

**UMD Stormwater Steering Committee  
November 9, 2007 Administrative Conference Room**

Present: Candice Richards (UMD Facilities Management), David Schimpf (UMD Biology Faculty), Erik Larson (UMD Civil Engineer), Chris Kleist (City of Duluth Storm Water Project Coordinator), Jesse Schomberg (MN Sea Grant Program), Casey LaCore (UMD Office of Civic Engagement), Tim Bates (UMD RSOP), Cheryl Love (UMD Parking Supervisor), Zandy Zweibel (UMD Student Representative), and recorder Trish Winberg

Casey LaCore from UMD Office of Civic Engagement was introduced – this year's issues are sustainability and building awareness on and off campus; Jonathan Tupper is new full time sustainability staff.

Absent: Peggy Dahlberg (UMD Grounds Supervisor), Rick Axler (NRRI, Lake Superior Streams), Cindy Hagley, John Weiske (UMD Housing), and Mahjoub Labyad (Environmental Health & Safety)

**Review Minutes:**

*March 2007:* Minutes were received previously by email. Approved.

*April 18, 2007:* (Annual Meeting): Minutes were Approved.

*Annual Meeting comments:*

*Thirty-two* people were present at the 4/18/07 annual meeting which was combined with a presentation on UMD efforts towards sustainability. Legal requirements were fulfilled by reporting summary and inviting comments at meeting.

Comments and questions were received regarding:

- Methods used for melting ice
- Placement of walkways and reduction of impervious surfaces
- The need for an office of sustainability on campus
- Raising awareness and improving attendance at the annual meeting.

Discussion followed regarding publicizing the meeting. Erik Larson suggested publicizing the presentation earlier, involving environmental education faculty and obtaining a list of instructors to notify when there are project opportunities.

Casey LaCore noted the best success for involvement is to target people who are looking for projects in current curriculums. Tim Bates added that information be available early enough to include in a class syllabus. Dave Schimpf mentioned the College of Science and Engineering will launch an environmental science major run by department faculty in Fall 2008.

Candice and Erik will work to update project information for a targeted list of instructors. Casey suggests using bulk email to inform students of Storm Water efforts and suggested using the Rafter's, and should be scheduled early. The committee agreed to keep the annual meeting and presentation within the same week as Earth Day and Beautiful U Day.

*June 2007 (2006 MPCA Report):* The newly formatted annual report was submitted to MPCA prior to deadline. Report form asks for numbers of educational items or contacts such as presentations, tours, newspaper articles and website hits. Team efforts are combined for reporting purposes. A PDF of the annual report was sent to committee members; no further comments were received from MPCA. Members should watch for opportunities to build awareness and document these events for the annual report.

## **2007 Education / Outreach activities report:**

### *UMD Classes:*

- David Wyring's Anthropology senior seminar students conducted a research project on Stormwater; Candice and Erik were interviewed. Candice attended the class presentation and commented on a job well done.
- Beth Ruark's Technology in Education class continues to devote a class period each semester to a storm water presentation and Rain Garden tour for future science teachers.
- Candice will work through Office of Civic Engagement to match students to projects. Development of a curriculum for employee training may be appropriate project.

### *Other University of Minnesota stormwater education:*

- LakeSuperiorStreams.ORG: Rick Axler (absent) reports that he receives about 400,000 requests and 75,000 page requests per month on Lake Superior Streams. Over 2,000,000 pages of information were requested by Minnesotans in 2006-2007. Securing funding for LSS.Org continues to be difficult.
- UMD Storm Water website is being updated and will be part of larger environmental site when it is complete.
- Beautiful U Day cleanups and Tischer Creek clean up provided service learning opportunities.
- ROTC & FM planted 800 native tree seedlings along W. branch Tischer Creek. Providing shade, 1500+ trees have been planted in the creek area over the last 3 years.
- UMD Theatre and the Office of Civic Engagement collaborated to connect community groups involved in water quality efforts to the Urinetown play's corresponding message. Groups were invited to staff literature tables in the MPAC lobby.

