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July 2, 2009

## MEMORANDUM

**TO:** Fish and Wildlife Committee

**FROM:** Nancy Leonard, Wildlife and Ecosystem Monitoring and Evaluation Manager

**SUBJECT:** Pacific Northwest Aquatic Monitoring Partnership (PNAMP) - update and 2009 priorities

Jen Bayer, PNAMP Coordinator, will provide an update on PNAMP activities. This presentation will focus on two areas the PNAMP Steering Committee has identified as highest priority for 2009:

- Coordination of regional high level environmental indicators
- Demonstration of principles and benefits of monitoring integration, including the use of probabilistic designs, consistent methods, and data management practices

Jen will provide an update on progress to date and next steps planned for these two high priority areas.



# Pacific Northwest Aquatic Monitoring Partnership (PNAMP)

## 2009 Update

Prepared for:

**Northwest Power and Conservation Council**

**July 14, 2009**

**Jennifer M. Bayer**

**PNAMP Coordinator (USGS)**

# What is PNAMP?

- PNAMP provides a forum for collaboration and coordination between state, federal, and tribal aquatic habitat and salmonid monitoring programs
- Open & inclusive process, voluntary participation
- Supported by in-kind contributions of time from partners
- Facilitated by staff

# Who is PNAMP: Signatory Partners



ACOE



EPA



USFS



BLM



NOAA



USGS



BPA



NWIFC



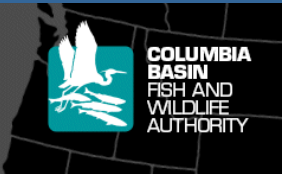
WA ECY



CDFG



WDFW



CBFWA



OWEB



WA GSRO



CRITFC



PSMFC



Colville Tribes



USBR



WA RCO

# Current PNAMP Focus

- Coordination of regional 'High Level' environmental indicators (HLIs)
- Improving monitoring by using tools for integrated monitoring, including:
  - use of probabilistic designs
  - consistent methods
  - consistent data management practices

# High Level Indicators Coordination



It's time to start speaking the same language!



**Status of Fish and Wildlife Resources in the Columbia River Basin**

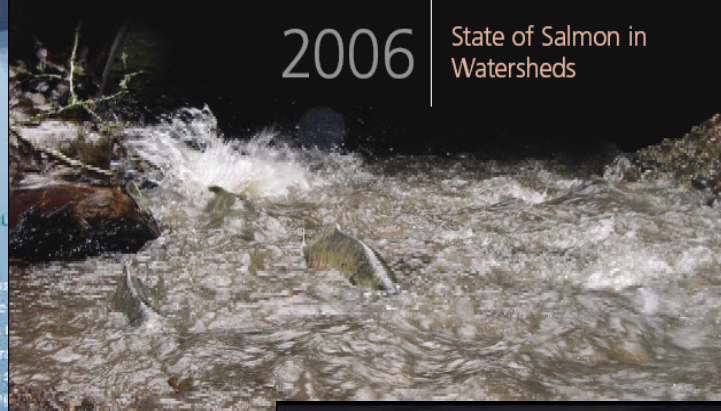
This project presents data about the current status of fish and wildlife resources within the Columbia River Basin. Explore links to the left to view historical abundance data for focal species in each subbasin, interact with geographic data representing species distribution, population, Endangered Species Act status, and species listing factors, and see what projects are currently in place to help fish and wildlife.

- Home
- Focal Species
- EPA Fish & Wildlife Projects
- Geographic Provinces
- Blue Mountain
- Columbia Cascade
- Columbia Estuary
- Columbia Gorge
- Columbia Plateau
- Intermountain
- Lower Columbia
- Middle Snake
- Mountain Columbia
- Mountain Snake
- Upper Snake
- Watershed/Systemwide
- Overview/Introduction

