

Stormwater Work Group

Meeting Summary

Wednesday May 14, 2025 from 9:00 a.m. to 12:00 p.m.

Meeting Overview

The Stormwater Work Group (SWG) held a virtual meeting on February 12, 2025.

Meeting topics included:

- **View SAM presentation:** [Evaluation of Best Management Practices Maintenance Conditions](#), City of Bellevue and Herrera Environmental Consultants
- Welcome more **E WA permittees** into the SWG
- Hear **updates from our partners, PRO-C, and SAM**
- **Vote:** Additional SWG Meeting on July 16, 2025 from 1pm - 3pm
- **Vote:** Approve new PRO-C and SWG members
- Organize a **Fall 2025 in-person meeting**
- Hear about the **upcoming SWG 6PPD Subgroup Meeting**

Meeting Participants

104 people participated in this SWG meeting. People included:

14 Voting Members

Present: Abby Barnes, Dara Osborne, Dana de Leon, Jane Dewell, Rae Eaton, Nick Hehemann, Jess Huybregts, Jessica Atlakson, Jeff Killelea, Lori Blair, Maureen Meehan, Don McQuilliams, Meiring Borchers, Hannah Mittelstaedt

Absent: Rich Sheibley, Gary Bahr, Trey George

There are 26 total voting member spots in the SWG. Currently, there are 17 filled positions. There are vacancies in the state, federal, Tribal, environmental, and business caucuses.

5 Ecology Administrative Staff

Madison Bristol, Raghu Namburi, Chelsea Morris, Emma Froembling, Shelby Giltner

Ecology administrative staff support the SWG through membership outreach, coordinating PRO-C and SAM, organizing the agenda, notetaking, meeting facilitation, virtual meeting technical support, updating the SWG website, and managing the SWG listserv.

85 Additional Attendees

Aimee Navickis-Brasch	Eli Mackiewicz	Ken Johnson	Keith Quinata
Amy Georgeson	Emily Smith	Kevin Fitzgerald	River Wan
Jean Antol	Emma Lautanen	Stacey Kim	Sarah Wilson
April Hardy	Bryson Finch	Chris Konrad	Shawn
Ariana Dionisio	Raquel Gilliland	Kyle Dorsey	Christensen
Barb Tope	Diane Hennebert	Joanna Larson	Graham Simon
David Batts	John Herrmann	Laurie Larson-Pugh	Stefan Grozev
Blaine Chesterfield	Danyel Hiland	Haley Lewis	Stefanie Stockwell
Frances Bothfeld	Zackary Holt	Lisa Jones	Abbey Stockwell
Tony Bush	James Packman	Heather Martin	Subhash Poudyal
Allison Carley	Jan Edelstein	Morgan Maupin	Dorie Sutton
Rebecca Casey	Jeff Davis	Shannon McClellan	Tammie Wilson
Chris Korwel	Jennifer Bare	Megan Folkers	Tiffany Sevilla
Christian Nichols	Patricia Johnson	Melissa Petrich	Amy Waterman
Justin Cohee	Charles Jones	Chelsea Mitchell	Will Riley
Leslie Connelly	Jordan Hatch	Teizeen Mohamedali	William Chen
Curtis Hinman	Joseph Moser	Jennie Morgan	Wissam Altamimi
David Cattie	Joshua Carter	Caroline Najarian	Rachel Yonemura
Dimitrios Athanasiou	Julie Brandt	Yago Perniciaro	Sarah Zehner
Evan Dobrowski	Kaytee Villafranca	Braden Price	
Mike Ehlebracht	Keith Estes		

Thank you as always to our voting representatives, members, staff, and partner organizations for your commitment to the SWG community.

