

**THE UNIVERSITY OF MICHIGAN
MUNICIPAL STORM WATER NPDES PERMIT MI0053902
FISCAL YEAR 2004-2005 ANNUAL REPORT**

In accordance with Part I, Section C.1.e. of NPDES Permit MI0053902, the University of Michigan (University) is required to submit an annual report of activities associated with the storm water management program. This program is a requirement of the NPDES permit reissued by the Michigan Department of Environmental Quality (MDEQ) Surface Water Quality Division on October 1, 2001. This report covers the period July 1, 2004 through June 30, 2005 and follows the format identified in the permit.

1. Compliance Assessment –

a. Describe the status of compliance with permit conditions.

The University of Michigan is in compliance with the permit conditions. In accordance with Part I, Section B, the University has begun implementation of the storm water management program plan (SWMPP) revised June 2005 and approved by MDEQ on June 16, 2005.

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

Dry Weather screening is performed in 4 distinct areas based on geographical separation - South Campus, Central Campus, Medical Campus, and North/East Campus. During this period, the North/East Campus areas were selected for dry weather screening to determine the existence, location, and extent of possible illicit discharges into the UM storm water drainage system. Non-storm water flow will be backtracked and investigated to identify the source of the discharge and to determine if it is an authorized flow as described in Part I.A.1 of the permit. In the event that the flow is not authorized, repairs will be made to redirect the flow to the sanitary sewer. For the 2005-2006 reporting year, the South Campus area will be targeted for dry weather screening.

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

- North Campus Areas: Dry Weather Screening 2004-5 identified flow in the following screening locations: Manholes #4 (Northwood III area), #8 (Northwood II area) and #9 (Electrical Engineering & Computer Science area.) Further backtracking investigation of these areas will be performed to identify potential source(s) of the flow.

No illicit connections are currently identified for further investigation.

Illicit discharges will be prioritized for correction according to their potential impacts to water quality. Sanitary discharges will take priority for immediate correction. Other non-approved discharges will take second priority. Cross-connections without discharges

are lower priority. Cooling tower discharges will be prioritized based on the frequency of discharge and will be redirected to the sanitary sewer as building improvements and upgrades are undertaken.

Remediation is underway for the following illicit connections:

- Randall Laboratory - One source of water is a condensate receiver connected to an ejector tank that is connected to the storm water drainage system. The steam condensate from the ejector tank was disconnected. This repair was confirmed as completed in October when the manhole was rechecked. After the removal of the steam condensate, there was still flow. A potable water source was then suspected at this location. Potable water is an approved discharge under the NPDES permit. Additional investigation confirmed the source of water was the nearby CC Little Building where a fire pump is leaking into a floor drain. This issue was referred to maintenance and the pump was repaired. An engineering design project is underway for the correction or elimination of the floor drain and work is estimated to be completed by Fall 2006.
- Reflecting Pool – Flow was observed in the storm sewer system on the east side of the reflecting pool, near the Industrial Operations Engineering building. The Plumbing Shop was contacted and conducted several rounds of investigation including dye testing restrooms and floor drains in the IOE building. Potential sanitary sources in the area were eliminated through this process. Additional investigations, drawing reviews and dye testing operations were conducted jointly by UM-Occupational Safety and Environmental Health (OSEH) Environmental Management and the Plumbing Shop which identified the source of the flow as the reflecting pool. The reflecting pool was drained for the season, thus eliminating the discharge. The discharge pipe was also plugged to ensure no discharge to the storm sewer system. A repair order to redirect the pool discharge to the sanitary sewer system was prepared and work is underway and estimated to be completed by November 2005.
- Mary Markley Hall: Dry weather screening identified flow in this area. The source of the flow was identified as non-contact cooling water discharging into floor drains. Potable water, such as this non-contact cooling water (untreated) is an approved discharge under the NPDES permit. An additional source has been identified from a hand washing sink. The request for correction work to redirect the sink discharge and the floor drains to the sanitary sewer system has been submitted and UM AES has been contracted for design and oversight of this project. Repairs are estimated to be completed by Fall 2006.

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- Natural History Museum: Dry weather screening identified flow in this area. The source of the flow was identified as non-contact cooling water discharging into a floor drain. Potable water, such as this non-contact cooling water (untreated) is an approved discharge under the NPDES permit. The request for correction work to redirect the floor drains to the sanitary sewer system has been submitted and UM AES has been contracted for design and oversight of this project. Repairs are estimated to be completed by Fall 2007.
- Kresge Medical Research III Building: Dry weather screening identified flow in this area. The source of the flow was identified as non-contact cooling water discharging into floor drains. Potable water, such as this non-contact cooling water (untreated), is an approved discharge under the NPDES permit. The request for correction work to redirect the floor drains to the sanitary sewer system has been submitted and UM AES has been contracted for design and oversight of this project. Repairs are estimated to be completed by Fall 2007.
- Central Campus Recreation Building: Dry weather screening identified flow in this area. The source of flow was identified as coming from CCRB pool. The University is permitted to discharge dechlorinated water from the CCRB pool to the storm water drainage system. An additional source has been identified from pool deck drains and overflow. The request for correction work has been submitted, UM AES has been contracted and design is underway for this project. Work is estimated to be completed Fall 2006.
- Unit for Laboratory Animal Medicine: Dry weather screening identified flow in this area. The source of the flow was tracked back to the Medical Science II building, mechanical room where a backflow preventer was leaking potable water which was discharging into a floor drain. UM AES will be contracted for correction or elimination of the floor drain. Work is estimated to be completed in 2007.
- Cooling Towers – Past dry weather screenings identified flow from cooling towers when overflow valves are tripped resulting in overflow to the storm system via existing roof drains. Daily maintenance inspections of cooling towers are performed to identify and correct any overflow conditions.

