



INDOT SWQMP
Annual Report
April 2018-April 2019

INDOT SWQMP Annual Report – April 2018- April 2019

Characterization and Prioritization of Receiving Waters

0A-Identify Receiving Waters

Identify all known receiving waters that overlap with INDOT roadways and other facilities within 2010 Census mapped Urbanized Areas (UA). Send findings and completed SWQMP - Part B to IDEM within 180 days of the NOI date. Updates to the Baseline Characterization will be submitted in the annual reports and will be kept in the MS4 Coordinator's files.

This measure was completed and submitted to IDEM on October 24, 2014.

0B- Identify Impaired Waters

Identify impaired receiving waters within UA. Send findings and completed SWQMP - Part B to IDEM within 180 days of the NOI date. Updates to the Baseline Characterization will be submitted in the annual reports and will be kept in the MS4 Coordinator's files.

This measure was completed and submitted to IDEM on October 24, 2014.

0C- Identify Sensitive Waters

Identify known sensitive waters such as swimming areas, water supplies, endangered species habitat, outstanding resource and exceptional waters that overlap INDOT roadways and facilities within UA. Send findings and completed SWQMP - Part B to IDEM within 180 days of the NOI date. Updates to the Baseline Characterization will be submitted in the annual reports and will be kept in the MS4 Coordinator's files.

This measure was completed and submitted to IDEM on October 24, 2014.

0D- Part B

Submit Part B: Baseline Characterization and Report to IDEM

This measure was completed and submitted to IDEM on October 24, 2014.

0E- Part C (4/28/15)

Submit Part C: Program Implementation to IDEM

The step by step Rule 13 program implementation was included in the 2014-2015 Annual Report.

Public Education and Outreach

1A-Awareness Program (12/15/14)

Develop and/or update a public awareness program including brochures, electronic communications, etc. The completion of this goal will be measured by the delivery of business rules and formal INDOT policies that describe the communication method, frequency and measure of success for this awareness program. Communications and measures of success will be included in the annual report and kept in the MS4 Coordinator's files.

Public Awareness program Completed for 2014-2015 Annual Report.

1B-Awareness Training (12/15/14)

Develop and/or update a program of annual stormwater pollution awareness training for appropriate INDOT maintenance staff. Training shall include general stormwater awareness, identification of stormwater pollution potential, and appropriate contacts for reporting spills and illicit discharges. The completion of this goal will be measured by the submittal of the training materials, frequency, audience and number of people trained each year. This information will be kept in the MS4 Coordinator's files.

Due to ongoing issues with the INDOT University Learning Management System (LMS) we were unable to continue this training for the 2018-2019 permit cycle. However, updates are continuing to be made to the program and as soon as the new LMS system is live, or INDOT Maintenance finds a different delivery method INDOT will roll out the new version of this training.

1C- Volunteer Training (09/25/14)

Develop and/or update an ongoing program for training Adopt-A-Highway volunteers. The completion of this goal will be measured by the submittal of the training materials, frequency and trainee audience each year. This information will be kept in the MS4 Coordinator's files.

Adopt-A-Highway volunteers receive a fact sheet about storm water quality in their training briefing. A copy of the fact sheet is kept in the MS4 Coordinator's files.

1D- Internal Education and Involvement Plan (12/15/14)

Develop and/or update an Internal Education and Involvement Plan. The plan shall detail the internal training requirements related to the assigned specific responsibilities of INDOT staff. The completion of this goal will be measured by the submittal of the Internal Education and Involvement Plan, any training materials developed and an accounting of staff trained in each year. This information will be kept in the MS4 Coordinator's files.

The internal education and involvement plan was completed for the 2014-2015 annual report. Plan kept in the MS4 Coordinator's files.

1E- Public Involvement Programs (Ongoing)

Continue the Trash Bash, Adopt-A-Spot, Sponsor-A-Highway and Adopt-a-Highway programs. Timber planting, native vegetation and additional programs may also be expanded or developed. The completion of this goal will be measured by the annual submission of documentation of the number of programs, projects, lane miles or areas adopted and number of participants.

Throughout the State dedicated citizen volunteers participate in programs such as Trash Bash Adopt-A-Highway, Adopt-A-Spot as well as Sponsor-A-Highway programs. Reportable numbers of programs, projects, lane miles, areas adopted and numbers of participants are recorded by each district. INDOT does keep track of the amount of litter that these volunteers gather and that data is recorded below. A press release was issued on late in April

2018 about the Trash Bash Spring Cleanup. A copy of this release is located in the MS4 Coordinator's files. 2018 Trash Bash (April 13-15, 2018) 3,457 bags of trash or 874 cubic yards were collected by INDOT staff and volunteers.

The 2019 Trash Bash runs April 15-30, 2019. There are many litter clean up events and groups that routinely pick up litter on INDOT right of way. Most Trash Bash activities will be taking place in April after this annual report is submitted. The INDOT Public Involvement Policies and Procedure Manual is located in the MS4 Coordinator's files.

INDOT developing and letting contracts for litter removal. For example with one litter removal contract in the Indianapolis area collected 2339 bags, 15 tons, which filled 34 dumpsters. This was accomplished with 749 man hours. The following chart shows 2018 litter and debris collection for CY 2018. INDOT will continue to strengthen the litter and debris collection efforts in 2019.

Activity Name	District	cubic yards	Labor Hours
FULL WIDTH LITTER PU	Crawfordsville	382	1219
	Fort Wayne	400	807
	Greenfield	3870	4358
	LaPorte	1913	8575
	Seymour	618	792
	Vincennes	195	1019
FULL WIDTH LITTER PU Total		7377	16768
SPOT LITTER PICKUP	Crawfordsville	3555	17951
	Fort Wayne	4300	13290
	Greenfield	7510	25409
	LaPorte	7262	25541
	Seymour	6319	28012
	Vincennes	3282	13421
SPOT LITTER PICKUP Total		32226	123623
Statewide		39603	140391

Sponsor A Highway Program Bag Counts 2018													
Name	Jan.	Feb.	Mar.	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Adopt A Highway Maintenance Corporation AHMC	No pick up- Weather	No pick up- Weather	61	58	37	28	26	32	18	65	40	31	396
Litter Removal Service of America Inc .net	31	20	75	61	123	48	69	67	51	122	87	127	881
Sums	31	20	136	119	160	76	95	99	69	187	127	158	1277

Contracted litter plan for CY 19

12 contracts for litter collection (~634 centerline miles)

- 1 per district for selected roads for urban areas
 - 12 collections per year except Indy and Gary areas with 24 collections a year.

Northeast Indiana				
Route	Starting RP	Ending RP	Centerline Miles	Description
I 469	0.00	30.83	30.83	I 69 TO I 69
I 69	293.44	317.50	24.06	I-469 INTERCHANGE TO N END OF RAMPS AT EXIT 317
US 27	106.00	111.62	5.62	BOSTICK RD TO PETTIT AVENUE
SR 930	151.50	152.11	0.61	MINNICH ROAD TO I 469
Sum			61.12	

Southeast Indiana				
Route	Starting RP	Ending RP	Centerline Miles	Description
SR 37	94.60	106.25	11.65	OLD STATE ROAD 37/S WALNUT ST TO FIRST BRIDGE BEYOND N WALNUT ST (TO INCLUDE I 69)
I 64	117.29	123.61	6.32	GEORGETOWN EXIT TO IN/KY STATE LINE
I 265	0.00	6.71	6.71	I 64 TO I 65
SR 265	6.71	8.78	2.07	I 65 TO
I 65	0.00	10.47	10.47	STATE LINE TO ST. JOE RD.
I 275	15.00	18.17	3.17	IN/KY STATE LINE TO IN/OH STATE LINE
Sum			40.39	