Sincerely,

Don McQuilliams, SWG Chair

Abby Barnes, SWG Chair

Madison Rose Bristol, SWG Interim Coordinator

Full Meeting Summary

SAM Presentation: Evaluation of Best Management Practices

Maintenance Conditions

- [Presentation](#) by Don McQuilliams and James Packman
- [Project Website](#): Evaluation of Best Management Practices Maintenance Conditions
 - See this website for published reports and deliverables
- [Final Report](#)
- This project evaluated the **effectiveness of operations and maintenance (O&M) programs** for best management practices (BMPs) like ponds, trenches, and tanks
- Cities involved included Bellevue, Redmond, Sumner, Woodinville, and Tacoma
- **Survey** of municipal O&M programs
 - The goal of the survey was to learn about operations and maintenance programs for different stormwater BMPs
 - The **most common O&M issues** were trash, sediment build-up, vegetation growth, repair issues, erosion, cleaning of media, and ventilation. See the [presentation slides](#) for issues associated with specific BMPs.
- This study also included a **literature review** of published data
 - The goal of this literature review was to search for, compile, and analyze published BMP maintenance data
 - Focused mainly on BMP performance and cost data
 - Assessed the history of BMP maintenance standards through reviewing manuals and comparing standards
 - 1990 King County Surface Water Design Manual
 - 1992 Ecology Stormwater Management Manual for Puget Sound Basin
 - 2001 Stormwater Management Manual for Western Washington (SWMMWW)
 - The literature review informed Ecology interviews
- **Ecology Interviews**
 - Worked with current Ecology engineers and permit writers to understand the origins of the maintenance standards
 - The specific sources for maintenance standards couldn't be ascertained, but Ecology confirmed that current standards are derived from 2011 SWMMWW
- Conducted a **comparison of maintenance standards**
 - 18 maintenance standard categories considered
 - Among the maintenance standards reviewed in four major stormwater manuals, seven showed notable variability: grass cover height, pond liner integrity, sediment accumulation, standing water in ponds, blockage, cracks, and sludge
- **Pilot Data Analysis of Maintenance Standards**

- Exploratory pilot-level analysis to compare data collected by permittees to maintenance standards
- Results:
 - Phase II city & Phase I city Pond Facilities had a similar distribution
 - Phase II city & Phase I city Trench/Swale Facilities - Phase II has fewer days between visits than Phase I
 - Phase II city & Phase I city Tank/Vault Facilities had a similar distribution
- Notes on recordkeeping
 - Variable approaches, methods, and software
 - Notes and comments in O&M records
 - Recommend using sparingly
 - Capture status from searchable standardized responses
 - Terminology
 - Recommend using common terms for BMPs from stormwater manuals
- **Maintenance outcomes**
 - What maintenance issues most frequently came out of the inspection?
 - Ponds
 - Trash/Debris/Sediment approach is preventative
 - Inlet/Outlet and Trees are the highest issues
 - Phase I city did not record issues tied to standards – they determine whether or not maintenance is still required after an inspection
 - Trenches/Swales
 - Inlet/Outlet and Noxious Weeds were main issues
 - Phase I city required less maintenance after an inspection
 - Vaults/Tanks
 - Similar Phase II graphs with trash/debris/sediment
- **Conclusion and Recommendations**
 - BMP maintenance standards in Western WA
 - Derived from the 2011 Ecology SWMMWW
 - Bibliography in SWMMWW is extensive
 - Recommend testing of maintenance standards in controlled settings
 - **BMPs and Maintenance Needs**
 - Most common BMP maintenance needs include:
 - Vegetation management, sediment or trash removal
 - Noted issues:
 - Pipe blockage, noxious weeds, access
 - Least common:
 - Structural issues, slope erosion, overflow/spillway concerns, damage to a pond liner

- BMP visit frequencies for inspection or maintenance
 - Most common: once per year
 - Secondary frequencies: 100 days and 250-300 days, especially for ponds and trenches/swales
- **Adjusting BMP maintenance frequencies**
 - BMPs that were visited more frequently (e.g. 100 days) or less frequently (e.g. 250-300 days) than annual inspections highlight opportunities for adjusting BMP visit frequencies
 - Tie maintenance outcomes to the maintenance standards
 - Recommend regular analysis of maintenance frequencies
 - Preventative maintenance approach for common issues could be effective

Q&A

Question: What kind of spills affect BMPs and what issues are noticed after a spill? Isn't it the goal of the BMPs to absorb spills, preventing contaminants from getting into waterways?

