

# Prioritizing Stream Preservation & Restoration Based on B-IBI

## Stakeholder's Workshop Wed, March 19, 1-3:30



Funded by EPA federal pass through funds via WA Dept. of Ecology as part of the PSP Action Agenda: Ecosystem Restoration and Protection Project



**King County**

Department of  
Natural Resources and Parks  
Water and Land Resources Division

B-IBI Advisory Group Meeting

February 27, 2014

# B-IBI: PSP Vital Sign Indicator




- 🐛 Freshwater Quality B-IBI Targets by 2020:
- 🐛 PROTECTION - All stream drainage areas retain “excellent”
- 🐛 RESTORATION - 30 basins improve from “fair” to “good”

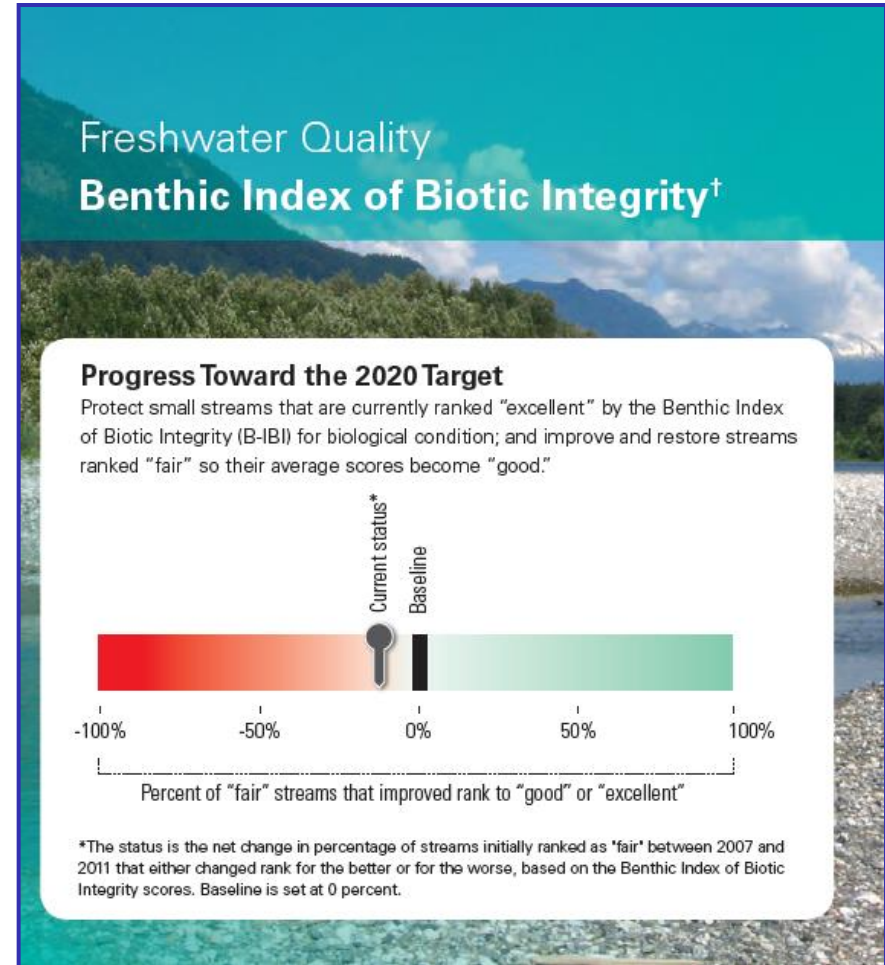


# Target Progress

 No progress improving biological condition

 Funding for King Co. to prioritize basins & develop strategies

 No funding for restoration & protection implementation or effectiveness monitoring



# Prioritization Framework

- ✈️ Refine relationship between B-IBI and stressors
- ✈️ What restoration has worked, where, and why?
  - ✈️ What actions are possible?
- ✈️ Incorporate existing tools as appropriate
- ✈️ Feedback from regional experts, stakeholders
- ✈️ Identify restoration strategies for high priority basins




