



## Rule 13 - MS4 ANNUAL REPORT

State Form 51278 (R6 / 7-12)

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

- NOTE:**
- Annual reports must be submitted to the Indiana Department of Environmental Management. **Failure to submit the annual report is 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.
  - 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 attachments to the IDEM Storm Water Program, MS4 Coordinator at the address listed in the box on the upper-right.

### For questions regarding this form, contact:

IDEM Office of Water Quality, Storm Water Program  
MS4 Coordinator  
100 North Senate Avenue, Room 1255  
MC 65-42  
Indianapolis, IN 46204-2251

Telephone: (317) 234-1601 or

(800) 451-6027, ext. 41601 (within Indiana)

Web Access: <http://www.IN.gov/idem/4900>

Five Year Permit Term	Reporting Year
<input type="checkbox"/> 1st Permit Term	<b>Permit Year <u>2013</u></b>
<input checked="" type="checkbox"/> Second and subsequent five (5) Year Permit Terms	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input checked="" type="checkbox"/> 4 <input type="checkbox"/> 5
	MS4s in their first permit term must submit reports annually. MS4s that are in subsequent permit terms must submit in years 2 and 4 of the permit term.

### PART A: GENERAL INFORMATION – MS4 OPERATOR

1. Permit Number:	INR 0 4 0 089	<b>Type of MS4:</b> <input type="checkbox"/> City <input type="checkbox"/> Town <input checked="" type="checkbox"/> County <input type="checkbox"/> Non-traditional	
2. MS4 Entity:	Monroe County (Name of permit holder)		
3. MS4 Operator:	Monroe County Board of Commissioners		
4. Mailing Address:	100 W. Kirkwood Avenue Rm 323 Bloomington, IN ZIP: 47404 County: Monroe		
5. Email Address:	apurdie@co.monroe.in.us		

### PART B: GENERAL INFORMATION – MS4 COORDINATOR

6. MS4 Coordinator (please print):	Terry Quillman
7. Person's Title:	MS4 Coordinator
8. Mailing Address:	501 N. Morton St Rm 216 Bloomington, IN ZIP: 47404
9. Telephone Number:	812-349-2499
10. E-mail Address:	tquillman@co.monroe.in.us

### PART C: GENERAL INFORMATION – REPORT PREPARER

11. Name: Dana Wilkinson (Provide this information if someone other than MS4 Operator or Coordinator completed this report.)	
12. Affiliation with the MS4:	MS4 Assistant
13. Mailing Address:	501 N. Morton St. Rm 216 Bloomington, IN ZIP: 47404
14. Telephone Number:	812-349-2960 Extension:
15. E-mail Address:	dwilkinson@co.monroe.in.us

## **Part D Program Management**

**16a) If this is a co-permit, list all permittees and operators responsible for permit implementation for each entity.**

There are no co-permittees.

**b) Identify changes to the MS4 area boundaries, including areas added to or lost to the MS4 area via annexation or other similar means. Provide a current map.**

An updated map has been created during this reporting period using 2010 census information to determine the Urbanized Area and depicting some annexation to the Town of Ellettsville. However, we essentially manage the entirety of unincorporated county lands with regard to our stormwater quality management program.

**c) Identify follow-up or additional water quality characterizations completed during the reporting period if applicable.**

Thirty-nine Monroe County stream sites were sampled in 2016 as part of a watershed-level study championed by the Monroe County Planning Department and Indiana University graduate students. Hoosier Riverwatch equipment was used to determine basic stream reach health and the quality of habitat. The sampling was part of a larger, ongoing report entitled, "Impervious Cover & Watershed Health in Monroe County, Indiana: 2005 – 2017." This report is currently being completed.

**d) Provide updated receiving water information completed during the reporting period if applicable.**

There is no updated receiving water information.

**e) Identify funding sources (utility fees, grants, enforcement fines, etc.) utilized for the MS4 program implementation during this reporting period.**

Monroe County assesses an annual stormwater fee of all county residents.

**f) Provide a list of new active industrial sites identified during this reporting period.**

Elliot Stone Quarry located at 6524 S. Rockport Rd is the only new site identified. There may be one or two limestone quarries working towards a Rule 6 permit, but none are new operations.

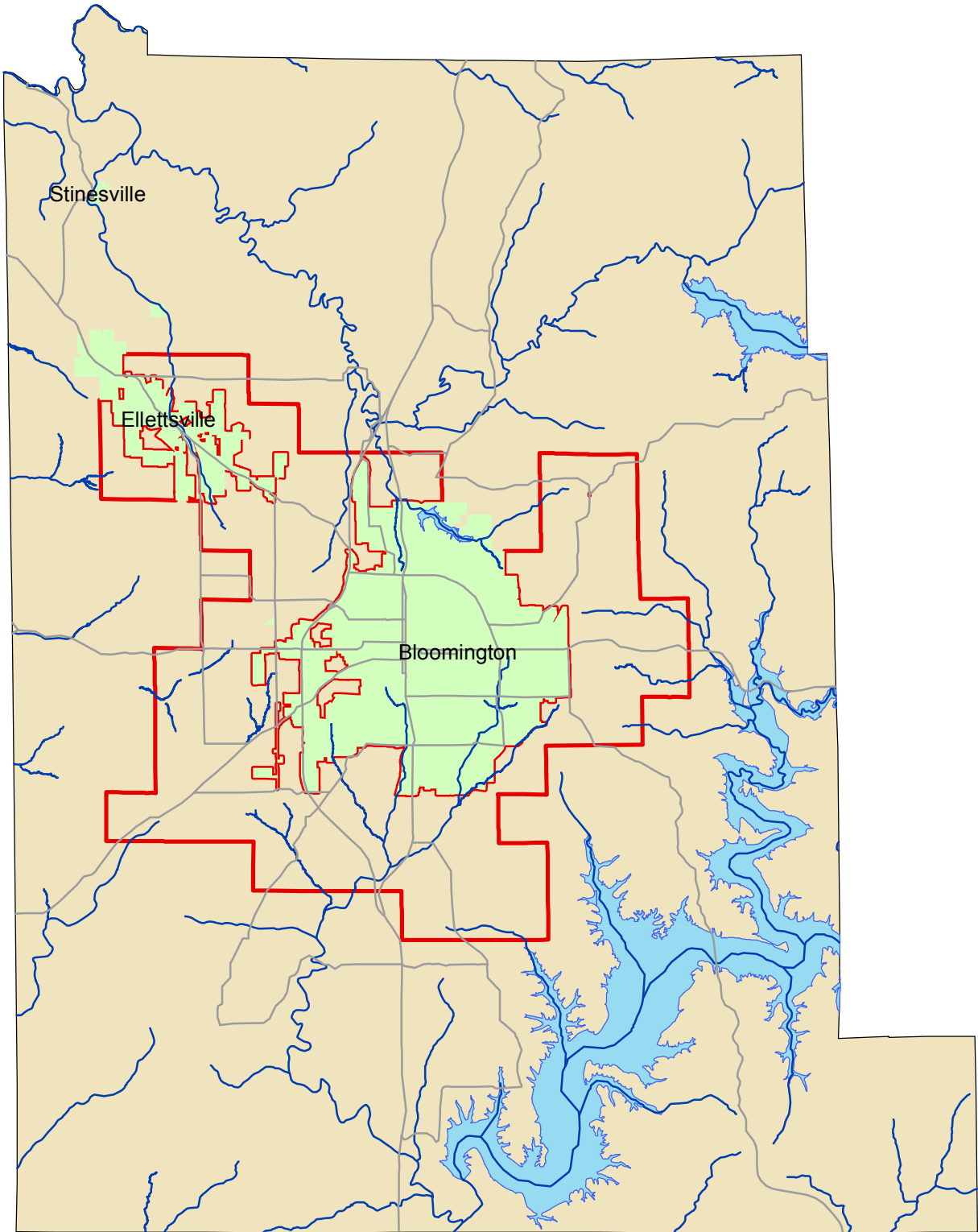
**g) Provide a list of facilities owned and operated by the MS4 that require Rule 6 (industrial stormwater) permits.**

The Monroe County Airport (INRM00165) at 972 S. Kirby Road is owned by Monroe County.

