

**THE UNIVERSITY OF MICHIGAN  
MUNICIPAL STORM WATER NPDES PERMIT MI0053902  
MID-YEAR REPORT, APRIL 2004**

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 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, 2003 through December 31, 2003 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 permit conditions. In accordance with Part I, Section B, the University is continuing to implement the storm water management plan (SWMP) approved on December 15, 1999, until the revised SWMP is approved.

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

The following illicit discharges were identified during this reporting period:

- 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 confirmed flow in that area. Further investigation will be performed to confirm the sources of the flow when weather permits.

The following illicit connections are under further investigation.

- Dry weather screening in 2003 identified flow in the following areas. Further investigation will be performed to confirm the sources of the flow when weather permits.
  - Natural History Museum
  - Central Campus Recreation Building
  - Mary Markley Hall
  - Simpson Memorial Institute buildings
  - Kresge Medical Research III Building area
  - Couzens Hall area
  - Unit for Laboratory Animal Medicine
  - Medical Science Research Building I/II
- Randall: The source of water is a condensate receiver connected to an ejector tank that is connected to the storm water drainage system. Work to disconnect the steam condensate from the ejector tank is expected to be completed in 2004.
- Fisher Field / S. Campus: Dry weather screening identified flow in this area. Flow appears to be drainage from the field itself. Further investigation will be performed to confirm the source of the flow when weather permits.
- Cooling Tower Discharges: The following buildings have identified cooling towers discharges to the storm sewer system: Tappan Hall, Chemistry, School of Education, and the

N. Ingalls building. The correction of these systems will be prioritized based on the frequency of discharge from the building and redirection to the sanitary sewer will be completed as building improvements and upgrades are undertaken.

The following illicit connections have been addressed:

- Fisher Field / S. Campus: Dry weather screening identified flow in this area. Flow was confirmed as drainage from the field itself.
- South Quad: Three floor drains in kitchen were identified that connect to the storm water system. Redirection of these drains to the sanitary sewer has been completed.

3. *Assess BMP appropriateness and progress toward goals identified in the SWMP.*

A. Education and Outreach on Storm Water Impacts – Public Education Program

Goals:

- 1) Educate the public of hazards associated with illicit discharges and improper discharges. Encourage public reporting of the presence of illicit discharges or improper disposal of materials into the UM drainage system.
- 2) Educate the public regarding acceptable application and disposal of pesticides, herbicides and fertilizers.
- 3) Educate the public concerning the ultimate discharge point and potential impacts of pollutants from the drainage system serving their places of residence.
- 4) Educate the public about their responsibilities and stewardship of their watershed
- 5) Educate commercial and institutional entities likely to have significant storm water impacts

Measures taken to achieve goals:

- 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.
- OSEH produces and distributes storm water pollution prevention brochures specifically designed 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.
- The storm water educational video produced through a joint venture between OSEH and the School of Natural Resources (SNRE) continues to be televised on UM cable TV.
- OSEH provided training on storm water pollution prevention, management, best management practices and soil erosion and sedimentation control to Construction Management.
- University of Michigan personnel, including construction inspectors, managers, plant and OSEH personnel maintain MDEQ certification as construction site storm water operators.

- Soil Erosion and Sedimentation Control (SESC) Operator certification is being pursued by three University personnel. Seven UM staff are currently MDEQ-trained in SESC.
- 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.
- The OSEH Web page at [www.umich.edu/~oseh](http://www.umich.edu/~oseh) provides a wealth of storm water information which can be accessed by the general public, as well as the campus community. The website has been visited over 1,200 times since November 2003. This site is continually updated and contains links to a variety of articles on storm water quality management and pollution prevention, improving storm water quality and wetlands protection, as well as copies of past years NPDES storm water reports. There is also a link to the OSEH/SNRE storm water education site. Many questions are received by OSEH staff regarding specific application of storm water principles identified on the web site. The following information has been added and/or updated on the UM website:
  - Exterior Cleaning – procedures and alternatives to chemicals
  - Household Hazardous Waste Disposal
  - Spills – management and response
  - Sanitary and Storm Water Drainage Systems
  - Storm Water Regulations
- Drain markers saying “Dump No Waste – Drains to River, Keep our Michigan Waters BLUE” continue to be installed over storm drains throughout campus. These markers have raised the awareness of employees, students and visitors to the University that storm drains are directly connected to the river. Additional markers are installed, as needed, to repair or replace existing marker locations. New storm drain catch basins are permanently cast with a fish and the words “Dump No Waste”.

