

# Stormwater Monitoring Work Group

An Update on the Development  
of a Stormwater Monitoring  
Program for the Future

April 27, 2010  
Jim Simmonds



# Overview

- What/Who is the Stormwater Work Group
- Why do we exist?
- What have we done this last year?
- What is in the Scientific Framework and what is not?
- Next Steps

# Stormwater Work Group

- One of 3-5 initial topical work groups likely to be included in the regional ecosystem monitoring program
- All work groups to be coordinated by Puget Sound Partnership
- A caucus-based committee with broad representation

# What we are Doing

- By June, 2010 recommend a regional coordinated stormwater monitoring and assessment strategy including:
  - A scientific framework for monitoring stormwater impacts and management effectiveness
  - An implementation plan describing roles and responsibilities, including NPDES permit requirements

# Workgroup Membership

- 6 representatives of local government
- 6 representatives of state agencies
- 3 representatives of federal agencies
- 2 representatives of the Tribes
- 2 representatives of the environmental community
- 3 representatives of businesses: industry, developers, shellfish
- 1 representative of agriculture
- 1 representative of public ports

# Local Jurisdiction Representatives

- Dana de Leon, City of Tacoma
- Mindy Fohn, Kitsap County
- Jonathan Frodge, City of Seattle
- Heather Kibbey, City of Everett
- Kit Paulson, City of Bellevue
- Jim Simmonds, King County
- Alternates:
  - Jerallyn Roetemeyer, City of Redmond
  - Allison Chamberlin, Mason County
  - Rick Haley, Skagit County
  - Neil Aaland, WSAC
  - Andy Meyer, AWC

# Work Group Schedule

- June 2008 – April 2010
  - Launch committee, scope problem, hold two public workshops, release draft scientific framework, develop draft implementation plan
- April 30, 2010 – Release revised scientific framework and draft implementation plan
- May 19, 2010 – 3rd public workshop
- May 28, 2010 – Comments on report due
- June 30, 2010 – Deliver strategy to Puget Sound Partnership and Dep't of Ecology

# The Current Situation

- Disparate stormwater monitoring programs
- Poor coordination
- Not extensible to locations without monitoring
- Monitoring decisions made in a closed process
- Not designed to provide most needed information
- Phase 1 monitoring is expensive
- Ecology has stated that Phase 2 jurisdictions will have monitoring in the next permit



# The Science We Want

- Holistic monitoring strategy
- Focused on priority information needs
- Monitoring programs are well designed
- Integrated with other monitoring efforts
- Consistent protocols and data management
- Analyzed information is credible

# The Governance We Want

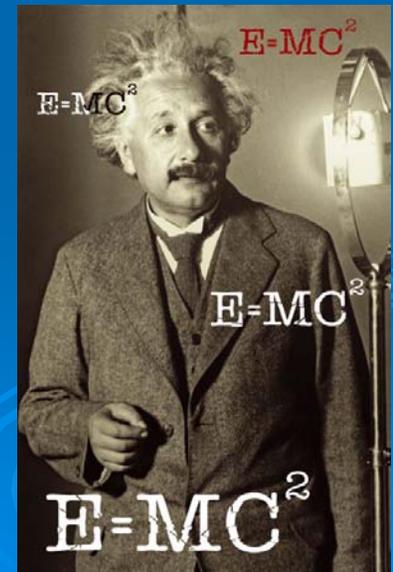
- Coordinated among all entities
- Stakeholders are engaged, on board
- Transparent and open governance
- Leverages capacity and uses limited resources more wisely
- Results in better decisions and management actions
- Pay-in option included in next permit

# Three Major Summary Questions

- What are the long-term status and trends of beneficial uses that are impacted by stormwater?
- How effective are various stormwater management actions at reducing stormwater impacts?
- Where are the sources of stormwater causing the impacts to beneficial uses?

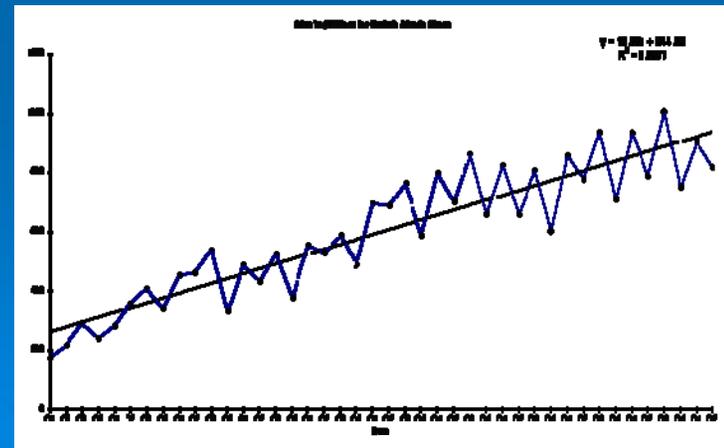
# Scientific Framework

- Provide the most important information to decision makers
- Includes multiple scales
- Highest priority monitoring proposed first
- Hypothesis driven approach
- 3 main categories of monitoring
  - Status and Trends
  - Effectiveness
  - Source Identification



