

# Letter of intent (LOI)

Interested parties should submit a Letter of Intent (LOI) on or before February 28, 2023 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.

The respondent's email (**Heidi.Siegelbaum@wsu.edu**) was recorded on submission of this form.

## Applicant contact information

Applicant Full Name \*

Heidi Siegelbaum

Organization \*

Washington Stormwater Center (WSC) at Washington State University (WSU)

Phone number \*

253-445-4502

## Proposed Study Information

1. Proposed Study Title \*

Synthesis of Street Sweeping Research and Practices: Guiding Program Effectiveness and Waste Management

## 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

This study will address multiple priority topics including Maintenance/Manual, Stormwater Management of 6PPD-q, and Municipal Stormwater Permits. Conduct a literature review of street sweeping that will result in a whitepaper which permittees can apply to develop or improve their street sweeping programs. It will also include waste management best practices to guide the disposal of decant water and solids. This work could also be used by Ecology to update street sweeping BMP in the Ecology Stormwater Management Manuals or to consider while making future policy decisions.

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## 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 will build on a literature review and policy discussions initiated by the Puget Sound Partnership and WSC to evaluate street sweeping effectiveness. Originally the group focused on reducing toxics in fish, then the technical advisory team recommended expansion to all pollutants affecting receiving waters. This proposed SAM project will focus on priority questions related to street sweeping with respect to anticipated MS4 Permit requirements, including concerns regarding how to reduce toxics such as 6PPDq concentrations in stormwater. Considerable research has been conducted on street sweeping but there is no Washington MS4 Permit specific synthesis of pollutants and street sweeping effectiveness overall, including emerging issues or where gaps exist. The goal of this study is to refine and expand the existing literature review to collect and analyze information and data that will be used to address the following topics.

**Support Program Effectiveness:** Synthesize information practitioners use for developing a new street sweeping program or improving the efficacy/efficiency of their existing programs. Based on the information available, guidance will be provided for estimating life cycle costs, design, operations & maintenance, implementation, and efficiency improvements to programs.

**Waste Management Best Practices:** Identify what is known about street and catch basin waste characteristics, how it can be safely disposed of, existing decant facilities locations, an estimate of how many decant facilities are required to effectively manage street sweeping waste, and recommendations for regional facilities locations. Based on the information available, guidance will be provided for street waste best management practices.

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## 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.

The advisory group has started a literature review and analysis that will be updated and expanded as part of this SAM project. The WSC has already collected an extensive library of resources including removal effectiveness based in particle size and pollutant, conceptual models, and program characteristics. Please see below for additional data sources that will be used.

For Support Program Effectiveness, it is anticipated the literature search will focus on identifying what is known about the factors that can influence the following:

- Street sweeping effectiveness
- Program management decisions such as understanding differences in street waste characteristics based on roadway/parking lot classifications, average annual daily traffic (AADT),
- Equipment differences (function, cost, efficacy, sharing),
- Optimal sweeping frequency, etc.

For Waste Management Best Practices, it is anticipated the literature search will focus on identifying what is known about the factors that could influence street waste management decisions including identifying ideal solid waste partnership opportunities and how other states are managing street waste.

The literature review will focus on answering questions such as:

- Characterize the pollutants in street sweeping waste and vector waste, i.e., waste from catch basins and pipes,
- Determine gaps in knowledge regarding regulated pollutants and emerging pollutants of concern such as TSS, Metals, hydrocarbons, organics, sediments, PAHs, PCBs, microplastics, and 6PPD as it relates to street sweeping and vector waste.

The expected duration of this proposed project is 12-15 months from the date the contract is executed. We anticipate that the data and information needed will be collected in the first three to four months of the project.

## 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? \*

- o White paper that answers the questions noted above, identifies gaps, and provides prioritized recommendations for next steps for further studies and action.
- o The white paper will also address program development and operation including equipment, O&M, unique issues, and waste management issues. This will provide recommendations for street sweeping practices that permittees can use to develop/refine their own programs.

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

Enter "NA" if not applicable.

N/A

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