

**THE UNIVERSITY OF MICHIGAN
MUNICIPAL STORM SEWER NPDES PERMIT MI0053902
2000 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 Michigan Department of Environmental Quality Surface Water Quality Division on December 19, 1995. This report covers the period July 1, 1999 through December 31, 1999 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 items in the management of storm water runoff and pollution prevention.

- 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 is planned for February 2000 to January 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 completed during this period on the North Campus. The screening detected one illicit connection from the Cooley building to the storm water system. The connection was re-routed to the sanitary sewer system. A copy of the report of the screening program for North Campus is attached.
- Education programs reported in the last annual report are continuing. The OSEH department project with the School of Natural Resources and Environment (SNRE) has filmed the storm water education video. The film is currently being edited and is expected to be finalized by March 2000. Distribution of the video and/or viewing of the video is planned through several channels, such as staff, student, & faculty new hire orientation, training sessions conducted by the OSEH department. Other potential means of video dissemination will be evaluated and adopted as appropriate.
- Additionally, as opportunities arise for education, training is being provided to staff. As an example, the University Public Safety Officers have received storm water pollution awareness training at their daily briefings. Maintenance supervisors and the Contracting Group employees have also received storm water education specifically directed at their department's different activities.
- 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.
- OSEH staffed a booth at the Dormitory Student Resident Assistants Resource Fair in August. Information was provided on storm-drain stenciling as a community service project they can complete with dormitory residents. Additionally, a student group on campus stenciled 73 drains this past Fall and plan to do more stenciling in the spring.
- 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.
- A major initiative is underway to evaluate the storm water system of the University. The study being conducted by CH2M Hill under contract to OSEH is performing several tasks including: 1) an aerial survey and digitized topographic maps to a 1 foot contour interval, 2) verification of invert elevations on catch basins and manholes, 3) modeling of runoff patterns across campus and through the storm drain system to evaluate capacity, and 4) preparation of a report. The draft report should be complete in February. It is focusing on specific flooding areas, including the Palmer Drive area on Central Campus and an area of recent development on North Campus. The storm water system drawings are complete and the sanitary sewer drawings were field verified in December 1999.

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 and eliminated during this reporting period:

- U-M OSEH continues to work with vendors at the stadium to prevent illicit discharges.
- North Campus Recreation Building: The North Campus Recreation Building (NCRB) cross-connection project was completed on 12-10-99. The pool drains now discharge to the sanitary sewer system and the connections to storm water system have been plugged.
- Cooley Building: Floor drains in a mechanical room were found to be connected to the storm water system instead of the sanitary sewer. These floor drains have been recently routed to the sanitary sewer system.
- Hoover Ave Building Complex: A cross connection was discovered from some bathrooms. The cross connection was re-routed to the sanitary sewer system in December 1999.
- Medical Science II: It was discovered that 28 floor drains are connected to the storm water system. U-M Plant Extension is evaluating the cross connection and developing a solution.
- 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.

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