

City of Greenfield

Municipal Separate Storm Sewer System 2005 Annual Report



Rodney Fleming, Mayor

Larry Breese, Clerk-Treasurer

Michael Fruth, P.E., R.L.S., City Engineer

City of Greenfield
Municipal Separate Storm Sewer System
2005 Annual Report

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Section 1:

Municipal Separate Storm Sewer System Status

Phase I of the National Pollutant Discharge Elimination System (NPDES) stormwater program began in 1990 and required medium and large municipal separate storm sewer systems (MS4s) that served a population of 100,000 or more to obtain NPDES coverage. The City of Indianapolis is the only entity in Indiana that met this designation criterion. The expanded Phase II program began in 1999 and required small municipalities that met at least one of nine (9) designation criteria to obtain a NPDES permit and implement six (6) minimum control measures. The City of Greenfield was therefore designated as an MS4 entity and required to submit a Notice of Intent (NOI) for permit coverage under 327 IAC 15-13. Phase II has three (3) parts; Part A, initial application; Part B, baseline characterization and report; and, Part C, program implementation.

The City of Greenfield submitted the Part A NOI for general permit NPDES coverage in November 2003. The City received a Notice of Sufficiency (NOS) in December 2003. Part B was submitted in October 2004, however, an NOS or Notice of Deficiency (NOD) was not received within the required ninety (90) evaluation period and, according to 327 IAC 15-13-7 (c), the report was deemed sufficient by default. In May 2005 the City submitted the Part C and received a NOS in June 2005.

Concurrent with the submittal of Parts A, B, and C the City worked through the process of creating a stormwater utility. In August 2004 the consulting services of Butler, Fairman and Seufert (BF&S) were contracted for assistance with the creation of the stormwater utility and preparation of stormwater utility ordinances. On December 16, 2004 the City created the utility through an ordinance adopted on that date. BF&S then assisted the City with the creation of a fee structure and the conversion of existing utility billing services to billing services that would incorporate the new utility.

On June 9, 2005 the ordinances with an incorporated rate structure were approved by the Common Council. Based upon this rate structure, the City began collecting stormwater fees in July 2005. On July 28, 2005 many residential and commercial customers brought their concerns regarding the rate structure before the Council. The City then held public meetings on August 4, August 11, September 8 and September 22, 2005, concerning the approved rate structure and proposed amendments. On October 13, 2005 the Common Council passed an amended fee structure ordinance. The City began collecting Stormwater Utility fees.

On September 8, 2005 the Common Council approved the budget for the Stormwater Utility including positions needed to administer the utility. In February 2006 the City employed a Stormwater Coordinator to assist with the completion of the Rule 13 requirements.

Since the hiring of the Stormwater Coordinator the City has formally requested for proposals for the preparation of stormwater ordinances and on May 23, 2006 the

City contracted the consulting services of Christopher B. Burke, Inc. for that purpose. Currently the consulting firm is in the process of gathering and reviewing information regarding existing ordinances, standards and other information pertinent to the development of the ordinances. The current schedule for completion and adoption of these ordinances is December 31, 2006.

Due to inadequate funding of the Stormwater Utility and the lack of personnel to implement and track the Stormwater Quality Management Plan, as discussed in many letters to the Indiana Department of Environmental Management since the implementation of Phase II requirements, the City has not been able to implement the schedule as outlined in the Part C submittal. An updated schedule has therefore been attached (Appendix D) for approval. This update was generated by postponing some implementation dates and providing new implementation dates for items that did not get completed according to the original schedule. In the absence of any written approval regarding the proposed dates, the City will start to implement these milestones based upon these proposed dates.

Section 2
Municipal Separate Storm Sewer System
2005 Annual Report
State Form 51278



RULE 13 ANNUAL REPORT

State Form 51278 (R2 / 11-03)

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

For questions regarding this form, contact:

IDEM – Rule 13 Coordinator
100 North Senate Avenue, Rm 1255
P.O. Box 6015
Indianapolis, IN 46206-6015
Phone: (317) 234-1601 or
(800) 451-6027, ext. 41601 (within Indiana)

Web Access:

<http://www.in.gov/idem/water/npdes/permits/wetwthr/storm/rule13.html>

NOTE:

- In order to comply with 327 IAC 15-13-18, annual reports must be submitted to the Indiana Department of Environmental Management. **Failure to submit this form will be considered noncompliance with your permit.**
- For the **first five** (5)-year permit term, this completed form must be submitted by 1 year from the SWQMP – Part C submittal date and, thereafter, 1 year from the previous report (i.e., in years two (2) through five (5) of permit coverage).
- In the **second and subsequent** five (5)-year permit terms, this completed form must be submitted in years two (2) and four (4) of permit coverage, by 1 and 3 years from the SWQMP – Part C resubmittal date.
- **Please type or print in ink.**
- Please answer all questions thoroughly and return the form by the due date.
- Return this form and any required addenda to the IDEM Rule 13 Coordinator at the address listed in the box on the upper-right.

REPORTING YEAR

(Check one)

- 2005
- 2006
- 2007
- 2008
- 2009
- 2010
- 2011
- 2012
- 2013

PART A: GENERAL INFORMATION – MS4 OPERATOR**1. Report**

Completed By: Michael Fruth, P.E., P.L.S.
(MS4 Operator — i.e., name of permit holder)

2. Permit Number:

IN
R 0 4 0 039

3. Mailing Address

Street Address: 10 South State Street

City
 Town

Of: Greenfield

Zip: 46140

County: Hancock

PART B: GENERAL INFORMATION – CONTACT PERSON**4. Contact Person Name (please print):**

Daniel H. Miller

5. Contact Person Title:

Stormwater Coordinator

6. Phone

Number: (317) 477-4320

7. Facsimile Number (if applicable):

(317) 477-4321

8. E-mail Address (if applicable):

dmiller@greenfieldin.org

PART C: CONTROL MEASURE ACTIVITIES

9. For the following items, please provide a summary of control measure activities related to Rule 13 performed during the previous year. List any updated measurable goals from the SWQMP, compliance activities, BMPs installed or initiated, updated programmatic indicator data, and updated or developed regulatory mechanisms with effective dates.

a. Public Education and Outreach:

As outlined in the Part C submittal, the City supports and assists the outreach efforts of public groups such as the Hancock County Soil and Water Conservation District (HCSWCD) and the Hancock County Solid Waste Management District (HCSWMD). A copy of many of these items is located in Appendix A.

