

6PPD Subgroup Meeting Agenda June 12th, 2024

Welcome

Eli Mackiewicz, Co-Chair

The SWG 6PPD Subgroup formed in 2020 and met monthly with support of the Stormwater Work Group (SWG). In 2022, the subgroup changed meeting times to quarterly. The goal of the SWG 6PPD Subgroup is to share the latest science on 6PPD and 6PPD-q.

GUEST SPEAKER: VELMA Model - Jonathan Halama, US EPA

- Presentation by Jonathan Halama with the US EPA on VELMA 6PPD-q modeling. The goal of this project is to further understand contaminant loading patterns, validate simulations, and ultimately suggest green and/or grey infrastructure placement through simulations of contaminant reduction. Much of this work was conducted at Longfellow Creek in Seattle, WA.
 - [VELMA Presentation Slides](#)
- Questions Asked During the Presentation:
 - **Does the VELMA read traffic road counts?** The model uses annual data and takes an average. Uses max count from Seattle high traffic area and then scales it down.
 - **What is the upper geographic scale can be?** 10m resolution is too coarse and did not work well. Depends on what you are asking, but for 6PPD work they are sticking to the 5m.
 - **Does the VELMA take size of vehicle into account?** Only uses SPU traffic counts. VELMA uses a car rate of TWP deposition. It could be modeled for truck traffic, but the traffic count data is not available.
 - **Does your live map show 6PPD level/detection dating back 2019?** 6PPD-q data is not available prior to 2020 when the chemical was discovered. Data is limited and EPA is working on collecting more data.
 - **Do you see deposition more from intersections?** Yes
 - **Does it model wind?** No there is not a wind dispersion parameter.
 - **Does it account for topography?** The model does take topography into account but does not model things like braking on hills, treadwear, etc.
 - **How difficult is to calibrate the VELMA model?** It can be relatively easy if you are familiar with the model, but workshops are offered that provide training on the model.

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- [Visualizing Ecosystem Land Management Assessments \(VELMA\) Model | US EPA](#)
- [Visualizing Ecosystem Land Management Assets \(VELMA\) Training Webinar Archive | US EPA](#)

Updates from the Stormwater Work Group - Shelby Giltner, Ecology

- Heard 2 presentations about SAM projects.
 - Hydrologic performance of bioretention – Jesse Barham, City of Olympia; Bill Taylor, Raedeke Associates; and Jenny Saltonstall, AESI
 - Improving roadside ditches and maintenance – Ani Jayakaran, WSU-Puyallup; Jonathan Schnore, WSU; Michael Neff, WSU
- Status and Trends Subgroup will be reconvening to discuss ongoing adaptations and clarifications to the Stormwater Action Monitoring (SAM) program’s study design. The subgroup will discuss adding 6PPD-q as a parameter for monitoring.
- The SWG is recruiting more voting members; PRO-C is recruiting new members.
- The SWG voted to approve the [2024-2025 SWG Work Plan](#). This work plan outlines important milestones the SWG will achieve throughout the next 2 years, including continuing to support the 6PPD Subgroup.
- The SWG discussed how to best welcome Eastern WA permittees into the SWG. Following MS4 permit reissuance, Eastern WA permittees can now opt into SAM and become SWG members.
- The next SWG general meeting will be held in-person in Seattle (with a hybrid option) on **September 11, 2024 from 9am - 12pm. Location: Aspect Consulting, 710 2nd Avenue, #550, Seattle, WA-98104, Main Conference Room**. More meeting information will be announced shortly on the [SWG webpage](#).

Updates from the Washington State Department of Ecology (ECY) - Shelby Giltner

- Updates on funded projects
 - **Vendor Pool Solicitation Update**
 - Ecology was required to use a state-approved vendor pool via the new Department of Enterprise Services’ (DES) [Environmental Consulting Services contract](#). This statewide vendor pool allows Ecology to move to negotiating scopes of work immediately if vendors can provide the 6PPD research needed.
 - Ecology contacted the vendors and received proposals on the following Data Gaps:

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- 1: Verify the effectiveness of BMPs ranked as having medium to high potential effectiveness in the [BMP Effectiveness Report](#).
- 2: Research the effect of different traffic densities and land uses and characteristics on 6PPD-q concentrations to further characterize 6PPD-q in stormwater.
- 3: Investigate crumb rubber fields.
- 4: Quantify the reduction of 6PPD-q by unamended soils.
- 5: Investigate the needed frequency for street sweeping to be an effective BMP for 6PPD-q management.
- 7: Conduct research that will support the development of standards for TAP-E (Technology Assessment Protocol - Ecology) devices through sampling influent and effluent concentrations of 6PPD-q.
- Contracts in Negotiation:
 - **NV5** (Engineering and Technology consultants)
 - Data Gap 1: BMP Effectiveness Study
 - Data Gap 2 and 5: Combined Land Use and Street Sweeping Study
 - Data Gap 3: Crumb Rubber Investigation Study
 - **EA Engineering, Science, and Technology Inc.**
 - Data Gap 4: Quantify the Reduction of 6PPD-q by Unamended Soils Study
- **New ECY Funded Projects**
 - **Snoqualmie Tribe Project:** A subset of samples will be collected to better understand how land use features like parking lots, roads, and upstream development impact 6PPD-q concentrations. Another subset will help determine if the floating treatment wetland BMP in the stormwater pond and vegetated swales in the parking lot of the Casino help reduce 6PPD-q.
 - **Pierce County Decant Project:** Conduct 6PPD-q sampling and analysis in different stages of stormwater treatment at a Decant facility. Investigate 6PPD-q removal by solid/liquid separation and GAC filtration. Investigate interferences by co-contaminants such as TPH, other organics, and suspended solids.
 - **King County Embankments Project:** This is Phase II of a project to characterize 6PPD-q in stormwater runoff from King County and WSDOT roadways and to use this information to prioritize road segments for 6PPD-q treatment. Phase I screened candidate sampling sites for sampling

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feasibility and presence of 6PPD-q in runoff. Phase II will collect samples from the selected sites and analyze for 6PPD-q, TSS, and PSD.

