In accordance with Part I, Section C.1.c of NPDES Permit MI0053902, the University of Michigan (University) is required to submit a mid-year report describing the status of compliance with permit conditions associated with the storm water management program. This program is a requirement of the National Pollutant Discharge Elimination System (NPDES) permit issued by the Michigan Department of Environmental Quality (MDEQ) Surface Water Quality Division on October 1, 2001. This report covers the period July 1, 2012 through December 31, 2012 and follows the format identified in the permit.

1. Describe the status of compliance with the permit conditions

The University of Michigan is in compliance with the Storm Water Management Program Plan (SWMPP) for the Ann Arbor (UMA2), Dearborn (UMD), and Flint (UMF) campuses, as revised in May 2010 and approved by MDEQ on June 2, 2010. The University is also continuing to implement the approved post-construction storm water management requirements outlined in the Storm Water Management – Post-Construction Requirements Guideline (EP3-001). UM will submit a Phase II permit renewal application to MDEQ in accordance with the notification from MDEQ dated February 5, 2013, prior to June 1, 2013. For the purposes of this report please note that the Occupational Safety and Environmental Health (OSEH) department is associated with UMA2, the Environmental Health Safety and Emergency Management (EHSEM) department is associated with UMD, and the Environmental Health and Safety (EHS) department is associated with UMF.

2. Provide a report of illicit discharges and illicit connections removed.

The following potential illicit discharges were identified during this reporting period:

- **Dye testing** was completed by UMA2 at the following buildings during the reporting period: Ruthven Natural History Museum, Crisler Arena, and the Central Campus Recreation Building (CCRB). No new cross connections were identified during these testing events with the exception of the CCRB.

- **Central Campus Recreation Building (CCRB):** Cross connections were found as a result of dye testing that was conducted in August 2012. It was found that the swimming pool filter back-wash and deck drains were routed to the storm sewer system. These connections have been repaired and no longer discharge to the storm sewer system. In addition, it was determined that the floor drains in the Machine Room, and possibly the pool drain are connected to the storm sewer system. UM plans to further evaluate the pool drain to determine if it is connected to storm, and if so, what course of action will be implemented to mitigate or permit this discharge.

The following illicit connections are under further investigation.

- **Naval Architecture & Marine Engineering** – A potential issue was identified by AEC. Floor drains in a 1960 drawing of the building appear to be routed to the storm system. No discharge is occurring to these floor drains. Renovation activities by UM are being prioritized for review in conjunction with other priority corrections of cross connections and water main replacement projects.

- **School of Public Health 2** – Plumbing Shop manager reported that chiller machine discharge routed to floor drains in the basement may tie into the storm sump for the building. Dye testing will be conducted during the next few months to verify floor drain connections.
• **Burton Tower:** Floor drains in the basement level. Investigations on discharge to date have been inconclusive. Renovation activities by UM are being prioritized for review in conjunction with other priority corrections of cross connections and water main replacement projects.

• **Chemistry Building:** Floor drains in room 408-B. Investigations on discharge to date have been inconclusive.

• **Engineering Programs Building /François-Xavier Bagnoud Building:** AEC identified the potential for some floor drains in these buildings to be cross-connected to storm. Additional investigation is needed, including camera work on the lines or dye testing. Dye testing has been recommended by Occupational Safety & Environmental Health (OSEH) prior to/concurrent with proposed renovations.

• **Non-contact cooling water** was identified as the source of flow during dry weather screening at the following locations: Mary Markley Hall (and 1 hand-washing sink); and the Natural History Museum. The Plumbing Shop is reviewing the Markley Hall site for correction planning. The Natural History Museum was dye tested in the last six months and it was determined that the floor drains discharge to the storm sewer system. Additional reviews of the building and plan sets continue in an effort to confirm that the proposed work and tie-ins identified below are properly routed. Individual projects will be prioritized for correction.

• **UMA2** is continuing follow-up investigations for flows identified during dry weather screening events at the following locations: Literature, Science, and the Arts/Student Activities Building (MH-5): News & Information Services (MH-8); Modern Languages Building (MH-14); Biomedical Science Research Building (MH-20); Wolverine Tower; Briarwood; M-Stores; Northwood III (MH-4); Northwood II (MH-8). Follow-up investigation activities by UM are being prioritized for review in conjunction with other priority corrections of cross connections and water main replacement projects.

• **Manufactured Gas Plant (MGP):** Although not considered an “illicit connection” it may be relevant to note that during 2011-2012, Consumers Energy, reported that while investigating their company’s former MGP located under and adjacent to property currently owned by the UMF Campus, a sheen along the riverbank adjacent to the university property. This was reported to the MDEQ by Consumers Energy; booms have been deployed, and the situation is being closely monitored/investigated further. The actual source has not yet been determined but the historic MGP site is considered suspect. Consumers Energy continues to keep UMF as well as the MDEQ and The City Flint informed of their ongoing monitoring/investigations.

The following illicit connections have been addressed:

• **Northwood – 1613 Beal** - Dye testing prior to renovation work planning identified boiler room drains flow into a sump which discharges into the storm water system. This item was referred to AEC & the Plumbing Shop to determine the necessary correction. The drains were put out of service. The repair was completed in September 2012.

• **Central Campus Recreation Building (CCRB):** It was determined that the swimming pool filter back-wash was routed to the storm sewer system as a result of dye testing that was conducted in August 2012. This connection has been repaired and no longer discharges to the storm sewer system.

• **GG Brown:** The cross connected floor drains have been corrected.

• **UMD** was concerned that illicit connections were possible at the Fairlane Center due to inconsistent mapping available for the area. UMD cleaned out two (2) catch basins and conducted camera sewer mapping to determine the connections, flow, and points of discharge at the Fairlane Center. After the investigation and input from Fairlane Grounds, all
connections, points of discharge, and flow directions were discovered along with the findings of a French drain. None of these connections were found to be illicit.

3. Assess BMP appropriateness and progress toward goals identified in the SWMP.
   
   Note: (Excerpts from the SWMP are shown in italics.)

a. Total Maximum Daily Loads (TMDL)
   
The UM participates in TMDL reduction efforts throughout the permit cycle for Total Phosphorus – Ford & Belleville Lakes; E.coli – Geddes Pond; Biota – Malletts Creek; E.coli – Rouge River; and Biota – Rouge River.

TMDL -1. Major Discharge Points
   
   Measurable Goal: Review existing outfalls to identify major discharge points discharging directly to surface waters of the state within the portion of the TMDL. Major discharge points are pipes or open conveyances measuring 36 inches or more at its widest cross section.

   Actions during the reporting period:
   
   As previously reported:
   Outfalls have been evaluated to determine if they are “major” discharge points. A list of major outfalls is kept on file. UMA2 has identified four major discharge points within TMDL reaches. O-41 and O-47R discharge directly into Millers Creek. O-88R and O-30R discharge directly to the Huron River.

   UMD has identified two major discharge points which discharge directly into the Rouge River and one discharge point that is tied into a City of Dearborn storm water line on Hubbard Road.

