



Biennial (2018-2019)

Stormwater Progress Report Template/Information

October 2019

Most of the Alliance of Downriver Watershed members have biennial progress reports due by November 1. The ADW Facilitation Team prepared a set of documents for you to include with your 2018-19 MS4 Progress Report. MS4s need to review the documents, update them to include your individual MS4 activities, and submit final reports through EGLE's MiWaters online reporting system (www.michigan.gov/miwaters). If you have any problems with that system, email or call Erica Stevenson with DEQ (stevensone@michigan.gov; 586-601-7985).

This document outlines the report elements, provides answers to many questions you will be asked via MiWaters, and indicates which parts individual MS4s will need to prepare on their own. **It is important to note that it is the responsibility of the individual permit holders to tie these summaries of ADW activities back to your permit and to your SWPPI.** You will need to add your individual MS4 activities to these documents and upload the documents attached to this email to MiWaters.

Timeframe: The ADW Facilitation Team is reporting on activities, accomplishments and data from November 2017 through September 2019. For consistency, it may be best for you to use the same reporting timeframe.

Section 1. General Information and Outfalls

Each MS4 is responsible for their own reporting information under this section. All ADW members have a Watershed-Based Permit (MIG610XXX) and are Phase II permittees.

Section 2. Public Involvement and Participation Program

The ADW Team **answered the 3 questions** from this section below. A separate report document on progress in this area is also included that you will upload in the reporting process (see reference in answer 1 below). **Note: Please review and edit the PPP Report document. There are places to include your organization's information.**

Question 1: Section 2 – ADW PPP Report.doc, pages 1-3

Question 2: YES

Question 3: YES, with changes

Question 3a: YES

Section 3. Public Education Program (PEP)

The ADW Team **answered the 3 questions** in this section below. A separate report document on progress in this area is also included that you will edit and upload in the reporting process (see reference in answer 1 below). **Note: Please review and edit the PEP Report document. There are numerous places to include your organization's information and activities per your SWPPI. Add in the final page number below (highlighted in yellow in question 1) once you've added your information.**

Question 1: Section 3 – ADW PEP Report.doc, **Pages 1- ?**

Each MS4 should add into the report any PEP activities per your permit/SWPPI that you conducted on your own PRIOR to uploading to MiWaters.

Question 2: YES

Question 3: YES, with changes

Question 3a: YES

Section 4. Illicit Discharge Elimination Program (IDEP)

Question 1: Section 4 – ADW IDEP Report.doc, **Pages 1- ??**

Each MS4 should add into the report any IDEP activities, findings and results you conducted on your own PRIOR to uploading to MiWaters. Add in the final page number above (highlighted in yellow in question 1) once you've added your information.

Question 2, 2a, 2b, 2c: **Respond with number detected.**

Question 3: YES

Question 4: YES, with changes

Section 5. Post-Construction Program

Question 1: Section 5 – ADW Post Construction Report.doc, **Pages 1- ??**

Each MS4 should add into the report any Post-Construction activities you conducted on your own PRIOR to uploading to MiWaters. Add in the final page number above (highlighted in yellow in question 1) once you've added your information.

Question 2: YES

Question 3: YES, with changes

Section 6. Pollution Prevention/Good Housekeeping

Question 1: Section 6 – ADW Pollution Prevention GH Report.doc, **Pages 1- ??**

Each MS4 should add into the report any Pollution Prevention/Good Housekeeping activities you conducted on your own PRIOR to uploading to MiWaters. Add in the final page number above (highlighted in yellow in question 1) once you've added your information.

Question 2: YES

Question 3: YES, with changes

Section 7. Enforcement

Each MS4 is responsible for their own reporting information under this section.

Section 8. General Permit Requirements

The ADW Team answered questions 4 and 5 from this section, and a separate report document was provided on progress in this area that you will upload in the reporting process. Each MS4 should add into the report any Pollution Prevention/Good Housekeeping activities you conducted on your own PRIOR to uploading to MiWaters. Add in the final page number above (highlighted in yellow in question 1) once you've added your information.

Questions 1: Section 3-ADW PEP Report, Page 9

Question 2: Section 4 – ADW IDEP Report, Page ?

Question 3: Section 4-ADW IDEP Report

Section 9. Phase I – ONLY

Not applicable to ADW members

Alliance of Downriver Watersheds

Section 2: Public Participation Plan (PPP) Progress Report

A PPP was most recently developed for most permittees in the Alliance of Downriver Watersheds and submitted to the EGLE in 2010. A PPP was also submitted as part of the 2017 stormwater permit application.

Review and Revision of the WMPs

Watershed Management Plans (WMPs) for the Alliance of Downriver Watersheds were approved by EGLE in 2007. The 2007 version of the WMPs were most recently reviewed and updated by the Alliance of Downriver Watersheds in 2011-12, to include activities and data that had since been collected and/or developed and to achieve 319 approval from the State. The plans (Ecorse Creek Watershed Management Plan, Combined Downriver Watershed Management Plan, and the Lower Huron River Watershed Management Plan) were then made available for public review via the ADW's website. The WMPs was approved by EGLE in 2012. Since that time, the permittees within the Alliance of Downriver Watersheds have focused on implementing activities within the WMP and have additionally developed specific implementation plans to address water quality impairments. These activities are reported in other sections of the progress report. The WMP continues to be available to the public via the Alliance of Downriver Watersheds (ADW) website at <http://www.allianceofdownriverwatersheds.com/initiatives>.

[MS4s indicate if you have the current WMP posted or linked on your website]

A collaborative TMDL Plan to address progress evaluation monitoring was submitted and approved by EGLE in July 2019 to address the 5 TMDLs in the ADW.

Alliance of Downriver Watersheds

In 2007, the majority of permittees within the Alliance of Downriver Watersheds formally established under Public Act 517 of the Public Laws of 2004. The ADW consists of 22 public agencies in the Ecorse Creek, Combined Downriver and Lower Huron River Watersheds within Wayne and Monroe Counties. The ADW meets (open to the public with schedules posted on the website) on a regular basis and works together to cooperatively manage the rivers, lakes and streams within the watershed. During the reporting period, the ADW met on the dates listed below. Meeting agendas and summaries are posted on the ADW website.

- **Full ADW**

The full ADW has met six (6) times since the last reporting period with an additional meeting scheduled for November 2019. Meeting dates have included:

November 2, 2017

February 21, 2018

May 9, 2018

September 19, 2018

February 13, 2019

May 8, 2019

September 18, 2019

November 2019 (date to be determined to approve budget)

- ***Joint Public Involvement Committee and Technical Committee***

The joint Public Involvement/Technical Committee has met ten (10) times since the last reporting period including:

January 30, 2018

April 24, 2018

June 19, 2018

August 7, 2018

October 23, 2018

January 15, 2019

February 26, 2019

April 30, 2019

July 16, 2019

October 23, 2019

- ***Executive Committee***

The Executive Committee meets when needed to discuss financial and other issues. The Executive Committee met two (2) times since the last reporting period primarily to discuss annual budgeting, work plans and contracts. Meeting dates included:

September 5, 2018

September 4, 2019

ADW Membership and Budget

From the previous reporting period, membership dropped from 23 to 22 members with the Charter Township of Brownstown withdrawing in 2018.