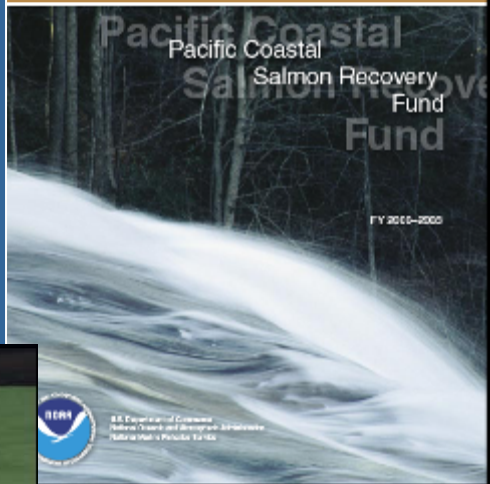


2006

State of Salmon in Watersheds



2004 Report to Congress



2005 - 2007 Biennial Report



The **OREGON PLAN** FOR SALMON AND WATERSHEDS

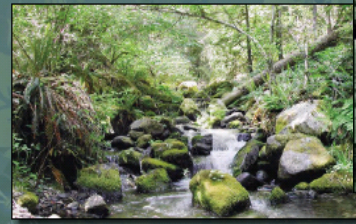


U.S. Department of Commerce  
National Oceanic and Atmospheric Administration  
Washington, D.C. 20541



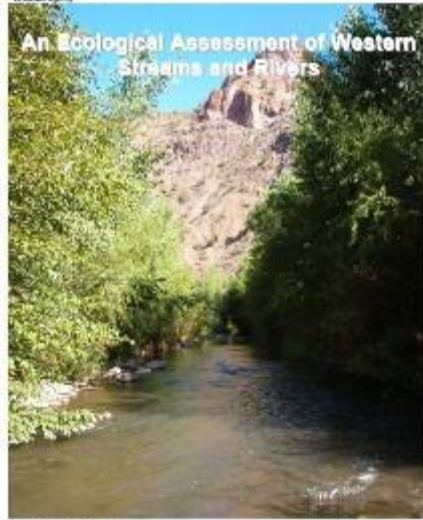
**Preliminary Assessment of the Condition of Watersheds**

Kirsten Gallo, Steven H. Lanigan, Peter Eldred, Sean N. Gordon and Chris Moyer



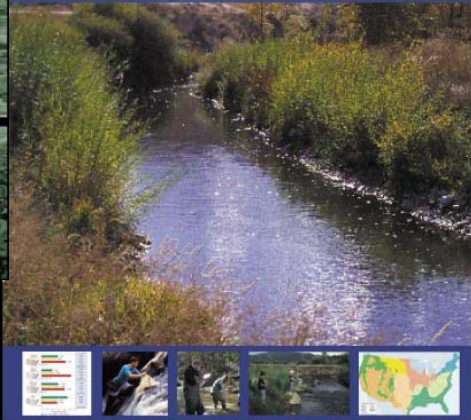
Office of Research and Development  
Washington, DC 20460

**An Ecological Assessment of Western Streams and Rivers**



United States Environmental Protection Agency  
Office of Water  
Washington, DC 20460  
EPA 815-B-04-002  
May 2005  
www.epa.gov/owow/watersurvey