   UMF is not currently in any TMDL program.

TMDL -2. Sampling Major Discharge Points
   
   Measurable Goal: By April 15, 2012, UM will take samples of at least 50% of the major discharge points within the portion of the TMDL watershed in the urbanized area. At a minimum, these samples will be analyzed for the applicable TMDL parameter (E. coli or total phosphorus). The sampling results will be retained and reported in the second progress report.

   Actions during the reporting period:
   
   As previously reported:
   UMA2 conducted sampling and analysis of O-41 and O-47R on March 30, 2012 for E. coli and total phosphorus. This represents 50% of the major discharges.

   UMD sampled all major discharge points. Two (2) of the discharge points, DOF-006 and DOF-007 were sampled on November 22, 2011 and the last discharge point, DOF-001, was sampled on June 19, 2012.

   UMF does not discharge to a TMDL watershed.

TMDL -3. Action Plan to Reduce TMDL Discharges
   
   Measurable Goal: By October 1, 2013, sampling results and other available information will be reviewed. A plan will be developed to reduce the discharge of the applicable TMDL parameter (E.
coli or total phosphorus). These prioritized actions will be reported in the second progress report with implementation targeted during the 5-year permit cycle that begins 2013.

**Actions during the reporting period:**
No activity during this reporting period.

**b. Public Education Program (PEP) – Education and Outreach on Storm Water Impacts**
Recognizing the need for public involvement in the effort to reduce storm water pollutants, the UM has developed a broad storm water education and outreach program. This multi-faceted program is closely connected to the UM’s Office of Campus Sustainability (OCS) and its many initiatives. Specifically, the storm water education curriculum is designed to promote, publicize, and facilitate watershed education while encouraging sustainable practices developed under the UM’s environmental stewardship agenda. The intended audience for the program is all persons associated with the University who could potentially affect the quality of storm water discharges, including, but not limited to: campus residents; University faculty, staff, and students; visitors to the campus; contractors and vendors working on the campus; and commercial and industrial operations on campus. UM’s overall goal for the PEP is to bring awareness of storm water issues to 70% of the University community by the end of 2013. Levels of storm water awareness are anticipated to vary widely among the different community groups, with more emphasis given to key staff having greater potential to impact storm water quality during their day-to-day work activities. The remainder of the University community is targeted through other means, such as brochures, posters, websites, storm drain markers, public service announcements (PSAs), etc.

The following is a description of each of the public education topics identified in the permit, to be included as appropriate, based on the potential impact on the receiving waters:

- **Educate the public of hazards associated with illicit discharges and improper disposal of waste.** Part of this education is to encourage public reporting of the presence of illicit discharges or improper disposal of materials into the UM drainage system.
- **Educate the public concerning the water body that would be potentially impacted by improper actions at or near a person’s home.**
- **Educate the public on the availability, location and requirements for household hazardous waste disposal, travel trailer sanitary wastes, chemicals, grass clippings, leaf litter, animal wastes and motor vehicle fluids.**
- **Educate the public regarding acceptable application and disposal of pesticides, herbicides, and fertilizers, including the use of phosphorus-free fertilizer alternatives, as appropriate.**
- **Educate the public on preferred car cleaning agents and procedures for noncommercial car washing.**
- **Educate property owners with a septic system on proper maintenance and how to recognize system failure.**
- **Educate riparian land owners of management of lands to protect water quality.**
- **Educate the public about their responsibilities and stewardship of their watershed.**
- **Educate the public on the benefits of using native vegetation instead of non-native vegetation.**
- **Educate commercial and institutional entities likely to have significant storm water impacts.** (At a minimum, commercial food services shall be educated to prevent grease and litter discharges from entering the MS4).
The following BMPs are used to meet the requirements of Part I, Section B.1 of the University of Michigan’s NPDES Permit for the Public Education Program (PEP):

**PEP - 1. Storm Water Education Brochures**

In cooperation with the UM School of Natural Resources and Environment (SNRE), the UM Department of Occupational Safety and Environmental Health (OSEH) developed a series of brochures to assist various members of the University community in preventing storm water pollution on campus. The brochures have been designed to meet the overall program objectives for specific audiences.

**Measurable Goal:** Review existing brochures and update as needed. Create additional brochures, tip cards, posters, etc. as new needs are identified. The number of new or revised brochures, flyers or other educational media created will be tracked for inclusion in the progress reports. Copies of brochures (and other handouts/postings) will be kept on file.

**Actions during the reporting period:**

The Fall 2012 OSEH Update Newsletter included the article on storm water which discussed what storm water runoff is, common storm water pollutants, curb markers, and promotes the OSEH web page, video and BMP resources.

The OSEH Department reviewed the available brochures and their content over the last six months. Currently UMA2 has brochures targeting students, faculty & staff, vendors and film projects. OSEH is determining if one generalized brochure would provide a consistent message with a stronger impact. OSEH is also considering using posters to publicize the website where detailed best management practices can be found and eliminating the brochures. This effort would also promote sustainability of resources with reduced paper waste.

UMD revised the storm water bookmark in August 2012. The bookmarks are an educational tool providing storm water tips, some tips from Public Safety and Public Safety’s number in order to report an emergency or spill/illicit connection. Bookmarks are available and distributed by the bookstore, library, and Public Safety. EHSEM also updated the Car Care brochure in September 2012. The Car Care brochures were given out when students, faculty, and staff purchased their parking passes.

UMF distributed storm water education bookmarks to the campus bookstore in September at the beginning of the fall term to promote storm water education.

**Measurable Goal:** A minimum of 1,800 brochures will be distributed annually during presentations, training courses and new employee orientation sessions. The quantity of brochures distributed throughout the year will be tracked for subsequent inclusion in the progress reports.

**Actions during the reporting period:**

This information will be provided in the annual report.

**Measurable Goal:** In 2010-2011, develop/add additional brochures to fill any gaps in the topics needed to meet the permit requirements. Keep a copy of newly developed/added brochures with dates finalized.
Actions during the reporting period:
No additional brochures were developed during the last six months. The website was updated with additional topics including best management practices for waterbodies impacted by TMDLs.

Measurable Goal: In 2011-2012, create a dissemination strategy to reach the target audiences and any new audiences identified by UM. Identify educational information available/developed for each target audience applicable at UM and keep this information on file.

Actions during the reporting period:
This information will be kept on file.

Measurable Goal: In 2012-2013, implement the new dissemination strategy/plan for educational brochures. Tally the number of brochures distributed and provide in the annual reports.

Actions during the reporting period:
This information will be provided in a future report.

PEP -2. OSEH/SNRE Storm Water Education Web Sites
Developed in cooperation with the UM SNRE and maintained by OSEH, the Storm Water Education Web site builds upon the information contained in the brochures and disseminates it to the general University community and the public at large. This web site is intended to help students, employees, and visitors in the UM community understand how the University’s storm water system operates, various legal requirements, and what individuals can do to reduce contamination in the storm water system from surface runoff. As viewers move through the site they learn about storm water, what they can do to help protect it, how regulations impact the University’s operation, and various safe practices. The UMD and UMF websites also provide topical information for practices potentially impacting storm water.

