



## **Independent Scientific Review Panel**

for the Northwest Power and Conservation Council

851 SW Sixth Avenue, Suite 1100

Portland, Oregon 97204

[www.nwcouncil.org/fw/isrp](http://www.nwcouncil.org/fw/isrp)

September 4, 2013

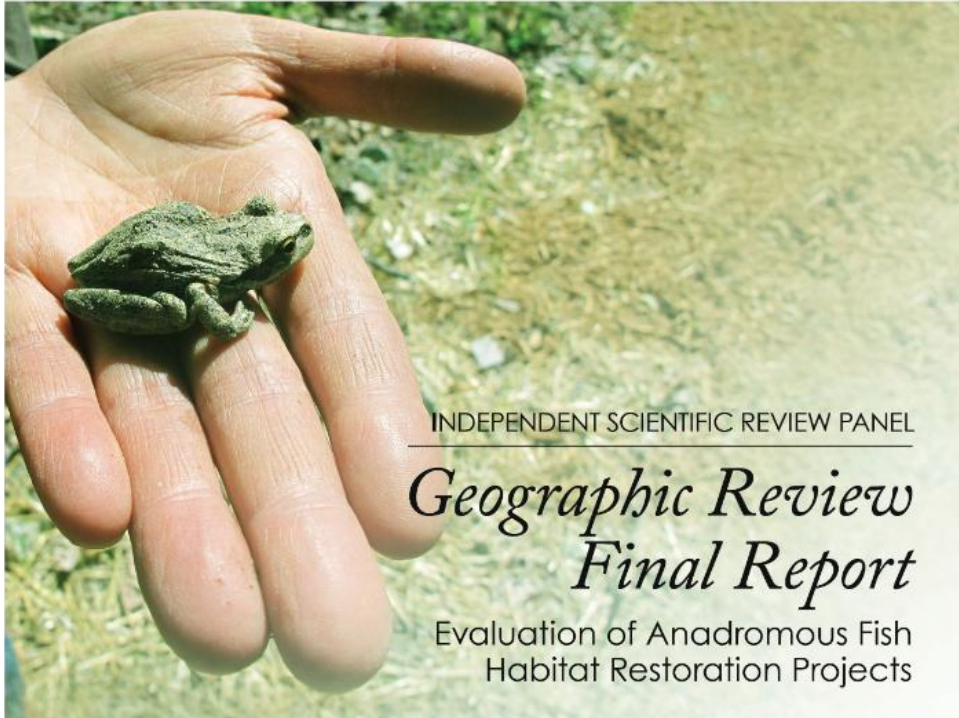
### **Presentation: ISRP Final Review of Proposals for the Resident Fish, Data Management, and Regional Coordination Category**

Greg Ruggerone, ISRP Chair, will present findings and answer questions regarding the ISRP's Final Report for the Geographic Review of ongoing habitat projects in the anadromous areas of the Columbia Basin ([www.nwcouncil.org/fw/isrp/isrp2013-11](http://www.nwcouncil.org/fw/isrp/isrp2013-11), 407 pages). See the attached presentation.

The report provides the ISRP's recommendations on 83 proposals. The ISRP recommends that 20 proposals meet scientific review criteria (24%), 55 proposals meet criteria with some qualifications (66%), 4 proposals did not meet criteria (5%), and 4 proposals were not amenable to scientific review (5%). In addition to individual project reviews, this report contains a brief retrospective evaluation of habitat improvements and comments on important issues that involve most projects and apply to the Program in general. Topics covered include regional research, monitoring and evaluation (RM&E), strategic restoration framework, productive partnerships, workforce support, and restoration methods and assessments.

This is the last set of projects to be reviewed in the Category Review process. To our knowledge, every project funded through the Fish and Wildlife Program has now been evaluated by the ISRP through the Category Reviews. The ISRP is supportive of many features of the Category Review approach and looks forward to helping shape the next review process based on lessons learned.

The ISRP especially appreciates the efforts of project sponsors and Council and BPA staff in organizing and providing invaluable site visits and presentations. The ISRP also appreciates the constructive and detailed responses by project sponsors that addressed the ISRP concerns raised in the preliminary review. The proposals, responses, tours, and presentations demonstrated that the projects are led by dedicated staff and progress is being made. Specifically, greater understanding and appreciation of the Council's Fish and Wildlife Program goals for native species and ecosystem restoration are evident in the projects visited and reviewed by the ISRP.