- Final expenditures for 2017 were \$308,850.92
- Final expenditures for 2018 were \$402,714.18
- Expenditures to date for 2019 are \$107,505 (as of September 2019)

These funds were expended on efforts directly related to the betterment of the watersheds. The majority of the budget is a combination of dues, grants, and Wayne County funds. In both 2018 and 2019, the majority of expenditures were for conducting advanced IDEP investigations, public education, physical and biological monitoring, MS4 permit plans and template development, SAW grant related elements, as well as facilitation of ADW meetings.

Contracts

The ADW continued to be engaged in two (2) contracts during the 2018 and 2019 reporting year, including:

- Watershed Facilitation Services w/ Orchard, Hiltz & McCliment, Inc. Team
- Watershed Facilitation and Fiduciary Services w/ Wayne County

Inter-Agency Agreements

During the 2018-2019 reporting period, the ADW maintained (1) Inter-agency Agreements (IAA) with 1 entity for their assistance with ADW initiatives:

- Fiduciary Services Agreement w/ Wayne County

New MS4 Permits Submitted

The ADW members new individual MS4 permits were due to the MDEQ April 3, 2017. The ADW worked together to develop several collaborative portions of the permit as well as templates for use by the various ADW members. This work was completed in our continued efforts to work together to address water quality issues, collaborate and share resources. The following collaborative sections of the permit were developed and attached to each ADW members 2017 MS4 permit (not yet EGLE approved). The Collaborative sections of the permit listed below were originally submitted to EGLE in 2017. Based on EGLE review and comment, the collaborative sections were modified and then approved by EGLE in May 2019.

- Public Participation Plan
- Public Education Plan
- Illicit Discharge Elimination Plan
- Total Maximum Daily Load Implementation Plan

In addition, the following templates were developed and distributed to ADW members for their modification and use in submitting their MS4 permit:

- Enforcement Response Procedure (ERP)
- Construction Runoff Control Program
- Post-Construction Runoff Control Program
- Pollution Prevention/Good Housekeeping

MDEQ/EGLE Stormwater, Asset Management, and Wastewater (SAW) Grant

The ADW submitted a SAW application under the Stormwater Management Plan option in 2013 requesting \$999,900 in funds with a local match of \$111,100. The ADW was funded in the fourth round of SAW awards. SAW funded work began in 2017 with the initial focus on developing new MS4 permit collaborative plans and templates for use by the ADW as well as planning efforts related to the additional SAW work. The majority of SAW work was completed in 2018 and 2019. The final deliverable to EGLE to fulfill SAW grant requirements is a Stormwater Management Plan that is due in December 2019. Major Tasks and work completed with SAW funds in 2018 and 2019 include:

- Development of centralized GIS dataset of stormwater outfalls, discharge points and MS4 system assets with GPS field surveys completed to fill in data gaps within IDEP priority areas.
- Dye Testing of ADW member facilities/communities in ADW priority areas to look for any illicit discharges.
- Collaborated and worked on development of stormwater planning and design rules/guidelines for submittal to EGLE in conjunction with Oakland and Macomb counties.
- Collaborated with and prepared pollution prevention action plans for ADW member facilities.
- Site assessments and conceptual planning for green infrastructure improvements for 25 ADW member properties.
- Engaged interested ADW members in development and analysis of sustainable stormwater funding mechanism via stormwater utilities.

Alliance of Downriver Watersheds

Section 3: Public Education Plan (PEP) Progress Report

The PEP section of the Watershed Management Plan was developed to promote, publicize, and facilitate watershed education in the Alliance of Downriver Watersheds. In addition, in 2017, the ADW members submitted a Collaborative Public Education Plan and Table along with their 2017 Stormwater Discharge Permit Applications. The Collaborative PEP was approved by EGLE in July 2019, however, ADW member communities have not received approved 2017 permits as of the time of this reporting. Following is a summary of the progress made on PEP implementation. The reporting period covers November 1, 2017 – September 30, 2019.

The ADW included activities for the period **November 1, 2017 to September 30, 2019**, but permittees should fill in additional progress on their own public education activities such as efforts to distribute materials provided by others. Areas after each activity are provided for this purpose and are highlighted in yellow. Comments to the right are provided as additional helpful instruction for collecting needed materials and producing the report. **Please delete this paragraph AND all comments and make sure the inserted images line up with the appropriate section prior to saving your final report and submitting it to MiWaters.**

Distribute Pollution Prevention Literature

{MS4s need to check your individual SWPPI to determine if you committed to distribute literature for activities you committed to and, if applicable, include reporting on those here.}

ADW Green Schools Museum To You: River Residency Stream Table Simulation Workshops

Each year, the ADW gives hundreds of students an opportunity to learn about watersheds, water flows and erosion, flooding, and the consequences of human activities on water quality. Made possible by a partnership between the ADW, Wayne County Green Schools and the University of Michigan, Museum of Natural History, the Stream Table River Residency program provides in-school workshops focused on a 12-foot traveling stream simulation table that cycles 40 gallons of water and holds 240 pounds of plastic sediment. Students work in small groups and record their observations in accompanying journals. All workshops are inquiry based and meet state standards for social studies and the new Next Generation Science Standards. Green Schools (as designated through a Wayne County program) in the ADW are able to choose a combination of workshops. The ADW covers the cost of a one-day workshop. **During this reporting period, the ADW provided vouchers to 13 schools for a 1-day River Residency Workshop.** Some of the schools chose to extend the number of days of the workshop with their own funding.



- St Pius, Southgate had the stream table for two days, November 30 – December 1, 2017. 137 3rd-6th graders participated.
- Bates Elementary, Woodhaven had the Stream Table for two days, January 22-23, 2018.

1105th graders participated.

- St Sebastian Catholic School, Dearborn Heights had the table for two days January 29 & 30, 2018; 90 3rd-5th grade students participated.
- Arno Elementary, Allen Park had the table for one day, April 23, 2018; 85 4th graders participated.
- Barnes Elementary, Flat Rock had the Stream Table for five days, April 9-13, 2018; 430 3rd, 4th, & 5th graders participated.
- Chapman Elementary, Rockwood had the table for two days, April 30 – May 1, 2018; 115 3rd & 4th graders participated.
- Shumate Middle had the table for two days, May 21-22, 2018; 101 6th & 7th grade students participated.
- Brownstown Middle, Brownstown had the table for 1 day, October 8, 2018; 166 6th grade students participated.
- Creative Montessori Academy, Southgate had the table for two days, November 14-15, 2018; 115 7th & 8th graders participated.
- John Paul II Catholic School, Lincoln Park had the table for two days, November 26-27. 2018; 110 Kindergarten-8th grade students participated.
- Wegienka Elementary had the table for one day, December 7, 2018; 63 5th graders participated.
- St. Sebastian School, Dearborn Heights, February 7-8, 2019; 98 K-8 students participated.
- Seitz Middle School, Riverview, March 13, 2019; 80 6th-8th graders participated.