The storm water website content is updated on a regular basis to include pertinent information related to storm water management and pollution prevention. Current material on the web site can be viewed by visiting Ann Arbor’s website at www.oseh.umich.edu/environment/storm.shtml, Dearborn’s website at www.umd.umich.edu/691923/, and Flint’s website at http://www.umflint.edu/ehs/.

An additional website has been developed through the UMA2 Office of Campus Sustainability and Planet Blue at http://sustainability.umich.edu/. Through Planet Blue staff and students can become a Planet Blue Ambassador by completing modules. More information regarding the implementation of this program is outlined in the additional measures taken to achieve the PEP goals at the end of this section.

Measurable Goal: The number of visitors to the websites will be tracked annually for subsequent reporting. The goal is to have 2,000 website hits annually. This website is intended to help students, employees, and visitors in the UM community understand how the University’s storm water system operates, various legal requirements, and what individuals can do to reduce contamination in the storm water system from surface runoff. This website tally may also serve as an indication of the community seeking additional storm water information from the link provided in the brochures, as detailed above.
Actions during the reporting period:
As of this report, 22,872 website hits were registered on the Ann Arbor Stormwater website. That equates to 1,224 hits since the last reporting period.

The EHSEM storm water page at UMD received 1,436 hits between July 1st and December 17th 2012. Data from December 18th, 2012 – January 13th, 2013 was not collected due to an IT error.

UMF expanded its campus storm water education website last year and is continuing to improve training materials and resources that will be posted to the Flint EHS storm water management web site. UMF had some difficulty with tracking visits to the web resources. However, EHS has begun tracking visits to the EHS website in February 2013.

Measurable Goal: Review and update existing websites and perform periodic review. Print a copy of website changes made, noting the date of revision, etc. A copy of these changes will be kept on file.

Actions during the reporting period:
This information will be kept on file.

During this reporting period, UMD re-designed their storm water website. The website offers basic storm water education; How You Can Help; Best Management Practices; What To Do If A Spill Occurs, and Why It’s Important. Links are available to community partners including: Friends of the Rouge (FOTR), Alliance of Rouge Communities (ARC), SEMCOG, DEQ, and Earth 911. The website also provides viewers with two storm water videos titled “Storm Water Rubber Ducky” and “Water Quality: It’s In Our Hands”, information on the local county household hazardous waste sites, and UMD educational materials.

Measurable Goal: In 2010-2011, create a website information dissemination and coordination strategy (all campuses) to reach the target audiences. Identify educational information available/developed for each target audience applicable at UM. This information will be kept on file.

Actions during the reporting period:
This information will be kept on file.

Measurable Goal: In 2011-2012, develop/add additional topics, weblinks, etc. to fill any gaps in the topics needed to meet the permit requirements. Print a copy of website changes made, noting the date of revision, etc. A copy of these changes will be kept on file.

Actions during the reporting period:
This information will be kept on file.

Measurable Goal: In 2012-2013, implement the new dissemination strategy/plan for the stormwater education website. The number of website hits will be tracked for reporting (above).

Actions during the reporting period:
This information will be provided in the annual report.

PEP -3.  Storm Water Management at the University of Michigan - Video & Public Service Announcements
The video Storm Water Management at the University of Michigan provides viewers with an overview of storm water issues as they pertain to University operations and activities. The video begins with an overview of the UM-A2’s storm water drainage system and it’s receiving bodies followed by a synopsis of the legal requirements that mandate the NPDES permit and the development of a storm
water management program. The remainder of the video focuses on how storm water can become polluted because of human activities. It proceeds to inform viewers of the University’s actions to protect storm water quality in the following areas: salt use and deicing activities, waste management and spill response, campus planning and expansion, cleaning outdoor equipment and vehicles, chemical disposal practices, and food vendor training.

This video or other storm water video content is offered for viewing on an as needed basis for inclusion in faculty and staff presentations, classes, workshops, etc.

Measurable Goal: The number of offerings of storm water videos will be tracked annually for subsequent reporting in the progress reports. A listing of available storm water videos will be kept on file.

   Actions during the reporting period:
   This information will be provided in the annual report.

Measurable Goal: Storm water, waste disposal, and recycling related Public Service Announcements will be distributed annually for use during the Football season home games. These short educational messages will provide storm water information to visitors, students, staff and contractors attending the UM football games. The total anticipated audience for these messages is over 107,000 per game. An example announcement follows:
Stop trash, food, and drink wastes from going down the storm drain and to the Huron River! Please recycle and properly dispose of your trash, food, and drink wastes. Help keep our Michigan waters BLUE!

   Actions during the reporting period:
   Public Service Announcements were made at the six UM football home games during the 2012-13 season, reaching an audience in excess of of 670,000 people.

   UMD storm water banners remain hanging in the University Center and the Fairlane Center. Storm water signs are still posted in the Fieldhouse. These three locations are high traffic areas for students, staff, faculty and visitors and serve as a reminder to protect our waters.

   UMF has dedicated an outdoor display case to storm water education. The display case is located on the faculty/staff Harrison parking ramp which is along a high traffic pedestrian walking area. UMF continues to champion the campus wide recycling in all buildings and encourages proper management of waste whether one is on campus or at home.

PEP-4. Storm Water Education Presentations (includes Training Sessions, Workshops, etc.)
Storm water education presentations. are provided to key staff having greater potential to impact storm water quality during their day-to-day work. The remainder of the University community is targeted through other means. The presentations discuss the storm water drainage system; the need for protecting the quality of storm water discharges; the NPDES permit, its legal requirements, and the storm water management program; and the most common storm water pollutants and ways to limit their effects on storm water. The presentations can also feature the storm water video.

Storm water education is provided during new employee orientation sessions (all employees at the UM), new laboratory employee training classes and at new Plant employee training classes. In addition, presentations including storm water topics are provided on an annual basis to UM-A2 Plant staff which includes the following sub-groups:

   - Building Services,
- Construction Services (including the Cabinet, Sign, Glass, and Upholstery shop departments),
- Facilities Maintenance (including HVAC, Plumbing, Pumps, Steam Distribution & Insulation, Electrical, Fire Systems, Elevators, Roofing, Metal Crafts & Machine Repair shop departments),
- Grounds & Waste Management Services,
- Utilities & Plant Engineering (includes purchasing, generation, distribution, conservation, and accounting of utilities for the University), and the Work Control group (responsible for single point of contact for services, all estimates and preventive maintenance planning).

Measurable Goals: Storm water topics will be included in a minimum of 50 classes, workshops or presentations annually. The number of sessions including training on storm water issues will be tracked for subsequent reporting.

Actions during the reporting period:
This information will be provided in the annual report.

Measurable Goals: A minimum of 500 laboratories will be inspected annually. The inspections will include a review of issues impacting storm water quality, chemical storage, waste management and disposal. These inspections may also serve as an indicator of the effectiveness of storm water education received, or the need for additional education. The number of inspections performed annually will be tracked for subsequent reporting.