Currently, repairs are scheduled to be completed at the following locations:

- Taubman Library – Repairs are scheduled for November 2005.
- School of Education - Piping leaks which are the source of the overflow issues identified are currently being addressed.

The following illicit connections have been addressed:

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- Printing Services Building: Cross connections were discovered at Printing Services as a result of an investigation of a report by two UM employees on November 23, 2004 of a 'bluish' coloring in Millers Creek. Initial response, containment, and cleanup efforts are documented in the Incident Report dated December 2, 2004. Discharge to the creek from usage of any cross connected equipment or fixtures was immediately ceased. Since that date, efforts to identify cross-connections included camera review of exterior storm lines, plan/diagram reviews of all available information, as well as extensive dye testing of the building fixtures and discharge points. Dye testing of the building has shown that all bathrooms are properly connected to the sanitary sewer system. Three sinks, the computer-to-press equipment (CTP), and a few floor drains were found to be connected to the storm water drainage system. Discharges to the storm water system were stopped upon identification. These systems were evaluated by UM Architecture & Engineering Services (AES), and a design for correction and/or removal was completed. Repairs to these systems were completed in Spring/Summer 2005.
- Couzens Hall: Dry weather screening identified flow in this area. No flow was observed during six follow up events. No further follow up is required.
- Cooling Towers – Past dry weather screenings identified flow from cooling towers when overflow valves are tripped resulting in overflow to the storm system via existing roof drains. Daily maintenance inspections of cooling towers are performed to identify and correct any overflow conditions.
 - Chemistry – Repairs completed in 2004.
 - Medical Science II – Repairs were completed in 2004.
 - Naval Architecture & Marine Engineering (NAME) – Repairs completed, Spring 2005.
 - Lorch Hall – Repairs were completed, Spring 2005.
 - Kraus – Repairs were completed, Summer 2005.
- Medical Science Research Building I/II: Dry weather screening identified flow in this area. The manhole identified was confirmed as a sanitary sewer via dye testing. No flow was identified during two follow up investigations of the original storm manhole. No further follow up required.
- Simpson Memorial Institute Buildings: Dry weather screening identified flow in this area. No flow was identified during three follow up events. A broken water main was identified and corrected in this area during this timeframe, and is the suspected source. No further follow up required.
- Central Power Plant: The CPP discovered some sampling and blow down drains were cross connected to the storm sewer while performing maintenance on boiler no. 4. These drains were infrequently used. The CPP took action

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immediately to correct the problem by re-plumbing the drains to the neutralization tank system which is connected to the sanitary sewer. The project was completed in September, 2004.

Dry Weather Screening – Dry weather screening for 2005 will begin in late September. The 2005 screening event includes South Campus and is scheduled for completion in Spring 2006, weather permitting. Any items identified and their subsequent corrective action will be prioritized based on the type of discharge. Information on these items will be provided in subsequent semi-annual and annual reports.

The Department of Occupational Safety and Environmental Health (OSEH) is working with Facility Maintenance to improve the system of tracking cross-connections and their repair.

During this reporting period OSEH personnel responded to approximately 45 incidents, involving spills and leaks of materials that could have potentially impacted storm water. The majority of the spills were small, ranging from a few milliliters to a few gallons. The materials were contained with spill kits; cleaned up using absorbent materials, and removed for appropriate disposal by OSEH's on-call emergency response team. Response activities involved leaks and spills of diesel, gasoline, hydraulic oil, soil/sediment, blood, urine, vomit, and ethylene glycol-based anti-freeze in parking areas, driveways, and other outdoor places. A few examples of such releases and the corresponding response actions are given below.

- UM staff mistakenly disposed of approximately 3 gallons of wash water off the dock instead of disposing the wash water into the sanitary drain inside the building at the loading dock. The discharge consisted of hot water and wax. An OSEH employee discovered the discharge and immediately blocked the storm drain and called for additional assistance. The UM vacuum truck was used to clean up the material. Unfortunately a thunderstorm started before the clean up was complete and a small amount of wash water entered the storm water drainage system.
- Approximately 1 to 10 gallons of diesel fuel was released from a malfunctioning snow melter which located in a south campus parking lot. The diesel fuel has spread along the curb to a storm water catch basin which drains to Allen Creek. A sheen was detected in the catch basin. OSEH responded and cleaned up the spill using oil dry and sorbent pads. A sweeper truck and a vacuum truck were then used to complete the cleanup. All waste materials were collected for proper disposal.
- A sanitary sewer overflow occurred when the line backed up in a manhole, overflowing onto the ground, and then running over land approximately 300 to 400 feet to Millers Creek. Most of the flow soaked into the ground or ponded on the

ground surface, however a small flow did reach the creek. OSEH and the UM Plumbing Shop responded and a contractor was hired to assist with the response. After the blockage in the line was isolated, the sewage was temporarily diverted and pumped to a down-gradient sanitary manhole. Efforts to clear the line continued late Thursday night and through the next day. The blockage was cleared at 4 pm on Friday. A vacuum truck was used to remove sanitary flow that had ponded on the ground. Lime was then applied to the path of the flow to treat any bacteria, per the recommendations of the City of Ann Arbor Public Services regarding the MDEQ guidance for response to sanitary overflows.

- Sediment was discharged from a storm water drain which flows into the Huron River. The discharge was the result of a break on a six-inch water main near the loading dock. The break occurred near a construction site, but not in the construction zone or as a direct result of construction activity. The large volume of water released from the break necessitated emergency removal of the soil erosion and sedimentation controls (SESC) at the loading dock to reduce flooding at the site and surrounding buildings. The UM Plumbing Shop responded and repaired the line with assistance from the City of Ann Arbor to shut off water mains in the area. In follow up to the incident, approximately 1,000 feet of storm line was cleaned, removing approximately 4 yards of sediment. The SESC controls in the area were replaced and additional cleanup and site restoration followed.

c. Assess BMP appropriateness and progress toward goals identified in the SWMPP.