A total of 1,700 students from ADW Green Schools learned from the River Residency Stream Table Simulation Workshops during the reporting period. The cost of a 1-day workshop is paid for by the ADW.

Teacher and Student comments:

"The Stream Table was so much fun, for the students and me! We had our biggest class of Fifth Graders in a decade go through this program: 110 children! It was great to see the children so engaged in the lesson. We will definitely schedule this again next year!" - Brenda Mayes, 5th grade teacher, Bates Elementary

"It was fun how we got to see how fast water could get through different materials: sand, clay, and loose gravel." - Nik, 5th grade student, Bates Elementary

"Teachers have been positive and feel that this program does a great job of helping kids to understand the importance of understanding and protecting our water. One teacher said, "I loved the program last year, and I liked it even more this year. I knew what to expect and could be more attentive to the presentation." I received many thanks for arranging the program, and I made sure to give credit to you and the Alliance of the Downriver Watershed. I will be sending out thank you notes to express our appreciation." – Kim Smith, 5th grade teacher, Barnes Elementary

"Teacher feedback was incredible. They absolutely loved it and enjoyed the experience. They could tell their students were completely engaged and interested. Teachers have also said their students have expressed their excitement with the activities." – Katie Thomas, Advisor, Creative Montessori Academy

"The kids had a great time so far today. Most of them told me it was cool, awesome, fun and we should do it again. One teacher came in right after a group had finished and told me that it was a good thing the kids were done because she would have shoved them out of the way to get to the erosion table. Thank you so much for the opportunity to have the STREAM table come to Shumate. The kids had a wonderful time and it was a great to have hands on opportunities for my special ed students." – Debbie Turley, teacher, Shumate Middle



High PAH Pavement Sealants – Coal Tar Education

High PAH coal tar-based pavement sealants are bad for water quality and dangerous to human health. The ADW is supporting member communities in taking action to protect clean water and public health from these toxic pavement sealants and educating on safer alternatives available. In 2018, the ADW hosted a presentation by John Leon of the Grosse Ile Conservancy on coal and its effects on our waterways. This presentation influenced the ADW's decision to approve ADW budget in 2019 to begin coal tar education.

In 2019, the ADW developed and hosted an hour-long webinar "The Problem with Pavement Sealants" on June 18th. Registration information and marketing materials were developed by the ADW and distributed to members to encourage people to sign up. Speakers included Rebecca Esselman, HRWC, Matthew Best, Director of Public Services at Van Buren Township as well as John Leon from Grosse Ile Township. Approximately 20 people joined the webinar. The webinar is posted to the ADW website for download as well as an example public information brochure. The ADW communities plan to update the brochure and distribute it electronically to its member communities.

<https://allianceofdownriverwatersheds.com/initiatives>

2018 Tree Planting- US Forest Service

As part of a US Forest Service grant, the ADW had funds available to organize and plan two tree planting events in September 2017. The events in Gibraltar and Van Buren Township were assisted by The Citizen Foresters who helped with leading volunteers on proper tree planting. 20 trees were planted in Gibraltar and 30 trees were planted in Van Buren Township.

Invasive Species Workshop

On April 28th, 2018 the ADW Facilitation Team in partnership with the Taylor Rotary Club and Taylor Conservatory, conducted a public invasive species training at Heritage Park in Taylor MI. The training was conducted in two parts, formal classroom presentation and an interactive field demonstration. During the classroom session, participants received an overview of what makes a species invasive, why they are detrimental to our native ecosystems, and what individuals can do to help stop the spread of invasive species in their communities. After the overview, an introduction to plant identification was conducted in which participants learned how to use a dichotomous key and were asked to download the MISIN application on their mobile devices. After they had completed the download, participants worked through a guided identification scenario with ADW facilitators to become familiar with the application.

The field demonstration began with a recap of plant identification and vocabulary learned in the previous session. Several examples were provided, and the dichotomous keys were used to identify some trees found in the Taylor Conservatory Botanical Garden. A brief discussion followed



regarding the common invasive species that could be found in the surrounding landscape and how to identify them. Participants then completed a field identification and MISIN upload followed by a tutorial on the proper way to remove and dispose of several invasive species. A brief discussion and Q&A session ended the training.

2018 Watershed ADW Community Calendar

In 2017, the ADW budgeted for the design, printing, delivery and distribution of 45,000 Watershed Community Calendars. The calendars featured water-related photos from local nature photographers and 12 months of tips for preventing stormwater runoff pollution and protecting the waters of the ADW. Additionally, recreation and volunteer stewardship opportunities in the ADW area are highlighted. The ADW members received delivery of the calendars in October 2017 for distribution to residents, businesses and constituents. Quantities for each ADW member were determined by the amount of dues paid (which is based on population).



In addition to the ADW members, 4,500 calendars were provided to the following organizations for further distribution:

- Dearborn Heights Watershed Council
- Huron River Watershed Council
- Downriver Linked Greenways
- Detroit River International Wildlife Refuge
- Friends of the Detroit River
- Downriver Chamber of Commerce
- Riverside Kayak (photo contest sponsor)
- Detroit River Water Festival
- H2E River Adventures (photo contest sponsor)
- Westcroft Gardens (photo contest sponsor)
- Willow and Lake Erie Metroparks
- Wayne County Green Schools in the ADW area
- Downriver Community Conference
- Michigan Sea Grant

The following quantities of calendars were provided to ADW member communities:

Number of Calendars	
2,650	City of Allen Park Public Services
525	City of Belleville

4,950	Brownstown Twp Dept of Public Works
1,775	Dearborn Heights City Hall
675	Albert B. Buday Civic Center, City of Ecorse
1,775	City of Flat Rock, City Hall Offices
925	Gibraltar City Municipal Building
1,950	Grosse Ile Township
375	City of Inkster
1,000	City of Lincoln Park
250	Melvindale Dept of Public Works
1,625	Riverview Department of Public Works
725	Rockwood City Hall, Public Services Dept
4,600	City of Romulus Dept of Public Works
1,375	City of Southgate Department of Public Services
750	Sumpter Twp Department of Public Services
7,500	City of Taylor Dept of Public Works
2,050	Van Buren Township Offices
2,000	Wayne County Environmental Services
525	City of Westland Department of Public Services
1,825	Woodhaven City Hall
400	City of Wyandotte
275	Woodhaven Brownstown School District, Central Administration
40,500	

