

Creating a new regional monitoring program for the MS4 permits

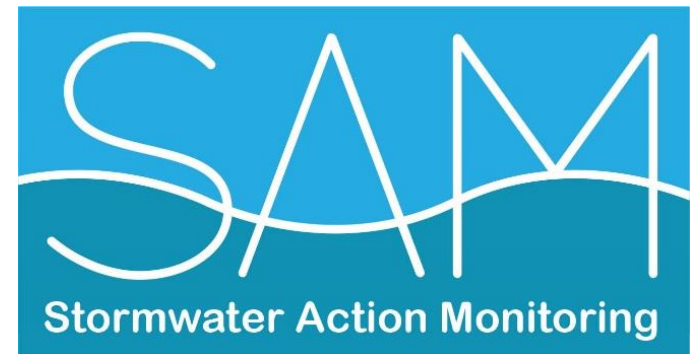
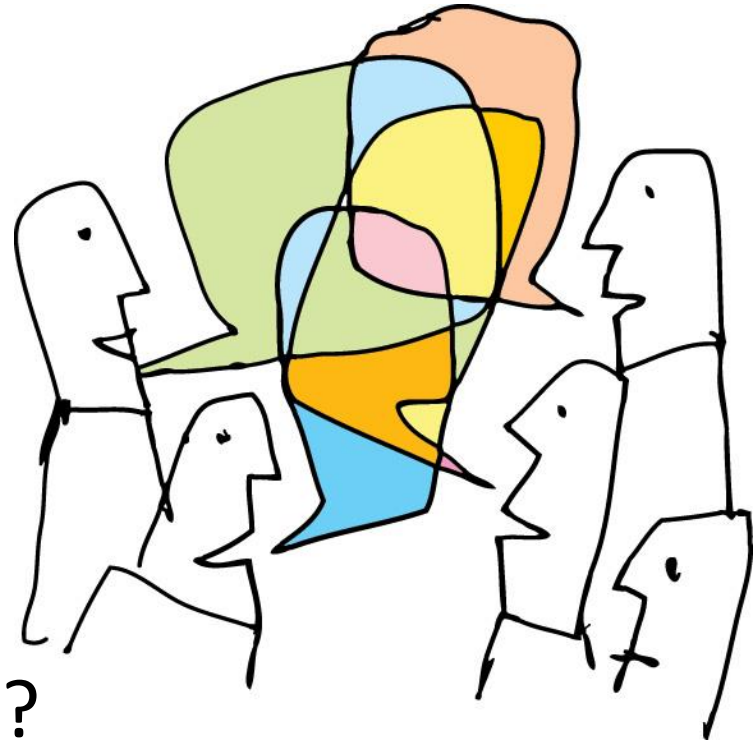
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Municipal Stormwater Adaptive Management

Traditional NPDES Monitoring

- ▶ Conducted by individual permittees
 - Compliance focused
 - Expensive
 - No regional story
- ▶ Permittees asked for a different approach

Today's topics

- ▶ Why regional monitoring?
- ▶ How does the permit work?
- ▶ What are we learning?
- ▶ How are we sharing findings?
- ▶ Benefits of this approach!
- ▶ Some lessons shared...



What it took to change the paradigm

Regulator's
commitment

Stakeholder
recommendations
and buy-in

New permit
requirements
and staff

Regional
monitoring
program

Blood, sweat, and tears!



We have BIG questions

So hard to answer!



Receiving waters:

- Are things getting better or worse?
- Are we protecting key resources?



Effectiveness:

- What is/isn't working?
- What works better or is more cost-effective?

So many things we might monitor

Who gets to decide?

Habitat conditions
LAKES
Hydrology
Toxics, metals, nutrients
BMPs
Land uses, development practices
Bacteria, pathogens, charges
Spills and illicit discharging
Age of infrastructure
Groundwater
CSOs



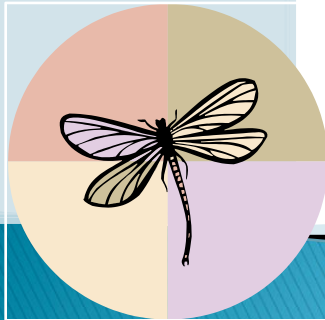
Everyone has an opinion

- ▶ Process with sideboards
- ▶ Build relationships
- ▶ Leverage ongoing regional monitoring efforts
- ▶ Determine the level of effort/cost allocations
- ▶ Set priorities
- ▶ Select projects
- ▶ Provide oversight
- ▶ Keep making recommendations

Stormwater Action Monitoring

Status and trends

- Are receiving waters getting better or worse?



