

6PPD Subgroup Meeting Notes

Wednesday June 4th, 1:00 p.m. to 3:00 p.m.

The SWG 6PPD Subgroup formed in 2020 and meets quarterly with support of the Stormwater Work Group (SWG). The goal of the SWG 6PPD Subgroup is to share the latest science on 6PPD and 6PPDQ.

1:00pm **Welcome, from Eli Mackiewicz, Co-Chair**

1:05pm **Updates from the Washington State Department of Ecology**

- [Current research projects](#)
 - City of Tacoma has finalized their 6PPDQ Sediment method SOP. A final report summarizing how they developed their methodologies is has been drafted and will be published soon.
 - NV5's Street Sweeping, Land Use, and Traffic Study and the Crumb Rubber Turf Field Investigation is wrapping up sampling. Thank you for everyone who participated and allowed us to sample streets and fields. Data is being processed. This contract is being extended into the next biennium to wrap up the data analysis and final reports.
 - EA's Unamended Soils study is also being extended based on their initial finding that unamend soils can reduce stormwater 6PPDQ concentrations below 12ng/l. They have proposed building off this study to determine how silt and organic matter impact removal efficiencies and how effective soils from different land uses, like areas with high impervious service will be at reducing 6PPDQ
 - King County recently posted their final report on the lab study of 6PPDQ treatment by high performance media.
 - [Testing Removal of 6PPDQ and Coho Salmon Lethality by High-performance Bioretention Media Blends: Final King County Report](#)
- Discussion: What priority **stormwater** research projects do you want to see funded between 2025 – 2027?
 - Fish survival after treatment with porous pavement (like those done on bioretention mixes). There are studies showing that

porous pavement can reduce concentrations of 6PPD-Q, but we're not certain that it reduces fish mortality. Porous pavement could potentially be a relatively inexpensive and easy retrofit, but we want to make sure it helps the fish!

- Types of porous pavement: pervious concrete vs porous asphalt or pavement, pavement system with a treatment layer or as an overlay.
 - Monitoring 6PPD and 6PPQ in water ways on private land to aid private landowners in salmon rehabilitation projection.
- **6PPD Lab Accreditation** – 5 labs are now accredited for 6PPDQ analysis in water samples, including: Manchester Environmental Lab, King County Environmental Lab, University of Washington – Tacoma, City of Tacoma, and Eurofins.
 - Increasing the number of private, commercial accredited labs will directly support 6PPDQ work. If you have a contact at a commercial lab, please encourage them to apply for accreditation. For accreditation questions, reach out to [Rebecca Wood](#).
- **6PPD publications:** There have been several recent publications about WA's work on 6PPDQ
 - [Western Forester](#) – article will be published soon about 6PPDQ and unamended forest soils
 - [King County Natural Resources and Parks](#)
 - [Seattle Times](#)
 - [UW Storymap](#)
 - [National Geographic](#)
- **Supporting an in-person 6PPD Subgroup meeting**
 - The statewide budget freeze is still in effect. It is uncertain when this will change.
 - Can start planning for a fall in-person subgroup meeting.
 - Any ideas for host locations?
 - There is interest for an in-person meeting. Will be difficult for government employees.
 - Possible locations: Bellingham, Vancouver, Ship Canal site
 - Maybe a joint Oregon/Washington meeting

- **Updates on Ecology's agency-wide work to address 6PPD** (Tanya Williams, ECY)
 - [Ecology Updates PowerPoint Presentation](#)
 - **Safer Products**
 - On June 17th a meeting on Safer Products was conducted to provide an overview and answer question about the Safer Products for Washington Cycle 2 Final Identification of Priority Products Report to the Legislature. The report identifies the priority consumer products for Cycle 2 of Safer Products for Washington.
 - [Identification of Priority Products: Safer Products for Washington Cycle 2 Implementation Phase 2](#)
 - **Flexsys – 6PPD Manufacturer Update (see slides)**
 - Manufacturer of 6PPD, Only US manufacturer
 - Contracting with USDA -synthesizing chemical alternatives
 - 3 candidates moving to toxicity testing with USGS
 - No PPDs, non-quinone forming
 - 12-18 months to share alternative testing results
 - Estimated 10 years – all passenger tires 6PPD free
 - Estimate 15 years – all truck tires 6PPD free
 - **Alternatives Testing Preliminary Results (see slides)**
 - CCPD: currently assessing toxicity tests
 - 7PPD, IPPD, and durazone-37
 - Have not failed toxicity tests yet
 - Good rubber performance
 - Graphene
 - Probably can't remove 6PPD completely from tires
 - **Consideration – Action Plan Projects (see slides)**
 - **Proposed Tire Fee in Washington (see slides)**
 - Potential modification for WA bill
 - Paid by the tire industry

- Certification process for 6PPD free tires
- Stormwater mitigation and safer alternatives

1:30pm Stormwater-Watershed Focus Area Spatial Data Workgroup
Presented by - Heidi Siegelbaum, Stormwater Strategic Initiative Lead

- [Stormwater Meet Spatial Data PowerPoint Presentation](#)
- The [Spatial Data Workgroup](#) is one of the 10 Work Groups that comprise the Puget Sound Ecosystem Monitoring Program. Led by ESA, it hosts a number of focus areas. Its products include a 6PPDQ modeling efforts and other Spatial Data Resources.