2018 Photo Contest

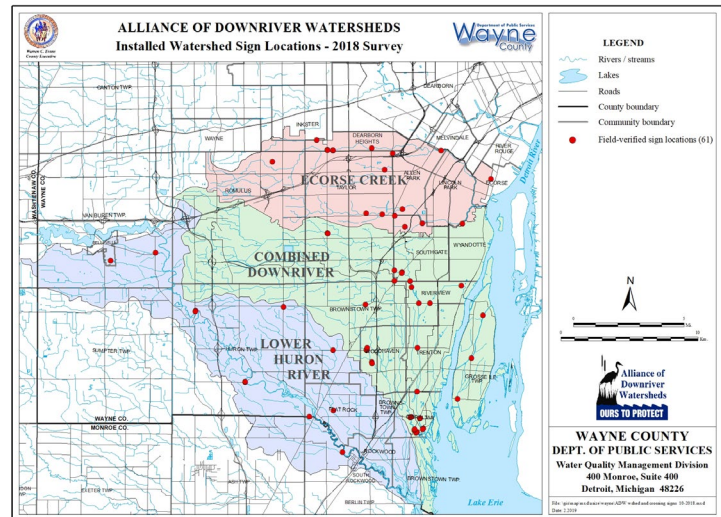
The ADW hosted a photo contest that supported and furthered outreach goals. The contest was promoted by the 2018 Watershed Community Calendar and sought photos each month from the public that demonstrated their connection to the freshwater resources of Southeast Michigan and pollution prevention behaviors. Entries were submitted at the ADW website and shared with the public via Instagram. Winning photos earned prizes, provided by local ADW businesses, and were incorporated into the 2020 calendar (slated for distribution in October 2019). Additionally, the contest was promoted through social media, print advertising, a public relations campaign targeting local press and by ADW members. 107 participants from 27 communities submitted 182 photos. The ADW plans to run the photo contest again in 2020.

System Labeling and Signage - Watershed Signage Field Inventory Project

Beginning in 2010, the ADW began installation of “Entering Watershed” and “Creek Crossing” signs. Since 2014, the ADW has maintained a map of the locations of installed, existing creek crossing and entering watershed signs. In 2018, the ADW began a project to survey and geo-locate all existing installed watershed/creek crossing signs throughout the ADW watershed, check condition and determine if replacement is needed. The field surveys began in May and concluded July 2018.

The original ADW Sign Project installed a total of 47 signs in the first phase. The second phase of ADW sign Project installed 12 signs for a total amount of 59 signs. A total of 20 ADW signs were purchased through the Wayne County Department of Public Services (WCDPS) Clearinghouse and installed prior to the ADW Sign Projects, thus bringing the WCDPS known minimum total of installed signs to 79. During this ADW Sign Project Field Survey it was discovered that some smaller ADW signs, that were not part of the earlier ADW sign projects or purchased through the WCDPS Clearinghouse, had been installed. These smaller signs that were found were geo-located and included in the ADW Sign Project Field Surveys.

The final report includes a data table for each sign that was located and consists of a photo of each sign, the sign location, sign condition, and recommendations if maintenance is required and/or if sign replacement is needed. Additionally, recommendations to install new signs are included in the final report.



Household Hazardous Waste Collection Days

Wayne County continued to hold Household Hazardous Waste Day collections in 2018 and 2019 including the following:

2018 Events

In 2018, four (4) Household Hazardous Waste Days were held for Wayne County residents including one in the ADW. This event held in the ADW was held in Taylor on November 3, 2018 at the Wayne County Community College District.

2019 Events

In 2019, four (4) Household Hazardous Waste Days were held for Wayne County residents including one in the ADW. This event held in the ADW was held in Taylor on October 19, 2019 at the Wayne County Community College District.

Pop-Up Display for Key Venues and Events in Member Communities

The ADW members continued to use the ADW designed and produced (in 2016) outreach displays at key venues and events in their communities. The display's messaging shows how ADW communities are working for clean water, and shares with residents how they can prevent stormwater pollution in their everyday actions. These are available for check out by members through the Wayne County Department of Public Services, Water Quality Management Division. In 2018 and 2019, the ADW Panel Displays were displayed in a number of ADW member communities including dates and locations below.

7 Simple Steps Display

Display Name	Event	Community	Dates
<i>7 Simple Steps</i>	<i>Shiver on the River</i>	<i>Detroit-Belle Isle</i>	<i>2/3/18</i>

ADW Panel Display

Event	Community	Dates
<i>Flat Rock City Hall</i>	<i>Flat Rock</i>	<i>1/2/17 - 1/23/17</i>
<i>Woodhaven Brownstown School District</i>	<i>Woodhaven</i>	<i>1/23 /17 – 3/28/17</i>
<i>Romulus City Hall</i>	<i>Romulus</i>	<i>4/19/17- 5/19/17</i>
<i>Riverview City Hall</i>	<i>Riverview</i>	<i>5/12/17 – 7/10/17</i>
<i>Suds on the River</i>	<i>Ann Arbor</i>	<i>9/14/17</i>
<i>Suds on the River</i>	<i>Ann Arbor</i>	<i>9/14/17</i>
<i>Brownstown Township City Hall</i>	<i>Brownstown Township</i>	<i>11/13/17 – 12/1/17</i>
<i>Grosse Ile Township Hall</i>	<i>Grosse Ile Township</i>	<i>11/1/17 – 1/26/18</i>
<i>Various Grosse Ile Township Public Schools</i>	<i>Grosse Ile Township</i>	<i>11/1/17 – 1/24/18</i>
<i>Romulus City Hall</i>	<i>Romulus</i>	<i>4/9/18 – 4/26/18</i>
<i>Suds on the River</i>	<i>Ann Arbor</i>	<i>8/7/18 – 9/5/18</i>
<i>Flat Rock City Hall</i>	<i>Flat Rock</i>	<i>12/11/18 – 12/31/18</i>
<i>Gibraltar City Hall</i>	<i>Gibraltar</i>	<i>12/11/18 -2/15/19</i>
<i>Romulus City Hall</i>	<i>Romulus</i>	<i>4/18/19 – 6/10/19</i>
<i>Riverview City Hall</i>	<i>Riverview</i>	<i>6/10/19 – 6/27/19</i>
<i>Various ADW Communities</i>	<i>Various ADW Communities</i>	<i>7/16/19 – 9/11/19</i>
<i>Suds on the River</i>	<i>Ann Arbor</i>	<i>9/12/19 – 9/15/19</i>

ADW Leadership Communication

In 2019, the ADW budgeted funds to develop a plan to improve communication and awareness of the ADW with member leadership (councils, mayors, boards, city managers, etc). A secondary goal is to provide brief updates that can be used by ADW members for further distribution. During this reporting period, the ADW:

- developed details of the communication plan
- developed an email distribution list of ADW member leadership, elected officials, applicable department heads

- drafted the first e-newsletter with goal of 3 e-newsletters per year. 1st newsletter planned for October 2019.
- determined protocol for data management and security
- established a marketing email account
- drafted a 10-15 minute slide presentation to be given at ADW leadership council/board meetings with goal of presenting to each ADW member community once over the next 2-3 years. Focus of presentation is to raise awareness and celebrate successes.
- began to schedule initial presentations with 4-5 ADW member communities.

