

Storm Water Progress Report

Covering the period September 2015 through August 2017

Michigan General Permit Number **MIG619000 | MIG040000**

Certificate of Coverage Number **MIGXXXXXX**

Permittee: Eastern Michigan University (EMU)

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Date: **XXXXX XX, 2017**

Signature of Authorized
EMU Representative _____

Name of signer

Title

Name of signer

Title

Introduction

This document fulfills EMU's NPDES Phase II storm water permit requirement for a Progress Report. This report includes information on progress made over the time period stated on the cover towards compliance with the six minimum measures and other commitments made in EMU's Storm Water Pollution Prevention Initiative (SWPPI) or Storm Water Management Plan (SWMP) pursuant to the permit listed on the cover. Subsequently, EMU submitted an application for a new permit, which has not yet been drafted or approved by MDEQ. Thus, this report follows items and requirements under the previous (expired) permit.

This document also reports on the assessment of water quality in the area affected by EMU's storm water discharge along with any changes made to Best Management Practices (BMPs) or Watershed Management Plans (WMP). The report follows reporting requirements specified in the permit and is organized by the six minimum measures, with additional reporting sections at the end.

I. Compliance Assessment

A. Public Participation Plan (PPP)

A PPP was most recently developed for most permittees in the middle Huron River watershed and submitted to the MDEQ in July 2009. It was revised and resubmitted in July 2010. A PPP was also submitted as part of the 2013 stormwater permit application.

Review and revision of the WMP

A Watershed Management Plan (WMP) for the Middle Huron River was approved by MDEQ in 2008. The 2008 version of the WMP was most recently reviewed and updated by the Huron River Watershed Council (HRWC) in 2010-11. It was then made available for public review via HRWC's website. The WMP was approved by MDEQ in 2011. Since that time, the permittees within the Middle Huron River Watershed 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 this report.

The WMP continues to be available to the public via the Huron River Watershed Council's (HRWC) website at <http://www.hrwc.org/publications/watershed-management-plans/> (number 7 on the list). The WMP is scheduled to be revised in three sections, starting with the middle section (Barton Dam to Geddes Dam) in 2017-18. The following TMDL Implementation Plans were also developed or revised and submitted to MDEQ:

- Malletts Creek (biota impairment)
- Swift Run (biota impairment)
- Ford and Belleville Lakes (nutrient impairment)
- Argo to Geddes section of the Huron River (bacteria impairment)
- Honey Creek (bacteria impairment)

The above plans are all referenced in the umbrella WMP and are available through the Middle Huron Stormwater Advisory Group (SAG) website at <http://www.hrwc.org/middle-huron-sag/>.

Citizen Advisory Committee

In 2008, the permittees within the Middle Huron River Watershed formed the Middle Huron Stormwater Advisory Group (SAG). This is a forum, open to the public, for planning, discussion and reporting on stormwater treatment and management practices. The SAG meets in conjunction with the Middle Huron Partnership, which was formed in 1997 and focused on monitoring and reducing phosphorus. During the reporting period, the SAG met on the following dates:

- September 10, 2015
- June 2, 2016
- September 15, 2016
- December 1, 2016
- March 2, 2017
- June 8, 2017

Meeting agendas and lists of attendees to the meetings are included in Appendix A. All questions about meetings should be directed to Ric Lawson the SAG facilitator (rlawson@hrwc.org, 734-769-5123 ext.609).

In addition to the SAG meetings, HRWC and SAG partners also facilitate public meetings focused on planning and implementation activities within high priority tributaries. These groups include the Malletts Creek Coordinating Committee (MC3), the Millers Creek Advisory Team (MCAT), and the Fleming Creek Advisory Committee (FCAC). All three groups meet monthly to quarterly as needed. All three groups also meet to review development proposals from within the tributary watershed. A list of meeting dates is included in Appendix A. Attendees lists and agendas can be requested from Ric Lawson.

B. Public Education Plan (PEP)

The PEP section of our SWPPI was developed to promote, publicize, and facilitate watershed education in the Middle Huron watershed. Following is a summary of the progress made on PEP implementation.

Activity #1: HRWC and/or Southeast Michigan Partners for Clean Water Informational Materials

Brochures, tip cards, posters, and other materials developed by HRWC or the regional public outreach campaign, "Our water. Our future. Ours to Protect" were distributed by individual jurisdictions.

These materials contain information that covers required Topics 1-8. The overall campaign promotes key messages on proper use of fertilizer, car care, landscaping, storm drain awareness, household hazardous wastes, water conservation, pet care, and riparian protection.

During the reporting period the Southeast Michigan Partners for Clean Water met periodically to review existing materials and propose updates and revisions to the campaign messaging and delivery methods.

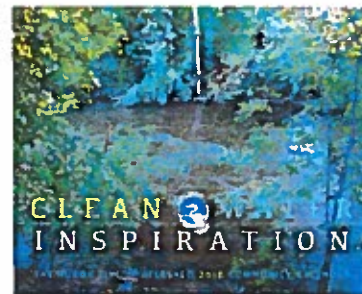
Updated tip cards on storm drains, landscaping, household hazardous waste, pet care, lawn care and car care were released by the Southeast Michigan Council of Governments in the spring of 2015 for printing and distribution. See <http://semcog.org/What-You-Can-Do-To-Protect-Our-Waterways>.

EMU

- Community Partners for clean streams, HRWC, and SEMCOG educational materials were handed out to students', faculty and employees at the Interdisciplinary Environmental Science & Society office, Vision volunteer center and Environmental Health & Safety office.
- These materials are also handed out to students and community members who volunteer at EMU Storm drain Labeling events.
- Constructed a watershed education pavilion with rain barrel at the Community Garden site to provide distribution of hardcopy education materials. The pavilion provides shelter and shade for the garden volunteers. It also demonstrates the use of the rain-barrel BMP.
- Has hosted the annual Washtenaw County waste drop-off/Clean Up Day event since 2009. EMU provided the venue located at the Rynearson Stadium parking lots. Washtenaw County residents were able to drop off a variety of house hold wastes. Events this period were on October 17, 2015 and October 15, 2016. The next event is October 14, from 9-2pm

Activity #2: Community Watershed Calendar

During the reporting period HRWC and participating communities produced, printed, and distributed 37,000 and 37,000 2018 Watershed Community Calendars presenting a full year of monthly informational prevention tips targeted to homeowners in a single The tips and provided resources are related to permit requirements such as illegal dumping, fertilizer and care, rain barrels, pet waste, car care, rain gardens and plants, home toxics, storm drain awareness and watershed education.



2017

2016



pollution
piece.
topic
yard
native
general

Participating communities distributed calendars in the residents either through by *direct mail, at customer service counters or through other channels as follows:

	2016	2018
City of Brighton	500	500

Livingston County Drain Commission	700	700
Livingston County Road Commission	200	200
Village of Finckney	900	900
City of Ann Arbor*	21,000	21,638
Ann Arbor Public Schools	500	500
City of Dexter*	1800	1800
Washtenaw County Water Resources Commissioner	300	465
Pittsfield Township	500	500
City of Ypsilanti	500	500
Charter Township of Ypsilanti	2500	2500
Eastern Michigan University	1500	1500
Washtenaw County Road Commission*	300	300
Barton Hills Village	150	150
Marion Township	500	250
Huron River Watershed Council*	2,850	3,130
Green Oak Township*	2000	767
University of Michigan	300	300
City of Wixom	N/A	200
Hamburg Township	N/A	200
TOTAL	37,000	38,000

HRWC distributed calendars through direct mail, at key organizational events and in person, promoting it through HRWC's printed newsletter (direct mailed to 2,000 recipients), marketing emails (6700+ recipients), home page blog (9,000 monthly average unique page views), and social media announcements on Facebook and Twitter.

EMU

- Watershed Calendars were distributed to Physical Plant employees and to multiple buildings and departments on campus
- Calendars were also offered to students and community members at Storm-drain labeling events and in the EMU Vision volunteer office

Activity #3: Information in Community Newsletters and on Websites

Seasonal newsletter inserts of tips and information on nonpoint source pollution prevention topics are developed by HRWC and made available in pdf format for community use on www.hrwc.org/our-work/programs/middle-huron-sag/ (under Public Education Materials).

These materials also include a series of 12 advertisements in various sizes and formats (jpeg, pdf) that correspond to the Watershed Community Calendar branding, monthly topics and messaging.

Additionally HRWC publishes announcements, articles, tips and promotions that focus on nonpoint source pollution prevention and water quality information using the following distribution channels:

- www.hrwc.org (73,065 sessions with 135,907 page views overall during the period October 1, 2015 through August 1, 2017--66.58% new visitors) (excludes hrwc.org data not captured through Google Analytics, February 16-June 16, 2016)
- www.facebook.com/huronriver (1,919 page likes as of October 1, 2015 to 2,596 page likes as of August 1, 2017).
- Monthly e-mail newsletter (6,381 average monthly contacts with an average open rate of 22%).
- Printed quarterly newsletter (direct mailed to over 2,000 HRWC members and distributed to the following watershed libraries: Huron High School, Ann Arbor District, South Lyon, Milford, Chelsea, Belleville, Flat Rock, Pinckney, Ypsilanti District, Brighton Public, Dexter District).

The homeowner pollution prevention tips pages in the “Take Action” section, www.hrwc.org/take-action had the following results over the period October 1, 2015 to August 1, 2017 (excludes hrwc.org data not captured through Google Analytics, February 16-June 16, 2016):

- www.hrwc.org/take-action/capture-rain (content pages featuring rain gardens, rain barrels and native plants) – 2,328 page views with 1,793 unique page views. “Garden with native plants” was the most popular topic with 70.49% of the total page views going to that tips page.
- www.hrwc.org/take-action/water-pollution (content pages featuring nonpoint source pollution prevention tips) – 1,029 page views with 867 unique page views.
- www.hrwc.org/take-action/waterfront-wise -- 495 page views with 443 unique page views.
- www.hrwc.org/take-action/save-water-save-energy -- 151 page views with 118 unique page views.

