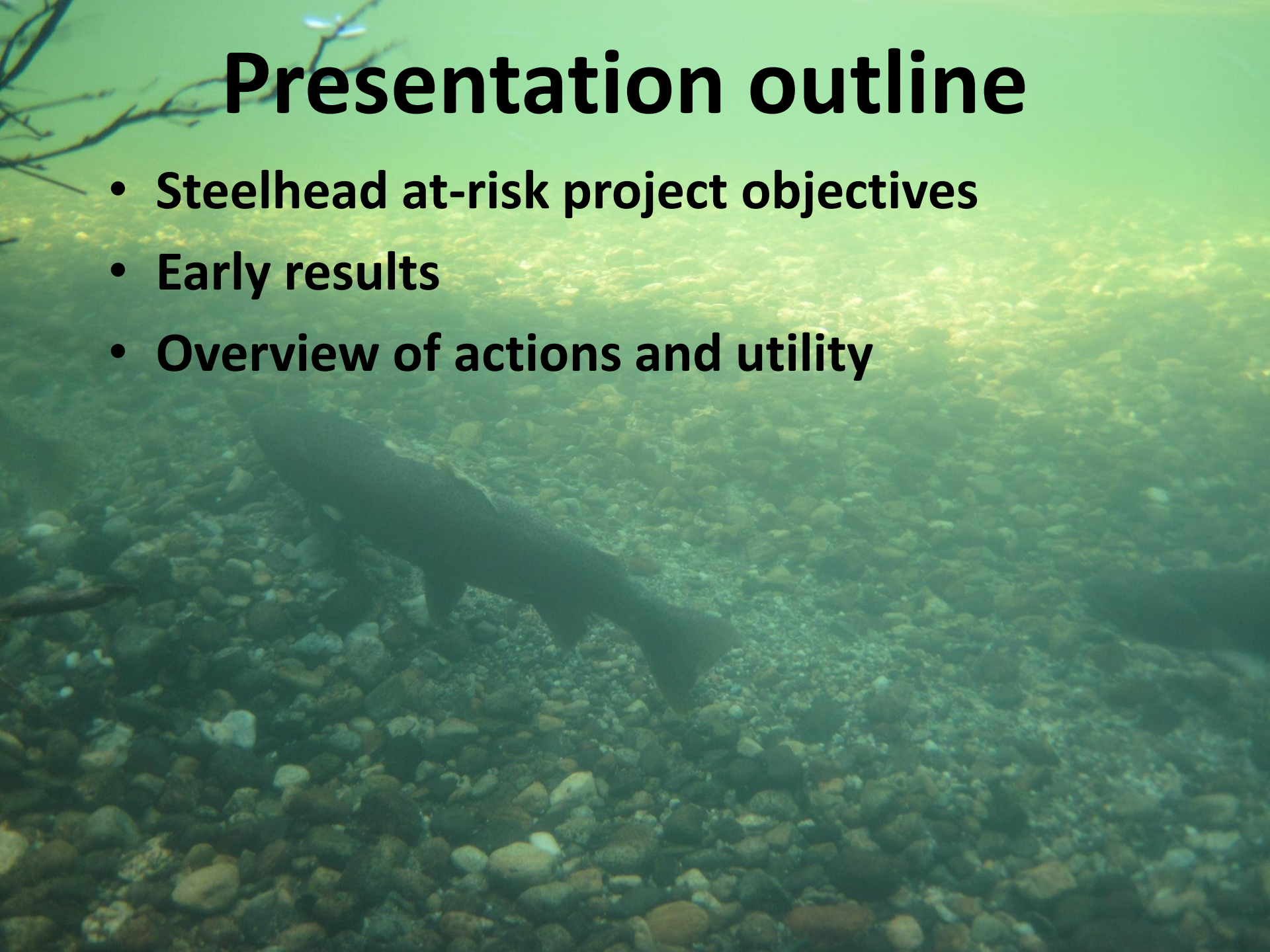
Washington State Steelhead Status Review

2014 Pacific Coast Steelhead Management Meeting
March 18, 2014
Jeremy Cram

Presentation outline

- Steelhead at-risk project objectives
- Early results
- Overview of actions and utility