**h) Provide a summary of complaints received and follow-up investigation results related to stormwater quality issues during this reporting period.**

During this reporting period, Monroe County Public Works received 435 complaints related to drainage and stormwater concerns. Most issues were water quantity-related and resolved with either directed property owner action or stormwater crew maintenance work. Maintenance work generally required roadside ditch cleaning, culvert cleaning or replacement, or other necessary work. Most water-quality issues were connected to construction sites. These calls prompted the MS4 Assistant to conduct an inspection and request corrective actions as needed. When necessary, some residents were directed to the local NRCS or SWCD for agricultural land use issues.

# Monroe County MS4 Area



## Legend

- Roads
- Streams
- City Jurisdiction
- 2010 Urbanized Area
- Managed County MS4 Area

## **Part E: MCM 1 Public Education and Outreach**

**17a) List BMPs and Identify progress made towards development and implementation of each Best Management Practice (BMP) for this minimum control measure (MCM) including timetables and measurable goals during this reporting period.**

**b) Describe implementation problems encountered and changes made due to ineffectiveness or infeasibility during this reporting period.**

**c) Describe program BMPs that went beyond those identified in the Stormwater Quality Management Plan (SWQMP)**

**d) Identify stormwater BMPs installed for this MCM during this reporting period.**

**e) Describe program implementation partnerships and explain successes and barriers during this reporting period.**

*-Continue to facilitate SWEET (Storm Water Environmental Education Team) meetings to share information and to coordinate activities among interested MS4 entities in the county*

*-Continue to create an annual Monroe County Stormwater Calendar (or similar outreach materials) for fair & office distribution*

*-Develop Excel sheet of area schools and potential teacher connections for classroom visits w/ MCCSC & R-BB*

*-Continue hosting educational booth and sponsoring annual events: BugFest (sponsor, aquatic insect focus), Sustaining Nature and Your Land (SNAYL) Day (sponsor, rain garden focus), Environmental Fair at The Academy (watersheds and BMPs at home focus), Monroe County Fair, Fall Festival*

*-Mail watershed post cards to property owners in one watershed per year describing practices that homeowners can implement to reduce polluted runoff*

*-Provide at least 2 Rain Garden workshops per year*

*-Maintain media outreach activities - All of the following have been used to disseminate stormwater information, future options can vary w/ efficacy: TV infomercials (or support MCSWMD infomercials), Herald Times articles, Facebook page, CATS, Radio PSAs*

Monroe County is greatly benefited by the existence of so many diverse, active organizations providing water quality-related education throughout the year. Staff from various County departments and other agencies are able to reach a variety of audiences and provide an expertise that we, on our own, may not otherwise achieve. Below we will detail what our own stormwater staff have accomplished while attached in MCM 1 Appendix are more details regarding other agency programs and relevant documents.

In this reporting period, we have continued to air our infomercials through Comcast television and online digital packages. In 2016, we aired them on a variety of stations throughout the year. In an effort to better diversify our education funds, we chose a more budget-friendly package in 2017. In choosing the seasonal NFL package, we had the opportunity to reach different county residents than we could probably reach elsewhere. The infomercials are thirty second spots that cover the topics of rain gardens, aquatic insects, illicit discharges, water quality, and watersheds. We also place these videos on our website and Facebook page. In utilizing Comcast to air these messages, we do have the benefit of receiving specific viewer information afterwards to better understand whether this best management practice (BMP) is worth continuing. We look forward to reviewing this data and determining what our next steps will be in regards to this specific outreach. We were also a sponsor of the MS4 educational videos produced by multiple MS4 partnerships in 2017.

In other media outreach, we have continued to expand our reach and explore alternatives not yet tried. We maintain a Facebook page with current, relevant stormwater and water quality related news. We strive to update this once a week and have made this an intern assignment. However, it can be difficult to keep our page up-to-date and regularly visited. This may be simply due to intern schedules and general “out of sight, out of mind.” We also update our stormwater website with educational items for the public in order to actively engage and educate them on a range of issues dealing with water quality and our program in general.

In 2017, we reached out to numerous area radio stations and provided public service announcements (PSAs) related to BMPs at the individual level. We find this approach challenging to measure success or reach as, thus far, the radio stations cannot guarantee a frequency of reading the PSAs (without payment) nor can they provide numbers on those that heard the announcement with any degree of accuracy. But we believe this is a “low hanging fruit” option to further spread our message and content for no cost.

We have continued each year in distributing our Monroe County Stormwater-themed calendar. They have become a popular item at the Monroe County Fair with distribution of 2000+ in both 2016 and 2017. Aside from the fair booth, we place them in many county offices and other public spaces for dispersal. With the help of interns, we continue to develop materials for various audiences including a general MS4 brochure, materials for gas stations and restaurants, and general BMP guides for rain gardens. In 2016, we mailed Monroe Lake watershed residents a simple postcard detailing what watershed they lived in and how they can help keep it clean. Mailing residents in a specific watershed each year is a newer goal for us and a simple way to educate residents about watersheds and the stormwater connection.

Our stormwater staff and interns table at several events each year. In 2016, we shared a table with the City of Bloomington stormwater staff at the Open Streets event in Bryan Park. We had our Plinko board activity (see MCM 1 Appendix), watershed maps and several materials to hand out. Unfortunately, it was a very hot day and attendance was low, we spoke to roughly 20 people. This event has also since ended and will not be occurring in the future. Open Streets was somewhat of an experiment for us and although it provided access to many city and county residents not yet visited, it would probably not have stayed on our outreach events list due to

staff effort versus overall residents reached. We often try to weigh these issues when planning our events.

We continue to support and/or attend several other events each year and include them in our annual goals. These include Sustaining Nature and Your Land Day (SNAYL Day), Bugfest, Monroe County Fair, and the Environmental Fair at The Academy. We sponsor both SNAYL Day and Bugfest, providing \$500 to each event. At SNAYL Day, we promote rain gardens and provide upcoming rain garden workshop information and interact with roughly 250 people. Bugfest is a chance to meet with over 1300 people, mostly small children, and share the importance of water quality for aquatic insects and other organisms. It is a wonderful event that continues to grow and we intend to be a part of it in the future.

Each year we create a booth at the Monroe County Fair. In 2016, we maintained our own space, handing out calendars, engaging children with the Plinko Board and displaying a green infrastructure activity board. In 2017, we shared a space with the Soil & Water Conservation District (SWCD). A painted mural depicting a Monroe County landscape with stormwater features was part of the display and we hope to use it again in the future. The fair can often be a challenge in that it presents us with the opportunity to engage with hundreds of people, but we may often only have 30 seconds to do so. It can be difficult determining the right kind of handout or message to convey in the short time we may have with visitors, but it is definitely worth it!

In 2016, The Environmental Fair took place at a local high school where we interacted with 200+ middle and high school students. We had the opportunity to discuss our organization's mission while also educating students on their watershed and the effects of stormwater quality. This event, organized by a local teacher, has since been cancelled due to funding and scheduling issues, so we did not attend in 2017.

A new event for us this year was the Peden Farm Children's Festival. We partnered with the SWCD and provided a table with simple stormwater facts and the Plinko board for the roughly 5,000+ visitors. We plan to add this to our annual goals and events and develop more appropriate activities for young children. It's a great opportunity to not only reach children but their parents as well.

Our stormwater program was a community partner in the Monroe County Community School Corporation (MCCSC) Afterschool Program for the 2016-2017 school year. Students learned about stormwater pollution, water quality testing, water conservation, and other water related topics. The afterschool program included six elementary schools. We presented once a week for six weeks at each school. We partnered with City of Bloomington Utilities for this program. Each school had about 20-30 students in their afterschool program. We have since put this program BMP on pause to assess other options within the school systems. The afterschool program audience becomes redundant and difficult to work with at times and the effort for staff to develop and attend these events weekly is challenging. Instead, we are trying to turn our focus to getting into classrooms during the day, but this, too, can be hard. We are pleased,

however, that other agencies sharing similar messages are already often in area schools, particularly Monroe County Solid Waste Management District staff.

Stormwater staff continue to give annual rain garden talks at the Master Gardeners program. In a new development, we've been able to partner with a local landscaping & restoration group, Eco Logic. In 2017, we conducted two rain garden workshops at their facility and plan to continue to do so in the future. For the rain garden talks, we cover not only the specifics of how to construct rain gardens but explain watersheds and present the bigger picture of how low impact design fits into the goals of the Clean Water Act.

