



## Status & Trend Scientists Team Meeting Notes

Thursday, July 24, 2025, 1:30 - 3:00 pm

**Group Purpose:** To bring together regional scientific expertise to guide long-term monitoring programs and support collective learning about improved stormwater management.

**Meeting objective:** Introduce members, Subgroup mission and goal, and review current work under SAM's Status & Trends program

**Mission:** To bring together regional scientific expertise to guide long-term monitoring programs and support collective learning about improved stormwater management.

**Goal:** To recommend robust methods for collecting data and analyzing trends in water quality, habitat, and biological health. Help regional partners evaluate whether our stormwater efforts are protecting and improving aquatic ecosystems.

### Meeting Materials:

- [PowerPoint presentation](#)

### Meeting Notes:

- **Review Past & Current SAM Receiving Water Studies** –The goal in this ‘presentation’ is to bring everyone onto the same page about where we’ve been and where we can go

### Discussion on Subgroup mission, goals, workplan, and future meetings

#### How can we improve the draft mission and goals?

- From Tim Clark: Suggest a slight edit to the goal:
  - " ... trends in water quality, habitat, and biological health in waters receiving or otherwise impacted by municipal stormwater discharges." (or something along those lines).

#### What should we add/remove/prioritize in the draft work plan?

- Suggestion to include non-targeted HRMS (High-Resolution Mass Spectrometry) to have the data on file to next time we discuss or encounter new contaminants. Other SAM projects are using non-targeted HRMS in sample analysis: [Stormwater characterization](#)
- What kind of runoff are we talking about—agricultural stormwater, urban stormwater, exurban? Do we want to be capturing all kinds of runoff?
  - Because SAM is adaptive management program related to the permits; the monitoring findings and recommendations would be more municipal stormwater focused. Our goal is to inform municipal stormwater permittees.
- Discussion on how changes in stormwater management actions and improvements are tracked and quantified, so that they can be used in our analysis with receiving water data? How are those data going to be collected, standardized, and how are we tracking

the stormwater action management piece of this? It would be helpful to quantify the action and correlate them with the trends we are seeing.

- Kate Macneale shared a short description of the King County B-IBI trends report: <https://your.kingcounty.gov/dnrp/library/2023/kcr3559/kcr3559.pdf>. This work will also be published soon in the journal Freshwater Science.
- Perhaps Annual Report metrics and compliance rates can be quantified for analysis with B-IBI scores and other parameters.
- We could consider a geospatial metric of proximity of stormwater infrastructure to monitoring location, to understand how influential stormwater is (or is not) to the monitoring location in question? Gopal provided an example focused on nitrogen removal but the idea is similar: <https://agupubs.onlinelibrary.wiley.com/doi/full/10.1002/2015GL064965>
- Subgroup members may also be interested in the ongoing SAM Paired Watershed Study, run under the SAM effectiveness study category: [Paired watershed retrofit and restoration](#).
- Discussion on basin size appropriate for detecting trends. Stormwater actions are happening in smaller areas and when we try to detect trends in a receiving water with a larger basin, we can miss the impact.
  - In the design of the current SAM studies, we selected watersheds between 0.5 to 75 square kilometers (0.2-27 mi<sup>2</sup>).
- Ideas about changes to the current studies or new sub studies are welcome. However, our current focus is to characterize the entire region. We collect data that we can confidently extrapolate and determine trends in water quality.
  - One constraint for the group to be mindful of – our budget. We have a 5-year budget for SAM status & trend projects. This program is funded through permittees and we will need their approval (through SWG) on how to spend this funding.
  - When these studies were designed, it was assumed that stormwater actions are increasing over time. We are getting better at managing stormwater and should hopefully be seeing an improving trend. How increasing urbanization and climate change dampens that trend was considered, and somewhat addressed.
- Idea to add a lake study: Like the past short-term study looking at existing data for nearshore bacteria using existing programs, I would love to see an analysis of lakes across the urban development spectrum - Snohomish, King, and Thurston counties have rich datasets that could be tapped into. Municipalities are often struggling between whether they should focus on urban watershed phosphorus management or simply use in-lake phosphorus inactivation chemicals. Separately, lake sediments can also tell wonderful stories on the impacts of urbanization and treatment thereafter.

What should we plan for our next meeting? Would you want to see examples of trend analyses at future meetings? Review statistical methods?

- Please send comments on document on workplan, goals, and vision to Chelsea

Would 2-3 volunteers like to help plan the next meeting?

- Please let Chelsea know via email if you are interested.
- Abigail Nickelson, Caitlin McIntyre, and Tim Clark volunteered in the chat for agenda planning

#### Which date is best for our next meeting?

- Thursday Aug 21 @ 1:30
  - 13 votes
- Friday Aug 22 @ 10am
  - 9 votes

#### Questions for follow up:

- **Q1:** When sampling for 6PPDQ in sediments are you analyzing for degradation products as well? Because of their short half-life? Just curious if the information gathered is relatable to what the chemical does when exposed to environmental conditions. I hear they don't persist long when exposed to environmental conditions.
- **R1:** From what I understand, researchers sometimes analyze sediment samples for 6PPDQ along with a broader suite of tire wear contaminants using high-resolution mass spectrometry (HRMS). HRMS is helpful because it can detect a range of known and even some unknown compounds, including potential degradation products—if they're included in the analytical protocol and reference libraries. That said, I'm not entirely sure whether researchers are consistently including specific degradation products of 6PPDQ. I believe some protocols are evolving to look at these transformation products, but it might vary by lab or study.
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#### Next steps:

- Subgroup members will be emailed and asked to provide feedback on the draft work plan which includes subgroup mission, goals, tasks, and meeting frequency.
- Chelsea will schedule next meeting for August 21 and will schedule a pre-meeting with the planning team.