Steelhead at-risk report

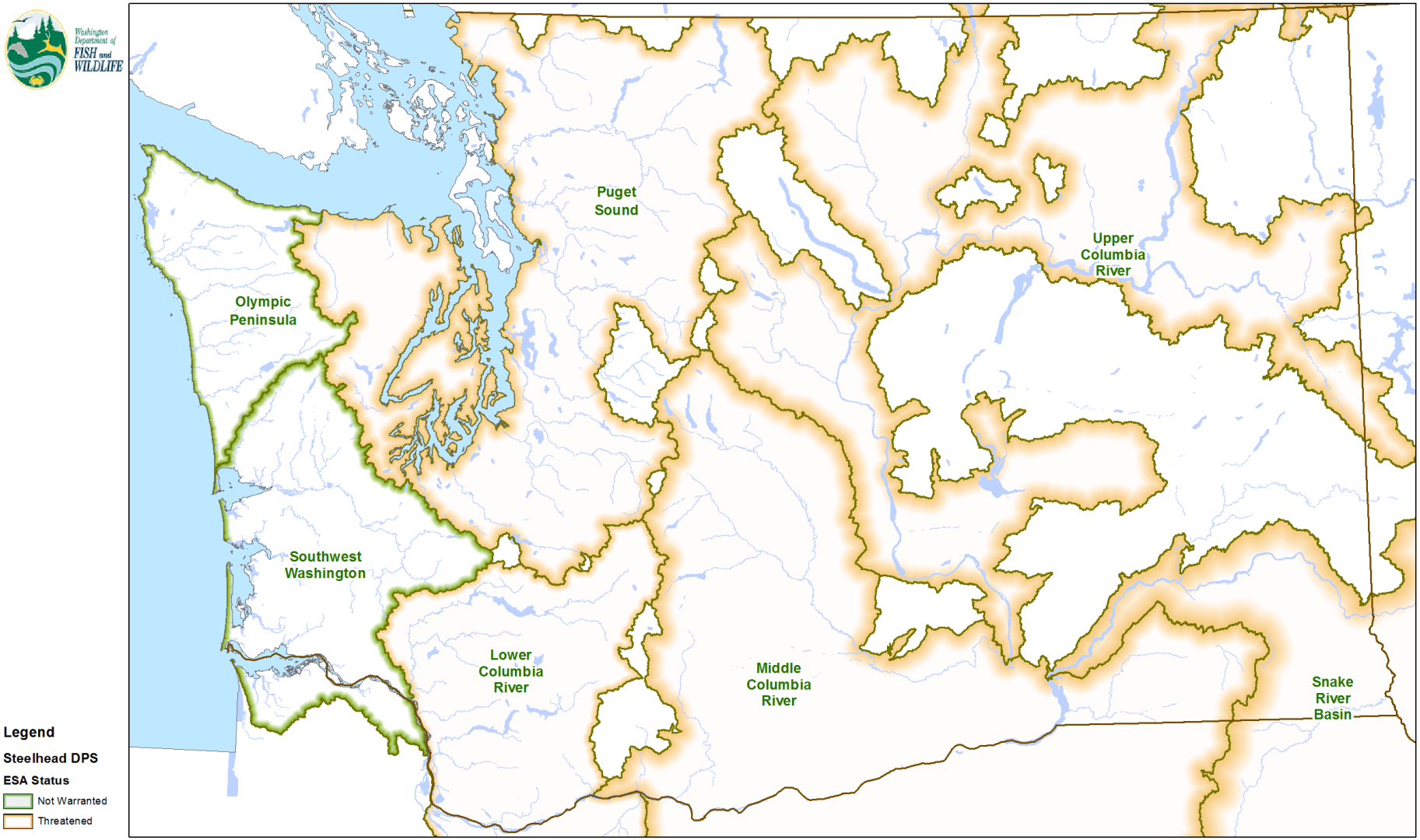
Objectives

- Update VSP parameters statewide
- Identify threats and risks at 3 scales:
  - Statewide
  - DPS
  - Population
- Develop priority conservation actions
- Prioritize data gaps

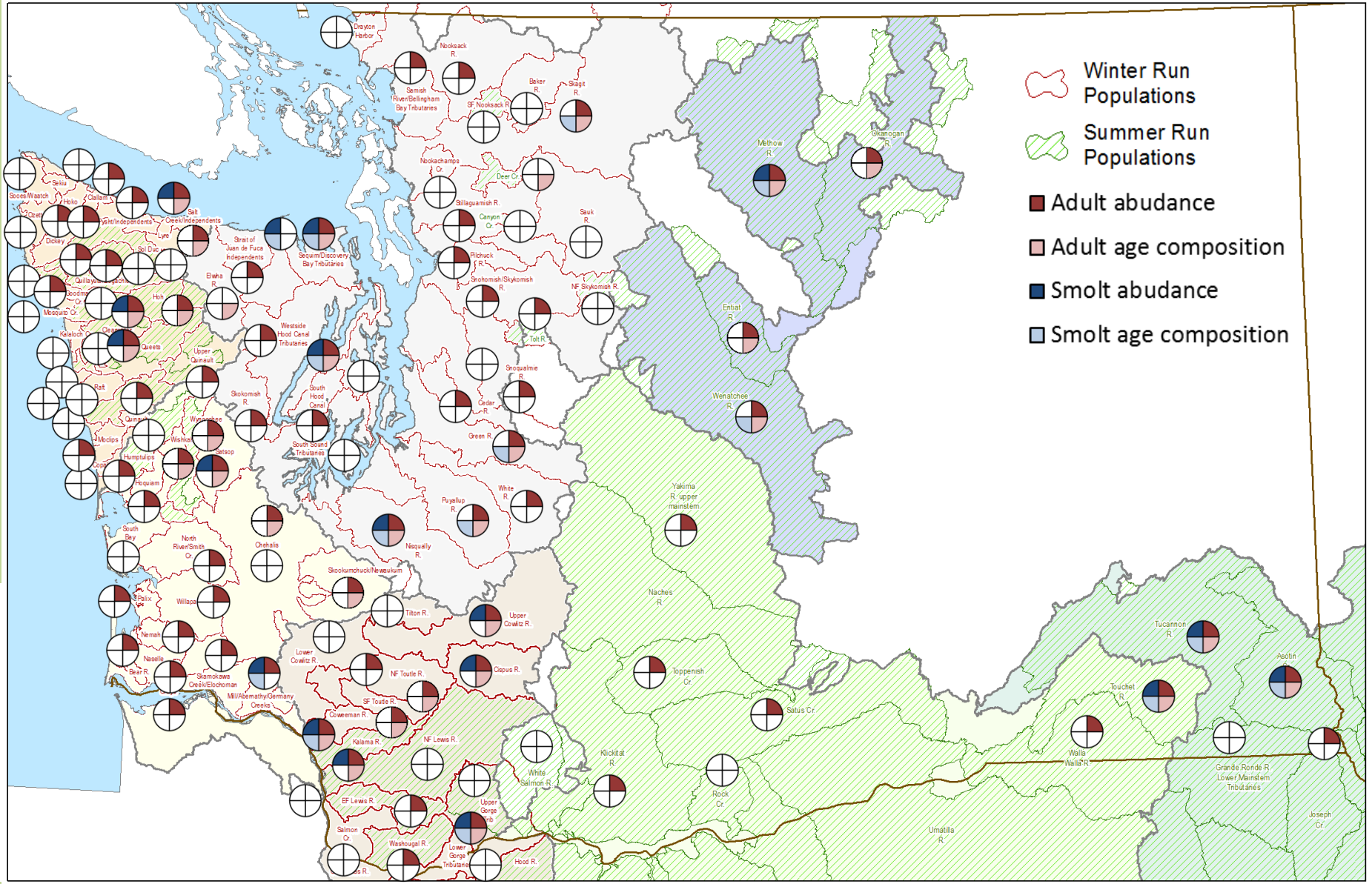
Core Team

Jeremy Cram, Neala Kendall, Anne Marshall, Thomas Buehrens, Laurie Peterson, Bob Leland, Todd Seamons, Andy Weiss