Note: (Excerpts from the SWMPP are shown in italics.)

Education and Outreach on Storm Water Impacts – Public Education Program (PEP)

Recognizing the need for public involvement in the effort to reduce storm water pollutants, the U-M has developed a broad and aggressive storm water education and outreach program. This multi-faceted program is closely connected to the U-M's pollution prevention (P2) program and its many initiatives. Specifically, the storm water education curriculum is designed to promote, publicize, and facilitate watershed education while encouraging the P2 practices developed under the U-M'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. Below is a description of each of the program's components.

The overall PEP program accomplishes the following goals:

- *Educate the public of hazards associated with illicit discharges and improper discharges. Part of this education is to encourage public reporting of the presence of illicit discharges or improper disposal of materials into the U-M drainage system.*
- *Educate the public regarding acceptable application and disposal of pesticides, herbicides, and fertilizers.*
- *Educate the public concerning the ultimate discharge point and potential impacts of pollutants from the drainage system serving their places of residence.*
- *Educate the public about their responsibilities and stewardship of their watershed.*
- *Educate commercial and institutional entities likely to have significant storm water impacts.*

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 U-M School of Natural Resources and Environment (SNRE), the U-M 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. OSEH produces and distributes storm water pollution prevention brochures specifically for Students; Faculty and Staff; and Contractors, to provide each group with appropriate information on user responsibilities, best management practices and procedures for reporting spills and illicit discharges to the storm water system.

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 reporting. Additional brochures will be created/revised as new needs are identified. The number of new brochures, flyers or other educational media created will be tracked on an annual basis for subsequent reporting.

Actions during the reporting period:

An estimated 3,200 brochures were distributed during at over 100 training, orientation or workshop sessions throughout the reporting period.

PEP -2. OSEH/SNRE Storm Water Education WebSite

Developed in cooperation with the U-M 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 U-M 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 website 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 www.oseh.umich.edu/stormwater/.

Measurable Goal: OSEH/SNRE Storm Water Education Web Site

(www.oseh.umich.edu/stormwater/): The number of visitors to the website will be tracked semi-annually for subsequent reporting. The goal is to have at least 2,000 website hits annually. This website is intended to help students, employees, and visitors in the U-M 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:

3,379 website hits were registered as of this report. This is a total of 1,279 hits since the 2004 Annual Report. The website is currently being redesigned to create a more user-friendly environment. These website renovations are anticipated to be completed during the next 18 months. Use of the website is expected to increase in response to this website enhancement project.

Topics currently under construction for addition to the website and topics added to the website during the reporting period include: North Campus Woods Conservation, Invasive Plant Species, Volunteer Programs, Locations for Invasive Species Removal, Soil Erosion and Sedimentation Control – Program information and forms, and the revised Storm Water Management Program Plan.

PEP -3. Storm Water Management at UM Video

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 University's storm water drainage system and its 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 is shown every semester on the cable system. In addition, separately offered video viewings, on an as needed basis, are provided in faculty and staff presentations.

Measurable Goal: The video will be aired a minimum of 50 times annually for viewing on the U-M local cable TV station. The number of offerings of the video will be tracked semi-annually for subsequent reporting. Additional viewing of the video during presentations, classes, workshops, etc. will also be tracked.

Actions during the reporting period:

The video Storm Water Management at the University of Michigan was aired a total of 64 times during the reporting period.

PEP -4. Storm Water Public Service Announcements (PSAs)

Measurable Goal: Storm water, waste disposal, and recycling related Public Service Announcements will be distributed annually for use during the six or seven football season home games. These short educational messages will provide storm water information to visitors, students, staff and contractors attending the U-M football games. The total anticipated audience for these messages is over 107,000 per game.

Actions during the reporting period:

Public Service Announcements were made at the UM football home games during the 2004 season, potentially reaching an audience of 666,149 people.

Examples of the announcements made include:

Protect our environment! Dump no drinks on the pavement or down the storm drains. They drain directly to the river without any treatment. Help keep our Michigan waters BLUE!

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!

What happens to water when it runs into a storm drain? Nothing. No filtering, no treatment. The storm drains empty directly into our creeks and rivers. And so does anything you dump on the ground - pop, food waste, cigarette butts, litter. So keep them out of our water! Help keep our Michigan waters BLUE!

Would you pour your beverage in your fish tank? Of course not, which is why you should never pour pop, juice, coffee, or alcohol down a storm drain or on the pavement. It goes straight to the river untreated. So do your part and help keep our Michigan waters BLUE!

While the Wolverines score today, you too can score points for the environment. Anything that enters a storm drain goes straight to the river untreated. Pop, juice, coffee, alcohol and tobacco should be disposed of properly. So do your part and help keep our Michigan waters BLUE!

Dumping pop, juice, coffee, alcohol and cigarette butts into the storm drain or on the pavement might seem like the easiest way to get rid of your trash, but it's also the easiest way to pollute the river. Anything that enters a storm drain goes straight to the river untreated. Dispose your trash in the proper receptacles to help keep our Michigan waters BLUE!

Did you know that 70% of Washtenaw County's drinking water comes from the Huron River? Caffeine, sugar, acids, alcohol and tobacco end up in the river when beverages and cigarettes are not disposed of properly. Never dump anything down a storm drain because it goes straight to the river untreated! So do your part and help keep our Michigan waters BLUE!

PEP -5. Presentations, Training Sessions, Workshops, etc.

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

Actions during the reporting period:

Storm water topics were included in approximately 118 classes, workshops or presentations during the reporting period. Examples of classes include: OSEH New Hire Training for Laboratory Personnel, Foundations of Supervision, Safety Supervisor's Workshop and Plant Academy-Law and Policy.

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:

A total of 759 laboratory rooms were inspected by OSEH personnel during the reporting period.

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 for subsequent reporting.

