

Water Quality Partnership

March 12, 2020

Welcome & Introductions	David Giglio	1:00 – 1:10
Legislative & Budget Updates from Ecology & Partnership	David Giglio Becca Conklin Rebecca Pittman	1:10 – 1:20
Municipal Stormwater Permit Compliance Assurance Program	Abbey Stockwell Jeff Killelea	1:20 – 1:35
Nutrients General Permit Update	Ellie Ott Vince McGowan	1:35 – 2:05
PARIS Database	Carissa Glassburn Vince McGowan	2:05 – 2:30
Salmon Habitat Rulemaking Update	Chad Brown Bryson Finch	2:30 - 2:45
Round Table	All	2:45 – 2:55
Closing wrap up – Future agenda topics	David Giglio	2:55 – 3:00





Electronic Permitting Tools

Vince McGowan and Carissa Glassburn



Our Permitting Data

We strive to collect, maintain, and report timely and accurate water quality permitting data.

We use multiple database collection systems that allow us to:

- Provide transparent and flexible reporting mechanisms
- Improve management of permits
- Capture required data elements for EPA
- Allow permittees and our staff to enter data
- Improve data quality by providing intuitive data entry screens



Permitting Database History

2003

WPLCS

First system developed to store permitting data. Data was hand-entered by Ecology staff.

2010

PARIS (Permit And Reporting Information System)

Moved database to Oracle platform, replacing WPLCS

Allowed for connection to WQ WebPortal

2018

PARIS 3.0

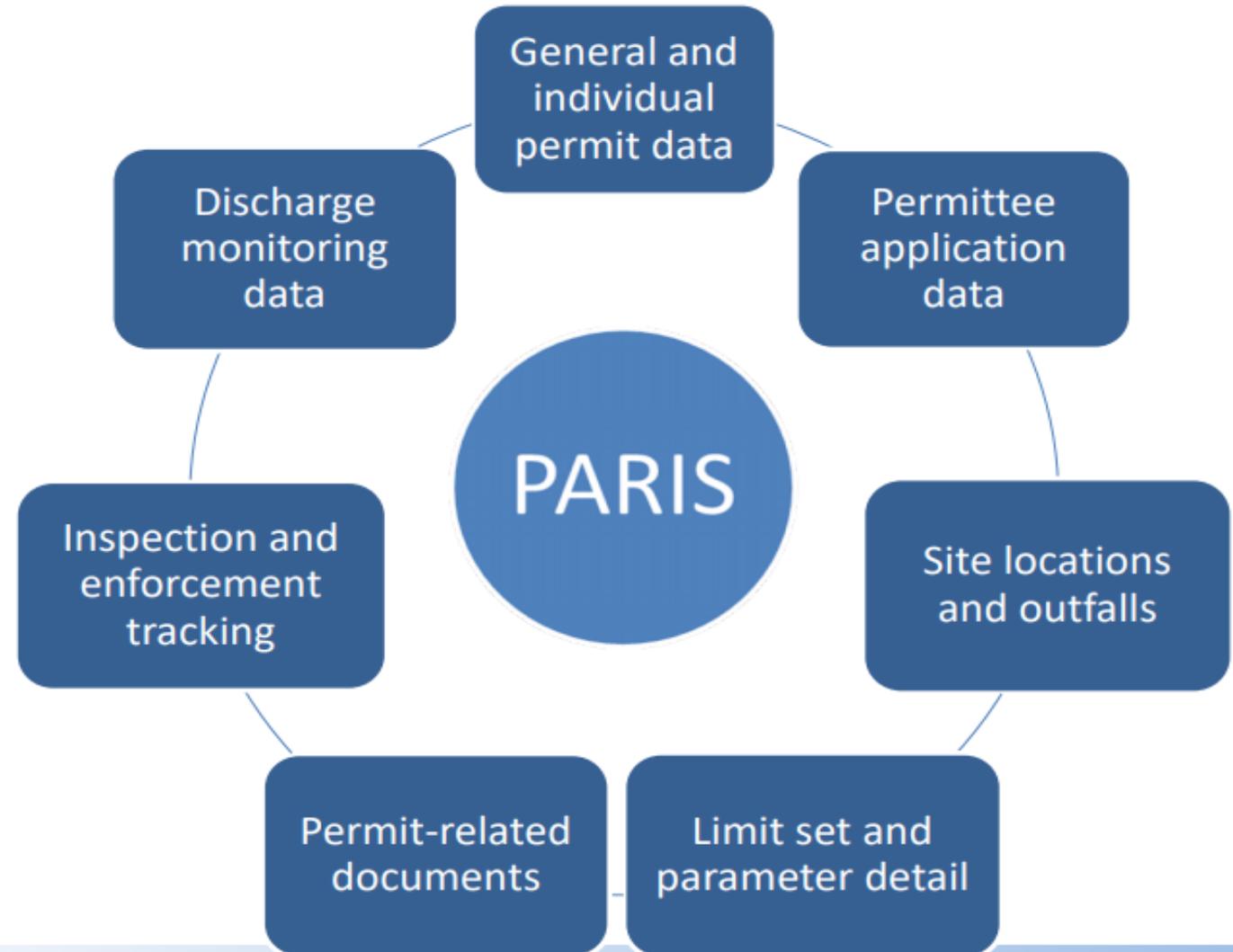
Moved PARIS off Oracle platform and onto agency-standard Microsoft platform