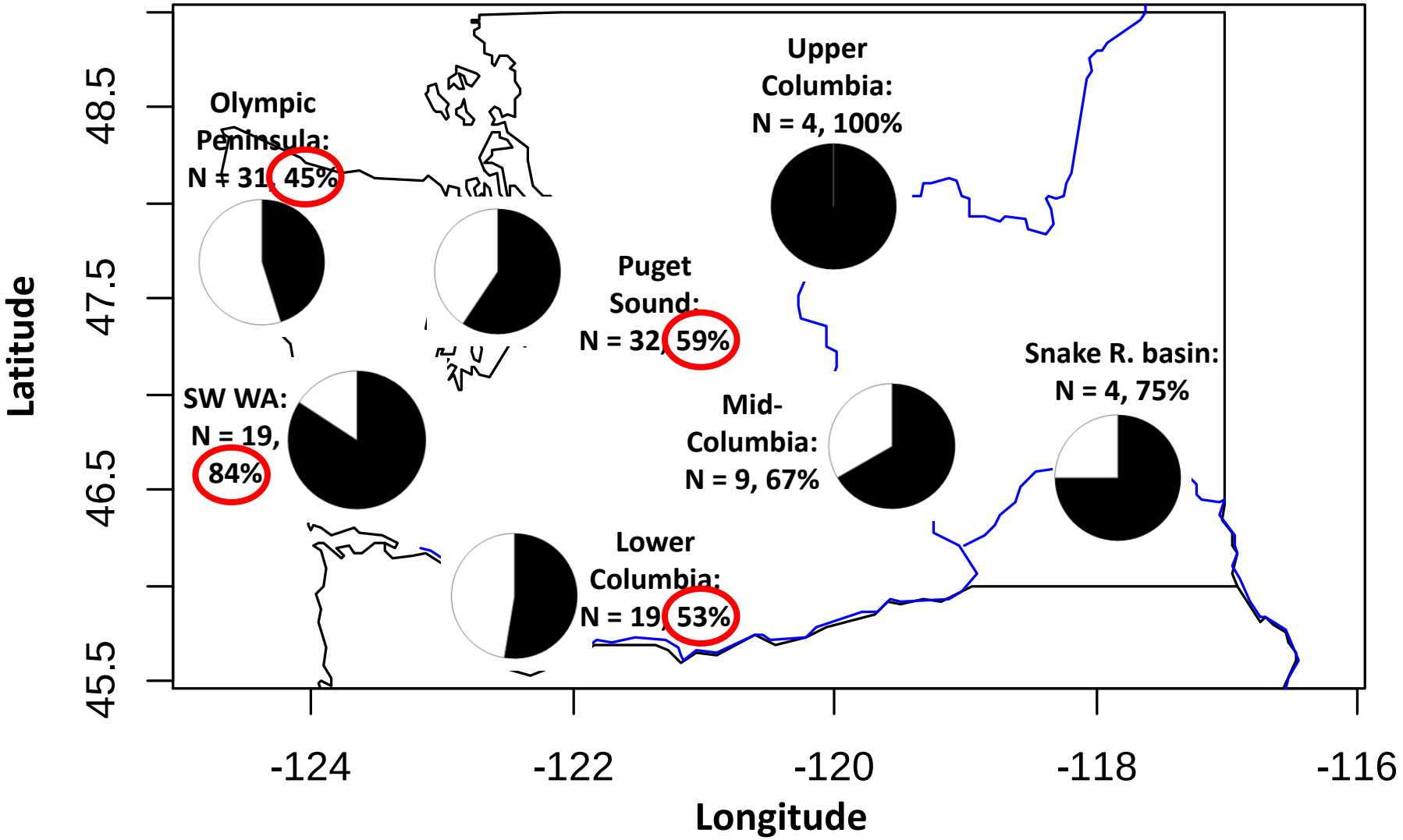
Steelhead DPS structure



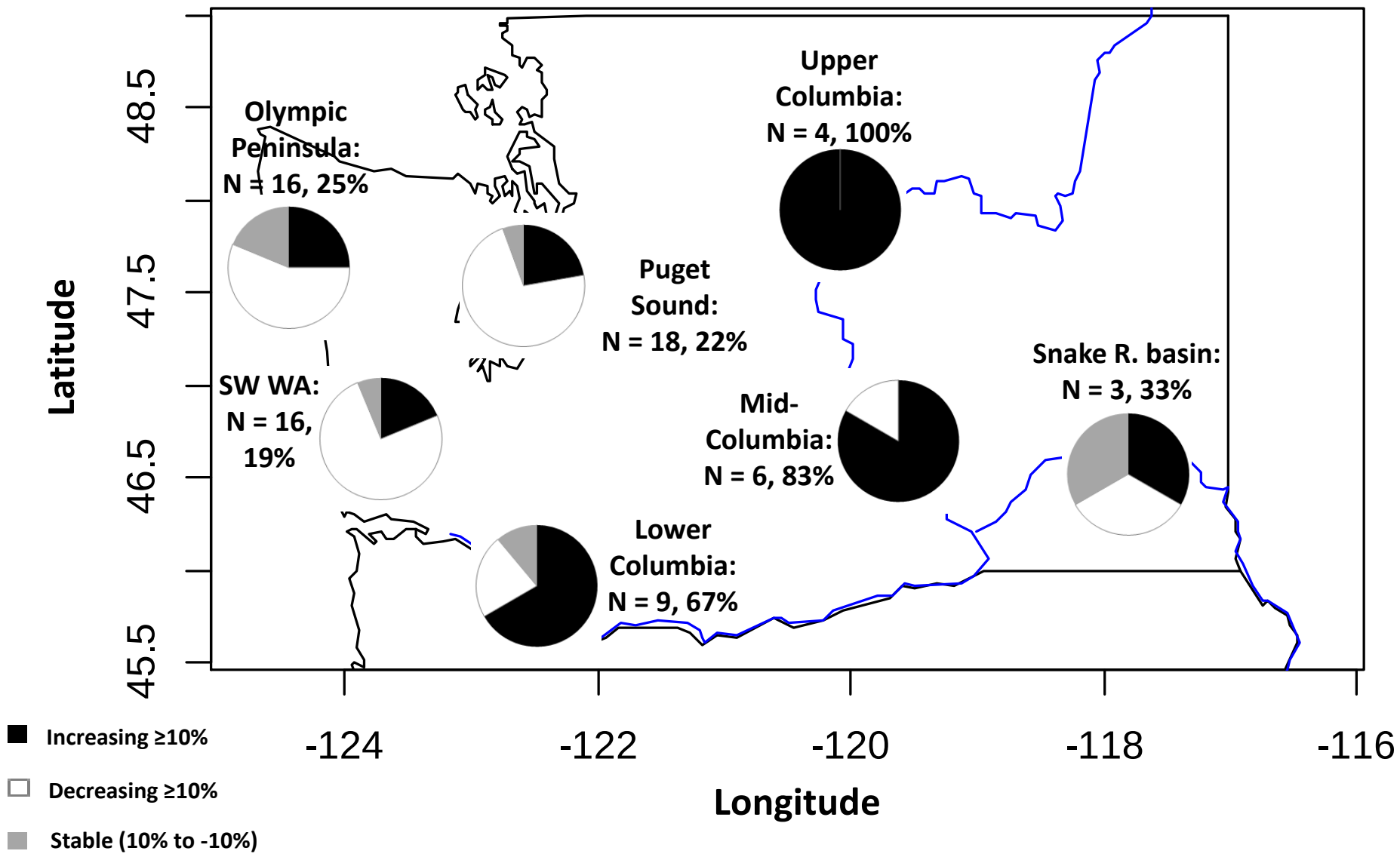
Steelhead populations and available data



