PREMIER ISSUE! JUNE 2011

Stormwater Utility Newsletter

This quarterly newsletter is intended to be a basis for understanding the mission and goals of the stormwater utility and provides a baseline understanding for the current activities within the purview of the City of Madison Stormwater Utility. Our intention is to provide information on new projects and issues as well as relevant updates to existing projects.

Willy Gets a Makeover

The Williamson Street reconstruction project includes replacement of the base course and pavement, curb and gutter, concrete driveway aprons, and sidewalk as needed. The street is also proposed to be narrowed from 48 ft. down to 44 ft. within these limits. This project will reuse 25,000 tons of old concrete and asphalt, which reduces trucking miles by 23,000.

Innovative stormwater management practices that will be installed with this project include two bio-vaults, two "tree" rain gardens, and two "standard" rain gardens. Bio-vaults are a multi-step system that provide for large sediment control, followed by trash ("floatable") control, followed by a tree filter vault where stormwater is either taken up by the tree or is infiltrated. The tree rain gardens are simply built like a rain garden, but a tree is planted instead of native vegetation. All these systems will be taken off line in the winter with plugs in order to prevent damage to vegetation from road salt.

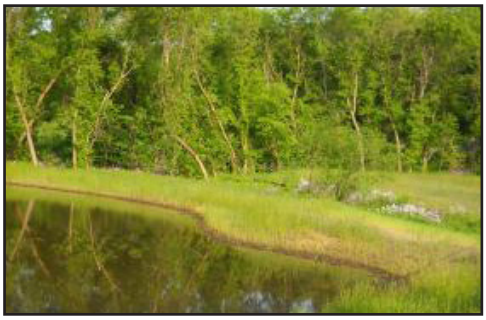
Terrace Rain Garden on Eton Ridge

A Message from City Engineer Rob Phillips

Those of you who have been following changes proposed by the state legislature know that stormwater management is not exempt. The State is proposing to repeal the requirement that municipalities remove 40% of total suspended solids in runoff by October 1, 2013. How will this and other changes affect us? While some of what we do is a result of regulation at the state level, Madison has always been committed to improving stormwater quality because it is the right thing to do. The City and County have already gone beyond the current minimum state requirements, with the intention of improving the condition of our lakes and rivers, and we will continue to do so. Here in Madison, and I believe in the surrounding communities as well, the commitment to the environment remains strong.

New Ponds for Old Middleton

The reconstruction of Old Middleton Road in 2010 included construction of two stormwater ponds. These ponds collect and treat runoff from a portion of the storm sewer installed as part of the road project. The ponds collect runoff from the street, and then discharge the treated water to the existing greenway, which ultimately flows to Lake Mendota. The ponds will capture 11,730 pounds of sediment each year, the equivalent of 8 DUMP TRUCK LOADS!



Storm Pond Along Old Middleton Rd

City Doubles Number of Terrace Rain Gardens

The terrace rain garden program grows in popularity each year. Engineering now offers to cost share rain gardens in the terrace where feasible and when the homeowner requests one during a street reconstruction or resurfacing project. The cost sharing is now capped at $400 for the homeowner or $350 if the owner purchases and installs plants on their own. We are installing 21 rain gardens in association with our resurfacing projects and 14 with street reconstructions. Our total number of terrace rain gardens will more than double this year.

Beaches Get Booms

There have been and continues to be many efforts throughout the Yahara watershed to control sediment and nutrient runoff. However, beaches still close. Sometimes they close due to floating algae, and sometimes due to bacteria. Last year, the City partnered with the UW, DNR, and Dane County to install floating booms to at least try to keep the floating algae away from 2 city beaches: Bernie's on Monona Bay and BB Clarke on Lake Monona. 2010 was a bad year to try to test their effectiveness against floating algae scum, because there were almost none! While the sampling results didn't show clear results one way or the other, the booms did manage to keep away the occasional floating algae mat and detached aquatic weeds, which made many swimmers happy. We intend to repeat this project again this year and include another site in our study. Brittingham Beach, on Monona Bay, will also get a floating boom, but instead of a 2 ft. curtain of fabric hanging below it (like the other sites), it will have a full-depth curtain to completely exclude the area from the rest of the bay. The water within the exclosure will be pumped and treated with a filter and UV to effectively kill any algae and bacteria in the water. The treated water will be returned to the exclosure, effectively creating an in situ swimming pool.

Bernie's Beach Boom, July 2010

Greenway Maintenance Pilot

City Engineering, in conjunction with the Parks Department, will begin a pilot program to maintain several city greenways and ponds in a manner intended to benefit both the natural habitat as well as stormwater management. The changes to the maintenance will depend on the location, but will likely include mowing at specific times of the year to target invasive weeds while promoting the growth of native vegetation. In some instances manual cutting and spot treatment of invasive or volunteer trees will be necessary. The objective of this program is to test the success of trying to manage these areas as both a stormwater management feature and as a natural area.

Cherokee Park Ponds

The most cost effective way of removing sediment from stormwater is routing it through a detention basin, provided that enough land is available. Engineering is proposing to install two stormwater treatment ponds in Cherokee Park, north of Lake Mendota. The construction project would be done in conjunction with a land restoration initiative to create high quality wetlands and an oak savannah upland area. The stormwater would be first routed through the two ponds before reaching the restored wetland.

Allied Drive Porous Pavement

Stormwater runoff is an issue that often comes up during many of our construction projects. The only way to minimize runoff is to maximize infiltration. This can be challenging with a street reconstruction. However, as part of the Allied Drive Redevelopment Project, we installed a 3' wide permeable concrete strip down an alley. The alley water is designed to drain to the center, infiltrate through the pavement and act as groundwater recharge system. Installation of permeable concrete is very labor intensive, which is why only the center strip was installed. Engineering staff will monitor the effectiveness of the pervious pavement during the summers of 2011 and 2012. Sampled water shall be tested for phosphorous, metals and select pesticides.

Dump No Waste, Drains To Lake

Erosion control practices are updated as technology improves and methods are refined. A common erosion control practice involves putting a type of matting over nearby stormwater inlets during construction. City Engineering recently revised our standard specifications to include inlet protection with a different material that can trap more sediment.
Reports of site inspections and the required maintenance are submitted to the City weekly or the day after a rain event to document maintenance pay items and provide inspection report coverage for any WDNR permitted sites.

A new method for inspecting construction sites has been implemented for the duration of the Williamson Street reconstruction project. Instead of taking pictures of individual erosion control practices, per usual, city erosion control inspectors are using a video camera to document the practices throughout the site. Engineering staff then uploads these videos to the Williamson Street Road Works web site: http://www.cityofmadison.com/engineering/williamson/.

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