PARIS Database

Our largest database

- Available for public views and queries
- Interfaces with other databases for complete permit picture

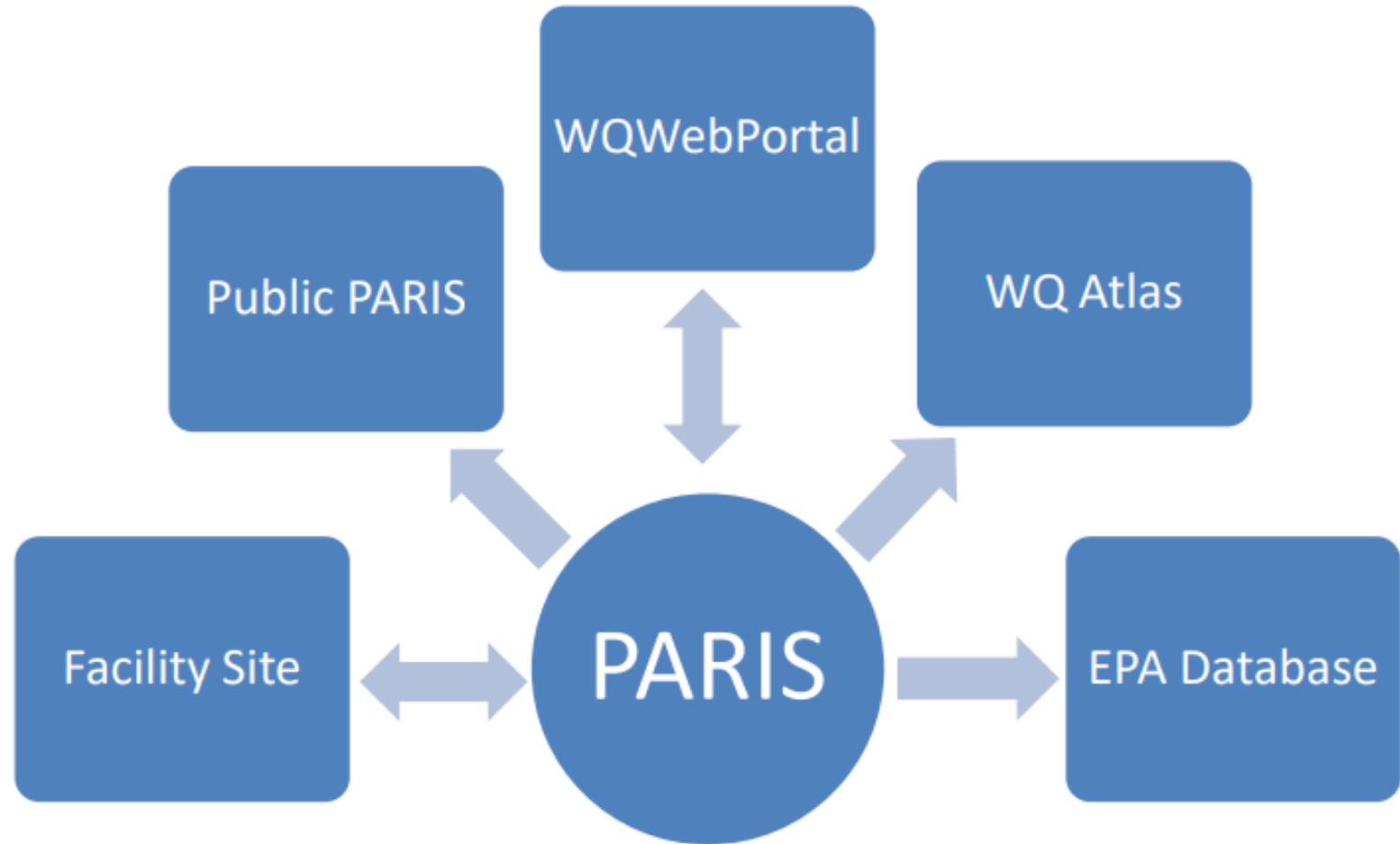


What is NOT in PARIS?

- ALL data for ALL permits
 - Some permits are not yet in PARIS
 - Example: Aquatic Pesticides
 - Some permits are partially in PARIS
 - Example: CAFO
- Groundwater data
- All facility-related documents
- Non-permitting related documents



PARIS Data Exchange Patterns



EPA Electronic Reporting Rule

October 2015: EPA implemented the [Electronic Reporting Rule](#) (e-Reporting rule). The rule requires that regulated entities and states will:

- Collect NPDES permitting information from municipalities, industries, and other facilities in an electronic format
- Report information to EPA electronically

In January 2020, the deadline for compliance was extended, from December 2020 to December 2023.



Progress Towards Compliance

Progress towards e-reporting compliance:

- 89% of permittees apply electronically
- 92% of permittees submit DMRs electronically
- 95% of all active permits have basic information reported to the EPA ICIS database on a daily basis



Recently Completed Projects

Our Water Quality Program has IT resources dedicated to the maintenance and updates of NPDES permitting data tools.

Recently completed projects:

- Moving the MS4 permit applications to electronic format
- Allowing electronic reporting of IDDE incident reports
- Creating the new Winery General Permit online tools
- Modifying CSWGP and ISGP online application tools for new permit cycles



Upgrades on the Horizon

Upcoming permitting database projects:

- Provide electronic application for individual permits
- Modify electronic permit applications for several general permits with upcoming renewal dates
- Convert permit transfer and modification forms to electronic format



Ongoing Projects and Maintenance

Ongoing database projects:

- EPA Reporting Rule compliance
- Improve data flow to EPA database
 - Improve quality of data in EPA's public-facing ECHO database to more accurately reflect WA's compliance rate
- Comply with agency or state-mandated software and accessibility requirements
- Address system bugs