**EPA Wadeable Streams Assessment**  
A Collaborative Survey of the Nation's Streams



# PNAMP efforts for HLI coordination

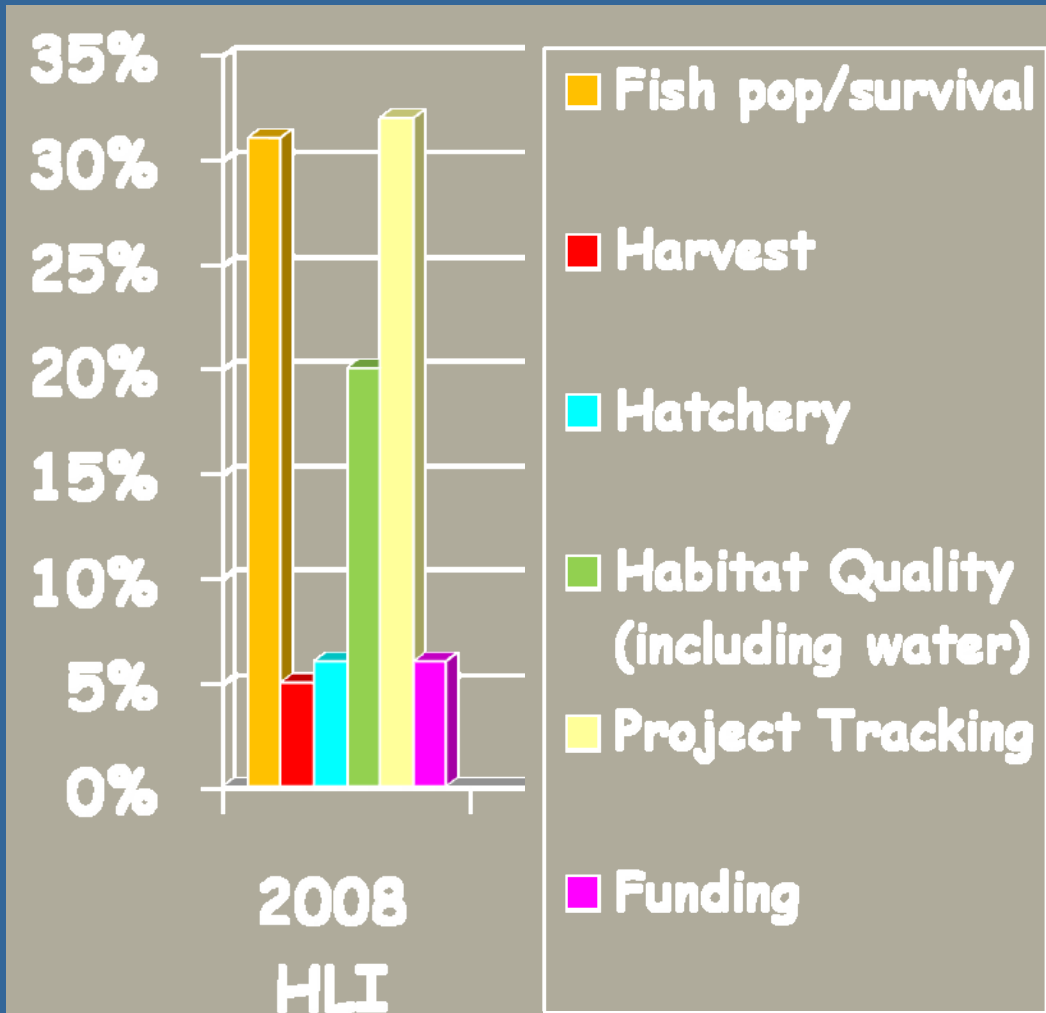
- PNAMP 2008 Report for NWEIS
- PNAMP 2009 Report for NWEIS, shared as comments to NPCC



- Workgroup to facilitate coordination at regional scale
- Sponsor sessions on habitat coordination
- Participation in NPCC workshops 2009



# PNAMP HLI Coordination Success by Focusing on the Most Common High Level Indicators Used Today



Focus on HLI with the most overlap among reports:

- Salmonid Population & Survival
- Habitat Quality
- Project Tracking (implementation)

# PNAMP 2009 HLI Recommendations

## Core Indicators for salmon

- Abundance of wild spawners
- Abundance of adults harvested
- Abundance of juveniles
- Abundance of hatchery spawners