- **City of Tacoma – Sediment Method SOP:** Ecology is providing funding to the City of Tacoma to develop a quantitative method for 6PPD-q in soils/sediments. It is critically important to begin to quantify stormwater sediment or receiving water sediments for 6PPD-q because the literature and experiments show that 6PPD-q sorbs to particles. The fate and transport of this emerging contaminant can only be understood if it is measured in both the water and sediment fractions.
- **[6PPD Action Plan](#)**
 - In April 2024, the 6PPD Action Plan Advisory Committee finalized their recommendations to be include in the December Legislative report.
 - Ecology’s internal review process is underway to edit and add to those recommendations.
 - Ecology and other state agencies are also writing their budget packages, which will be directly informed by committee recommendations.
- **Permit and Manual Updates**
 - MS4 Phase I and II Permits and Stormwater Management Manuals
 - New permit will be issued July 2024
 - [Municipal stormwater permit reissuance - \(PUB\) Washington State Department of Ecology](#)
 - [Draft Industrial Stormwater General Permit \(ISGP\)](#)
 - Monitoring requirement for 6PPD-q starting year 3 of the permit
 - PFAS monitoring at airport and landfills
 - EPA Issued JBLM Stormwater Permit – MS4
 - Monitoring requirement for 6PPD-q
 - [Public Notice: Proposed Stormwater Permit for Joint Base Lewis-McChord MS4 | US EPA](#)
- **Exciting Job Opportunities at Ecology**
 - [Senior Water Quality General Permit Writer \(Environmental Specialist 5\)](#)

Group discussion - Eli Mackiewicz

- Eli Updates on research
- Updates on 6PPD Action plan

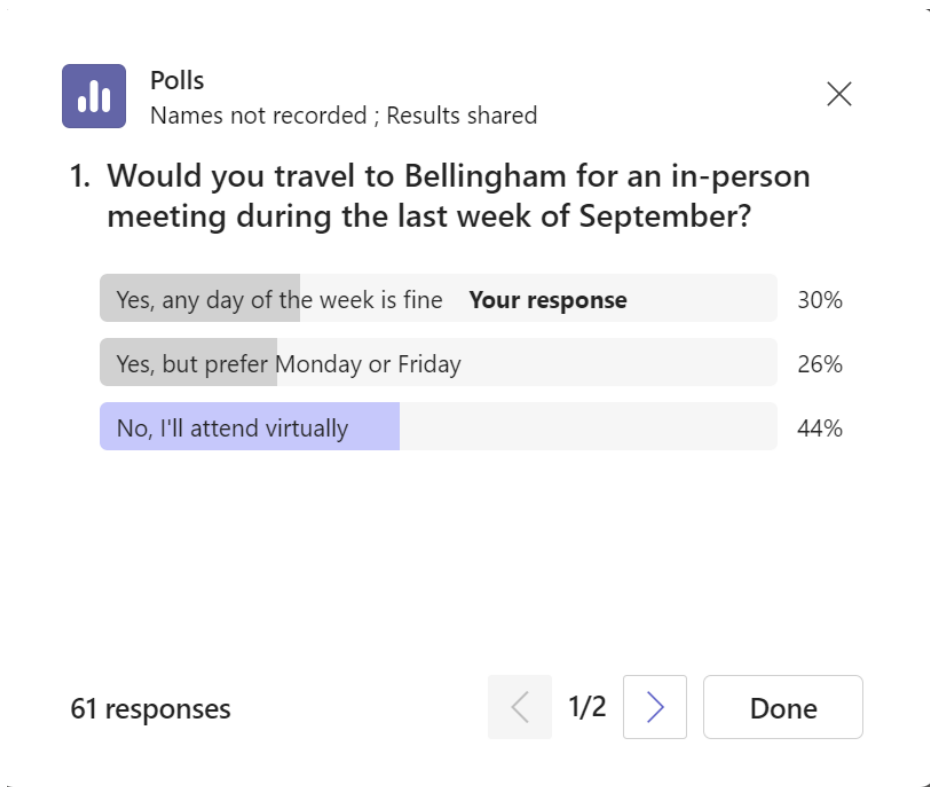
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- Updates on projects from the group

Wrap up - Eli Mackiewicz

- UPDATE On In-Person meeting.
 - Tentatively scheduled for end of September in Bellingham, WA
- A survey was conducted to determine who would attend and what format everyone would be interested in. See the results below:



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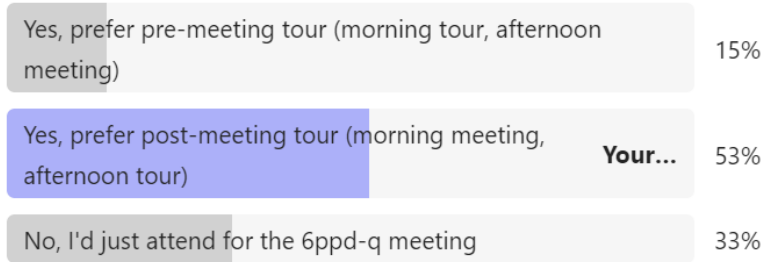


Polls

Names not recorded ; Results shared



2. Would you be interested in a pre-or-post meeting site tour of stormwater and/or habitat projects in Bellingham (hosted by City of Bellingham)?



61 responses