1:40pm Stormwater Work Group Updates

- The SWG sent a letter to Ecology's Environmental Assessment Program regarding 6PPD lab accreditation. [Read the full letter here.](#)
 - Stormwater Work Group in the umbrella organization that make decisions on how permittee funds are used. Group consists of Permittees, Tribes, and other organizations.
 - The letter wanted to support increasing capacity efforts for lab accreditation.
- Ecology is hiring a [Stormwater Work Group Project Manager \(Environmental Planner 4\)](#). This project manager would support the work of the SWG, including the 6PPD Subgroup.
- The SWG voted in several new voting members at the May 14 meeting. There are still open seats for representatives from state, federal, or Tribal governments, environmental groups, and businesses. If you are interested in becoming a representative or nominating someone else, reach out to [Madison Bristol](#).
 - The voting members now include representatives from Eastern Washington
 - There are members spots that need to be filled. There is a list available of current members. See link.
- A special SWG meeting will occur on July 16 from 1pm – 3pm. This meeting will focus on [Stormwater Action Monitoring](#) Round 5 Study Solicitation.
- The next regular SWG meeting is scheduled for **September 10 from 9am – 12pm.**

2:00pm Break

2:05pm Testing 6PPDQ on the Snoqualmie Indian Tribe Reservation
Presented by – Kelsey Payne and Jen Hartke, Snoqualmie Indian Tribe

- [Snoqualmie Tribe PowerPoint Presentation](#)
- The Snoqualmie Indian Tribe conducted a baseline 6PPDQ study to determine the level of filtration needed to mitigate stormwater impacts from a high use parking lot and roadways. This study was also designed to test current best management practices (BMPs) that the Tribe has in place for stormwater treatment, including grassy swales and a floating treatment wetland.
 - Snoqualmie Reservation is unique because of casino development, forested areas, and installed Green Infrastructure Systems which allowed for a unique study site.
 - Treatment train consists of 5 bioswales in casino parking lot, originally grassy swales but were replanted with native plants in 2011. The bioswales divert all runoff to a collector system.
 - In 2023 two Floating Treatment Wetlands were installed.
 - 16 sites were monitored as part of the study.
 - Tribe is interesting in continuing to monitor for 6PPDQ, but storm chasing is difficult with limited staff capacity. Other monitoring methods like passive samplers might be a more attractive monitoring method.
- Q&A:
 - Did Snoqualmie observe any methods that might be implemented to monitoring the efficiencies of Floating Wetland?
 - They test within the pond and the stream that the pond discharges to. So, the floating wetland is not sampled directly. Methodologies on how best to do that would need to be explored.
 - Do you have any preliminary information on how much 6PPD/6PPDQ was upstream of the reservation, entering the site?
 - There is data at A1 and coming in off North Bend Highway. Those sites did see spikes in concentrations. The concentration coming in is greater than the concentrations leaving the site, which is exciting considering how much impervious surfaces there are within the reservation.
 - What methods are you thinking of switching to, Autosamplers vs Passive Samplers?
 - Access is difficult and streams are shallow, maybe passive samplers.
 - How do you think the vegetative buffers along the stream impact the concentrations?
 - Stream A runs through a disturbed area with high impervious surface. Stream B in well buffered and intact stream. It's hard to

tell right now but is an area of interest looking forward.

- When will final report be in?
 - If all goes well in about 3 weeks, but likely mid-July.

2:35pm Presentation Q&A

2:45pm Topics for Future SWG 6PPD Subgroup Meetings and Roundtable Discussion

- What topics would this group like to hear moving forward?
- Katie Holzer (City of Gresham, Co-Chair of 6PPD Work Group): Oregon had a Stormwater Summit, Keynote talk was on start up of Working. Katie and Roy will be here next meeting to provide us with Oregon updates.

2:55pm Wrap-up

3:00pm Adjourn

Chat Q&A and Information Sharing

- I'm wondering about effects on amphibians - because of their unique relationship with water - like our native frog and salamander species
 - [Environmental concentrations of 6PPD and 6PPD-quinone induce hepatic lipid metabolism disorders in male black-spotted frogs - ScienceDirect](#) -
- What about management of discarded tires?
 - King County posted this about tire dumping:
<https://atyourservice.seattle.gov/2025/06/02/used-tires-seattle-is-taking-action-on-illegal-dumping/>
- So are marine environments/species not considered in this forum?
 - Testing for 6PPDQ in marine waters has problems that are currently being worked through by several labs, including EPA's and Ecology's Manchester.
 - The SWG 6PPD Subgroup focuses on Stormwater
- General Comments: I would be interested in coaching on navigating the various permitting requirements for stormwater management projects.
 - **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.

- Regular regional coordinator meetings (mostly organized by Laurie at WSC)
 - APWA hosts a regular meeting as well
- WSC keeps the list of groups here: [Stormwater Coordinator Groups – Washington Stormwater Center](#)
- To learn more about these opportunities, contact Abbey at abbey.stockwell@ecy.wa.gov or Amy at amy.waterman@ecy.wa.gov

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View the SWG Website

We regularly update the [SWG 6PPD Subgroup website](#) with information about upcoming meetings, past meeting materials, and important SWG documents. If you have additional questions about the SWG 6PPD Subgroup, contact shelby.giltner@ecy.wa.gov.

Chat Questions: What about interim stormwater regulation changes to the SWMMWW? 10-years is too long to wait plus another 5+/- years for existing tires to be replaced. Please provide water quality guidance as an emergency regulation.