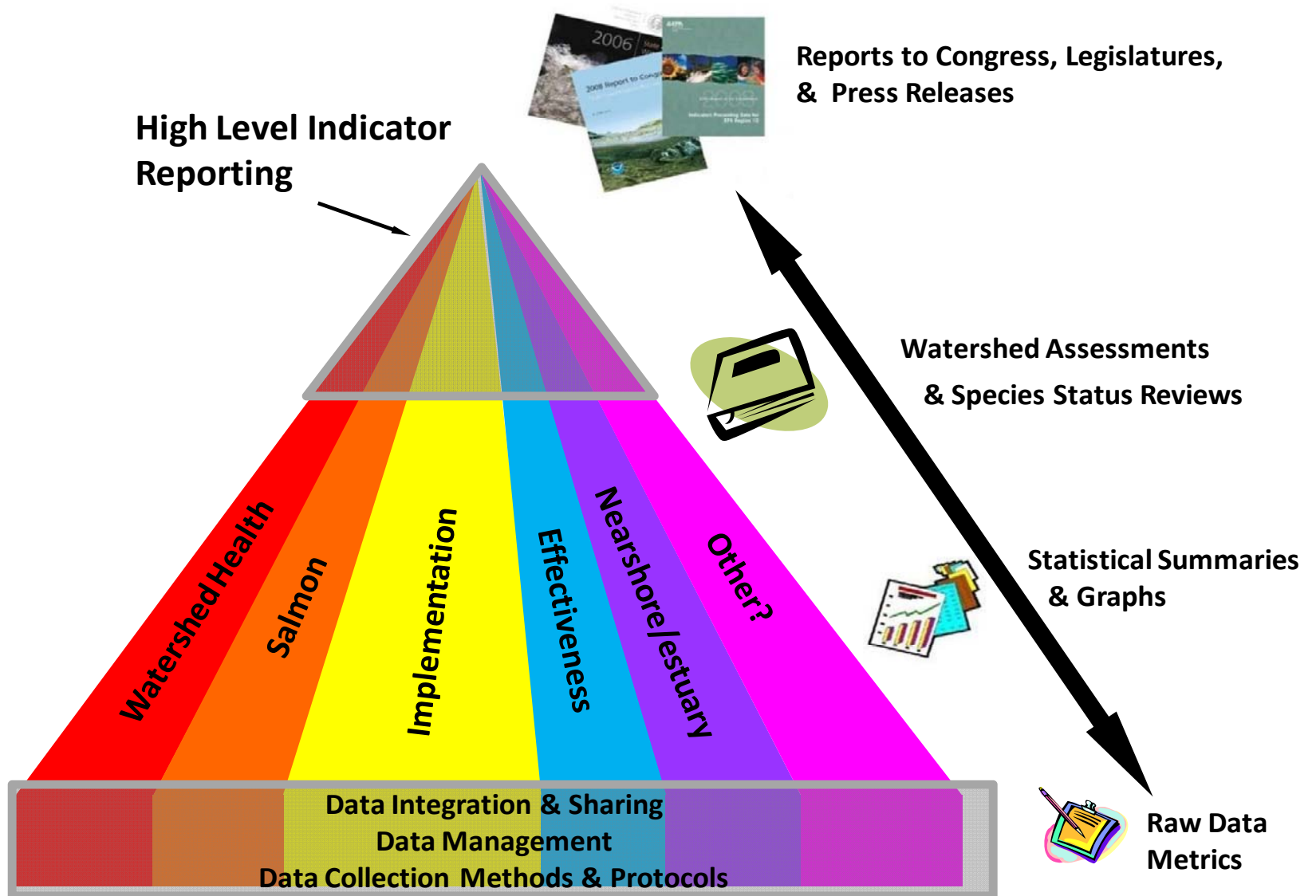
# PNAMP 2009 HLI Recommendations

## Core Indicators for Watershed Health

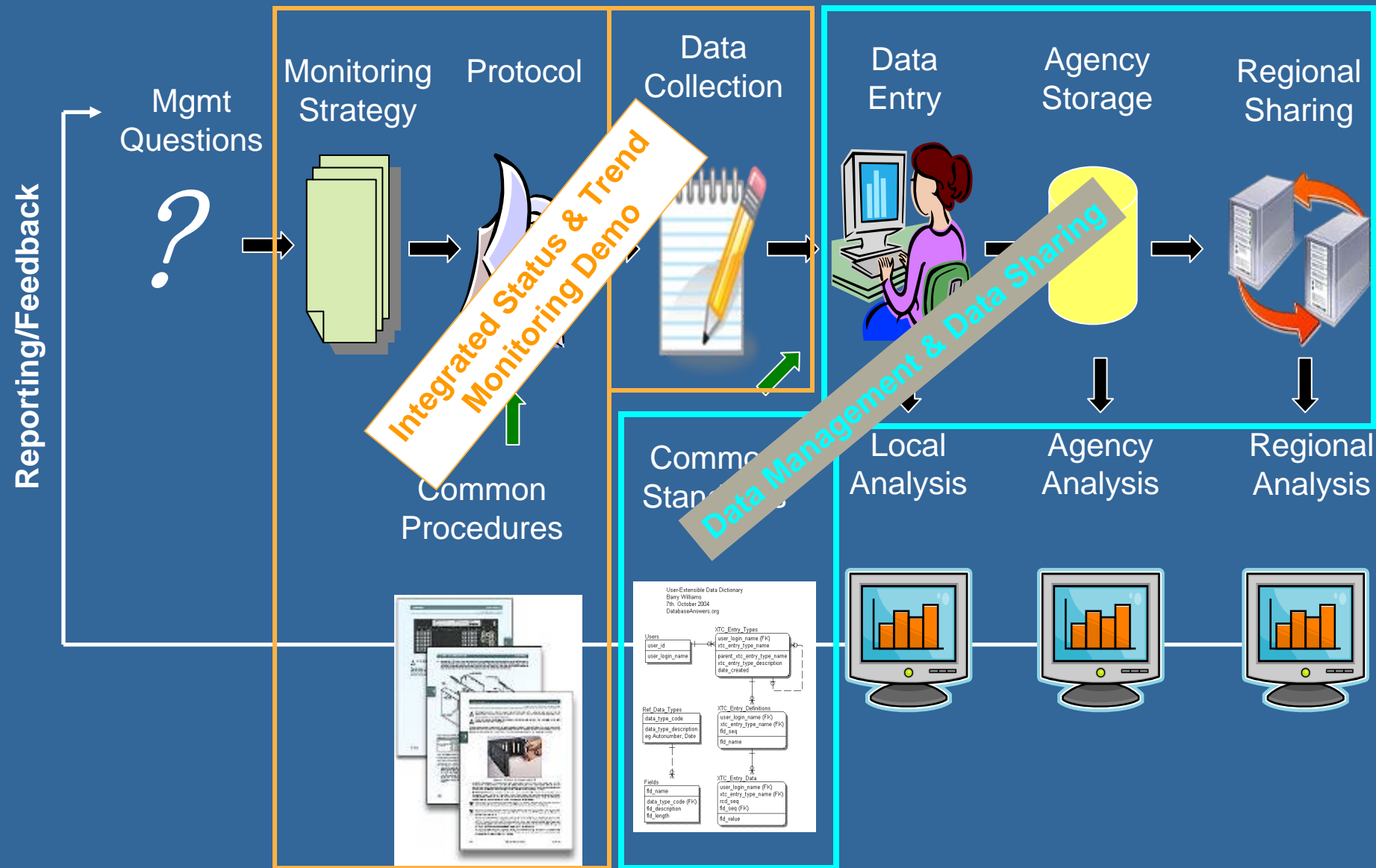
- Water Quality Index
- Stream Flow
- Sediment Quality Index
- Habitat Quality (in-stream and riparian) Index
- Biological Health (in-stream) Index
- Land Use / Land Cover