### *Brochures / Presentations / Tours:*

- Jesse reports that "Making a Great Lake Superior" conference was a great success Oct. 29 -31. 444 people attended making up a diverse audience including researchers, teachers, Resource Managers, mayors, public works employees, etc. Topics included climate change, water levels, non-point pollution, and several talks within each topic. An evaluation went out recently, and Jesse is looking for feedback.
- On October 31 a tour of innovative storm water management efforts in Duluth and Hermantown (18-20 people) stopped to view the UMD Rain Garden and a new installation of pervious pavers.
- Candice gave a presentation at a Minnesota College Personnel Association conference on October 22.
- Erik gave a rain garden presentation to a MN DNR group. The tour was to educate the Grand Rapids DNR using a rain garden as a starting point for storm water education.
- The City of Grand Rapids requested pictures of the UMD rain garden to provide support for their efforts to construct a similar garden.
- The Rain garden continues to be successful in drawing attention to UMD's efforts to address storm water issues. Over 250 people have participated in formal tours over the summer.
- Candice provided UMD neighbors with information and resources about raingardens and other stormwater BMP's at the annual neighborhood meeting. The City of Duluth has been requiring some homeowners to install sump pumps in the area as part of a program to disconnect footing drains from the sanitary sewer system.

- Jesse (UMD - MN Sea Grant) brought in water quality experts, architects, city planner, County land department, developers, residents, and others to property near west branch of Amity Creek last April. The group compared development scenarios for the location and came up with design recommendations based on their comprehensive plan to develop smaller lots closer to commercial and transit areas; and to eliminate development on the far side of creek where there is no sewer or septic available.
- Lester Amity Newsletter – short article (WSRI) about project driven by NRRI and private funding received to help make creek improvements.
- The Twin Ports Freshwater Folk meeting is held monthly for anyone interested in fresh water education, research or management by Randall E. Hicks, Professor and Director, UMD Center for Freshwater Research and Policy.
- David suggested that the rain gardens be put on campus maps, and when the Labovitz project is completed that campus tour group leaders include rain gardens in tour for new and prospective students.

*Regional Stormwater Protection Team report:*

- Watershed Festival: UMD participated in the June festival held in the Kmart parking lot by providing labor and prizes in this effort to educate homeowners and the general public.
- *Superior Streams Partners*: RSPT has contracted with an engineering and public relations team to develop a marketing program to encourage the regional business community to incorporate stormwater best management practices into their operations; and to provide financial support for RSPT. Chris Kleist discussed plans to take the program to the community.
- Environscape is a large working model showing non point source pollution, and is available for faculty or groups who'd like to use it.

**Illicit Discharge – Erik**

- During the spring, an Environmental Studies class found a dump site on UMD property; someone had dumped waste containers from sealing a driveway. Majhoub disposed of buckets with product inside and had a summer intern talk to creek side residents about the necessity of protecting the area. Several other old dump sites were found upon inspection of the west bank of Tischer Creek.
- Along St. Marie, a contract tree removal crew's hydraulic lift broke spraying an area near the creek with hydraulic fluid. Clean up was completed by an environmental cleanup company, and UMD is waiting for assessment and clean up report. Tree canopy caught most of the fluid and several trees were cut down or delimbed; very little fluid went into the creek. Several trees were replanted to replace those lost.
- Facilities Management EHS annual fire extinguishing training *appeared* to be resulting in storm drain pollution as discharge (baking soda only) was flowing toward a storm sewer. The catch basin was protected by using a sealing cover from a spill protection kit. EHS is formulating a plan to use a new electronic fire extinguisher training technique (using water only) in the future and possibly implement University wide.
- Erik is looking for additional comments regarding the Port-a-potty BMP. David made a comment about sanitation materials used in the winter (antifreeze?). Erik will send BMP and feedback to main supplier for additional comments and possible modifications made for UMD units.
- Student interns reviewed roof drain and drain tile systems for UMD buildings within Duluth. Still working on summery report of possible illicit connections found, such as water cooled mechanical units that are discharging city water into storm sewer system. EHS will have to determine if non storm water discharges are acceptable or not.

