Rule 13 - MS4 ANNUAL REPORT

State Form 51278 (R6 / 7-12)
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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

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.

Five Year Permit Term	Reporting Year
☐ 1st Permit Term ☒ Second and subsequent five (5) Year Permit Terms	**Permit Year** 11/16/2015-11/15/2017 ☐ 1 ☐ 2 ☒ 3 ☒ 4 ☐ 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 0 073**	**Type of MS4:** ☒ City ☐ Town ☐ County ☐ Non-traditional
2. MS4 Entity:	City of Valparaiso *(Name of permit holder)*	
3. MS4 Operator:	Jon Costas	
4. Mailing Address:	166 W Lincolnway Valparaiso, IN ZIP: 46383 County: Porter	
5. Email Address:	jcostas@valpo.us	

PART B: GENERAL INFORMATION – MS4 COORDINATOR

6. MS4 Coordinator (*please print*):	Mingyan Zhou
7. Person's Title:	Deputy Engineer/MS4 Coordinator
8. Mailing Address:	166 W Lincolnway Valparaiso, IN ZIP: 46383
9. Telephone Number:	(219) 462-1161
10. E-mail Address:	mzhou@valpo.us

PART C: GENERAL INFORMATION – REPORT PREPARER

11. Name: (*Provide this information if someone other than MS4 Operator or Coordinator completed this report.*)	
12. Affiliation with the MS4:	
13. Mailing Address:	, IN ZIP:
14. Telephone Number:	Extension:

15. E-mail Address:	

PART D: PROGRAM MANAGEMENT
327 IAC 15-13-18

16. Provide a summary of the following program management activities performed during the reporting period:

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

* City of Valparaiso, Jon Costas, MS4 Operator
* Valparaiso University, Jon Varnell, Executive Director, Facilities Management

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 (8.5" X 11" or 8.5" X 14")

A map of City of Valparaiso Limits as of Nov. 2017 is provided in attachments. The City annexed several parcels in two annexations since the last report on Nov. 2015. The areas of these two annexations were approximately 34 acres.

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

The City of Valparaiso and Co-permittee Valparaiso University have been monitoring the quality of our receiving waters in Salt Creek Watershed at multiple locations since 2004. The new data collected during this reporting period is provided in attachments.

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

The City of Valparaiso is continuing to define its receiving waters as those shown as a solid blue line on a United States Geological Survey 7.5-minute quadrangle map.

The City of Valparaiso has a new section of receiving waters to report, which is 2'850 feet of Cain Ditch to the southeast of the City's limits.

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

Stormwater fees collected from local residential and nonresidential properties are the major funding sources for the City of Valparaiso for MS4 program implementation during this reporting period.

The City of Valparaiso has also received a Lake & River Enhancement (LARE) grant from DNR to conduct a study on the bank stabilization in the Beauty Creek watershed. This project is above and beyond the MS4 Stormwater Quality Management Plan.

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

None

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

None

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

See attchement for the summary.

i) Other:

From United States Census Bureau website, the City of Valparaiso had a population of 31,730 based on April 1, 2010 Census, and the population estimates of the City of Valparaiso as of July 1, 2016 was 33,104.

PART E: PUBLIC EDUCATION AND OUTREACH - MINIMUM CONTROL MEASURE

17. Identify the best management practices (BMPs) for public education and outreach included in your Storm Water Quality Management Plan (SWQMP) Part C and then respond to the following:

a) 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.

The City of Valparaiso has conducted many Public Education and Outreach activities towards different types of constituent during this reporting period. Please refer to the Programmatic Indicators Report for the activities.

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

Insufficient personnel of the program has been the main obstacle for this MCM. Partnering or contracting with other entities was the approach we used to solve the problem.

In addition, it has not been easy to get into schools due to the tight curriculum of the schools. Partnering with RWRDPC, which was already in schools to incorporate stormwater messages into the existing programs was the way to solve the problem.

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

Partnered with Tippecanoe County Partnership for Water Quality and the Muncie Sanitary District to produce two stormwater videos during the reporting period. The videos were titled as "Stromwater Pond Maintenance for Homeowners" and "MS4 for Elected Officials: Why is Stormwater Quality Important for Your Community?".

Partnered with Merrillville Stormwater Utility and some other MS4s and consulting firms in the region to produce a South Shore stormwater educational poster titled "Clean & Clear".

Purchased 500 MS4 Stormwater pens (with the message as: City of Valparaiso MS4 Stormwater Program WWW.valpo.us/MS4 (219) 462-1161 “Only Rain in the Drain” on the pens) and provided them at City Hall for public to pick up for free. The pens are also distributed out at several events.

d) Identify storm water BMPs installed or initiated for this MCM during this reporting period.

Refer to Programmatic Indicators Report for the stormwater activities and BMPs.

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

The City of Valparaiso partnered with RWRDPC to provide public education and outreach programs during this reporting period. The City of Valparaiso is also a member of the Northwest Indiana Stormwater Advisory Group (NISWAG), which met monthly during reporting peroid, and the group, with the lead of Town of Merrillville, produced a South Shore poster in 2017. The City of Valparaiso also partnered with Tippecanoe County Partnership for Water Quality and the Muncie Sanitary District to produce two stormwater videos during the reporting period. In addition, the City of Valparaiso is co-permitted with Valparaiso University to implement the Stormwater Quality Management Plan.

The partnerships for this MCM are overall successful. The partnership with RWRDPC made it possible to incorporate stormwater messages into the district's existing programs and provide to schools. This partnership also made it possible to deliver consistent messages in the whole region. The NISWAG partnership made it easier to share information and experiences among MS4 entities in the region. Also, by concentrating the resources, professionals can be hired to perform work, such as producing posters and videos.

f) Other:

No IDEM audits were conducted for this MCM during the reporting period.

The City of Valparaiso has stopped the contract with Northwestern Indiana Regional Planning Commission for MCM 1 implementation for this reporting period because the regional program and partnership did not exist anymore. Instead, the City of Valparaiso started to partner with other entities (see items c and e above) to conduct public education and outreach.

PART F: PUBLIC PARTICIPATION AND INVOLVEMENT - MINIMUM CONTROL MEASURE

18. Identify the best management practices for public participation and involvement included 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.