# “Excellent” Sites ( $\geq 42$ ) = Protection

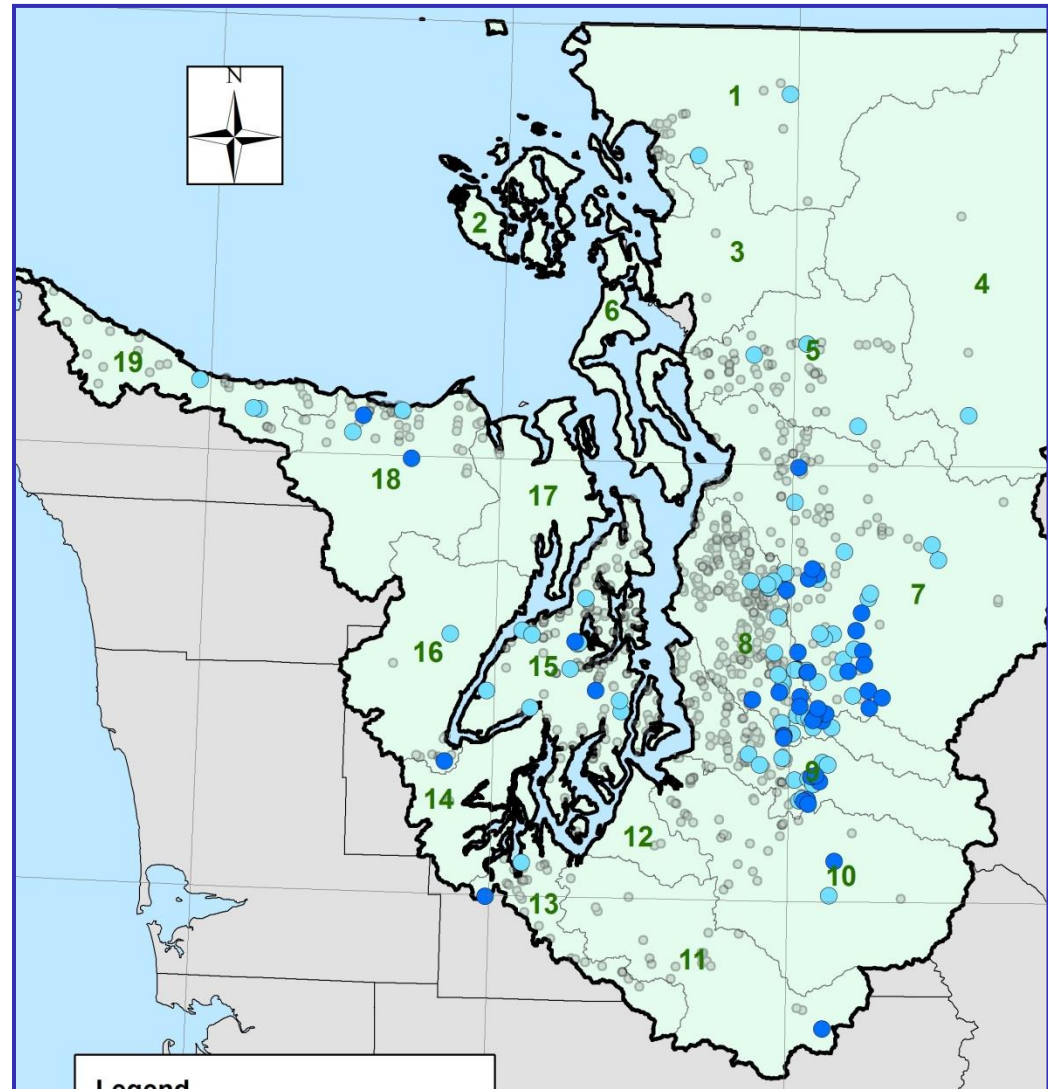
“Excellent” scores

●  $\geq 46$

●  $\geq 42$  and  $< 46$

 **121** sites scored  
“excellent” at least  
