

**Letter of Intent to
Submit an NPDES Effectiveness Study Proposal**

All fields must be completed

1. Proposed Study Title: Measuring long-term porous pavement performance in Western Washington

2. Short Description of Proposed Study:

With 5 years of monitoring completed on test pavements at the WSU-Puyallup LID facilities, results (published soon) show that porous asphalt pavements are highly effective at managing stormwater. However, a huge unknown is how these systems perform in the long term (beyond 5 years), and how various maintenance practices impact their long-term performance. We propose to extend monitoring of the replicated porous asphalt pavements cells and introduce specific maintenance regimes - water assisted vacuum sweeper, and a regenerative air sweeper - to test cleaning efficacies and impacts on water quality and water quantity.

2. What specific Stormwater Management Program condition(s) or other permit condition(s) in the NPDES W. WA. Phase I and/or Phase II Municipal Stormwater Permit does your study address?

Phase I Permit: S5.C.5: "Controlling Runoff from New Development, Redevelopment & Construction Sites"; S5.C.6: "Structural Stormwater Controls"; S5.C.7: "Source Control Program for Existing Development"; S5.C.9: "Operations & Maintenance Program"; S5.C.10 "Education & Outreach Program"

Phase II Permit: S5.C.4: "Controlling Runoff from New Development, Redevelopment and Construction Sites" AND S5.C.5 "Municipal Operations and Maintenance"

3. How will this study inform, assess effectiveness and/or support implementation of the specified NPDES permit conditions (e.g., project goal) and future permit conditions?

The study will provide insight into long-term clogging rates of porous pavements based on vehicular traffic and climatic conditions in Western WA, of critical value to multiple jurisdictions that have installed porous pavements. Additionally, the study will offer comparative maintenance from two standard street cleaning operations.

4. What are the anticipated measurable outcomes or deliverables of this proposed study?

Measurable outcome is the long term performance of porous asphalt pavements in Western WA under specific maintenance protocols. Deliverables will be a final report, a peer-reviewed fact sheet, outreach and education presentations and a journal publication.

5. How does this study advance regional understanding for stormwater management?

Maintenance requirements and long-term performance of permeable pavements is a critical and as yet unanswered question for Western Washington. Additionally, new street cleaning technologies offer the promise of better economics and efficiencies. A comparative measurement of two technologies of porous asphalt test beds will provide information of immediate value to several municipalities in Western Washington that have installed porous asphalt pavements within their jurisdictions.

6. Applicant(s) Contact Information:

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Organization: Washington State University - Puyallup, Washington Stormwater Center

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7. Permittees you are coordinating with (Provide contact information):

Joy Rodriguez, <JRodriguez@ci.puyallup.wa.us>, City of Puyallup, 333 S Meridian, Puyallup, WA 98371, (253) 841-5549

Jessica Knickerbocker <JKnicker@ci.tacoma.wa.us> City of Tacoma, Environmental Services, Center for Urban Waters, 326 East D Street, Tacoma, WA 98421, (253) 389-8044

8. Select Stormwater Work Group study category (select all that apply):

Source Control

Retrofits

Education & Outreach

LID

O&M

Other:

Submit LOI to Brandi Lubliner (WA Department of Ecology) via email at Brandi.Lubliner@ecy.wa.gov