During this reporting period, the public participation and involvement at stormwater management included public attendance at council and board meetings, watershed management stakeholder meetings, and public participation at tree planting events, on site stormwater management using rain barrels, pet waste management, yard waste management, E-waste and HHW collection events, and Report-A-Polluter program. Please refer to the Programmatic Indicators Report for the activities.

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

Insufficient personnel of our MS4 Program has been the main obstacle for this MCM. Partnering with other entities is our approach to solve the problem.

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

None

d) Identify storm water BMPs installed or initiated for this MCM during this reporting period.

Refer to Programmatic Indicators Report for the stormwater activities and BMPs.

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

The City of Valparaiso has formed a partnership with the Recycling and Waste Reduction District of Porter County to provide programs to city residents, such as E-Waste collection, HHW collection events, yard waste management and Rain Barrel Decoration Contest for K-12 schools. The partnership has been very successful.

f) Other:

No IDEM audits were conducted for this MCM during the reporting period.

The City of Valparaiso has stopped the contract with Northwestern Indiana Regional Planning Commission for MCM 2 implementation for this reporting period because the regional program and partnership did not exist anymore. Instead, the City of Valparaiso started to partner with Recycling and Waste Reduction District of Porter County (RWRDPC) for the implementation of the program.

PART G: ILLICIT DISCHARGE DETECTION AND ELIMINATION - MINIMUM CONTROL MEASURE

19. Identify the best management practices for illicit discharge detection and elimination (IDDE) included 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.).

Due to the formatting issue of this form, answer for this item is provided below, between Part G and Part H.

b) Describe implementation problems or challenges encountered, particularly as it relates to mapping and screening of outfalls during this reporting period.

Insufficient personnel and budgetary constraints have been the main obstacles for the implementation of this MCM. Although the mapping and screening of outfalls were both ranked at the BEST level by IDEM at the IDDE audit conducted on July 13, 2012, the screening of outfalls could be made better by increasing the screening frequency and using more advanced technology if the City's MS4 program had more manpower and budget to utilize on this MCM.

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

No changes were made to the IDDE Plan during this reporting period.

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

IDDE Ordinance was reviewed in 2016, and no revisions were required.

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.

All the mapping has been done. New stormwater structure is added to the map as it is installed. All outfalls have been screened as required by Rule 13. The mapping and screening have been ranked as the "BEST" according to the results of the IDDE audit conducted on July 13, 2012.

f) Other:

No IDEM audits conducted for this MCM during the reporting period.

19 a)

BMPs identified in SWQMP Part C submitted in 2005:

BMP 1: Salt Brine usage in street de-icing
Timeline for Implementation: implemented winter 2004/2005
Measurable Goal: A reduction in salt usage in de-icing streets
Progress made towards the BMP: The City of Valparaiso has been using the least amount of salt possible for street de-icing while ensuring the streets are safe for vehicles to drive on in winter. However, the amount of salt used over years cannot be compared to evaluate the program performance as the weather each winter is different.

BMP 2: Monthly City Safety Meetings
Timeline for Implementation: Already in place
Measurable Goal: Time spent on Rule 13 discussion and awareness
Progress made towards the BMP: The Monthly City Safety Meetings have stopped. Since the program is very mature now, a regular meeting is not hold to discuss Rule 13. A meeting would be called on when it is needed to discuss the Rule and rule requirements.

BMP 3: Quarterly S.W.A.C. meetings
Timeline for Implementation: Implemented June of 2003
Measurable Goal: Rule 13 awareness to public
Progress made towards the BMP: Since the program is very mature now, the Quarterly S.W.A.C. meetings have stopped. Rule 13 education and awareness to public is now conducted in other ways. See Programmatic Indicators Report for the activities.

BMP 4: Prepare Illicit Discharge Ordinance
Timeline for Implementation: December 31, 2006
Measurable Goal: Adoption of Ordinance
Progress made towards the BMP: IDDE Ordinance was adopted in 2006.

BMP 5: Prepare Ordinance regarding Regulations Controlling Environmental Impacts from Land Disturbing Activities
Timeline for Implementation: December 31, 2005
Measurable Goal: Adoption of Ordinance
Progress made towards the BMP: the City of Valparaiso has in place, since 1996, an ordinance establishing the Department of Stormwater Management, including an article dealing with Erosion Control on Sites with Land Disturbing Activities. The article has been updated over years. The Stormwater Management Ordinance was updated with major revision in 2015.

BMPs identified in SWQMP Part C Update submitted in 2010:

BMP 1: Develop an Illicit Discharge Detection and Elimination Plan
Timeline for Implementation: Have the plan in place by March 2011
Measurable Goal: The City of Valparaiso together with Valparaiso University will develop and implement an illicit Discharge Detection and Elimination plan. The measurable goal is to have the plan in place and to start to implement the plan by January 2011.
Progress made towards the BMP: the plan has been in place since October 2010.

BMP 2: Perform dry weather screening outfall inspections
Timeline for Implementation: Start from year 2011
Measurable Goal: At least annually, each outfall is inspected with additional monitoring on the outfalls in those areas of the City that contain significant industrial facilities as well as those areas of the City that rely upon on-site wastewater treatment (septic systems).
Progress made towards the BMP: the City's MS4 outfalls have been prioritized and monitored/screened by City employees. The ones with higher priority are monitored more closely.

BMP 3: “Report-A-Polluter” program
Timeline for Implementation: Start from September 2010
Measurable Goal: Beginning September in 2010, the City of Valparaiso together with Valparaiso University will implement a “Report-A-Polluter” program to field complaints from the public on illegal dumping, illicit discharges, poor erosion control practices, and other activities within the City MS4 area that negatively impact stormwater quality. Citizens will have opportunity to submit such complaints through an email hotline.
Progress made towards the BMP: the program has been in place since September 2010.

BMP 4: Review City’s current Long Term Control Plan (LTCP) for combined sewer overflow (CSO)
Timeline for Implementation: By January 2011, review LTCP to ensure consistency between the LTCP with this MCM.
Progress made towards the BMP: the BMP has been accomplished.

