

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 *

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Applicant contact information

Applicant Full Name *

Don McQuilliams

Organization *

City of Bellevue

Phone number *

425-452-7865

Proposed Study Information

1. Proposed Study Title *

Stormwater BMPs Maintenance Conditions Evaluation

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

Question 7 on BMP maintenance thresholds, including questions 7.1 and 7.2. Possible follow-up field study on questions 13 and/or 16.

3. Select type of project being proposed *

- Survey
- 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

This project proposes to evaluate BMP maintenance thresholds in the SWMMWW Appendix V-A, BMP Maintenance Tables (Tables), which are noted as "conditions when maintenance is needed." Per the Introduction, performing all maintenance in the Tables for all BMPs is not required, and permittees may adjust maintenance based on inspection. From the experience of Bellevue and other jurisdictions (anecdotally), many maintenance conditions for the range of vaults, ponds, and trenches in the Tables could be refined for better outcomes for stormwater quality while increasing efficiency for municipal O&M effort and cost. We propose the following tasks to address the RFP questions on this topic.

1. Survey permittees on their maintenance programs. Questions to focus on maintenance practices, records, costs, and retrofit vs. replace decisions.
2. Interview Ecology engineers and permit writers to understand the background and basis for the maintenance thresholds in the Tables.
3. Search and analyze relevant data for the BMP types of interest from the International BMP Database.
4. As a pilot project, analyze Bellevue BMP maintenance records (and collaborating jurisdictions if any).
5. If steps 1 and 4 show promising results for analyzing BMP maintenance data, then consider requesting data from other permittees to analyze.

A white paper will be prepared with the project outcomes and recommendations for more effectively maintaining vaults, ponds, and trenches. This project will support regional understanding of the efforts, costs, and outcomes of stormwater BMP maintenance for the variety of vaults, ponds, and trenches in use by municipal permittees.

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

A data request would be considered only if the following three project tasks completed first indicate it would be feasible and useful.

1. The survey results indicate that permittees have potentially useful and accessible BMP maintenance data
2. The analysis of data from the International BMP Database on vaults, ponds, and trenches has relevant outcomes to inform BMP use by western Washington municipal stormwater permittees
3. The pilot level data analysis of Bellevue's BMP maintenance data shows results that positively inform those cities' maintenance programs.

The timing of a data request, if needed, would likely occur in late 2021.

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? *

Measurable outcomes:

- Permittees can use the results to adjust their maintenance schedules and practices to improve water quality benefits and reduce BMP maintenance cost.
- Improve permittees' and Ecology's knowledge of the performance of the range of stormwater vaults, ponds, and trenches in use.
- Ecology can use the information from the white paper (and potentially a follow-up field study) to update the BMP Maintenance Tables in the SWMMWW.

Key deliverables: communications, and dissemination of project findings:

- Technical memo on permittee survey results and interviews of Ecology engineers and permit writers.
- Technical memo on results of International BMP Database query and data analysis
- Technical memo on results of analysis of Bellevue's BMP maintenance data.
- Report on the analysis of other permittees' BMP maintenance data if it occurs.
- White paper on findings and summaries of all tasks with recommendations of potential updates to SWMMWW BMP Maintenance Tables and outline of possible follow-up field study of selected BMPs, especially for question 13 on the benefits of mature vegetation in stormwater ponds.
- Fact sheet summarizing outcomes from project
- Presentations to the Stormwater Work Group and at conferences, permittee groups, and local and regional stormwater managers meetings.

Possible future SAM studies on this topic:

- Controlled field study of BMPs in sponsor's and/or coordinating agencies' jurisdiction(s). The study would use field data, geospatial data, and controlled maintenance practices to quantify affects to stormwater quality, habitat, and maintenance efforts/costs. Likely BMPs to be studied include ponds and swales in relation to vegetation maturity and maintenance.
- Based on outcomes of the white paper, do a controlled field study of other types of BMPs (besides ponds, vaults, and trenches) that stand out for needing more information on maintenance needs or show the most effectiveness for both stormwater quality and maintenance costs.

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

Enter "NA" if not applicable.

If this LOI is selected to develop a proposal, then we plan to reach out to neighboring jurisdictions as potential collaborators, including the cities of Kirkland, Redmond, and Sammamish

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