INDEPENDENT SCIENTIFIC REVIEW PANEL

## *Geographic Review Final Report*

Evaluation of Anadromous Fish  
Habitat Restoration Projects

### ISRP & Peer Review Group (PRG) Members

#### ISRP Members

J. Richard Alldredge, Ph.D.  
Robert Bilby, Ph.D.  
David Heller, M.S.  
Colin Levings, Ph.D.  
R. Scott Lutz, Ph.D.  
Robert Naiman, Ph.D.  
Greg Ruggerone, Ph.D. (Chair)  
Dennis Scarnecchia, Ph.D.  
Steve Schroder, Ph.D.  
Carl Schwarz, Ph.D.  
Chris C. Wood, Ph.D.

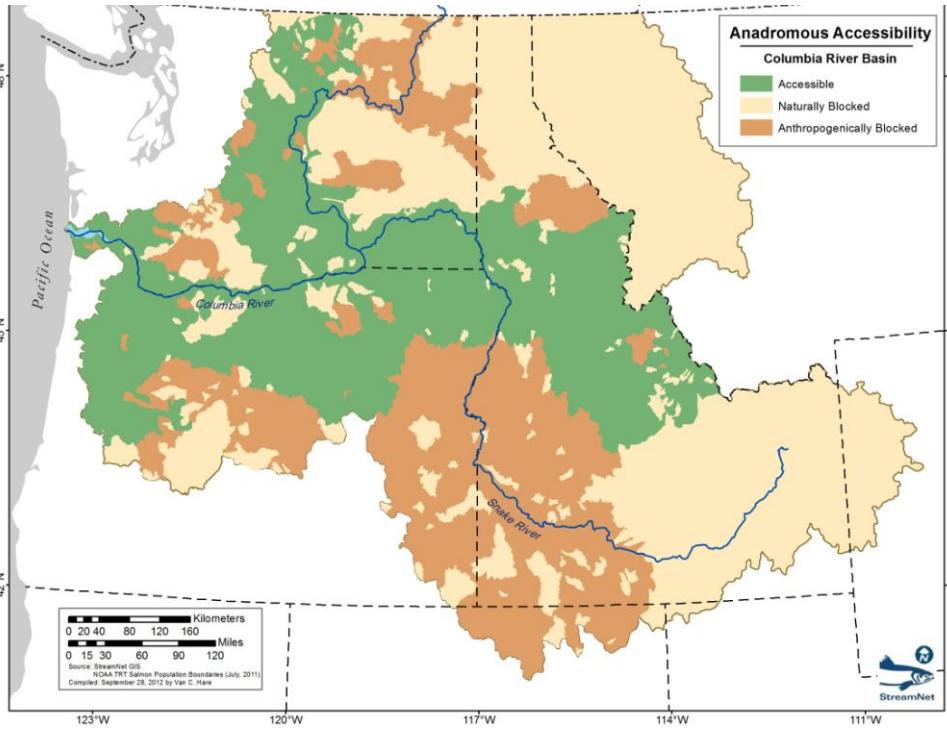
#### PRG Members

Peter A. Bisson, Ph.D.  
Jack Griffith, Ph.D.  
William Liss, Ph.D.  
Eric J. Loudenslager, Ph.D.  
Thomas P. Poe, M.S.

#### Staff

Erik Merrill, J.D., ISRP Coordinator





## Review Criteria

- Based on sound science principles
- Benefit fish and wildlife
- Clearly defined objectives and outcomes
- Contain provisions for monitoring and evaluation of results
- Consistent with the Fish and Wildlife Program



# ISRP Review Process

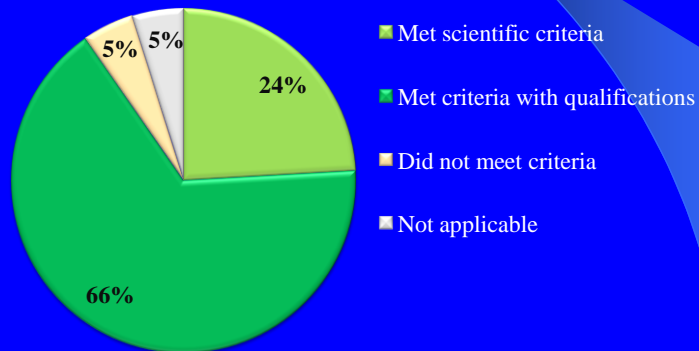
- Review begins: March 1, 2013
- Site visits: March 18 to May 24
- Sponsor presentations: March 18 to May 24
- Initial ISRP findings: June 6
- Final report: August 15