EMU

Storm-water related volunteer events such as:

- Host semi-annual Storm-drain labeling events with EMU Vision’s GREEN student volunteer organization.
- Annual EMU/Washtenaw County sponsored Free Hazardous Waste/County cleanup day in October (10/17/15, 10/15/16 and soon 10/14/17) at Rynearson stadium. Utilized by hundreds of community members.
- Various other campus and community cleanups.
- Shared Homeowner pollution prevention tips pages on the main EMU Facebook page with 33, 294 followers found at https://www.facebook.com/EasternMichU/?hc_ref=ARQWkFIpiHehK3_cRzxfoo_jB2rDyaBjCSWUAEINc6NohJSEzZsbp8qXmGq5Y9Do77g&fref=nf&pnref=story including:
 - “Pick up after your pet” graphic on May 15, 2017 – 11 likes and 1 share
 - “Pick up after your pet survey” on May 23, 2017 – 6 likes and 10 comments

-“Green Lawn in MI only needs .5 to 1.5 inches of water per week” graphic with trivia on June 8, 2017 – 10 likes, 2 shares and 10 comments
-Impact graphic for Lawn care posted on June 20, 2017 – 10 likes and 1 comment
-“Gardening with Native plants” graphic on June 29, 2017 – 10 likes, 1 share and 2 comments

- Above and HRWC volunteer events are advertised to students and employees in various places such as the Eastern Michigan University Facebook page (33,291 followers), GREEN Facebook page (144 members), and GREEN List serve (100 + members) at Emuvisiongreen@gmail.com.
- Events are also posted on the my.emich campus announcements tab which is viewed by every employee and student that signs in to input their time or check e-mails.
- The Washtenaw County/EMU Hazardous Waste drop off is displayed on 30-40 posters which are posted around campus and in the community. It’s also listed on EMU today which is read by employees and faculty.
- The Environmental Health & safety Department created two EMU brochures related to storm-water; one for Dining employees and students in dorms, concerning Fats, Oils and Grease disposal, and one for Pollution Prevention for the entire campus community.

Activity #4: Local Newspaper and Web Advertisements

2017 – 6 month week-by-week social media campaign of digital graphics, cut-and-paste ready text, hashtags, links and stormwater pollution prevention posts for Facebook, Twitter and Instagram as follows: May-Pet Waste, June-Lawn Care, July-Native Plants, August-Septic System, September-Home Toxics, October-Stormdrains.

Ads resembled and reinforced the Watershed Community Calendar messaging, using the hashtag #h2ohero and promoting the dedicated campaign web site, www.hrwc.org/h2oheroes which contains detailed information and additional resources.

Four communities posted organic (non-paid) ads to their social media channels: the Huron River Watershed Council (HRWC), the Washtenaw County Water Resources Commissioner’s Office (WCWRC), the Washtenaw County Environmental Excellence Partnership Program (E2P2), and Eastern Michigan University (EMU). All published #h2ohero posts on their Facebook pages, and HRWC and EMU also posted on Twitter.

HRWC Facebook page reach and engagement: From May 1 to July 15, there were 12 #h2ohero posts on the HRWC page. Cumulatively, these were seen 8,095 times, liked 64 times, shared 39 times, clicked on 250 times, and received 12 comments.

HRWC and EMU posted to Twitter for this campaign. HRWC’s #h2ohero posts received 1 retweet and 6 favorites (670+ following). EMU has an active Twitter account with the large following (10,000k+).

EMU

- As a member in good standing of the Middle Huron Watershed advisory Group, EMU contributed time and dollars to the cost of production, promotion and publication of Storm-water education advertisements.
- The Physical plant developed a website devoted to reducing energy use and encouraging recycling at <http://www.emich.edu/physplant/current/green.php>
- The Department of Public Safety created a website for help with Hazardous spill incidents on campus at <http://www.emich.edu/publicsafety/emo/procedures/hazmat.php>

Activity #5: Promote Water Resource Protection Workshops

Across the entire reporting period, HRWC also organized and promoted the following community events/workshops incorporating water quality and nonpoint source pollution prevention informational materials:

- Water Quality Monitoring volunteer trainings, March and June 2016, 2017
- Educator Trainings, March, 2017
- Volunteer Data Sharing, December 2016, January 2017
- Sectional River Clean-ups, Summer 2016, 2017
- River Round-Up, April and October, 2016, 2017
- Stonefly Search, January, 2016, 2017
- Huron River Appreciation Day Recreation and Paddling Safety Lifejacket Distribution (Milford, Flat Rock, Dexter, Ann Arbor, Ypsilanti) Summer 2016
- Community Techniques for Protecting Water Quality, Freedom Twp, December 2016
- Malletts Creek, Millers Creek, and Fleming Creek Subwatershed Advisory Group meetings, monthly to quarterly, 2016, 2017
- HRWC Annual Meeting, April 2016, 2017
- Green Infrastructure Workshop, Putnam Twp, July 2017
- Stream Monitoring Education at Huron Clinton Metroparks (Lake Erie, Lower Huron, Kensington, Hudson Mills), Summer 2017
- Swift Run Stakeholders Meeting, July 2015

Master Rain Gardener Program

The Washtenaw County Master Rain Gardener certification classes were offered:

Wednesdays	-	July 1 – July 29, 2015
Thursdays	-	February 25 – March 24, 2016
Wednesdays	-	August 11 – September 8, 2016, and
Tuesdays	-	February 28 – March 28, 2017

Please see additional detail under Activity 20 – Residential Rain Garden Program:

EMU

- HRWC volunteer events are advertised to students and employees in various places such as the student, Eastern Michigan University Facebook page (33,291 followers), GREEN Facebook page (144 members), and GREEN List serve (100+ members).

- Physical Plant employees (Grounds, Custodial, and skilled trades) attended the MDEQ Pollution Prevention training seminar on campus.
- Stormwater assistant attended & assisted the July 2016 Master Rain Gardener class.
- Stormwater assistant presented at HRWC Streamside Activity Days for Junior High and High school students in 2015.

Activity #6: Promote and Support Volunteer Stream Monitoring

Each year, HRWC hosted several activities or monitoring events that inspire the protection of local fresh water resources. One event measures the physical conditions (described below) and the other event (“bio-monitoring”) measures the aquatic invertebrate community.

In bio-monitoring events, held in January (Stonefly Search), April (River Roundup) and September (River Roundup), volunteers spend the day as part of a small research team, examining the conditions of two streams. Streams are selected to be strikingly different in quality. Each team collects samples of creatures (macroinvertebrates). They notice immediately that one stream is teeming with life while the other appears nearly “dead”. This comparative difference is an effective way for residents to discover for themselves that some local streams have deteriorated while others remain healthy which leads to inquiry about the causes of stream deterioration, the conditions of their local stream, and possible solutions. HRWC attempts to visit 40 locations per event (3x per year), which our volunteers have been able to keep up with. In 2016 and 2017 we visited 68 unique locations (some duplication), out of 71 official sites.

A follow-up report and annual presentation by HRWC responds to volunteer concerns by providing results of the monitoring events and an explanation of the primary causes of local stream deterioration, tools to address local stream issues and “tip cards” or information for homeowners and other residents on protecting water quality.

Annually in the summer interns measure the physical conditions of streams. They learn to “read a river” by studying the conditions that affect the ecological health of the sites. Interns are local college students that are aiming to become professionals in environmental and/or field work. These outings give them the basics to start those careers.

HRWC’s program serves the entire watershed, a 900-square mile area that drains into the Huron River and then into Lake Erie. The area includes approximately 525,000 residents and parts of seven counties in southeastern Michigan, primarily Livingston, Oakland, Washtenaw, and Wayne Counties. The pool of volunteers, who live in many of the in 67 watershed communities, is currently around 600, with up to 150 routinely participating in each event. HRWC has successfully drawn volunteers from throughout the watershed. Over 2014 and 2015 we have focused recruitment in the Trail Towns (Huron River Water Trail) (Milford, Dexter, Ann Arbor, Ypsilanti, and Flat Rock). While recruitment from these municipalities is slowly growing, the increased outreach, along with other Trail Town activities, have garnered numerous additional new partnerships and overall public awareness.

Additionally, HRWC operates a Water Quality Monitoring Program on behalf of partners in Washtenaw and Livingston Counties. This program, which utilizes volunteer sample collectors, is described in more detail in the Water Quality Data and Assessment section.

EMU

- HRWC volunteer events are advertised to students and employees in various places such as the Eastern Michigan University Facebook page (33,291 followers), GREEN Facebook page (144 members), and GREEN List serve (100+ members).
- EMU Green members participated in multiple HRWC streamside events from 2015-2017
- EMU Stormwater assistant presented at HRWC Streamside Activity Days for Junior High and High school students in 2015.

Activity #7: Catchbasin/Storm Drain Labeling (for communities with storm sewers)

Adopt-a-Stormdrain Program

Stormdrain awareness is a priority for public education efforts of stormwater phase I and II regulated communities. Historically, many communities have labeled and marked stormdrains with language that explains that they go directly to the local surface waters. This effort was usually combined with the distribution of door hangers that provided more detailed information about stormwater, non-point source pollution and the proper disposal of motor oil, grass clippings, pet waste, and other pollutants. With many of the urban stormdrains now labeled/marked, the effort has shifted to maintenance by local street or public works staff.

In 2010 the Middle Huron Stormwater Advisory Group members began development of an Adopt-A-Stormdrain program for key areas of Washtenaw County. The program is designed to recruit public and private partners to take sustained action to keep stormdrains labeled, clear and clean by working with a committed group of individuals. These volunteers also report problems to the local governments and serve as the neighborhood advocates and educators.

HRWC developed the program format and structure, creating waivers, intake and reporting forms, instructions and tips, etc. See www.hrwc.org/our-work/programs/adoptastormdrain/. Volunteers participated in the program by clearing debris from and applying new “Dump No Waste, Drains to River” markers to stormdrains and distributing informational door hangers to nearby neighborhood residences.

In June 2016 the program hosted a crowd-sourced stormdrain art event at a key community festival, the Ann Arbor Mayor’s Green Fair. Stormdrains located at the fair’s central intersection were decorated with chalk by a professional artist and the public with direction by an art educator. Informational flyers promoting the Adopt-A-Stormdrain program were distributed to attendees. HRWC staff and volunteers promoted the connection between stormdrains and water quality.

In 2017, the stormdrain program added a special focus in the Honey Creekshed (just west of Ann Arbor), which suffers from E. coli loading. HRWC volunteers were able to reach all households on stormdrains in the four priority locations within the subwatershed – over 2000 households and nearly 500 stormdrains.

EMU

- Conducts biannual Storm Drain Labeling events in the spring and fall of every year dating back to fall of 2008.
- Events during this period were 10/24/15, 12/3/16 and 3/18/2017, with an average of 100 labels placed each time.