Our Monroe County Parks & Recreation staff (Cathy Meyer) have continued to be vital to providing Hoosier Riverwatch training, organizing Bugfest, Leonard Springs Nature Day, and the Indiana University Science Camp. They conduct many programs related to water quality each year. More information can be found in the MCM 1 Appendix.

Our County Extension Agent (Amy Thompson) has actively promoted clean water practices. The Master Gardener program includes training in pesticide safety and application, storage, disposal, need for soil testing, how to correctly calculate fertilizer needs and make a proper application. In addition, plant disease diagnosis is also discussed. This discussion includes cultural practices to lessen disease occurrence and therefore pesticide use. Ms. Thompson conducts pesticide applicator recertification programs every year, with roughly 65 in attendance in 2017.

The Monroe County Solid Waste Management District staff (Elisa Pokral) provides an overwhelming number of educational programs throughout the year. Since there is a relationship between issues such as hazardous waste disposal, composting, re-use of materials, and water quality her work is of great importance to the Stormwater Program. More detailed information on Elisa's work is contained in the MCM 1 Appendix.

The Monroe County Stormwater Environmental Education Team (SWEET) meets monthly to share information and to explore opportunities for partnering on educational activities and simply keep multiple MS4s within one county informed of each other's' goings on.

## MCM 1 APPENDIX



United States  
Department of  
Agriculture

Forest  
Service

Hoosier National Forest  
Supervisor's Office

811 Constitution Avenue  
Bedford, IN 47421  
812-275-5987  
TDD: 800-877-8339  
Fax: 812-279-3423

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**File Code:** 1830  
**Date:** April 4, 2017

Congratulations!

You are part of a winning team of individuals who were nominated in 2016 for the Monroe Lake Cleanup as part of the Eastern Region Volunteer and Service Awards. The Hoosier National Forest nominated this project in the Cultural Diversity category due to the diversity of the people who attended last year. The event was a success in its own right with 97 people putting in a collective 392 hours of time cleaning up the lakeshore of Monroe Lake.

It was an amazing day, bringing people together from across cultures, some of who knew little or nothing about the lake or its environment, and working together to improve our part of the world. After the trash had been hauled back and put in dumpsters, the fellowship was great, with a complimentary appreciation picnic and door prizes. People were able to get acquainted and make new friends over hamburgers and baked beans. In its 4<sup>th</sup> year, the Monroe Lake cleanup continues to grow.

The partnership between different agencies, Lake Monroe Marina, J.L. Waters and Co. Adventure Outfitters, Hoosier Outdoor Writers, and several committed volunteers continue to make this an outstanding event. The event not only removes huge amounts of trash from the lake, but teaches the consequences of trash in our water source and environment to those who attend.

The Hoosier National Forest is honored to be a part of this outstanding effort, and to have the event win a Regional Award in Cultural Diversity for Volunteer and Service. And now, we understand it has won the same award at the national level! Congratulations to all of you who continue to make this event successful.

Sincerely,

MICHAEL CHAVEAS  
Forest Supervisor





Monroe County Parks & Recreation Programming (water-related items in blue)

Programs 2016

Date	Program	Place	Number	Programs	Fee	Revenue	Expense	Type				Group		
								Talk	Trip	Event	Workshop	School	Public	Camp
1/5/2016	Mammals and tracks	Harmony	25	1	\$15			25				25		
1/21/2016	Animal Adaptations	Grandview	20	1	\$10			20				20		
1/21/2016	Habitat Stewards	Karst	24	1	\$50	\$1,100	\$89				24		24	
1/26/2016	Science Night	Arlington	150	1						150		150		
1/28/2016	Habitat Stewards		24	1							24		24	
2/4/2016	Habitat Stewards		24	1							24		24	
2/11/2016	Habitat Stewards		24	1							24		24	
2/18/2016	Habitat Stewards		24	1							24		24	
2/18/2016	Science Night	EPS	200	1						200		200		
2/25/2016	Habitat Stewards		24	1							24		24	
3/1/2016	Pollinators	BNHS	25	1		\$15		25				25		
3/2/2016	Pollinators	BNHS	25	1		\$15		25				25		
3/3/2016	Habitat Stewards		24	1							24		24	
3/6/2016	Bird Walk	Flatwoods	7	1					7				7	
3/7/2016	FrogWatch		16	1	\$5						16		16	
3/8/2016	FrogWatch		16	1							16		16	
3/10/2016	Habitat Stewards		24	1							24		24	
3/15/2016	Leonard Springs Nature Day		100	4					100			100		
3/22/2016	Leonard Springs Nature Day		100	8					100			100		
3/24/2016	Griffy Lake Nature Day			0										
3/29/2016	Leonard Springs Nature Day		100	8					100			100		
3/31/2016	Griffy Lake Nature Day			0										
4/2/2016	Garden Fair		500	1						500			500	
4/5/2016	Leonard Springs Nature Day		100	4					100			100		
4/5/2016	Grandview Science Night		80	1						80		80		
4/7/2016	Griffy Lake Nature Day			0										
4/12/2016	Leonard Springs Nature Day		100	8					100			100		
4/12/2016	EECC Science Night		45	1						45		45		
4/13/2016	Water monitoring	Indiana University	15	1					15			15		
4/14/2016	Griffy Lake Nature Day		100	8					100			100		
4/14/2016	IMN Wildflower Hike	Calli Nature Preserve	12	1					12				12	
4/21/2016	Griffy Lake Nature Day			0										
4/16/2016	Spring Into Gardening		193	1						193			193	
4/22/2016	Wildflower Hike	Wildflower Foray	15	1					15				15	

4/22/2016	<b>Butterfly Hike</b>	Wildflower Foray	22	1					22				22	
4/23/2016	<a href="#">Puddle Wonders</a>	<a href="#">Wildflower Foray</a>	35	1					35				35	
4/24/2016	<b>Hayes Trail</b>	Wildflower Foray	13	1					13				13	
4/26/2016	<b>Hayes Trail Hike</b>	Harmony School	26	1	\$35				26			26		
4/26/2016	<b>Insects</b>	CCCNS	19	1	\$10				19			19		
4/28/2016	<a href="#">Adopt a Stream</a>		8	1							8		8	
4/28/2016	<a href="#">Pond Life</a>	<a href="#">Childs</a>	92	4	\$15	\$60			92			92		
5/3/2016	<b>Birds and Native Plants</b>	Brown Co. Bluebird Club	12	1					12					
5/4/2016	<b>Skins and Skulls</b>	Childs	69	3	\$10	\$30			69			69		
5/5/2016	<b>Insects</b>	Childs	92	4	\$15	\$60			92			92		
5/5/2016	<b>Kids Uplugged</b>	HNF	75	3						75		75		
5/5/2016	<b>Science Night</b>	EIS	80	1						80		80		
5/6/2016	<a href="#">Hoosier Riverwatch</a>	<a href="#">Karst</a>	12	1							12		12	
5/7/2016	<b>Birdathon</b>		8	1	\$20	\$160	\$212			8			8	
5/12/2016	<b>Griffy Lake Nature Day</b>		100	4					100			100		
5/13/2016	<a href="#">Frogs</a>	<a href="#">Muscatatuck NWR</a>	15	1					15				15	
5/13/2016	<a href="#">Night Hike</a>	<a href="#">Muscatatuck NWR</a>	25	1					25				25	
5/16/2016	<b>Helmet fitting</b>	Stinesville	30	1						30		30		
5/7/2016	<b>Helmet fitting</b>	EPS	200	8						200		200		
5/18/2016	<b>Project WILD table</b>	DNR naturalist training	40	1							40			
5/19/2016	<b>Griffy Lake Nature Day</b>		100	4					100			100		
5/28/2016	<b>Ready Set Grow</b>		50	1						50			50	
5/31/2016	<b>Cemetery Talk</b>	Monroe Co.History Club	40	1					40					
6/7/2016	<b>Boat Trip</b>		12	1					12				12	
6/11/2016	<b>SNAYL Day</b>		300	1						300			300	
6/11/2016	<b>Birds and Plants</b>	SNAYL Day	15	1					15			15		
6/14/2016	<a href="#">Project WET</a>		33	1							33			
6/20/2016	<b>Insects</b>	Girls, Inc.	50	2					50					50
6/20/2016	<a href="#">Magic of Water</a>	<a href="#">GS Day Camp</a>	59	5					59					59
6/21/2016	<a href="#">Magic of Water</a>	<a href="#">GS Day Camp</a>	96	6					96					96
6/23/2016	<a href="#">Watersheds</a>	<a href="#">GS Day Camp</a>	52	4					52					52
6/24/2016	<a href="#">Watersheds</a>	<a href="#">GS Day Camp</a>	68	6					68					68
6/25/2016	<b>Bug Fest</b>		1119	1			\$1,094			1119			1119	
7/27/2016	<b>Senior Day at the Fair</b>	Monroe County Fairgrounds	142	1	\$5	\$590				142		142		
8/30/2016	<b>Animal Adaptations</b>	Lighthouse Christian	28	1	\$15	\$15			28			28		
9/9/2016	<b>No Bones</b>	St. Charles	25	1	\$15	\$15			25			25		
9/14/2016	<b>Trees</b>	St. Charles	43	2	\$15	\$30			43			43		