ADW Annual Student Bug Hunt

As part of the ADW's continuing effort to engage ADW residents, the ADW engaged partner schools to assist in sampling a number of sites for macro-invertebrates. Participating schools, number of students and number of sites monitored are summarized in the tables below. 318 students were engaged in 2018 and 104 thus far in 2019.

School	School Community Location	Bug Hunt Site	Location	Sample Site Community Location	Watershed	Number of Students Spring 2018 approx	Number of Students Fall 2018 approx
Barnes Elementary	Flat Rock	HR1	Flat Rock Community Park	Flat Rock	Lower Huron	29	26
Flat Rock HS	Flat Rock	HR1	Flat Rock Community Park	Flat Rock	Lower Huron	0	20
Southgate Creative Montessori	Southgate	EC4	Grams Drain at Brest and McCann	Southgate	Ecorse Creek	29	27
Seitz Middle School	Riverview	CD15	Frank and Poet at Homeister	Riverview	Combined Downriver	29	22
Pardee Elementary	Dearborn Heights	EC7	RA Young Rec Center	Dearborn Heights	Ecorse Creek	29	29
Southgate Anderson HS	Southgate	CD2	SAHS East	Southgate	Combined Downriver	2	8
Trenton HS	Trenton	CD5A	West Road/Frank and Poet	Trenton	Combined Downriver	19	28
Brownstown Elementary	Brownstown Township	HR8	Sherman Drain	Brownstown Township	Lower Huron	7	14
						144	174
						total 2018	318

School	School Community Location	Bug Hunt Site	Location	Sample Site Community Location	Watershed	Number of Students Spring 2019 approx
Trenton HS	Trenton	CD5A	West Road/Frank and Poet	Trenton	Combined Downriver	20

Southgate Anderson HS	Southgate	CD2	SAHS East	Southgate	Combined Downriver	6
Southgate Creative Montessori	Southgate	EC4	Grams Drain at Brest and McCann	Southgate	Ecorse Creek	28
Pardee Elementary	Dearborn Heights	EC7	RA Young Rec Center	Dearborn Heights	Ecorse Creek	22
Brownstown Middle School	Brownstown Township	HR-8	Sherman Drain/Inkster Rd	Brownstown Township	Lower Huron	8
Flat Rock HS	Flat Rock	HR1	Flat Rock Community Park	Flat Rock	Lower Huron	20
					Total	104

Summary of the evaluation and determination of overall effectiveness of the PEP during the reporting period

Evaluation of the overall effectiveness of the PEP consists of a combination of both the accumulated measures of the effectiveness of the PEP's individual activities (shown above) and a measure of the effectiveness of the sum of all the activities through a carefully developed coordinated survey that was conducted by the ADW in 2016. "Resident Survey on Local Waters," results are reported in the Educational Resources section of the ADW website:

<https://allianceofdownriverwatersheds.com/educational-resources/>.

[MS4s need to check your individual SWPPI for activities you committed to and include reporting on those here. Examples may include brochures distributed, items posted to your website, your own environmental festivals, e-waste pick up days, bulk item pick up days, cable channel announcements, advertising the household hazardous waste days, stormdrain grates installed with no dumping signs, etc.

Alliance of Downriver Watersheds

Section 4: Illicit Discharge Elimination Plan (IDEP) Progress Report

The Alliance of Downriver Watersheds works collaboratively to effectively and efficiently identify and eliminate illicit discharges within the ADW via an Illicit Discharge Elimination Plan (IDEP). The ADW strategy has been to evaluate the status and trends of surface waters in the ADW to identify priorities, followed by investigation and remediation of problem areas. In addition, in 2017, the ADW members submitted a Collaborative Illicit Discharge Elimination Plan along with their 2017 Stormwater Discharge Permit Applications. The Collaborative IDEP was approved by EGLE in July 2019, however, ADW member communities have not received approved 2017 permits as of the time of this reporting. The Collaborative IDEP presents the watershed-wide priority action plan that is being pursued to effectively and efficiently identify and eliminate illicit discharges within the ADW. The plan consists of existing and planned activities and strategies, anticipated through the duration of the permit, that ADW members are individually and collectively implementing to identify and eliminate illicit discharges and reduce pathogen levels in Ecorse Creek, Combined Downriver, and Lower Huron River watersheds. This collaborative plan builds on the collective knowledge of the ADW members and implementation team. Specifically, the plan starts by evaluating the status and trends of surface waters in the ADW to identify priorities, followed by investigation and remediation of problem areas. Such a strategy focuses resources on the most likely sources of pollution or illicit discharge, rather than on areas with low likelihoods of problems.

The plan identifies 10 major activities that will be performed during the course of the MS4 permit. In addition, SOPs and forms were developed and included in the Collaborative IDEP. These SOPs and forms can be utilized by ADW members.

Collaborative IDEP efforts began in 2007 when the ADW budgeted \$101,094 for Wayne County Department of Public Services to provide staff training and to perform problem area identification across the watershed area. Since 2010, the ADW has budgeted over \$840,000 for collaborative IDEP activities. Over 150 ADW member staff have received IDEP training and Wayne County alone has performed IDEP advance investigation (specifically facility dye-testing) at over 280 commercial and municipal facilities throughout the ADW watershed.

Coordinated Complaint Response

The ADW members continue to promote the use of the Wayne County Department of Public Services telephone “hot line” (888.223.2363) to log and coordinate response to environmental complaints and concerns of all types. The ADW promotes this hot line in the biennial watershed calendar as well as on the home page of the ADW website. www.allianceofdownriverwatersheds.com

- [MS4s indicate where you have done promotion of the hot line number]

WQMD received and responded to 33 environmental concerns within the ADW watersheds. Several of these came from an ADW community staff, WC Roads, and WC Drains staff reporting environmental concerns to WQMD as a result of routine field operations. One of the incidents also included the assistance of the Downriver Hazmat Team and/or US EPA response team. HazMat EPA incident was in December 2018 (cities of Riverview & Trenton) – WQMD records do not record an estimated volume of material, however, City of Trenton Fire Department took the responsibility of contracting with MPC to capture the truck fuel spill and was planning to pursue recovering costs. The incident occurred along

King Road impacting the Frank & Poet Drain and resulted in responses from both the Riverview Fire Department and Trenton Fire Department with communications between them MDEQ, EPA and Wayne County Drain Office.