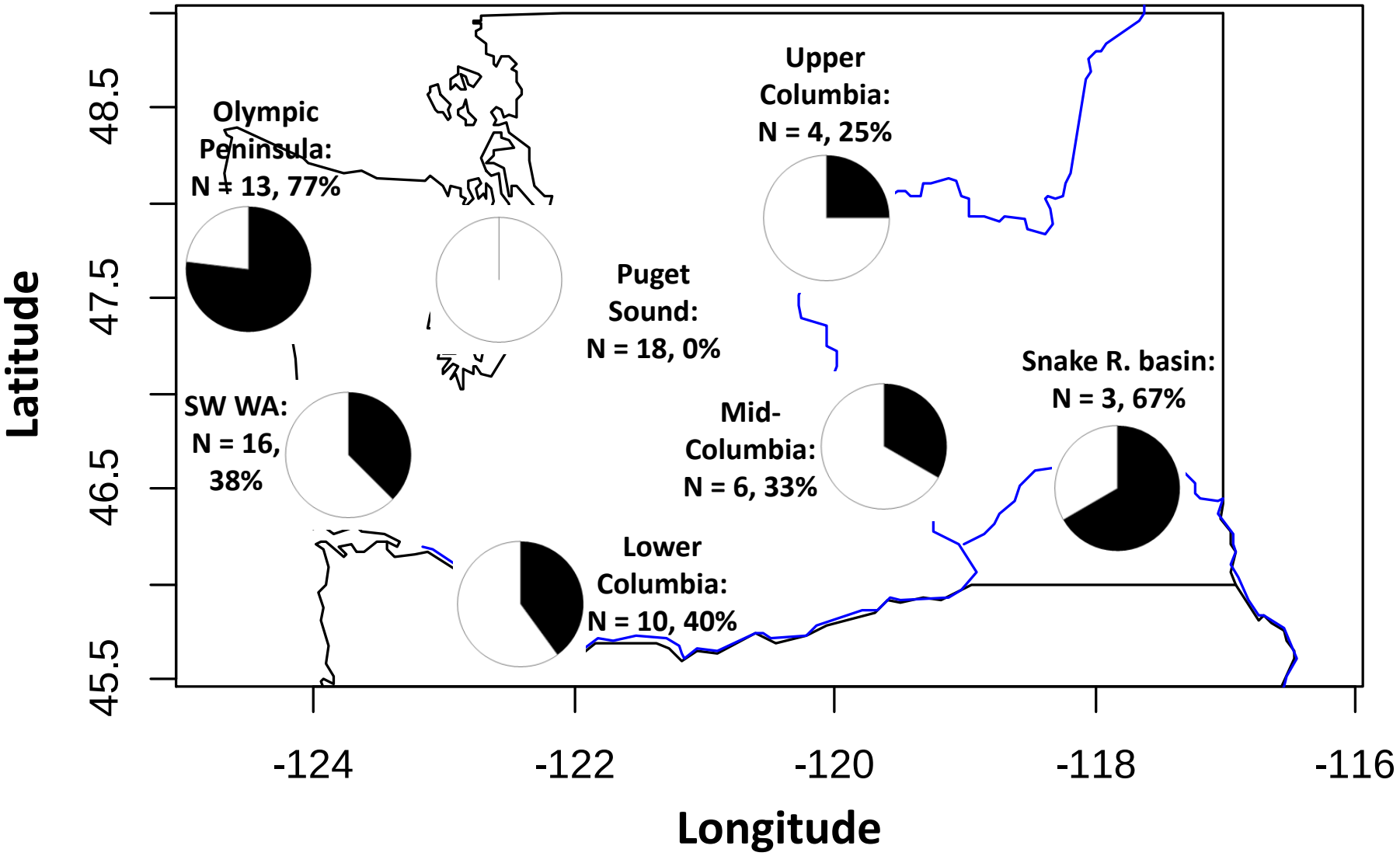
Paucity of abundance data in western WA



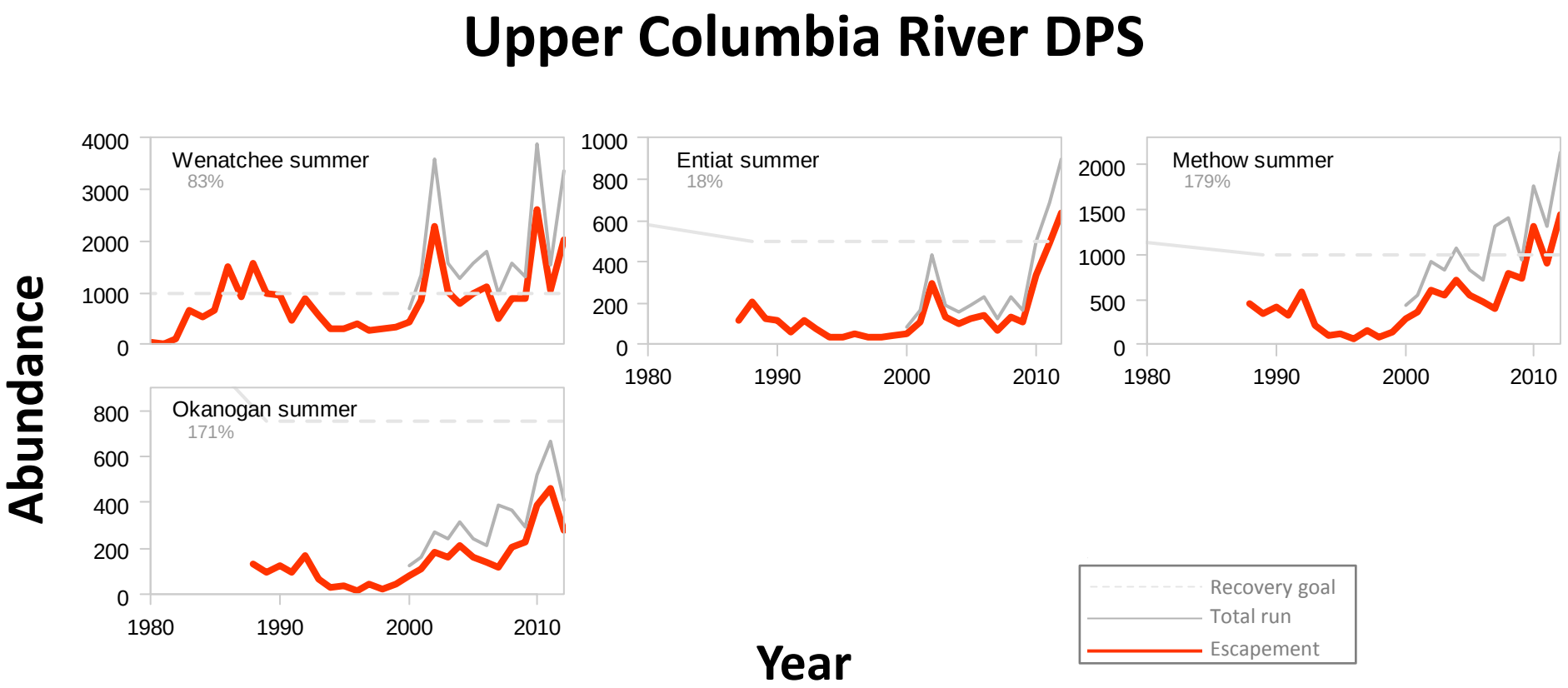
