procedures to Promote Improved Water Quality

The MSD will work with the Delaware Muncie Metropolitan Plan Commission to develop a local regulatory mechanism that meets the requirements of this section within 730 days of the submission of its Notice Of Intent, which will be November 2005. The MSD will implement planning procedures that promote improved water quality. The planning procedures will include, where appropriate, the following items:

- Post-construction requirements of 327 IAC 15-5-6.5(a)(8).
- Buffer strip and riparian zone preservation
- Filter strip creation
- Minimization of land disturbances and surface imperviousness
- Maximization of open space
- Directing community growth away from sensitive areas and towards areas that can support it without compromising water quality

10.3 Use of Any Storage, Infiltration, Filtering, and/or Vegetative Practice to Reduce the Impact of Pollutants on Storm Water Run-off

Where appropriate and to the extent of the MS4 operator's authority, the plan will include the following items:

- Prohibit using infiltration practices in well head protection areas
- Require an appropriately-sized vegetated filter strip width along unvegetated swales/ditches
- Prohibit discharges directly to sinkholes or fractured bedrock, without appropriate treatment to meet Indiana ground water quality standards

- Require any discharge from a storm water practice that is a Class V injection well to meet Indiana ground water quality standards
- Require appropriate BMPs to reduce metals and hydrocarbons are installed at new retail gasoline outlets or municipal/institutional refueling areas
- Regulate the rate of storm water flow through the MS4 Conveyances
- Require annual training for MS4 personnel responsible for implementing this MCM
- Identifies and schedules implementation of a written O&M plan for structural BMPs

10.4 Goals for Reduction Percentages and Timetables

All post construction stormwater run-off control activities have similar priorities and all will be conducted each permit year unless otherwise stated. Measurable goals are defined in the following table.

Permit Year	Measurable Goal/Milestone
Permit Year 1	<ul style="list-style-type: none"> • Complete and submit Part B: Baseline Characterization and Report as required by 327 IAC 15-13-7. • Complete and submit Part C: Program Implementation as required by 327 IAC 15-13-8.
Permit Year 2	<ul style="list-style-type: none"> • Adopt and a local regulatory mechanism that addresses post construction run-off from new developments and redevelopment sites in the MS4 area • Create a program to develop and address discharges of post construction stormwater run-off from new development and redevelopment areas • Reference the latest version of the Indiana Stormwater Quality Manual as the technical manual of reference for the MSD's sediment control program • Train plan review and inspection staff on erosion and sediment control • Document and publish accomplishments in annual report • Submit Certification Form for Post Construction Stormwater Run-off Control
Permit Year 3	<ul style="list-style-type: none"> • Implement a program to develop and address discharges of post construction stormwater run-off from new development and redevelopment areas • Reference the latest version of the Indiana Stormwater Quality Manual as the technical manual of reference for the MSD's sediment control program • Train plan review and inspection staff on erosion and sediment control • Use storage, infiltration, filtering, or vegetative practices to reduce the impact of pollutants in stormwater run-off on receiving waters

	<ul style="list-style-type: none"> • Document and publish accomplishments in annual report
Permit Year 4	<ul style="list-style-type: none"> • Reference the latest version of the Indiana Stormwater Quality Manual as the technical manual of reference for the MSD's sediment control program • Train plan review and inspection staff on erosion and sediment control • Use storage, infiltration, filtering, or vegetative practices to reduce the impact of pollutants in stormwater run-off on receiving waters • Document and publish accomplishments in annual report
Permit Year 5	<ul style="list-style-type: none"> • Reference the latest version of the Indiana Stormwater Quality Manual as the technical manual of reference for the MSD's sediment control program • Train plan review and inspection staff on erosion and sediment control • Use storage, infiltration, filtering, or vegetative practices to reduce the impact of pollutants in stormwater run-off on receiving waters • Document and publish accomplishments in annual report • Review and update SWQMP Post Construction Stormwater Run-off Control permit submittal

SECTION 11 – Municipal Operations Pollution Prevention and Good Housekeeping

11.1 Introduction and Rationale

This section describes the municipal operations pollution prevention activities of the Muncie Sanitary District in response to 327 IAC 15-13-17. The rationale for the program is the commitment to develop and implement a program to prevent or reduce pollutant run-off from municipal operations within the MS4 area. Activities selected take advantage of existing programs, and target specific water quality problems within the area.