Inventory of Facilities for Dye Testing

As part of the development of the MS4 permit application and the Collaborative IDEP, an inventory of ADW member owned facilities was performed. The purpose of this task was to determine how many facilities are left to be dye tested and identify those in priority areas. This involved a comparison of survey data collected from ADW members, available GIS data, and records of facilities already dye tested. The list of facilities and their priority level was included as part of the Collaborative IDEP. The ADW will utilize this list to schedule and perform future dye testing of ADW member-owned facilities.

Advanced Investigations (November 2017-September 2019)

- Between November 2017 and September 30, 2019, **16** facility dye-test inspections were performed at municipal, commercial and industrial facilities in the ADW by WCDPS. One illicit discharge and eight environmental concerns were identified and addressed at five of the facilities.
 - In 2017/18, eight commercial facilities were inspected. One in the Combined Downriver watershed and seven in the Ecorse Creek watershed. One illicit discharge and eight environmental concerns were identified and addressed at five facilities. In November-December 2017, one facility dye test inspection was performed at a commercial facility in the Combined Downriver Watershed, a recreational vehicle (RV) storage, maintenance and retail facility. The facility did not have illicit connections, but were performing outdoor vehicle cleaning and washing causing an illicit discharge. The storm sewers of the facility discharge into a Wayne County Road ditch, which drains to the Blakely Drain, a Wayne County Drain. The facility washes a minimum of 10 vehicles per day during the summer season. WQMD staff and ADW volunteers monitoring the Blakely Drain detected a strong septic odor in the road ditch and based on these observations, WQMD performed the inspection at the RV facility. WQMD provided technical assistance regarding options with recommendation to only wash vehicles indoors where the wastewater discharges into the sanitary sewer. Follow up communications have confirmed that all vehicle washing with soap occurs indoors.
 - In 2019 (through September), eight facility dye-test inspections were performed including one commercial facility in the Ecorse Creek in response to an illicit discharge complaint and seven ADW municipal facilities in the IDEP high priority areas as identified in the ADW's Collaborative IDEP plan. No illicit connections, discharges or environmental concerns were identified.
 - Since 2011, 344 facilities have been dye-tested. Forty-nine (49) illicit connections have been identified at eleven (11) facilities; twelve (12) illicit discharges have been identified at nine (9) facilities, and six (6) facilities with ten (10) environmental concerns. WQMD estimates that 815,720 gallons of polluted water will be removed from ADW waterways per year once all corrections are made. The pollutant loading reduction for the outdoor vehicle washing at the RV facility was not calculated for inclusion in this estimate.
- [MS4s indicate if you have done additional IDEP inspections/activities on your own during the reporting period and include findings, actions, enforcement, and results]

- [MS4s indicate if there were any significant illicit discharges, estimated volume and load discharged, and the locations of the discharge into both the regulated MS4 and receiving water] Per Question 2 in MiWaters.

County Road/Stream Crossing Dry Weather Screening: Between September 2017 and September 30, 2019, WCDPS surveyed 169 County road/stream crossings during dry weather throughout the ADW. Two hundred seventy-nine (279) outfalls were screened. Thirteen outfalls were identified to have dry weather flow and 13 dry weather samples (including 1 follow up sample) collected and analyzed for *E.coli*.

- In 2017, the Wayne County roads in the ADW IDEP priority areas were targeted for initial surveys. The Alliance of Downriver Watersheds (ADW) priority areas are located in the communities of Brownstown Township, Romulus, Flat Rock, Allen Park, Lincoln Park, Dearborn Heights, Trenton, Southgate, Woodhaven, Taylor, and Huron Township. One-hundred eight crossings were surveyed and 206 outfalls screened. Eleven outfalls had dry weather flow and sampled for *Escherichia coli* (*E. coli*). Below is a table summarizing the dry weather samples by ADW watershed. One sample of an outfall in the Combined Downriver Watershed in the City of Southgate discharging to the Frank and Poet Creek, had *E. coli* concentrations in excess of 1000 colony-forming units/100 milliliters of sample (CFU/100mL), designating this outfall for follow up screening.
- In 2018, the Alliance of Downriver Watersheds (ADW) dry weather screening took place in the community of Romulus in the Ecorse Creek, Combined Downriver, Lower Huron River and Middle Huron River watersheds in September 2018. Sixty-one crossings were surveyed, 23 were overgrown or enclosed and were unable to assess. Seventy-three outfalls were identified; two with dry weather flow. One of those outfalls was sampled, the other outfall with flow was not accessible. The *E. coli* concentration of the outfall sampled was less than 1000 CFU/100mL. Follow up sampling of one ADW outfalls with elevated *E. coli* in 2017 was conducted in 2018. The follow up sample had an *E. coli* concentration less than 1000 CFU/100mL. No follow up investigation is necessary at these outfalls during this screening cycle.

Year	# of Crossings	# of Outfalls	# with Dry Weather Flow
2017	108	206	11
2018	61	73	2
Totals	169	279	13

Samples	# of Samples	# of samples 0 - 1000 CFU/100mL	# of samples 1000 - 5000 CFU/100mL	# of samples >5000 CFU/100mL
Initial	12	11	1	0
Follow up	1	1	0	0
Totals	13	12	1	0

IDEP Training (November 2017-September 2019)

- Between November 2017 and September 30, 2019, thirty-six (36) staff from ADW member entities participated in the three Regional IDEP training workshops sponsored by SEMCOG, the ADW and the Alliance of Rouge Communities.

- Two (2) employees of ADW member entities attended the half-day IDEP Investigator training workshop held in the City of Rochester at the Van Hoosen Farm on April 12, 2018.
 - Fifteen (15) employees representing ADW member entities attended the half-day IDEP training workshop held at the VisTaTech Center at Schoolcraft College in Livonia on October 9, 2019.
 - A Stormwater Pollution Prevention and Good Housekeeping, IDEP Alert Observer Training workshop was also held in the afternoon of October 9, 2019. Nineteen (19) employees representing ADW member entities attended this workshop.
- [MS4s indicate what IDEP training you/your staff have completed during the reporting period]

Outfall Mapping

The goal of this task was to develop an ADW GIS database and map outfalls and storm water discharge points to waters of the State. On-going work through the ADW SAW grant includes:

- Initiate map development of centralized datasets of stormwater outfalls, discharge points and MS4 system assets. Request and receive existing GIS datasets of storm sewer systems and points of discharge from ADW members to initiate development of centralized datasets of stormwater outfalls, discharge points and MS4 system assets. A map of outfalls to waters of the State within the ADW will be prepared.
- Perform field surveys to GPS and fill in data gaps in outfalls to waters of the state, stormwater discharge points and MS4 system assets within IDEP priority areas. Update centralized database and maps.