East Central Indiana				
Route	Starting RP	Ending RP	Centerline Miles	Description
I 65	88.40	142.25	53.85	S OF FRANKLIN EXIT (BEGINNING OF 6 LANE) TO PRAIRIE CREEK BRIDGE
SR 37	135.00	145.10	10.10	SR 144 TO I 465
US 31	92.00	107.17	15.17	LEMLEY ST TO I 465
US 136	69.44	74.64	5.21	N 900 E TO I 465
I 465	0.00	53.19	53.19	I 65 TO I 65
I 865	50.00	54.12	4.12	I65 TO I465 NE CONNECT
I 70	58.80	96.20	37.40	MEDIAN CROSS OVER W OF EXIT 59 TO E END OF POST ROAD EXIT
I 70	145.00	156.31	11.31	W OF CENTERVILLE ROAD EXIT TO IN/OH STATE LINE
I 69	200.00	210.13	10.13	96TH ST TO SR 238
SR 67	95.00	104.52	9.52	WHITE LICK CREEK BRIDGE TO I 465
SR 931	156	167.52	11.52	US 31 TO US 31
I 74	65.37	73.27	7.90	WHITE LICK CREEK BRIDGE TO I 465
I 74	92.80	95.75	2.95	I 465 TO END OF RAMPS AT POST ROAD EXIT
Sum			232.36	

Northwest Indiana				
Route	Starting RP	Ending RP	Centerline Miles	Description
I 80	0.00	15.67	15.67	IN/IL STATE LINE TO I 80/90/94 SPLIT
I 94	15.67	26.40	10.73	I 80/90/94 SPLIT TO END OF RAMP E OF JCT SR 49
I 65	239.50	262.00	22.50	0.5 M S OF SR 2 TO US 12/20
SR 2	77.70	80.98	3.28	RICE RD TO END OF RAMPS E OF US 31
US 30	0.00	16.09	16.09	IN/IL STATE LINE TO DEEP RIVER AT PORTER CO LINE
US 31	242.00	245.70	3.70	MEDIAN CROSS OVER S OF MILLER RD TO IRELAND RD
US 31	253.74	257.50	3.76	US 20 TO MI STATE LINE
US 41	273.80	278.45	4.65	GRAND CALUMET RIVER TO SHEFFIELD AVE
US 41	258.00	269.00	11.00	US 231 TO SR 152 & 175TH STREET
US 20	70.53	99.06	28.53	US 20/31 TO SR 15
Sum			119.91	

Southwest Indiana				
Route	Starting RP	Ending RP	Centerline Miles	Description
SR 62	17.15	27.44	10.29	ST. PHILLIPS RD TO 41
SR 62	28.53	32.80	4.27	US 41 TO END OF BARRIER W OF I-69
SR 66	15.34	25.58	10.24	NEU CREEK TO US 41
SR 66	27.13	39.80	12.67	US 41 TO HONEY CREEK
US 41	0.00	18.00	18.00	IN/KY STATE LINE TO CR 1200 S
I 69	-0.60	10.50	11.10	OVERHEAD SIGN FOR US 41 RAMP TO N OF LYNCH ROAD EXIT
Sum			66.57	

West Central Indiana				
Route	Starting RP	Ending RP	Centerline Miles	Description
I 70	0.00	12.60	12.60	IN/IL STATE LINE TO RP 12.6 (MEDIAN CROSS OVER)
US 41	103.00	120.43	17.43	PATRIOT LANE TO EVANS AVE
US 150	13.30	14.50	1.20	N MACKSVILLE AVE TO WABASH RIVER BRIDGE
US 40	0.00	4.40	4.40	IN/IL STATE LINE TO END OF GRASS MEDIAN
US 40	8.00	16.65	8.65	I 70 TO SR 340
SR 641	0.00	6.14	6.14	US 41 TO I 70
SR42	0.00	2.55	2.55	US 40 TO END OF ROUND ABOUT
SR 63	33.00	44.98	11.98	US 41 TO SR 163
US 52 O	41.3	44.46	3.16	US 52/231 TO DUNCAN ROAD (SAGAMORE PARKWAY)
US 52	49.065	55.2	6.14	INTERSECTION OF TEAL RD TO WYANDOTTE RD (E 550S)
US 231	198.18	202.35	4.17	O'NEALL DITCH TO US 52
US 52	41.4	46.85	17.75	US 52/231 (OLD US 52) TO US52/SR25 INTERSECTION
I 65	168.45	179.1	10.65	SR 38 TO BRIDGE OVER BURNETT CREEK

SR 25	30.56	30.85	0.29	CR S 100 W TO US 231
SR 26	39.63	41.86	2.23	I 65 E TO MCCARTY LN
SR 25HH	39.33	40.68	1.35	I 65 E TO CO RD 300 N (TO INCLUDE ROUND ABOUT)
SR 43	28.2	30.5	2.30	CO RD E 500 NORTH TO SR 225
Sum			112.99	

1 contract per district for rural interstate miles (~764 centerline miles)

- 5 litter collections per year.

West Central Indiana				
Route	Starting RP	Ending RP	Centerline Miles	Description
I 65	142.25	168.45	26.2	PRAIRIE CREEK BRIDGE TO SR 38
I 65	179.1	200.59	21.49	BRIDGE AT BURNETTE CREEK TO US 24
I 70	12.6	58.8	46.2	RP 12.6 (MEDIAN CROSS OVER) TO MEDIAN CROSS OVER AT RP 58.8
I 74	0	65.37	65.37	TO WHITE LICK CREEK BRIDGE
Sum			159.26	

Northeast Indiana				
Route	Starting RP	Ending RP	Centerline Miles	Description
I 69	254.94	293.44	38.5	SR 26 TO I 469
I 69	317.5	357.3	39.8	EXIT 317 TO IN/MI STATE LINE
Sum			78.3	

East Central Indiana				
Route	Starting RP	Ending RP	Centerline Miles	Description
I 69	210.13	254.94	44.81	SR 238 TO SR 26
I 70	96.2	145	48.8	POST RD TO RP 145 (CENTERVILLE RD EXIT)
I 74	95.75	123.18	27.43	POST RD TO ST PAUL
Sum			121.04	

Northwest Indiana				
Route	Starting RP	Ending RP	Centerline Miles	Description
I 65	200.59	239.5	38.91	US 24 0.5 M S OF JCT SR 2
I 94	26.4	45.75	19.35	SR 49 TO IN/MI STATE LINE
Sum			58.26	

Southeast Indiana				
Route	Starting RP	Ending RP	Centerline Miles	Description
I 64	91.9	117.29	25.39	SR 66 TO GEORGETOWN EXIT
I 65	10.47	88.4	77.93	ST JOE RD TO BEGINNING OF 6 LANE S OF FRANKLIN EXIT
I 74	123.18	171.24	48.06	ST PAUL TO IN/OH STATE LINE
Sum			151.38	

Southwest Indiana				
Route	Starting RP	Ending RP	Centerline Miles	Description
I 64	0	91.9	91.9	IN/IL STATE LINE TO SR 66
I 69	10.5	114.23	103.73	LYNCH ROAD EXIT TO JCT SR 37
Sum			195.63	

Street Sweeping

INDOT Street Sweeping

7710 miles, 16,762 man hours (debris not currently weighed)

ORB SR 265 Toll Bridges

13.87 Tons of material

Indiana Toll Road I80-I90

128 Tons estimated

1F- Anti-Litter Programs (09/25/14)

Develop informational anti-litter and vehicle maintenance programs designed to educate and involve the public in reducing this major cause of storm water pollution. The completion of this goal will be measured by the annual submission of the communication message (i.e. proper disposal of cigarette butts), type (i.e. signs on restroom doors), message (i.e. copy of poster), quantity delivered (i.e. posted on 50 restroom doors for six months) and

estimated audience reached for each communication activity. This information will be kept in the MS4 Coordinator's files.

INDOT has a webpage dedicated information about trash removal on INDOT right-of-way. <http://www.in.gov/indot/2598.htm>. A anti-littering themed poster was developed, installed in the State House Tunnel, and distributed to rest areas, rest parks, district and maintenance buildings throughout the state. A copy of this poster is included in the MS4 Coordinator's files.

1G- Storm Water Web Site (12/15/14)

INDOT's website will be expanded to include a storm water web page with information on INDOT storm water activities. These will include outreach programs, brochures, guidelines for erosion and sediment control, maintenance activities and how to obtain information. The completion of this goal will be measured by the annual submission of documentation of website content and the number of visitors to the website. This information will be kept in the MS4 Coordinator's files.

During the 2018-2019 permit cycle there were 2373 hits to our webpage <http://www.in.gov/indot/2892.htm>

1H- Storm Water Information Center (12/15/14)

Create an online library of storm water-related materials accessible through the storm water website. Materials will be updated quarterly with the most recent guidance, research, publications and training materials. The completion of this goal will be measured by annual submission of a list of available library resources and the number of visitors to the website. This information will be kept in the MS4 Coordinator's files.

