

# SAM Study Topic Priorities Survey for Round 4

SAM funded projects should advance the understanding of managing stormwater, finding sources of pollution, improving guidance, and minimizing impacts to water quality.

We are starting the fourth round of SAM Effectiveness Studies and Source Identification Projects topic list building process. In this survey, select important topics for SAM to study starting in 2023. These questions start with the leftover questions from Round 3 Solicitation in 2019 as well as include topics/questions from the 6PPD Subgroup. At the end we also ask for any other stormwater study ideas for SAM funds.

**Select up to 20 topics that should become the SAM's Round 4 Topic List used for solicitation of proposals in 2023.**

The survey results will help the Stormwater Work Group (SWG) with their decision on which studies to approve for SAM funding. The first discussion of the survey results will be on September 6, at the SAM Studies subgroup meeting.

**This survey is only open until August 15th, 2022.**

If you have questions or concerns, please contact SAM staff: [Brandi.Lubliner@ecy.wa.gov](mailto:Brandi.Lubliner@ecy.wa.gov).

## 1. Round 3 SAM Carryover Topics: LID, Structural BMPs, Retrofits, O&M.

*Check all that apply.*

- What is the minimum maintenance frequency for bioretention required to achieve full benefits of the facilities?
- What maintenance frequency should be required for Treatment Assessment Protocol-Ecology (TAP-E) approved facilities that are currently failing? Recommend new criteria to improve maintenance schedules and provide a feedback loop to TAP-E.
- What do we know about designs and installations that have and have not worked in the past?
- What should permittees be doing with pre-1991 municipal separate storm sewer (MS4) infrastructure, including instream features? Should they be left as is, or should permittees redesign and rebuild them?
- Gather data to inform more site specific application of Ecology's 0.3 inches/hour infiltration rate criterion in the SWMMWW, and identify situations where flexibility might be warranted.
- Quantify the habitat and other benefits and reduced O&M provided by mature vegetation in stormwater ponds. Are we still getting the pollutant removal? What are the tradeoffs?
- Informed by a white paper, do a controlled field study to evaluate maintenance thresholds required in the SWMMWW.

## 2. Round 3 SAM Topics Carryover: Source Control and IDDE.

*Check all that apply.*

- What are the main barriers to compliance that business inspections should be prepared to address? Are regulatory incentives insufficient to get small businesses to adopt stormwater BMPs?
- What are barriers to proper handling of waste? How can the business licensure process and requirements support proper waste handling?
- What is the range of options to address spills on permeable pavement, and what are the most effective and lower cost methods?
- What are the most effective approaches for notification and following up on firefighting activities after the emergency response is complete?
- How can we improve cleanup and coordination with emergency responders to address vehicle leaks and spills across the region?
- What are the most effective approaches to source control for bacteria? In what situations do E&O, IDDE, and O&M activities most effectively address bacteria problems?
- Evaluate the IDDE data reported by permittees and gather additional information needed to identify mobile and other multi-jurisdictional business' violations, to support coordinated and effective multi-jurisdiction enforcement.

### 3. **6PPD Subgroup plus 6PPD-related Ad Hoc recommendations:** topics for SAM studies

*Check all that apply.*

- Study existing BMPs (gray or green) to verify capture or treatment of 6PPD and 6PPD-quinone
- Test sorbents and fill sorption question knowledge gaps
- Identify new BMPs that effectively reduce 6PPD and 6PPD-quinone
- Fill gaps on physicochemical for environmental fate and transport of 6PPD and 6PPD-quinone
- Study street sweeping and/or line cleaning to get more information about 6PPD and 6PPD-quinone removal
- Study decant water to get better idea of 6PPD and 6PPD-quinone concentrations and proper handling
- Test other (besides 60:40) approved bioretention soil media to see if they also remove the acute toxicity to Coho
- Determine if bioretention soils with bound 6PPD and 6PPD-quinone are toxic to biota
- Field testing for solids removal
- Find the threshold for toxicity from tire wear particle concentrations by land use and road use
- Leverage active studies/models that fit 6PPD priorities, such as methods to find hotspot locations
- Monitor to characterize runoff, like older S8 monitoring, for tire wear and toxic contaminants
- More research on sources of 6PPD and 6PPD-quinone to MS4 and receiving waters
- Evaluate if there are legacy loads in MS4 systems; storage areas.
- Use modeling to ID hot spots and priority timing (e.g. King Co Roads Study)
- White paper - Uses for waste collected during street sweeping

#### 4. **Complete SAM Studies Recommendations:** further ideas for SAM studies

*Check all that apply.*

- Send Oystershells thru TAPE field study so that they can be added to manuals
- Conduct lab or bench scale degradation studies of PCBs using fungal inoculated soils and BSM to study under controlled conditions
- Send HPBSM thru a TAPE field study for field confirmation \*(Ecology has a grant to Whatcom Co)
- Develop or modify a model to predict catch basin accumulation for predicting maintenance frequencies
- Develop a standardized data collection list for O&M staff to use at catch basins for regional accumulation rate development by land uses
- Develop a database for raingarden/bioretention O&M for regional learning

#### 5. **Structural Stormwater Control Recommendations (Section 5.4.3):** ideas for further study

*Check all that apply.*

- Work with local models to evaluate if recovery is linear when using SSC projects, and how many are needed for a given watershed and receiving water conditions, to find when partial or full benefit occurs.
- Fill gaps on benefits of retrofitting, restoration of riparian buffer, property acquisition, removal of impervious surfaces, floodplain reconnection or other actions used address stormwater runoff not otherwise required in S5.C.
- Conduct TAPE or TAPE like protocols testing of presumptive BMPs in SWMMs that have no field performance data
- Verify treatment and flow control benefits of "partial BMPs", (retrofits smaller than full design)
- Conduct maintenance benefits study on SSCs for CIPs >\$25,000

6. **AdHoc Groups:** ideas for further study

*Check all that apply.*

- Review other jurisdictions' BMP design standards across the county, focusing on areas with similar rainfall distributions to Western Washington
- Interview Permittee staff and private contractors about constructability and maintainability of BMPs
- Conduct a cost analysis of all BMPs, including cost to construct and cost to maintain
- Create a matrix comparing the effectiveness, costs, constructability, and maintainability of BMPs
- White paper to incentivize watershed based planning and implementation of the plans
- White paper - characterize opportunities, challenges, and form an outline for a regional retrofit fund
- White paper on resources and ideas for reaching EJ/JEDI goals in stormwater programs

7. **NEW Ideas** generated by SAM Study Selection Subgroup in July 2022.

*Check all that apply.*

- Evaluate and recommend changes to GULD approved devices maintenance schedules
- Make Permit Annual Report questions better for quantifying data for regional learning.
- Conduct a survey to learn how technology can or have been used to improve stormwater management.

8. Do you have a NEW suggestion for SAM funded projects that will advance the understanding of managing stormwater, finding sources of and preventing pollution, improving management guidance, and minimizing impacts to water quality?

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9. Do you have a second NEW suggestion for SAM funded projects that will advance the understanding of managing stormwater, finding sources of and preventing pollution, improving management guidance, and minimizing impacts to water quality?

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10. Is your organization already working on a BMP study that SAM could leverage in 2023 or beyond?

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11. I represent the following:

*Mark only one oval.*

- city, county, port or other stormwater permittee
- non-governmental organization
- for profit organization
- state, federal, or Tribal government
- Other: \_\_\_\_\_

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