

**THE UNIVERSITY OF MICHIGAN
MUNICIPAL STORM SEWER NPDES PERMIT MI0053902
2001 MID YEAR REPORT**

In accordance with Part III, paragraph C-2 of NPDES Permit MI0053902, The University of Michigan is required to submit a mid year report of activities associated with the storm water system program. This program is a requirement of the NPDES permit issued by the Surface Water Quality Division of the Michigan Department of Environmental Quality on December 19, 1995. This report covers the period from July 1, 2000 through December 31, 2000 and follows the format identified in the permit.

1. *Provide a brief summary of the implementation status of the plans for the elimination of illicit discharges, public education, and storm water pollution prevention.*

The University has undertaken several initiatives in the management of storm water runoff and pollution prevention including:

- An on-going survey of University owned/managed facilities is being performed by the Department of Occupational Safety and Environmental Health (OSEH) in an effort to identify discharge points into the storm and sanitary systems. The original facility survey was completed in October 1997, and the efforts were turned to actual sampling of discharge points from the facilities. The work has concentrated on the sanitary system sampling. The initial phase was completed in the Fall of 1999. Confirmation sampling of the initial results has been underway since February 2000 and should be completed in February 2001.
- According to the Storm Water Program submitted to MDEQ, the University is divided into 4 distinct areas based on geographical separation - South Campus, Central Campus, Medical Campus, and North Campus. Dry weather screening was initiated during this period on the Medical Campus has not yet been completed due to inclement weather. The initial screening identified seven manholes with sufficient flow to warrant sampling and follow-up flow back tracking however manhole MH-13 is down stream of MH-10, and MH-6 is down stream of MH-5, which lowers the re-inspection count to five locations. A copy of the initial inspection and field screening report for Medical Campus is attached. Follow-up investigation has been delayed due to wet weather conditions.
- Education programs reported in the last annual report are continuing.
- The OSEH Web page at www.umich.edu/~oseh/stormwater is being maintained. This site contains a variety of articles on storm water quality management as well as copies of the Annual Municipal Storm Water Discharge Reporting Municipal Storm Water NPDES Permit MI0053902 annual reports for the last five years. The OSEH web page also contains information about salt reduction initiatives and the use of alternative de-icing agents.
- Storm drain curb markers were purchased by OSEH for placement on the curbs at storm drain inlets. The markers indicate that the drains flow to river and that no waste should be dumped. They are applied to curbs over storm drains with an adhesive caulk. OSEH plans to gain assistance from environmentally conscious student groups this spring in the deployment of the markers. A marker is included for your review.
- Pollution prevention efforts continue through catch basin cleaning, street/parking lot sweeping, and litter collection programs. The university now owns and maintains a vacuum truck for storm drain cleaning. Soil erosion control efforts were implemented at a variety of construction projects during this past year. These efforts all reduce the quantity of sediment that may reach the Huron River.
- The *Salt Use Quality Improvement Team* has made considerable progress in identifying and employing a variety of liquid and solid materials on campus. The goal of the team is to

promote *Best Management Practices* for de-icing that minimize deterioration to buildings, infrastructures, and the environment without compromising the safety of the University's students, faculty, staff, and guests. Team members are from Public Safety, OSEH, General Counsel, Risk Management, Grounds Management, Parking Services, Building Services, and Plant Construction. A pilot test program was initiated in 1995 using potassium acetate (CF7) de-icer, and calcium magnesium acetate (CMA) to replace the sand/salt mixture. Various applications were tried, including mixtures of the materials with sodium chloride. A strategy of "anti-icing" was also tried where the application was made prior to the snow/ice precipitation. Based on the success of the pilot test, the program has expanded each year. These studies indicate there are feasible alternatives for using salt in some applications. This program will expand further in the upcoming years and additional studies will look at the effect of alternative deicers on vegetation, cost benefit on infrastructure maintenance, and safety issues. There is difficulty in judging the success of alternative de-icers due to the variable winters conditions that we have experienced year to year. Additionally, OSEH performed several "freeze" tests on a variety of alternative de-icers at varying concentrations. These tests were performed to find out what concentration of de-icer is needed for a given temperature. Grounds maintenance staff are also being trained on the use of proper salt/sand mixtures and the calibration of the equipment that deploys these mixtures. This is an effort to reduce the potential for over salting, hence reducing the amount of salt/de-icer that flows to surface waters. See attached log sheet and salt distribution log for one of the salt spreading trucks.

2. *Provide a report of illicit discharges and illicit connections removed, and schedules for illicit connections and their associated discharges yet to be removed.*

The following "illicit discharges" were identified this reporting period:

- U-M OSEH continues to work with vendors at the stadium to prevent illicit discharges.
- Medical Science II: Three floor drains that are connected to the storm water system are to be temporarily re-routed to the sanitary system. They will be permanently fixed during the building renovation. None of the floor drains are located in laboratories.
- Phoenix Memorial Laboratory: A potential cross connection is being investigated. It appears the floor drains in a mechanical room may be connected to the storm water system.
- Golf Course: A potential cross connection in the maintenance shop is being investigated. Dye testing will be performed to verify flow to the septic system.
- Naval Architecture and Marine Engineering: A potential cross connection is being investigated in on the floor drain in room 120. Dye testing will be performed to verify flow to sanitary sewer. This is a non-laboratory room and the drain is not used.
- Kraus: Cooling water is potentially discharging to a storm water cistern. The lines are being traced to find the source.
- South Quad Dock Garage: The floor drain located in the south quad dock garage may be connected to a storm water drain. Dye testing will be performed to verify flow to sanitary sewer.

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