Activity #8: Promote County-Wide Complaint Tracking and Response System

The Washtenaw County Environmental Reporting Line (734-222-3800) is in operation during business hours (Monday-Friday, 8:30 to 5:00) and staffed by the Washtenaw County Environmental Health Division. Information promoting the Environmental Reporting Line is distributed at the Western Service Center and is available from the Water Resources Commissioner's Office, upon request, for use at municipal offices, events, etc. In addition, online reporting of non-emergency issues is available 24/7 at <http://bit.ly/wcwrcreportissue>.

EMU

- Hotline numbers and instructions are published in the EMU Emergency Response Procedures manual, pg. 31
- Hotline numbers and instructions will be listed on the EMU Storm-water website which is a work in progress

Activity #9: Promote Soil Testing

Beginning January 1, 2012, phosphorus fertilizer applications are restricted on residential and commercial lawns in Michigan, including athletic fields and golf courses statewide. This includes applications by both homeowners and commercial applicators.

The general rule in the Michigan Fertilizer Law is no phosphorus fertilizer may be applied on residential or commercial lawns, unless it meets an exemption. The sale of phosphorus fertilizers in the marketplace is not impacted. Phosphorus applications for agriculture, gardens, trees, and shrubs are exempted. In September 2011 HRWC participated in a phosphorus fertilizer workgroup coordinated by the Michigan Department of Agriculture & Rural Development. MDARD produced a homeowner brochure and additional phosphorus information (available at www.michigan.gov/mda-fertilizer and www.BePhosphorusSmart.msu.edu).

In 2012, the soil testing program transitioned to a web-based mail in program run by MSU Extension where consumers were directed to purchase (\$25) a soil test kit, mail-in their samples and get results by email which they then plug into a website tool for interpretation.

HRWC promoted the "go phosphorus free" messaging to the public in April 2014 and 2015 through the Watershed Community Calendar (Activity #2), Information in Community Newsletters and on Websites (Activity #3), and Local Newspaper and Web Advertisements (Activity #4).

A total of 743 pageviews were recorded on the Washtenaw County soil testing information page at http://www.ewashtenaw.org/government/departments/extension/ex_extsoil.html.

A total of 136 pageviews were recorded on HRWC's fertilizer information page where soil testing is promoted at <http://www.hrwc.org/take-action/water-pollution/fertilizers/>.

EMU

- Eliminated the use of Phosphorus on campus grounds.
- As a member in good standing of the Middle Huron Watershed advisory Group, EMU contributed time and dollars to the cost of production, promotion and publication of Storm-water education advertisements.

Activity #10: Riparian Land Management Brochures

In 2014 HRWC produced a 12-page booklet, "Waterfront Wisdom, 7 tips for creating and maintaining a beautiful and healthy waterfront," an updated adaptation of a booklet designed by Environmental Consulting & Technology and published by the Oakland County Water Resources Commissioner. A series of tips web pages have also been posted with information and resources for shoreline property owners on shoreline buffers, aquatic invasives, preventing soil erosion, and benefits of keeping boats clean. See, <http://www.hrwc.org/take-action/waterfront-wise/>

These materials were developed and printed for the outreach requirements of the Portage Creek Implementation Project funded in part through the Michigan Nonpoint Source Program by the US Environmental Protection Agency under the Clean Water Act, assistance agreement C995474-12.

HRWC and participating communities printed an additional 2,400 booklets (not funded by the Michigan Nonpoint Source Program) for distribution to riparian landowners outside of the Portage Creek project area. During the reporting period 725 print booklets were distributed in person directly to watershed residents.

In December 2015 the Livingston Watershed Advisory Group also printed and direct mailed 2,390 booklets along with a short evaluative survey to owners of residential parcels on lakes in the Huron River Watershed greater than 10 acres.

EMU

- As a member in good standing of the Middle Huron Watershed advisory Group, EMU contributed time and dollars to the cost of production, promotion and publication of Storm-water education advertisements.
- PEP materials were handed out to various community members, students and employees at the Interdisciplinary Environmental Science & Society office, Vision volunteer center and Environmental Health & Safety office.

Activity #11: Stream and River Crossing Road Signs

Through a partnership with the Washtenaw County Water Resources Commissioner's Office, Washtenaw County Road Commission and local governments, 59 stream crossing signs were previously designed, produced and installed in highly traveled Phase II County road rights-of-way areas to promote watershed awareness to residents and visitors.

During this reporting period the Washtenaw County Road Commission installed 26 "Protect Our Streams & Rivers" signs and 16 stream/drain name signs.

EMU

- **Currently not applicable to EMU**

Activity #12: Displays and Outreach at Local and Regional Fairs and Community Events

HRWC coordinated and staffed watershed information displays and table activities at the following community events during the reporting period:

- Fly Fishing Film Tour (February 2016, 2017)
- Home, Garden & Lifestyle Show, Washtenaw County (March 2016, 2017)
- Earth Days: Ann Arbor (April 2016, 2017) and Milford (April 2016)
- Ann Arbor Mayor's Green Fair (June 2016, 2017)
- Huron River Day (July 2015, 2016)
- Huron Clinton Metroparks Summer Fun (July/August 2017)
- Dexter Daze (August 2015, 2017)
- University of Michigan EarthFest (September 2016, 2017)
- Ypsilanti Fall River Day (October 2016, 2017)

At the 2017 Ann Arbor Earth Day Festival in April, HRWC hosted a stream monitoring demonstration and watershed education booth for children and families. Volunteers collected benthic macroinvertebrates and guided festival attendees through table-top observation and identification. Over 400 children and parents participated during the 4 hour festival with help from six students with Skyline High School's Environmental Club who were trained offsite by a volunteer leader from HRWC's streamside education program. Additionally HRWC distributed 250 donated white pine seedlings for planting. HRWC also distributed watershed education, volunteer stewardship and stormwater pollution prevention materials.

In 2016 and 2017 in March HRWC partnered with the Washtenaw County Water Resources Commissioner's Office, to host a booth at the Washtenaw Home, Garden & Lifestyle Show. Both years, the booth featured native plants and rain garden displays and information, Waterfront Wisdom and riparian information were highlighted. Experts in sustainable landscaping (Drew Lathin, Sustainable Landscape Designs, 2016) and rain gardens (Susan Bryan, WCWRC, 2016, 2017) were on hand to promote and advise homeowners on best practices. Leading up to Home, Garden & Lifestyle, WCWRC and HRWC appeared as guests to present "Rain Gardens 101" on

the Lucy Ann Lance “Around the Home” show, 1290 WLBY in February 2016. In 2017 HRWC and WCWRC distributed over 200 native plant seed-balls

In 2016 and 2017 at Ann Arbor’s Huron River Day in July HRWC hosted a stream-monitoring demonstration and watershed education booth for children and families. Participants from HRWC’s volunteer stream monitoring program were on hand to show and tell macro-invertebrate indicator species, demonstrate monitoring equipment and recruit volunteers for HRWC’s October River RoundUp. Participating communities from the Middle Huron also sponsored a stream simulation table educational exhibit from the University of Michigan’s Museum of Natural History. The activity provided children hands-on opportunities to explore how water flows, erosion, effects of flooding, the consequences of human activities on water quality, and much more.

In 2016 HRWC’s Huron River National Water Trail program hosted an American Canoe Association Certified Instructor-led paddling safety talk and distributed 350+ free lifejackets and paddling safety information to the public in Milford, Dexter, Ann Arbor (at Huron River Day) and Flat Rock.

EMU

- After 8 years of participation in the annual Ypsilanti Heritage Festival, EMU discontinued the GREEN TENT event because it was found to be ineffective relative to its costs. This decision was made in concert with the many participants who helped sponsor the event including the HRWC and Washtenaw County water resources commissioner.
- The annual Eastern Michigan University Green Week (March 21-27, 2016 & March 20-25, 2017) is hosted by the student volunteer group; GREEN-Gathering Resources to Educate about our Environment & Nature. The 2016 and 2017 schedules included Water Wednesday with water related activities.

Activity # 13: Community Partners for Clean Streams

The Community Partners for Clean Streams (CPCS) program is a voluntary, cooperative effort between the Washtenaw County Water Resources Commissioner’s Office and Washtenaw County businesses, institutional landowners and multi-family residential complexes. The goal of the program is to help identify practical, cost-effective ways to protect Washtenaw County waterways through pollution prevention. CPCS is a cost-free initiative that provides information, technical advice and recognition to participants. There are currently over 120 partners in the program. For additional information visit: www.ewashtenaw.org/cpcs.

EMU

- EMU is a member in good standing as a result of on-site inspection by Washtenaw County Water Resources Commission and Public Health Dept.
- Materials were handed out to various community members, students and employees at the Interdisciplinary Environmental Science & Society office, Vision volunteer center and Environmental Health & Safety office.
- Community Partners for Clean Streams logo and contact information are listed on the EMU Fats, Oils, and Grease brochure which will be handed out to Dining employees and students in Dorms.

Activity #14: Pollution Prevention Inspections

Washtenaw County Pollution Prevention (P2) Inspections review chemical storage/handling practices, look for illicit connections, ensure compliance with relevant federal, state and local laws and provide a report and technical assistance where remediation is necessary. During the reporting period, 517 P2 inspections were conducted by the Washtenaw County Environmental Health Division. See <http://bit.ly/WCP2program>.

EMU

- EMU is a member in good standing as a result of on-site inspection by Washtenaw County Water Resources Commission and Public Health Dept.
- The Grounds Zone Manager conducts weekly inspections of the physical plant operations to be sure best management practices are kept current. Records available upon request

Activity #15: Green Media

In collaboration with local partners (City of Ann Arbor, Eastern Michigan University), Washtenaw County uses the website www.ewashtenaw.org to bring environmental education to the public in a variety of forms. Information is distributed via newspaper articles, award-winning informational videos, monthly television shows, and weekly radio programs. The Green Media website was developed to serve as a single resource for the County's educational outreach efforts. <http://bit.ly/GreenMediapage>.

"Issues of the Environment" Radio Show (WEMU – 89.1 FM)

The Issues in the Environment is a weekly radio program hosted by David Fair on WEMU. Every Wednesday morning the Washtenaw County Environmental Health Division introduces a special guest speaker. 77 shows aired during the reporting period. Examples of the water quality related topics include: Dam on Huron River in Ypsilanti May Be Removed; Prevalence of Septic Systems in Michigan Pose Potential Threats; Ann Arbor Bans Coal Tar Sealants and Hopes State Will Follow Suit; and Ann Arbor to Celebrate Environmental Leadership with Annual Green Fair. A complete listing of program topics can be found online at <http://bit.ly/IssuesOfEnviron>. Past interviews can accessed online for streaming at WEMU's website (above) or the County's website <http://bit.ly/wc-ioe>.