Actions during the reporting period:

All outdoor food vendors are required to attend training / orientation sessions prior to seasonal work at the UM. A total of 225 inspections were performed by OSEH sanitarians on Temporary food establishments during the reporting period.

Additional measures taken to achieve goals:

- OSEH continues to work with Building Services to improve their cleaning procedures to include specific instructions for handling waste generated from each different operation. During the reporting period, disposal procedures for mobile carpet cleaning were reviewed.
- OSEH provided training on storm water pollution prevention, management, best management practices and soil erosion and sedimentation control. Information was provided to Construction Management and the Safety Coordinator's Conference which included topics on creating, improving and writing BMPs and soil erosion and sedimentation control.
- Presentations are provided to students and staff by OSEH personnel to inform, educate and increase awareness of storm water quality issues. Responses from attendees in the campus community include requests for brochures, consultations and additional presentations on related storm water pollution prevention issues.
- 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 and pollution prevention brochures, to report illicit discharges and spills to OSEH and the Department of Public Safety so appropriate measures can be taken to correct issues which may impact storm water quality.

Public Involvement and Participation (PIP):

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, Ann Arbor Public Schools and interested local stream and watershed protection organizations are allowed to review and comment on them. A

website feedback link will be provided to facilitate feedback on the SWMPP from the community.

The overall PIP program accomplishes the following goals:

- *Provide information to the public on the Storm Water Management Plan and related information.*
- *Provide public access to make themselves aware of activities the University carries out under its storm water management program by viewing Annual Reports.*
- *Encourage local stream and watershed protection organizations to review and comment on new storm water management program plans.*

The following BMPs are used to meet the requirements of *Part I, Section B.1 of the University of Michigan's NPDES Permit* for Public Involvement and Participation (PIP):

PIP -1. Storm Water Annual and Semi-Annual Reports

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

Actions during the reporting period:

The SWMPP semi-annual report for 2005 was added to the UM-OSEH storm water website in September, 2005.

PIP -2. Community Meeting Participation

Measurable Goal: The U-M will attend a minimum of ten (10) meetings annually with the Huron River Watershed Council (HRWC), Washtenaw County Drain Commission, City of Ann Arbor (A2), the Millers Creek Action Team (MCAT) or other local stream protection organizations for collaboration on storm water issues in the community. U-M's participation in meetings, community events, etc. with these groups will be tracked for subsequent reporting.

Actions during the reporting period:

Fifteen meetings were attended during the reporting period.

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

Measurable Goal: The U-M SWMPP (and subsequent revisions) will be provided to the City, County, Ann Arbor Public Schools and other interested parties for review and comment on the same frequency the information is provided to the MDEQ. The SWMPP will be accessible on the U-M website for review and suggestions. Any comments received will be reviewed and evaluated for inclusion in the SWMPP by U-M OSEH. A reply to the comments submitted will be provided documenting the outcome.

Actions during the reporting period:

The revised SWMPP was provided to interested parties above. The SWMPP is also available for review on the OSEH website.

PIP -4. Middle Huron Initiative Participation / Phosphorus TMDL Participation

Measurable Goal: The U-M will participate in semi-annual meetings of the Middle Huron Initiative 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:

Semi-annual Middle Huron Initiative meetings were attended during this reporting period.

PIP -5. E. coli TMDL Participation

Measurable Goal: The U-M will participate in the 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:

No meetings were held during this reporting period.

PIP -6. Environmental Stewardship / Volunteer Opportunities

Measurable Goal: The U-M 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/marketing 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:

Volunteer invasive species removal projects were held in October, 2004 and April, 2005.

Additional measures taken to achieve goals:

- OSEH 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 City of Ann Arbor on improving storm water quality. This is accomplished through sharing information and resources.

Illicit Discharge Elimination Program (IDEP)

The removal of illicit discharges is an ongoing program being conducted by the U-M. 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.3 of the Permit.

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

The overall IDEP program accomplishes the following goals:

- *Identification and removal of Illicit Discharges on campus.*
- *Encourage reporting of water quality problems and possible illicit connections and discharges.*

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 Illicit Discharge Elimination Program (IDEP):

IDEP -1. Dry Weather Screening

Measurable Goal: The U-M will perform dry weather screening on the entire campus over the 5-year permit cycle to determine the existence, location, and extent of possible illicit discharges into the U-M storm water drainage system. 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 annually for subsequent reporting.

Actions during the reporting period:

Dry weather screening for 2004 was performed in Fall and continued through mid Winter 2005. The results of the screening are provided as an attachment to this report. Additional information is provided in Section 1.b of this report.

IDEP -2. 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:

A total of 45 call of outdoor incidents were reported via the DPS/OSEH emergency response system. A majority of these outdoor incidents were remedied (35), while 10 spills resulted in discharges to surface waters. Three of the 10 reportable incidents were the result of weather (rain, snowmelt) adversely impacting the emergency response activities.

Additional measures taken to achieve goals:

- 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.
- OSEH sanitarians continue to work with kitchen and food vendors on campus to ensure proper waste management and disposal methods are used.
- The Department of Occupational Safety and Environmental Health (OSEH) is conducting an on-going survey of University owned/managed 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.

Post Construction Storm Water Management Program for New Development and Redevelopment Projects (PCSW)

The U-M has a program to address storm water runoff from new development and redevelopment projects. As part of this program, the U-M manages, reviews, and continually updates campus-wide planning to address storm water runoff from each new 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.

The overall PCSW program accomplishes the following goal:

- *Provide and implement controls to minimize or prevent impacts on water quality from new development and redevelopment projects.*

The following BMPs are used to meet the requirements of *Part I, Section B.1 of the University of Michigan's NPDES Permit* for Post Construction Storm Water (PCSW):

PCSW -1. Formal SESC Plans

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 to require projects to include storm water management controls in the design of all projects. The SESC plan also required final site stabilization and the maintenance program for permanent SESC.