1. Newspaper Publications

- a. The Hancock County Soil and Water conservation District published twelve (12) newspaper articles in the local Daily Reporter including articles on water quality and related issues. The Daily Reporters average circulation for 2005 was approximately 11,500.
- b. The HCSWMD published eleven (11) newspaper articles dealing with water quality and related issues in the local Daily Reporter. The Daily Reporter's average circulation for 2005 was approximately 11,500.
- c. The City of Greenfield Published five (5) articles in the local Daily Reporter informing the public of upcoming leaf collection dates, Christmas Tree collection dates, and heavy trash collection dates and compost give-away dates. The Daily Reporter's average circulation for 2005 was approximately 11,500.
- d. The City of Greenfield published the Stormwater Ordinances in the local Daily Reporter on June 22, 2005.
- e. The Hancock County Solid Waste Management District published two (2) newspaper inserts titled "One Person's Trash" that was distributed to approximately 16,200 citizens.

2. Educational Brochures

- a. The City of Greenfield handed out a brochure, "Storm Water Utility", at the City's Utility Billing office and Engineering and Planning office to inform the public on the basic history of the stormwater program and a description of utility billing for the Stormwater Utility
- b. The Hancock County SWCD distributed 560 brochures, "Celebrate Conservation – Water Quality" to local churches and schools.

3. Website

- a. The Hancock County SWCD's internet web site, www.hancockswcd.org, offers a water quality education program for area teachers and has other miscellaneous stormwater links.
- b. The City of Greenfield annually publishes the pertinent information regarding services such as leaf collection, heavy trash, Christmas Tree collection, compost give-away, and mulch give-away on the City's website.

4. Public Meetings

- a. The City advertised two (2) public hearings in the local Daily Reporter on June 7, 2005 and October 4, 2005.
- b. The City announced two public meetings to discuss the Stormwater Utility during the July 28, Common Council meeting. These meetings were to be held on August 4, 2005 at 2:00 p.m. and 7:00 p.m.

5. Government Access Channel – Channel 19 through Insight Communications

- a. City meetings are commonly broadcast on local television stations. These broadcasts would have included the public hearings and Common Council and Board Work's meetings relating to the Stormwater Utility.
- b. City activities such as heavy trash, leaf, Christmas tree, and limb pickup are all advertised on the local broadcast television.

6. Smoke Testing

The City mailed out 275 letters to homeowners regarding smoke testing of the sanitary sewers to look for illegal sanitary sewer connections and cross connections with the storm sewer system.

7. Newsletters

The HCSWCD published two newsletters. The Conservation on the Land and the Backyard Tree. In 2005 the Conservation on the Land was published twice and distributed to approximately 750 people each time. The Backyard Tree was published three times and distributed to approximately 350 people.

8. HCSWMD Promotions

The HCSWMD promoted and hosted five (5) events with 692 participating citizens. Specific data regarding these events can be found in Appendix B.

9. HCSWCD Activities

- a. The HCSWCD held six (6) events for local (Hancock County) schools involving 900 students. The events included programs, booklets, Ag Day activities, and Earth Day handouts.
- b. The HCSWCD provided a display at the annual 4-H fair on pervious concrete that was attended by 911 Hancock County citizens
- c. A Leary Weber Water Quality Tour was hosted by the HCSWCD
- d. A no-till workshop in which 132 citizens of Hancock County attended was hosted by the HCSWCD

10. The City distributes the "Erosion Control for the Home Builder" pamphlet to home builders that apply for building permits (Appendix A)

b. Public Involvement and Participation:

As outlined in the Part C submittal, the City supports and assists the public involvement and participation efforts of public groups such as the Hancock County Soil and Water Conservation District (HCSWCD) and the Hancock County Solid Waste Management District (HCSWMD). See Appendix B for specific figures on some of these items.

1. HCSWMD Activities

- a. The HCSWMD held electronics recycling days on March 26, 2005 and October 15, 2005.
- b. The HCSWMD held a household hazardous waste day on June 18, 2005.
- c. The HCSWMD held a tire recycling day on May 15, 2005 and October 15, 2005.

2. City of Greenfield Activities

- a. The City of Greenfield provided heavy trash pickup that was held on April 16, 23, and 30, 2005.
- b. The City of Greenfield provided Christmas Tree Collection held from January 4 to January 18, 2005
- c. Stormwater Utility creation and fee structure development public meetings (Appendix B).
- d. The City of Greenfield provided held a compost and mulch give-a-way during the spring of 2005 and when otherwise available to residents
- e. Stormwater utility and stormwater fee structure creation
 1. On June 20, 2005 the Board of Public Works and Safety conducted a public hearing to consider the assessment and collection of user fees from all property within Greenfield Stormwater Utility.
 2. On July 28, 2005, the City Council received comments from citizens regarding the Stormwater Utility.
 3. On August 4, 2005 the City conducted two meetings, at 2:00 p.m. and 7:00 p.m., to address questions about the storm water utility.
 4. On August 11, 2005, the City Council received comments from citizens regarding the Stormwater Utility.
 5. On August 25, 2005, the City Council received comments from citizens regarding the Stormwater Utility.
 6. On September 8, 2005 the City Council received comments from citizens regarding the Stormwater Utility.
 7. On October 11, 2005 the Board of Public Works and Safety conducted a public hearing to consider the amendment to the user fees from all property with in the Greenfield Stormwater Utility.
- f. Smoke Testing

The City mailed out 275 letters to homeowners regarding smoke testing of the sanitary sewers to identify illegal sanitary sewer connections and cross connections with the storm sewer system.
- g. The City of Greenfield's Wastewater Treatment Plant currently has a Biosolids Marketing and Distribution Permit (BMDP) (IN LA 000721) that requires the City to record pertinent information regarding the recipients of more than one (1) dry ton or more per calendar quarter. The City did distribute smaller amounts of biosolids, however, because the City is only required to record information as outlined above, a mechanism has not implemented to track small distributions.

c. **Illicit Discharge Detection and Elimination:**

The City of Greenfield received an extension of this MCM on April 13, 2006. This extension allowed for the delay of the implementation of this MCM until December 31, 2006 (Appendix C).