The Green Room is a collaboration between the City of Ann Arbor's [Community Television Network \(CTN\)](#) and the Washtenaw County Environmental Health Division. 14 television shows

aired during the reporting period. Airing of each new episode begins on Channel 19, and continues to air throughout the month, typically 4-6 times per week. The show is also available for streaming online from the CTN webpages and/or YouTube. The show is produced by Barbara Lucas and Tim Nagae. Through her work with the County, Barbara also co-produces a monthly Green Room [radio show](#) with [WEMU 89.1FM](#). 37 radio shows aired during the reporting period. A variety of topics are covered each month, some examples during the reporting period include: Shades of Grey in Green Agriculture; Paper, Plastic or Neither; Urban Living Density – A Negative or a Positive; The Ann Arbor Area’s 1,4 Dioxane Plume; The Allen Creek Greenway in Ann Arbor – It’s a Matter of Time; Bee Safe Neighborhood Campaign; Lake Management for Invasive Species; Soil Erosion Control; and Pollution Prevention Programs for Businesses. A complete listing of episodes and the topics covered can be found online. See:

TV: <http://bit.ly/GreenRoomTV>.

Radio: <http://bit.ly/GreenRoomRadio>

Additionally, a variety of environmental video projects have been produced by the Washtenaw County Environmental Health Division. Videos such as Water Quality: It’s in our Hands, Septic Systems and Water Quality, and Safe Disposal of Medications are posted on the Washtenaw County website and can be viewed anytime: <http://bit.ly/GreenMediapage>.

EMU

- As a member in good standing of the Middle Huron Watershed Advisory Group, EMU contributed time and dollars to the cost of production, promotion and publication of Storm-water education advertisements.
- The Physical plant developed a website devoted to energy savings and recycling at <http://www.emich.edu/physplant/current/green.php>

Activity #16: Environmental Excellence Awards

The Environmental Excellence Awards were held in 2016 & March 2017. Winners were selected to receive award in the following categories: Water Quality Protection, Waste Reduction & Recycling, and Pollution Prevention. The Overall Environmental Excellence winner must be on organization that excels in all three categories and participates in the Washtenaw County Community Partners for Clean Streams, WasteKnot and Pollution Prevention programs. Award winners in all three categories plus the overall winner (if applicable), are provided in Table 1 below. Advertisement(s), press releases and website postings are used to recognize awards winners. See <http://bit.ly/EEAwardspage>.



April
an

Table 1: Environmental Excellence Winners for 2016-2017

	Overall Winner	Water Quality Protection	Waste Reduction & Recycling	Pollution Prevention
2016	-	Lawton	Recycle Ann	RheTech

2017	Zingerman's Community of Businesses	Elementary School Saline Environmental Commission	Arbor The Betty Brigade	Lambert Industries, Inc.
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EMU

- As a member in good standing of the Middle Huron Watershed Advisory Group, EMU contributed time and dollars to the cost of production, promotion and publication of Storm-water education advertisements.
- EMU has a campus wide recycling information page at https://www.emich.edu/envi/student_resources/recycle.php and GREEN volunteer students created recycling information posters for recycling stations.

Activity #17: Fats, Oils, and Grease and Litter Reduction

Series 9 in the Community Partners for Clean Streams program highlights proper disposal of fats, oils and grease (FOG). Food service educational materials are available to educate restaurants about FOG disposal and clean-up procedures. These packages include CPCS Series 9, a FOG brochure, and a FOG hauler listing. Customers are primarily directed to the electronic information rather than providing physical documents. Additionally, there have been 459 pageviews to the FOG Information on the County website (<http://bit.ly/FOGpage>) during the reporting period.

EMU

- Dining employees are trained on the proper disposal
- The Environmental Health & Safety Department brochure for Dining employees, and students in
- Oil collection tanks are located at Food service



Activity #18: River Safe Homes Program

The River Safe Homes Program began in 2007 and continues to offer Washtenaw County residents (<http://bit.ly/riversafehome>), user-friendly water quality protection information online that is geared to homeowners. Participants take an online survey to assess how the pollution prevention activities they already do and pledge to do can protect and improve water quality around their homes. The topics covered in the survey include:

- Lawn Care
- Car Care
- Proper Pet Waste Disposal
- Household Hazardous Waste Disposal

Upon satisfactory completion of the survey, participants receive a “RiverSafe Home” plaque that may be displayed at home entrances. The purpose of the plaque is to inform visitors about the water quality protection activities and commitment made by the homeowners who live there. A hard copy RiverSafe Home booklet and survey are also available for residents who do not have internet access.

During the reporting period, over 1,300 RiverSafe Home surveys were completed. Of that number, a majority represents participation by residents from the City of Ann Arbor who partnered with the WCWRC’s Office to promote RiverSafe Homes within the City by creating the Stormwater Credit program. See <http://bit.ly/rshresidentcredit> for the City of Ann Arbor’s residential stormwater credit program details.

EMU

- As a member in good standing of the Middle Huron Watershed advisory Group, EMU contributed time and dollars to the cost of production, promotion and publication of Storm-water education advertisements.
- Materials were handed out to various community members, students and employees at the Interdisciplinary Environmental Science & Society office, Vision volunteer center and Environmental Health & Safety office

Activity #19: Other Public Education Activities Related Specifically to E. coli and phosphorus TMDLs

HRWC regularly publishes articles in its quarterly newsletter the Huron River Report (circulation 2,200) that feature issues related to E. coli and phosphorus TMDLs. Articles related to these topics during the reporting period included the following:

- “Eyes on the River, HRWC volunteers protect the Huron” (Winter 2015)
- “Rain Gardens in Mitchell, Neighbors join together to protect Swift Run Creek” (Spring 2016)
- “Communities Reduce NPS Pollution, New regulations push further improvements in stormwater control” (Summer 2016)
- “Creek Countdown, How healthy is the creek near you?” (Fall 2016)
- “Making Honey Better, HRWC receives grant to improve Honey Creek in Scio Township” (Winter 2016)
- “Laura’s Stream of Consciousness, Dioxane cleanup standards, coal tar bans and phosphorus in Lake Erie” (Winter 2016)
- “Plant a Tree . . . Today, And store 100 gallons of stormwater” (Spring 2017)
- “New Rain Gardens in Swift Run! Green Infrastructure to improve neighborhood, creek and the Huron” (Summer 2017)
- “Planning Ahead, Local governments and residents are key to the health of the Huron” (Fall 2017)

Related blog posts at www.hrvc.org include:

- “Getting the Word Out,” October 28, 2015
- “Working for the Huron at Home,” March 18, 2016
- “Honey, We Got the Grant!,” October 14, 2016
- “Water Quality Monitoring Program Allows Active Involvement,” November 17, 2016;
- “2016 Results Are In! (at least some of them),” February 7, 2017
- “Engage, Engage, Engage,” March 3, 2017;
- “Standing Strong for Clean Water,” June 8, 2017;
- “2017 Water Quality Monitoring Season Marks Halfway Point,” July 18, 2017; and
- Linked external news articles from “News to Us” on December 16, 2015; November 15, 2016; and January 23, 2017.

EMU

- The use of Phosphorus is restricted on campus grounds.
- Pet waste stations were installed in the summer of 2016 in the Commons courtyard and at Brown hall.
- SEMCOG brochures concerning picking up pet waste have also been distributed on campus volunteer events to various community members, students and employees at the Interdisciplinary Environmental Science & Society office, Vision volunteer office and Environmental Health & Safety office and Vision office.
- WEMU Issues on Environment featured a story on “Prevalence of Septic systems in Michigan pose potential threats” on March 8, 2017

Activity #20: Residential Rain Garden Program

Since 2005 more than 297 rain gardens have been designed and installed at residential, church, and institutional properties through the Residential Rain Garden Program. The project was initiated as a Clean Water Act 319 grant but has since been funded by both the County, the City of Ann Arbor and a grant from the Michigan Department of Environmental Quality. In 2016, 63 new gardens were constructed. Sixteen gardens were constructed through the Rain Garden Assistance Program, and 47 were built through the Master Rain Gardener training program. In the assistance program, design and one-on-one assistance with construction are provided. Master Rain Gardeners are trained to design and build rain gardens, and to serve as neighborhood educators. Each year, the County hosts two certification classes, one online, and one in-person. www.MasterRainGardener.org



Washtenaw County also began partnering with the City of Ann Arbor to maintain public rain gardens. During the reporting period, we coordinated 20 workdays, recruited 22 stewards and organized a total of 1,110 volunteer hours. In addition, rain garden lessons were taught at three Elementary Schools.

EMU

- Installed a Rain garden in 2009 in the center of four buildings at Westview apartments on campus which the Storm-water assistant maintains weekly during summer months. This is a vegetative Best management practice under Post-construction runoff control.
- The Green roof on the top of the Mark Jefferson Science Complex renovation was complete in 2012. This is also a vegetative Best management practice under Post-construction runoff control.
- A Rain garden was installed in the Bowen parking lot, off of West Circle drive in 2012. This is also a vegetative Best management practice under Post-construction runoff control.
- Rain-garden/Native planting installation tips will be on the Storm-water Management website for students, employees and community members, which is a work in progress.
- Raingarden class brochures were handed out to various community members, students and employees at GREEN volunteer events, the Interdisciplinary Environmental Science & Society office, Vision volunteer center and Environmental Health & Safety office.

Activity #21: Washtenaw County Home Toxics Reduction Program

County Household Hazardous Waste Collection Events

The Washtenaw County Home Toxics Reduction Program has a permanent facility at 705 N. Zeeb Road that accepts household hazardous waste from the citizens of Washtenaw County. Examples of the household hazardous waste (HHW) materials that are accepted include: paints, aerosols, cleaners, motor oil, cooking oils (vegetable, canola, olive, etc.), pesticides, herbicides, fertilizers, paint thinner, solvents, varnishes, wood preservatives, mercury, fluorescent light bulbs, and home repair products. A complete listing of the acceptable and non-acceptable items can be found on our website at <http://recycle.ewashtenaw.org/>.

Collection facility hours of operation take place the first 3 Saturdays of the month from 9:00 am until noon beginning in April and ending in November. Collection during the winter months (December-March) is available by appointment. Appointments are also scheduled for those citizens unable to use the facility during regularly scheduled collection days. The Home Toxics Reduction Program held 45 Saturday events and collected 690,089 pounds of household hazardous wastes during the reporting period.