PART H: CONSTRUCTION SITE STORM WATER RUN-OFF CONTROL - MINIMUM CONTROL MEASURE

20. 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.

BMP 1: Revision of City's Erosion Control Ordinance

Timeline for implementation: December 31, 2005

Measurable Goals: Adoption of revised ordinance by Common Council

BMP 2: Adopt Inspection Program (Part Revision of City's Erosion Control Ordinance)

Timeline for Implementation: December 31, 2005

Measurable Goals: Adoption of revised ordinance by Common Council

BMP 3: Reexamine Violation Fines and Enforcement (Part Revision of City's Erosion Control Ordinance)

Timeline for Implementation: December 31, 2005

Measurable Goals: Adoption of revised ordinance by Common Council

Progress made for the above three BMPs: The measurable goals of these BMPs have been accomplished years ago. The City of Valparaiso updated its Stormwater Management Ordinance again in 2015.

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

The City of Valparaiso and some other MS4 entities in Northwest Indiana have formed a Stormwater Advisory Group (NISWAG) to share information and experience at implementation of this MCM. Setting up consistent standards for construction site stormwater management in the whole region is very important. It makes it easier for developers, builders and contractors to follow the rules, and for inspectors to do inspection and enforcement. From this aspect, this partnership has been very successful. The partnership also started to provide contractor training workshops.

Barriers: insufficient personnel and budgetary constraints of our MS4 Program are main obstacles for this MCM.

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.

Refer to Programmatic Indicators report for permitted construcion sites and enforcement actions.

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

The "City of Valparaiso Erosion and Sediment Control Notes" as an insert in permit application package, was distributed to all builders who have built in the City of Valparaiso during reporting period.

Outreach and education to construction personnel is also accomplished on an individual basis through emails, phone calls, in-person meetings, website, informational events, site reviews and permit application process.

The public education and outreach effort mentioned in the Programmatic Indicator report for Residents/General Public could also reach and educate construction personnel during reporting period.

Also, regional contractor's workshop has been provided through partnerships.

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.

MS4 personnel worked to receive regular training throughout the year during the reporting period by attending programs, seminars, webinars, and reading publications. An example of training included LTAP Stormwater Drainage conference, Indiana MS4 Annual Meeting, NISWAG quarterly meetings, INAFSM Inspectors group meetings, webinars such as "Inspections of Construction Sites", "Ground Control: Stormwater Pollution Prevention for Construction Sites" video, and periodicals such as Stormwater magazine and Storm Water Solutions magazine, and book review of "Designing and Reviewing Effective Sediment and Erosion Control Plans" third edition.

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

The Stormwater Management Ordinance and standards were revised and updated in June 2015; and no updates or revisions were made during reporting period.

g) Other:

No IDEM audits were conducted for this MCM during the reporting period; however, an audit was conducted on 11/22/2017, which was just out of the reporting time period which is 11/16/2015 - 11/15/2017. All items were rated as "Satisfactory" for this MCM.

PART I: POST-CONSTRUCTION STORM WATER RUN-OFF CONTROL - MINIMUM CONTROL MEASURE

21. List the best management practices for post-construction storm water run-off control identified in your SWQMP Part C and then respond to the following:

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

BMP 1: Controlled Discharge Required (City of Valparaiso Drainage Ordinance)

Timeline for Implementation: Currently in place

Measurable Goal: Continued application of the ordinance

BMP 2: Storm Sewers, Structures, Ditches, Swales, and Culverts (City of Valparaiso Drainage Ordinance)

Timeline for Implementation: Currently in place

Measurable Goal: Continued application of the ordinance

BMP 3: Detention Basins (City of Valparaiso Drainage Ordinance)

Timeline for Implementation: Currently in place

Measurable Goal: Continued application of the ordinance

BMP 4: Proper Design and Construction of Discharge Control Structure and Overflow (City of Valparaiso Drainage Ordinance)

Timeline for Implementation: Currently in place

Measurable Goal: Continued application of the ordinance, number of reported problems/complaints downstream

BMP 5: Requirement for Improved Storm Water Management with Renovation of Existing Developed Sites (City of Valparaiso Drainage Ordinance)

Timeline for Implementation: Currently in place

Measurable Goal: Number of renovated existing sites

Progress made for above BMPs: Continued application of the previous ordinance until the City of Valparaiso adopted the updated Stormwater Management Ordinance in 2015. The new ordinance has more stringent requirements on post construction stormwater runoff control. The link to the ordinance is provided on the City's website.

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

Budgetary constraints are the major obstacles for the implementation of this MCM.

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

There is no other partnership formed for the implementation of this MCM.

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.

MS4 personnel worked to receive regular training throughout the year during this reporting period by attending programs, seminars, webinars, and reading publications. An example of training included LTAP Stormwater Drainage conference, Indiana MS4 Annual Meeting, NISWAG quarterly meetings, INAFSM Inspectors group meetings, webinars such as “Post-Construction BMP and Commercial/Industrial Sites”, and periodicals such as, the Stormwater magazine, and Storm Water Solutions magazine.

e) Identify updates or revisions to the post-construction storm water ordinance or other regulatory mechanism made during this reporting period.

The Stormwater Management Ordinance and standards were revised and updated in June 2015; and no updates or revisions were made during reporting period.

f) Other:

No IDEM audits were conducted for this MCM during the reporting period; however, an audit was conducted on 11/22/2017, which was just out of the reporting time period which is 11/16/2015 - 11/15/2017. Of all checked items, only one was rated as "Marginal" and all others were rated as "Satisfactory" for this MCM.

PART J: MUNICIPAL OPERATIONS POLLUTION PREVENTION AND GOOD HOUSEKEEPING - MINIMUM CONTROL MEASURE

22. List the best management practices for municipal operations pollution prevention and good housekeeping identified in your SWQMP Part C and respond to the following:

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

BMP 1: Salt Storage Facility

Timeline for Implementation: 2007

Measurable Goal: Completion of the Facility

Progress has been made: The City of Valparaiso's Public Works Department constructed one salt storage facility in 2005 at 406 Don Hovey Dr., and another salt storage facility in 2014 at 1855 Joliet Rd. These two storage facilities allow the City to store the salt the City uses for deicing completely indoors.