# Connecting HLIs to Data Collection



# Steps needed to feed into HLIs

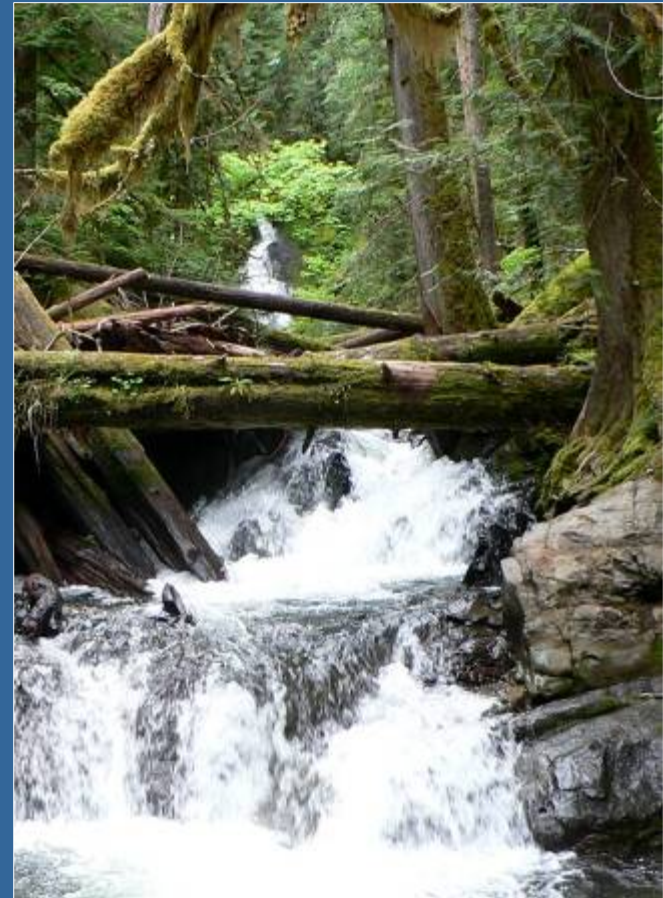


# PNAMP

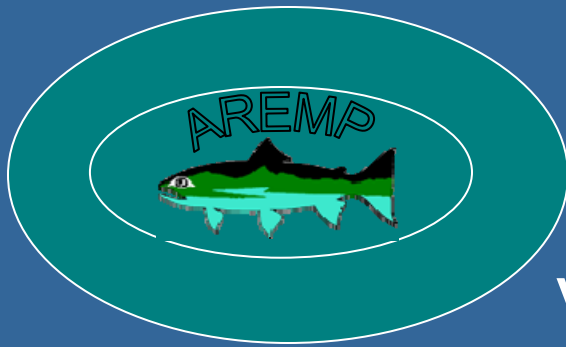
## Integrated Status & Trends Monitoring Demo Project