9/15/2016	Water monitoring	IU X 170	12	1					12			12		
9/16/2016	Water monitoring	Fall Festival	1000	1						1000		1000		
9/20/2016	Leonard Springs Nature Day		93	8					93			93		
9/21/2016	No Bones	St. Charles	25	1	\$15	\$15			25			25		
9/21/2016	Seeds	Lighthouse Christian	50	1	\$15	\$15			50			50		
9/22/2016	Griffy Lake Nature Day		97	8					97			97		
9/26/2016	Field trip	Harmony	25	1	\$50	\$50			25			25		
9/27/2016	Leonard Springs Nature Day		88	8					88			88		
9/29/2016	Children's Farm Festival		1000	1						1000		1000		
9/29/2016	Map and Compass	Girl Scouts	15	1	\$15	\$15			15			15		
9/30/2016	Children's Farm Festival		1200	1						1200		1200		
10/4/2016	Leonard Springs Nature Day		61	8					61			61		
10/6/2016	Griffy Lake Nature Day		100	8					100			100		
10/6/2016	Trees	IMN	15	1	\$50	\$850	\$170		15			15		
10/12/2016	Water monitoring	IU	16	1					16			16		
10/13/2016	Griffy Lake Nature Day		0											
10/13/2016	Birds/ Wildlife	IMN	15	1					15			15		
10/14/2016	Water monitoring	BHSN	120	1					120			120		
10/16/2016	Nature Hike	Harmony	25	1					25			25		
10/18/2016	Covered Bridge Festival		21	1					21				21	
10/18/2016	Leonard Springs Nature Day		81	8					81			81		
10/19/2016	Bats	St. Charles	31	1	\$15	\$15	\$7		31			31		
10/20/2016	Wildflowers/ Fungi	IMN	15	1					15			15		
10/20/2016	Griffy Lake Nature Day		80	8					80			80		
10/25/2016	Leonard Springs Nature Day		72	8					72			72		
10/26/2016	Nature Hike	Harmony	25	1					25			25		
10/27/2016	Griffy Lake Nature Day		77	8					77			77		
10/27/2016	Sky and Space	IMN	15	1					15			15		
10/28/2016	Home Remedies	Binford	50	2	\$15	\$30	\$26		50			50		
10/31/2016	Home Remedies	Binford	25	1	\$15	\$15			25			25		
10/31/2016	Hoosier RiverWatch	Childs	28	1					28			28		
11/3/2016	Griffy Lake Nature Day		101	8					101			101		
11/3/2016	Eco-regions	IMN	15	1					15			15		
11/5/2016	Nature Hike	Girl Scouts	37	2					37					
11/10/2016	Geology	IMN	15	1					15			15		
11/11/2016	Night Hike	Girl Scouts	9	1					9					
11/12/2016	Nature Discovery	Girl Scouts	16	1					16					

11/14/2016	Hoosier Riverwatch	Childs	56	2					56				56		
11/14/2016	Animal Adaptations	Girl Scouts	15	1	\$15	\$15		15							
11/15/2016	Home Remedies	Binford	25	1	\$15	\$15		25					25		
11/17/2016	Water/Fishes	IMN	15	1				15					15		
12/3/2016	Insects/Herps	IMN	15	1				15					15		
12/10/2016	Bird walk	Detmer Park	3	1					3					3	

10140258\$3,125\$1,59812262225637231770192594325

## Programs 2017

Date	Program	Place	Number	Programs	Fee
1/10/2017	Master Naturalists	Karst Park	25	8	\$50
1/17/2017	Master Naturalists		25	1	
1/24/2017	Master Naturalists		25	2	
1/20/2017	Karst and Caves	Tri-North	150	6	\$50
1/31/2017	Karst and Caves	Tri-North	75	3	\$30
1/31/2017	Master Naturalists		25	1	
2/7/2017	Master Naturalists		25	1	
2/9/2017	Birds	Rogers	30	1	
2/13/2017	Fossils	Tri North	150	6	
2/14/2017	Fossils	Tri North	75	3	
2/17/2017	Great Backyard Bird Count	Templeton	48	4	
2/18/2017	Bird Walk	Flatwoods	12	1	
2/21/2017	Master Naturalists		25	2	
2/23/2017	Science Night	Summit	100	1	
2/28/2017	Bird Trip	Goose Pond	13	1	
2/28/2017	Master Naturalists		25	2	
3/2/2017	Animal Adaptations	St. Charles	2	45	
3/3/2017	Karst and Caves	St. Charles	2	45	
3/7/2017	IMN		25	2	
3/20/2017	Frogwatch	Karst Park	16	1	\$5
3/21/2017	Frogwatch	Karst Park	13	1	
3/21/2017	Leonard Springs Nature Day	Grandview/ Unionville	83	4	
3/22/2017	Frogs	Home school group	9	1	\$15
3/22/2017	Frogs	Muscatatuck NWR	37	1	
3/23/2017	Griffy Nature Day	Grandview/Unionville	93	4	
3/28/2017	Leonard Springs Nature Day	Lakeview	77	4	
4/3/2017	Signs Left Behind	Grandveiw	20	1	\$10
4/4/2017	Leonard Springs Nature Day	Binford	95	8	
4/8/2017	Spring Into Gardening		200	1	
4/8/2017	Nature at Night	Flatwoods	10	1	
4/10/2017	Outdoor First Aid	Girl Scouts	6	1	
4/11/2017	Leonard Springs Nature Day	University	78	8	
4/12/2017	Insects	Children's Corner	32	1	\$10
4/13/2017	Griffy Nature Day	University	110	8	\$10
4/21/2017	Water Quality	Harmony	10	1	
4/21/2017	Orienteering	Hoosier Recreation Worksho	6	1	
4/22/2017	Paper Crafts	Hoosier Recreation Worksho	5	1	
4/22/2017	Night Hike	Hoosier Recreation Worksho	8	1	
4/24/2017	Animal Adaptations	Childs	50	2	\$15
4/24/2017	Adopt a Stream Training		12	1	\$15
4/26/2017	Animal Adaptations	Childs	50	2	\$15
4/26/2017	Pate Hollow Hike	Harmony	25	1	\$15
4/28/2017	Butterflies	Wildflower Foray	14	1	
4/29/2017	Puddle Wonders	Wildflower Foray	1	1	
4/30/2017	Hayes Trail	Wildflower Foray	4	1	
5/4/2017	Science Night	Edgewood Primary	250	1	
5/6/2017	Birdathon		9	1	\$20
5/6/2017	Ready Set Grow		30	1	
5/9/2017	Griffy Nature Day	Binford	145	8	
5/11/2017	Field Day	Edgewood Primary	175	8	\$50
5/11/2017	Griffy Nature Day	Lakeview	80	4	
5/17/2017	Insects	Childs	69	3	\$10
5/17/2017	Sticks and Strings	GLRLL	15	1	
5/19/2017	Exploring the Sky	GLRLL	6	1	
5/19/2017	Paper Crafts	GLRLL	6	1	
5/20/2017	Nature Hike	GLRLL	6	1	
5/21/2017	Bluebird Boxes	GLRLL	5	1	
5/21/2017	Geology	Girl Scouts at Karst	28	1	
5/31/2017	Pond	Mini 4H at Karst	20	1	
6/17/2017	Hoosier Riverwatch	Karst Park	11		
6/19/2017	4H Sparks	Flatwoods	0		
6/19/2017	Tree Rings	GS Day Camp	32	2	
6/20/2017	Tree Rings	GS Day Camp	30	2	
6/22/2017	Tree Rings	GS Day Camp	80	5	
6/24/2017	Bug Fest	Hilltop	1323	1	
7/18/2017	Animal Adaptations	Camp Rock	36	2	\$15