Actions during the reporting period:
This information will be provided in the annual report.

Measurable Goals: All outdoor food vendors will receive training/education including related storm water issues annually. Food establishment inspections will include items to ensure storm water BMPs are being followed. These inspections may also serve as an indicator of the effectiveness of storm water education received, or the need for additional education. The number of inspections performed will be tracked annually for subsequent reporting.

Actions during the reporting period:
This information will be provided in the annual report.

Additional measures taken to achieve goals:
- OSEH continues to work with UM football stadium vendors/concession stands to prevent potential discharges into the storm water system. Concession stands were posted with signage detailing procedures for proper grease and wastewater management for these operations during the 2012-13 football season to reinforce proper waste management for these temporary operations.
- The UMA2 Office of Campus Sustainability sponsors an e-waste drop-off day annually, where the public can bring in old televisions, computers and other electronic wastes for proper disposal.
- Through the Planet Blue Ambassador program students and staff can complete modules on different relevant topics (e.g., water). An example of what information is contained in the Water module follows: You have successfully completed the Water portion of your Planet Blue Ambassador Training! Your Pledges:
• I will put a water displacer in my toilet tank to save water when flushing or use a low-flow toilet
• I will follow “if it’s yellow, let it mellow; if it’s brown, flush it down”
• Next time I do laundry, I will run the clothes washer only when I have a full load
• I will only wash laundry in full loads
• I will re-use towels and wear jeans more than once in order to reduce how much laundry I have
• I will use an environmentally-friendly laundry detergent and use the correct amount
• I will opt for showers instead of baths and take fewer showers (within reason)
• I will always look for ways to shorten the length of time I run the tap
• I will search for any leaks and fix or report them as soon as possible
• I will check for leaks in the toilet
• I will properly dispose of my extra medications and not flush them
• I will always properly dispose of extra HHW
• I will fix any oil or other automotive fluid leaks on my vehicle immediately
• I will wash my vehicle on a permeable surface or at a carwash that reuses water

• The University of Michigan has a 24-hour Emergency Response Team to quickly and efficiently respond to and mitigate releases of polluting materials on campus. The campus community is encouraged, through presentations, training, signage, and other educational materials, to report illicit discharges and spills to OSEH/EHSEM/EHS and the Department of Public Safety so appropriate measures can be taken to correct issues which may impact storm water quality. The response team is primarily comprised of UM staff as well as 24-hour emergency response vendors to efficiently respond and mitigate releases on campus.

• EHSEM partnered with the Environmental Interpretive Center (EIC) and a group of students from the Honors Transfer Innovators (HTI) program who volunteered at sustainability week on Wednesday September 12th, 2012. The students put together a display board and passed out EHSEM’s storm water packets which consisted of a storm water bookmark and six (6) brochures titled “Dog Owner Tips”, “Household Waste Tips”, “Car Care Tips”, “Fertilizer Tips”, “Pesticide Tips”, and “Painting Tips”. The students held a raffle which permitted the students to visit the EIC and watch a storm water video in order to enter to win an iPod Nano. Ninety six (96) students participated in the raffle and 154 storm water packets were passed out.

• UMD has been directly promoting or distributing educational information or indirectly by supporting local agencies that are involved in such activities. Examples include the following:
  • EHSEM promotes their webpage on all of their educational materials including the six (6) brochures, the bookmark, and the storm water mouse pads. The website contains links to local agencies including Friends of the Rouge (FOTR), Alliance of Rouge Communities (ARC), SEMCOG, DEQ, Earth 911, and local county websites which provide information on household waste collection dates and locations.
EHSEM promotes local county hazardous waste collection dates and locations by sending out campus wide emails.

All UMD safety training classes include information on storm water importance and protection, defines an illicit discharge, identifies how to report spills, and who to call if they observe an illicit discharge or a spill that could potential threaten a drain, and how to protect drains. Brochures and bookmarks are also passed out at all events.

EHSEM provides storm water management training to contractors to ensure awareness of environmental and occupational safety requirements and provides them with a flip chart that informs them of how to handle and who to contact if a spill or illicit discharge is observed.

The Flint campus has been engaged directly in promoting or distributing educational information or indirectly by supporting local agencies that are involved in such activities. Examples include the following:

- Bulletin Board in Hubbard Building & on Harrison Parking Structure displays reminders and tips for employees and students in protecting storm drains and the Flint River
- All Hazard Communication, Hazardous Waste, PPE, and other general safety training classes address the difference between sanitary and storm drains, illicit discharges, reporting spills, protection of drains, who to call if they observe an illicit discharge or a spill that could potential threaten a drain.
- SPCC/PIP, Storm Water Management and environmental due care training is provided to select employees in Facilities Management & Operations. The training is offered at least every 2-3 years. Training covers best management practices, housekeeping, protection of storm drains, reporting spills, etc.
- UMF promotes the local Genesee County Household Hazardous Waste Collection in the spring and summer each year.
- Annual Earth Day events and activities include participation of many local environmental organizations including the Flint River Coalition and the Flint River Corridor Alliance (in which UMF is a member of both). During the annual Earth Day events the participating organizations provide educational materials about protecting the Flint River and hand out brochures. In addition organizations participate in one on one discussions with University and community members about; specific actions individuals can do to improve water quality, how individuals can report problems, how individuals can get involved, how individuals can participate in river clean ups, etc. During Earth Day presentations are offered by the organizations to the general community.
- UMF Outreach has organized several (3-4) Flint River clean up volunteer days both in the spring and fall. The University partners with the City of Flint. The University coordinates the student and community volunteers while the City of Flint coordinates the transportation and disposal of the trash and debris that is picked up & pulled from the banks of the river by volunteers.

UMF EHS meets with contractors prior to starting jobs to go over environmental and occupational safety requirements; this includes discussion of soil management, University’s construction safety requirements, protection of storm drains, etc. EHS staff also conducts random inspections of work
sites to ensure cautionary measures are in place prior to, and during contractor work. In some cases, SESC weekly inspections are conducted.

c. Public Involvement and Participation

The University encourages public input in all aspects of its storm water management program. In order to facilitate public participation, this plan and information related to the storm water management program are made available on the storm water web site. By viewing the Annual Reports that are placed on the web site, the general public and members of local stream and watershed protection organizations can make themselves aware of activities the University carries out under its storm water management program. In addition, when new storm water management program plans are developed and finalized, the City, County, and interested local stream and watershed protection organizations are allowed to review and comment on them. Website feedback link(s) will be provided to facilitate feedback on the SWMPP from the community.

One public awareness group that UM-A2 works with on a regular basis is the Huron River Watershed Council (HRWC). Many of the HRWC’s goals are consistent with the University’s ideals for the preservation and protection of the surrounding natural water bodies. As a result, the University has established an participates in partnership with the HRWC and has provided input to the HRWC on issues concerning the Total Maximum Daily Load program for water bodies that lie within the Huron River Watershed.