Table 3: Household Hazardous Waste (HHW) Collection Event Data

	2015 (Jul – Dec)	2016	2017 (Jan-Jun)
Household Hazardous Waste	125,647	384,986	115,464
Oil & Anti-freeze	-	25,964	13,907
Other	-	15,531	8,590
Total pounds collected	125,647	426,481	137,961
HHW Collections - Grand Total			690,089 pounds

In addition to the Saturday collection events, Clean-up Days to collect Household Hazardous Waste (HHW) were held in cooperation with the Washtenaw County Solid Waste Division, and local municipalities and universities. Eight (8) collection days were held during the reporting period at the following locations: Augusta Township (1), EMU/Ypsilanti (2), Chelsea (1), Northfield Township (2), and Saline (2).

Additional information on HHW collected is available in the Washtenaw County Solid Waste Program Annual Reports.

2015: <http://bit.ly/2015solidwastereport>

2016: <http://bit.ly/2016solidwastereport>

Waste Knot Program

The Waste Knot Program works to develop relationships within the Washtenaw County business community to increase waste reduction and recycling activities. The program provides community-wide recognition and organization-based technical assistance along with value-added education to organizations that exhibit leadership in waste reduction and recycling or to organizations that desire to become leaders in waste reduction and recycling. Currently there are over 300 businesses participating in the program.



For more information, please visit the Waste Knot Program website at <http://bit.ly/WasteKnot-E2P2>.

EMU

- Hosts the Hazardous Waste drop-off/ Regional “Clean-up Day” at the Rynearson stadium parking lot yearly in October. Events this period were on October 17, 2015 and October 15, 2016. The next event is October 14, 2017 from 9-2pm
- EMU Vision’s Green typically provides 6-8 volunteers for the event
- Ypsilanti hosts an annual city cleanup in May in which community members gather to pickup trash. It has historically been called “YpsiPride” but is now “YpsiProud” as of 2017.

Activity #22: Proper Disposal of Prescription Drugs and Personal Care Products/Pharmacy Drug Take-Back Program

The Medicine Take-Back Program consists of eleven (11) participating pharmacies and eight (8) Big Red Barrel locations at Police & Sheriff locations that serve as collection points for the general public to take unused, expired or unwanted medicines for safe disposal.

Medicine Take-Back	Pounds
2015	3,340
2016	3,500
Medications Collected – Total pounds	6,840

The County’s website www.dontflushdrugs.com includes disposal locations and information on:

- [Pharmaceutical Take-Back Program](#)
- [Mail-In Programs](#)

- [Big Red Barrel Program](#)
- [Locations Around Michigan](#)
- [Medication and Personal Care Product Disposal Guidelines](#) (including our 4-min. [VIDEO on proper disposal](#))

EMU

- Snow health Center offers a Pharmaceutical take-back program.
- The Environmental Health & Safety department created a Universal Waste brochure, which includes directions on what to do with your pharmaceutical waste.
- Pharmaceutical take-back/proper disposal tips will be on the Storm-water Management website for students, employees and community members, which is a work in progress.
- The Washtenaw County PEP brochure is distributed at all Stormwater related events.

C. Illicit Discharge Elimination Plan (IDEP)

The IDEP section of our SWPPI/SWMP was developed to prohibit and effectively eliminate illicit discharges (including the discharge of sanitary wastewater) to EMU storm systems. Following is a summary of progress made toward IDEP implementation.

Required Element #1: An ordinance or regulatory method for controlling discharges in the MS4; The EMU Physical Plant Chief of operations is authorized by virtue of his position to establish the policy prohibiting all practices that may result in pollutants entering the stormwater conveyance system. The EMU Stormwater Management Plan includes the IDEP plan which serves as the IDEP policy.

Required Element #2: Identification of areas prioritized for field screening or other investigation. The EMU IDEP Policy includes the commitment to conduct 100% field screening every year.

Each year, HRWC reviews results from the previous year's water quality monitoring and solicits recommendations and feedback from Middle Huron Partners for site locations for "investigative" sampling. HRWC staff and volunteers visit four investigative sites twice monthly between April and September to collect samples. While on site, they make observations of general conditions and report to HRWC staff anything that may be a spill, illicit connection or other potential pollutant source. HRWC staff review and evaluate these reports, to determine if there is a recent or active discharge. HRWC then reports any such findings, along with their location, to the municipality or agency under jurisdiction, or the DEQ if no local agency holds jurisdiction. Any reports from HRWC are included in our report of findings.

Required Element #3: Procedures for eliminating illicit discharges, pursuing enforcement action, and a system to track the elimination status of illicit discharges and enforcement actions. The EMU procedure for correcting all findings of potential pollutants is to trace upstream to the source and correct it immediately. The plumbing shop is authorized to enter all buildings on campus to conduct investigation and corrections immediately upon discovering pollutants in the system.

Required Element #4: A program to train staff. The EMU plumbing shop and select staffers of the Facilities Maintenance Operations have been trained in the IDEP training. Employee Pollution Prevention/Good House-keeping training was attended by Physical Plant employees. The purpose is to continue the effort raising the awareness of campus maintenance employees regarding the potential for pollution.

As part of their training of volunteers for water quality monitoring, HRWC staff includes a section on potential pollutant source observation and detection. This training is excerpted from the municipal staff training program and revised to be better delivered to citizen volunteers. The training program was developed in spring 2016 and has been part of the training program since then.

Required Element #5: A method for determining the effectiveness of illicit discharge elimination activities. The EMU method is to conduct the annual dry weather screening for 100% of discharge points. Additionally, any incidents of pollution investigation will document the chain of events and communication resolving the incidents.

D. Post-Construction Storm Water Control for New Developments and Redevelopment Projects

EMU has a process to implement and enforce a program to address post-construction storm water runoff from all new and redevelopment projects that disturb 1 acre or more. Progress to implement this program is included below.

EMU

- Has adopted the Rules of the Washtenaw County Water Resource Commissioner as the standard for compliance with this requirement. EMU Site Plans for construction are reviewed by the Office of the Washtenaw County Water Resource Commissioner for compliance. A sample of recent projects include:
- Installed a Rain garden in 2009 in the center of four buildings at Westview apartments on campus which the Storm-water assistant maintains weekly during summer months.
- The Green roof on the top of the Mark Jefferson Science Complex renovation was complete in 2012.
- Rain gardens were also installed by the Mark Jefferson science Complex and in the Bowen parking lot in 2012.
- Rain-garden/Native planting installation tips will be on the Storm-water Management website for students, employees and community members, which is a work in progress.
- There are Detention Basins located in Green Lot 1, east of the parking lot across from indoor practice facility, and by the Mark Jefferson Science Complex.

Rules of the Washtenaw County Water Resource Commissioner (Rules)

The Rules of the Washtenaw County Water Resource Commissioner outline procedures and design criteria for stream channel protection, stormwater quality management, flood control,

detention pond design and other best management practices. The current version of the Rules was issued on August 6, 2014.

E. Construction Storm Water Runoff Control

To control wet weather discharges from construction activities, EMU has developed procedures to minimize soil erosion and control runoff from construction sites. Progress toward implementation of construction storm water runoff controls is below.

Soil Erosion and Sedimentation Control

Washtenaw County is mandated by the State of Michigan's Department of Environmental Quality's, Part 91 Soil Erosion & Sedimentation Control of the Natural Resources and Environmental Protection Act, Act 451 of the Public Acts of 1994, for administration and enforcement. The Washtenaw County Board of Commissioner has adopted the aforementioned Act and rules promulgated under the Act within the County's SESC Ordinance and administers it to twelve jurisdictions.

The purpose of Washtenaw County's SESC Program is to manage soil erosion and subsequent sedimentation in order to promote the safety, public health and general welfare of the community through effectively sustaining the goal of clean water in Washtenaw County and the State of Michigan

The Washtenaw County Water Resources Commissioner's Office regulates earth moving activities for all of Washtenaw County except City of Ann Arbor, Ann Arbor Township, City of Chelsea, Bridgewater Township, Dexter Township, Freedom Township, Lima Township, Lyndon Township, Manchester Township, Pittsfield Township, Sharon Township, Sylvan Township, Ypsilanti Township, and the Village of Manchester.

The Washtenaw County Soil Erosion and Sedimentation Control Ordinance can be found online at: http://www.ewashtenaw.org/government/drain_commissioner/dc_websoilerosion/sesc-ordinance-2011.pdf

The most recent soil erosion and sedimentation control guide and permit fee schedule and soil erosion permit application can also be found online at: http://www.ewashtenaw.org/government/drain_commissioner/dc_websoilerosion

EMU

- **At the present time EMU collaborates with the County to assure proper precautions are observed during construction projects.**
- **Construction site plans include SESC measures on campus.**
- **Established a zero Phosphorus policy for campus grounds maintenance.**

F. Pollution Prevention and Good Housekeeping

A set of training and maintenance activities is required for MS4 municipal operations, under the permit, to control pollution from municipal operations. EMU has fulfilled these requirements by implementing the following activities.

EMU

- Employee/contractor training- employees have incorporated inspections and BMP practices in place such that training is part of the practice. Employee turn-over is minimal and all employees have been trained via MDEQ seminars on campus. Contractor training is one of many requirements for contractor selection.
- Structural stormwater control effectiveness: Effectiveness is quantified by way of the site plan review. Record review available upon request.
- Roadways, parking lots : EMU collaborates with the City of Ypsilanti for street sweeping. Parking lot sweeping is contracted three times per year.
- Fleet maintenance and storage yards: Fleet maintained on a regular basis. Records available upon request. Daily observations of fleet garage and yards conducted by Chris Grant, Grounds Zone Manager.
- Managing vegetated properties. Westview Raingarden is maintained monthly to weekly during the growing season. Turf management is coordinated among grounds staff and seasonal contractors. Contractors are required to perform according to best management practices. Records available upon request.

II. Water Quality Data, Assessment and Stressor Update

Permittees within the Middle Huron River Watershed agreed to work with the HRWC to develop and conduct a water quality monitoring program to collect data and assess the water quality within the river and tributaries. There are five stormwater related TMDLs in the middle Huron River watershed. While the permit does not specifically require reporting on TMDLs, EMU and watershed partners have funded monitoring to determine progress toward meeting each TMDL. This monitoring program is also used determine status and trends of water quality within the middle Huron River watershed affected by storm water discharges. HRWC submitted a plan for this monitoring as an appendix to SWPPIs, and subsequent permit applications, submitted by permittees within the watershed. That plan was titled “Middle Huron Stormwater Plan for Addressing Total Maximum Daily Loads (TMDLs).”