Answer: Regarding what types of spills, the data set did not capture that information. This is related to some limitations in how records are kept. We couldn't tie maintenance visits to maintenance outcomes. It depends on the BMP. Detention vaults may not capture it, but others may. We also want to know if maintenance standards around pond liners are still good.

Question: How long does media in bioretention BMPs tend to last? What are standard operating procedures (SOPs) when media is no longer effective and needs to be replaced?

Answer: This depends on the BMP being used. The best bet is to check the Operation and Maintenance Manual of those BMPs.

Updates from our partners

Puget Sound Ecosystem and Monitoring Program (PSEMP) - Katrina Radach, PSEMP Manager

- **Call for applications to the PSP Science Panel:** The Puget Sound Partnership's Leadership Council is seeking applications to join the Science Panel to identify diverse sources of scientific evidence to inform policies for the protection and recovery of Puget Sound. Applications are due by June 20. Appointment terms begin Sep. 2025 and ending Sep. 2029. Read the full announcement [here](#).
- **Communications Support:** Now through Fall 2025, PSEMP is partnering with Sea & Shore Solutions to help strengthen the network's communication skills and develop new communication products. This support is available to anyone connected with PSEMP—

not just for PSEMP. To request communications support, simply fill out this [form](#), and the PSEMP team will connect you with Sea & Shore. Read the full announcement [here](#).

- **Upcoming PSEMP Events**

- The next Coffee with PSEMP is June 10 at 11am. This is an informal space for folks to connect, ask any and all questions, and engage in discussion. Register via this [link](#).
- For the full PSEMP calendar, please follow this [link](#).
- **Subscribe to our newsletter** at this [link](#) if you haven't yet! If you have an event, publication, or job opportunity you'd like to share in the newsletter, please email Hannah.Mittelstaedt@psp.wa.gov

National Estuary Program Stormwater Strategic Initiative Lead (SW SIL) - Chanele Holbrook, SW SIL

- The SW SIL opened a [new Request for Proposals \(RFP\)](#) on May 7, with \$1 million available for **Neighborhood Stormwater Education and Assistance projects**. This RFP will be open until July 9, 2025. If you are considering an application, please submit this short ["Interest in Applying" form](#) as soon as possible.

Washington Department of Ecology (Ecology) - Madison Rose Bristol, 6PPD Stormwater Planner; Morgan Baker, 6PPD Management Analyst

6PPD Work

- **6PPD publications:** There have been several recent publications about WA's work on 6PPDQ
 - [Western Forester](#)
 - [King County Natural Resources and Parks](#)
 - [Seattle Times](#)
 - [National Geographic](#)
- Ecology is recruiting **new 6PPD BMP effectiveness studies**
 - Ecology has received \$2.9 million from the WA State Legislature to continue 6PPD stormwater BMP effectiveness research
 - This research is different than the SWG Effectiveness Subgroup, though we have shared some funding with SAM projects in the past
 - The goal of this research is to inform stormwater manual and permit updates
 - There is no application for this funding. To get started, reach out to Madison at madison.bristol@ecy.wa.gov to discuss project ideas.
 - For more information about this funding and the types of projects we support, please view our [6PPD Stormwater Website](#).
- **Industrial Stormwater General Permit 6PPD monitoring**

- Transportation and waste management facilities will begin quarterly sampling of 6PPDQ in January 2028
- Currently not enough lab capacity to analyze these samples, so Ecology is hoping to have more commercial labs in WA apply for and become accredited for 6PPDQ
- If you know of a commercial lab that could be interested in applying for accreditation, please encourage them to apply. If you need further information about the accreditation process, contact Rebecca Wood at rebecca.wood@ecy.wa.gov.
- **Municon 2025**
 - There will be several at least 9 sessions at Municon about 6PPDQ!