The INDOT Storm Water Information Center is intended as a resource for MS4 communities and other user groups throughout the state of Indiana. This on-line library exists to distribute material in various forms that can assist MS4 communities and others that are interested in the prevention of storm water pollution. The Information Center contains various materials including brochures, handouts, processes, research articles, and website links. New material has been added during this permit cycle. This material can be accessed through the INDOT Storm Water webpage. <http://www.in.gov/indot/2892.htm>

1I- Employee Education (Ongoing)

Publish two articles in either The Torch (monthly State Personnel Department) and/or Inside INDOT (monthly INDOT) publications annually. The completion of this goal will be measured by annual submission of copies of the articles and an estimate of the number of recipients. This information will be kept in the MS4 Coordinator's files.

Four articles have been published internally and distributed via INDOT intranet and email during this annual report cycle. One State House Tunnel Poster was installed about preventing storm drain flooding and littering. Copies of these articles, and poster can be found in the MS4 Coordinator's files.

"Flooded Highways Are Fixed after Months of Diligence"

"Public Gives Comments on Preferred Alternatives for the I-69 Ohio River Crossing"

"Concrete Reinforcement Mat Makes Its Mark at INDOT"

"Pipe-Lining Pilot Project Draws an Eager Audience"

"Trash Bash! Results in Thousands of Bags of Litter Removed from Hoosier Highways"

1J- Collaboration (03/15/15)

Coordinate with IDEM and MS4s statewide to share ideas and resources. The completion of this goal will be measured by including the agenda, copies of the presentations, discussion group notes, attendee list, and INDOT participants (presenters, volunteers, etc.) in the annual report. This information will be kept in the MS4 Coordinator's files.

The INDOT MS4 coordinator continues to sit on the Indiana MS4 Partnership Committee as a non-voting member and attends all meetings. The MS4 Annual Meeting was held on May 15th, 2018. The next MS4 Annual Meeting will be held on May 14th, 2019. INDOT MS4 Coordinator presents at each annual meeting. Last year's presentation was "Liquid Waste and Construction" The 2019 presentation will be "The Benefits of Rolled Filtration products and how to inspect them". Copies of these presentations MS4 Coordinator's Files. Normally the MS4 Coordinator presents to a full room of around 100 people. More information about this growing organization can be found at www.indianams4.org and in the MS4 Coordinator's files. The district's INDOT Construction Erosion Control Specialist have some involvement with the MS4 groups in their area.

1K- Road School (06/15/15)

Develop storm water quality training module(s) and present annually at the Purdue Road School (Joint Transportation Research Program (JTRP) and Indiana Local Technical Assistance Program (LTAP) sponsored) and the LTAP Stormwater Drainage Conference. The completion of this goal will be measured by including a copy of the presentation, number of attendees and INDOT presenters/volunteers in the annual report. This information will be kept in the MS4 Coordinator's files.

The MS4 Coordinator presented at the 2019 LTAP Drainage Conference and 2019 Purdue Road School. The Coordinator also presented Storm Water information at the INDOT 2019 Bridge Drainage Conference, and the 2019 Seymour District Construction Conference. Copies of the presentations are in the MS4 Coordinator's files.

1L-Facility Signage (03/15/15)

Develop educational signage (i.e. illicit discharges, waterway protection) and install signage in rest areas, weigh stations, and other public facilities. The completion of this goal will be measured by including a copy of the signage and location installed in the annual report. This information will be kept in the MS4 Coordinator's file.

INDOT's first tunnel poster of 2019 is on the theme of Litter and Storm Water. A Roadside Management poster is being distributed to be displayed at District offices and facilities as well as rest areas/rest parks. Storm Water Awareness themed posters and brochures are continual replenished at the Rest Areas/Rest Parks. Copies of these posters are in the MS4 Coordinator's files.

1M- Public Education and Outreach Certification (04/28/15)

Submit Public education and outreach program development certification to IDEM

The Rule 13 state form 51279 signed by the INDOT MS4 Operator is included in this submittal and stored in the MS4 Coordinator's files.

Public Participation and Involvement

2A – SWQMP Public Meetings

INDOT will hold a public meeting in each INDOT district once during the first year of the plan. Participants will be solicited by advertising in key newspapers and emails to MS4s located in the district. The website will be updated with a copy of the SWQMP, contact information, meeting times and locations prior to the meeting. Comments will be considered for incorporation into the SWQMP. The completion of this goal will be measured by meeting attendee records, meeting minutes and a summary of the comments received and response. This information will be kept in the MS4 Coordinator's files.

Completed in the 2014-2015 permit cycle

2B- Public Involvement in Project Development (Ongoing)

Public involvement in project development follows the National Environmental Policy Act (NEPA) requirements that results in a varying amount of involvement depending on the project scope. INDOT's public includes citizens, state employees, consultants and contractors. The completion of this goal will be measured by analyzing the contracts let for the reporting year (i.e. projects let, number requiring public involvement under NEPA, number falling within a UA, etc.) and including this in the annual report. The supporting information will be available to the MS4 Coordinator through INDOT electronic storage mediums.

INDOT Public Involvement Procedures (August 2012) is located on the internet at:

http://www.in.gov/indot/files/PI_PublicInvolvementManual_2012.pdf

Following the public involvement requirements of the National Environmental Policy Act, INDOT holds public meetings across Indiana to inform the public and receive input for highway projects. Approximately 422 citizens attended INDOT public meetings in this permit cycle. Copies of the INDOT Storm Water Management Brochure is handed out at public meetings throughout the state. Copies of the public meeting participation sign in sheets in the MS4 Coordinator's files.

2C-Annual Reporting (Ongoing)

An Annual Report will be developed and posted on the website. An availability notice will be sent to a list serve containing the MS4s and interested public. The completion of this goal will be measured by recording the posting of the document on the website, list serve message and tracking the public comments received, if any. This information will be kept in the MS4 Coordinator's files.

The 2018-2019 Annual Report will be posted on the INDOT Storm Water webpage and will be in the MS4 Coordinator's files.

2D- Public Involvement and Participation Certification (04/28/15)

Submit Public involvement and participation program development certification to IDEM

The Rule 13 State Form 51273 has been signed by INDOT's MS4 Operator, and is attached to this annual report, and is housed in the MS4 Coordinator's files.

Illicit Discharge Detection and Elimination

3A- IDDE Program Development (12/15/14)

INDOT will develop a program for illicit discharge detection and elimination. The completion of this goal will be measured by including a summary and a copy of the program and policies developed in the annual report. The information will be kept in the MS4 Coordinator's files.

INDOTs current IDDE Program and policies are contained in an INDOT Operations Memo 09-07. This policy is currently being evaluated and updated for improved compliance.

Coordination is occurring between INDOT Hazardous Waste Management, INDOT Environmental Services, INDOT Safety, INDOT Facilities, IDEM Emergency Response, and INDOT Maintenance. A new Hazardous Material Unit Operating Manual was completed and is on INDOTs Environmental Policy Webpage (www.in.gov/indot/2523) with more guidance along with the Red Flag template. The new policies and procedures were included in the INDOT Maintenance Storm Water Awareness, and IDDE Training. A copy of Memo is kept electronically and in hard copy within the MS4 Coordinator's files.

3B- IDDE Program Review (01/15/15)

INDOT shall review their programs, policies, practices for issuing utility and access permits and make modifications necessary to ensure that non-storm water discharges are not connected into the INDOT storm sewer system. The completion of this goal will be measured by including a summary and copy of the changes to the policies in the annual report. The information will be kept in the MS4 Coordinator's files.

The INDOT Driveway Permit Manual Section 24: Drainage, has been updated.

<http://www.in.gov/indot/files/driveway.pdf>. Information is located in the MS4 Coordinator's files.

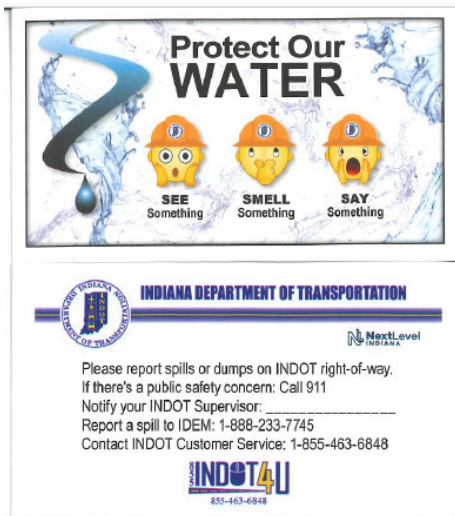
3C-IDDE Reporting (01/15/15)

INDOT shall develop a standard reporting format and phone and website contacts for all complaints and reports of illicit discharges. The completion of this goal will be measured by including a copy of the reporting form and a summary of complaints received and actions taken in the annual report. The information will be kept in the MS4 Coordinator's files.