Actions during the reporting period:

Twenty UM sites required formal SESC plans which were reviewed and approved by OSEH-EM during the reporting period.

PCSW -2. SESC Plan Review for Permanent Storm Water BMPs

Measurable Goal: OSEH and the University Planner's Office department 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. Examples of BMPs to be tracked for reporting may include but are not limited to those identified above.

Actions during the reporting period:

Approximately 20 UM projects during this reporting period used a variety of BMPs. Examples of BMPs included the use of hydrodynamic separators, in-ground detention systems, storm water basins (detention and retention), bioretention islands, and connection to regional storm water management systems (detention or retention.)

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:

The storm water management basin reviews continue during this reporting and are being performed by a consultant as part of the system evaluation for potential retrofit opportunities to increase water quality and reduce or hold additional storm water volumes. These reviews will be completed over the next several months. In the 2003-4 reporting year, a consultant performed reviews of the storm water

management basins which was the basis for the current review of potential retrofits during maintenance activities.

One of the two north campus grounds basins was dredged during this reporting period. The second basin at this location was reviewed, and a revised design to address volume and slope issues was completed. The retrofit of this basin is expected to be completed in Fall 2005. The UM Golf Course basin maintenance project is underway and expected to be completed in Fall 2005. The Matthaei Botanical Gardens areas have been identified as needing maintenance and are anticipated to be one of the next projects undertaken, and will require a Joint Permit Application for the project.

PCSW -4. SESC Plan Review for PCSW Controls

Measurable Goal: OSEH and the University Planner's Office review all plans to ensure projects have adequate post construction storm water management controls. The number of plan reviews will be tracked for subsequent reporting.

Actions during the reporting period:

Over 59 UM projects were reviewed during this reporting period.

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.
- Flood control and soil erosion and sedimentation control projects continue to be researched and implemented. 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 are also under consideration.
- OSEH is working with Construction Management to implement standard protocols to dye test the internal piping in new building construction to confirm proper connection to the sanitary sewer system. A program for confirmation of taps to exterior pipes is already in place.

Construction Storm Water Runoff Control (CSW)

In 1982, the U-M 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 U-M's APA status was received in 2004 from the Michigan Department of Environmental Quality. APA

status allows the U-M to establish and manage the Soil Erosion and Sedimentation Control procedures on its properties. Construction activity at U-M 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.1 of the University of Michigan's NPDES Permit for Construction Storm Water (CSW)*:

CSW -1. Formal SESC Plans

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 to require projects to insert storm water management controls into the front end of all projects.

Actions during the reporting period:

Twenty UM sites required formal SESC plans which were reviewed and approved by OSEH-EM during the reporting period. Two sites are 5 acres or greater in size, and have individually filed a construction NPDES Notice of Coverage.

CSW -2. SESC Plan Review for BMPs

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:

A total of 59 UM projects during this reporting period used a variety of BMPs on their sites. Examples of BMPs included the use of vegetative buffers, silt fence, catch basin filters, water diversions, and anti-tracking pads.

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 U-M sites will be tracked for subsequent reporting.

Actions during the reporting period:

Approximately 1,424 weekly and after storm SESC inspections were performed during this reporting period.

CSW -4. SESC Training by MDEQ

Measurable Goal: Select staff from OSEH and the University Planner's Office will be SESC trained by MDEQ. The number of U-M staff who have received MDEQ SESC training will be tracked annually for subsequent reporting.

Actions during the reporting period:

To date, ten UM staff have received SESC training from MDEQ and the associated Certificate of Training.

CSW -5. Storm Water Operator Certification for Construction Sites

Measurable Goal: Select U-M staff from OSEH University Planner's Office and Construction Management will be certified in Storm Water Management for Construction Sites. The number of U-M staff who have received MDEQ certification will be tracked annually for subsequent reporting.

Actions during the reporting period:

To date, 29 UM staff are Certified Storm Water Operators in the State of Michigan for Construction sites.

Additional measures taken to achieve goals:

- A street sweeper is in operation at construction sites to reduce the amount of sediment that could potentially reach receiving waters.
- The storm water drainage system is vacuumed semi-annually to remove sediment buildup within the system and to lessen potential sediment impacts to receiving waters.

Pollution Prevention/Good Housekeeping for University Operations

The University's storm water pollution prevention and good housekeeping initiatives are divided into the following six areas:

- *Structural Controls - permanent physical features that control and prevent storm water pollution. Each structural control has routine scheduled maintenance and long-term inspection procedures to ensure that they remove storm water pollutants to the maximum extent practicable.*

- *Roadways - The University maintains numerous parking structures and surface parking lots throughout the Ann Arbor campus. Maintenance of the U-M roadways and parking structures incorporates sediment control activities. Street sweeping removes potential storm water pollutants before they are carried into receiving waters in runoff from a storm event. Maintenance activities on these structures and surfaces include street sweeping, leaf pick-up, litter and pollution controls, snow and ice removal, and roadside vegetative maintenance.*

- *Fleet Maintenance - The U-M owns and operates a large fleet of vehicles, including buses and cars, that is maintained by the Transportation Department. The U-M also owns and operates a fleet of equipment, including lawn mowers and rototillers that is maintained by G&WM. All vehicles and equipment are regularly maintained to ensure proper and effective operation as well as prevent impacts on storm water quality.*

- *Storm Sewer Labeling - As of March 10, 2004, any outfall structure that the U-M constructs or installs that discharges storm water to waters of the State will provide permanent identification (e.g. label, color coding, or other identifying characteristic).*

The storm drains placed on campus come with the message "Dump No Waste - Drains to Waterways" engraved on it. Storm drain grates already in place have 4 inch plastic circle curb markers with the message "Keep our Michigan Waters Blue: Dump No Waste - Flows to River."