Permit Updates

- **Several stormwater permits are under appeal.** This includes:
 - [Municipal Stormwater General Permits](#) – settlement discussions in progress with Puget Soundkeeper et al.
 - [Industrial Stormwater General Permit](#) – 7 appellants (mix of transportation permittees and NGOs) have agreed upon 58 appeal issues; PCHB hearing scheduled for Feb 2026
- **Draft [Construction Stormwater General Permit](#)** - Draft released, public comment period closed on May 9, 2025. Final permit will be issued in December 2025.
- The **draft [WA Department of Transportation Municipal Stormwater Permit](#)** is being developed and is scheduled to be released in Fall 2025
- The **draft [Sand and Gravel General Permit](#)** is expected to be released in Summer 2025
- **Opportunities to discuss permit implementation:** There are several existing forums permittees can attend to discuss permit implementation, including:
 - Washington Stormwater Center (WSC) hosts or supports several permittee meetings intended to discuss implementation topics. We encourage you to join these existing forums to delve into implementation topics beyond monitoring and assessment. Reach out to Laurie Larson-Pugh to get invites at laurie.larson-pugh@wsu.edu.
 - ROAD MAP – discusses operation and maintenance
 - STORM – education and outreach forum
 - WSC hosts 2 Environmental Justice groups, one for municipal stormwater permittees, and one that is a salon and takes on EJ more broadly
 - During permit reissuance, if there is permittee interest, WSC has organized the ad-hoc groups that discuss permit topics and develop recommendations. For the 2029 permit, this would begin next year.

- o [Municon 2025](#): Workshop 3B on May 20, 2025 from 3:15 – 5:15pm – Ecology Permit Overview
- o Regular regional coordinator meetings (mostly organized by Laurie at WSC)
 - APWA hosts a regular meeting as well
- o WSC keeps the list of groups here: [Stormwater Coordinator Groups – Washington Stormwater Center](#)
- o To learn more about these opportunities, contact Abbey at abbey.stockwell@ecy.wa.gov or Amy at amy.waterman@ecy.wa.gov

Hiring Updates

- Ecology is hiring a [Stormwater Work Group Project Manager \(Environmental Planner 4\)](#). This position will remain open until filled. Applications received after May 4, 2025 may not be considered.
 - o This position was initially posted in November 2024. However, due to the statewide hiring freeze, Ecology was unable to hire for this position. The Water Quality Program has received an exception to restart this hiring process.
- Ecology is also hiring for a [WQP Manager](#) - Vince left in April

Q&A

Comment: 6PPD suggestion: Parallel testing of existing technologies and slightly modified versions of those technologies. E.g. biofiltration with existing media and biofiltration with a reasonably available enhanced media.

- For WQ treatment facilities, need monitoring for basic (TSS), metals, and phosphorus removal as well. Plus, any facility or BMP using compost or other plant matter content media should be including arsenic among the analytes.

Comment: For the future PSEMP strategy, clearly it will be important to leverage design and info gathered from the SAM Status and Trends nearshore work. Probably already is well aligned because PSP is a partner of the SWG.

Discussion: Are there other kinds of spaces permittees would like to see to discuss permit implementation?

- Some thoughts: Intricacies of IDDE program requirements. Post-emergency firefighting activity requirements - what does Ecology consider due diligence as we develop our plans/procedures?
- WSC Industrial Permit assistance coordinator is Brandon Boyd, contact him at brandon.boyd1@wsu.edu

PRO-C Updates

- **Ecology Report Card:** PRO-C provides feedback to Ecology twice a permit cycle
 - PRO-C is getting ready to do that this year
 - Revised the template they've been using to make it more relevant
 - PRO-C will be ready to fill it out and post it on the SWG website once Ecology approves it
 - **If you have comments to add to this report card, contact Chris Konrad at cpkonrad@usgs.gov**
- **Lori Blair was voted into PRO-C via 10 yes votes and 0 nays**
- PRO-C is now currently at 9 members and they are allotted 12 members
 - Current members include 5 permittees and 4 non-permittees
 - Would be good to have at least another 1 or 2 members who are from the municipal caucus. **Contact Chris at cpkonrad@usgs.gov if you are interested in being a PRO-C member or nominating someone.**
- **Need a new PRO-C Chair**
 - Chris Konrad is currently acting as the Interim Chair; however, he cannot do this position long-term
 - Having a permittee as the Chair for PRO-C is recommended
 - Would like to see more Eastern WA representatives join PRO-C
 - **Contact Chris at cpkonrad@usgs.gov if you are interested in being the PRO-C Chair or nominating someone.**