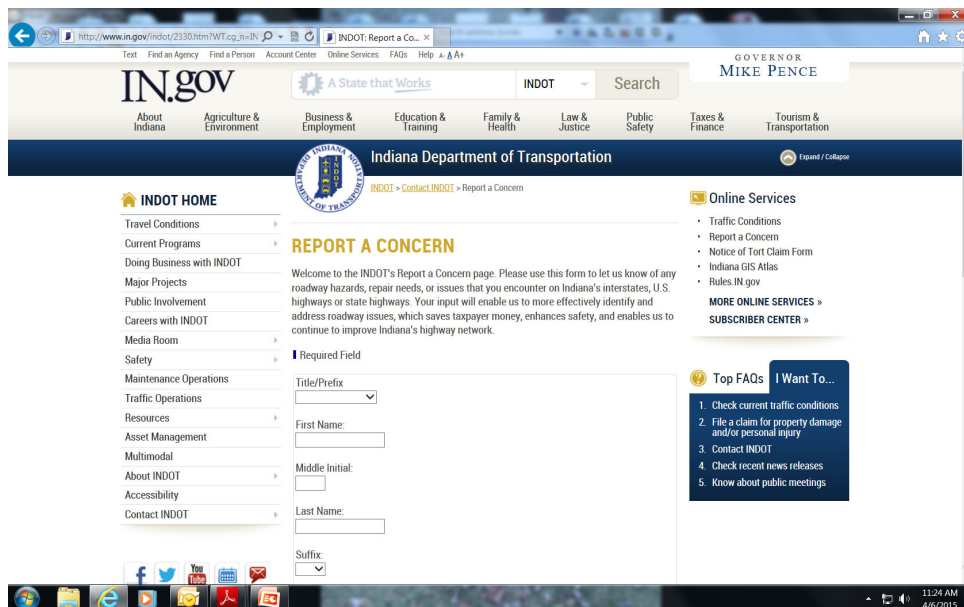
See Something, Smell Something, Say Something.



Wallet cards with numbers on the back of agencies/people to call in the event that our field staff finds pollution within INDOT right of way, are still being distributed to INDOT employees and contractors who work within our right of way.



The icon “Report a Concern” is on every INDOT webpage and is on the INDOT Storm Water Webpage so that citizens can submit an electronic concern that automatically notifies the INDOT MS4 Coordinator when there is a concern that needs addressing. The INDOT Customer Service Call Center records complaints and reports of Storm Water and Drainage related issues from emails and phone calls from Indiana Citizens. Copies of every data entry related to storm water are in the MS4 Coordinator’s files.



Data from April 2018 through April 2019 was compiled from our Customer Service Data base and can be found in the MS4 Coordinators Files. In summary, **1,822** calls were logged during this permit cycle that dealt with storm water and drainage issues.

3D- IDDE Staff Training (05/15/14)

INDOT shall develop a training program and provide it annually to appropriate staff and contractors. Training shall include identification and reporting of illicit discharges and illegal dumping. The completion of this goal will be measured by including a copy of the training material, a summary of the individuals that received training (number, contractor, INDOT, etc.) in the annual report. The information will be kept in the MS4 Coordinator's files.

IDDE training has been incorporated into the INDOT Storm Water Awareness Training for Maintenance Staff. A copy of this training material can be found in the MS4 Coordinator's files. In the first year of this training in December of 2017, six in-person training secessions were conducted, one at each district for all maintenance supervisors and foreman. The rest of the maintenance staff is working on completing the on-line version of the training. Due to issues with our on line INDOT University program, which is currently being updated, this training was not available in 2018-2019.

3E- Facilities Mapping (06/15/15)

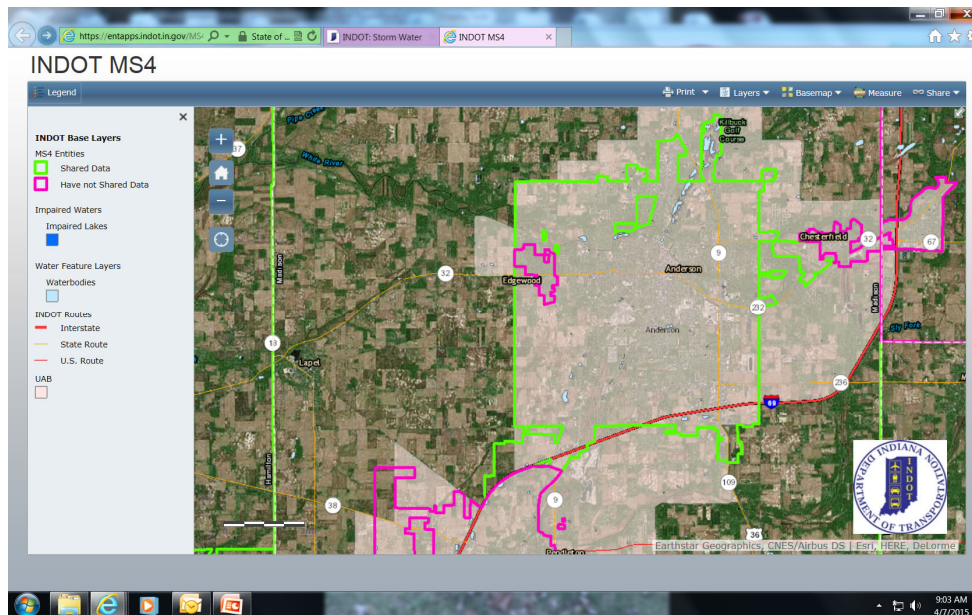
Complete GIS mapping of all INDOT facilities other than roadways (i.e. district, sub district and maintenance offices, salt storage, rest areas, etc.) statewide. The completion of this goal will be measured by including the number and type of additional facilities mapped in the annual report. The information will be stored in the INDOT GIS system and accessible to the MS4 operator.

INDOT is currently completing the required facility mapping as part of the facility SWPPP development. As of April 2018 all 43 INDOT maintenance facilities have completed their SWPPP. WVC from the Ohio River Bridges project has summited to INDOT their maintenance building SWPPP, mapping, and inspection reports which can be found in the MS4 Coordinator's files. The ITRCC I-80/I-90 toll road has not reported anything to INDOT at this time.

3F- Outfall Mapping GIS (09/10/14)

Develop a GIS database for mapping of conveyances and outfalls within UA. Database tracking and reporting is described in measures 3H-3K. The completion of this goal will be measured by the completion of 3H, 3I and 3K and will be discussed in the annual report. The information will be stored in the INDOT GIS system and accessible to the MS4 operator.

This GIS Map of UABs is available to public view on the INDOT Storm Water Website. INDOT has been collecting GIS data from MS4s though out the state. That information is housed in a map and can be access by this webpage <http://www.in.gov/indot/2892.htm>. The data that is collected by INDOT is being developed along with the storage database. INDOT manages and ArcGIS Enterprise solution where, data is managed in an Oracle RDBMS using ESRI Spatial Database Engine (SDE) software which facilitates multi user editing. Tools used to view, edit, and analyze the GIS data include ESRI's suite of ArcGIS desktop, and Server software including ArcGIS Online. INDOT is in the process of procuring software and services that will more closely tie our pathway services video log images with GIS data collection capabilities offering the opportunity to collect water conveyance features like inlets, drains and ditches.



3G- Outfall Mapping SOP (07/15/14)

Develop SOP for as built outfall data collection and for incorporating data into GIS when the collection tools and procedures are implemented. The completion of this goal will be measured by including a copy of the SOP in the annual report. The information will be kept in the MS4 Coordinator's file.

INDOT is in the process of developing in the post construction specification that will require the contractor to collect spatial data on all new assets that were built during the contact.

This will include storm water facilities, signs, pavement cores, guard rail etc.