Case study in the lower Columbia River ESU to demonstrate for habitat, fish, and water quality monitoring:

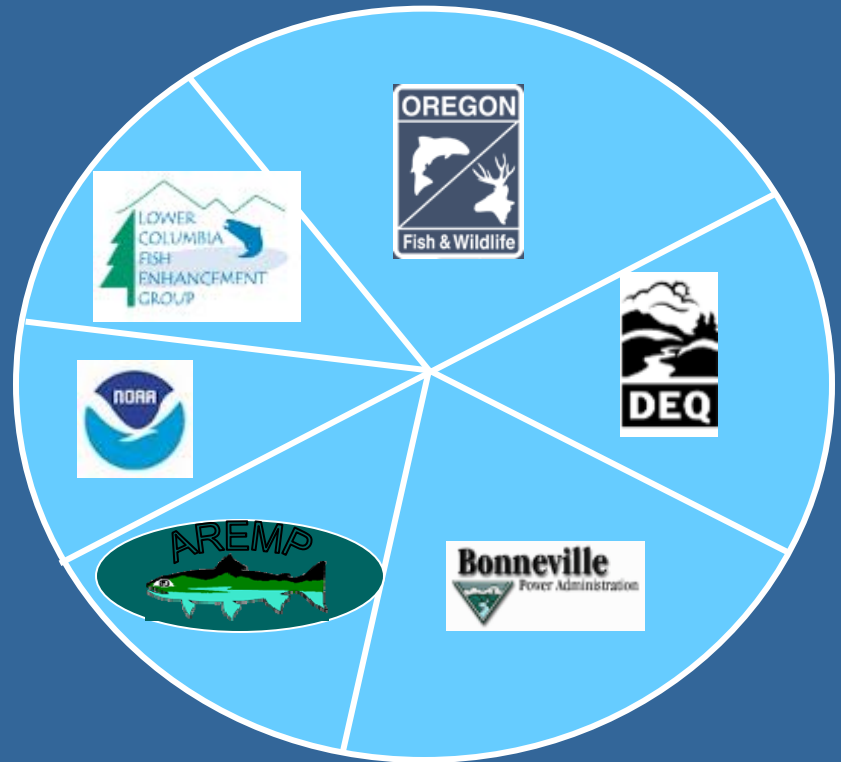
- how a **design-based integrated** monitoring program might function and how it can inform HLIs



# Integrated Status & Trend Monitoring: what's in it for me?



VS.



Agency pays 100% of the  
cost to sample 10 sites

Agency pays 15% of the total cost  
and gets data from 150 sites

**Agency cost is the same for either scenario**

# Integrated Status & Trend Monitoring: Progress

- BPA funds OSU to develop master sample tracking tool & to provide analytical support
  - PNAMP ISTM fish workgroup developing proposal to explore alignment of fish monitoring
  - Tributary habitat monitoring – working on details
  - Estuary habitat monitoring – workshop Jan. '09
- Request ISRP review of ISTM summer 2009



# PNAMP

## Data Management & Data Sharing

- Facilitate collaboration of data management practitioners
- Produce tools to improve data sharing
- Assist with the advancement of a regional environmental information management strategy and framework



# Other PNAMP tasks

The following products will be complete by the end of FY09:

- Habitat Monitoring Methods Recommendation
- Fish Tagging, Telemetry & Marking Compendium (“TTM”)
- Intrinsic Potential Modeling Workshop Report
- Intensively Monitored Watersheds Report
- Effectiveness Monitoring Inventory (& Review in FY10) Task
- Protocol Library/Monitoring Term Glossary

# Lessons Learned

## Collaboration is the key to success

- Provide an inclusive, open process
- Agree on a few common goals & issues
- Provide support for monitoring expertise to inform data expertise



**We appreciate the investment of all our partners which makes this voluntary process successful**

# More Information

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