SAM Updates

- Please contact Raghu at raghu.namburi@ecy.wa.gov if you ever have SAM questions!
- **Structure of the SAM Study Solicitation Subgroup**
 - Raghu would like to see if anyone is willing to be a part of the SAM Study Solicitation Subgroup and the permittee subgroup
 - Raghu's hope is that there are two groups, but potentially could eventually become one.
 - Amy Waterman said that during the last study solicitation process, there was only 1 group. Raghu is fine with one team approach.
 - If any SWG members has suggestions for Raghu on how to structure the Study Solicitation Subgroup, please contact Raghu. This group can also include people outside of the SWG.
- **Round 5 Study Solicitation Process**
 - Goal: two rounds of solicitation and project funding during each permit cycle
 - Last permit cycle: 2019-2024
 - Two rounds completed

- Current permit cycle: 2024-2029
 - First round delayed due to staff turnover
- Round 4 Solicitation Process
 - Development & Approval of priority topics list, Proposal Advertisement, Letter of Interest (LOI), Full Proposal, Review & Scoring, Workshop, voting process, and SWG Approval have been completed.
 - Potential start for contracting the studies selected in Round 5 – Summer 2027
- Decisions to make:
 - Research priority list and subgroups
- **Vote: Add July 16 meeting from 1pm-3pm to discuss the Study Solicitation Process**
 - Abby Barnes: That isn't a big deal, it may be a good chance for the group to come together and talk. It may make a good opportunity to make sure we are on point and moving forward.
 - Raghu's concern is that we are falling behind in the timeline and he welcomes any suggestions for fixing this.
 - Amy Waterman - that subgroup played a big role is the process for prioritizing research topics, which were included in the LOI
 - **Voting results:** approved a July 16 meeting with 9 Yays and 0 Nays
- **Discussion: Round 5 Research Priority Topics**
 - Do we want to start from scratch on a new list? The solicitation group is typically the strong lead for that list. We are probably getting low on the existing list of things to tackle. The list was big, with a lot of similarities. If the solicitation group had thoughts of throwing that out and starting over, that would be reasonable since there has been so many new changes and things happening.
 - Thinking of the timing of Round 5, the permit cycles, and the need to have good data to inform the Permits, I suggest we all consider how to leverage 6PPDQ Legislative Funding. With that said, I fully recognize it can take some of us 3-6 months to have our projects put forth to City Council to even be able to accept Ecology funds! But if we can frontload the 6PPDQ projects using other non-SAM effectiveness study tools, we could use Round 5 for other topics.
 - Absolutely. There is also the possibility that we will not be able to support all 6PPDQ research proposals with Ecology's \$2.9 million. We might recommend that those projects apply to SAM funding.
 - Starting over with a new list may make sense, and in addition having a summer meeting may be helpful with that.
 - There should be topics beyond 6PPD as well.