INDOT manages and ArcGIS Enterprise solution where, data is managed in an Oracle RDBMS using ESRI Spatial Database Engine (SDE) software which facilitates multi user editing. Tools used to view, edit, and analyze the GIS data include ESRI's suite of ArcGIS desktop, and Server software including ArcGIS Online. INDOT is in the process of procuring software and services that will more closely tie our pathway services video log images with GIS data collection capabilities offering the opportunity to collect water conveyance features like inlets, drains and ditches.

3H- Outfall Mapping 1Q (10/01/15)

Map first 25% of conveyances and outfalls within UA. Collect existing outfall data from local MS4s to minimize redundancy. Verify accuracy of MS4 information. Maps will be housed in the INDOT GIS system and can be made available to IDEM and other MS4s. The completion of this goal will be measured by either MS4, county, road mile or other measurable unit and will be discussed in the annual report. The information will be stored in the INDOT GIS system and accessible to the MS4 Coordinator.

Collecting data from other MS4s has been difficult. Many MS4 refused to share data with INDOT. Many MS4s have data that is incompatible with INDOT technology, and GPS mapping programs. INDOT is in the process of collecting their own data state wide. A map of the old data collected to date from other Indiana MS4s is housed on this webpage:

<https://entapps.indot.in.gov/MS4/>. Once INDOT has completed outfall mapping the data will be housed in the data systems described in 3F.

The following is a narrative of INDOTs efforts to date with Outfall Mapping.

- **INDOT has completed the location of all large culverts (4'-20') for the entire state. For small culverts (<4') INDOT has started the program for locating all of these small culverts the goal is to have all of these structures located by the end of the CY2019. This process included driving every road in the state looking for structures including culverts, in-lets and manholes.**
- **INDOT is using ERSI collector app to collect the location, flow direction and condition of small culverts in INDOT right-of-way; INDOT is recording all pipe inlets or outlets that are located within the right-of-way this includes not INDOT structures. Second phase: Plan to connect data points, conveyances, direction of flow etc.... Once all of the system is found and recorded INDOT will start phase two of the program that will be verifying culvert flow paths as well as starting to collect the remaining storm water facilities including BMPs, storm sewers, and ditches.**
- **To improve the inspection of the culvert system INDOT has developed a small culvert inspection tool. This tool is a small remote control "car" that is water proof with a camera and lights that can go into 12" and larger pipes. This will allow INDOT to record and view inside the pipes. We are also looking at buying a submersible camera system.**
- **INDOT has a contract with a local consultant that will collect all assets within the Marion County MPO with the use of collect app.**

3I- Outfall Mapping 2Q (09/30/16)

Complete mapping of 50% of conveyances and outfalls within UA. Collect existing outfall data from local MS4s to minimize redundancy. Verify accuracy of MS4 information. Maps will be housed in the INDOT GIS system and can be made available to IDEM and other MS4s. The completion of this goal will be measured by either MS4, county, road mile or other measurable unit and will be discussed in the annual report. The information will be stored in the INDOT GIS system and accessible to the MS4 operator.

State wide INDOT mapping for structures is underway. See 3G for an update on this effort.

3J- Outfall Mapping 3Q (09/30/17)

Complete mapping of 75% of conveyances and outfalls within UA. Collect existing outfall data from local MS4s to minimize redundancy. Verify accuracy of MS4 information. Maps will be housed in the INDOT GIS system and can be made available to IDEM and other MS4s. The completion of this goal will be measured by either MS4, county, road mile or other measurable unit and will be discussed in the annual report. The information will be stored in the INDOT GIS system and accessible to the MS4 operator.

State wide INDOT mapping for structures is underway. See 3G for an update on this effort.

3K- Outfall Mapping 4Q (09/30/18)

Complete mapping of 100% of conveyances and outfalls within UA. Collect existing outfall data from local MS4s to minimize redundancy. Verify accuracy of MS4 information. Maps will be housed in the INDOT GIS system and can be made available to IDEM and other MS4s. The completion of this goal will be measured by either MS4, county, road mile or other measurable unit and will be discussed in the annual report. The information will be stored in the INDOT GIS system and accessible to the MS4 operator.

State wide INDOT mapping for structures is underway. See 3G for an update on this effort.

3L- Illicit Discharge Certification (04/28/15)

Submit Illicit Discharge Detection and Elimination plan and regulatory mechanism certification to IDEM

The Rule 13 State Form 51271 has been signed by INDOT's MS4 Operator, and is attached to this annual report and is housed in the MS4 Coordinator's files.

Construction Site Stormwater Runoff Control

4A-JTRP Document Updates (08/06/14)

Incorporate remaining updates from the JTRP study in 2014 Standard Specifications and Design Manual. The completion of the goal will be measured by summarizing the updates added to the design manual in the annual report. The MS4 operator will have access to the Design Manual and Standard Specification updates on the INDOT website.

For this permit cycle INDOT is not currently working with any JTRP studies for Storm Water. However there have been some changes to our specifications that will assist construction with improved compliance and minimize issues with sediment and erosion.

RSP 629-R-630 Plant Growth Layer (revision 4-16-2017) a copy of this new standard can be found on line and in the MS4 Coordinator's files. This RSP is not required on all Rule 5 permits

RSP 205-R-636 Storm Water Management (revision 9-1-2017) a copy of this new standard can be found on line and in the MS4 Coordinator's files. A new version of this RSP is being written by a committee and sometime in 2022, however any immediate changes will be covered in Construction Memos as needed.

ITM 803 Chapter 15, and SWQMP Check List.

RSP 621-R-637 Seed Mixtures and Seed Requirements (revision 9-1-2016) a copy of this new standard can be found on line and in the MS4 Coordinator's files.

New Concrete Waste Water Standard Specifications. INDOT has completely rewritten the concrete washout specifications. This new spec is contained in the RSP 205-R-636 (9-1-2017) for all contracts letting after March 1, 2017 the new specs apply. The contractor must provide a Concrete Waste Water plan as part of their Storm Water Quality Control Plan. More detailed requirements are contained in the ITM 803 document. A copy of the appropriate section of ITM 803 is in the MS4 Coordinator's files.

Storm Water Quality Control Plan. For Project letting after 9-1-2016 Contractors are required to submit a Storm Water Quality Control Plan (SWQCP) at least 14 days before the start of construction. This SWQCP gives the Contractor the opportunity to strengthen the sediment and erosion control from the original design if needed. This is leading to better compliance in the field and more contractor buy-in as part of the permitting process. Information about the SWQCP is contained in RSP 205-R-636 and ITM 803.

Design Memos related to Storm Water issued during this permit cycle:

Design Memorandum: 18-24

Storm Water Temporary BMPs

INDOT re-issued the suite of Storm Water Temporary BMPs for construction. These will be mandatory on any INDOT contracts letting after September 1st, 2019. A draft-approved version is included in the MS4 Coordinator's files.

4B- Certification (08/06/14)

Develop policy that requires contractors' onsite Erosion Control Supervisor and select INDOT personnel to be certified. Develop the certification program and training. Implement policy within 2 years. The completion of the goal will be measured by including a copy of the policy, certification program, and training materials in the annual report. The number of projects requiring the certification will be reported until the policy is fully implemented. The

report will also provide a summary of the individuals that received training (contractor, designer, consultant, INDOT, etc.) The information will be kept in the MS4 Coordinator's files.

During the **2018-2019** permit cycle INDOT has continued to offer Storm Water Management Training offered to both INDOT employees, consultants, designers and contractors. **Six** classes were conducted during this permit cycle. A total of **371** people attended the trainings. **185** people renewed their training during this permit cycle.

Copies of the Presentation and test questions are available electronically or in the MS4 Coordinator's files in hard copy. This program is updated at least annually so that the most current INDOT information and regulatory agency requirements are available to our stakeholders. The policy for this Certification Training can be found in the new INDOT Standard Specification 205: <http://www.in.gov/dot/div/contracts/standards/specprovta/>

4C- Rule 5 Inspection & Tracking (08/06/14)

INDOT district representative will visit each construction site with a Rule 5 permit quarterly, complete a Rule 5 inspection and document/track findings in central database (basically an oversight program). The completion of the goal will be measured by including a summary of the number of inspections conducted in the annual report. The supporting information will be maintained electronically and accessible to the MS4 operator.