BMP 2: Partnering with Valparaiso University regarding salt storage and management

Timeline for Implementation: 2007

Measurable Goal: Completion of agreement for V.U. to use the City's salt storage facility, end using its own salt storage facility, and therefore eliminate an unneeded potential for additional pollution.

Progress has been made: It was later determined by both the City and the University that it was not necessary to implement this identified BMP. Valparaiso University has its own covered salt storage at 406 Don Hovey Dr. The IDEM MS4 Coordinator Reggie Korthals visited this site at the audit for the MCMs 1, 2, and 6 in 2009 and had no issues with Vaparaiso University's salt storage. She also visited the City site on Don Hovey, and there were not any issues with it neither.

BMP 3: Physical Improvements to Public Works Department Regarding Water Quality

Timeline for Implementation: 2007

Measurable Goal: Completion of Improvements

Progress has been made: At the previous Public Works Campus at 406 Don Hovey Dr., the City of Valparaiso's Public Works Department purchased and constructed the salt storage facility in 2005. Also, secondary containment measures were installed for all storage of petroleum products to prevent any spillage from contaminating ground water. Fuel spill clean-up kits were purchased and placed by the facility's fuel island and other storage locations. In 2014, the City of Valparaiso constructed a new campus for Public Works Department at 1855 Joliet Rd. This campus has many stormwater BMPs installed to minimize polluted stormwater runoff. The BMPs included: water quality swales and basin installed onsite; a covered salt barn to store deicing materials; secondary containment for the brine tank; a fueling island with a cover, a 13' wide manmade berm on the south side of the island to prevent contaminated stormwater draining south, an emergency "e-stop" valve next to fuel island, a completely level slab at the fueling area so it will hold spills, and spill kit onsite to clean up if spill occurs; activities including sign making, vehicle maintenance and storage, are conducted indoors; drains indoor are connected to a sediment trap then an oil separator then to sanitary sewer; and also many spill kits and secondary containment in the Sign/Paint Shop and Vehicle Maintenance Shop.

Also refer to Programmatic Indicators for other activities.

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.

No problems during reporting period.

c) Identify storm water BMPs installed or initiated at MS4 owned and operated facilities.

Two stormwater detention ponds were installed at Forest Park Golf Course in 2016.

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

MS4 personnel worked to receive regular training throughout the year during this reporting period by attending programs, seminars, webinars, watching videos and reading publications. An example of training included LTAP Stormwater Drainage conference, Indiana MS4 Annual Meeting, NISWAG quarterly meetings, videos such as "Rain Check -- Stormwater Pollution Prevention for MS4s", "Storm Watch -- Municipal Stormwater Pollution Prevention", "Spills & Skills-- Non-Emergency HazMat Spill Response Employee Training", and "Blue is the New Green", and periodicals such as the Stormwater magazine, and Storm Water Solutions magazine.

Other City employees received training by watching stormwater videos produced by Excal Visual Inc. and other sources, including "Rain Check -- Stormwater Pollution Prevention for MS4s", "Storm Watch -- Municipal Stormwater Pollution Prevention", "Spills & Skills-- Non-Emergency HazMat Spill Response Employee Training", and "Blue is the New Green".

City employees also received training through stormwater messages we put at Valpo Works city employee newsletter.

e) Other:

No IDEM audit was conducted for this MCM during the reporting period.

PART K: CERTIFICATION AND SIGNATURE

The individual 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."

Type or Print Name: _____

Signature: _____ 4/19/2018
(mm/dd/yyyy)

City of Valparaiso - 2017 Annual Report Attachments

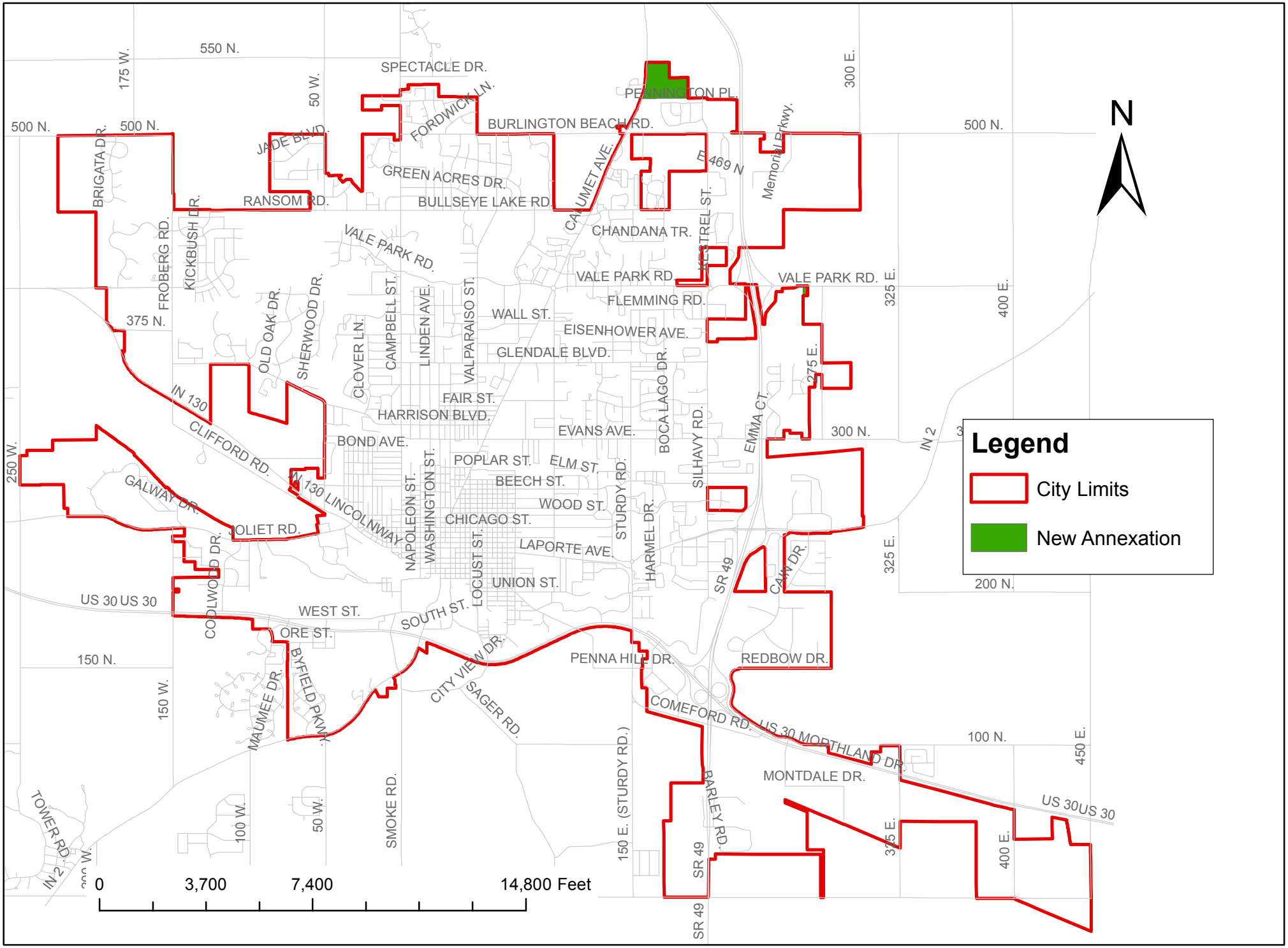
Attachment 1. A map of City of Valparaiso Limits as of November 15th, 2017 (for question 16b)