Increasing trends in Columbia and Snake…



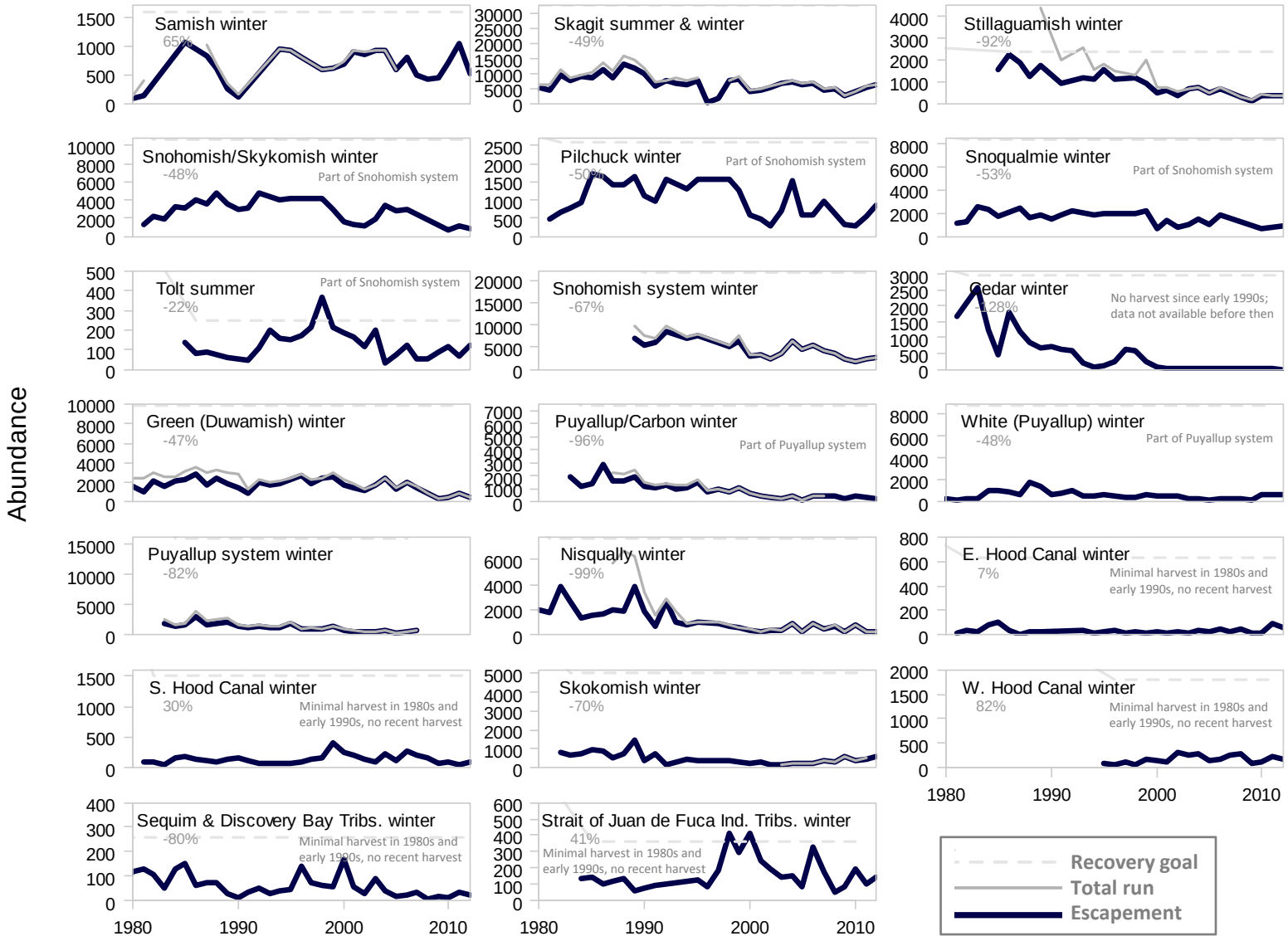
…However, many populations are still below goals