For all contracts (let after 9/1/2016) that disturb soil and use temporary storm water BMPs, contractors and consultants are required to submit the weekly/post rain event inspections electronically using our Field Assistant Application. The Construction Memo 16-04 and some supplemental information was distributed to contractors and consultants and can be found in the MS4 Coordinator's files. For this permit cycle, 10,433 contractor Storm Water Inspections (weekly and post rain event) were completed; 270 INDOT quality assurance inspections submitted by INDOT PE/PS were completed. A copy of all submissions to date are included in the MS4 Coordinator's files.

4D- Inspection Form (Ongoing)

Standardized inspection form is required on all contracts let after September 1, 2012 that requires a Rule 5 permit. This inspection form is available on the INDOT website. The completion of the goal will be measured by including a copy of the form in the annual report. The form will be kept in the MS4 Coordinator's files.

INDOT has developed a standardized inspection form that is required to be used on all contracts let after September 1, 2012 with a Rule 5 permit. The name of this form is 108-c-192d. A copy of the inspection form is kept in the MS4 Coordinator's files. This form is only used in the event of a technological or network failure.

Since 2016, INDOT requires an electronic submission from the Field Assistant Application. This digital submission is similar to the 108-C-192d form. Information about this application is explained in 4C. Completed inspection reports are entered into the database automatically.

A list of these inspection reports can be found in the MS4 Coordinator's files.

Link to current INDOT Storm Water (Sediment and Erosion Control) "paper" inspection form
<http://www.in.gov/dot/div/contracts/standards/rsp/sep13/100/108-C-192d%20130901.pdf>

4E- Inspection Tracking (Ongoing)

Continue to track central office and IDEM inspections and violations in centralized database. The completion of the goal will be measured by including a summary of the inspections and violations in the annual report. The supporting information will be maintained electronically and accessible to the MS4 operator.

The inspections conducted by INDOT Storm Water Specialists and the IDEM Storm Water Inspectors are tracked with the internal computer data base Environmental Waterway Permit System (EWPS). The MS4 Coordinator has the report that shows how many inspections were conducted by INDOT Storm Water Specialists as well as the inspections conducted by IDEM Storm Water Inspectors. This report does not cover LPA projects. Totals for the time period of April 2017 to April 2018 can be found in the table below. The full report is located in the MS4 operator's files.

IDEM Storm Water Inspections	Satisfactory 0	Marginal 10	Unsatisfactory- Permit Violation 4
INDOT Storm Water Inspections From EWPS	Satisfactory 32	Marginal 6	Unsatisfactory- Permit Violation 0

The district Erosion Control Specialist do not have access to the EWPS database. They track their inspections differently, and do not quantify the condition of the project.

Fort Wayne District: 60 inspections

Greenfield District: 28 inspections

Crawfordsville District: Erosion Control Specialist on Maternity Leave cannot get data

La Porte District: 31

Seymour District: 89 inspections

Vincennes District: 99 inspections

4F- District Inspection Employees (03/01/15)

Each district shall have a minimum of one full time equivalent employee dedicated to water quality compliance. The completion of the goal will be measured by including documentation of the location, personnel assigned, job description and dedicated hours in the annual report. The information will be kept in the MS4 Coordinator's file.

All six INDOT districts have a full time Erosion Control Specialist on staff, with offices in each district office. These individuals have been extremely helpful to the INDOT Storm Water Program. They complete site visits, quality assurance inspections, and serve as technical advisors for INDOT staff and contractors. They have been working to close out old NOTs, visit LPA projects, assist with process questions and review Storm Water Quality Control Plans. Each district wrote a slightly different job description but basically they are all completing similar tasks. Every two weeks all 6 district Erosion Control Specialists along with Central Office Storm Water Specialists participate in a conference call. These conference calls discuss issues that have come up in the various districts, discuss policy and spec changes, distribute any important information and serve as support in many other ways.

Current Staff Assignments:

La Porte District: Donovan Wilczynski

Fort Wayne District: Jennifer Napier

Crawfordsville District: Megan Bolyard

Greenfield District: Cory Senich
Seymour District: Rachel Austin
Vincennes District: Rich Montgomery

4G-Field Guide (05/13/14)

Develop a SWQ Pocket Field Guide as technical field resource. The completion of the goal will be measured by including a copy of the pocket guide, a record of the number of guides printed and distributed in the annual report. The information will be kept in the MS4 Coordinator's file.

The following is the location for the PDF version of the 2018 INDOT Storm Water Management Field Guide.

[http://www.in.gov/indot/files/Indiana Storm Water Field Guide.pdf](http://www.in.gov/indot/files/Indiana_Storm_Water_Field_Guide.pdf)

All 2000 2015 copies of the original first printing have been distributed as part of the INDOT Construction Storm Water Management Trainings, and to INDOT Maintenance Supervisors. For the 2nd addition, 1500 copies were printed and are being distributed at the INDOT Construction Storm Water Management trainings. Many changes, updates and improvements were made in the 2nd edition. A new section was added called “Successful Strategies (for compliance)” to assist with field decisions and compliance efforts.

4H- Construction Staff E&SC Training (08/06/14)

*Develop and implement a training program to provide INDOT construction staff an understanding regarding E&SC and waterway permitting. Recommended cycle includes initial and **3rd year review**. The completion of the goal will be measured by including a copy of the training program and a summary of the individuals trained each year in the annual report. The information will be kept in the MS4 Coordinator's file.*

Erosion and sediment control training for INDOT construction staff was completed via the certification training described in MCM 4B - Certification. Starting in the spring of 2016 the certification program added an on-line element as part of the INDOT University system. After attending the classroom training, participants have 30 days to enter our on-line program, read additional information and take an on-line exam. During this permit cycle of April 2018-April 2019 371 people have gone through this training program. The training is valid for 3 years, renewals are conducted on line. This training is evaluated internally each year and appropriate changes/updates are made annually.

4I- Construction Site Program Certification (04/28/15)

Submit Construction Site program plan and regulatory mechanism certification to IDEM

The Rule 13 State Form 51272 has been signed by INDOT's MS4 Operator, and is attached to this annual report and is housed in the MS4 Coordinator's files.

Post Construction Stormwater Runoff Control

5A- Pollutant Identification (12/15/14)

Research and determine pollutants of concern and BMP effectiveness for likely pollutants. Complete a cost benefit analysis for each BMP. The completion of the goal will be measured by including a summary of the research and the cost benefit analysis in the annual report. The information will be kept in the MS4 Coordinator's file.

This measure was addressed by a Joint Transportation Research Project (JTRP) SPR 3941 "Lack of Data for Predicting Storm Water Pollutant Removal by Post-Construction Best Management Practices":

The final report and findings can be found in the MS4 Coordinators files. The following is the abstract for the report.

"The project objective was to conduct a detailed literature review of storm water pollutants and mitigation technologies and synthesize the information so that INDOT can implement project results into standards. Because INDOT is a Municipal Separate Storm Water Sewer System (MS4) INDOT is required to minimize storm water pollution. A literature review was carried-out to identify pollutants examined by other transportation agencies, the pollutant's relevance to Indiana roadways, and the effectiveness of storm water pollution minimization best management practices (BMP). A cost benefit analysis was also conducted for a few BMP devices used in Indiana. Results showed that a variety of databases contained BMP testing studies and the same type of BMP may not perform similarly at different sites. Some BMPs can also generate pollutants. Very little BMP design, cost, and performance data were obtained during this study from INDOT and municipalities contacted due to the organizations being unable to access it. Manufacturer self-reported BMP device performance data found was not corroborated by independent device testing data. Manufacturer reported data greatly overestimated the device's cost benefit; Field validated device performance data are needed. Based on project results INDOT should consider (1) Establishing agency-wide procedures to begin collecting pertinent storm water BMP information from ongoing and planned projects, (2) Surveying which and how many BMPs are under INDOT control, (3) Apply caution when estimating BMP performance based on manufacturer reported data or BMP performance data from other parts of the U.S., (4) Conduct a field investigation to determine pollutant removal effectiveness for select BMPs."

5B- NEPA (06/15/16)

Develop policy for identifying projects in sensitive areas such as part of the Red Flag Investigation. Use GIS layer identifying these areas. The number of projects flagged will be tracked. The completion of the goal will be measured by including the revised policy and a summary of the projects flagged in the annual report. The information will be kept in the MS4 Coordinator's file.