Attachment 2. Stream Water Quality Monitoring results (for question 16c)
- 2.1 Chemical monitoring by City of Valparaiso
- 2.2 Biological monitoring by Valparaiso University

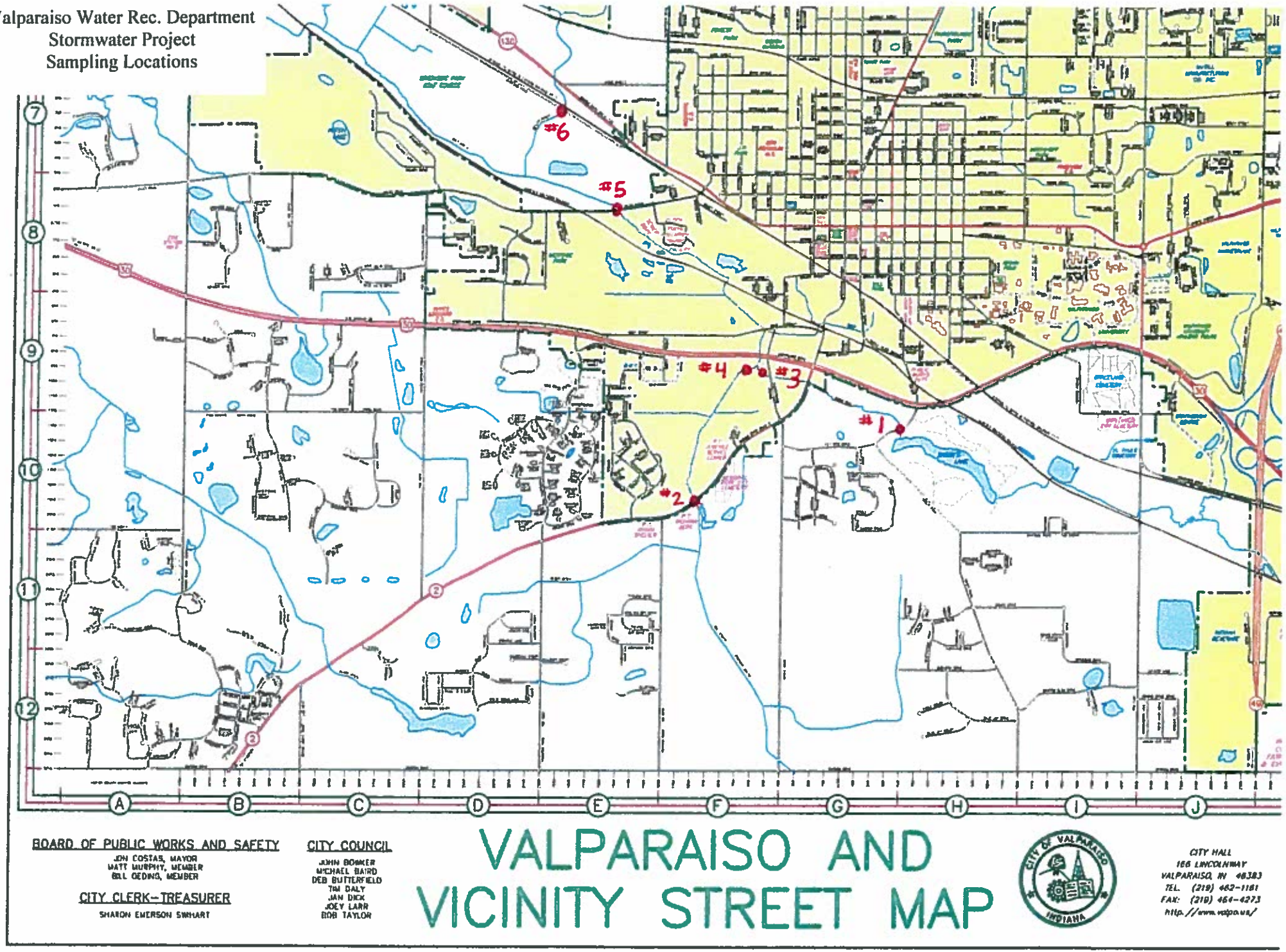
Attachment 3. A summary of complaints received and follow-up investigation results related to stormwater quality issues during this reporting period (for question 16h)

Attachment 4. Programmatic Indicators Report (for question 17a, 17d, 18a, 18d, and 20c)