### **UMD Construction / Post-Construction Report: Erik**

- A temperature study was conducted at NRRI this summer (July- November). 9 sensors were placed in storm sewer lines coming off the roof, parking lot, HWY 53, and in the Airport Road ditch. Results were sent to St. Anthony's Lab for data crunching. Erik would like to repeat the study next year due to drought conditions this year. The MPCA will complete the total maximum daily load for temperature for Miller Creek in about two years.
- Barr Engineering redesigned outlet structures for ponds; Erik will be receiving final prints in order to modify structures to discharge cooler, cleaner water to streams instead of warmer top water. Prints will be available in Erik's office for review. EHS funded the design, but as of now there is not money for construction.
- Barr Engineering is also doing schematics for Zone 1 retention/detention system (south half of campus). The detention/retention systems are those that either store water and *discharge* later or store water and *use* later in order to limit erosion and water issues downstream from UMD. EHS funded the schematic design study, but as of now there is not money for final design or construction.
- Designers for new civil engineering building wanted to put pervious pavers in the project, and admin suggested a test site. 2 test sites (north side of heat plant and east doors of SpHC) are being used for 2 types of pervious pavers (concrete and V.A.S.T. {rubber/plastic composite}). Samples and brochures are available from Erik for review. Pervious pavers allow storm water to filter through openings into a crushed rock base storage area instead of directly into catch basins. The Heating Plant the paver area will feed an irrigation system for nearby grass. The systems were designed to retard frost heave by using a bypass valve to drain the system. The test sites will be watched to see how they endure the winter.
- RLB Oregon Creek study is being conducted to look at retaining walls that should confine Oregon Creek under the RLB building. Significant wall collapse last spring could pose problems in creek and to building. Retaining walls are national historic features and need to be built to original specs; wall collapse poses the question, "What type of impact does storm water coming in through Zone 1 have on historical structures?" Erik should have study results by January or February.

### **UMD Maintenance / Pollution Prevention Report:**

- UMD Facilities Management (and Parking Services) is responsible for maintenance and pollution prevention. FM is working to develop and implement a plan for sweeping parking lots and streets.
- FM is has completed 100% inspection of loading docks and storage areas (all known outfalls and devices) to identify issues and entities - reports to follow; FM needs to determine responsible parties for loading dock areas. Inspections showed that UMD is in relatively good shape other than some minor maintenance and housekeeping issues.
- FM needs to develop and implement snow storage policy and procedure.
- FM is working on Dumpster Management inspection and education.
- FM is reviewing and recommending vehicle washing requirements on campus - inventory campus vehicles this year; develop and implement policy next year.
- FM has inspected and cleaned campus ponds.
- Landscape and Turf Management requires FM review this year and recommendations next year. FM will evaluate inspection frequencies according to MPCA plan; previous inspections can be used for new frequency decisions.

## **Future projects**

- *LEED and storm water:* LEED (Leadership in Energy and Environmental Design – building design standard given a level of certification. UMD has the goal of being LEED certified on all new construction and renovations.
- *Civil Engineering Buildings:* Erik presented project boards to group. Preliminary design plans include 2 green roofs (2 different substrates); all water coming off roofs will pool into rock gabion and be reused. Main entrances will have pervious pavers and loading dock driveway will be made from turf pavers. Erik encourages group to review Civil Engineering plans and make comments.
- Jesse – UMD has a class explaining internship requirements; he suggests making a pitch to environment studies class (need dates).

## **Announcements**

### *2008 Meeting Schedule:*

Annual meeting will be held in April; Candice will choose date for annual meeting and get on calendar prior to second semester to encourage class participation.

Winter meeting is usually held in early March. Schedule suggestions are welcome.

*Meeting Adjourned*