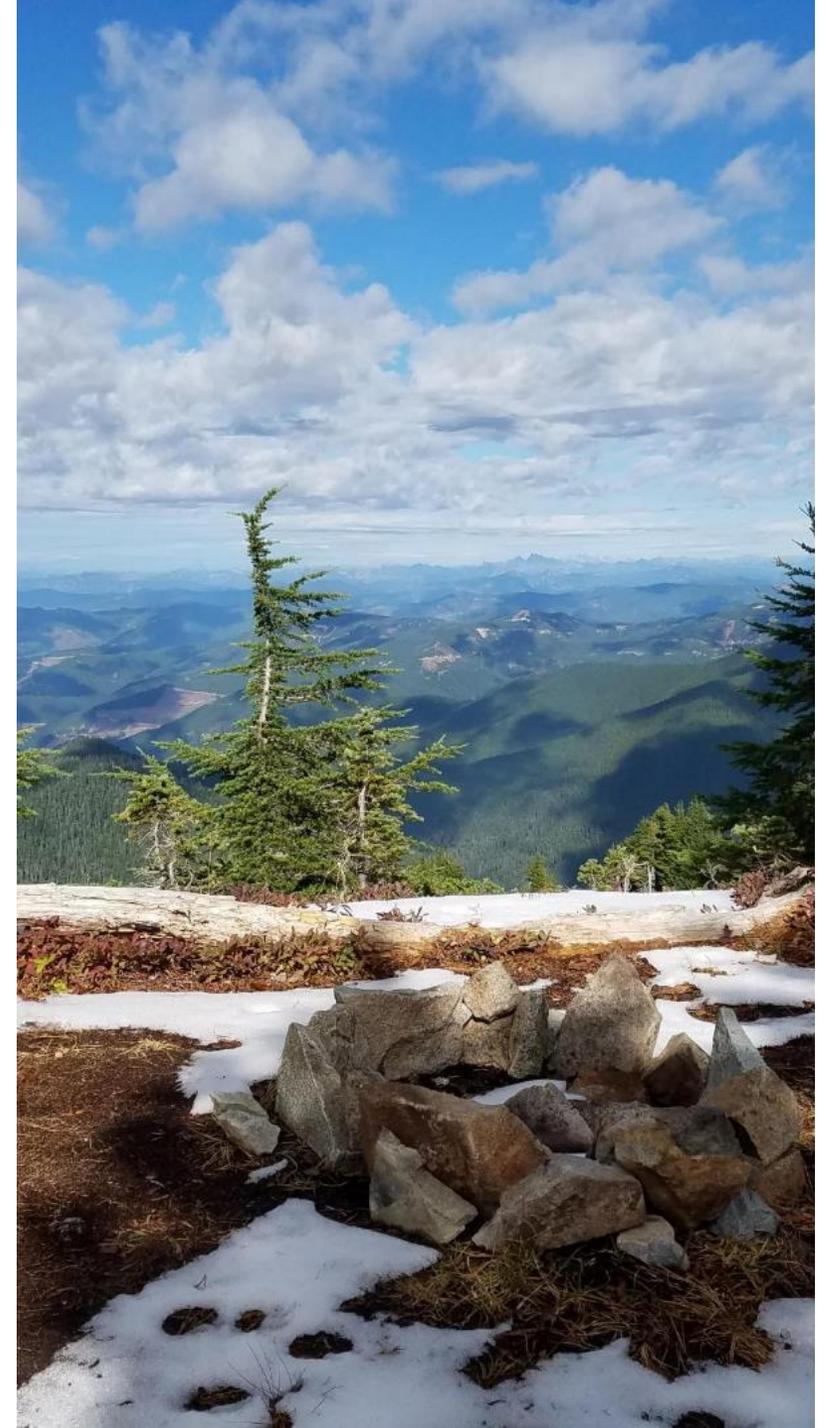
What If I have questions?

We now have dedicated PARIS resources!

- Carissa Glassburn, PARIS Business Lead
Carissa.glassburn@ecy.wa.gov
- Josh Klimek, PARIS Technical Lead
Josh.Klimek@ecy.wa.gov

Technical Support for the WQWebPortal is also available:

- WQWebPortal@ecy.wa.gov
- 1-800-633-6193, Option 3



Salmon Spawning Habitat Protection Rule

Water Quality Partnership Meeting
March 12, 2020

Water Quality Program



Rule and Purpose

Rule will include:

- Revising the current freshwater dissolved oxygen criteria
 - Developing a new fine sediment criterion
-
- Purpose:
 - Improve salmon spawning habitat
 - Ensure adequate dissolved oxygen levels in spawning gravels
 - Ensure physical structure of redds are conducive to spawning success



Tentative Rule Timeline

- Rule Announcement (**CR-101**): *December 2019*
 - Begin stakeholder/public process – educate public, gather information, develop draft discussion paper, and draft rule language
 - Technical Expert Meetings (~July – November 2020)
 - Preliminary Webinar
 - Economic Analysis
 - Staff Report

- Rule Proposal (**CR-102**): *Early 2021*
 - Hold public hearings
 - Public comment period