Septic Systems [if applicable in your community]

[MS4s should summarize if any inspections took place, any problems found, how they corrected them, any areas taken off septic] If none, delete this section.

Updating Sewer Maps

[MS4s should summarize any updates to sewer maps during reporting period] If none, delete this section.

Alliance of Downriver Watersheds

Section 5: Post Construction Stormwater Runoff Program Progress Report

Post Construction Standards

Through the SAW grant, the ADW has been able to work toward meeting the new MS4 permit requirements for post-construction. Substantial regulatory changes are in the works for the MS4 permit program that will affect communities and Wayne County for new development and redevelopment projects. These changes offer an opportunity to streamline regulations across municipal boundaries to ensure that important considerations for economic development and efficient implementation are reflected in the new standards.

The ADW hosted two workshops in 2019 to allow members to be informed of the direction of the new Wayne County standards and give members an opportunity to provide input. The ADW facilitation team continues to be a part of the Regional Stormwater Standards Coordination Committee (“Committee”). The committee includes representatives from Wayne, Oakland, Macomb and Livingston Counties, and has worked collaboratively over the past 18 months to develop MS4 post-construction stormwater standards for water quality and channel protection that require new and redevelopment projects to manage site stormwater runoff for the MS4 permit areas.

GI Concept Plans

Under this task of the SAW grant, the ADW identified 19 conceptual green infrastructure opportunities for ADW maintenance facilities, municipal park lands, and open spaces. Concept drawings and cost opinions were prepared for each of these sites. The site selection process began with soliciting from municipalities suggestions for sites where green infrastructure would be most feasible and effective. A desktop review of possible sites for each municipality was then conducted. Based on this desktop review, three sites were chosen for each municipality and were visited by field staff to further investigate the feasibility of green infrastructure at each location. Based on the field investigation, sites were chosen based on runoff volume needing treatment, probable practice cost, presence of existing infrastructure, and the preference for practices in municipal parks listed in the SAW Grant application. Once final sites were chosen, the green infrastructure practices were designed to maximize the runoff volume treated at each site while minimizing the cost of the practice per gallon of runoff treated.

[MS4s, you could add more details as well as concept plan(s) for your specific plans that were completed by the ADW team via the SAW work]

Stormwater Utility Analysis

The ADW leveraged SAW grant funding to develop a framework for a plan to identify sustainable stormwater funding sources. Specific activities performed under this task included:

1. Identified interested communities.
2. Identified planning-level ranges of stormwater billing units for individual communities based on number of parcels and approximate impervious coverage for each zoning/land-use classification.
3. Evaluated a range of revenue potential for ADW communities using the billing unit calculations developed above. Evaluated revenue ranges based on a scenario that includes a flat residential rate and non-residential billings based on impervious coverage as compared to a single-family residential parcel (Equivalent Residential Unit, or ERU, method).

4. Identified top potential ratepayers in each ADW community based on the revenue calculations developed above.
5. Developed a framework for stakeholder involvement and public education on stormwater enterprise funds (a/k/a stormwater utilities).
6. Developed recommendations for structuring revenue options.

In August 2018, the Alliance of Downriver Watersheds met with representative communities to discuss the framework for a plan to identify sustainable stormwater funding sources and determine which municipalities were willing to participate. Three ADW member communities were interested and have participated in this task.

Stormwater Pond Inspections

As part of the SAW Grant, the ADW assessed 218 detention ponds in 17 municipalities. This study included gathering field data from all 218 detention ponds found through aerial imagery and performing a field investigation. The purpose of these assessments was to develop an understanding of overall pond conditions across a wide area of the combined watersheds and apply a rating system in order to prioritize maintenance activities. The inspected ponds were found to be in various physical conditions and states of hydraulic functionality. An inventory protocol for field data collection was developed to evaluate important attributes of each pond. These attributes were scored on a numerical scale and further processed using a weighted scoring methodology, which provided an overall rating for each detention pond. The overall ratings were then classified into three categories: high, moderate, and low priority. These ratings were then used to rank the ponds based on the severity of their need for maintenance in the watershed overall and for each municipality.

[MS4s, you could also include more details on the stormwater pond inspections specifically done within your community]

[MS4s indicate any other BMPs you implemented in your community and/or maintenance agreements you've entered into during the reporting period]

Alliance of Downriver Watersheds

Section 6: Pollution Prevention and Good Housekeeping Program Progress Report

PP/GH Training

A Stormwater Pollution Prevention and Good Housekeeping, IDEP Alert Observer Training workshop was held in the afternoon of October 9, 2019. Nineteen (19) employees representing ADW member entities attended this workshop.

Inventory and Prioritization of Municipal Facilities

An inventory of ADW member owned municipal facilities was performed. For each of their facilities, ADW members completed a form identifying the types of storm water controls at the site, and the pollutants stored at the site. The form was developed to aid in determining which facilities fell under the guidelines for high, medium, and low priority facilities. “High” priority facilities have specific procedures in place in order to ensure that proper steps are followed in order to minimize and prevent the discharge of pollutants to storm water from the site. Therefore, if a SOP for a high priority facility did not already exist, one was developed. Site visits were made to each high priority facility. At each site, the following assessments were made:

- Number and type of storm water controls on the site
- List of significant materials stored on-site that could pollute storm water; the description of the handling and storage requirements for each significant material; and the potential to discharge the significant material
- Routine and comprehensive inspection schedule
- Methods for training employees on good housekeeping practices

SOPs for 15 facilities were developed as part of this task.

[MS4s should add details specific to their community]

[MS4s indicate activities you’ve completed during the reporting period. Examples may include training that your staff attended, doing own inspections of facilities, inspected stormwater basins, street sweeping, catch basin cleaning, certified pesticide applicators, salt storage and use, yard waste pick up, etc.]

Alliance of Downriver Watersheds

Section 8: MS4 Watershed-Based General Permit Requirements Progress Evaluation | Monitoring

Permittees within the Alliance of Downriver Watersheds have worked with the Huron River Watershed Council and Wayne County to continue to execute long-term monitoring activities on behalf of the ADW and to follow the ADW water quality monitoring program to collect data and assess the water quality within the watershed. While the current permit does not specifically require reporting on TMDLs, the watershed partners have funded monitoring to determine progress toward meeting each TMDL. This monitoring program is also used to determine status and trends of water quality within the Alliance of Downriver Watershed affected by storm water discharges.

Following is a summary of monitoring efforts in 2018 and 2019, with brief summaries of monitoring efforts since the beginning of the ADW. The monitoring program is scheduled such that the majority of data is collected throughout Spring to Fall and the data is verified and compiled in early winter, with reporting in late winter. Details can be found in the annual monitoring report. Annual monitoring reports may be downloaded from the ADW website at <https://www.allianceofdownriverwatersheds.com/initiatives>. The monitoring reports also include the current five-year monitoring strategy.