The following BMPs are used to meet the requirements of Part I, Section B.2 of the University of Michigan’s NPDES Permit for Public Involvement and Participation (PIP):

**PIP -1. Storm Water Reports**

Measurable Goal: The SWMPP and NPDES reports will be made available on the UM storm water web site. The date of addition to the website will be tracked for subsequent reporting.

Actions during the reporting period:
- The annual report for 2012 was added to the UM OSEH storm water website on January 15, 2013. EHSEM links out to UM OSEH’s reports webpage which provides both the annual and semi-annual reports from 2005-2012. Additionally, it was shared with key stakeholders and decision makers on the UMF Campus in the areas of Facilities and Operations, Business and Finance, and others.

**PIP -2. Community Meeting Participation**

Measurable Goal: The UM will attend a minimum of ten (10) meetings annually with local watershed/creekshed organizations like the Huron River Watershed Council (HRWC), Washtenaw County Drain Commission, City of Ann Arbor (A2), the Millers Creek Action Team (MCAT), Flint River Corridor Alliance, Flint River Watershed Coalition, Friends of the Rouge or other local stream protection organizations for collaboration on storm water issues in the community. UM’s participation in meetings, community events, etc. with these groups will be tracked for subsequent reporting.

Actions during the reporting period:
- This information will be provided in the annual report.

**PIP -3. Storm Water Management Program Plan - Community Feedback**

Measurable Goal: The City, County and interested local stream and watershed protection organizations will be notified of the online availability of the UM SWMPP for review and comment on the same frequency the information is provided to the Department. The SWMPP will be
accessible on the UM website for review by the public. Any comments received will be reviewed by UM OSEH/EHSEM/EHS and evaluated for inclusion in the SWMPP. Comments submitted and any actions taken in response to comments will be documented and kept on file.

**Actions during the reporting period:**
No community feedback on the SWMPP was received during this reporting period. The SWMPP is available for review on the UM stormwater website.

**PIP -4. Middle Huron Initiative Participation / Phosphorus TMDL Participation**
**Measurable Goal:** The UM will participate in meetings of the Middle Huron Initiative (typically semi-annual) to address the Ford & Belleville Lake TMDL on phosphorus reduction throughout the permit cycle. Attendance at these meetings will be tracked for subsequent reporting.

**Actions during the reporting period:**
This information will be provided in the annual report.

**PIP -5. E. coli TMDL Participation**
**Measurable Goal:** The UM will participate in Geddes Pond – E. coli TMDL efforts throughout the permit cycle. Management activities addressing E. coli include dry weather screening and illicit discharge elimination, semi-annual catch basin cleaning, pollution prevention, and public education. These efforts as well as attendance at meetings/events on this issue will be documented for subsequent reporting.

**Actions during the reporting period:**
This information will be provided in the annual report.

**PIP -6. Environmental Stewardship / Volunteer Opportunities**
**Measurable Goal:** The UM will sponsor/offer a semi-annual volunteer opportunity for participants to get involved with storm water improvement and education programs. Examples of opportunities include storm drain stenciling/marking and invasive species removal projects. The number of volunteer events offered will be tracked annually for subsequent reporting. The number of participants in volunteer stewardship events will be tracked for subsequent reporting.

**Actions during the reporting period:**
A volunteer invasive species removal event was held in Ann Arbor on November 3, 2012. There were a total of 26 volunteers. Semi-annual events are planned for 2013, with the spring event being held on March 16, 2013.

EHSEM partnered with the Environmental Interpretive Center (EIC) and a group of students from the Honors Transfer Innovators (HTI) program who volunteered at sustainability week on Wednesday September 12th, 2012. The students put together a display board and passed out EHSEM’s storm water packets which consisted of a storm water bookmark and six (6) brochures titled “Dog Owner Tips”, “Household Waste Tips”, “Car Care Tips”, “Fertilizer Tips”, “Pesticide Tips”, and “Painting Tips”. The students held a raffle which permitted the students to visit the EIC and watch a storm water video in order to enter to win an iPod Nano. 96 students participated in the raffle and 154 storm water packets were passed out.

UMF was a community site for local benthic monitoring activity in September 2012. A local school science teacher and their students conducted the monitoring and shared data with the Flint River Watershed Coalition to incorporate with other watershed data for that fall monitoring event.
Measurable Goal: In 2010-2011, meet with local watershed/creek groups to identify joint activities and opportunities to meet permit requirements. Identify local creek/watershed groups, etc. timeframes, staffing and participation opportunities. This information will be kept on file.

Actions during the reporting period:
UM has been participating in local watershed groups/meetings to coordinate efforts, actions, etc., as appropriate. UM is also contributing to the Middle Huron Initiative activities.

Measurable Goal: In 2011-2012, develop a participation plan for all campuses. Keep records of meetings attended, possible opportunities for coordination with local groups, etc. This information will be kept on file.

Actions during the reporting period:
This information will be kept on file.

Measurable Goal: In 2012-2013, implement the participation plan. Tally the number of meetings attended for annual reporting (as detailed in goals above).

Actions during the reporting period:
This information will be provided in a future report.

Additional measures taken to achieve goals:
- OSEH/EHSEM/EHS staff members continue to create, improve, and revise project/contract specifications for inclusion of Best Management Practices (BMPs) during construction and renovation projects on campus.
- The University of Michigan continues to work with the local City governments and watershed organizations in improving storm water quality. This is accomplished through sharing information and resources.

d. Illicit Discharge Elimination Program (IDEP)
The removal of illicit discharges is an ongoing program being conducted by the UM. As illicit discharges are identified, they are discontinued or otherwise corrected. The program described in this section will be used to determine the existence, location, and extent of possible illicit connections and discharges to the storm water drainage system. At a minimum, it will address the elements presented in Part I, Section B.7 of the Permit.

The UM-A2 has been involved in an ongoing program for identifying and controlling non-point source pollution to the Huron River. The Huron River Pollution Abatement Project was developed from a grant from the federal Clean Water Act and used by the UM-A2 to identify illicit connections to the storm water system. The project was completed in 1990.

The UM will continue to encourage reporting of water quality problems and possible illicit connections and discharges to the storm water system. OSEH, Plant Operations, and/or Facilities Management will receive reports of water quality problems and possible illicit connections and perform follow-up investigations, leading to elimination where appropriate.

The following BMPs are used to meet the requirements of Part I, Section B.3 of the University of Michigan’s NPDES Permit for the Illicit Discharge Elimination Program (IDEP):
IDEP -1. Storm Sewer Map

Measurable Goal: By February 1, 2011 the UM will create a storm sewer system map identifying the location of all if its discharge points and the names and locations of all the surface waters that the MS4 discharges into.

Actions during the reporting period:
- A GIS mapping system was completed for the Ann Arbor campus in 2010. Updates to the system will continue, as needed.
- UMD completed mapping at the Fairlane Center in November 2012.
- UMF has completed GPS points mapping for its outfalls into the Flint River or City of Flint MS4. In addition, a labeling plan to identify catch basins to specific outfalls has been completed. The updated maps have been used for 2012 dry weather screening activities.

Measurable Goal: The storm sewer system map will be updated periodically as discharge points are identified or added. The dates of modification of the system map will be tracked and kept on file.