once

 **33** sites averaged  
“excellent”



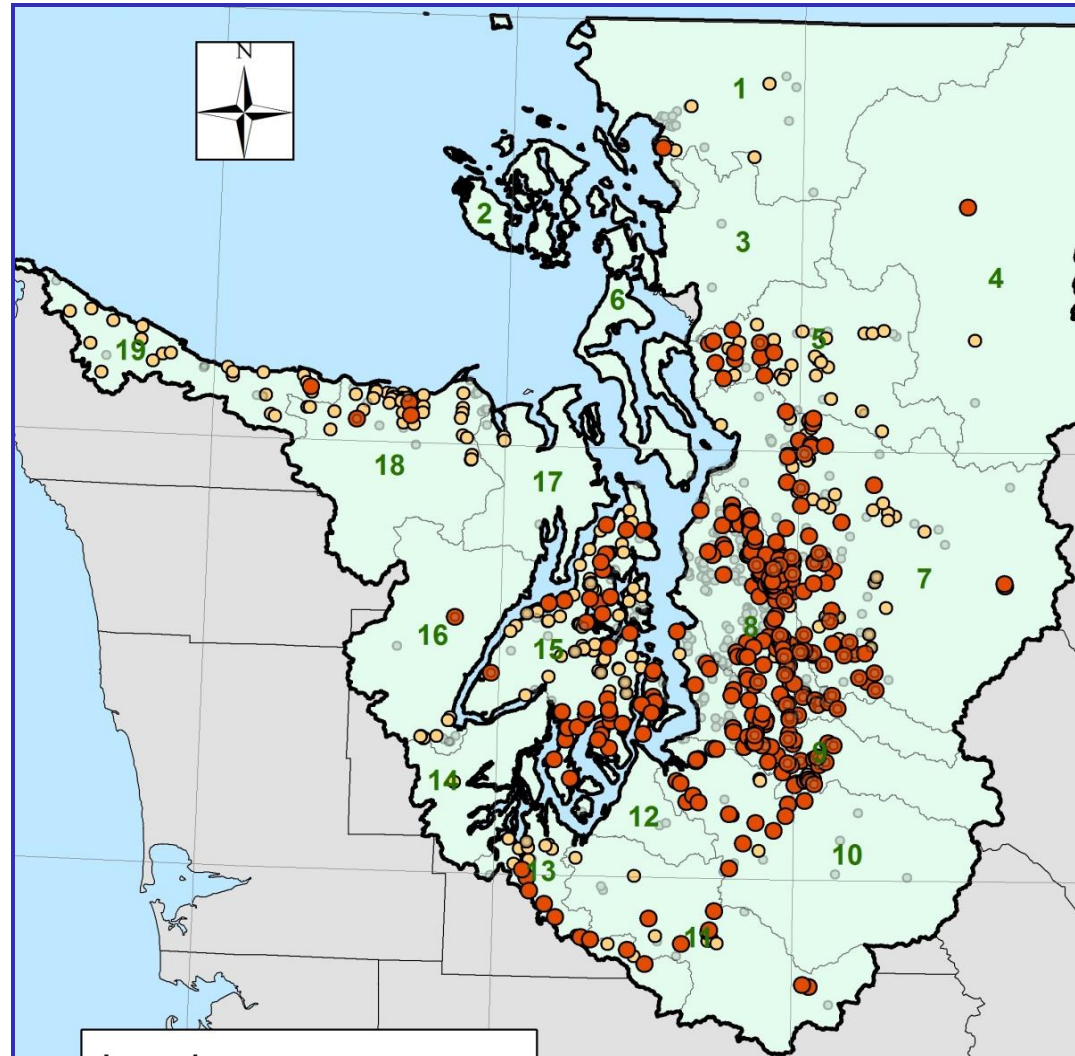
# “Fair” Sites (28-36) = Restoration

● “Fair” +  $n > 1$  +  
since ‘08

● “Fair” at least once