Challenge: concisely report as much information as possible



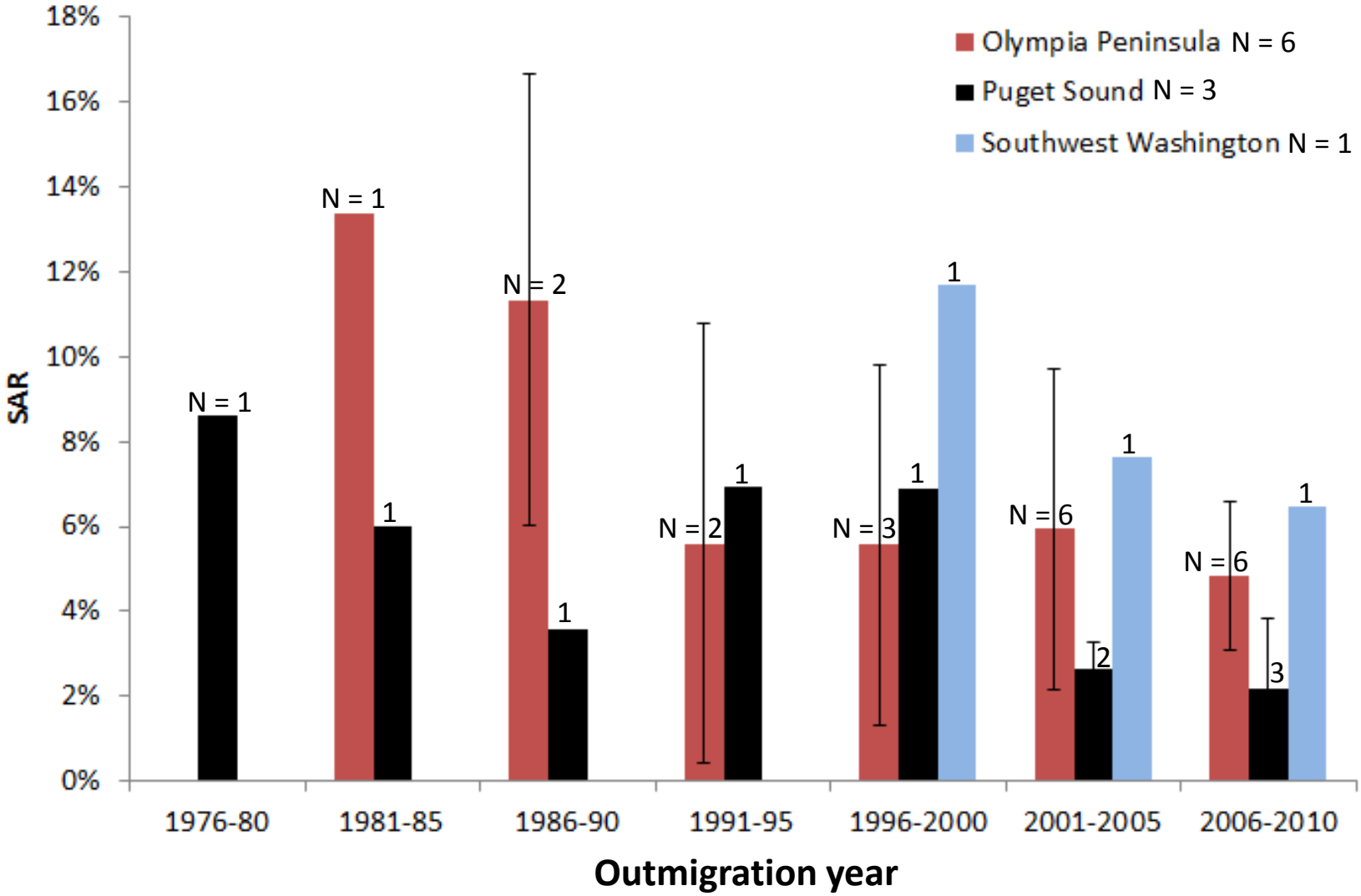
Puget Sound DPS



Populations with very limited or no data:

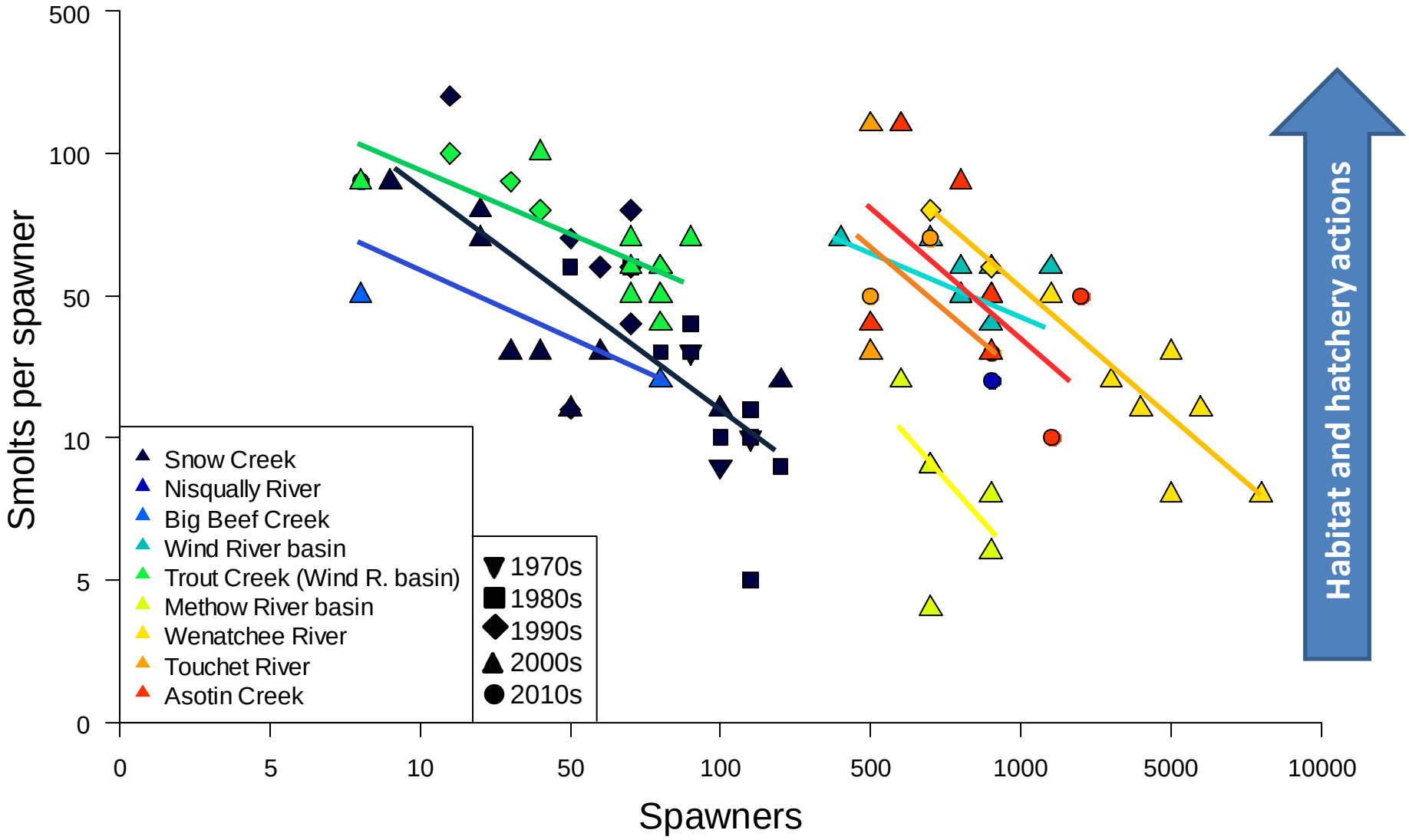
- **Drayton Harbor tributaries winter**
- **Nooksack winter**
- **S. Fork Nooksack summer**
- **Baker River summer & winter**
- **Sauk River summer & winter**
- **Nookachamps winter**
- **Deer C. summer**
- **Canyon C. summer**
- **N. Fork Skykomish summer**
- **Tolt Summer Steelhead**
- **N. Lake Washington & Lake Sammamish winter**
- **S. Sound Tribs. winter**
- **E. Kitsap winter**
- **Dungeness winter**
- **Elwha winter**

