

## The Collaborative, Systemwide Monitoring and Evaluation Project (CSMEP)

---

Dave Marmorek, Marc Porter, **ESSA Technologies**  
Frank Young, **Columbia Basin Fish and Wildlife Authority**

### State Agencies

S. Sharr, C. McGrath, C. Petrosky **IDFG**  
T. Rien, E. Tinus, **ODFW**  
A. Hoffman, P. Hahn **WDFW**  
B. Schmidt, **StreamNet**

### Federal Agencies

C. Jordan, S. Katz **NMFS**  
P. Wilson, **USFWS**  
P. Larsen, **EPA**  
K. Hyatt, **DFO**

### Tribal Agencies

P. Roger, E. Weber, S. Hyun **CRITFC**  
J.Hesse, P.Kucera **Nez Perce Tribe**  
D. Fast, B. Bosch **Yakima Nation**  
K. Wolf, KWA, **Colville Tribes**  
J. Schwartz, **Umatilla**

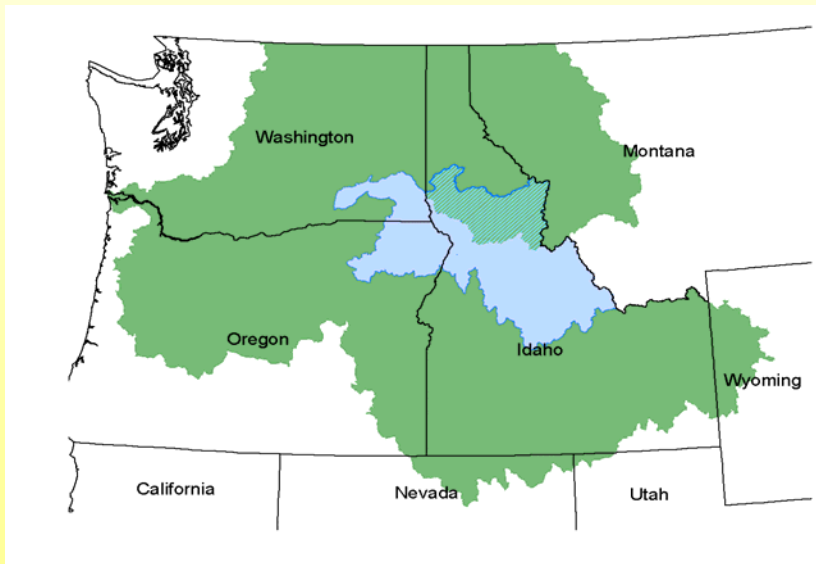
### Consultants

N. Bouwes, **Eco Logical Research**  
C. Beasley, **Quantitative Cons.**  
C. Paulsen, **PER**  
L. McDonald, **WEST**

**CBFWA February 23<sup>rd</sup>, Winter Members Meeting**

1

## Design: Pilot for Snake Basin



## **TASKS**

- Inventory and Assessment
- Status and Trends
- Hydrosystem
- Harvest
- Hatcheries
- Habitat
- Design Integration

## **INVENTORY AND ASSESSMENTS**

- Inventory metadata for anadromous fish studies for 20 subbasins. Focus for FY 2006 was on resident species (bulltrout and cutthroat).
- Assess strengths and weakness of studies to answer key monitoring questions.
- Develop Web database to store inventory metadata in readily accessible format.

## **STATUS AND TRENDS**

- Identified monitoring design elements necessary to determine whether sufficient improvement in status for Snake River S/S Chinook for delisting.
- Developed simulation model to evaluate alternative designs for modeling abundance, productivity, spatial structure and diversity to answer TRT questions. (H,M,L precision)

## **HYDROSYSTEM**

- Develop LMH designs that integrates major hydrosystem questions for previously developed DQO document for hydrosystem.
- Developed estimate of cost of PIT-tagging hatchery and wild chinook for Snake Basin for HML scenarios.
- Developed revised statistical models to evaluate statistical reliability of alternative M&E designs to answer key assessment questions.

## **HARVEST**

- Assess value of monitoring alternatives using TAC models.
- Focus for FY 2006 has been Snake Spring/Summer Chinook recovery monitoring.
- Described problems encountered in ensuring that fishery mortalities do not exceed prescribed levels for conservation of weak stocks.

## Habitat

- Variation in conditions, scale and status of fish populations presents serious challenge to development of consistent or uniform habitat effectiveness monitoring.
- Because of the above have focused on use of a consistent process (rather than a template) for development of individual monitoring designs. Piloted this approach in Lemhi Subbasin.



## HATCHERY

- Identified uncertainties associated with operation of hatcheries as a “class” of actions.
- Developed strategy that allows employment of EMAP style approach to selection of hatcheries for study.
- Assessed distribution of sampling effort, evaluated data gaps, and identified appropriate design strata for overall Basin-wide monitoring.

## **DESIGN INTEGRATION**

- Began to apply the PrOACT approach (a simplified multi-objective decision analysis) for generation and filtering of alternative M&E designs across CSMEP subgroups based on 1) inferential ability, 2) statistical performance, 3) cost, 4) practicality and 5) environmental impact.