- *Flood Control Projects - As construction, renovation or utility improvement projects are undertaken, the buildings identified as candidates for improvements are reviewed for potential flood control projects. Modeling is performed prior to new construction projects in areas identified with flooding issues or concerns to ensure opportunities to alleviate or prevent new flooding issues are appropriately addressed.*

Whenever the U-M conducts new flood management projects, the impacts on water quality of the receiving water are taken into consideration. As appropriate, new flood management project include a storm water modeling component to understand the potential impacts to regional detention needs prior to decision-making on design.

In addition, as appropriate, the U-M incorporates flood management considerations into its existing projects to assess the potential for incorporation of additional water quality protection opportunities, as well as regional detention opportunities.

- *Pesticides and Fertilizers* - The application of pesticides and fertilizers is controlled by several departments including G&WM, Athletics, Matthaei Botanical Gardens, Radrick Farms and Nichols Arboretum, depending on the location. The University employs Integrated Pest Management (IPM) methodology, an ecological approach to pest management, in University buildings. All available techniques are used to reduce pest populations to acceptable levels while minimizing the potential impact of pesticides upon humans and the environment.

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.1 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 U-M retention basins and detention basins will be tracked for subsequent reporting.

Actions during the reporting period:

The storm water management basin reviews continue during this reporting and are being performed by a consultant as part of the system evaluation for potential retrofit opportunities to increase water quality and reduce or hold additional storm water volumes. These reviews will be completed over the next several months. In the 2003-4 reporting year, a consultant performed reviews of the storm water management basins which was the basis for the current review of potential retrofits during maintenance activities.

P2/GH -2. Storm Water Catch Basin Maintenance

Measurable Goal: Maintenance cleaning of the catch basins and storm sewer system piping will be performed semi-annually. The number of catch basins maintained will be tracked for subsequent reporting.

Actions during the reporting period:

Storm sewer cleaning activities occur on a semi-annual basis. Catch basins across the campus are cleaned and the sewer lines rodded out. The liquid waste is drained

to approved sanitary locations and the remaining non-hazardous sediment and debris is transported for disposal off-site. To more effectively handle the storm and sanitary cleaning solids, the University of Michigan constructed a storage pad for drying the solids. The solids are then loaded onto a dump truck or a roll-off container and transported to a sanitary landfill for proper disposal as non-hazardous, non-regulated waste.

This goal is new, as of the June 16, 2005 MDEQ approval of the revised SWMPP. This information will be tracked for subsequent reports.

P2/GH -3. Street Sweeping, Leaf, and Litter Collection

Measurable Goal: Street sweeping, leaf and litter collection will be performed continually 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 Ann Arbor campus will be tracked annually for subsequent reporting.

Actions during the reporting period:

An estimated 230 cubic yards of waste was sent for disposal from cleaning of parking lots and structures throughout campus. Street sweeping operations disposed of approximately 988 cubic yards of waste. Litter pickup and disposal yielded an estimated 1,160 cubic yards of waste.

P2/GH -4. 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:

The National Weather Service noted that in the 2004-5 winter season, “All areas across Southeast Lower Michigan saw well above normal snowfall and not only for the season but on a monthly basis as well...and right through April.” Approximately 1,717 tons of salt was used during this reporting period which is a 34% reduction from the average annual use amount of 1,600 tons per year from 1989 to 1999. The harsh winter conditions experienced this season resulted in less of a reduction in the use of salt than the 40% reduction in salt use shown in previous years.

P2/GH -5. Snow and Ice Removal – Use of Alternative De-icers

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:

In the 2004-5 season, the following alternative de-icers were used:

Magnesium Chloride at 259,200 pounds;

Calcium Chloride at 6,300 pounds

Caliber M-1000 at 9,598 gallons

Treated Sand was not used this season

P2/GH -6. Pesticide and Fertilizer Technician Training

Measurable Goal: All applicators (technicians) will be trained in pesticide and fertilizer use. The number of trained pesticide and fertilizer technicians will be tracked on an annual basis.

Actions during the reporting period:

The UM currently employs 40 certified technicians.

P2/GH -7. Roadside Vegetative Replacement

Measurable Goal: Eliminate the need for vegetative replacement due to salt damage. Annual tracking of the need for replacement vegetation will tracked for subsequent reporting.

Actions during the reporting period:

This goal is new, as of the June 16, 2005 MDEQ approval of the revised SWMPP. This information will be tracked for subsequent reports.

P2/GH -8. Storm Sewer Labeling

Measurable Goal: All U-M 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:

Approximately 500 storm drain markers were installed during the reporting period on catch basins throughout campus. Special attention is given to areas near the annual Art Fair, the Football Stadium and associated parking, as well as higher use walkways.

2. Environmental Impacts –

Provide an assessment of the pollution reduction and probable receiving water quality impacts associated with program implementation. Include any negative water quality

impacts that may have occurred as a result of any illicit discharges or accidental spills during the past year.

Storm water management is recognized as a significant issue for the campus and control options are given careful consideration. A major goal of the many BMPs identified and implemented at the University is to reduce the discharge of sediment and associated pollutants to the receiving waters. The control program begins in the project design phase, by providing guidelines for storm water management and soil erosion and sedimentation control on campus and continues through the construction phase of the many projects on campus. The BMPs below have been implemented at the University. Probable impacts to water quality from these BMPs are taken from the MDEQ's *Index of BMPs/Individual BMPs*.