Subsequently, HRWC conducts water quality monitoring each year between April and September. They will report the results of this monitoring following the inclusion of results through September. Reports are available for 2001 through 2014 via the SAG website at <http://www.hrwc.org/middle-huron-sag/>. Reports for 2015 and 2016 are in progress and will be posted to the website as well. Additionally, HRWC is developing a new, geographically organized, map-based data reporting framework. The new framework provides progress reporting data from a variety of monitoring sources and allows users to drill down by drainage area and specific site location. Complete plans and reports are also linked to relevant sections. The framework is currently housed on a [HRWC ArcGIS website](#). Once complete, it will be linked directly from the HRWC and SAG web pages.

Much of this data analysis was also included in the evaluation of five water quality impairments within the watershed. Based on this analysis and discussion with the SAG, implementation plans were developed and submitted to MDEQ for each of the following five TMDLs in the prior reporting period:

- Ford Lake and Belleville Lake – impaired for excessive phosphorus
- The Huron River between Argo and Geddes Dams – impaired for pathogens
- Malletts Creek – impaired for aquatic life and habitat
- Swift Run – impaired for aquatic life and habitat
- Honey Creek – impaired for pathogens

All plans are posted on the SAG website at <http://www.hrwc.org/middle-huron-sag/>.

In addition, within the last two years, HRWC has began implementation of specific projects to address the impairments in Swift Run and Honey Creek. HRWC received funding, with support from the Middle Huron SAG, to monitor results before and after each of those projects. Details and products on each of these projects can be found at <http://www.hrwc.org/swiftrun> and <http://www.hrwc.org/honey-creek/>. No additional watershed stressors beyond those listed above and others originally listed in the WMP have been identified.

III. Upcoming Activities and Changes

EMU

- **BMP or Goal Changes –** After 8 years of participation in the annual Ypsilanti Heritage Festival, EMU discontinued the GREEN TENT event because it was found to be ineffective relative to its costs. This decision was made in concert with the many participants who helped sponsor the event including the HRWC and Washtenaw County water resources commissioner.
- **Collaborate with Washtenaw County and the HRWC in Public Education and Outreach strategies for campus audiences.**
- **Notice of changes in reliance on permitted drainage system operators:** Drainage systems on campus at EMU are under the authority of the Physical Plant. Specific activity and responsibilities fall under the departments of: Buildings and Grounds, Plumbing, Construction. The status of the drainage system is daily observation by all departments.
- **Stormwater drainage system changes:** Changes resulting from construction on campus are kept on record at the Physical Plant. Revisions to digital mapping files are pending.
- **2017 EMU GREEN Storm Drain Labeling is scheduled for October.**
- **Hosting the Washtenaw County Hazardous Waste drop-off/ Regional “Clean-up Day” on October 14, 2017 from 9-2pm**

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SUMMARY:

Construction and redevelopment projects on EMU property are regulated under the National Pollutant Discharge Elimination System (NPDES) Permit #MIG????? for storm water discharges, as issued by the Michigan Department of Environmental Quality (MDEQ). The Storm Water Management Post-Construction Requirements Policy has been developed to provide guidance regarding responsibilities and actions to meet the permit conditions for construction and renovation projects on EMU property.

The post-construction storm water policy for regulated projects is required to include:

1. A minimum treatment volume standard to address water quality impacts;
2. Channel protection criteria to address resource impairment resulting from flow volumes and rates;
3. Operation and Maintenance Plans

REGULATORY MECHANISM:

Eastern Michigan University Physical Plant Chief of Operations is fully authorized to assume the responsibility for compliance with the Storm Water Discharge permit. Accordingly, the Physical Plant administration has adopted the Washtenaw County design specifications (Appendix A) as the primary regulatory mechanism, policy and procedures for compliance with the EMU Post-Construction Runoff requirements specified below.

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REFERENCE REGULATIONS:

1. Rules of the Washtenaw County Drain Commissioner: Procedures and Design Criteria for Storm Water Management Systems
2. Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq.)
3. Michigan Act 451, Public Acts 1994, as amended, Part 31.
4. Michigan Executive Orders 1991-31, 1995-4, and 1995-18.

SCOPE:

As required by the NPDES permit for EMU, the scope of this Policy includes all construction and renovation projects on EMU property that involve either:

a. earth disturbance of one (1) acre or greater,

OR

b. earth disturbance of less than one (1) acre, but which are part of a larger common plan of development or sale that would disturb one (1) acre or more.

Note: "Regulated site" in this policy refers to projects meeting a. or b. above.

ACRONYMS:

BMPs – Best Management Practices
 CSO – EMU Certified Stormwater Operator
 EHS – Environmental Health & Safety
 EMU – Eastern Michigan University
 MDEQ – Michigan Department of Environmental Quality
 NOAA – National Oceanic & Atmospheric Administration
 NPDES – National Pollutant Discharge Elimination System
 O&M – Operation & Maintenance
 SOP – Standard Operating Procedure
 TSS – Total Suspended Solids
 UAs – Urbanized Areas

RESPONSIBILITY:

This Policy applies only to units involved in construction or renovation activities meeting one of the scope criteria. These responsibilities do not apply to units not involved in construction or renovation activities.

Physical Plant Chief of Operations

- Delegate authority among Physical Plant staff, as necessary and appropriate, to meet the requirements of the Storm Water Discharge Permit.

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- Promote an environment where EMU staff and other personnel are directed and encouraged to follow this policy.

Directors, Facility Managers, and Supervisors

- Provide support to units/staff with responsibilities for storm water management, including ensuring appropriate notifications, information, data, etc. are provided to collaborating university departments (i.e., EHS, DPS, Communications & Marketing)
- Assure that staff and contractors are aware of the requirements outlined in this policy and instructed on the details of implementation in accordance with the NPDES permit.
- Provide Facilities Planning and Construction with advance notification of regulated projects.
- Maintain documentation on all of the above and/or provide CSO with data for tracking these activities.

Facilities Planning and Construction and Project Managers

- Work with the Project Developers and Contractors to ensure that the project prepares and implements site plans which incorporate the post-construction storm water requirements of the NPDES permit for EMU (#MIG?????, May 2008), including the minimum treatment volume standard, channel protection criteria and operation & maintenance plan requirements.
- Work with the Project Developers & Contractors to provide the documentation, certifications and plans to EMU Certified Stormwater Operator for the post-construction storm water controls.
- Initiate enforcement of the post-construction storm water control requirements, with EMU CSO support.

Program Managers and Supervisors

- Assure that staff and contractors are aware of the requirements outlined in this policy and instructed on the details of implementation in accordance with the NPDES permit. This includes providing information developed by Physical Plant to personnel regarding the importance of storm water management planning and controls.

Project Developers & Contractors

- Submit the post-construction storm water control plan with supporting documentation to Facilities Planning and Construction and EMU CSO for review, comment and recordkeeping.
- Provide EMU CSO with certification that the design complies with the post-construction storm water control requirements.

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- Prepare and implement site plans which incorporate the post-construction storm water requirements of the NPDES permit for EMU #MIG610000, May 2008), including the minimum treatment volume standard, channel protection criteria and operation and maintenance plan requirements.
- Provide EMU Facilities Maintenance and Operations with certification that the construction of the post-construction storm water controls meets the required volume and treatment standards identified in the permit.

EMU Certified Stormwater Operator

- Review and revise the Policy in collaboration with Facilities Planning and Construction.
- Coordinate the storm water management program for EMU and act as primary contact with MDEQ. Administer and enforce (with the support and participation of Physical Plant and other EMU Project Managers) the storm water management program for EMU, including developing and maintaining procedures, guidance, information, etc. to aid EMU staff and contractors in complying with the post-construction requirements for storm water management on regulated sites.
- Develop, track and enforce (with the support and participation of Grounds, Facilities, and other EMU Project Managers) a program to ensure long-term O&M plans for the water quality treatment and channel protection controls installed as a requirement under this policy.
- Maintain and retain records on post-construction storm water management for all regulated sites, in accordance with NPDES permit #MIG?????.

PROCEDURES:

1. **The post-construction plan for storm water management on regulated sites shall include:**
 - A minimum treatment volume standard to address water quality impacts;
 - Channel protection criteria to address resource impairment resulting from flow volumes and rates;
 - Operation and Maintenance requirements.

Refer to EMU NPDES permit #MIG????? and the Post-Construction Storm Water Worksheet for additional details on these requirements.

The project team (Project Manager, Project Developer and/or Contractors) shall develop the post-construction storm water management plan in accordance with this policy and the NPDES permit #MIG?????. Preferred design elements are identified in the Post-Construction Storm Water Worksheet.

1.1 Minimum Treatment Volume Standard

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The minimum treatment volume standard shall be either:

- a. One half (0.50) inch of runoff from the entire site,

OR

- b. The calculated site runoff from the *90 Percent Annual Non-Exceedance Storms*, as summarized in MDEQ's memo dated March 24, 2006.

1.2 Minimum Treatment Volume Standard – TSS Removal

The treatment methods shall be designed on a site-specific basis to achieve the following:

- a. A minimum of 80 percent removal of total suspended solids (TSS), as compared with uncontrolled runoff,

OR

- b. Discharge concentrations of TSS not to exceed 80 milligrams per liter (mg/l).

Note: A minimum treatment volume standard is not required where site conditions are such that TSS concentrations in storm water discharges will not exceed 80 mg/l.

2.0 Channel Protection Criteria

The channel protection criteria must maintain post-development site runoff volume and peak flow rate at or below existing levels for all storms up to the 2-year, 24-hour event. "Existing levels" means the runoff volume and peak flow rate for the last land use prior to the planned new development or redevelopment. More restrictive channel protection criteria may be utilized by EMU on a case-by-case basis, as appropriate.

2.1 Rainfall data

The rainfall data for calculating runoff volume and peak flow rate shall be the *Rainfall Frequency Atlas of the Midwest*, 1992 (NOAA - Huff & Angel).

2.2 Methods for estimating pre- and post-development runoff

The methods used for estimating pre- and post development runoff shall follow curve number evaluations as described in MDEQ's *Computing Flood Discharges from Small Ungaged Watersheds*, June 2008.

3.0 Operation & Maintenance Plans

All structural and vegetative BMPs installed as a requirement under this section of the permit shall include a plan for maintaining maximum design performance through long-term operation and maintenance.

EMU CSO will oversee annual inspections of the BMPs, and report the findings to the facility manager(s) for remedy.