Effectiveness studies

- Are required actions working?



Source identification

- Any regional solutions to common problems?



... and **research** to better understand impacts and develop new ways to treat and prevent problems

Keep the mess out of the permit

- ▶ Permit Fact Sheet describes SAM & process
- ▶ S8: Each permittee chooses to *either*
 - Pay into the cost-share fund, or
 - Conduct individual monitoring
 - defined in permit
- ▶ Timely payments fulfill permit requirements
- ▶ All 93 permittees are participating, plus WSDOT
 - Three did *some* individual monitoring

Freedom from the shackles!



- ▶ Diversity of topics
- ▶ No timeframes or ceilings
- ▶ Mix of small, short- and large, long-term projects
- ▶ Multi-year studies done in phases with interim findings



**Iconic species
in trouble**

We are answering our BIG questions!



Finding solutions

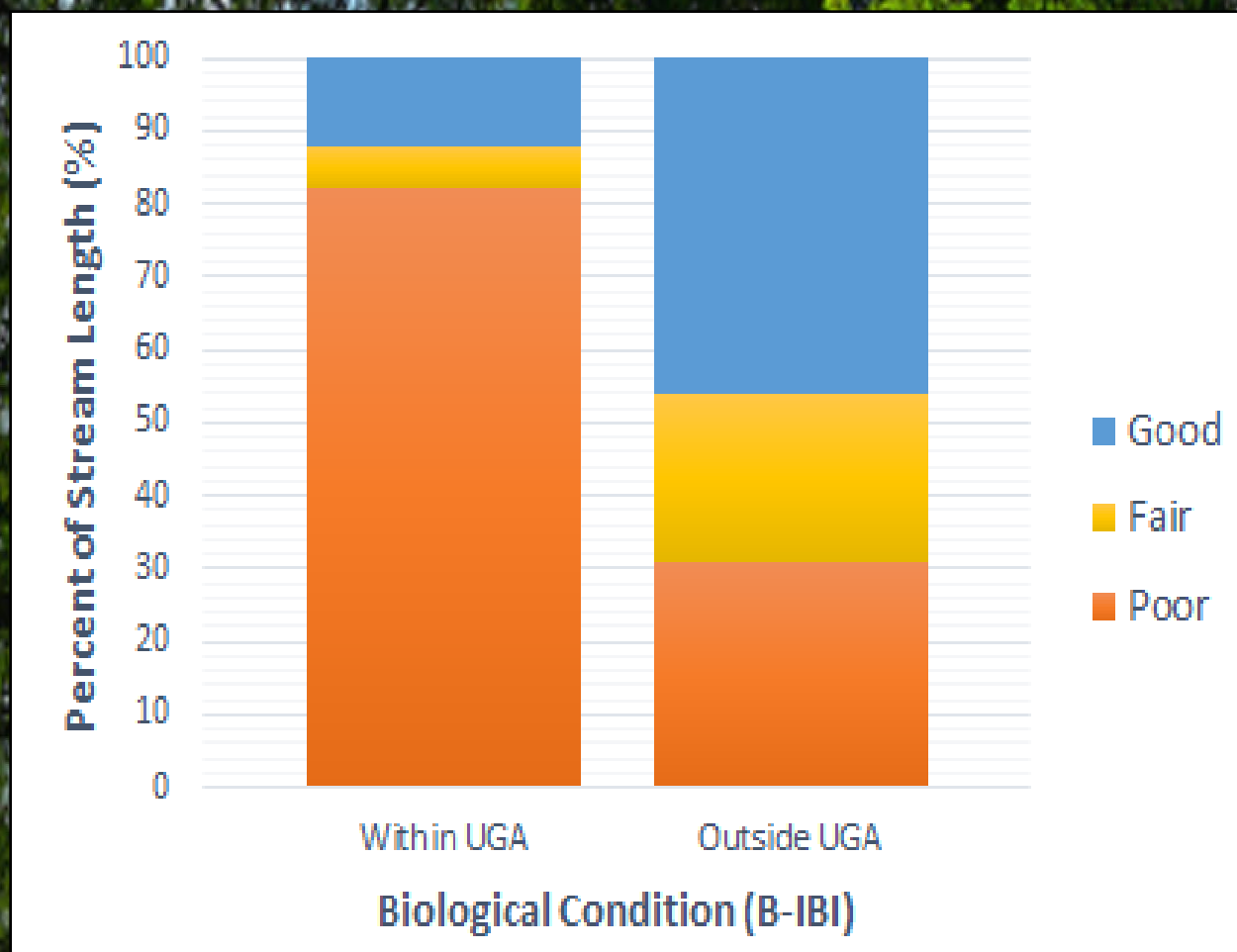


Finding causes

Are stormwater programs working? What is the key to healthy streams?



Watershed canopy explains most of the variation

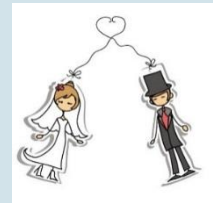


Ecology is the service provider

SAM Coordinator duties



- Invoice permittees annually
- Execute contracts
- Approve deliverables
- Procure state spending authority
- Manage cash flow
- Provide quarterly budget reports
- Maintain webpage
- Communicate findings



Sharing findings with stormwater managers

- ▶ Annual reports
- ▶ Fact sheets
- ▶ E-Newsletters
- ▶ Permit coordinators' meetings
- ▶ MuniCon, SAM Symposium
- ▶ Videos

Pool Party

Battle Ground combines resources with others to fund large-scale projects.

“The Washington Department of Ecology has been very busy lately...”


term projects with the help of cities, counties, and agencies throughout the state.

Much of the activity owes impetus and funding to the Stormwater Action Monitoring (SAM) program, composed of 93 entities (cities

and fish.”