#### B. Public Involvement/Participation

##### Goals:

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

##### Measures taken to achieve goals:

- The OSEH web page contains the UM Storm Water Management Plan as well as storm water information for use by students, faculty, staff and the surrounding community. The site also contains contact information for community input.

- The University posts its annual and semi-annual NPDES reports on the UM-OSEH website to heighten community awareness of the storm water management activities on campus.
- The University of Michigan actively participates in storm water improvement meetings with the City, County and Huron River Watershed Council addressing concerns such as the E. coli TMDL, the phosphorus TMDL, and Millers Creek.
- Local stream and river protection organizations are encouraged to provide feedback on the University's Storm Water Management Program and associated activities.

### C. Illicit Discharge Elimination Program

#### Goals:

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

#### Measures taken to achieve goals:

- The University of Michigan has an ongoing program to identify illicit discharges on campus. Dry Weather screening is performed in a prescribed area of campus each year, to determine the existence, location, and extent of possible illicit discharges into the UM storm water drainage system. As illicit discharges are identified, they are discontinued or otherwise corrected. Section 2 of this report details recent IDEP activities on campus.
- The campus community is encouraged 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 which may impact storm water quality.
- The Department of Occupational Safety and Environmental Health (OSEH) is conducting an ongoing 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.
- OSEH sanitarians continue to work with kitchen and food vendors on campus to ensure proper waste management and disposal methods are used.
- 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.

### D. Post Construction Storm Water Management Program for New Development and Redevelopment Project

#### Goal:

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

#### Measures taken to achieve goal:

- Construction sites are stabilized with the addition of permanent controls and vegetation to reduce the amount of sedimentation that could impact receiving waters.
- The MDEQ Construction Site Storm Water Certified Operator Training manual and the Guidebook of Best Management Practices for Michigan Watersheds are referenced as the basis for design, plan review and installation and maintenance of appropriate soil erosion and sedimentation control measures on campus sites.
- A storm water management basin system is currently under construction in the north campus area. The system is comprised of three connected basins designed to improve the quality and reduce the quantity of storm water discharge.
- 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.

#### E. Construction Storm Water Runoff Control

##### Goal:

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

##### Measures taken to achieve goal:

- The SESC Program for the University has been revised and submitted to MDEQ. Once approved, this program will be distributed throughout the University to institute programs for review, planning and execution of soil erosion and sedimentation control measures for projects that could potentially impact storm water quality.
- The MDEQ Construction Site Storm Water Certified Operator Training manual and the Guidebook of Best Management Practices for Michigan Watersheds are referenced as the basis for design, plan review, installation and maintenance of appropriate soil erosion and sedimentation control measures on campus sites.
- Members of OSEH review site plans and make recommendations to improve runoff water quality in and around construction projects.
- A street sweeper is in operation six days per week at construction sites to reduce the amount of sediment that could potentially reach receiving waters.
- Storm sewers are vacuumed semi-annually to remove sediment buildup within the system and to lessen potential sediment impacts to receiving waters.
- Soil erosion and sedimentation control measures are required for construction activities on campus which have the potential to impact storm water quality. Practices to reduce erosion include the use of vegetative buffers and covering spoil piles. The use of silt fence and inlet

filters, at a minimum, are required for sedimentation control. These efforts help reduce the quantity of sediment that may reach the Huron River.

- Staff in various departments have received, or are in training to receive certification from MDEQ in Part 91 – Soil Erosion & Sedimentation Control; Part 31 – Water Resources Protection, Storm Water Management – Construction Site or Storm Water Management – Industrial Site.

#### F. Pollution Prevention/Good Housekeeping for University Operation

Goal:

- 1) Develop and implement a program of operational and maintenance Best Management Practices to prevent or reduce pollutant runoff from University operations.

Measures taken to achieve goal:

- The University Parking Services and Grounds and Waste Management Department (G&WM) conduct street and parking lot-cleaning programs to collect sediment and litter send it off site for proper disposal. This is done to improve customer service, decrease the damage to structures from use of salt, prevent clogging of drains due to sand, litter and debris, and to improve the environment.
- 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.
- Pesticide and fertilizer applicators on campus are trained and certified in appropriate application amounts and techniques.
- Structural controls including retention basins, ponds and detention basins are used throughout campus to reduce potential impacts from runoff into the storm water system. Periodic maintenance is performed on these structures to optimize performance.
- Flood control and soil erosion and sedimentation control projects continue to be researched and implemented.
- A storm water management basin in the north campus area is in the construction phase and is scheduled for completion in 2004.