11.2 Program to Ensure that Municipal, State or Federal Operations are Performed to Minimize Storm Water Contamination

To the extent of their authority, the MSD and the MS4 operator will develop and implement a program to ensure that existing municipal operations are performed in ways that will reduce contamination of storm water discharges. The program will include the following:

- Address written documentation of maintenance activities, maintenance schedules, and long-term inspection procedures for BMPs to reduce floatables and other pollutants discharges from the storm sewer system
- Address controls for reducing or eliminating the discharge of pollutants from operational areas, including roads, parking lots, maintenance and storage yards, and waste transfer stations
- Requires a minimum distance of 150 feet for canine parks to be sited away from a surface water body
- Address written procedures for the proper disposal of waste removed from MS4 conveyances and operational areas
- Address written documentation to ensure that new flood management projects assess their impacts on water quality and examine existing projects for incorporation of additional water quality protection devices or practices
- Address documentation for MS4 area personnel to attend annual training regarding this MCM

11.3 Goals for Reduction Percentages and Timetables

All municipal operations pollution prevention and good housekeeping activities have similar priorities and all will be conducted each permit year unless otherwise stated. Measurable goals are defined in the following table.

Permit Year	Measurable Goal/Milestone
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Permit Year 1	<ul style="list-style-type: none"> • Complete and submit Part B: Baseline Characterization and Report as required by 327 IAC 15-13-7. • Complete and submit Part C: Program Implementation as required by 327 IAC 15-13-8.
Permit Year 2	<ul style="list-style-type: none"> • Train appropriate maintenance and operations staff on erosion and sediment control measure installation and maintenance practices, and document training • Train appropriate maintenance and operations staff on storm water pollution prevention and good housekeeping practices for municipal operations, and document training • Perform sweeping of roadways and priority areas and develop a log of sweeping activities • Clean catch basins • Examine current municipal operations to determine where additional pollution prevention activities, policies, training or structural measures are needed • Document and publish accomplishments in annual report
Permit Year 3	<ul style="list-style-type: none"> • Train appropriate maintenance and operations staff on erosion and sediment control measure installation and maintenance practices, and document training • Train appropriate maintenance and operations staff on storm water pollution prevention and good housekeeping practices for municipal operations, and document training • Perform sweeping of roadways and priority areas and develop a log of sweeping activities • Clean catch basins • Examine current municipal operations to determine where additional pollution prevention activities, policies, training or structural measures are needed • Document and publish accomplishments in annual report
Permit Year 4	<ul style="list-style-type: none"> • Train appropriate maintenance and operations staff on erosion and sediment control measure installation and maintenance practices, and document training • Train appropriate maintenance and operations staff on storm water pollution prevention and good housekeeping practices for municipal operations, and document training • Perform sweeping of roadways and priority areas and develop a log of sweeping activities • Clean catch basins • Examine current municipal operations to determine where additional pollution prevention activities, policies, training or structural measures are needed • Document and publish accomplishments in annual report
Permit Year 5	<ul style="list-style-type: none"> • Train appropriate maintenance and operations staff on erosion and sediment control measure installation and maintenance practices,

and document training

- Train appropriate maintenance and operations staff on storm water pollution prevention and good housekeeping practices for municipal operations, and document training
- Perform sweeping of roadways and priority areas and develop a log of sweeping activities
- Clean catch basins
- Examine current municipal operations to determine where additional pollution prevention activities, policies, training or structural measures are needed
- Document and publish accomplishments in annual report
- Review and update SWQMP Municipal Operation Pollution Prevention and Good Housekeeping permit submittal

SECTION 12 – Reporting

12.1 Introduction and Rationale

This section describes the reporting activities of the Muncie Sanitary District in response to 327 IAC 15-13-18. The rationale for the program is the commitment to develop reporting requirements for annual and monthly reporting.

12.2 Annual Report

The Muncie Sanitary District will submit an annual report to the department, certified by the MS4 operator and containing the following items:

- Progress towards development, implementation, and enforcement of all MCMs, including updated programmatic indicator data
- 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
- 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 and other similar means
- Identified storm water quality improvement projects
- Updated receiving water information

12.3 Monthly Construction Site Project Summary

The Muncie Sanitary District will submit monthly construction site project summaries to the department containing the following items:

- Project names associated with 327 IAC 15-13-15
- Project addresses
- Project durations
- Indication of enforcement actions undertaken
- Projects included in this monthly report include projects with an NOI letter submittal or a Notice of Termination letter