The City of Greenfield smoke tested a total of 30,198 lineal feet of sanitary sewer line during 2005. Smoke testing not only locates illegal connections to the sanitary sewer; it locates cross connections of the sanitary sewer system with the storm sewer system thereby reducing the amount of pollutants in stormwater discharged from the storm system. The City also smoke tests the storm sewers when it becomes evident, through sanitary sewer smoke testing, that individual service connections may be present in the storm sewer system.

d. Construction Site Storm Water Run-off Control:

The City of Greenfield received an extension of this MCM on April 13, 2006. This extension allowed for the delay of the implementation of this MCM until December 31, 2006 (Appendix C).

Current Practices

The City of Greenfield requests erosion control plans, in the form of building site construction plans, along with an erosion control bond for all construction projects excluding small commercial and individual residential construction applicants. The smaller commercial and individual residential construction applicants are required to sign a sediment and erosion control policy requiring them to, at a minimum, provide erosion control practices for the duration of the project until the site is completely stabilized.

When other building plans are submitted to the City's Engineering and Planning Department the associated erosion control plans are reviewed for completeness and effectiveness. Erosion control plans that are deemed inadequate are returned to the developer for modifications. Once the erosion control plans are acceptable the building permit is issued or the plans referred to the planning commission for acceptance.

Upon the commencement of construction the Building Inspectors, the Public Works Inspector, and the new Stormwater Coordinator visit construction sites to monitor erosion control activities. Building inspectors generally monitor erosion control practices at individual residential construction sites and small and large commercial construction sites. The Public Works Inspector monitors erosion control practices at residential developments and other sites that include the installation of City infrastructure components.

The City currently uses "Stop Work Orders" and progressive building inspections to control and enforce erosion control practices.

e. Post-construction Storm Water Management in New Development and Redevelopment:

The City of Greenfield received an extension of this MCM on April 13, 2006. This extension allowed for the delay of the implementation of this MCM until December 31, 2006 (Appendix C).

Current Practices

The City of Greenfield currently requires most individuals who are developing or redeveloping parcel subdivisions to post a performance bond and a three (3) year maintenance bond. The City currently utilizes the Public Works Inspector and a bond release mechanism to ensure that required post-construction structural BMPs contributing to the City's infrastructure are properly constructed, installed, and maintained during construction. If these structural BMPs are not constructed, installed, or maintained according to construction plans, then the City will not release the associated performance bonds. Once the construction, installation, and maintenance of these structural BMPs are acceptable then the City will release the associated performance bond. The then the City then continues to monitor the structural BMP during the three (3) year maintenance bond period. The release of maintenance bonds at the end of that three (3) year period is preceded by an inspection by the Public Works Inspector to determine if additional maintenance needs to be required to the structural BMPs prior to the bond release.

f. Pollution Prevention and Good Housekeeping for Municipal Operations:

1. During the fall of 2005 the City collected an estimated 5,400 cubic yards or 145,800 cubic feet of leaves from residents within the city. According to Street department records, the city utilizes seventeen (17) people daily for eight (8) weeks to collect these leaves.
2. The City collected an estimated 184 tons of heavy trash plus 149 refrigerators/freezers and 23 air conditioning units during three (3) collection dates in 2005.
3. The City provided tree limb collection and Christmas Tree collection during 2005 on an as need basis. Collections amounted to approximately 1,144 cubic yards of material.
4. In conjunction with the leaves collected during the annual leaf pickup and tree limb clean up during 2005, the City produced approximately 15,000 cubic yards of mulch and five (5) to ten (10) thousand yards of compost from the materials collected during the leaf, tree limb pickup, Christmas Tree pickup, City street maintenance, and Electric Utility Maintenance
5. City of Greenfield Maintenance Garage recycled approximately 1075 gallons of oil and 55 gallons of coolant at the Warrior Oil Service in Franklin, Indiana. This oil was generated from 516 oil changes and 11 coolant changes. One fire engine was repaired for an oil leak.
6. The City disposed of 97 tires through the Riley Park Tire Business.
7. The City of Greenfield smoke tested a total of 30,198 lineal feet of sanitary sewer line during 2005. Smoke testing not only locates illegal connections to the sanitary sewer; it locates cross connections of the sanitary sewer system with the storm sewer system thereby reducing the amount of pollutants in stormwater discharged from the storm system.
8. The City of Greenfield's Wastewater Treatment Plant currently has a Biosolids Marketing and Distribution Permit (BMDP) (IN LA 000721) that requires the City to record pertinent information regarding the recipients of more than one (1) dry ton or more per calendar quarter. The City did distribute smaller amounts of biosolids, however, because the City is only required to record information as outlined above a mechanism was not implemented to track small distributions.
9. The HCSWMD collected 13,420 pounds of electronics to recycle during 2005 (Appendix B).
10. The HCSWMD collected 1,829 tires to recycle during 2005 (Appendix B).
11. The HCSWMD collected 4,191 pounds of hazardous material, 1,934 pounds of non-hazardous material and 14 appliances during the HCSWMD's annual household hazardous waste day (Appendix B).

g. Other controls:

10. List all receiving water(s) and corresponding outfall(s) not submitted in the original NOI letter (form):

No receiving streams have been identified that were not included in the original NOI.

11. Provide any data regarding the following programmatic indicators, since the previous annual report (Attach separate sheets as necessary, and indicate, as appropriate, the rationale behind not using a listed indicator):

- i. Number or percentage of citizens that have an awareness of storm water quality issues

This was to begin by July 2005, however, due to funding and personnel issues the City has not moved forward on this BMP. See Appendix D for an updated schedule

- ii. Number and description of meetings, training sessions, and events conducted to involve citizens

See Public Involvement and Participation portion of this report.