A project investigating stormwater treatment at this scale could easily cost \$400,000 or \$500,000, making it cost-prohibitive for a city of Battle Ground's size to implement. The pooled resources allow both large and small cities and counties—Phase I and Phase II—to reap the benefits of these large-scale projects. “Even though all of the first-round projects were in the Puget Sound area, the recommendations and effects of these projects are relevant, useful, and felt throughout the state,” says Uhazz, whose city was initially skeptical of SAM's efficacy because of the projects' location. “Whether you're in Puget Sound or down here in Battle Ground, if they come up with a good bioretention mix that treats storm runoff, that's going to work for us down here and for Puget Sound.”

The financial impact of the SAM program can be profound: Battle Ground contributed \$7,736 a year for four years, totaling about \$31,000; the total fund was about \$10 million over 10 years. The city's return on the investment was thus huge—it essentially cost Battle Ground \$31,000 to get the results of a \$500,000 project.

“It's a really innovative idea that Ecology proposed, to pool money and try to fund projects,” says Uhazz. “You can do projects on a scale that cities individually wouldn't be able to do.” —Rachel Sandstrom Morrison 

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and counties throughout the state, as well as the ports of Seattle and Tacoma) that are collectively pooling their money to monitor stormwater. With pooled resources, they can do regionally relevant work and bigger and longer studies than could be accomplished through a single grant program.

“Some of the projects in the first round investigated different types of soil mixes and how they can inform stormwater treatment methods,” says Kelly Uhazz, associate stormwater engineer for the City of Battle Ground. “One project related to

We've learned a lot

- ▶ Keep details outside the permit
- ▶ Huge effort to launch
- ▶ Few findings in time to inform the next permit
- ▶ Continually educate new people
- ▶ Communication takes tons of effort
- ▶ It's worth the work



You can have a program like



Payment =
permit
compliance

Stakeholders
make decisions

One entity
takes charge

Region gets
answers to
BIG
questions!

It's worth the hard work!



Questions? Discussion!



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