

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

All fields must be completed

1. Proposed Study Title: Effectiveness of detention vaults as source control

2. Short Description of Proposed Study:

Over the past 25 years or so, flow control regulations have resulted in the installation of stormwater detention vaults at many locations around in the Puget Sound area. The proposed study monitor water levels and basic water quality parameters (pH, specific conductance), turbidity) in existing detention vaults to assess their performance.

The proeect will develop guidance on maintaining vault performance for property managers and owners. The project will be a collaboration between Seattle University's Environmental Science Program, US Geological Survey, and interested municipalities.

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: Phase I, 6.a.3. Structural stormwater controls;

Phase II Permit: Phase II S5.1.II.b. Public Education and Outreach

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 proposed project will provide quantitative evaluation of the performance of detention vaults and develop educational materials on maintenance issues. The project will assess the effectiveness of a widely used type of stormwater control for phase I permittee, promote education of a key audience for phase II permittees, and will inform future permits with regard to necessary responsibilities of property owners and managers for source control.

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

The project will measure retention time and storage volume provided by detention vaults as built and report findings as a peer-reviewed publication. Project Guidance about maintenance of detention vaults.

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

Over the past 25 years or so, flow control regulations have resulted in the installation of stormwater detention vaults at many locations around in the Puget Sound area. Most large commercial developments constructed after around 1990 contain some form of flow control, most often, buried underground detention vaults constructed of large diameter pipe. Recent updates to the Department of Ecology Stormwater Management Manual now require the incorporation of low impact development approaches to managing stormwater to the maximum extent feasible. However, the effectiveness of the thousands of flow control structures already installed, particularly after what may be several decades of operation, is a relevant question.

6. Applicant(s) Contact Information:

Name: Wes Lauer; Chris Konrad

Organization: Seattle University; US Geological Survey

Phone: 206-296-5523; 253-552-1634

Email: lauerj@seattleu.edu; cpkonrad@usgs.gov

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

To be determined

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

- | | | |
|--|------------------------------------|--|
| <input checked="" type="checkbox"/> Source Control | <input type="checkbox"/> Retrofits | <input checked="" type="checkbox"/> Education & Outreach |
| <input type="checkbox"/> LID | <input type="checkbox"/> O&M | <input type="checkbox"/> Other: |

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