8/2/2017	Senior Day at the Fair		142	1	\$5
8/17/2017	Hoosier Riverwatch	Karst Park	15	1	
8/17/2017	Master Naturalists	Karst Park	13	1	\$50
8/24/2017	Hoosier Riverwatch	Karst Park	15	1	
8/24/2017	Master Naturalists	Karst Park	13	1	
8/31/2017	Master Naturalists	Karst Park	13		
9/7/2017	Master Naturalists	Karst Park	13		
9/13/2017	TCC Hike		22	2	\$30
9/14/2017	Master Naturalists	Karst Park	13		
9/15/2017	Seeds	Bl. Montessori	16	1	\$10
9/16/2017	H2Olympics	CBU Anniversary event	50	1	
9/21/2017	Griffy Nature Day		98	4	
9/21/2017	Master Naturalists	Karst Park	13	1	
9/22/2017	Fall Festival	Ellettsville	1000	1	
9/25/2017	Animal Adaptations	Templeton	54	2	\$15
9/26/2017	Pond Study	Will Detmer Park	9	1	\$15
9/26/2017	Map and Compass	Harmony School	25	1	\$15
9/27/2017	Map and Compass	Harmony School	25	1	\$30
9/28/2017	Master Naturalists	Karst Park	13	1	
9/28/2017	Children's Farm Festival	Peden Farm	2700	1	
9/29/2017	Children's Farm Festival	Peden Farm	1000	1	
10/3/2017	Leonard Springs Nature Day		89	8	
10/4/2017	Water Quality	BHSN	90	1	
10/5/2017	Master Naturalists		25	1	
10/5/2017	Griffy Nature Day		0	0	
10/6/2017	Trees	Rogers	26	1	\$15
10/13/2017	EEAI	Waycross Camp	90	1	
10/17/2017	Covered Bridge Festival		11	1	
10/17/2017	Leonard Springs Nature Day		93	4	
10/19/2017	Griffy Nature Day		94		
10/20/2017	Trees	Harmony	23		\$15
10/20/2017	Bats	Grandview	42		\$10
10/23/2017	Insects	Harmony School	23		\$15
10/24/2017	Leonard Springs Nature Day		67	8	
10/25/2017	Flatwoods Field trip	Harmony School	25	1	\$30
10/26/2017	Griffy Nature Day		70	8	
10/27/2017	Trees	Unionville	30	1	\$10
10/27/2017	Insects	Bl. Montessori	16	1	\$10
10/31/2017	Leonard Springs Nature Day		67	4	
11/1/2017	Bats	Edgewood Intermediate	50	1	\$15
11/2/2017	Griffy Nature Day		98	8	
11/3/2017	Classification	Harmony School	25	1	\$15
11/9/2017	Leonard Springs Nature Day		85	4	
11/11/2017	Daisy Brownie Ideas	Girl Scouts	10	1	
11/11/2017	STEM Nature Crafts	Girl Scouts	22	1	
11/11/2017	Night Hike	Girl Scouts	4	1	



**Where Green Living Begins**  
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*Serving Indiana as a leader in green communities*

Feb 1, 2018

**During 2015-2017 from November 2015-November 2017 (TWO YEARS) 600 programs serving 14,400 students and 39 teachers were presented in the MCCSC schools, 14 programs at Lighthouse Christian Academy and 9 programs at RBBSC).** A series is most commonly chosen averaging 9 in a series for each school. The more than 30 sessions offered are listed on [gogreendistrict.com](http://gogreendistrict.com) under Education/For Teachers with state standards noted. Standards include English Language Arts, Literacy, Science, Social Studies, Economics, Health and Wellness, Family & Consumer Science and more. Sessions include different aspects of the District's mission in Citizen Science. Included in every presentation verbally and via handouts are suggestions for active environmental stewardship for students, teachers, and parents. Presentations are given to preschool through adults and they are held year round. Day camps, clubs, and other community organizations are also served.

During this period, **five new 30 second cable television infomercials** were produced that relate to stormwater: one general recycling, two compost, one pharmaceutical, one electronics. Commercials rotate on a seasonal schedule. Cable TV infomercials are a part of a series of commercials that teach the public basic earth care and are part of the District's advertising campaign. A WHCC Hoosier Country Radio series of environmental challenges and solutions airs during the year to educate citizens. The paid public service announcements target rural customers focus on recycling, electronics recycling, hazardous materials recycling and bulky item disposal. WFHB airs two 30 second District public service announcements which I recorded on the mission of the District. Other radio stations also air some free such as WCLS and WVNI. **Two PBS WTIU TV's Friday Zone children's programs** also included segments on Citizen Science.

Comcast Cable TV is a prime source in educating the public about District services and how they can be earth stewards. Comcast Cable TV reaches more than 37,000 people across electronic devices as well as some areas in adjacent counties that use our services. The District rotates the airing of thirty five 30-second District infomercials from our District library. There are additional videos on our web site which include segments on Friday Zone programs, a student shot video, and shared videos on the industry. The Weather Crawl is also regularly used throughout the year for messages which relate to stormwater.

Other media and public relations outlets for the District include strategic social media in which water quality is a vital part of the news, web site information pertinent to Household Hazardous Waste collection, and the Green Information bins at Rural Recycling Centers which contain the **District GoGreen Guide**, and other earth care information. Guides are also available at the South Walnut Recycling Center for easy access to District services. Gogreen Guides are also mailed upon request and detailed information is available on the **District's web site at [gogreendistrict.com](http://gogreendistrict.com)**. They are distributed periodically throughout the year at the libraries, ReStore, and a the Area 10 Agency on Aging.

**OVER**

The following is a breakdown of organizations served from **November 2015-November 2017 totaling 25,720 people.**

**SCHOOLS:** Visits during the year typically include covering two and/or three grade levels of a classroom, not just one presentation. Ex: all 2<sup>nd</sup> grade classrooms, all 5<sup>th</sup> grade, or kg, 1<sup>st</sup> and 2<sup>nd</sup> grade levels at the school. This is a significant amount of students and teachers, especially for one educator and especially for the 2017-2018 academic year as school populations have substantially increased. Programs do not include preparation time required to review programs, to adapt presentations to the group or time period and to copy handouts. Handouts are always. There are fun educational handouts (word searches, puzzles etc.) for students and handouts designed specifically for parents that present additional information and guidelines for families. Some are used in the classroom when I'm there, others teachers use at another time, but all go home with the students. Students are excited about the handouts and teachers say they appreciate them as well. I have even had parents comment on the usefulness of the handouts. Although I have been in all schools in both MCCSC and RBBSC, the following schools are ones regularly visited. The others in MCCSC either have plenty of free IU programs offered such as with University Elementary or, they have low test scores and transient students so bookings there are not common. Middle Schools and High Schools have more testing pressures and more activities. Fewer outside visitors are welcomed.

**PARTICIPATING SCHOOLS**

Elementary:

Childs

Marlin

Rogers

Highland Park

Grandview

Lighthouse Christian Academy 210 kg

RBBSC Stinesville 80 k-2, 4 teachers

Edgewood M.S. 170, 1 teacher

Tri-North Middle School, the YES Club 60 7<sup>th</sup> and 8<sup>th</sup>, 2 teachers

BHSN Bloomington High School North Env'tal Club 40, 2 teachers

BHSS Bloomington High School South Env'tal Club 60, 1 teacher

IU: SPEA, School of Business, Media School

IVY TECH 40, 1 teacher

**COMMUNITY**

Wonderlab break programs 25 k-2, 2 teachers

La Casa Latina Daycamp 15 k-7, 3 teachers

Penny Lane Daycare 30 pre-kg, 3 teachers

Rotary- East side group 15 adults

MCPL 20

Bell Trace 30 seniors, 1 facilitator

AIMSD: 12 educators

**Community TOTAL:**

**156 children and adults**

**SCHOOL TOTAL: 14,800 K-12 and adult**

**TOURS: South Walnut Recycling Center**

Indiana University Students 25

IU Office of International Dvmpt H.S. students: 46, 2 adults (2 tours)