Attachment 1. City of Valparaiso Limits as of Nov. 2017



Attachment 2. Stream Water Quality Monitoring results



Stream Monitoring Locations

Valparaiso Water Reclamation Department

2016 Stormwater Project

Sample Point	Date	Time	Collected By	Temp. Celcius	Rain Y/N	pH Stan. Units	D.O. mg/l	NH4 mg/l	PO4 mg/l	TSS mg/l	TBOD mg/l	E. Coli CFU/100 mls.
1	11/1/2016	9:00 AM	YA	13.5	N	8.0	9.4	0.095	0.038	3	2	16
2	11/1/2016	9:15 AM	YA	13.5	N	7.7	7.1	0.116	0.053	5	<2	111
3	11/1/2016	9:25 AM	YA	14.0	N	8.0	9.2	0.116	0.046	4	<2	32
4	11/1/2016	9:30 AM	YA	14.0	N	7.8	7.5	0.149	0.055	5	<2	93
5	11/1/2016	9:50 AM	YA	14.5	N	7.9	8.5	0.184	0.177	5	2	52
6	11/1/2016	10:10 AM	YA	14.5	N	8.0	9.3	0.114	0.028	4	<2	72
1	11/10/2016	9:45 AM	YA	12.0	N	7.7	9.9	0.173	0.039	4	<2	11
2	11/10/2016	9:30 AM	YA	9.0	N	7.8	8.8	0.151	0.049	4	<2	142
3	11/10/2016	9:05 AM	YA	11.0	N	8.0	10.2	0.143	0.030	4	<2	15
4	11/10/2016	9:15 AM	YA	9.0	N	7.9	9.1	0.135	0.063	8	<2	148
5	11/10/2016	8:55 AM	YA	12.5	N	8.0	9.6	0.148	0.234	5	<2	1203
6	11/10/2016	8:40 AM	YA	10.5	N	8.1	10.1	0.133	0.027	3	<2	162
1	11/16/2016	10:20 AM	YA	10.0	N	7.9	10.6	0.087	0.031	3	<2	5
2	11/16/2016	10:05 AM	YA	9.0	N	7.8	9.1	0.103	0.044	3	<2	147
3	11/16/2016	9:55 AM	YA	10.0	N	8.0	11.1	0.046	0.028	2	<2	6
4	11/16/2016	9:45 AM	YA	9.0	N	7.9	9.7	0.074	0.039	4	<2	155
5	11/16/2016	9:30 AM	YA	13.0	N	8.0	10.0	0.096	0.229	2	<2	517
6	11/16/2016	9:15 AM	YA	11.0	N	8.1	9.9	0.089	0.019	3	<2	50
1	11/22/2016	8:20 AM	YA	7.0	N	7.9	11.5	0.056	0.039	4	<2	28
2	11/22/2016	8:30 AM	YA	4.5	N	7.8	10.1	0.126	0.047	5	<2	56
3	11/22/2016	8:40 AM	YA	7.0	N	8.0	11.6	0.088	0.033	3	<2	19
4	11/22/2016	8:50 AM	YA	4.0	N	7.9	10.8	0.100	0.055	4	<2	44
5	11/22/2016	9:05 AM	YA	8.5	N	8.0	10.9	0.147	0.168	3	<2	770
6	11/22/2016	9:20 AM	YA	8.5	N	8.0	10.8	0.134	0.031	4	<2	55

Note: Sampling and anaylsis conducted by the Valparaiso Water Reclamation Department.

Valparaiso Water Reclamation Department

2017 Stormwater Project

Sample Point	Date	Time	Collected By	Temp. Celcius	Rain Y/N	pH Stan. Units	D.O. mg/l	NH4 mg/l	PO4 mg/l	TSS mg/l	TBOD mg/l	E. Coli CFU/100 mls.
1	10/5/2017	7:55 AM	YA	19.5	N	8.0	8.2	<0.02	0.105	10	3	14
2	10/5/2017	8:10 AM	YA	17.0	N	7.7	6.2	0.118	0.049	7	<2	411
3	10/5/2017	8:20 AM	YA	18.0	N	8.1	8.0	0.046	0.049	8	2	74
4	10/5/2017	8:30 AM	YA	17.0	N	7.9	6.9	0.106	0.050	6	<2	260
5	10/5/2017	8:55 AM	YA	19.5	N	8.0	7.3	0.135	0.308	5	<2	166
6	10/5/2017	9:20 AM	YA	15.0	N	8.0	8.5	0.129	0.014	3	<2	49
1	10/12/2017	8:15 AM	YA	18.5	N	7.9	8.8	0.096	0.075	4	2	365
2	10/12/2017	8:28 AM	YA	15.5	N	7.6	5.8	0.110	0.089	9	<2	2420
3	10/12/2017	8:36 AM	YA	18.0	N	7.9	8.4	0.095	0.083	14	2	2420
4	10/12/2017	8:45 AM	YA	15.5	N	7.6	5.9	0.117	0.105	13	<2	2092
5	10/12/2017	9:06 AM	YA	17.5	N	7.8	7.9	0.104	0.202	17	<2	922
6	10/12/2017	9:30 AM	YA	14.5	N	7.9	9.2	0.062	0.083	40	<2	227
1	10/19/2017	7:55 AM	YA	15.5	N	8.0	9.4	0.154	0.063	4	<2	88
2	10/19/2017	8:10 AM	YA	16.5	N	7.8	7.1	0.158	0.061	6	<2	345
3	10/19/2017	8:20 AM	YA	14.5	N	8.0	8.9	0.144	0.060	19	<2	152
4	10/19/2017	8:35 AM	YA	12.0	N	7.8	7.6	0.165	0.063	7	<2	345
5	10/19/2017	8:55 AM	YA	15.0	N	8.0	8.7	0.168	0.407	8	<2	172
6	10/19/2017	9:20 AM	YA	13.0	N	8.0	9.5	0.108	0.022	4	<2	93
1	10/26/2017	8:35 AM	YA	12.0	N	7.7	10.2	0.055	0.068	6	<2	770
2	10/26/2017	8:45 AM	YA	9.0	N	7.5	7.9	0.087	0.074	9	<2	770
3	10/26/2017	9:00 AM	YA	11.5	N	7.7	9.8	0.063	0.068	15	<2	649
4	10/26/2017	9:20 AM	YA	8.5	N	7.5	8.1	0.096	0.069	6	<2	770
5	10/26/2017	9:50 AM	YA	12.0	N	7.7	9.3	0.094	0.196	12	<2	649
6	10/26/2017	10:20 AM	YA	11.0	N	7.9	9.8	0.064	0.027	5	<2	156

Note: Sampling and anaylsis conducted by the Valparaiso Water Reclamation Department.