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More frequent inspections of BMPs may be required, based on the O&M plan. All inspections, other than the annual inspection by EMU CSO, shall be the responsibility of the facility manager. A copy of all inspection reports shall be forwarded to EMU CSO, for recordkeeping.

4.0 Project Submittals

The project team (EMU Project Manager, developer and/or contractors) shall submit the post-construction storm water management plan, all calculations, and BMP details, including TSS designed removal rates and the O&M plan to EMU CSO for review and comment.

The project team must ensure that the storm water control plan and all supporting information are deemed acceptable by EMU CSO prior to beginning any earth disturbance.

A statement is required to be signed by a Professional Engineer familiar with the project, certifying that the design meets the minimum treatment volume standard and channel protection criteria.

A second certification from the engineer is required after construction has been completed, stating that the as-built conditions meet the post-construction storm water requirements required in the permit.

5.0 Enforcement

Facilities Maintenance will administer and enforce the storm water management program for EMU, including developing and maintaining procedures, guidance, information, etc. to aid EMU staff and contractors in complying with the post-construction requirements for storm water management on regulated sites. Enforcement may include, but is not limited to, letters of warning, stop work orders, withholding SESC permits, withholding payment to the contractor, etc. and shall be implemented with the participation of Project Managers at EMU and Environmental Health and Safety.

TECHNICAL

All referenced regulations and other documents are available through the EMU Physical Plant web site.

SUPPORT:

Kevin Abbasse, EMU Structural and Life Safety Manager, (734-487-3426) or John Foley, EMU Certified Stormwater Operator, (248-820-7509)

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APPENDICES:

Due to the volume of these documents, Appendices B, C, D, and G remain online accessible by links and through EMU Physical Plant web site

- A. EMU Storm Water Permit – NPDES #MIG?????, May 2008
- B. 90 Percent Annual Non-Exceedance Storms, March 2006 – MDEQ
http://www.michigan.gov/documents/deq/lwm-hsu-nps-ninety-percent_198401_7.pdf
- C. Rainfall Frequency Atlas of the Midwest, 1992 – NOAA
<http://www.isws.illinois.edu/pubdoc/B/ISWSB-71.pdf>
- D. Computing Flood Discharges for Small Ungaged Watersheds, June 2008 - MDEQ
http://www.michigan.gov/documents/deq/lwm-scs_198408_7.pdf
- E. Post-Construction Storm Water Worksheet
- F. Rules of the Washtenaw County Drain Commissioner: Procedures and Design Criteria for Storm Water Management Systems May 2000
- G. Low Impact Development Manual for Michigan, 2008 – SEMCOG
<http://www.semCog.org/LowImpactDevelopment.aspx>

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Section A. Effluent Limits and Monitoring

- (2) Techniques for finding illicit discharges, including field screening, source identification, and recognizing illicit discharges and connections
 - (3) Methods for eliminating illicit discharges and the proper enforcement response
 - (4) A training schedule and requirement for training during the term of the permit
- d) The IDEP shall describe a method for determining the effectiveness of the illicit discharge elimination program.

4) **Post-Construction Storm Water Control for New Developments and Redevelopment Projects**

The permittee shall develop, implement, and enforce a program through an ordinance or other regulatory mechanism to address post-construction storm water runoff from all new and redevelopment projects that disturb one (1) acre or more, including projects less than one (1) acre that are part of a larger common plan of development or sale that would disturb one (1) acre or more. The program shall include the following general requirements:

- A *minimum treatment volume standard* to minimize water quality impacts
- *Channel protection criteria* to prevent resource impairment resulting from flow volumes and rates
- Operation and maintenance requirements
- Enforcement mechanisms with recordkeeping procedures
- A requirement for the project developer to write and implement site plans, which shall incorporate the requirements of this section of the permit

The permittee shall retain the records associated with this activity in accordance with Part II.C.3. of this permit.

The permittee shall establish structural storm water BMP design standards by meeting any of the following:

- The permittee identified in its application a schedule to develop and place in effect an ordinance or other regulatory mechanism that incorporates the *minimum treatment volume standard* and the *channel protection criteria* listed in a) and b) below.
- The permittee identified in its application for coverage under this general permit its applicable local ordinance or regulatory mechanisms that implement a standard for storm water treatment and criteria for channel protection that existed before the permittee submitted its application.
- The permittee identified in its application for coverage under this general permit the applicable local procedures that implement a standard for storm water treatment and criteria for channel protection that existed before submittal of its application, and these local procedures will be converted into an ordinance or other regulatory mechanism by the date specified in the COC for SWPPI submittal.
- The permittee submits with the SWPPI an alternative approach, such as design criteria based on low-impact development (LID), that provides at least the same level of water quality treatment and channel protection as a) and b) below, and the alternative is approved by the Department.
- Elective Option: The permittee identified in the application for coverage under this general permit that it will develop an ordinance or other regulatory mechanism to meet the following outcomes:
 - A methodology and standard for treating water quality based on watershed priorities identified in the WMP
 - Criteria for channel protection based on scientifically accepted morphological concepts
 - The requirements of Part I.A.4.b.4.c.

The permittee shall submit its standards and criteria proposed under the elective option as a request for permit modification by the date specified in the COC to the Chief of the Permits Section, Water Bureau, Michigan Department of Environmental Quality, P.O. Box 30273, Lansing, Michigan 48909-7773.

Any combination of existing regulatory mechanism or procedure, approved alternative approach, elective option, or adoption of an ordinance or regulatory mechanism in accordance with the requirements of a) and b) below, may be used to establish the necessary minimum treatment volume standard and channel protection criteria, provided that they are applied to all new developments and redevelopment projects as described at the beginning of this section. Amendments made to ordinances or other regulatory mechanisms do not have to be submitted to the Department if the amendments do not reduce the level of channel protection or water quality treatment that were provided prior to the amendment.

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- a) The *minimum treatment volume standard* shall be either:
- (1) One inch of runoff from the entire site, or ½ inch of runoff from the entire site if the permittee demonstrates technical support for it in the WMP, or
 - (2) The calculated site runoff is from the 90 percent annual non-exceedance storm for the region or locality, according to (a) or (b) below, respectively.
- (a) The statewide analysis by region for the 90 Percent Annual Non-Exceedance Storms is summarized in a Department memo dated March 24, 2006, which is available on the Internet at: www.michigan.gov/degstormwater; under Information, select "Municipal Program/MS4 Permit Guidance," then go to the Storm Water Control Resources heading.
- (b) The analysis of at least ten years of local published rain gauge data following the method in the memo "90 Percent Annual Non-Exceedance Storms" cited above. This approach is subject to approval by the Department.

Treatment methods shall be designed on a site-specific basis to achieve the following:

- A minimum of 80 percent removal of total suspended solids (TSS), as compared with uncontrolled runoff, or
- discharge concentrations of TSS not to exceed 80 milligrams per liter (mg/l).

A minimum treatment volume standard is not required where site conditions are such that TSS concentrations in storm water discharges will not exceed 80 mg/l.

- b) The *channel protection criteria* established in this permit is necessary to maintain post-development site runoff volume and peak flow rate at or below existing levels for all storms up to the 2-year, 24-hour event. "Existing levels" means the runoff flow volume and rate for the last land use prior to the planned new development or redevelopment. Where more restrictive channel protection criteria already exists or is needed to meet the goals of reducing runoff volume and peak flows to less than existing levels on lands being developed or redeveloped, permittees are encouraged to use the more restrictive criteria than the standard permit requirements.
- (1) An acceptable source of rainfall data for calculating runoff volume and peak flow rate is: *Rainfall Frequency Atlas of the Midwest*, Huff & Angel, NOAA Midwest Climate Center and Illinois State Water Survey, 1992.
 - (2) Methods for estimating pre- and post-development runoff shall follow curve number evaluations as described in *Computing Flood Discharges for Small Ungaged Watersheds*, dated July 2003, which is available on the Internet at: www.michigan.gov/degstormwater; under Information, select "Municipal Program/MS4 Permit Guidance," then under "Storm Water Control Resources" select "Guidance for Calculating Runoff Volume and Peak Flow Rate."
 - (3) The permittee shall request approval from the Department to use other rainfall data sources and runoff models.
 - (4) Channel protection criteria shall not be required for the following water bodies:
 - (a) The Great Lakes or connecting channels of the Great Lakes
 - (b) The Rouge River downstream of the Turning Basin
 - (c) The Saginaw River
 - (d) Mona Lake and Muskegon Lake in Muskegon County
 - (e) Lake Macatawa and Spring Lake in Ottawa County

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Section A. Effluent Limits and Monitoring

- c) All structural and vegetative BMPs installed as a requirement under this section of the permit shall include a plan for maintaining maximum design performance through long-term operation and maintenance (O & M). The permittee shall develop, track, and enforce a program, through an ordinance or other regulatory mechanism, to ensure long-term O & M plans for the *water quality treatment* and *channel protection* controls the permittee requires.

5) Construction Storm Water Runoff Control

The Department has determined that Part 91 of the Michigan Act and Michigan's Permit by Rule (Rule 323.2190) are qualifying local programs for the control of wet weather discharges from construction activities that result in a land disturbance of greater than or equal to one (1) acre, or disturb less than one (1) acre that is part of a larger common plan of development or sale. A qualifying local program provides control for soil erosion, off-site sedimentation, and other construction-related wastes, consistent with Federal Phase 2 storm water control requirements for MS4 permittees.

To ensure adequate protection of the MS4, the permittee shall develop and implement the following:

- a) A procedure to provide notice as follows when pollutants are discharged from construction activity in violation of Section 9116 of Part 91 of the Michigan Act, Michigan's Permit by Rule at R 323.2190(2)(a), or the prohibition of non-storm water discharges in Part I.A.4.b.3.a. of this permit, and the pollutants enter the MS4 owned or operated by the permittee:
- (1) Notify the Part 91 permitting entity and the Department when soil and sediment are discharged.
 - (2) Notify the Department when other wastes are discharged.

If the permittee suspects the discharge may endanger public health or the environment, the violations shall be reported in accordance with Part I.B.2.a. of this permit.

- b) A procedure to ensure adequate allowance for soil erosion and sedimentation controls on preliminary site plans, as applicable
- c) A procedure for the receipt and consideration of complaints or other information submitted by the public regarding construction activities discharging wastes to the MS4

6) Pollution Prevention and Good Housekeeping Activities for Municipal Operations

Municipal operations cover a wide variety of activities and land uses that are potential sources of storm water pollutants. These include, but are not limited to, roadways; parking lots; transportation and equipment garages; fueling areas, warehouses; stockpiles of salt and other raw materials; open ditches and storm sewers; turf and landscaping for all municipal properties, including parks; and waste handling and disposal areas.