BHSN 4, 1 teacher

MCPL 4

Kids City Daycamp 30 4<sup>th</sup>-9<sup>th</sup>

Owen County Head Start 15 pre-kg, 4 adults

Home School Group 8 students, 2 adults

Girl Scout Troop for Project School 10 K-2, 2 adults

**OVER**

**15 TOURS**

**TOTAL: 155 children and adults**

**FAIRS:****TOTAL: 10,250  
Children, youth, and adults**

Latino Family Night(s)	170	students, parents
Fairview Science Night	100	students, parents
Arlington Science Night	100	students, parents
EPS Science Night	200	students, parents
MCPL	65	children, adults
Marlin Elementary Fair	135	students, parents
MCPL AND MCPR Flatwood Park Festival(s)	380	K-8, parents, seniors
Ellettsville Fall Festival(s)	2,300	students, parents, teachers
Peden Children's Fall Festival(s)	5,900	students, parents, teachers
MCCSC Environmental Fair Academy of Science Entrepreneurship at New Tech	300	H.S.
Summit Science Night	150	students, parents
Grandview Stem Night	100	students, parents
Monroe County Fair	350	children, youth, adult
BugFest at Hilltop Nature Garden Center	2,600	children, parents, seniors

**DISTRICT ANNUAL EVENT****TOTAL: 500 seedlings  
adults and children**

Tree Seedling Giveaway(s) in honor of Earth Day and Arbor Day

**Education Park Help:**

Cub Scout Pack 123 Clear Creek Elementary helped prepare Wicking Garden 15 students, plus adults

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The mission of the District is to secure a healthier environment in south-central Indiana, by eliminating waste going to final disposal through reduction of source materials, reuse of reusable materials, and recovery of recyclable materials and by offering educational resources and programs; and by promoting sustainable materials practices throughout our communities. The District achieves this mission by working with Monroe County residents, businesses, and community organizations. The District provides the community with Citizen Science/Environmental Education in a variety of District curriculum offerings to students, teachers, and the community as this education is vital to the health of Monroe County and vital to the health of the earth.

**ELISA K. POKRAL****Media and Education Director**

The District (MCSWMD)

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## **Part F: MCM 2 Public Participation and Involvement**

**18a) List BMPs and Identify progress made towards development and implementation of each BMP for this MCM including timetables and measurable goals during this reporting period.**

**b) Describe implementation problems encountered and changes made due to ineffectiveness or infeasibility during this reporting period.**

**c) Describe program BMPs that went beyond those identified in the SWQMP.**

**d) Identify stormwater BMPs installed or initiated for this MCM during this reporting period.**

**e) Describe program implementation partnerships and explain successes and barriers during this reporting period**

*-Continue to present Hoosier Riverwatch training workshops (at least one per year), hosted by Monroe County Parks & Recreation*

*-Investigate ways to involve neighborhood groups (HOAs) in creating and maintaining best management practices, including rain barrels and rain gardens*

*-Continue holding monthly Stormwater Management Board meetings at which public can provide comment and share concerns*

*-Administer a survey once per permit cycle*

*-Continue to sponsor and support Monroe Lake Shoreline Cleanup annually*

*-Maintain Adopt-a-Stream Program (County/City Parks & Recreation)*

*-Develop storm inlet marking program, assess community need and mark one neighborhood or area per year (Work with HOAs)*

*-Maintain MOU with the Monroe County SWCD to support the Mini-Grants program each year*

Developing successful public participation and involvement opportunities can be challenging for any program. Encouraging county residents to not only learn about a new topic but actively engage in available events and activities can be difficult, but we have had some mild successes.

Our biggest, ongoing event continues to be the annual Monroe Lake Shoreline Cleanup each fall. This volunteer event involves many partnering agencies including the Indiana DNR, U.S. Army Corps of Engineers, Hoosier National Forest, local businesses and more. Our stormwater program provides funding for boats to allow access to shorelines needing trash collection and a cookout for volunteers afterwards. The event has steadily increased in volunteer numbers, with our largest event including 95 people in 2016. The 2016 event was also

recognized with both a Regional and National Volunteer Award from the U.S. Forest Service. With careful coordination and communication, an event involving so many partners can become quite the success over time. We have not faced many difficulties in putting the cleanup together each year, so long as funding and partner support continue.

The Monroe County Parks & Recreation Adopt-a-Stream program has continued to develop with 20 attendees at training events in 2016 and 2017. The program has been implemented at two County Parks (Flatwoods and Jackson Creek). Clear Creek along the Clear Creek trail is also included in this program. Adopt-a-Stream is coordinated through the City of Bloomington Parks & Recreation Department. This City and County partnership won the “Outstanding Special Event as a Partnership” award at the annual Indiana MS4 Meeting in May 2017. Not only do volunteers pick up trash and keep their stream reach clean, but they conduct basic water quality monitoring as well.

In Spring 2017, the SWCD assisted an environmental science class at Bloomington H.S. South in the maintenance and restoration of a rain garden on school property. This was a partnership that required stormwater funds through the Mini-Grants Program, SWCD staff and Eco Logic staff. The teacher and students provided labor and will be responsible for ongoing maintenance. It was a wonderful opportunity to engage MCCSC facility staff in the long-term maintenance of such a BMP. We hope this may open up the installation of similar measures on other school properties in the future, especially with the possible assistance of the Mini-Grants Program.

The SWCD has developed a Mini-Grants program to which we provide \$35,000 annually. County residents apply for cost-share funds to install any number of BMPs on their property to improve a water quality or soil erosion issue. Fifteen grants were awarded in both 2016 and 2017. A Memorandum of Understanding with the SWCD has provided the framework for Mini-Grants Program funding. We look forward to this program continuing to grow in its reach to county residents and its assistance in improving our local water quality and land use in general. Approval for funding of this program will always be a requirement and a possible barrier to its success if future changes occur. Collaborative partnership between stormwater staff and SWCD staff is also key to the program’s efficacy, and thus far has developed well.

The SWCD was also responsible for partnering with the Monroe County Health Department and hosting a Septic System Workshop in 2017. Fifteen people attended the event held in the Lake Lemon watershed. We would like to add septic system workshops to our future BMP goals and move them around to different watershed locations.

Monroe County Parks & Recreation staff have continued to conduct Hoosier Riverwatch training workshops at least twice each year. In 2016, these trainings included some elementary school groups as well, with a total of 100 participants. In 2017, two trainings included 26 participants. The most difficult challenge in providing this programming is finding an appropriate time to hold the workshops so that all who want to attend can.

The SWCD conducted a survey during the 2017 Monroe County Fair. The major takeaways from that survey are that many residents are still uncertain of whether or not they live

in a watershed, most believe chemicals are the #1 pollutant in Indiana water ways, and that agricultural practices are the main source. Surveys are always challenging. We struggled with encouraging fair-goers to participate and ended up with 50 participants. In the future, we'd like to explore possible electronic alternatives to increase the number of residents we can reach and decrease the time it takes to complete the survey. We're also concerned that our questions were not worded properly to prevent biases and confusion. We'd like to have a realistic understanding of our citizen's water quality and stormwater knowledge to better inform our program decisions.

The Monroe County Stormwater Management Board meets each month. This is an opportunity for the public to comment on our monthly budget reports, activities and general program goals.

Newly added to our BMP goals list during this reporting period is planned outreach to Homeowner's Associations and their potential involvement in storm drain marking programs in specific neighborhoods. This is still being developed but we hope to proceed in 2018.

### **Part G (MCM 3): Illicit Discharge Detection and Elimination (IDDE)**

**List the best management practices for the IDDE program identified in your SWQMP Part C and then respond to the following:**

- a) Identify progress made towards development and implementation of each BMP for this MCM including timetables and measurable goals during this reporting period (mapping, screening, etc.).**
- b) Describe implementation problems or challenges encountered, particularly as it relates to mapping and screening of outfalls during this reporting period.**

*-Complete dry-weather screening of all outfalls within the urbanized area once during each permit cycle.*

*-Sample all of our Hoosier Riverwatch characterization program sites once per permit cycle.*

*-Distribute educational materials to all fuel stations and restaurant industries in County jurisdiction once per permit cycle*

*-Support Monroe County Health Department in providing a Septic System Workshop once per year.*

*-Maintain Cartegraph/GIS mapping of outfalls and other mapped items*

*-Annually promote existence of reporting mechanism to public for illicit discharge concerns.*

*-Review and update the IDDE plan once per permit cycle.*

*-Create GIS layers for Rule 6 facilities, fueling stations and other relevant items.*

During this reporting period, several strides have been taken to improve the success of our IDDE program and meet our goals for this control measure. An illicit discharge ordinance was passed in January of 2012, prohibiting any illicit discharge into our stormwater system. This will allow us to better enforce illegal activities affecting our receiving streams in the county.

