



# Stormwater Best Management Practices

June 2023

Photo: Madison Rose Bristol

# Agenda

- Overview of how stormwater best management practices (BMPs) tie into Ecology's holistic 6PPD response
- Current knowledge on the most effective BMPs for capturing and treating 6PPD and 6PPD-quinone
- Ecology's water quality strategies and funded projects
- Collaborative spaces to engage further on BMPs research and implementation

# Ecology's 3-Part Approach



Reducing sources of  
6PPD & evaluating  
alternatives



Mapping and  
assessing to  
support planning



Stormwater Best  
Management Practices  
(BMPs)



## Best Management Practices (BMPs)

- BMPs help prevent or reduce pollutants in Washington's waterways - Ecology's 2019 Stormwater Management Manuals
- We've researched how effective current BMPs are at addressing 6PPD and [published a report](#) on:
  - Source Control BMPs
  - Flow Control BMPs
  - Runoff Treatment BMPs

# Source Control BMPs

Prevent stormwater contaminants from entering storm drain systems

**High Potential:** Street sweeping, cleaning roadside ditches, catch basins, and storm drains

**Medium Potential:** Education and outreach



# Flow Control BMPs

Slow and reduce runoff volume through on-site management of water

**High Potential:** Bioretention, infiltration basins

**Medium Potential:** Detention ponds, permeable pavement



# Runoff Treatment BMPs

Reduce concentrations of targeted pollutants through means of physical filtration and chemical sorption

**High Potential:** Sorbent media, bioretention soil mix, media filters

**Medium Potential:** Sand filters





# Water Quality Strategies

- Increasing grant funding capacity
- Updating guidance for regulations
- BMP effectiveness research: \$1.5 million over 2 years from the legislature



# Current Projects

- **King County** – High Performance Bioretention Soil Mix (HPBSM) testing
- **Osborn & Evergreen StormH2O Consulting** – BMPs report, 6PPD subgroup, and particle size study
- **UW-Tacoma** – soils and sorbents effectiveness

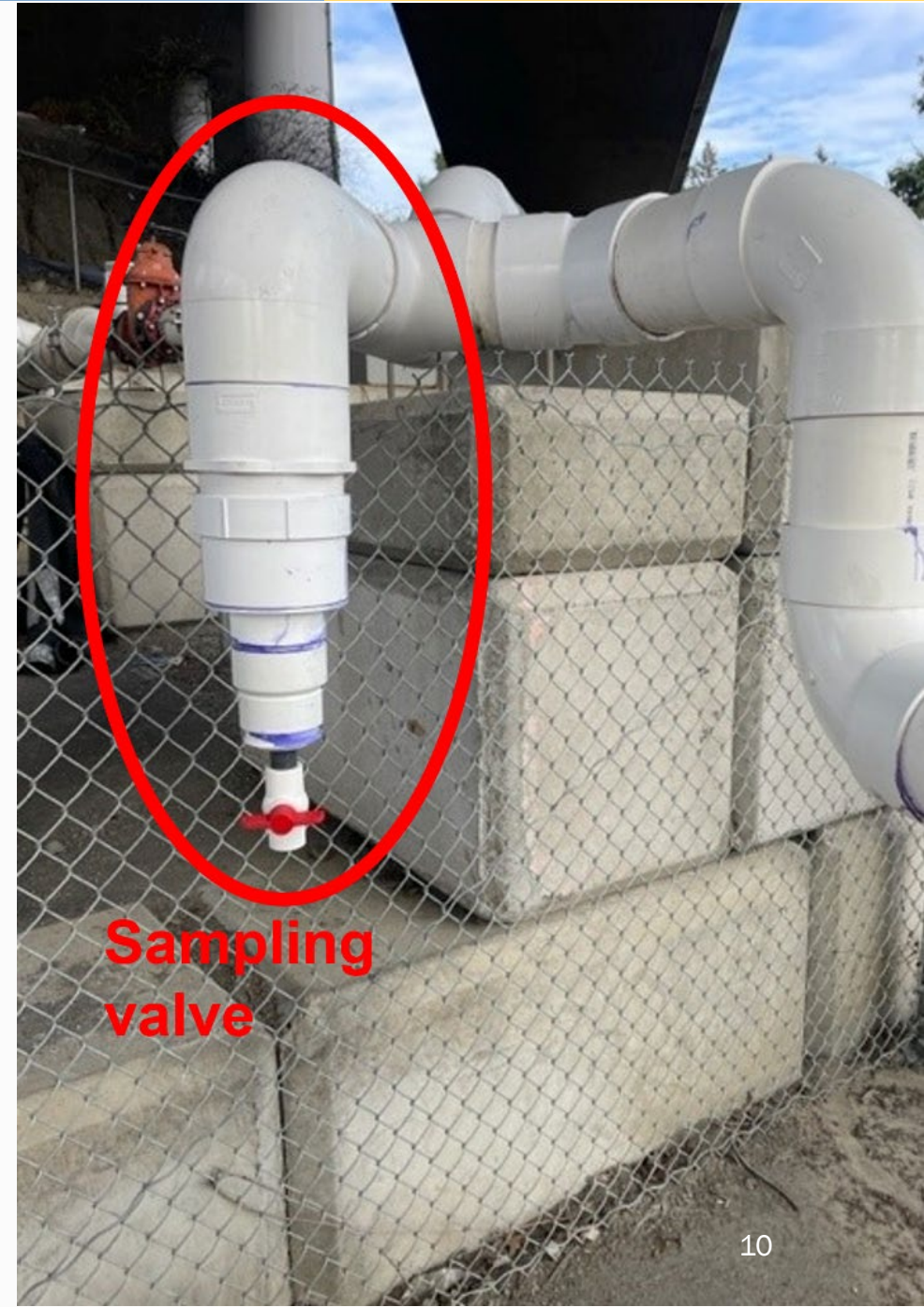
Photo: Madison Rose Bristol



# Current Projects (continued)

- **King County Environmental Lab** – highway & residential stormwater characterization study
- **Herrera** – testing influent and effluent with TAPE devices for removal of 6PPD-q

Photo: King County Environmental Lab



# Stormwater Action Monitoring Program (SAM)

- Research that improves the effectiveness of municipal stormwater management programs
- Current 6PPD studies:
  - **WSU-Puyallup** – longevity of bioretention media
  - **Redmond** – street sweeping effectiveness



# Collaborations: Interstate Technology Regulatory Council (ITRC) Tire Anti-Degradants (6PPD) Team



- National collaborative process
- Creating educational materials & identifying knowledge gaps
- **Join the Solutions Subgroup**
- Other subgroups: Problem Formulation, Effects Characterization & Toxicology, Assessment Strategies

Visit <https://connect.itrcweb.org/home> to learn more

# Collaborations: Stormwater Work Group (SWG) 6PPD Subgroup



PUGET SOUND ECOSYSTEM  
MONITORING PROGRAM

- Multi-year, Western WA-centric information sharing group
- Quarterly meetings
- Subscribe to the [SWG-6PPD-Subgroup listserv](#) to receive regular updates

# Key Takeaways

- Stormwater BMPs help us act now to reduce ongoing harm from 6PPD
- Research helps us fill the many knowledge gaps surrounding 6PPD and make informed policy and technical decisions
- Past and current efforts have been responsive and inclusive because of collaborative processes
- **Reach out to us if you are interested in engagement opportunities**



# Contact Information



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