Internal SWG Affairs

- The SWG sent a [letter to Ecology's Lab Accreditation Unit](#) this Spring. We are excited to see that **there are now 5 labs accredited to analyze 6PPDQ in water samples**, including: Manchester Environmental Lab, King County Environmental Lab, City of Tacoma, UW-Tacoma, and Eurofins.
- **SWG Organizational Structure**
 - We watched a [video orientation](#) about the SWG
 - 2 voting seats were recently added to the SWG for Eastern WA representatives
 - To see the current structure of the SWG, please visit the [SWG Voting Representatives Webpage](#)
- **Seeking new SWG Voting Representatives**
 - Currently, there are vacancies in the state, federal, Tribal, environmental, and business caucuses
 - Possible representatives:
 - Federal Caucus: EPA, Someone from JBLM (pays into SAM) or Navy for Federal – had this in the past, can reach out to Raghu for contact
 - Port Caucus: Ports paying into SAM
 - State Caucus: Someone from Department of Commerce or Governor's Salmon Recovery Office
 - Environmental Caucus: The Nature Conservancy, Mid-Sound Fisheries, Puget Soundkeeper Alliance, Washington Conservation Action, Puget Sound Partnership Science Panel, Skagit Fisheries Enhancement Group, Skagit Watershed Council, Conservation Commission, Long Live the Kings, Spokane Riverkeeper, Kris Holm
 - The SWG has worked a lot with the Nature Conservancy in the past. This organization can also compile feedback from other NGOs.
 - Tribal Caucus: Northwest Indian Fisheries Commission, Upper Columbia United Tribes, Columbia River Inter-Tribal Fish Commission
- **Voting in New SWG Representatives**
 - At this meeting, we held a vote to add new SWG representatives. The updated list of representatives is on the [SWG Voting Representatives Webpage](#)
 - Local Caucus, Western WA
 - Maureen Meehan, Pierce County – **Approved** with 7 yes votes
 - Meiring Borchers, City of Mukilteo – **Approved** with 5 yes votes
 - Local Caucus, Eastern WA
 - Trey George, City of Spokane – **Approved** with 8 yes votes
 - Dara Osborne, City of Walla Walla – **Approved** with 8 yes votes
 - Environmental Caucus

- A discussion was held about if consultants can be voting representatives. Several SWG members noted that this could be a conflict of interest, since consultants often receive SAM funding for studies. Members would like to continue this conversation and develop protocols for navigating conflicts of interest, such as having folks abstain from votes.
- Aimee Navickis-Brasch from Evergreen StormH2O was nominated but not approved to be a voting member. This was due to a concern over conflicts of interest.
- **Discussion: In-Person SWG Meeting**
 - There are travel challenges this year with budget restrictions
 - Could consider hosting the SWG in-person meeting every other year, alternating with Municon
 - Location preferences: Central WA, hybrid, accessible via public transit
 - If folks have ideas for host locations, reach out to Madison at madison.bristol@ecy.wa.gov

Q&A

Question: Are the Federal representatives from the Navy bases?

Answer: We used to have someone that showed up from JBLM, but not anymore – it may be a good idea to add someone. Someone from Navy was on the group in 2022, but no longer.

Question: As I engage with other industrial permittees to fill the other spots, can I reach out to Eastern WA?

Answer: Absolutely

SWG 6PPD Subgroup – Eli Mackiewicz, Co Chair of Subgroup

- 6PPD Subgroup meeting on June 4, 1pm-3pm
- Reach out to Shelby Giltner at shelby.giltner@ecy.wa.gov
- Agenda topics include:
 - Ecology 6PPD Project Updates
 - Discussing priority 6PPD BMP effectiveness research topics for 2025-2027
 - **Presentation:** Testing 6PPD-quinone on the Snoqualmie Reservation, Snoqualmie Indian Tribe
 - The Snoqualmie Indian Tribe is determining the level of filtration needed to mitigate stormwater impacts from a large parking lot, upstream development, and a medium-traffic road. This study was also designed to test current BMPs that the Tribe has in place, including a floating treatment wetland and unamended vegetated swales.

Updates Related to Our Work

- Nominations are open for a new Chair and Vice Chair during the September meeting
 - Fill out [this poll](#) to nominate yourself or someone else
- Raquel Gilliland is the newest member of PSP - Monitoring Program Effectiveness Analyst

Future Meeting Dates

The next SWG meeting is **July 16, 2025 from 1pm-3pm**. Please mark your calendars for September 10 and November 12, 2025 – all Wednesdays, from 9am - 12pm. We may occasionally extend our meeting time, and any extended meeting time will be determined at the previous meeting.

At our meeting on Wednesday, July 16, we will:

- Review the SAM Round 5 study solicitation process
- Vote in a new PRO-C member

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View the SWG Website

We regularly update the [SWG website](#) with information about upcoming meetings, past meeting materials, and important SWG documents. If you have additional questions about the SWG, contact madison.bristol@ecy.wa.gov.