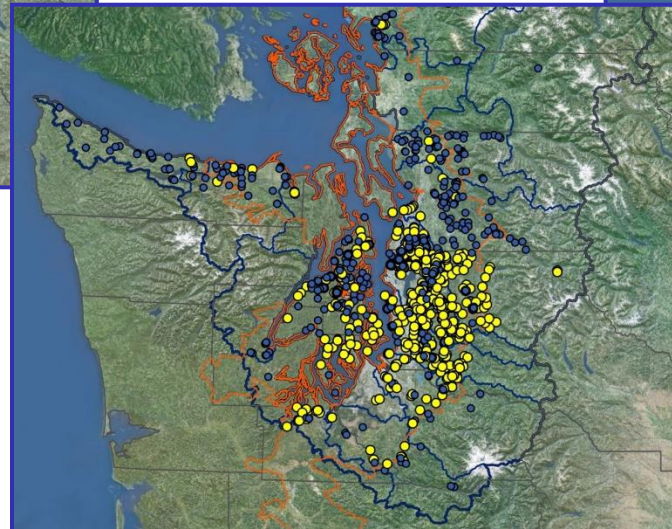
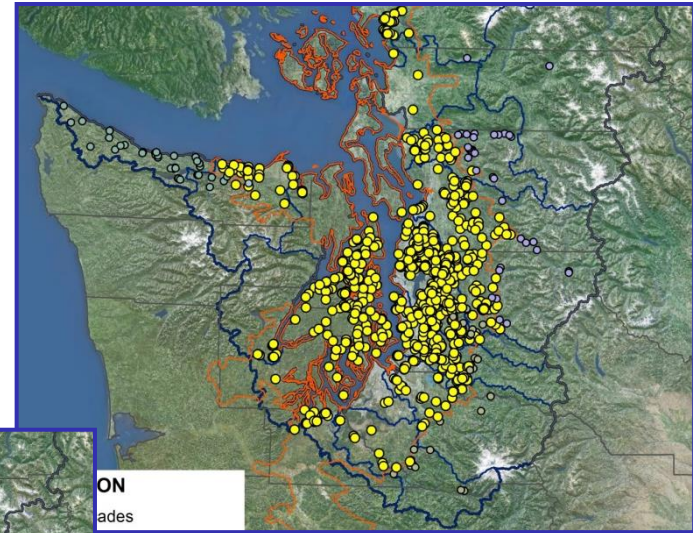
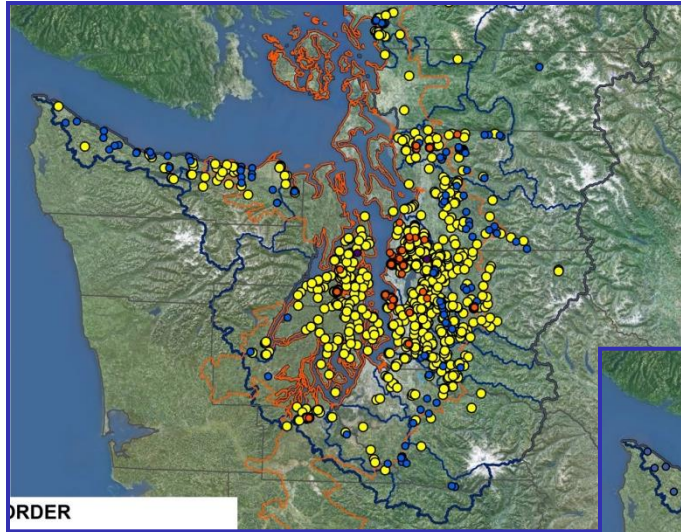
🐛 **648** sites scored “fair”  
at least once

🐛 **348** sites scored  
“filtered fair”