- Rule Adoption (**CR-103**): *~October 2021*





Freshwater Dissolved Oxygen

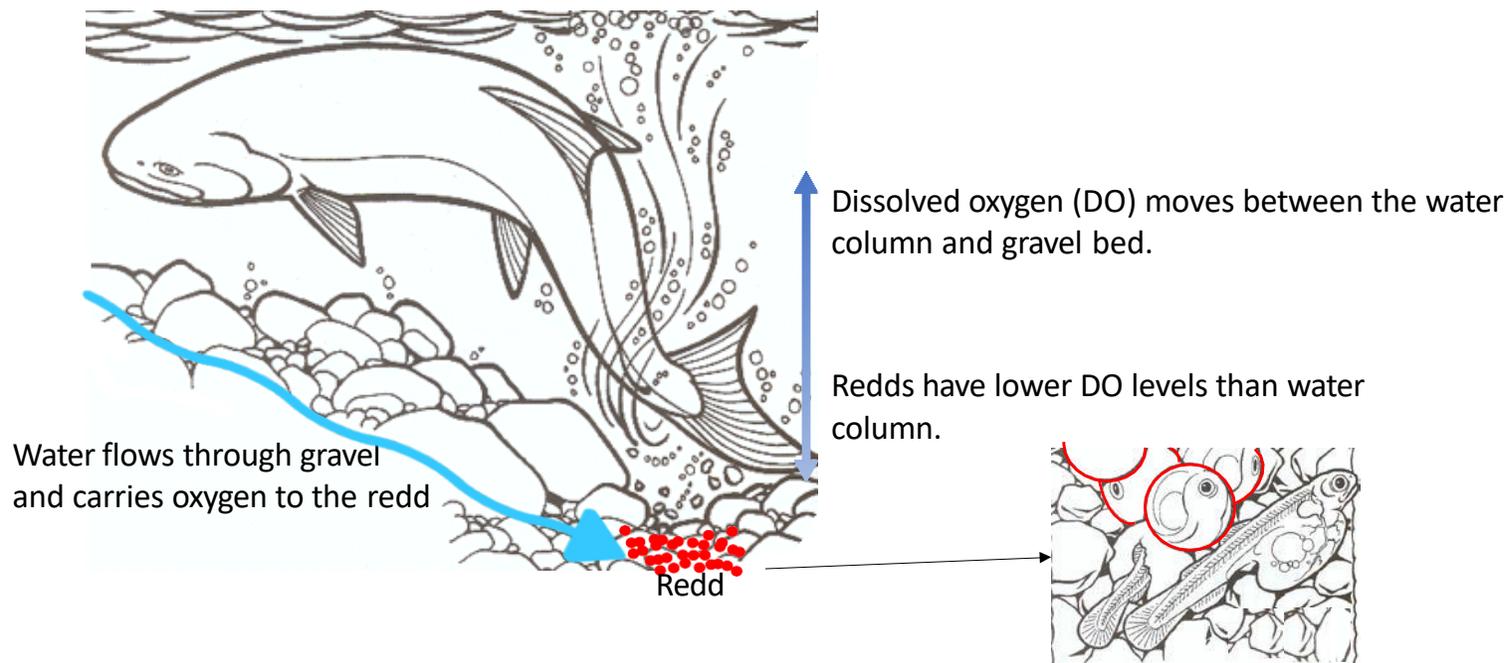
Freshwater Dissolved Oxygen 101

- What is Dissolved Oxygen (DO)?
 - Measure of the amount of oxygen dissolved in water usually measured in milligrams per liter (mg/L)
- Sources
 - Exchange of DO between waterbody and the atmosphere
 - Photosynthesis (aquatic plants, algae, phytoplankton)
- Importance
 - Essential for aquatic life respiration
- Reductions in DO caused by:
 - Excess nutrients, respiration, and increase in temperature



Freshwater Dissolved Oxygen 101

Salmon eggs and larvae need oxygen to breathe



Images: https://www.fws.gov/sacramento/es_kids/Chinook-Salmon/Images/redd_fws.gif



Why Revise Freshwater DO Criteria?