# Status and Trends

- Focus on small streams and nearshore
- Biologically-based
- Long-term trends over time
- Link to salmon and public health monitoring
- Estimate fraction of resource not meeting beneficial uses
- Two scales
  - Puget Sound
  - WRIA
- Probabilistic design



# Effectiveness

- Five basic categories of studies
  - New development / redevelopment
  - Retrofits
  - Programmatic / non-structural approaches
  - Traditional structural approaches
  - New technologies
- Need a process for soliciting, reviewing, selecting, and funding effectiveness studies
- Three basic designs
  - Upstream / downstream comparison
  - Before / after comparison
  - Test site / control site comparison

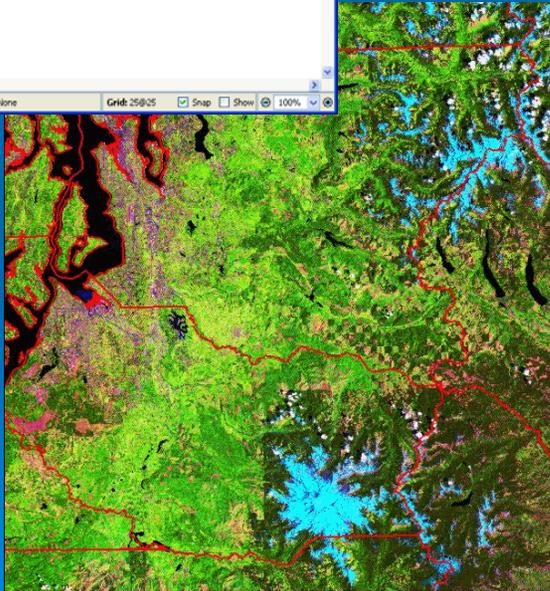
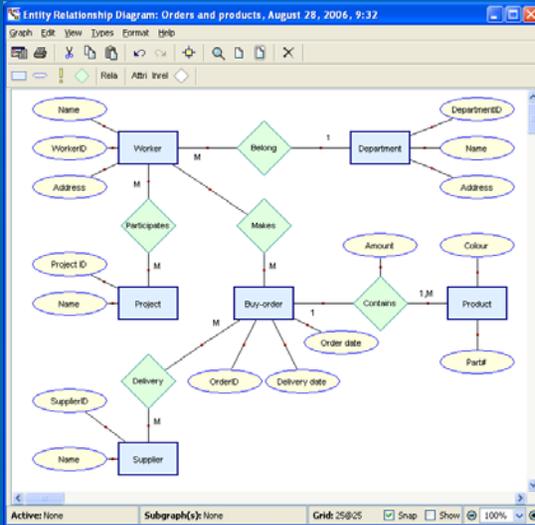


# Source Identification

- Local scale
- Track sources of chemical or volume that are impacting beneficial uses
  - Detailed monitoring upstream of impacts to identify sources
  - Mapping of connected impervious area
  - On-site septic system inspections
  - Business inspections
  - Illicit discharge programs
  - Other programs



# Additional Science Needs



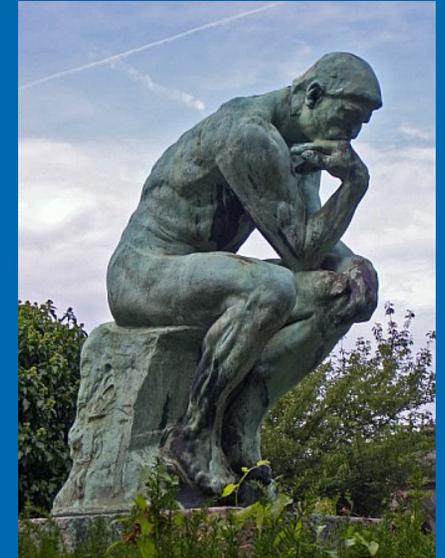
- Data management
- Standard operating procedures
- Land use/land cover data
- Climate data
- Modeling

# Implementation Plan Key Points

- Management structure for monitoring
- Pay-in option for municipal NPDES compliance
- Cost estimates for jurisdictions, state agencies, others
- Leveraging existing capacities
- Integration and synthesis of results
- Methods for selecting, funding, and overseeing effectiveness and source identification studies
- Additional science needs

# Some Issues to Ponder

- Affordability for Phase 2 jurisdictions given economic conditions
- Leveraging existing capabilities
- Public and political support
- Link between policy and science
- Relationship between municipal and industrial permits, and need for watershed approach
- Overcoming fear of data due to possible future requirements
- Maintaining and expanding cooperation
- Ensuring accountability for pay-in option



# We Want Your Input!

- Report released April 30
- Public workshop May 19
  - Renton Community Center, 9:00-3:00
  - Register at:  
<http://swgworkshop3.eventbrite.com/>
- Comments due May 28
- More info?  
<http://sites.google.com/site/pugetsoundstormwaterworkgroup/home>