Marine survival declining…
…continued lack of data

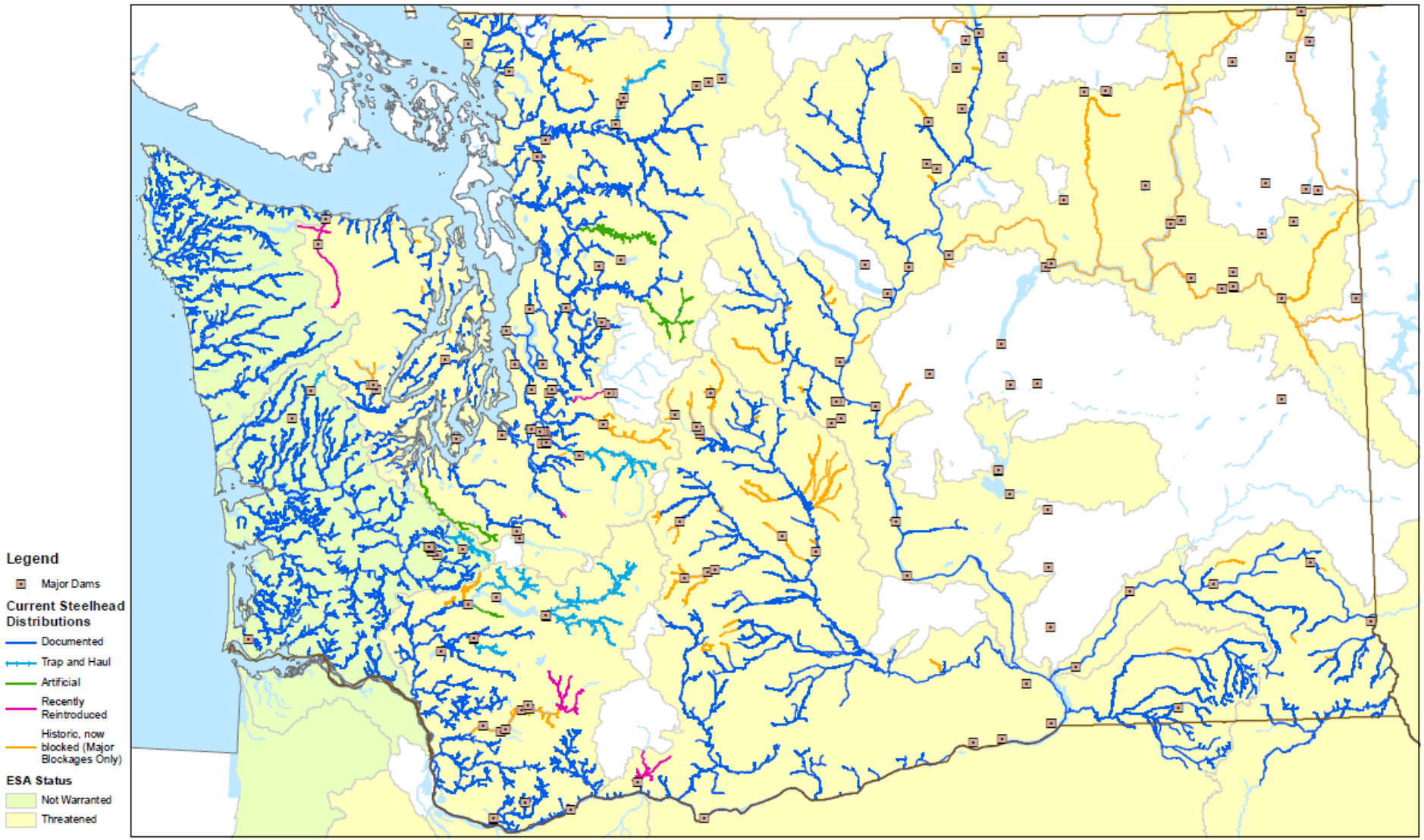


Freshwater productivity

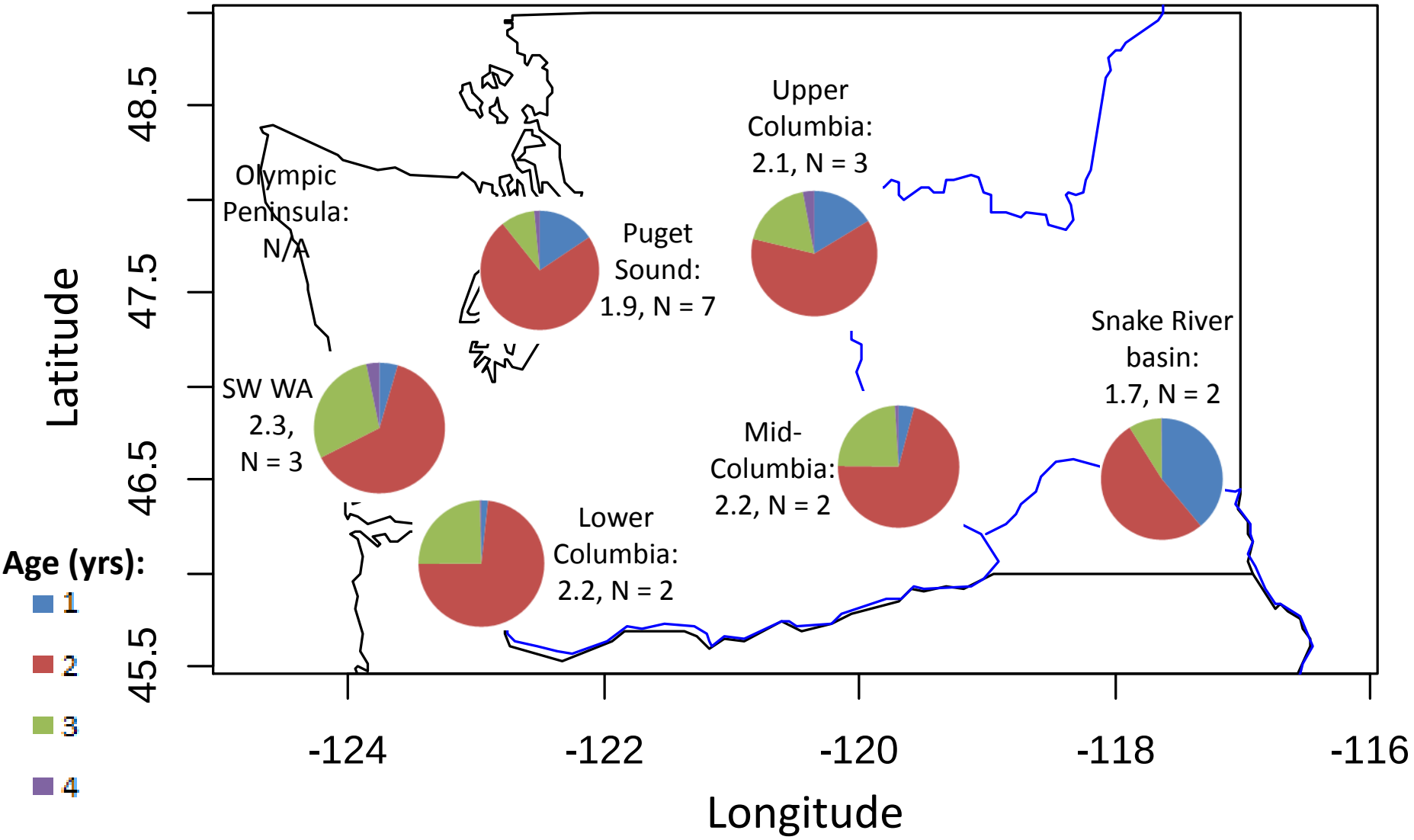
Smolts per spawner across populations and time



Spatial structure



Freshwater age composition among DPSs

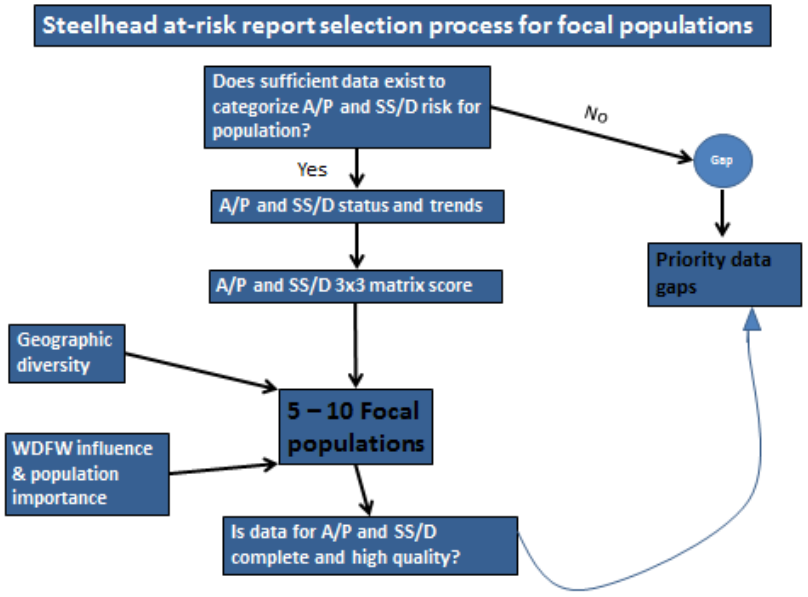


Statewide VSP findings

- Columbia Basin abundance trends increasing more than Puget Sound and coastal populations
- Some ESA-listed populations are meeting recovery criteria, but most are not
- Many non-listed populations are not meeting escapement goals
- Lack of abundance data represents risk
- SARs have declined over time and R/S plot shows density dependence for all populations
- Key spatial structure issues remain
- Diversity threats are primarily associated with hatcheries

Focal populations

- Puget Sound DPS: Green (W), Puyallup/Carbon (W), Tolt (S), Nisqually (W)
- Olympic Peninsula DPS: Hoh (W), Quillayute (W)
- Lower Columbia DPS: Cispus (W), Upper Cowlitz (W), Tilton (W)
- Southwest WA DPS: Chehalis (W)
- Middle Columbia DPS: Upper Yakima (S)
- Snake River basin DPS: Tucannon (S)
- Upper Columbia DPS: Methow (S)



Potential management actions

Hatchery reform

- **Conservation programs:**
  - **Develop locally derived broodstock for integrated programs**
  - **Transition to volitional releases to segregate smolts from non-migrants**
  - **Release non-migrants into non-anadromous waters for recreational fisheries**
  - **Scale release goals to escapement targets**
- **Externally mark all hatchery steelhead**
- **Increase adult management opportunities**
- **WSMZs: Sol Duc, Sauk, EF Lewis, NF Toutle/Green, Wind – more to come**

Hydropower

- **Facilitate downstream movement of adult steelhead in the Snake River**
- **Evaluate ways to improve or create passage at key dams**

Harvest

- **Develop harvest reporting system for accurate, real-time reporting of all harvest**

Habitat

- **Quantify the effectiveness of restoration efforts statewide**

Potential applications

- Prioritize WDFW hatchery, harvest, and habitat actions for conservation purposes
- Provide a platform to inform and engage recovery partners
- Inform upcoming NOAA 5-year status review
- Identify priority data gaps based on thorough analysis

Stay tuned – coming in 2014!

Thanks!