We have acquired Hoosier Riverwatch equipment to continue our stream characterization studies from past years. Although we understand this equipment is not meant for end-of-pipe sampling, it does provide baseline information of all our area streams and locate possible problems stemming from the stormwater system. The Planning Department currently has graduate student fellows who will be coordinating these sampling efforts and adding to past studies that have been conducted to complete a study titled, "Impervious Cover and Watershed health in Monroe County, Indiana: 2005-2017."

We last received an IDDE program audit on August 20, 2013 with no serious deficiencies noted during that review. Our IDDE Plan was updated during this reporting period with a better description of what we are doing in the field and our strategy for completing dry-weather

screening and mapping of the entire MS4 area. Included in this plan is additional information on contract laboratories, Rule 6 industries and fuel station concerns, and the development of a hotline or illicit discharge reporting system for citizens. We have also placed a simple SurveyMonkey link for residents to report possible illicit discharges on our county website. Since its start in 2013, it has received 19 complaints, most related to construction site activity. We would like to increase awareness of this tool to county residents with an annual focus of its existence in some of our media outreach.

In 2017, we completed dry-weather screening of all of our outfalls, with no issues aside from general erosion found. We also visited all fueling stations in the MS4 area, speaking with staff and providing a handout on BMPs suggested for such businesses. This has been added to our BMP list and we intend to visit such sites at least once each permit cycle. This can be a challenging outreach mission, due to employee apathy and general business practices at some locations. But it was felt that the campaign was effective and worthwhile to continue in the future.

The Monroe County Public Works Department manages all of its assets through a software program called Cartograph. We received a major upgrade of this program in August 2017 and have since moved all of our stormwater mapping, maintenance activities, and drainage issue calls to this platform. It does still integrate with ESRI systems, however. Staff have slowly adjusted to these changes and we are finding that although it has its challenges, it is successfully helping us maintain historical records of work performed on our storm sewer system and mapping in general.

Our MS4 Assistant has been involved in the Indiana Association for Floodplain & Stormwater Management (INAFSM) IDDE subcommittee, serving as the chairperson for several years now. Through this experience we have been able to learn how other MS4s implement their IDDE programs and look for ways to improve our own.

**c) Identify changes made to the IDDE Plan during this reporting period if applicable.**

Our IDDE plan was updated in November 2017. It now better explains our approach to mapping, screening, sampling and responding to emergency situations related to illicit discharges. Its general template was also updated, improving its appearance and organization.

**d) Identify updates or revisions to IDDE ordinance or other regulatory mechanism made during this reporting period.**

An IDDE ordinance was adopted in January 2012. No changes have been made.

**e) Describe level of mapping and screening completed to date. If there are unmapped or unscreened outfalls, provide a plan and a timetable for completion.**

Except for some of the newer developments and projects that have been installed in the last year, our infrastructure mapping is complete. With the addition of better data collection equipment and graduate student assistance, we feel we are better able to maintain and update our mapping as needed. We typically have two interns who assist us in this work. We have

integrated our former GIS layers into the Cartegraph system. This has created a lot of “clean-up” of the layers and making sure each component (inlet, pipe, culvert, etc) is accurately drawn. While the majority of the MS4 area is mapped, we are now in serious edit mode.

We are also developing a layer of all Rule 6 industries, fuel stations and relevant properties within our MS4 boundaries. We are also pleased that during dry-weather screening we were able to attach a photo of each outfall along with other relevant information to the data point.

**f) Other:**

--The Monroe County Solid Waste Management District responds to illegal dumping complaints within the county.

--The Monroe County Health Department responds to complaints of septic system failures and also inspects septic systems when properties are transferred.

## **MCM 4 Construction Site Stormwater Runoff Control**

**List the best management practices for the construction site storm water run-off program identified in your SWQMP Part C and then respond to the following:**

- a) Identify progress made towards development and implementation of each BMP for this MCM including timetables and measurable goals during this reporting period**
- b) Describe program implementation partnerships and explain successes and barriers during this reporting period**

*-Maintain construction site inspection frequency and return inspection reports within 5 days of site visit.*

*-Maintain (in conjunction with Monroe Co Planning Dept) an active construction site database and inspection schedule*

*-Develop & maintain internal SWPPP review of County-owned projects w/ Public Works Director*

*-Attend pre-construction meetings and conduct inspections for County-owned projects*

*-Hold annual Monroe County Contractors' Workshop w/ partners and guest speakers from area MS4s*

*-MS4 Assistant to attend at least 2 INAFSM Inspector Group meetings or similar trainings per year*

The MS4 Assistant (formerly known as Stormwater Inspector) is responsible for conducting and documenting each inspection with photos and an inspection form, as well as filing of pertinent email correspondence and ongoing work. We still work collaboratively with the Planning Department as they issue grading permits for projects and also assist in our enforcement efforts when a violation is found. Together, we communicate with developers and homeowners as needed when problems arise. Monroe County Planning Department staff have also assisted in the development of the active construction site database that assists the MS4 Assistant with inspection scheduling and general organization. Public Works Department, Legal, and Planning staff meet once a month to discuss upcoming county projects and current concerns. These meetings help facilitate open communication which allows for multiple opinions to be heard and assess the proper course of action.

During this reporting period, the Public Works Department has organized and coordinated in its approach to new County-owned projects. The MS4 Coordinator and MS4 Assistant now do an internal review of SWPPP documents for these projects and attend pre-construction meetings. We are also included in any future, relevant correspondence. The MS4 Assistant has also added these projects to the active construction site list for inspection.

Due to the logistics of passing plans around, reviewing permits and communicating concerns between departments, it can be difficult to be timely in these matters or not miss something altogether. Staffing and time constraints for all groups involved can also prove challenging when trying to set up regular meetings and accomplish time sensitive reviews. Frequent check-ins and project updates help with these issues.

**c) Identify the number of construction sites permitted during this reporting period and identify the number and type of enforcement actions taken against construction site operators during the same period:**

The Monroe County Planning Department issued 65 grading permits between November 2015 and November 2017 and 61 logging permits. The Planning Department is currently responsible for much of our enforcement program. They received 22 complaints related to land disturbance and erosion control issues during this reporting period. When the MS4 Assistant sites a problem, a number of actions can be taken. Often, a letter describing the deficiencies and required corrective actions is enough. But a stop work order or fine can be placed on the site as well. The Zoning Inspector (within the Planning department) cited 10 cases that required fines during this reporting period. A few of these cases did receive stop work orders until corrective actions were taken. Often, a lack of a grading permit and proper erosion control measures were the main issue.

**c) Identify the number and types of training opportunities that were provided to contractors, developers, and builders during this permit period:**

The Monroe County Public Works Department has continued to provide an annual Contractors' Workshop. We held one in both 2016 and 2017. We plan to continue hosting this event, partnering with other area MS4s and guest speakers. It's a half day event with both staff and IDEM professionals speaking on various topics, mainly erosion and sediment control BMP installation and maintenance. Both reporting years saw roughly 30 attendees.

**e) MS4 personnel responsible for plan review, inspection and enforcement of construction activities shall receive, at a minimum, annual training addressing appropriate control measures, inspection protocol, and enforcement procedures. Identify training provided to MS4 personnel responsible for these activities during this reporting period.**

The MS4 Assistant has received numerous training opportunities to date and there are plans to continue providing these opportunities for professional certification in this field and to improve the inspector's ability to competently and confidently inspect sites and make recommendations. The MS4 Assistant is a Certified Professional in Erosion & Sediment Control (CPESC) and has maintained this certification with professional development hours earned at annual conferences, one day workshops, and other opportunities.

**f) Identify updates or revisions to the storm water construction ordinance or other regulatory mechanism made during this reporting period:**

No updates have been made to our erosion control ordinance, chapter 816 in the Monroe County Code.

**g) Other:**

This MCM was audited by IDEM in October 2016. No significant deficiencies were noted.