- iii. Number or percentage of citizens that participate in storm water quality improvement projects

- iv. Number and location of storm drains marked or cast

The City of Greenfield started requiring all new structures to be labeled "City of Greenfield Storm". All new developments are required to mark storm drains. The City has not started to mark pre-existing storm drains.

- v. Estimated linear feet or percentage of MS4 conveyances mapped

This was to begin by November 2005, however, due to funding and personnel issues the City has not moved forward on this BMP. See Appendix D for an updated schedule.

- vi. Number and location of MS4 area outfalls mapped

This was to begin by November 2005, however, due to funding and personnel issues the City has not moved forward on this BMP. See Appendix D for an updated schedule.

- vii. Number and location of MS4 area outfalls screened for illicit discharges

The City of Greenfield currently does not have stormwater ordinances in place and the City has received an extension of the implementation of this MCM until December 31, 2006 (Appendix C).

- viii. Number and location of illicit discharges detected

The City of Greenfield currently does not have stormwater ordinances in place and the City has received an extension of the implementation of this MCM until December 31, 2006 (Appendix C).

- ix. Number and location of illicit discharges eliminated

The City of Greenfield currently does not have stormwater ordinances in place and the City has received an extension of the implementation of this MCM until December 31, 2006 (Appendix C).

- x. Number of, and amount of material collected from, HHW collections

The City participates with the Hancock County Solid Waste Management District for the collection of these materials. During 2005 about 13,463 pounds of electronics, about 1,919 tires, about 4,191 pounds of hazardous material, about 1,934 pounds of non-hazardous material and about 14 appliances were collected (Appendix B).

- xi. Number and location of citizen drop-off centers for automotive fluids

Currently Hancock County has one site for oil only collections located at the Hancock County Highway Department. Various private businesses also accept automotive fluids. These businesses include automotive repair shops and oil change facilities.

- xii. Number or percentage of citizens that participate in HHW collections

Approximately 669 citizens participated in the five (5) events that the Hancock County Solids Waste Management District sponsored. See Appendix B.

- xiii. Number of construction sites permitted for storm water quality

The City of Greenfield currently does not have stormwater ordinances in place and the City has received an extension of the implementation of this MCM until December 31, 2006 (Appendix C). The IDEM currently issues the permits and the permitting program has not been delegated at this time.

- xiv. Number of construction sites inspected

The City of Greenfield currently does not have stormwater ordinances in place and the City has received an extension of the implementation of this MCM until December 31, 2006 (Appendix C). Although the City does not currently have the stormwater ordinances in place and does not have the full authority or delegation to conduct inspections of Rule 5 construction sites, the City has conducted inspections at approximately 1,700 construction sites by building inspectors and public works inspectors. Erosion control measures are monitored during building inspections and public works inspections.

- xv. Number and type of enforcement actions taken against construction site operators

No formal enforcement actions have taken place as the City does not have stormwater ordinances in place, has not been delegated authority, and has received an extension of this MCM until December 31, 2006 (Appendix C).

11. Provide any data regarding the following programmatic indicators, since the previous annual report (Attach separate sheets as necessary, and indicate, as appropriate, the rationale behind not using a listed indicator):

- xvi. Number of public informational requests received related to construction sites

The City has received no public information requests related to construction sites.

- xvii. Number, type, and location of structural BMPs installed

See Appendix E

- xviii. Number, type, and location of structural BMPs inspected

Structural BMPs such as detention ponds, retention basins, infiltration basins, swales, and inlet structures with sump pits are all common structural BMPs located within the City. The Street Department, Wastewater Department Building Inspectors and the Public Works Inspector all contribute to the inspection of these BMPs. BMPs are commonly inspected on an as needed basis. However, all BMPs outlined in Appendix E were inspected at the time of development.

- xix. Number, type, and location of structural BMPs maintained, or improved

No BMPs were maintained or improved in 2005

- xx. Type and location of nonstructural BMPs utilized

The City utilizes several nonstructural BMPs through the MS4 area. Refer to the Pollution Prevention and Good Housekeeping for Municipal Operations section of this report.

- xxi. Estimated acreage or square footage of open space preserved and mapped

The City has preserved approximately 85 acres of open space. This open space includes acreage at Beckenholdt Park, Wilson Park, and Macy Park. Area has not been mapped as all three areas are currently under development.

- xxii. Estimated acreage or square footage of mapped pervious and impervious surfaces

The City estimates that 10% of the pervious and impervious surface areas are mapped. See Appendix D for an updated schedule.

- xxiii. Number and location of retail gasoline outlets or municipal, state, federal, or institutional refueling areas with installed BMPs

The City of Greenfield currently does not operate any refueling areas within the MS4 area and purchases vehicle fuel commercially. The local Indiana Department of Transportation, according to local representatives, purchases fuel commercially. No mechanism has been implemented to track or ordinances adopted to require structural or non-structural BMPs during development, maintenance, or redevelopment, or operation of commercial refueling areas. Structural and non-structural BMPs needs will be evaluated during the Stormwater ordinance creation and adoption process.

- xxiv. Number and location of entity facilities that have containment for accidental releases

The City of Greenfield wastewater and water treatment facilities currently have secondary containment for accidental releases. The WWTP has secondary containment around backup generator diesel fuel tanks, the Class A sludge polymer tank, and the Actiflow process polymer tank. The Water Treatment Plant currently provides secondary containment for backup generator diesel fuel tanks and for fluoride tanks. Devices are of two types; walled-dyke containment and double wall storage tanks. Photographs of the walled-dyke type are located in Appendix G.

- xxv. Estimated acreage or square footage and location where pesticides, herbicides and fertilizers are applied by the entity

The City has not set up a mechanism for tracking the estimated acreage or square footage of application sites. The non-uniform application of pesticides around signs, fences, and other irregularly objects as well as overspray and reapplication makes the reporting of specific acreage covered highly inaccurate. A better estimate may be calculated using volume of pesticides utilized and the chemical manufacturers mixing and coverage recommendations. Using a combination of methods the City estimates a selective herbicide was applied to approximately 230 acres. The City also utilized approximately 190 gallons of mosquito insecticide, 165 gallons of mosquito larvicide and 600 larvicide briquettes. Because of the changes in atmospheric conditions such as humidity and wind speed, an estimation of area covered can't be calculated for the pesticides utilized.