The Urbanized Area Boundary (UAB) has been added to the Red Flag investigation as a layer on the GIS map. A link has been created for MS4s to the UAB layer on the GIS map. A new Red Flag Investigation process letter has been written to explain this process to designers. The SOP for Early Coordination letters has been updated to include notifying MS4 operators when a project is within an MS4 area. This information can be found on the INDOT Environmental Policy Webpage: www.in.gov/2523.htm

To make this process function the INDOT Storm Water team updated an out of date IDEM list of all Indiana MS4 contacts. This list of MS4s and their contacts can be found on the INDOT Environmental Policy Webpage: www.in.gov/2523.htm and the INDOT Storm Water

Webpage www.in.gov/2892.htm. IDEM is sending the INDOT MS4 coordinator updates as reported to them so that the list can remain as up to date as possible. In 2018 748 red flag investigation documents were approved. A complete list of all contracts with red flag investigations is contained in the MS4 Coordinator's files.

5C-New Impervious Pavement Policy (12/15/15)

Revise policy for post construction BMPs for projects with increased impervious area. Policy should consider water quality and quantity. The number of projects incorporating post-construction BMPs and BMP type will be tracked. The completion of the goal will be measured by including the revised policy and a summary of the project BMP data in the annual report. The post construction BMPs will be tracked in the GIS database created in Measure 7A. The policy information will be kept in the MS4 Coordinator's file.

An INDOT committee has been formed to address post construction BMPs for both water quality and water quantity, when they should be required, and what design would best fit the requirements. This committee has members from multiple INDOT divisions. INDOT is currently conducting an inventory of installed Post-Construction BMPs, developing SOPs for As-Builts, developing maintenance guidelines and schedules, and a tracking data base. INDOTs mapping efforts will also record locations and types of BMPs in right of way.

5D- Evaluate design related BMPs (12/15/15)

Investigate and document stormwater quality and quantity impacts to evaluate and determine appropriate BMPs such as reduced pavement widths, eliminating curb and gutter, providing diffuse flow, etc. The investigation may consist of pilot studies, monitoring, literature research, and other appropriate resources. Documentation shall include pollutant reduction for each BMP and recommendations on incorporating these measures into the INDOT planning process. The completion of the goal will be measured by including the findings in the annual report. The information will be kept in the MS4 Coordinator's files.

INDOT is in the process of re-evaluating its approach to post construction BMPs after the results of SPR 3941. Considerations are currently being reviewed for changes to the INDOT design manual to incorporate design for post construction pollution prevention and containment.

Through efforts to improve our post construction BMP program INDOT has been working to identify type of post construction BMPs currently installed within INDOT right of way. A list of mechanical post construction BMPs is stored in the MS4 Coordinator files. As part of the agency wide mapping and facility management efforts, these post construction BMPs will be located, recorded and maintained as part of the new process and system.

5E-Document updates for Post Construction (06/15/16)

Update design manual and specifications to include new and revised policies and guidance. The design manual and specifications will be housed on the INDOT website. The completion of this goal will be measured by the inclusion of a summary of the updated design manual and specifications and documentation that they have been loaded on the INDOT website in the annual report. The supporting information will be kept in the MS4 Coordinator's files.

A committee is being formed to update the INDOTs Indiana Design Manual for post construction BMP selection and design. Many internal divisions are involved in this process. These efforts are working in conjunction to mapping through our Asset Management Division, Maintenance, Hydraulics, Bridge and Design. The end product will aid designers in choosing the best water quality or water quantity BMP for the contract, need, and foot print.

5F- Post construction Program Certification (04/27/16)

Submit Post construction program plan and regulatory mechanism certification to IDEM

The Rule 13 State Form 51274 has been signed by INDOT's MS4 Operator, and is attached to this annual report and is housed in the MS4 Coordinator's files.

Operations Pollution Prevention & Good Housekeeping

6A- Facility SWPPP Review (12/15/14)

Determine the availability of current SWPPPs. Evaluate the SWPPPs applicability to the specific district, sub district and maintenance unit location, in addition to their consistency, quality and quantity. The completion of this goal will be measured by the inclusion of a summary of the findings in the annual report. The information will be kept in the MS4 Coordinator's files.

The review was completed in the 2014-2015 permit cycle and can be found in the MS4 Coordinator's files.

6B- Facility SWPPP Development (12/15/14)

Develop and implement statewide facilities SWPPP. The SWPPP will provide statewide standard information and also address requirements based on the district, sub district and maintenance unit conditions (i.e. site map showing site location in relation to nearby water bodies, classification, etc.). The SWPPP will be kept at each facility. The completion of this goal will be measured by the submittal of the facility SWPPP with the annual report and a summary of the monthly inspection reports, findings and corrective action by district. The information will be kept in the MS4 coordinator's file.

All 43 facilities have completed their SWPPPs, and drainage maps. INDOT Office of Environmental Services and INDOT Maintenance are working together on the implementation of the facility SWPPPs. Additional training will likely be required. A working copy of all Facility SWPPPs including the maintenance building on ORB SR 265 Toll Bridges are kept in the MS4 Coordinator's files.

6C-Maintenance Guidelines (07/27/14)

Review and revise guidelines for right-of-way maintenance to include mowing (height, frequency, fuel consumption, etc.) and weed control (herbicide use, type, amount, frequency, etc.). The completion of this goal will be measured by the submittal of the revised guidelines with the annual report and a comparative summary of the frequency of mowing annually. The information will be kept in the MS4 Coordinator's files.

Operations Memorandum Vegetation Management 14-05 which is found on INDOT intranet is a set of guidelines for vegetation management on INDOTs right-of-ways. A copy of the Operations Memo 14-05 is stored in the MS4 Coordinator's files.

6D- Recycling (09/15/14)

Review and revise the policy for recycling practices (scrap metal, tires, plastics, aluminum, paper, etc.). The amount of recycling by type will be tracked. The completion of this goal will be measured by the inclusion of the revised policy and a summary of the recycling activity in the annual report. The information will be kept in the MS4 Coordinator's file.

Information about INDOTs recycling programs and policy can be found on the website; <http://www.in.gov/indot/2586.htm>

INDOT Executive order 05-21 has the guidelines for minimizing waste and recycling at INDOT. This executive order is stored in the MS4 Coordinator's files.

INDOT facilities recycles a variety of materials, including tires, shop hazardous waste, batteries, bulbs and ballasts. A spread sheet has been provided with a list of hazardous and nonhazardous materials that were collected for recycling has been provided and is in the MS4 Coordinator's files. A detailed report of, 2018-2019 reporting year, INDOT recycling efforts can be found in the MS4 Coordinator's files.

- Scrap metal recycled (calendar year 2018): 654.75 tons of scrap metal recycled
Notes: -LSC purchased a hydro-stripper to try and recover as much signage as possible by stripping and reapplying on used signs.
-Some of the districts have moved to selling aluminum scrap at their 210 auctions as they are getting better prices from local auctions as such the total amount may decrease some moving forward.
- Tires: 165,700 pounds of recycled tires
- Maintenance facility assorted recyclable waste products: A spreadsheet is provided in the MS4 Coordinator's files for specific recycled products , examples include: oil filters, empty aerosol, waste oil, water based paint, antifreeze, special fuel, light bulbs, batteries, and others.

6E- Snow Removal practices (Ongoing)

Evaluate current snow removal practices and chemical storage and research feasibility and benefits of innovations to minimize fuel, salt and chemical usage with a consideration for public safety. The amount of material consumed (fuel, salt and chemicals) will be tracked in comparison to mobilizations and weather factors. The completion of this goal will be measured by the conclusion of the findings, implementation progress and usage analysis in the annual report. The information will be kept in the MS4 Coordinator's files.

INDOT 2018-2019 Winter Operations Data Totals for all 6 districts

Salt NaCl = 307,263 tons
Salt Brine (23.3% NaCl) = 5,455,792 gallons
Total of 5/507/495 lane miles

A more detailed analysis of INDOT Winter Operations including gallons of fuel used, labor hours, lane miles treated ext. can be found in the MS4 Coordinator's files.

ORB SR 265 Toll Bridges 2018-2019 Winter Season

Salt NaCl = 171,640 pounds
Brine = 66,617.408 pounds

Indiana Toll Road I80-I90 2018-2019 Winter Season

Salt NaCl = 21,575 tons
Brine = None

New project to improve efficiency coming on line soon.