Actions during the reporting period:
- UMA2 continues to work with the Plant Utilities Department to review and update the storm sewer maps as changes/updates are needed.
- Mapping was completed in November 2012 after further investigation was conducted at the Fairlane Center to determine the connections, flow, and discharges of numerous structures. Upon investigation and input from Fairlane Grounds, a french drain was discovered.
- UMF EHS partnered with University Outreach staff to complete GIS mapping of storm drains and outfalls on campus. This information was also used for two other related projects related to 2012 dry weather screening and hazard mitigation planning activities.

IDEP -2. Survey of Facility Discharge Points

Measurable Goal: UM will create a prioritized listing for the performance of dry-weather screening considering the criteria in Part I.A.7.b.2 of the permit. The list will be developed in 2011 to ensure the use of the most up to date storm sewer system map/information will be utilized. The list will be kept on file.

Actions during the reporting period:
- This information will be kept on file.

IDEP -3. Dry Weather Screening

Measurable Goal: The UM will perform dry weather screening on each MS4 discharge point at least once every 5-years beginning on February 1, 2010, (per Part I.A.7.b.3) to determine the existence, location, and extent of possible illicit discharges into the UM storm water drainage system on all three campuses. This is typically done during four to five rounds of screening. Any issues identified for further investigation or correction will be tracked for subsequent reporting. The number of illicit discharges and connections identified and subsequently corrected or removed will be tracked for subsequent reporting.

Actions during the reporting period:
- UMF completed dry weather inspections of all the 13 outfalls associated with the campus between the months of June and October 2012. The inspections were performed following the
guidance in UM’s *January 2010 Dry Weather Screening Program Guideline for the University of Michigan*. Flow was observed at four of the outfalls during dry weather conditions. Two of the sources were backtracked to off campus sources, and the remaining two were determined to be building foundation sump pumps. The complete report, including figures, analytical data and field data sheets, is provided as an attachment.

**IDEP -4. Public Reporting of Illicit Discharges**

**Measurable Goal:** The emergency response system on campus will be maintained by DPS (24/7) for use by the public to report illegal dumping, spills or suspicious discharges at the University throughout the permit term. The number of calls received by the DPS/OSEH emergency response call system on potential discharges to the storm water system will be tracked for subsequent reporting. The number of incidents remedied as a result of these calls will also be tracked and reported annually.

**Actions during the reporting period:**

This information will be provided in the annual report.

**Additional measures taken to achieve goals:**

- OSEH sanitarians continue to work with kitchen and food vendors on campus to ensure proper waste management and disposal methods are used. In addition, OSEH continues to work with UM football stadium vendors/concession stands to prevent potential discharges into the storm water system. Concession stands were posted with signage detailing procedures for proper grease and wastewater management for these operations during the 2012-2013 football season to reinforce proper waste management for these temporary operations.

- The University continues to review owned facilities in an effort to identify discharges into the storm and sanitary systems. As part of this survey, any areas that contain suspect flows are noted for potential dye testing.

- Additional campus programs which assist in maintaining or improving the quality of storm water discharges include: recycling, training and education of staff and students, designing to minimize seepage, and erosion control. In 2012 UMA2 completed its seventh year participating in RecycleMania, a nationwide collegiate recycling and waste reduction competition. The competition is comprised of four categories: recycling rate, per capita recycling, per capita total waste, and total pounds of recycling. UMA2 competed against 266 schools in this 10 week competition running from January 22rd through March 31st. U-M finished in eleventh place in total lbs of recycling with 747,409 lbs. UMA2 is participating again this year, and results are not yet available.

- Erosion Control – Part 91 of the NREPA provides for a statewide soil erosion and sedimentation control program. This program outlines the proper provisions for water disposal and the protection of soil surfaces during and after construction and is adhered to by the UM.

- Employee Training and Education – UM personnel involved in the application of herbicides, pesticides, and fertilizers have been trained and are licensed applicators. All applicators in the following departments are trained and licensed: Grounds and Waste Management (G&WM), Facilities Management Grounds Department, Matthaei Botanical Gardens, Nichols Arboretum, Radarick Farms, and Athletics. In addition to the courses taken through the Michigan Department of Agriculture, G&WM also employs a foreman to train all of its employees. Training programs will also be conducted to address the purpose and operation of BMP activities under this SWMPP. In addition, staff in various departments have received, or are in training to receive
certification from MDEQ in Storm Water Management – Construction Site, Storm Water Management – Industrial Site or Soil Erosion & Sedimentation Control. Two (2) UMD EHSEM staff members received their CSWO/SESC certifications in October 2012.

- **Hazardous Materials Response** – OSEH, EHS & EHSEM are instrumental in maintaining a safe and healthy environment for faculty, staff, students, and visitors. Routine training is provided to new faculty, staff, and students regarding hazardous materials and conditions at UM facilities. The University also maintains spill response teams (UM staff and contracted vendors) for each campus that can quickly and efficiently respond to and mitigate releases of hazardous materials.

- **Hazardous Waste Disposal** – OSEH is responsible for the appropriate collection and disposal of hazardous waste and hazardous materials used and generated by the UM units. The program ensures tracking of the materials from point of generation through collection and ultimate disposal. Personnel are properly trained and appropriately licensed to handle the material and transport the waste on campus. Qualified contractors are used for ultimate transport and disposal off site.

- **Plan Review** – OSEH, EHSEM & EHS review all plans for the renovation of existing structures and the construction of new facilities. The plans are reviewed to identify potential environmental concerns and the protection of storm water quality and the storm water drainage system.

- **Storm Water Basins** – Storm water management basins are used to reduce the impact of storm water discharges from campus locations. Although the primary function of these basins is to provide first-flush holding capacity for storm water, the design also provides for sediment deposition within the basin structure which can significantly reduce pollutant loads in receiving waters.

- **UMF EHS** is responsible for coordinating the collection and disposal of hazardous and regulated waste materials generated on campus. EHS HazWaste program ensures frequently scheduled HazWaste pick up, tracking of the waste from point of generation through collection and ultimate disposal, and provide administration and assistance with identifying, storing, preparing and ultimately transportation of site of regulated waste. Employee hazardous waste training is coordinated through EHS. Only qualified contractors are used to manage, handle, and ultimately transport and dispose waste off site.

- **UMF – EHS** routinely walks the campus and inspects loading dock areas, dumpsters, facilities operations and vehicle maintenance/storage areas, refueling operations, etc. to ensure that materials continue to be stored properly; secondary containment is functioning, and any outdoor storage containers remain in good condition.

### e. Post-Construction Storm Water Control for New Development and Redevelopment Projects

The UM has a program to address storm water runoff from new development and redevelopment projects. As part of this program, the UM manages, reviews, and continually updates campus-wide planning to address storm water runoff from each new regulated development and redevelopment project. This program helps to ensure that controls are in place that will minimize and in some cases prevent impacts on water quality from new development and redevelopment projects that disturb areas greater than one acre or disturb areas less than one acre but which are part of a larger common plan of development.