- xxvi. Estimated linear feet or percentage and location of unvegetated swales and ditches that have an adequately sized vegetated filter strip

The City estimates that 5% of the swales and ditches are unvegetated and that 80 % of the swales and ditches have an adequately sized vegetated filter strip.

- xxvii. Estimated linear feet or percentage and location of MS4s cleaned or repaired

Due to utility funding and personnel issues as outlined in MS4 extension requests, an adequate mechanism for tracking this data was not implemented in 2005.

- xxviii. Estimated linear feet or percentage and location of roadside shoulders and ditches stabilized

Due to utility funding and personnel issues as outlined in MS4 extension requests, an adequate mechanism for tracking this data was not implemented in 2005.

11. Provide any data regarding the following programmatic indicators, since the previous annual report (Attach separate sheets as necessary, and indicate, as appropriate, the rationale behind not using a listed indicator):

xxix. Number and location of storm water outfall areas remediated from scouring conditions

No stormwater outfall areas were remediated from scouring conditions. Inspection of stormwater outfalls will commence with the illicit discharge detection MCM of Phase II. Upon finding areas that need to be remediated, a schedule for remediation will be initiated and implemented in accordance with budgetary considerations.

xxx. Number and location of de-icing salt and sand storage areas covered or otherwise improved to minimize storm water exposure

The City of Greenfield currently has one covered salt storage area located at the Greenfield Street Department. Sand storage areas are located at the Street Department in low runoff potential areas.

xxxi. Estimated amount, in tons, of salt and sand used for snow and ice control

According to records provided by the City of Greenfield Street Department, approximately 800 tons of sand and 400 tons of salt were utilized during the 2005 to 2006 winter season. These numbers reflect sand and salt usage for the winter months of 2006. Actual usage of these materials for the fiscal year 2005 may be and are likely to be different.

xxxii. Estimated amount of material collected from catch basin, trash rack, or other structural BMP cleaning

Due to utility funding and personnel issues as outlined in MS4 extension requests, an adequate mechanism for tracking this data was not implemented in 2005.

xxxiii. Estimated amount of material collected from street sweeping

The Street Department estimates that approximately 800 tons of material was swept from city streets.

xxxiv. Number or percentage and location of canine parks sited at least 150 feet away from a surface water body

The City of Greenfield currently does not have any canine parks. However, the City does have an ordinance (93.11 (A)) prohibiting the deposition of animal waste and other materials.

XXXV. Other

PART D: MISCELLANEOUS INFORMATION

12. On-Going Water Quality Characterization Activities

No additional water quality characterization occurred in 2005.

a) Monitoring Data (submit summary of appropriate results):

b) Other:

13. Discuss any problems encountered during this period (include any BMP changes in response to problems encountered).

As discussed previously in this report, the City's extensive utility creation process and fee structure process substantially slowed the City's ability to address the specific requirements and tracking mechanisms needed to fully implement Part C. The City has provided an updated schedule in Appendix D

14. Identify any new funding source(s) for implementing this permit.

The City of Greenfield has, as of December 2004, created a Stormwater Utility for the purpose of administering and supporting a stormwater program. In October 2005 the City finalized the fee structure for the utility. The Fee structure is based upon a \$5.00 base rate for residential users with an additional \$2.00 for each additional 2,250 square feet of impervious area for commercial users. It is estimated that this fee structure will collect approximately \$720,000 per year.

15. Identify any non-routine (i.e. do not include routine maintenance or cleaning) budgetary transactions related to your permit. List all storm water improvement projects started during this reporting period.

The City of Greenfield expended approximately \$135,430 during 2005 on the storm water utility creation and implementation processes and the fee structure creation and implementation processes.

16. Provide a summary of complaints received and the follow-up actions taken in reference to storm water quality issues.

The City of Greenfield has not received any complaints relating to storm water quality issues.

17. Implementation status:

- a. Are the six minimum control measures being implemented within the compliance schedule and SWQMP timetables?

Yes No*

* If no, explain:

As indicated in the introduction section of this report, the City of Greenfield underwent a rigorous utility creation process. Following the creation of the utility, the City then underwent a lengthy fee structure development process in order to fund the utility. The City did not have the funding in place to employ additional personnel until December 2005. In February 2006 the City employed a Stormwater Coordinator. Up until the employment of the Stormwater Coordinator, the City did not have additional staff to accomplish the tasks according to the implementation schedule as outlined in the SWQMP. Appendix D outlines an updated schedule that is based upon the original schedule and the delay in implementation due to the various reasons listed above. The City will assume, unless information is received to the contrary, that the proposed implementation schedule is agreeable to the IDEM.

- b. Do you foresee any problems which may affect full implementation of all the measures?

Yes No*

* If yes, explain:

Although the City has created and started funding a stormwater utility to manage the MS4, the same utility must also manage the storm sewer system within the MS4. The implementation of the MS4 requirements is only a small part of the utility. As the community grows the utility must also provide for the correction of various drainage problems within the MS4, the maintenance of the stormwater collection and conveyance system, and provide additional stormwater drainage capabilities. The funding mechanism may, in the future retard the stormwater utilities ability to fully implement the MS4 requirements as well as correct drainage issues, maintain the stormwater collection system, and provide additional stormwater capabilities. The continued growth of the community is a key factor in the financial success and hence the Phase II implementation success of the City.

- c. Are the six minimum control measures meeting percent reduction goals specified in the SWQMP?

Yes No*

* If no, explain:

At this time, because the City has been unable to implement the SWQMP on the schedule outlined in the Part C, the City has not seen/monitored any reduction.