Salt creek biomonitoring data
Valparaiso University, Valparaiso, IN
BIO 440 Ecology, sampled last week of OCT/first of NOV

SITE 1	*number from 4 groups, 20 samples*											5 groups	
GROUP1	2004	2005	2006	2007	2008	2009	2010T	2010R	2011	2012	2013	2015	2017
stonefly	2		3	2	2	1	2	3		1	4	1	2
mayfly		6	5	4	3	9	4	1	3		1	3	1
caddis fly			110	46	5	73	2	5	23	11	6	182	5
dobsonfly			1			1			3				
riffle beetle	1		4	5	2		25	3			3		4
water penny		20+				6	1	1	6				
right snail			1	5			5	4	7			1	
GROUP 2													
damselfly		4	3	3	1	6	10	7	7	26	3	19	55
dragonfly		1				1	1	2				3	
sowbug	100+	80+	46	14	55	105	13	44	242	56	11	16	7
scud	4	30+	37	15	16	18	7	2	12	4	1	7	2
cranefly		4	1	1	4	7	4	2	2		1	1	
clams		12	9	1			1	29	5	3	14	4	3
crayfish											1		2
GROUP 3													
midges			3	8	2	5	9	2	12	1		2	
black fly				51	8	3	4	1	2	3	1		1
planaria	1	47+	22		37	24	130	19	107	281	231	337	406
leech	1	3	13	3		1	2	2	4	2	1		
GROUP 4													
left snail		2	1	1	1		7	2		9		6	5
aquatic worms	3	3	6	16	10		18	1	3		5		
blood midge			11	2	3	22	1	3	6	18	2	2	2
rat-tailed maggo	1						0	1					
PTI	*23*	*32*	*48*	*44*	*37*	*44*	*53*	*54*	*45*	*30*	*42*	*44*	*37*
Date tested	2-Nov	8-Nov	7-Nov	6-Nov	4-Nov	3-Nov	2-Nov	4-Nov	1-Nov	6-Nov	5-Nov	3-Nov	7-Nov

SITE 2	*number from 4 groups, 20 samples*										5 groups-20 samples		
GROUP1	2004	2005	2006	2007	2008	2009	2010T	2010R	2011	2012	2013	2015	2017
stonefly	3		1	4	4		17	1	1			1	3
mayfly	14	12	7	19	5	5	48	18	9	121	30	30	15
caddis fly	5	20+	12	5	14	2	8	3	65	137	31	14	7
dobsonfly	1	4					0	2	1		1	3	
riffle beetle					6	1	2	3				1	3
water penny						2					15	1	
right snail			1	1		1	0	1		5	3		
GROUP 2													
damselfly	3	4		5	7	8	4	39	2	26	7	12	13
dragonfly		1	2		1		1	0			1		
sowbug	21+	15	126	15	25	17	6	62	8	28	19	11	14
scud	28+	16	20	18	24	50	30	51	25	36	88	49	46
cranefly		1								1		3	
clams		3	2			1						1	5
crayfish		1		1						1	2		1
GROUP 3													
midges	1		6	1	5	6	11	3	22	2	4	2	
black fly					4	9				1	0	1	
planaria		3			3	3	3	0		13	18	1	19
leech		1		1		2	1	0					
GROUP 4													
left snail	3		2		1		8	11	3	2		1	
aquatic worms		5	7	7	11		11	10	2	6	27	6	2
blood midge	2	9			3	3	7	2	5	41	13	10	5
rat-tailed maggot													
PTI	*29*	*39*	*32*	*33*	*37*	*45*	*37*	*38*	*30*	*36*	*41*	*48*	*33*
Date tested	9-Nov	8-Nov	7-Nov	6-Nov	4-Nov	3-Nov	2-Nov	4-Nov	1-Nov	6-Nov	5-Nov	3-Nov	7-Nov

SITE 3	*number from 4 groups, 20 samples*										5 groups-20 samples	
GROUP1	2004 (no	2005	2006	2007	2008	2009	2010	2011	2012	2013	2015	2017
stonefly				2	3	3	1		1			
mayfly		15		6		8	2	13	10	1		1
caddis fly		8	8	15		51	10	5	13	17	19	12
dobsonfly					1			1				
riffle beetle		1		1		5		5			1	2
water penny						2	1					
right snail		12	2			2	4	1	2			1
GROUP 2												
damselfly		6	1	1	6	10	1	14	31	18	7	9
dragonfly		2				1						
sowbug		20+	6	4	16	65	46	25	39	7	20	6
scud		20+	10	12	22	28	18	11	9	33	16	9
cranefly			2	2		*9*			1			
clams		20+	45	20		1	2	1	9	2	2	7
crayfish		1								1		
GROUP 3												
midges			8	1	5	14	26	18		5		
black fly			14		1	3	1			1		
planaria		7	6		1	22	6	7	3	3		12
leech		8		1		1			1	2		
GROUP 4												
left snail		8		1		1	6	1	6	4	1	
aquatic worms		2	4	1	2	1	10	14	20	4	7	9
blood midge		1	5	6		34	83	41	32	31	56	
rat-tailed maggot												
PTI	*NA*	*41*	*31*	*38*	*24*	*53*	*41*	*42*	*38*	*34*	*23*	*31*
Date tested	NA	8-Nov	7-Nov	6-Nov	4-Nov	3-Nov	2-Nov	1-Nov	6-Nov	5-Nov	3-Nov	7-Nov