**PCSW -1. Post-Construction Storm Water Runoff**
Measurable Goal: By August 1, 2009 UM issued the Post-Construction Storm Water Requirements guideline which details the minimum treatment volume standard and the channel protection criteria. The guideline is provided in Appendix G of the SWMPP.

Actions during the reporting period:
The Post-Construction Storm Water Requirements Guideline was submitted to MDEQ on July 28, 2009.

PCSW -2. SESC Plan Review for Structural & Non-Structural BMPs
Measurable Goal: OSEH/EHS/EHSEM and/or the University Planner’s Office will review all construction and renovation plans for use of structural and non-structural BMPs to prevent receiving water quality from the impacts of development and limit the rate at which surface water runoff discharges from any specific site to not exceed the pre-development hydrologic regime. The number of sites implementing various non-structural and structural BMPs will be tracked annually for subsequent reporting.

Actions during the reporting period:
This information will be provided in the annual report.

PCSW -3. Operation & Maintenance of BMPs
Measurable Goal: Storm water management basins on campus will be inspected annually, at a minimum. The number and frequency of inspection of storm water basins will be tracked for subsequent reporting. Maintenance issues identified during these inspections will be tracked until corrected.

Actions during the reporting period:
Annual inspections of the storm water management basins on campus were completed in 2012 by UM personnel.

PCSW -4. SESC Plan Review for PCSW Controls
Measurable Goal: OSEH/EHSEM/EHS and/or the University Planner’s Office will review all plans to ensure projects have adequate post construction storm water management controls. The number of plan reviews will be tracked annually for subsequent reporting.

Actions during the reporting period:
This information will be provided in the annual report.

Additional measures taken to achieve goals:
- Construction sites are stabilized with the addition of permanent controls and vegetation to reduce the amount of sedimentation that could impact receiving waters.
- OSEH is working with Construction Management to implement standard protocols to dye test the internal piping in new building construction and building renovation projects where more than 10 fixtures are impacted to confirm proper connection to the sanitary sewer system. A program for confirmation of taps to exterior pipes is already in place.
- Bioretention traffic islands, porous pavement and a parking lot storm water treatment system to remove sediments, oil, grease and trash have been installed at various locations on campus and are being evaluated for viability in future construction projects. Additional low impact development options such as green roofs have been constructed at the Ross School of Business, North Quad, Children & Women’s Hospital and additional projects are being considered for other construction/renovation locations on campus. Examples of additional storm water controls installed include hydrodynamic separators at the Elbel Field artificial turf replacement project and
the Law School addition and expansion project. In addition underground storm water detention and retention systems have been installed at the Law School. Retention and detention storm water management ponds (2) were constructed at the Golf Course Practice Facility.

f. Construction Storm Water Runoff Control

In 1982, the UM received approval from the Michigan Department of Natural Resources to operate as an Authorized Public Agency (APA) under the authority of Part 91, Soil Erosion and Sedimentation Control (SESC) of the Natural Resource & Environmental Protection Act, 1994 PA 451, as amended (Part 91). Reauthorization of UM’s APA status was received in 2004 from the Michigan Department of Environmental Quality. APA status allows the UM to establish and manage the Soil Erosion and Sedimentation Control procedures on its properties. Construction activity at UM may involve contractor or in-house construction activities performed by Plant Operations.

The overall CSW program accomplishes the following goal:

- Provide and implement controls to minimize or prevent impacts on water quality from construction activity.

The following BMPs are used to meet the requirements of Part I, Section B.5 of the University of Michigan’s NPDES Permit for Construction Storm Water (CSW):

CSW -1. Site Plan Reviews

Measurable Goal: Formal SESC plans are required for sites with earth disturbance (greater than 24 hours) of 1 acre or greater and projects (of any size) within 500 feet of “Waters of the State.” The number of SESC site plan reviews will be tracked annually for subsequent reporting. This review process allows OSEH/EHS/EHSEM to require projects to insert storm water management controls into the front end of all projects.

Actions during the reporting period:
This information will be provided in the annual report.

CSW -2. Best Management Practices (for SESC on Construction Sites)

Measurable Goal: The use of BMPs is required on all projects under the approved SESC Procedures for the University. The number of projects using the Best Management Practices identified above for SESC will be tracked annually for subsequent reporting. BMPs will be selected as appropriate for site conditions.

Actions during the reporting period:
This information will be provided in the annual report.

CSW -3. SESC Inspections

Measurable Goal: Sites will be inspected weekly and after rain events until final stabilization of the project site. The number of SESC inspections performed annually on UM sites will be tracked for subsequent reporting.

Actions during the reporting period:
This information will be provided in the annual report.

CSW -4. SESC Training by MDEQ

Measurable Goal: Select staff from OSEH, EHSEM, EHS, AEC, and the University Planner’s Office will be SESC trained by MDEQ. The number of UM staff who have received MDEQ SESC training will be tracked annually for subsequent reporting.
CSW -5. Storm Water Operator Certification for Construction Sites
Measurable Goal: Select UM staff from OSEH, University Planner’s Office and Construction Management/AEC will be certified in Storm Water Management for Construction Sites. The number of UM staff who have received MDEQ certification will be tracked annually for subsequent reporting.

Actions during the reporting period:
This information will be provided in the annual report.

CSW -6. Sedimentation Control During Maintenance Activities
Measurable Goal: The use of SESC controls is required for all maintenance projects involving earthwork. The number of SESC inspections performed annually on UM sites will be tracked for subsequent reporting.

Actions during the reporting period:
This information will be provided in the annual report.

Additional measures taken to achieve goals:
- A street sweeper is recommended by UM for contractor usage at construction sites with earth work to reduce the amount of sediment that could potentially reach receiving waters.
- The storm water drainage system is vacuumed periodically to remove sediment buildup within the system and to lessen potential sediment impacts to receiving waters.
- The post construction storm water guidelines and soil erosion and sedimentation control requirements for construction projects are incorporated into the project specifications and bid documents.
- Other unofficial SESC/SWM related inspections are conducted by EHS staff as they tour the campus, walk through project sites, and report potential problems to responsible parties for correction (i.e., covering a dumpster, debris/litter, inappropriate outdoor storage by contractors, etc.)

Pollution Prevention/Good Housekeeping for Municipal Operations
The University’s storm water pollution prevention and good housekeeping initiatives include, but are not limited to the following six areas:

- Structural Controls
- Roadways
- Fleet Maintenance
- Storm Sewer Labeling
- Flood Control Projects
- Pesticides and Fertilizers

Each area has operation and maintenance BMPs with the ultimate goal of reducing and in some cases preventing pollutant runoff from University operations to the maximum extent practicable. The overall P2/GH program accomplishes the following goal:
• Develop and implement a program of operational and maintenance Best Management Practices to prevent or reduce pollutant runoff from University operations.

The following BMPs are used to meet the requirements of Part I, Section B.6 of the University of Michigan’s NPDES Permit for Pollution Prevention & Good Housekeeping (P2/GH):

P2/GH -1. Storm Water Management Basin Inspections
Measurable Goal: Storm water management basins will be inspected annually during the permit term. The number and frequency of inspections on the UM retention basins and detention basins will be tracked for subsequent reporting.