# “Fair Sites”: Filters

Stream Order 1-4



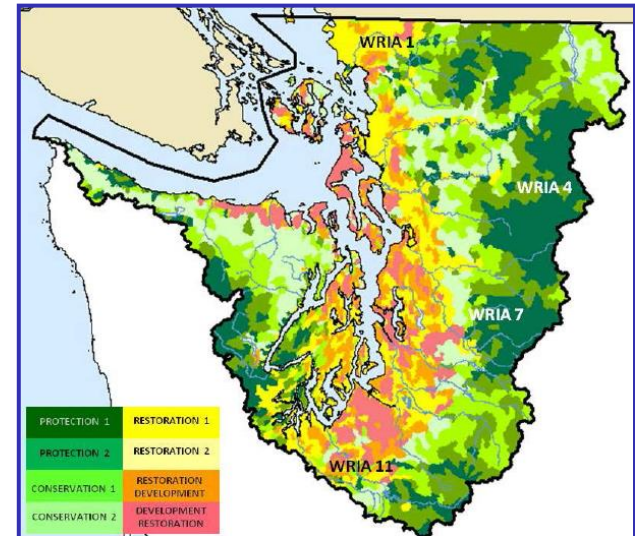
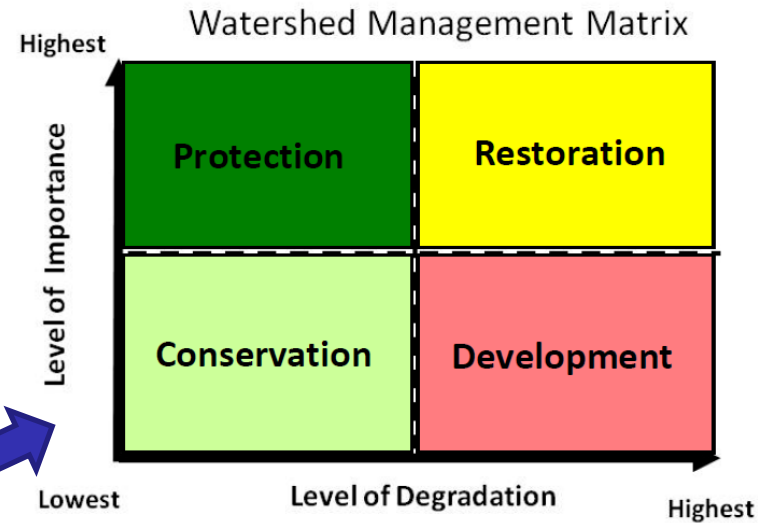
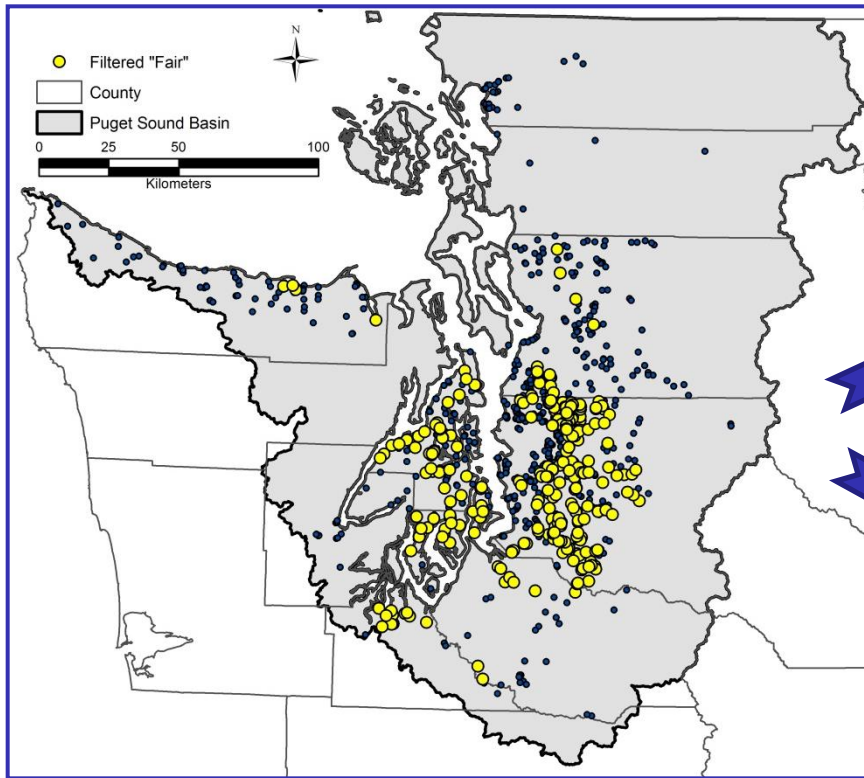
Puget Lowland  
Ecoregion

Sampled > Twice



# Prioritization Framework

 268 sites →



 → PS Watershed Characterization

# Additional Criteria

- 🐛 Fish presence
- 🐛 Salmon recovery priorities
- 🐛 Ownership
- 🐛 Basin size
- 🐛 Impervious Area
- 🐛 Fragmentation
- 🐛 Watershed context
- 🐛 Riparian condition
- 🐛 Variability
- 🐛 Intrinsic potential...

## Management Actions

### Feasible? Effective?

- 🐛 Habitat improvements
- 🐛 Riparian plantings
- 🐛 SW retrofits
- 🐛 Ag BMPs
- 🐛 Education/outreach
- 🐛 Legislation
- 🐛 Incentives
- 🐛 Seeding inverts...

# Acknowledgements



## King County:



**Debra Bouchard, Chris Gregersen, Chris Knutson, Gino Lucchetti, Kate Macneale, Kate O’Laughlin, Jim Simmonds, Kerry Thrasher**



## PS Watershed Characterization:



Ecology: Susan Grigsby, Colin Hume, Stephen Stanley



WDFW: George Wilhere



## Ecology Project Management:



Tom Gries, Kim Harper, **Doug Howie**, Kirsten Weinmeister

The background of the slide is a close-up photograph of a streambed. In the foreground, several dark, segmented aquatic insects, likely caddisfly larvae, are resting on a light-colored, textured rock surface. The background is filled with a variety of smooth, rounded river stones in shades of grey, tan, and brown, creating a natural, outdoor setting.

?'s / Suggestions / Success Stories

Jo.Wilhelm@kingcounty.gov

[www.pugetsoundstreambenthos.org](http://www.pugetsoundstreambenthos.org)

Stakeholder's Workshop

Wed, March 19, 1-3:30