PART E: CERTIFICATION AND SIGNATURE

► **The individual completing this report, listed in "PART A: GENERAL INFORMATION – MS4 OPERATOR" must sign the following certification statement:**

“By signing this Rule 13 annual report, I hereby certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

Type or Print

Name: Michael L. Fruth, P.E., R.L.S.

Signature:

e: _____ **Date:** _____
(mm/dd/year)

Appendix A
Public Education and Outreach

**Appendix A
Public Education and Outreach**

Newspaper Publications

Date of Publication	Title of Publication
January 19, 2005	'Storm' available to public
February 9, 2005	Don't throw away used oil; recycle it
February 16, 2005	Environmental education workshop planned
March 2, 2005	Shore plants protect, improve streams and river
March 9, 2005	USDA conservation innovation grants
March 9, 2005	Got e-waste? We can help!
March 23, 2005	Program aids conservation on farm land
March 30, 2005	Improving soil quality with no-till cultivation
April 6, 2005	Get involved in curbside recycling: the 'industry' of recycling needs your help
May 4, 2005	Scrap tires and mosquitoes: An unhealthy combination
June 1, 2005	Household cleanout day is June 18
June 8, 2005	Organize now for annual household hazardous waste day
June 15, 2005	Cleanout day Saturday
July 13, 2005	Tour takes look at sources of ground water contamination
July 20, 2005	Concrete helps water quality: 'Pathway to water quality' at state fair
August 3, 2005	Get involved in SWCD boards
August 31, 2005	No-till means more than stopping the plow
September 7, 2005	Buy recycled: It's easier than you think
October 5, 2005	County electronics recycling day returns
October 13, 2005	Electronics recycling available Saturday
October 26, 2005	Grassed waterways protect water quality, prevent erosion
November 2, 2005	Tire recycling day returns
November 16, 2005	Everyone plays a part in saving water quality
April 4, 2005	Heavy trash days scheduled for month
April 12, 2005	Days for heavy trash collection scheduled
October 27, 2005	City leaf pickup begins Monday
January 2005	Christmas tree pickup to begin
Summer 2005	City gives away compost, mulch
Spring 2005	One person's trash: Spring 2005
Winter 2005	One person's trash: Winter 2005

Appendix A
Public Education and Outreach

School Programs

Date	Event
February 2, 2005	Food Web – Water Quality Wetlands
February 11, 2005	Water Cycle Program
February 23, 2005	Watershed Protection Booklets
April 13, 2005	AG Day farm activities including GIS, water quality, weather, etc.
April 22, 2005	Earth Day Program – handouts to area schools
May 5, 2005	Frogprints presentation

Appendix B
Public Participation and Involvement

**Appendix B
Public Participation and Involvement**

Hancock County Solid Waste Management District Activities ¹

Date	Event	Quantity Collected ²	Number of Citizens that Participated ²
March 26, 2005	Electronics Recycling Day	6,791 lbs.	92
May 14, 2005	Tire Recycling Day	361 tires	76
June 18, 2005	Household Hazardous Waste Day	4,191 lbs. of hazardous 1,934 lbs. of non-hazardous 14 appliances	182
October 15, 2005	Electronics Recycling Day	6,629 lbs	79
November 5, 2005	Tire Recycling Day	1,468 tires	263

¹ Data provided by the Hancock County Solid Waste Management District

² Specific numbers reflect the quantity collected and participation from Hancock County

Public Meetings¹

Date	Meeting	Subject	Number of Citizens Present
May 26, 2005	Common Council	Stormwater Utility fee structure 1 st reading	0
June 9, 2005	Common Council	Stormwater Utility fee structure passage	0
July 28, 2005	Common Council	Stormwater Utility fee structure	12
August 4, 2005: 2:00 p.m.	Special meeting with local businesses	Stormwater Utility fee structure	11
August 4, 2005: 7:00 p.m.	Special meeting with local businesses	Stormwater Utility fee structure	15
August 18, 2005	Meeting of business people	Stormwater Utility fee structure	12
August 25, 2005	Common Council	Stormwater Utility fee structure	3
September 8, 2005	Common Council	Stormwater Utility fee structure	3
September 22, 2005	Common Council	Stormwater Utility fee structure	1

¹ Data gathered from meeting notes and may not include citizens that did not speak

**Appendix B
Public Participation and Involvement**

2005 City of Greenfield Activities

Event	Quantity Collected	Approximate Number of Citizens that Participated
Leaf pickup	5,400 cubic yards	75% of households
Heavy Trash Pickup	184 tons, 149 ref/freezers, 23 air conditioners	800 households
Tree Limb Collection	1,144 cubic yards	50% of households
Christmas Tree Collection		350 households
Mulch and Compost	15,000 cubic yards mulch 5,000 – 10,000 cubic yards compost	Unknown
Biosolids	Unknown	Unknown
Smoke Testing	60,198 feet	275

Appendix C
Phase II: Part C Extension

Appendix D
Phase II: Part C Updates

City of Greenfield
Stormwater Quality Management Plan
Part C: Program Implementation
Appendix A Update
NPDES Facilities in MS4 Area
Storm Water Quality Management Plan
Greenfield, Indiana

NPDES Permit No.	SIC	BUSINESS NAME	ADDRESS 1	ADDRESS 2	CITY	STATE	ZIP
IN0002925	2833	ELI LILLY AND COMPANY	GREENFIELD LABORATORIES	WEST NATIONAL RD U S 40	GREENFIELD	IN	46225
IN0020109	4952	GREENFIELD WASTEWATER TR. PL.	CITY OF GREENFIELD	809 SOUTH STATE ST	GREENFIELD	IN	46140
IN0060747	5171	SHELBY PETROLEUM INC.	325 EAST MAIN STREET		GREENFIELD	IN	46140
ING080186	5541	GASAMERICA #33	815 WEST MAIN STREET		GREENFIELD	IN	46140
INP000043	2295	ROLL COATER INC.	1950 EAST MAIN STREET		GREENFIELD	IN	46140
INP000077	3714	400 WEST NEW ROAD	GREENFIELD		GREENFIELD	IN	46140
INP000120	3714	INDIANA AUTOMOTIVE FASTENERS	1300 WEST ANDERSON BLVD.		GREENFIELD	IN	46140
INP000165	3479	JOB SHOP COATINGS INC.	P.O. BOX 923		GREENFIELD	IN	46140

Notes:

NPDES: National Pollutant Discharge Elimination System Permit Number (IDEM, 2004)

SIC: Standard Industrial Classification Code

Source: IDEM, 2004, NPDES_Facility_IDEM_IN: Facilities in the National Pollutant Discharge Elimination System with Assigned UTM Coordinates in Indiana (Indiana Department of Environmental Management, Point Shapefile), Indiana Department of Environmental Management, Office of Land Quality, Indianapolis, Indiana.