- Catch Basins / Cleanout Procedures – reasonably effective in protecting sewers from receiving loads of coarse solids.
- Oil/Grit Separators – remove coarse sediment and oils from storm water prior to delivery to a storm drain network, the ground, or other treatment.
- Salt Reduction – reduced application rates of salt may result in an improvement of surface water quality by reducing chloride and sodium concentrations. Reductions in salt application will also help protect ground water supplies used for drinking water. Other benefits that may occur by reducing salt application rates and encouraging proper salt storage include reducing density stratification in ponds and lakes; reducing corrosion of vehicles and bridges; reducing damage to roadside vegetation; and reducing the deterioration of soil structure.
- Storm Water Management Basins – 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 fine sediment and the pollutants (e.g., phosphorus) associated with them. Detention basins can be effective at removing sediment, non-soluble metals, organic matter and nutrients through settling. Up to 90% of particulates may be removed if the storm water is held for 24 hours or more. Sediment basins can be very effective in preventing sedimentation of downstream areas. Coarse and medium size particles and associated pollutants will settle out in the basin. Suspended solids, attached nutrients, and absorbed non-persistent pesticides may break down before proceeding downstream. Because sediment basins also retain water, they may increase recharge to ground water.
- Street Sweeping – can remove 50-90% of street pollutants that potentially can enter surface water through storm sewers. Street sweepers will also make road surfaces less slippery in light rains, improve aesthetics by removing litter, and control pollutants which can be captured by the equipment.
- Illicit Discharges – minimal adverse impacts to water quality are anticipated from the currently identified illicit discharges. No sanitary cross-connections have been

identified at this time. Priority is given to correction of illicit discharges containing constituents of concern to the Huron River. Water quality is improved as illicit discharges continue to be identified and corrected as a result of the dry weather screening program.

- Spills – minimal adverse impacts to water quality are anticipated, as a majority of outdoor spills (35) were contained and removed from the storm water system using OSEH's 24-hour emergency response team. Ten reportable events occurred during this reporting period. Discharges included wash water, sediment from water main breaks (2), salt brine, sewage backup and subsequent overflow (2), gasoline, diesel and cross-connections from 1 building (non bathrooms). The majority of the reportable spilled material was cleaned up by OSEH's emergency response team, the UM vacuum truck and the UM sweeper truck, as appropriate, per site.

**3. *Water Quality Assessment –
Provide an assessment of the water quality conditions within the jurisdiction.***

The following information was provided by and compiled from the Huron River Watershed Council:

The Huron River is considered the cleanest urban river in Michigan. The river is used for recreation, drinking water and power generation by roughly ½ million residents of the watershed, and the watershed contains two-thirds of southeast Michigan's public recreational lands. More than 37 miles of the river and three tributaries have been designated Country Scenic River by the Department of Natural Resources under the State's Natural Rivers Act, the only such designation for a river in southeast Michigan.

However, the stretch of the Huron River known as the Middle Huron River does not meet state and federal water quality standards due to excess nutrification, E. coli pathogen levels, and fish consumption advisory for polychlorinated biphenyls that exceed state levels. Tributaries to the Huron River within the City of Ann Arbor also exhibit poor macro invertebrate and fish communities.

Communities in the Huron River Watershed are concerned with a number of water quality and water quantity issues including high levels of sediment entering the river system, destruction of aquatic and terrestrial habitat, river flow fluctuations, and pollutant loads of metals and other toxins, bacteria, and excess nutrients. Nutrient enrichment of the River system is of particular concern, driving annual algal blooms in the River's impoundments, which in turn limit recreation uses protected by the federal Clean Water Act. These blooms are associated with high phosphorus levels in the river and lake waters which originate from both "point sources", (i.e. discharges out the end of a pipe from industry and municipal wastewater treatment) and from "non-point sources", polluted runoff from our

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lawns, streets, agricultural fields and from the banks of the River itself. It is thought that to reduce the problems associated with nuisance algal blooms in the impoundments it is necessary to reduce summer concentrations of phosphorus in the River at Ford Lake to 50 micrograms per liter. This concentration would ensure a reduction of the phosphorus concentration in Belleville Lake to 30 micrograms per liter, the goal set by the Michigan Water Resources Commission in 1987. To reach this goal, requires reducing current phosphorus loads by approximately 50%. These goals have been set forth by the Michigan Department of Environmental Quality (MDEQ) in Total Maximum Daily Load allocation (TMDL) for the Middle Huron.

The U. S. EPA approved the TMDL for E. coli in the Huron River submitted by the Michigan Department of Environmental Quality. Stakeholders, including the University of Michigan and the MDEQ have completed the implementation plan with the assistance of a third-party facilitator. As of the September 2004, the stakeholder representatives were soliciting formal support for the plan from their respective communities and organizations, in preparation for submitting the plan to the MDEQ. This plan will serve as an example for E. coli TMDLs across the country since few, if any, have been completed in other areas.

Ecological conditions of the Huron River have been compiled for up to 10 years by Adopt-A-Stream groups. Ecological Condition is determined by the biological and physical conditions of the site. The biological conditions include the diversity of insect families, EPT families and sensitive families. The physical conditions are determined by conductivity results and "measuring and mapping" assessments of habitat. These assessments involve examining characteristics such as the stream banks, stream widths and depths, and the types of material (such as sand and gravel) on the stream bottom. When interpreting the biological and physical conditions, more diversity is expected at a larger site or one with cooler summer stream temperatures. The Huron River watershed as a whole is comprised of predominantly "acceptable" to "good" conditions with 4 areas receiving "excellent" condition rankings. Urban areas and downstream sites in the watershed are more likely to show a "poor" condition ranking. Adopt-A-Stream data for the reach from Mill Creek to Belleville Lake reveal the following:

- 2 sites have Excellent conditions
- 6 sites have Good conditions
- 10 sites have Acceptable conditions
- 15 sites have Poor conditions

"Acceptable" indicates that the quality of the site is just below what is expected for a healthy site of its characteristics (such as drainage area and stream temperature). "Good" sites are at or slightly above expectations, while "Poor" sites are well below what is expected. A few sites qualify as "Exceptional" due to a great diversity of insects and good physical quality.

4. Data & Results –

Provide a summary of all information collected and analyzed, including monitoring data, if any, during the annual reporting cycle.