Actions during the reporting period:
Annual inspections of the storm water management basins on campus were completed in 2012 by UM personnel.

P2/GH -2. Storm Water Catch Basin Maintenance
Measurable Goal: Maintenance cleaning of the catch basins and storm sewer system piping will be performed periodically, with higher traffic areas and those identified via service requests receiving more attention. The goal will be to clean all catch basins in the system at least once per 5-year cycle. The number of catch basins maintained will be tracked for subsequent reporting.

Actions during the reporting period:
This information will be provided in the annual report.

P2/GH -3. Municipal Properties with Storm Water Controls
Measurable Goal: By October 1, 2011 a list of municipal properties and structural storm water controls owned or operated by UM will be created, which includes the type and number of properties and structural controls. This listing will be kept on file.

Actions during the reporting period:
This information will be kept on file.

P2/GH -4. Street Sweeping, Leaf, and Litter Collection
Measurable Goal: Street sweeping, leaf and litter collection will be performed periodically throughout the permit term. The cost for disposal and estimated quantity of debris, trash, dirt, etc. disposed from the maintenance and cleaning/sweeping of numerous parking structures, surface lots and roadways throughout the University will be tracked for subsequent reporting.

Actions during the reporting period:
This information will be provided in the annual report.

P2/GH -5. TSS Runoff Reduction from Paved Surfaces
Measurable Goal: A strategy to reduce the runoff of TSS from paved surfaces to the maximum extent practicable, with a goal of reducing the annual TSS loading by 25% as compared to annual loading with no suspended solids controls will be developed (2010-2012) and implemented (2013) at the University. An estimate of the TSS loading reduction achieved through this strategy will be provided in the progress reports.

Actions during the reporting period:
This information will be provided in a future report.
P2/GH -6. Unpaved Road and Parking Lot BMPs
Measurable Goal: Develop BMPs to control dust and suspended solids in runoff from unpaved roads and parking lots. A list of unpaved roads and parking lots will be created (2010-2011).

Actions during the reporting period:
This information will be kept on file for the Ann Arbor campus.
The UMD campus does not utilize any unpaved roads.
There are no unpaved roads or parking lots on the Flint campus.

P2/GH -7. Prohibition of Coal Tar use as Asphalt Sealant
Measurable Goal: The use of coal tar emulsions to seal asphalt surfaces will be prohibited, as required in the permit. Plan reviews for construction and renovation projects involving asphalt will include comments from OSEH/EHSEM/EHS prohibiting the use of coal tar emulsions for UM projects. Comments on construction and renovation projects are kept on file at the OSEH/EHSEM/EHS offices.

Actions during the reporting period:
The number of plan reviews performed will be tracked and provided in the annual report.

P2/GH -8. Snow and Ice Removal – Reduction in Salt Use
Measurable Goal: Incremental annual reduction in the use of salt for de-icing to reach 50% reduction based on an average annual use of 2600 tons per year from 1989 to 1999. The quantity of salt used for deicing will be tracked on an annual basis.

Actions during the reporting period:
This information will be provided in the annual report.

Measurable Goal: Increase the use of alternative de-icers annually to replace/supplement salt use. The quantity of alternative de-icers will be tracked on an annual basis.

Actions during the reporting period:
This information will be provided in the annual report.

P2/GH -10. Pesticide and Fertilizer Technician Training
Measurable Goal: All applicators (technicians) will be trained in pesticide and fertilizer use. The number of pesticide and fertilizer technicians will be tracked on an annual basis.

Actions during the reporting period:
This information will be provided in the annual report.

P2/GH -11. Roadside Vegetative Replacement
Measurable Goal: Eliminate the need for vegetative replacement due to salt damage to the maximum extent practicable. The need for replacement vegetation will be tracked for subsequent reporting.

Actions during the reporting period:
This information will be provided in the annual report.

P2/GH -12. Storm Sewer Labeling
Measurable Goal: UM storm drains will be marked with the message "Dump No Waste - Drains to Waterways", "Keep our Michigan Waters Blue: Dump No Waste - Flows to River" (or similar message) during the permit cycle. The number of storm drains marked will be tracked annually for subsequent reporting.
Actions during the reporting period:
This information will be provided in the annual report.

Measurable Goal: In 2010-2011, Develop an education program for UM staff involved in fertilization of turfgrass at UM. Also include a strategy to disseminate the requirements to contractors at UM.

Actions during the reporting period:
This information will be kept on file.

UMD received a copy of TruGreen’s non-phosphorus policy on August 10th, 2012. This information will be kept on file.

UMF EHS and Facilities & Operations worked together to implement a revised safe application distance from the Flint River during the summer of 2010. Facilities continues to maintain the safety distance from 20 feet to 40 feet from the river and only spot treat in the 20’-40’ area as needed.

Measurable Goal: In 2011-2012, implement a turfgrass fertilization education program for appropriate UM staff and contractors. Identify educational information available/developed for each target audience applicable at UM.

Actions during the reporting period:
This information will be kept on file.

Information about the Michigan restrictions on the use of phosphorus-containing fertilizer on turf grass was provided to Facilities & Operations staff responsible for managing grounds/landscape. Additionally, select Facilities employees attended SWM employee training were this information would have be covered. Lastly, our employees certified in IPM attend workshops/seminars routinely to maintain their certification and stay updated on new information/technologies as it relates to turf and landscape management.

P2/GH -14.  Storm Water Pollution Prevention Plans for Fleet Maintenance & Storage Yards
Measurable Goal: In 2010-2012, Develop SWPPP for all fleet maintenance and storage yards/facilities at UM.

Actions during the reporting period:
Drafts SWPPPs have been developed for all fleet maintenance and storage yard facilities on the UMA2 campus. The plans are kept on file.

Measurable Goal: In 2013, implement all SWPPP for fleet maintenance & storage yards at UM.

Actions during the reporting period:
This information will be provided in a future report. The completed (signed) SWPPP(s) will be kept at each facility.

UMD developed and implemented their SWPPP for the Grounds department on March 7, 2012. Two (2) employees received training on the SWPPP on July 27th, 2012.

Additional measures taken to achieve goals:
- The UMA2 campus launched a bike rental program on campus, Blue Bikes, in the fall of 2012. The program is operated by Outdoor Adventures within Recreational Sports; the program was developed in collaboration with Parking & Transportation Services, the Office of Campus Sustainability and the University Planner’s Office.
The University of Michigan Radrick Farms Golf Course was awarded the 2012 Excellence in Water Quality Protection Award. The award is given by the Water Resources Commissioner’s Office and Public Health Department’s Environmental Health Division to recognize those in the community who provide leadership in environmental protection and who practice environmentally sound behavior.

In addition, in September 2011 the Michigan Department of Agriculture and Rural Development recognized Radick Farms Golf Course for its efforts to ensure environmental stewardship and enhance wildlife habitat. The golf course achieved certification in the Michigan Turfgrass environmental stewardship Program.