Eli Lilly and Company is partially within the City of Greenfield MS4 Area. The NPDES permitted wastewater treatment facility and the NPDES permitted outfall lie outside of the MS4 Area.

City of Greenfield
Storm Water Quality Management Plan
Part C: Program Implementation Schedule Update

MCM: Public Education and Outreach	Old Date	New Date
BMP 1: Develop and implement a public outreach and education program		
Goal 1: review educational activities within the MS4 area and develop an inclusive education program (July 2005)	July 2005	March 2007
BMP 2: Survey MS4 Area constituents for attitudes and prior knowledge of storm water quality		
Goal 1: Quantify attitude towards, and prior knowledge of storm water quality (May 2006)	May 2006	January 2008
BMP 3: Educate minorities, disadvantaged communities, and children		
Goal 1: No Action - Greenfield has not identified a significant population of minorities or disadvantaged	Addressed in BMP5	
BMP 4: Education initiatives		
Goal 1: Begin educational initiatives for reducing and handling lawn and pet waste and their impacts to storm water quality (May 2007)	May 2007	January 2009
Goal 2: Begin public education program for public employees, businesses, and general public on the hazards of illicit connections (November 2008)	November 2008	July 2010
Goal 3: Begin installing roadside signage to increase awareness of dumping impacts on storm water quality (May 2007)	May 2007	January 2009
BMP 5: Educational initiatives in conjunction with the Hancock SWCD		
Goal 1: Begin a collaborative education effort with the Hancock County SWCD		

**City of Greenfield
Storm Water Quality Management Plan
Part C: Program Implementation Schedule Update**

MCM: Public Participation and Involvement	Old Date	New Date
BMP 1: Develop and implement a public participation and involvement program		
Goal 1: Review current public participation and involvement programs within the MS4 area and develop a program to notify and include constituents in MS4 activities	May 2005	January 2007
BMP 2: Survey constituent attitudes and willingness to volunteer		
Goal 1: quantify attitudes, prior knowledge, and willingness of constituents to participate in volunteer activities	May 2006	January 2008
BMP 3: Provide public notice of council/commission meetings addressing storm water issues		
Goal 1: Publicize dates and times for all meetings where storm water related ordinances or management objectives are discussed	May 2007	January 2009
BMP 4: Storm drain marking		
Goal 1: mark newly installed storm drains and manholes within MS4 area	May 2007	January 2009

City of Greenfield
Storm Water Quality Management Plan
Part C: Program Implementation Schedule Update

MCM: Illicit Discharge Detection and Elimination	Old Date	New Date
BMP 1: Develop Storm Sewer map		
Goal 1: Develop map noting the location of 25% of the known storm water outfall conveyance systems with a pipe diameter greater than 12 inches and open ditches with bottoms larger than 2 feet	November 2005	July 2007
BMP 2: Development and implementation of ordinances or other regulatory mechanism that prohibit illicit dischargers into the MS4 conveyance		
Goal 1: City anticipates adopting an illicit discharge detection and elimination ordinance to prohibit illicit discharges into MS4 conveyances	November 2005	July 2007
BMP 3: Develop plan to detect, address, and eliminate illicit discharges, including illegal dumping, into the MS4 conveyance system		
Goal 1: dry screening will be used to document the presence of illicit connections	November 2008	July 2010
Goal 2: Industrial facilities be mapped and identified	November 2008	July 2010
BMP 4: Implementation of an education about the hazards associated with illicit discharges and improper disposal of waste	See Section 3.1, BMP4, Goal 2	
BMP 5: Establishment of a recycling program for commonly dumped wastes	See Section 2.2.3	

**City of Greenfield
Storm Water Quality Management Plan
Part C: Program Implementation Schedule Update**

MCM: Construction Site Storm Water Run-Off Management	Old Date	New Date	
BMP 1: Develop and adopt a construction site storm water pollution prevention plan	Goal 1: Adopt a construction site storm water runoff management ordinance	November 2005	July 2007
	Goal 2: Formally implement a policy that establishes penalties associated with violations of the local ordinance	May 2006	January 2008
BMP 2: Plan identifies and schedules implementation of a requirement to use appropriate BMPs on construction sites to control sediment and erosion and other waste at the site.	Goal 1: Select MS4 area and SWCD personnel erosion and sediment control plan reviewers and construction site inspectors	November 2005	July 2007
BMP 3: Plan identifies and schedules implementation of a requirement to use appropriate BMPs on construction sites to control sediment and erosion (November 2005)		November 2005	July 2007
	Goal 1: Prepare a technical document providing a suite of approved BMPs for selection by contractors	November 2005	July 2007
BMP 4: Develop and implement a program to receive, track, and respond to erosion and sediment control complaints	Goal 1: Establish procedures for the receipt of and consideration of public inquires, concerns, and information on local construction activities	May 2006	January 2008
	Goal 2: Policies and standard operating procedures ill be formalized for tracking and follow up of public concerns and information	May 2006	January 2008

City of Greenfield
Storm Water Quality Management Plan
Part C: Program Implementation Schedule Update