A copy of the 2004-5 Dry Weather screening is provided as an attachment to this report. Twenty points were selected in the North and East Campuses for the 2004 dry weather screening. Three screening locations showed flow and will be targeted for further backtracking and investigation.

5. Upcoming Activities –

Provide a summary of the storm water activities to be implemented during the next annual reporting cycle. Include schedules for elimination of any illicit connections identified but not disconnected prior to annual report submittal.

The University of Michigan shall continue its on-going programs including:

Public Education and Outreach

- Continue to update the OSEH web page.
- Distribute storm water brochures to members of the campus community and new employees.
- Install additional storm water curb markers, with the dump no waste, flows to river slogan.
- Create and distribute information on household hazardous waste disposal options in the area.
- Revise 2006 Plant Employee training to reinforce good housekeeping procedures and proper waste management.
- Continue OSEH sanitarian work with kitchen and food vendors on campus to ensure proper waste management and disposal methods are used.
- Continues to work with UM staff to improve waste handling procedures.
- Work with Athletics to request continued Storm water educational announcements at the University of Michigan home football games.
- Continue offering viewings of the OSEH department and the School of Natural Resources (SNRE) storm water educational video on UM cable TV.

Public Involvement/Participation

- Continue to work with the Millers Creek Action Team.
- Continue to participate in the *E.coli* TMDL implementation plan.
- Continue to offer opportunities for environmental stewardship on campus.
- Continue to update the OSEH web page which contains the UM Storm Water Management Program Plan as well as information for use by students, faculty, staff and the surrounding community.

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- Continue to post the UM annual and semi-annual NPDES reports on the UM-OSEH website to heighten community awareness of storm water management activities on campus.

Illicit Discharge Elimination Program

- Continue annual dry weather field screening to locate potential illicit discharges.
- Follow-up on potential illicit discharges to the storm water system and make repairs as required.
- Items for further investigation will be researched, as weather permits. Identified illicit discharges will be prioritized for correction according to their potential impacts to water quality. Cross connections will take priority; cooling tower discharges will be prioritized based on the frequency of discharge and will be redirected to the sanitary sewer as building improvements and upgrades are undertaken.
- Continue to encourage the campus community to report illicit discharges and spills to OSEH and the Department of Public Safety so appropriate measures can be taken by the 24-hour Emergency Response Team to correct issues that may impact storm water quality.

Post Construction Storm Water Management

- Review storm water management plans for new construction.
- Continue to perform post construction site closure, per the DEQ construction site storm water operator guide.
- Review targeted sites for flood control projects, as new construction or renovation projects are identified.
- Review the results of the basin study (estimated to be complete in Winter 2006) to identify areas for potential increases in detention capacity, retention/infiltration, additional BMP usage. Opportunities for enhancement of the basins will be reviewed and prioritized.

Construction Storm Water Runoff Control

- Continue construction site storm water protection BMPs.
- Training of personnel to maintain certification as construction site storm water operators.
- Training of personnel to maintain certification as soil erosion and sedimentation control operators.
- Continue OSEH review of site plans. Continue to make recommendations to improve runoff water quality in and around construction projects.

Pollution Prevention/Good Housekeeping for University Operations

- Continued cleaning of storm water inlets, lines, and detention basins on a regular basis.
- Continue salt use reduction and alternative product usage to improve storm water runoff quality.
- Continue to implement BMPs to improve storm water discharge quality.

- Revise 2006 Plant Employee training to reinforce good housekeeping procedures and proper waste management.
- Continue to have pesticide and fertilizer applicators on campus trained and certified in appropriate application amounts and techniques.

6. *BMP Changes –*

Describe any planned changes in identified BMPs or Measurable Goals for any of the minimum measures.

No revisions are proposed at this time.

7. *Notice of Changes in Reliance on Permitted Drainage System Operators –*

Describe any changes in the need to rely on other permitted drainage system operators to satisfy the terms and conditions of this permit, as defined in Part I.C.1.d.

No revisions are proposed at this time.

8. *Drainage System Changes –*

Provide an update on areas added to the drainage system due to annexation or other statutory processes (if applicable).

No revisions are proposed at this time.

9. *Revised Fiscal Analysis –*

Provide a summary of revisions, if necessary, to the fiscal analysis reported during the previous permit, pursuant to permit application requirements at 40 CFR 122.26(d)(2)(vi).

No revisions are proposed at this time.

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10. Annual Budget –
Provide the previous fiscal year’s annual expenditures and proposed budget for the fiscal year following the report.

The expenditures and budget are shown in the following table.

ACTIVITY	2004-2005 UM LABOR AND MATERIALS¹	2004-2005 CONTRACTOR COST OR DIRECT PAYMENTS	2005-2006 BUDGET ESTIMATE
Permit administration	\$30,000		\$35,000
Storm and sanitary repair	\$245,000		\$250,000
Construction site soil erosion control*	\$137,000		\$135,000
Storm water management basin construction & maintenance	\$25,000	\$30,000	\$250,000
Storm water education program	\$15,000		\$15,000
Catch basin maintenance and cleaning program	\$79,000		\$90,000
Street sweeping program	\$101,000		\$105,000
Waste Management Department Litter collection & disposal	\$904,000		\$900,000
Parking structure and lot cleaning program	\$447,000	\$111,000	\$500,000
Storm water utility charges paid to Ann Arbor		\$314,000	\$320,000
OSEH spill response activity		Footnote 2	
Plant Extension Division		Footnote 2	
TOTALS	\$1,983,000	\$455,000	\$2,600,000

Footnotes: * - Many construction and renovation projects do not have separate tracking of SESC costs, as they are built in to the contract as a whole. Therefore, the expenditures for SESC are higher than shown. **1** - University labor costs include estimated base salary, 28% for benefits, and 52% for indirect cost recovery charges. **2** - These departments and divisions have moderate storm water costs and are not tracked separately by the University budget system.

ATTACHMENTS

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