## **Part I (MCM 5): Post-Construction Stormwater Runoff Control**

**21a) List BMPs and Identify progress made towards development and implementation of each BMP for this minimum control measure (MCM) including timetables and measurable goals during this reporting period.**

**b) Describe implementation problems encountered and changes made due to ineffectiveness or infeasibility during this reporting period.**

**c) Describe program implementation partnerships and explain successes and barriers.**

**d) MS4 area personnel responsible for implementation of the post-construction minimum control measure shall receive, at a minimum, annual training. Identify training provided for this minimum control measure during this reporting period.**

**e) Identify updates or revisions to the post-construction stormwater ordinance.**

*-Conduct at least 5 post-construction inspections per year*

*-Develop and maintain a GIS map for private structural BMPs throughout the permit term that are to be regulated*

*-MS4 Assistant and MS4 Coordinator to attend at least two conferences during each permit cycle dealing with long-term water quality practices*

*-Conduct at least 1 HOA presentation on post-construction BMPs per year*

*-Create HOA database for major subdivisions, contact info, etc.*

*-Edit and adopt updated Ch. 761 Drainage ordinance standards*

*-Develop and research interest for specific Post-Construction Workshops for local designers and landscape groups*

A good plan review program for private development has existed in Monroe County for years. Construction of projects according to the plans, however, has not always been adequate. One of our goals has been to conduct pre-construction meetings to go over construction procedures that are critical to the success of best management practices such as bioretention areas. These meetings have helped. We have also required contractors to contact the MS4 Assistant prior to backfilling bioretention areas to ensure the quality of the installation. There are still challenges to the success of these installations, and we believe it's simply a lack of education or understanding of the function of these particular measures on the part of contractors and those who have to maintain them.

For the Long Range Stormwater Plan, a GIS layer of existing detention basins within Monroe County was created. A goal for the upcoming reporting period will be to create a GIS layer including other private, long-term BMPs such as permeable paving and bioretention areas.

During this reporting period, Planning and Stormwater staff have also increased our expectations of engineers to provide Operation & Maintenance manuals with property owner signatures. The MS4 Assistant has also increased inspection frequency of these completed projects compared to previous reporting periods. These items have helped ensure that post-construction measures are not only installed correctly, but maintained over the years. Inspecting and enforcing this component of our program can be challenging. Property owners change, incentive to fix problems is gone when a project is complete, etc. But with increased outreach and continued inspections we hope to combat these issues.

We have added the HOA contact list and outreach BMPs in order to improve some of the issues we see in our larger, older subdivisions. While active HOAs do not exist everywhere, we'd like to work with those that do and who have the ability to oversee the BMPs in their neighborhoods.

The MS4 Assistant and MS4 Coordinator have attended the annual Indiana Local Technical Assistance Program (LTAP) Stormwater Conference, annual INAFSM Conference and the annual MS4 Meetings. One or both of us have attended the Farm Bureau Drainage School conferences as well.

In early 2017, Monroe County Stormwater staff had the opportunity to work with a graduate class at Indiana University's School of Public & Environmental Affairs. We were basically their client and the students assisted us in developing recommendations for updates to our ch.761 Drainage Ordinance. This experience helped County staff understand that our current ordinance may be out of date in its design standards. We have now moved forward in hiring a consultant group to assist us with an update to that ordinance and anticipate the completion of that update in the next reporting period.

## **Part J (MCM 6): Municipal Operations Pollution Prevention and Good Housekeeping**

**22a) List BMPs and Identify progress made towards development and implementation of each BMP in the SWQMP including timetables and measurable goals during this reporting period.**

**b) Describe implementation problems encountered and changes due to ineffectiveness or infeasibility as it relates to pollution prevention and good housekeeping at MS4 owned and operated facilities during this reporting period.**

**c) Identify stormwater BMPs installed or initiated at MS4 owned and operated facilities.**

**d) Identify and describe appropriate stormwater training provided to MS4 employees. Employees are required to have a minimum training once a year.**

*-Coordinate with field crews to develop roadside vegetation plan, particularly stabilization needs after ditching work*

*-Update Facility Stormwater Pollution Prevention Plans (SWPPPs) once per permit cycle or as needed*

*-Stormwater staff to learn and incorporate updated Cartegraph asset management software into daily work*

*-Update drainage plan to include additional structural BMPs at Highway Maintenance facility to incorporate future flush hydrant and clean out area for VAC truck and Street Sweepers*

*-Investigate cost of cover for Karst Farm Park Garage dumpster*

*-Develop new employee training document for HR*

*-MS4 Assistant to provide annual employee trainings for Highway Maintenance facility and Karst Farm Park employees, and other departments as needed*

This component of our program was audited in July 2017. Due to this audit and the preparation it required, we have made several improvements during this reporting period and added some new BMPs as a result. All of our facility SWPPPs have been updated to provide better site-specific guidelines, maps and photos. These were completed with the assistance of summer interns who had the time and attention to create detailed documents for our facilities. Oftentimes the only challenge to working with our facilities is coordinating with the staff at that site and relying on them to provide us the information needed.

In early 2017 we developed a much needed storage space for our street sweeping material and started hauling the material to a nearby landfill. While this has increased budgeting costs for that particular activity each year, this part of our program now has a standard operating procedure to follow. This is important as we now have two street sweepers and a larger stormwater crew to complete maintenance work. Stormwater staff are also working with crew members to improve stabilization techniques on ditching work. This has been a challenge to

request in the past, but with a crew devoted only to stormwater work and dedicated funds to support that work, improvements have been seen with continued communication.

As stated in the MCM 3 section, Public Works staff now use Cartegraph for all mapping and maintenance documentation. The biggest challenge we face is making sure that the field crews properly and thoroughly document their work on a paper form that is then given to office staff to input in the system. It has taken quite a bit of coordination and communication, but great strides have been made in adequately documenting all field crews' activities.

We continue to maintain a native plant area on the north side of the courthouse lawn. With assistance from the Extension Agent and other volunteers, it has developed into a beautiful space in our downtown square. We hope to increase these pockets of native plants and other functional measures where opportunity arises, mostly within our County Parks.

Through facility inspections and the audit, we have added several new BMPs. We would like to investigate, with the help of Parks & Recreation staff, the cost and requirements for installing a large cover over a permanent dumpster onsite. We would also like to coordinate with our Human Resources department and see if adding a general MS4 brochure to new employee packets would be possible. The Public Works Department has also hired a local consultant to start the preliminary design work of updating our stormwater BMPs at the Highway Maintenance Facility. We would like to add an additional pond and sediment forebay to assist in the cleanout functions for the VAC truck and sweepers while still responsibly containing the material and runoff.

The MS4 Assistant provides annual training to all of the staff at the Highway Maintenance Facility and Karst Farm Park Parks & Recreation staff. Developing new, interesting material can be difficult each year. It is also challenging keeping the attention of some attendees. Stormwater staff would like to develop new, relevant lesson plans for these and future trainings.

New in 2017, the MS4 Assistant had the opportunity to provide general MS4 training to all Treasurer's Office staff. This training provided background information on stormwater and explanations related to the assessment of our stormwater fee. It was a great opportunity to explain concepts related to impervious surfaces and stormwater pollution.

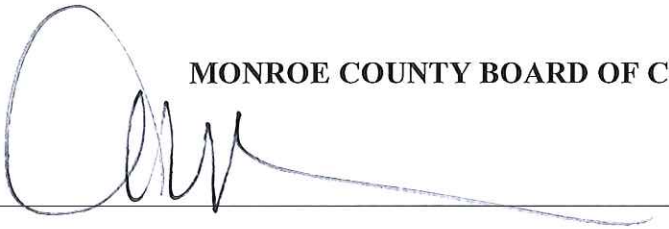
The County MS4 Coordinator and MS4 Assistant have attended the annual MS4 Conferences, the annual INAFSM conferences, and the Farm Bureau Drainage School. The Public Works Director also attended the annual MS4 meeting during this reporting period. The MS4 Assistant attends meetings of the INAFSM Stormwater Inspectors group and has chaired the Illicit Discharge Detection and Elimination INAFSM subcommittee for three years. She is CPESC certified.

## Part K: Certification and Signature

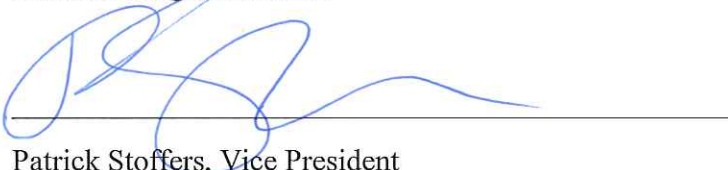
**The individual(s) listed in “Part A: General Information – MS4 Operator” must sign the following certification statement:**

*“By signing this 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.”*

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