The permittee shall develop, implement, and ensure compliance with a program of operation and maintenance of BMPs, with the ultimate goal of minimizing pollutant runoff to the maximum extent practicable from municipal operations that discharge storm water to the surface waters of the state. The permittee is encouraged to use BMP guidance and training materials that are available from federal, state, or local agencies, or other organizations. The SWPPI shall include specific actions and implementation schedules for the BMP operation and maintenance program.

The program shall meet the following requirements:

- a) **Employee/Contractor Training Related to Storm Water Management Activities**
The permittee shall ensure there is training for staff and contractors associated with potential storm water pollutant sources on topics that affect the water quality entering the MS4, such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, storm water system maintenance, and any other activity included in the standard requirements of Part I.A.4.b.6.b-e. Training topics shall be determined by the permittee, working with the watershed partners. Timing for training shall include the following:
- For existing employees, one (1) training session prior to the expiration of this permit
 - For new employees, one (1) training session during the first year of employment

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- For contractors, the permittee shall ensure that they are trained before they perform the contract work. Permittees may conduct the training or provide training materials relating to storm water management activities, which may include local pollution control specifications and standards for bid specifications.

b) **Structural Storm Water Control Effectiveness**

Structural storm water controls include, but are not limited to, vegetated swales; infiltration, sedimentation, and bioretention facilities; storm water devices (e.g., catch basins and oil/water separators); and any controls installed or operated by the permittee to remove pollutants from storm water. Routine maintenance shall be provided, and maintenance schedules shall be developed and implemented that are adequate to maintain pollution removal effectiveness at design performance, and to ensure that the controls are maintained in a condition (e.g., adequately stabilized, seeded, functional) to reduce, to the maximum extent practicable, the contribution of pollutants to the surface waters of the state.

(1) The permittee shall inspect all structural storm water controls at a frequency appropriate for the BMP design and site conditions. Inspection frequencies shall be identified in the SWPPI.

(2) The permittee shall include in the SWPPI a summary list of the municipal properties and an estimate of the structural storm water controls owned or operated by the permittee. The list shall include the type and number of municipal properties and structural storm water controls. The permittee shall have location information for all municipal properties and structural storm water controls by the date specified in the COC for the submittal of the first progress report. The information may be included on the maps maintained for the IDEP (Part. I.A.4.b.3.b.1. of this permit). The location information shall be updated whenever new municipal properties and structural storm water controls are added. The location information shall be retained by the permittee and, upon advance notice, provided to the Department for review.

The following are examples of municipal properties: police or fire station(s), library(ies), administration building(s) (e.g., city or township hall), public works facility(ies), such as maintenance garages or storage yards, park(s), cemetery(ies), waste disposal areas or unregulated landfills/dumps, open or vacant land, or any other type (describe) of property maintained by the permittee.

(3) The permittee shall describe and implement procedures to dispose of the following materials in accordance with Part 111 (hazardous waste), Part 115 (solid waste), and Part 121 (liquid industrial waste) of the Michigan Act: operation and maintenance waste, such as dredge spoil, accumulated sediments, floatables, and other debris the permittee removes from the MS4. Options for the disposal of wastes removed from catch basin sumps or other parts of an MS4 are included in the Department publication entitled "Guidance for Catchbasin Cleaning Activities," which is available on the Internet at: www.michigan.gov/degstormwater, under the information link named "Municipal Program/MS4 Permit Guidance."

(4) When the permittee adds facilities or structural controls for water quantity or pollution treatment or removal, it shall design and install the controls based on the treatment volume standard, channel protection criteria, and requirements for operation and maintenance established under Part I.A.4.b.4. Permittees are encouraged to upgrade and rehabilitate existing facilities or structural controls based on the treatment volume standard, channel protection criteria, and requirements for operation and maintenance in Part I.A.4.b.4.

c) **Roadways, Parking Lots, and Bridges**

(1) The permittee shall construct, operate, and maintain its streets, roads, highways, parking lots, and other permittee-owned or operated impervious infrastructure in a manner so as to reduce the discharge of pollutants into the MS4 and the surface waters of the state, including pollutants resulting from snow removal practices.

(2) The permittee shall reduce the runoff of total suspended solids (TSS) from all of its paved surfaces to the maximum extent practicable.

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TSS reductions may be achieved by any combination of pollution prevention (e.g., improved materials handling, or altered land uses or traffic patterns), removal (cleaning streets and catch basins), or treatment (settling filtration or infiltration). Permittees are encouraged to collaborate with their watershed partners to seek watershed-based alternative approaches for meeting the TSS reduction.

Reductions of sediment from activities otherwise regulated or prohibited, such as sediment track-out or runoff from construction sites, shall not be counted toward the TSS load reduction achieved. As a method of assessing progress in storm water pollution prevention, the permittee's progress reports shall provide an estimate of the TSS loading reduction achieved.

(3) Salt and sand applied for improved traction shall be prevented from entering MS4s and receiving streams to the maximum extent practicable. Good housekeeping shall be required at salt and sand storage facilities to prevent the discharge of salt and sand from these areas. The permittee shall also comply with the salt storage requirements of the Part 5 Rules (Rules 324.2001 to 324.2009 of the Michigan Administrative Code).

(4) The permittee shall implement the appropriate BMPs to control dust and suspended solids in runoff from unpaved roads and parking lots.

(5) The permittee shall not use coal tar emulsions to seal asphalt surfaces.

d) **Fleet Maintenance and Storage Yards**

(1) A Storm Water Pollution Prevention Plan (SWPPP) shall be implemented for all municipal fleet maintenance and storage yards that are not regulated as industrial activities. The SWPPP shall be developed in accordance with the Appendix to this permit.

The permittee shall have a certified storm water operator in accordance with Part II.D.2 of this MS4 permit to oversee storm water controls at all facilities with SWPPPs. To meet the SWPPP and the certified storm water operator requirements, the permittee may opt to incorporate the requirements identified in the Department's industrial storm water permit program into the SWPPI, to be overseen by the Storm Water Program Manager.

(2) The permittee's SWPPI shall identify its fleet maintenance and storage yard facilities (including those for nested jurisdictions, if applicable), and shall indicate if a SWPPP has been developed for each facility and if it has been implemented under the supervision of a certified storm water operator.

(3) The completed SWPPP shall be signed by the facility manager and certified storm water operator or Storm Water Program Manager, as applicable, and retained on-site at the facility that generates the storm water discharge. The permittee shall retain the SWPPP, reports, log books, storm water discharge sampling data (if collected), and supporting documents in accordance with Part II.C.3. of this MS4 permit.

(4) Fleet maintenance activities include, but are not limited to, adding or changing vehicle fluids, including fuel, lubrication, mechanical repairs, parts degreasing, and vehicle or equipment washing. Storage yards include, but are not limited to, areas where vehicles are stored or impounded, and where vehicle and road maintenance materials and other chemicals in bulk are stored and handled. The discharge of vehicle or maintenance facility wash water is not authorized by this MS4 permit. Vehicles and equipment shall be maintained for clean and effective operation to prevent impacts on storm water quality.

(5) The permittee shall also investigate, select or design, and implement appropriate BMPs to prevent the discharge of pollutants to the MS4 from the storage, collection, transport, and disposal of refuse by the permittee or for the permittee under contract.

e) **Managing Vegetated Properties**

The permittee shall minimize the discharge of pollutants related to the management of vegetation on land that the permittee owns or operates. BMPs required under this measure include:

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- (1) A process to train employees and contractors on the proper storage, handling, and use of pesticides, herbicides, and fertilizers before they handle or apply them.
- (2) Use of only phosphorus-free fertilizers for turfgrass. Phosphorus may be added to turfgrass only if soils are tested for nutrients (nitrogen/phosphorus/potassium) every four years and a need for phosphorus is demonstrated. Phosphorus fertilizers shall be applied to lands that the permittee owns or operates only as prescribed in the soil test results.
- (3) A program to minimize storm water impacts from all of the permittee's managed vegetated properties.

7) Program Assessment

The SWPPI shall identify methods for determining the effectiveness of the SWPPI actions to be implemented. Evaluation of the effectiveness at the watershed level is encouraged.

8) Implementation Schedule

Provide a detailed implementation schedule, identifying the years and frequency, if applicable, that the permittee will implement the actions to which they have committed. All actions shall be implemented (i.e., put into action, operation, service, or practice) over the term of this permit, unless the permittee has a shortened permit term and the Department agrees to another schedule.

9) SWPPI Coverage in Areas with Deferred WMPs

Where the WMP has been deferred for urbanized areas, as indicated in the COC, the requirements of Part I.A.4.b. of this permit shall be designed and implemented to carry out actions where the permittee owns and operates MS4s in the regulated area.

c. Facility Contact Person

The permittee shall identify a facility contact person to act as a storm water program manager responsible for overseeing compliance with the requirements of this permit. The facility contact person may be replaced at any time, and the permittee shall notify the Department within ten days after the replacement.

d. Retention of Records

The latest approved version of the SWPPI shall be retained until at least three years after coverage under this permit terminates. All records and information resulting from the assessment of SWPPI effectiveness shall be retained for a minimum of three years or longer if requested by the Department or the Regional Administrator.

5. Discharges Requiring Separate Authorizations

a. Tracer Dye Discharges

This permit does not authorize the discharge of tracer dyes without approval from the Department. Requests to discharge tracer dyes shall be submitted to the Department.

b. Water Treatment Additives

This permit does not authorize the discharge of water additives without approval from the Department. Water additives include any material that is added to water discharged through the MS4 to condition or treat the water.

In the event a permittee proposes to discharge water additives, the permittee shall submit a request to discharge water additives to the Department for approval. Such requests shall be sent to the Surface Water Assessment Section, Water Bureau, Department of Environmental Quality, P.O. Box 30273, Lansing, Michigan 48909-7773, with a copy to the Department. Instructions to submit a request electronically may be obtained via the Internet (<http://www.michigan.gov/deg> and on the left side of the screen click on Water, Water Quality Monitoring, and Assessment of Michigan Waters; then click on the Water Treatment Additive List which is under the Information banner). Written approval from the Department to discharge such additives at specified levels shall be obtained prior to discharge by the permittee. Additional monitoring and reporting may be required as a condition for the approval to discharge the additive.