SITE 4	*number from 4 groups, 20 samples*										5 groups-20 samples	
GROUP1	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2015	2017
stonefly	3		5	4	1	2	2	1				2
mayfly	3	5	4	12	15	14	8	24	17	25	17	3
caddis fly	1	2	18	34	3	14	44	8	7	7	1	10
dobsonfly	1	1	1	6	4	5		2		3		
riffle beetle	3		3	2			5	2	5		1	1
water penny			1	2		5	2	4	8	1		16
right snail	2			9		1			10	1	3	11
GROUP 2												
damselfly	1	12	3	2	4	15	9	8	14	10	3	8
dragonfly		1		3	1		1		2			
sowbug	5	14	12	11	10	41	24	39	7	17	21	7
scud	9	1	7	4	5	25	5	17	17	7	41	12
cranefly		3	2	4		1			1		4	*1*
clams		2	6	2		3	14	1	35	5	2	24
crayfish	1	2	1		1		1	2			1	
GROUP 3												
midges	5	5	9	15	1	9	10	6	8	2	3	
black fly		1	2	5		1						
planaria			1	2			2		3	4		1
leech		11	1	1	1				5	1		
GROUP 4												
left snail	2	1				2	6		9	1		1
aquatic worms	6	6	1	9	5		17	26	25	26	6	4
blood midge	5	1	4	13	8	19	16	9	38	33	15	3
rat-tailed maggo	1			2		1						0
PTI	*42*	*42*	*52*	*57*	*37*	*46*	*45*	*43*	*47*	*41*	*38*	*44*
Date tested	2-Nov	1-Nov	31-Oct	31-Oct	28-Oct	27-Oct	28-Oct	25-Oct	23-Oct	29-Oct	27-Oct	31-Oct

SITE 5	*4 groups, 20 samples*										5 groups	
GROUP1	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2015	2017
stonefly	2			1		5	3					2
mayfly	4		2	2	1						2	3
caddis fly	2	13	21	55	2	23	7	13	3	13	60	11
dobsonfly				10		2			1		1	
riffle beetle			3	1		3		1	9	6		
water penny				4								
right snail				1					1			
GROUP 2												
damselfly	1	7		5		3		5	29	6	12	5
dragonfly												
sowbug	11	24	21	34	4	37	11	21	5	18	13	50
scud	3	2	1	9	2	15	3	19	1	5	9	61
cranefly	3					1		11	3			2
clams							3	5	40	5		6
crayfish			1									1
GROUP 3												
midges	2	1	3	9	2	9	2	18	3	2	18	
black fly	1			2	10	1			0	3	7	
planaria	9	22	4	2	18	2	9	19	5	47	17	39
leech	1	10		19		14	1	2	9		3	2
GROUP 4												
left snail						1			2			1
aquatic worms	2	2	4	4	4	2	3	17	44	14	3	5
blood midge	12	6	17	7	4	18	41	54	43	4	25	5
rat-tailed maggot			1	1					1			
PTI	*34*	*21*	*28*	*48*	*22*	*39*	*25*	*31*	*41*	*28*	*31*	*37*
Date tested	9-Nov	1-Nov	31-Oct	31-Oct	28-Oct	27-Oct	28-Oct	25-Oct	23-Oct	29-Oct	27-Oct	31-Oct

Attachment 3. A summary of complaints received and follow-up investigation results related to stormwater quality issues during this reporting period

Date	Complaints
1/11/2016	Sediment in street at B-WAY construction site.
3/31/2016	Inadequate erosion and sediment control measures at 52 Harrison Blvd.
5/11/2016	Mud in street at Naples Dr from a site by Olthof Homes.
5/15/2016	Sediment runoff to alley and street from VU Sorority Housing construction site.
5/27/2016	Sediment runoff to alley and street from VU Sorority Housing construction site.
7/1/2016	Inadequate erosion and sediment control at 2801/2803 West Wind Dr construction site.
7/30/2016	Erosion and sediment control at some lots in Hawthorne Phase 3 were not sufficient.
8/6/2016	Unstabilized Dirt pile at 2063 Beauty Creek Ct.
8/18/2016	Mud getting into street from 2401 Nottingham Dr site at Hawthorne Phase 3.
8/20/2016	Inadequate sediment control measures at 753 Mill Crossing.
8/22/2016	Construction entrance was a mess and was not safe for kids walking to school at Cooks Corners Elementary School construction site.
8/25/2016	Dirt in street at North Hampstead
10/3/2016	Sediment control measures installed were not working at Courtyards at Pepper Creek site.
10/6/2016	Inadequate erosion and sediment control measures at Courtyards at Pepper Creek site. Sediments going into the pond.
10/14/2016	Mud in street at Mistwood Sub Phase II Unit I
1/26/2017	Inadequate erosion and sediment control measures at the several lots under construction at Hawthorne Phase 3.
2/10/2017	Dirt in street from the construction site at Memorial Elementary School.
3/11/2017	Sediment control measures not adequate at 2901 Winter Garden Dr.
3/31/2017	Sediment control measures not adequate at 2806 West Wind Dr.
5/15/2017	A resident on Nottingham Drive complained about a few empty lots (3-4) within the Southwest corner of the Hawthorne Neighborhood saying that these lots had not been maintained and had a combination of tall weeds (>1'), garbage/trash, and inadequate storm water protection (silt and mud flowing into the street).
6/9/2017	Inadequate erosion and sediment control measures at Morgan Townhomes.
6/23/2017	Complaint on erosion and sediment control at 2801/2803 West Wind Dr construction site.
7/20/2017	Sediment in street at Hawthorne North.
7/21/2017	A resident nearby Northview Elementary School project complained about the lack of silt fencing on the NW corner of the project. He was worried the rain water would run on to his property from the parking lot.
9/20/2017	A complaint that mud was tracked into street at Hawthorne North Sub.

9/20/2017	Resident at a home on Pine Creek Rd complained the lack of maintenance of the silf fence behind his house at the LOV development.
10/14/2017	A nearby resident complained about muddy water running down to street from Lot 104 Hawthorne Phase 3 after a downpour.
10/20/2017	A nearby resident complained mud in street from 3001 and 3003 Kickbush Dr construction site
10/23/2017	A resident at Pepper Creek Bridge Parkway complaining the construction site at 3265 Climbing Tree Ct.
10/24/2017	A resident at Courtyards at Pepper Creek site called and complained sediment going out of some construction sites at this development and into street.
11/1/2017	A resident at Beauty Creek Ct called complaining lots on both sides have no silt fence installed.

All these complaints were about erosion and sediment control at construction sites. The follow-up investigation and actions for all complaints were checking the sites, requiring builders/contractors to address issues, and making sure the issues were addressed.

Attachment 4. Programmatic Indicators Report