

Water WoRDs

Updates from the Water Resources Division



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Profiling a Water Resources Division Partner in Storm Water Management

Western Michigan University (WMU) has taken the lead to address storm water runoff challenges on campus, and throughout the Kalamazoo area. WMU is a permitted Municipal Separate Storm Sewer System (MS4) within the Portage and Arcadia Creeks Watershed in Kalamazoo. As part of the university's MS4 permit, WMU is required to have a policy that addresses how storm water is managed from areas of new development and redevelopment.

WMU decided to go the extra mile, and implemented policies that exceed minimum DEQ permit requirements. WMU's goal is to infiltrate all storm water from both new development and redevelopment. To accomplish this goal, a variety of Best Management Practices (known as "BMPs") have been implemented throughout campus. Retention basins soak in water, and let it infiltrate back into the ground. Detention basins hold back water to allow sediments to settle out, then release storm water slowly. These practices help prevent "flashy" flows during storm events and reduce streambank erosion. Some basins are planted with beautiful native flowers, while other basins are covered with rocks. In one situation, WMU actually abandoned a parking lot for the benefit of treating additional storm water.



Some of WMU's BMPs are hidden below ground. In order to conserve space, underground infiltration chambers were installed when new student housing was built. Although some of these BMPs cannot be seen, the benefits to campus are evident. Waldo Stadium previously flooded regularly, but is now high and dry. That's something for Bronco fans to cheer about!

In addition to addressing new development and redevelopment, WMU has also been looking for opportunities to retrofit other areas of campus. A riparian buffer zone of native plants was installed around Goldsworth Valley Pond, and a no-mow zone was established along Arcadia Creek. A current DEQ grant project will soon address five other locations on campus. Rain gardens will be installed to capture and infiltrate storm water, a detention basin will be retrofitted to increase storm water capacity, an area contributing sediment to Arcadia Creek will be stabilized, and a streambank will be planted with native plant species.

One recent grant project was a partnership between WMU, Michigan Department of Transportation (MDOT), and the City of Kalamazoo. A series of detention basins was built on WMU property and MDOT right-of-way along Stadium Drive in order to treat storm water from a campus area and a surrounding neighborhood. This project reduced storm water volumes, addressed flooding issues, provided a settling area to reduce sediment discharges to the creek, and stabilized an eroding area of Arcadia Creek.



In addition to on-campus projects, WMU has supported several off-campus projects by providing in-kind match. A community organization, The Forum of Greater Kalamazoo, received DEQ grant funding to stabilize streambanks using native plantings at Milham Park and Kalamazoo Christian High School, and to install a storm water retention area at Loy Norrix High School. Finding matching funds was proving to be a challenge, until WMU stepped in and agreed to provide in-kind match. The match was provided through funds used to install storm water projects on campus within the same watershed. Although these projects were already in the planning stage, WMU was required to submit all engineering plans to DEQ to verify eligibility. WMU did not mind jumping through a few extra hoops to help the greater community.

WMU has been an excellent example of leadership when it comes to protecting our water resources. It is estimated that WMU storm water controls have reduced annual nonpoint source phosphorus loadings from Arcadia Creek to the Kalamazoo River by nearly 25 percent. Because of WMU's interest in water quality, the university applied for and received a water quality monitoring grant, which will help quantify these load reductions. Since there is an overabundance of phosphorus in the Kalamazoo River/Lake Allegan watershed, everyone needs to do their part to reduce storm water inputs of nutrients. WMU has certainly stepped up to the plate.....Go Broncos!

Meet the People Behind this Project:

From the WRD's Kalamazoo District Office...

Janelle Hohm graduated from Michigan State University with a M.S. in Environmental Toxicology, and then started her career in DEQ's Surface Water Permits Section in 1998. In 2001, she transferred to the Kalamazoo District Office. She currently works in the Municipal Storm Water, Industrial Storm Water and Nonpoint Source Pollution programs. Janelle's work focuses on improving water quality in the Kalamazoo River Watershed through partnerships with municipalities, industries, and watershed residents.

Western Michigan University's Storm Water Team...

Pat Holton has worked in the WMU Division of Environmental Health and Safety for 26 years and has been active in storm water management for the university for the past 11 years. She represented WMU on the steering committee for the development of the Portage and Arcadia Creeks Watershed Management Plan and helped develop WMU's first storm water permit compliance program.

Lu Tavares graduated from Michigan State University, and has spent over 24 years as an environmental professional with responsibilities ranging from RCRA compliance inspector, project manager consultant, and a specialist on hazardous waste, air compliance and storm water management projects. She has been with Western Michigan University as the Environmental Specialist for the past 3 years.

John Seelman graduated from Michigan Technological University, and spent over 20 years working as an engineer with the City of Kalamazoo. He has served as the Utilities Manager at Western Michigan University for the last year, overseeing a variety of storm water projects.

Tim Holysz is the Director of Landscape Services at Western Michigan University. Tim has an Associate's Degree in Landscape and Turf Management from Kalamazoo Valley Community College and a Bachelor's of Science Degree from Western Michigan University. He has the responsibility of maintaining over 700 acres of campus grounds. Tim oversees an additional 600 acres, including the University's Asylum Lake Property, Kleinstuck Preserve and athletic fields.



From left to right: Pat Holton, Tim Holysz, Janelle Hohm, Lu Tavares, and John Seelman