- **AVL/IMO (connected trucks) Goal: To have all INDOT salt trucks collection data including location, speed, camera images, material output, diagnostics, drive observations and weather conditions. It will help INDOT monitor exactly applying in real time with feedback. INDOT expects that salt and brine will be reduced as efficiency is increased.**
- **Route Optimization: Snow routes will be redesigned in this new system to increase efficiency. Goal: To reduce travel distance and unnecessary deadhead miles as well as designed routes for best material lifecycle which will also reduce fuel consumption**
- **Driver training 2.0: New training material for plow drivers and supervisors to increase best practices and efficiency**

- **Purdue Research project (environmental/cost analysis):** Joint effort between Purdue's research team and INDOT is building a model that looks at storm performance and give quantitative environmental effects
- **Material research:** New materials that are expected to reduce chlorides drastically. Indiana is a "Clear-Roads" (clearroads.org) participating state.

INDOT has been committed to reducing the amount of salt needed to regain travel conditions during winter events. A large part of this effort has been to increase our abilities to mix, store, and apply salt brine. INDOT has enhanced several sites and each ones mixing operations over the last year by building a number of new facilities, most of which use a highly efficient recycling process. The new, fully automated systems are coming online at locations such as Lebanon and Loogootee Units where the stage one prewash station is located on the interior of the salt building. The advantage with these systems is that all operations are under one roof in close proximity, and the chance of environmental mishaps are greatly reduced. These new sites and many others also host added storage capacity, which gives INDOT the ability to deploy these highly effective anti-icing solutions much quicker than in years past. This results in savings and efficiency that allow INDOT to more effectively manage of materials.

6F- Vegetation Management (Ongoing)

Restrict pesticide and fertilizer usage to those materials approved by EPA. Pesticide and fertilizer shall be used in accordance with label restrictions. The completion of this goal will be measured by the inclusion of the policy in the first annual report and policy changes included in subsequent reports. The information will be kept in the MS4 Coordinator's files.

The purpose of INDOTs vegetation management is to:

- **Enhance the safety of the motoring public**
- **Enhance environmental protection**
- **Mitigate erosion while providing adequate drainage**
- **Promote and preserve native wildlife habitats and native flora throughout the state**

The full Vegetation Management guidelines can be found at:

<http://www.in.gov/indot/3262.htm>

Summary of Current Roadside Management Program and ongoing efforts for improvement

Mowing:

- Past Practice: 2 cycles
- New Practice:
 - Up to 5 cycles in major urban areas (up to 3 cycle increase)
 - Up to 3 cycles on rural interstate routes (1 cycle increase)
 - 2 cycles on other state routes (no change)

Litter and Debris:

- Past Practice:
 - Internal staff collected as needed
 - Work Requests
 - In concert with mowing operations
 - Department of Corrections crews utilized at discretion of department
 - Sponsor a Highway- Indy metro area- sponsor pays a company to collect 1 mile stretch of interstate

- Adopt a Highway- Statewide volunteer groups collect litter on a 2 mile stretch for a 2 year contract- can be extended.
- New Practice:
 - Contracted collection
 - Urban areas-
 - Greenfield and LaPorte District Urban areas- up to 24 collections per year
 - Vincennes, Seymour, Crawfordsville and Fort Wayne Districts- 12 collections per year
 - Rural Interstate
 - Collected 5 times per year.
 - Internal Staff to focus efforts on non-contracted routes
 - DOC Crews- to focus on non-contracted routes
 - Adopt-a-Highway- policy under review to increase participation

Shoulder Sweeping:

- Past practice- as needed by in-house staff and some contracted
- New practice- scheduled sweeping and road rake (medium sized debris) in urban areas on a monthly cycle
- Sweepers and Road Rakes purchased for each district

Herbicide:

- Past Practice: primarily in-house service
 - broadleaf weed control in clear zone every 2 years
 - noxious weed species control primarily chased work requests and as time allowed
- New Practice: contracted service
 - broadleaf weed control in clear zone every years
 - Noxious weed species control allotment of acreage for targeted treatments.
 - Digital mapping of selected noxious and invasive species to guide additional treatments for next calendar year.

Tree Risk Mitigation and woody vegetation management:

- Past Practice:
 - In-house-
 - clean up trees after they have fallen
 - work requests
 - remove dead trees that threaten roadway
 - address sight distance concerns with brush/woody vegetation
 - Contracted
 - Occasional tree removal contracts as funds allowed
- New Practice:
 - Digital mapping process to identify/locate tree risk
 - Dedicated tree risk mitigation removal contracts prioritized by mapping process
 - Forestry mulchers purchased to increase production of brush removal.
 - 5 year plan in place to remove brush to promote sight distance and remove invasive species.

Right-of-Way Rehabilitation

- Past Practice- fix soil erosion as necessary
 - Contracted and In-house staff

- New Practice- identify problem areas and create contracts to correct areas of concern

6G-Vegetation Management Training (11/15/14)

Develop and conduct training for personnel assigned vegetation management responsibilities. Training will include proper mowing techniques, use, handling and application of biological and chemical agents, spill response procedures, potential water quality impacts, etc. The completion of this goal will be measured by the inclusion of the training materials and personnel trained in the annual report. This information will be kept in the MS4 Coordinator's files.

Additional Vegetation Management Training was provided to INDOT Maintenance Personnel through the Storm Water Awareness Training for Maintenance. See MS4 Coordinators files for copy of training material.

6H- Operations and Maintenance Program Certification (04/28/15)

Submit Operational and maintenance plan certification to IDEM

The Rule 13 State Form 51281 has been signed by INDOT's MS4 Operator, and is attached to this annual report and is housed in the MS4 Coordinator's files.

Ongoing Water Quality Characterization/BMP Inspection & Maintenance

7A- BMP Tracking (12/15/15)

Develop database of structural BMP locations, to include watershed, level/type of service, maintenance required, maintenance completed, cost, etc. Incorporate structural BMP information for past projects. Create SOP for tracking future projects in GIS based database. The completion of this goal will be measured by the number of structural BMP locations in the database and development of the SOP that will be included in the annual report. This information will be kept in the MS4 Coordinator's files.

Efforts are moving forward for an agency wide mapping program and database. The INDOT Central Office Storm Water team is assisting in the development of a SOP as well as example photographs of post construction BMPs. A list of existing post construction mechanical devices has been completed and these BMPs will be entered into the asset management program for maintenance. The complete list of post construction BMPs that have been located is on file with the MS4 Coordinator's files.

7B- BMP Inspection Manual (12/15/15)

Develop written procedures outlining the inspection and maintenance requirements for structural stormwater BMPs. Written procedures will outline the inspection frequency, provide an inspection checklist, "how-to" instructions for regular maintenance, evaluation and reporting procedures for non-routine maintenance, and an inspection and maintenance tracking mechanism. The completion of this goal will be measured by the submission of the written procedure in the annual report with subsequent reports providing procedure updates made during the year. The written procedure will be kept in the MS4 Coordinator's files.

This is in process as INDOT develops a post construction BMP program

7C- Develop BMP Inspection Program (11/15/16)

Develop and implement a BMP Inspection and Maintenance Program. The program will include development and presentation of training for appropriate INDOT staff and contractors. The completion of this goal will be measured by the submission of the training materials and number of people trained by district in the annual report. The report will also include a summary of inspection and maintenance activity by district. The training materials and training records will be kept in the MS4 Coordinator's file.

This is in process as INDOT develops a post construction BMP program

7D- Evaluation of BMP Inspection Policies (12/15/17)

Develop and implement a water quality sampling plan to evaluate BMP Inspection and Maintenance programs, practices and effectiveness. Findings and recommendations will be used to improve the program. The completion of this goal will be measured by the submission of the water quality sampling plan and subsequent sampling results and recommendation response in the annual report. This information will be kept in the MS4 Coordinator's files.

This is in process as INDOT develops a post construction BMP program

Retrofit Program

8A- Retrofit Program Assessment (11/15/18)

Assess the feasibility and need for a retrofit program to include an analysis of the benefits (i.e. pollutants of concern, BMP effectiveness, waterway priority, TMDL, etc.), feasibility (i.e. budget, life cycle, etc.) and develop a retrofit/maintenance plan to implement program starting in 2019. The completion of this goal will be measured by a summary of the findings and retrofit/maintenance plan in the 2018 annual report and the inclusion in the permit renewal. This information summary will be kept in the MS4 Coordinator's files.

Not in process at this time.