2018-2019 Monitoring

Stream Discharge: Eight water-level stations (1 USGS station in Ecorse Creek Watershed, 7 sensors owned by Wayne County, and one owned by HRWC) have been established at sites throughout the ADW (2 in Ecorse Creek, 3 in Combined Downriver, and 2 in Lower Huron, with an additional sensor used to provide atmospheric pressure). All stations have at least a 5-year record of continuous flow data generally covering the April-October time period. Stream discharge was measured numerous times at different water levels at all of the sites to allow translation from water level to discharge and calibrate annual changes in site characteristics. All of the data is quality checked and processed to produce a seasonal record and generate statistics to be included in the monitoring report. The USGS station at the North Branch of Ecorse Creek was monitored in 2018 and 2019 as the longitudinal flow sensor for the ADW and for the purpose of tracking storm data. A storm flow sensor was also installed to track flow in real time at this site to assist with storm sample selection. Stream discharge is also measured at each water chemistry site to pair with data collected as described below.

Water Temperature: The water level sensors also recorded temperature data over the same intervals. Seasonal maximum temperatures can be determined over the sampling period, which can then be related to fish species tolerances in the annual reports. No new temperature data from pressure sensors was collected in 2018 and 2019. Temperature is also measured twice per month using handheld sondes during water chemistry monitoring site visits.

Water Chemistry: HRWC conducts water quality monitoring annually during the growing season at nine long-term sites in Wayne County through its Chemistry and Flow Monitoring Program. Long-term sites help track changing conditions over time. HRWC also monitors at investigative sites located upstream of selected long-term sites to gain a better understanding of upstream conditions, or at smaller stream sites to investigate potential sources. They report the results of this monitoring following the inclusion

of results through September. Each site is visited twice per month from April through September by volunteer collectors. During the reporting period, water samples were analyzed by the Ypsilanti Community Utility Authority laboratory in 2018 and by the Downriver Utility Wastewater Authority in 2019. The lab analyzes the samples for total phosphorus, total suspended solids and *Eschericia coli* concentrations. Volunteers also directly measure conductivity, pH, and dissolved oxygen with handheld sondes.

In total, 17 sites were sampled in 2018 and 2019. Since the beginning of the Chemistry and Flow Monitoring program, 33 sites have been sampled and over 100 volunteers have been trained and involved in the program. A presentation of data from the 2018 monitoring season can be accessed at <http://www.hrwc.org/chemistryandflow>.

In summary, monitoring data shows the following key results in the ADW area:

- Total phosphorus concentration ranges across the nine long-term sites in the ADW vary quite a bit year to year. The mean TP concentration across all long-term sites for 2018 was 0.14 mg/l with a median of 0.11 mg/l, both of which are above the target concentration of 0.05 mg/l (based on phosphorus TMDLs in the area). The bulk of the concentrations range between 0.07 mg/l and 0.14 mg/l, with a few samples exceeding this range by a considerable margin. Typically, these high concentrations are measured during or following storm event. As such, stormwater runoff is still a major pathway of overall phosphorus loading to the ADW waterways. At most long-term sites, there are no statistically-significant trends in TP, as concentrations vary year to year. The long-term site at Blakely Creek has shown increasing TP concentrations, unfortunately.
- Mean concentrations of total suspended solids across the ADW are well below the runoff sample standard of 80 mg/l. The vast majority of samples from long-term sites in the ADW had TSS concentrations below the target threshold. The mean TSS concentration across all long-term sites for 2018 was 20.7 mg/l with a median of 14.1 mg/l, indicating most samples are quite clear of sediments, even following some storm events.
- The data collected on bacteria (as *E. coli*) indicate that all long-term sites except one (Woods Creek) regularly exceed state standards. Long-term trends for *E. coli* in the ADW show no significant improvements and are either increasing bacteria counts or maintaining a consistent range. *E. coli* concentrations at Blakely Creek, Brownstown Creek, S. Ecorse Creek and N. Ecorse Creek are increasing, with most samples above the state single sample standards for Full Body Contact (300 *E. coli* cfu per 100 ml) and Partial Body Contact (1000 *E. coli* cfu per 100 ml). Mean *E. coli* concentrations in the ADW across all long-term sites for 2018 was 1,519 *E. coli* cfu per 100 ml with a median of 821.2 *E. coli* cfu per 100 ml, indicating consistently high *E. coli* concentrations across the ADW in exceedance of state standards.
- All sites in the ADW except Woods Creek had average and median conductivity values that exceeded a standard set at 800 μ S. No discernible trends have been detected in conductivity data at long-term sites.
- Most samples at the eleven long-term monitoring sites had values for dissolved oxygen that were within the normal range for Michigan surface waters. However, several measurements at Silver Creek, Brownstown Creek, and N. Ecorse Creek routinely did not meet the state standard of 5 mg/l.

Stream Geomorphology: Wayne County staff completed rapid geomorphological surveys for 14 streams through 2011 to help determine stream reach stability. These surveys began in fall 2008 as part of the Grow Zone grant project and continued in 2010-11. No new sites were surveyed in 2018 or 2019.

Stream Biology: Biological monitoring efforts are carried out through two macroinvertebrate collection programs. The two organizations (HRWC and Wayne Co) meet periodically to assure comparable methods and data. The biological monitoring efforts of the Wayne County Department of Public Services, Water Quality Management Division and the Stream Teams continued with the following events:

- WCDPS/Stream Team Spring 2018 Bug Hunt; April/May 2018: 12 sites monitored
- WCDPS/Stream Team Fall 2018 Bug Hunt; October 2018: 13 sites monitored
- WCDPS Winter Stonefly Search; February 2019: 1 site
- WCDPS/Stream Team Spring 2019 Bug Hunt; April/May 2019: 9 sites monitored
- WCDPS/Stream Team Fall 2019 Bug Hunt; October/November 2019: 15 sites targeted for monitoring
- Number of students participating in the WCDPS/Stream Team bug hunts in 2018: 318.
- Number of students participating in the WCDPS/Stream Team bug hunts in spring 2019: 104.

In addition, the biological monitoring efforts of the Huron River Watershed Council and volunteers included the following events across six sites in the Lower Huron River Watershed:

- Winter Stonefly Search, January 2018 – 2 sites
- Spring River Round-Up, April 2018 – 0 sites
- Fall River Round-Up, October 2018 – 3 sites
- Winter Stonefly Search, January 2019 – 2 sites
- Spring River Round-Up, April 2019 – 2 sites

[Permittees can add monitoring activities they have engaged outside of the program developed by the ADW/HRWC/Wayne County.]

[MS4s should include a list of pollutants that were discharged (if any) including the estimate volume and load discharged, and the locations of the discharge into both the regulated MS4 and receiving water. Per question Section 8:2 in MiWaters]