MCM: Post Construction Storm Water Run-Off Control	Old Date	New Date
<hr/>		
BMP 1: Develop and adopt a post construction plan and ordinance to meet requirements of 327 IAC 15-5-6 (a)(8)		
Goal 1: Develop a plan to implement, manage, and enforce an ordinance to address post construction storm water discharge to meet requirements of 327 IAC 15-5-6 (a)(8)	May 2006	January 2008
Goal 2: Formally implement a policy that establishes penalties associated with violations of the local ordinance	May 2006	January 2008
<hr/>		
BMP 2: Reduce the impact of pollutants in storm water run-off on the receiving waters by storing, filtering and providing vegetation.		
Goal 1: Infiltration practices not allowed in wellhead protection areas		
Goal 2: Appropriately sized vegetated filter strips required and maintained along unvegetated swales and ditches	May 2007	January 2009
Goal 3: Adopt an ordinance to prohibit discharge from the MS4 conveyance into sinkholes or fractured bedrock with out treatment	May 2006	January 2008
Goal 4: Develop and adopt an ordinance to require discharge from storm water Class V injection well practices to meet Indiana groundwater quality standards	May 2006	January 2008
Goal 5: Develop and adopt an ordinance to require refueling station start replace existing tanks to install tanks that reduce heavy metal and PAH runoff in storm water	November 2008	July 2010
Goal 6: Regulation of rate of storm water flow through MS4 Area	See Section 2.2.5	
<hr/>		
BMP 3: Annual Personnel Training		
Goal 1: Acquire annual training for personnel responsible for plan review, inspection, and enforcement	November 2008	July 2010
<hr/>		
BMP 4: Operational and Maintenance plan(s) for structural storm water BMPs		
Require operation and maintenance plans for all structural storm water BMPs	May 2006	January 2008
<hr/>		

City of Greenfield
Storm Water Quality Management Plan
Part C: Program Implementation Schedule Update

MCM: Good Housekeeping and Pollution Prevention	Old Date	New Date
<p>BMP 1: Develop and implement a written Good Housekeeping Improvement Plan</p> <p style="padding-left: 40px;">Goal 1: Examine current municipal operations and present findings to the governing authority to determine where additional pollution prevention activities, policies, training, or submittal measures are needed</p>	<p>November 2006</p>	<p>July 2008</p>
<p>BMP 2: Controls to minimize the discharge of pollutants from existing municipal, state, or Federal operational areas</p> <p style="padding-left: 40px;">Goal 1: Document current maintenance activities, schedules, and inspection procedures for BMPs to reduce floatables and other pollutants discharged</p> <p style="padding-left: 40px;">Goal 2: Address controls for reducing or eliminating discharge of pollutants from operational areas, including roads, parking lots, maintenance and storage yards, and waste transfer stations</p> <p style="padding-left: 40px;">Goal 3: Develop a SOP for proper disposal of animal waste</p> <p style="padding-left: 40px;">Goal 4: Document written procedures for the proper disposal of waste removal from MS4 conveyances and operational areas</p> <p style="padding-left: 40px;">Goal 5: Establish new snow disposal areas</p> <p style="padding-left: 40px;">Goal 6: Develop a SOP for spill prevention and cleanup during refueling operations</p>	<p>May 2006</p> <p>May 2006</p> <p>May 2006</p> <p>May 2006</p> <p>May 2006</p>	<p>January 2008</p> <p>January 2008</p> <p>January 2008</p> <p>January 2008</p> <p>January 2008</p>
<p>BMP 3: Pollution reduction and prevention from flood improvement projects</p> <p style="padding-left: 40px;">Goal 1: Flood management projects will be examined to ensure impact to surface water is minimized</p>	<p>May 2007</p>	<p>January 2009</p>
<p>BMP 4: MS4 Area employee training sessions</p> <p style="padding-left: 40px;">Goal 1: Employees will be trained with annual courses on Hazard waste disposal, vegetative waste handling, fertilizer and pesticide application, and function of implemented BMPs</p>	<p>May 2007</p>	<p>January 2009</p>

City of Greenfield
Stormwater Quality Management Plan
Part C: Program Implementation
Section 8.1 Update
Summary of the Program Budget for Five Year Permit Period¹

Stormwater Utility Expense	Forecasted Appropriation
Salaries	\$135,275.00
PERF	\$9,150.00
Employee Insurance	\$11,000.00
SS/Medicare	\$10,365.00
Miscellaneous Supplies	\$1,000.00
Consultant/Engineering Services	\$50,000.00
Copies/Computer Software	\$5,000.00
Telephone/Alarm	\$750.00
Postage/Freight	\$12,000.00
Travel Expense	\$500.00
Publications/Ads	\$500.00
Outside Contractors	\$60,000.00
Subs, Dues, Instruction	\$500.00
Grants Subsidies – CED, IT	\$60,000.00
Repairs/Assessments	\$419,416.00
Machinery/Equipment	\$30,000.00
Furniture/Fixture	\$5,000.00
Total	\$810,456.00

¹ Budgeted monies and expenses above are projections and are likely to change according to monies received and actual expenses incurred during any calendar year.

Appendix E
Structural BMPs Installed

Appendix E
Installed Structural BMPs

Development/Project	Basin (all types) ²		Drainage Swale ²	Catch Basin ²
	Size (total acres)	Number	(feet)	(number - all types)
Oak Highlands (Section One) ¹	3.2	2	7,663	13
Boots Place ¹	0.2 ³	1	2,034	0
Sweetwater Farms (Section Two) ¹	0	0	1,063	0
Sweetwater Farms (Section Three) ¹	0	0	1,050	0
Bethel Baptist Church ⁴	1.8	1	1450	0
Brandywine Community Church ⁴	1.2	1	1138	3
Hancock County Public Library ⁴	0.9	1	420	7
Total	7.3	6	14,818	23

Note:

- ¹ Developments for which the City released bonds in 2005
- ² Data calculated using construction plans unless noted otherwise
- ³ Data calculated using Hancock County Online GIS
- ⁴ Applied for a construction permit in 2005

Appendix F
Secondary Containment Facilities

Appendix F
Secondary Containment Facilities



Figure 1: WWTP backup generator diesel fuel secondary containment



Figure 2: WWTP Class A sludge process polymer storage secondary containment

Appendix F
Secondary Containment Facilities



Figure 3: WWTP Actiflow treatment process polymer storage secondary containment



Figure 4: Water Department backup generator diesel fuel secondary containment