Letter of intent (LOI)

Interested parties should submit a Letter of Intent (LOI) on or before February 28, 2020 for each individual proposal. Letter of intent should include applicant contact information and seven questions about proposed study. More details about SAM study selection process, eligibility and funding availability can be found in SAM REF guidelines in SAM Effectiveness webpage.

Email address *

Nigel.Pickering@wsu.edu

Applicant contact information

Applicant Full Name *

Nigel Pickering

Organization *

Washington Stormwater Center

Phone number *

509-335-8624

Proposed Study Information

1. Proposed Study Title *

Tools and Strategies to Determine the Most Effective BMP Depending on Pollutant Type and Source

2. Which topic(s) from the SWG's priority list do you propose to address? *

The proposed study topic should be in the SWG's priority list

Topic #6: Which BMPs are most effective under typical pollutant loadings/sediment particle size ranges?

3. Select type of project being proposed *

- [ ] Survey
- [x] Literature Review & Synthesis
- [ ] Environmental Sampling Study
- [ ] Other

4. Short Description of the Proposed Study *

250 word limit: describe how results will assess effectiveness and advance regional understanding and permittees' implementation of specific stormwater management approaches

Determination of a suitable stormwater BMP for a specific site is typically based on site constraints, receiving water body conditions, pollution generating surfaces, approved BMP functions, and regulatory requirements for runoff treatment and flow control. However, not all pollutant sources are the same with respect to pollutant types and loads, and not all BMPs are as effective across a range of conditions. In addition, even if pollutant loads are identical, particle size distributions may vary, affecting the ratio of particulate to dissolved contaminants, and subsequently the treatment mechanisms needed to reduce and/or control the total contaminant load. For instance, brush street sweepers are more effective at removing sediment compared to fine particles that contain highly adsorbed contaminants like phosphorus and metals. This project will use available literature, databases, and local information to develop tools that help guide the permittees towards selecting the most effective BMP for their site. We expect to condense the available information and develop recommendations for incorporating the study findings into the BMP selection process outlined in the Ecology Stormwater Manuals.

5. What type information will be collected or analyzed for this proposed study? *

If existing permittees' data are needed, specify the type, and the expected timing of a request for existing information from Permittees

To understand BMP performance, we will perform a systematic review of available literature on BMP performance data, qualifying the results by careful screening for the type of pollution generating surface and regional differences. Sources of BMP performance data include past Ecology effectiveness studies, the International Stormwater Database, the National Stormwater BMP Database, and any other local data that are relevant. Examples of pollutant load information include the National Stormwater Quality Database, the National Urban Runoff Program, and various local pollutant load summaries. For studying the particle size distribution, we will use the particle size distribution data information that is imbedded in the National Water Quality Database, supplemented with literature data. The expected duration of this proposed project is one year from date funds are available. Information expected from the permittees will be concentrated in the first six months of that time period.

6. What are the anticipated measurable outcomes and key deliverables that will be produced by the proposed study, and how will they be used by Permittees and the Washington State Department of Ecology? *

The outcome of this work will be a review of pollutant loads by land use/land type and how they could be affected by particle size distribution. Anticipated deliverables include a synthesis of the available information and development of summary tables, flow charts, or other tools that assist the permittees' process of choosing the most effective BMP for their site. Key deliverables would be a white paper, an Excel spreadsheet that summarizes the data utilized, and a desktop tool to help automate the BMP choice for permittees.

7. Permittees or agencies you are proposing to coordinate with (provide staff names and contact information, if known) *

Enter "NA" if not applicable.

TBD

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