- Federal concerns that Washington's freshwater DO criteria is not fully protective of incubating salmonid embryos
- Current water column standards for salmonid spawning
 - Core summer salmonid spawning is protected at 9.5 mg/L
 - Spawning, rearing, and migration is protected at 8.0 mg/L
- EPA recommendation for full protection for all spawning to be **11.0 mg/L**
 - EPA considers an intragravel DO of **8.0 mg/L** fully protective of developing embryos
 - EPA assumes **3.0 mg/L** reduction in DO from the water column to interstitial spaces of gravel – (**8.0 mg/L** + **3.0 mg/L** = **11.0 mg/L**)



Preliminary DO Criteria Options

1. Revise freshwater DO to match EPA recommendations
2. Apply seasonal freshwater DO criteria during spawning periods to address EPA recommendations
3. Develop and implement intragravel DO measures
4. Add an alternative percent saturation criteria to the freshwater DO criteria
5. Some combination of the above





Fine Sediments

Fine Sediments 101

- What is Fine Sediment?
 - Generally particles less than 2 mm

- Sources
 - Erosion, runoff, flooding, land development, in-water activities, and natural stream hydrology

- Importance
 - Excess fine sediment can result in:
 - Biological effects, loss of habitat, reduced oxygen, reduced embryo hatching success, behavioral changes, and mortality



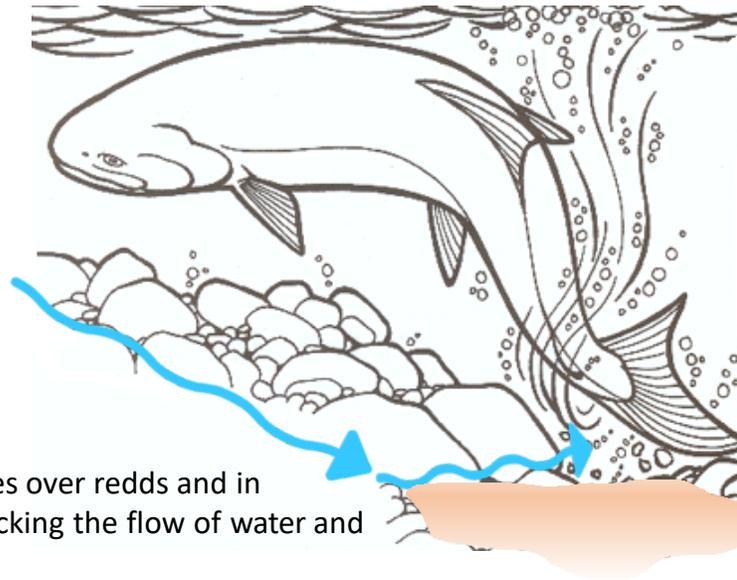
Why a Fine Sediment Criterion?

1. Fine sediment is the nation's #1 pollutant (according to EPA)
2. Better protect salmon spawning gravels
3. Meet obligations in a 2018 U.S. District Court stipulated order of dismissal
4. Current narrative does not specifically address fine sediment:
 - **General narrative criterion:** “*no deleterious materials...*”
 - Narrative criterion can be used to address fine sediment but...
 - Narrative criterion does not specifically address the designated spawning use protection requirements for waters impaired by fine sediment
 - **Turbidity criteria**
 - Was not specifically designed to reduce effects of sedimentation
 - Turbidity measurement includes all particles contributing to reduce light penetration in the water column including phytoplankton and detritus (not specific enough)



Fine Sediments 101

Fine sediment is not suitable spawning habitat



Fine sediment settles over redds and in between gravel, blocking the flow of water and oxygen.

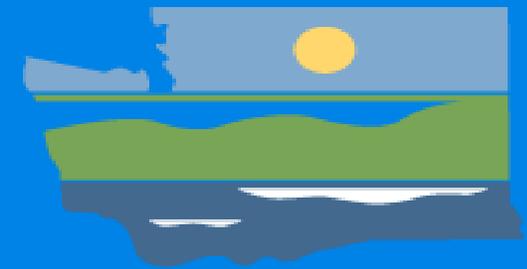
Sediment covers eggs and reduces hatching success



Fine Sediment Criteria Considerations

- Narrative or numeric criterion?
 - Implementing fine sediment criteria often uses a combination of water quality measurements
- Best measurement for quantifying/assessing fine sediment
 - Several options and combinations available to assess fine sediment
 - Compare site-specific characteristics to a reference site
- Implementation
 - Determining a reasonable and feasible methodology to assess fine sediments that can be incorporated into water quality monitoring





Questions