

## Active and Recently Completed WSDOT Stormwater Research Projects

Project name	Description	Status
Compost Amended Vegetated Filter Strip	This project is quantifying the flow control and water quality benefits of composted shoulders, which is an approved Low Impact Development technique. The study is expected to help WSDOT and Ecology calibrate models for estimating how much water is detained or infiltrated. Secondary objectives include documenting how effectively compost removes sediment, metals, phosphorus and oil. This is a three-year project, largely funded by the Federal Highway Administration. Cost \$345,000	One year completed in a three year study. Construction was completed in October of 2004. Data collection began immediately thereafter
Ultra Urban Stormwater Treatment testing (I-5 Ship canal Bridge)	The City of Tacoma is testing several BMPs for use in ultra urban settings where space is extremely limited at WSDOT's testing facility. WSDOT provides support as needed. Cost \$30,000	Ongoing, a final report is expected in August 2006.
Runoff Treatment BMP Design in Cold Climates	This project will evaluate how BMPs should be designed in areas with cold climates where ice and snow can greatly influence BMP effectiveness. Cost \$200,000	This is a two-year project that started in January of 2005.
Low Impact treatment methods – Natural Dispersion of Highway Runoff	This is a study by WSU to develop better sizing criteria for dispersion and infiltration facilities in eastern Washington. Cost \$125,000	Complete. Results were provided to Ecology and are now under consideration for use in updating Ecology's Eastern Washington Stormwater Management Manual.
BMPs for disposal of PCP grindings	This project evaluates the impacts of concrete grindings on pH and the use of compost to neutralize pH. Cost \$10,000.	Draft report completed. Research indicates that compost greatly reduces the elevated pH levels.
Precipitation Modeling for Eastern Washington Stormwater design	This project will produce a map showing the expected rainfall amounts for the range of expected storm intensities across all of eastern Washington. This information will be used to more accurately size stormwater treatment facilities. Cost \$85,000	Projected completion date October 2005
Floating Bridge Runoff Study	This limited study was performed in response to unusually high zinc concentration observed in runoff from a floating bridge. The study suggests that poor quality control in the downspout galvanization process in the 1960's is responsible for elevated zinc levels on one the bridges. Cost \$20,000	Completed. WSDOT is evaluating how to prevent future problems with better quality control on materials.
Ecology Embankment	The Ecology Embankment is a Low Impact Development BMP that infiltrates and filters runoff within highway shoulders. Research started on this BMP prior to the development of Ecology's BMP testing protocols, which require dissolved copper data. Copper data was collected to document that this BMP meets the performance goal for Enhanced Metals Treatment.	Field Data collection completed and data has been submitted to Ecology.