# Proposal Review Summary

Proposals reviewed: 83

Response requested: 33





# Programmatic Comments

- Implement Research, Monitoring, and Evaluation at a Regional Scale
- Develop Strategic Framework for Restoration
- Learn from Productive Coordination/Partnerships
- Improve Workforce Support and Development
- Evaluate and Improve Umbrella Projects
- Future Review Process
- Expand the Conservation Reserve Enhancement Program (CREP)
- Provide Long-term Maintenance of Fish Screens and Livestock Fences
- Explore M&E Opportunities at Diversion Fish Screen Installations
- Streamline NEPA Compliance
- Consider Forest Health
- Efficiently Use Large Wood
- Evaluate and Control Pesticides and Toxic Chemicals
- Improve Noxious Weed Management and Control
- Evaluate and Improve Winter Habitat

## Implement Research, Monitoring, and Evaluation at a Regional Scale

- ISEMP, CHaMP, AEM --- very important



ISEMP study areas at Bridge Creek, John Day River basin (left) and Entiat River (right).

## Implement RM&E at a Regional Scale (continued)

- Identify monitoring efforts associated with habitat projects across the landscape
- Improve communication and coordination between restoration projects and RM&E
- Focus fish RM&E on key viable salmonid population (VSP) parameters of wild salmonids
- Develop quantitative objectives to guide RM&E and adaptive management



## Develop Strategic Framework for Restoration

- Strategic framework to guide actions across landscape
  - Quantitative objectives that address limiting factors, priority areas, at landscape and subbasin scales
  - Address processes that degrade habitat, e.g., hydrology, sedimentation, temperature, habitat complexity, etc.
- Expert Panels
  - View findings as hypotheses and update with RM&E and life history modeling effort

## Learn from Productive Coordination/Partnerships

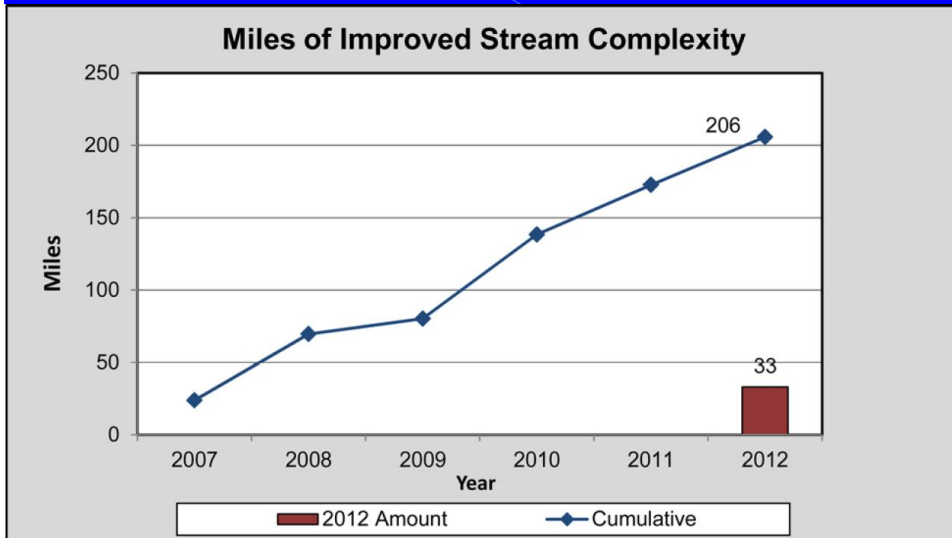
- Upper Salmon River, Yakima River
  - Agencies, Tribes, Landowners working together
- Approaches to improve coordination
  - Workshops involving sponsors across the Basin
  - Develop citizen science programs and outreach



## Retrospective Overview of Habitat Improvements

- Graphs provided by the Action Agencies' draft 2013 Comprehensive Evaluation
- How much more is needed to achieve robust salmon populations?
  - Need for strategic framework
  - RM&E in each subbasin
  - Life Cycle Models

# Habitat Actions



## Stream Complexity Examples:



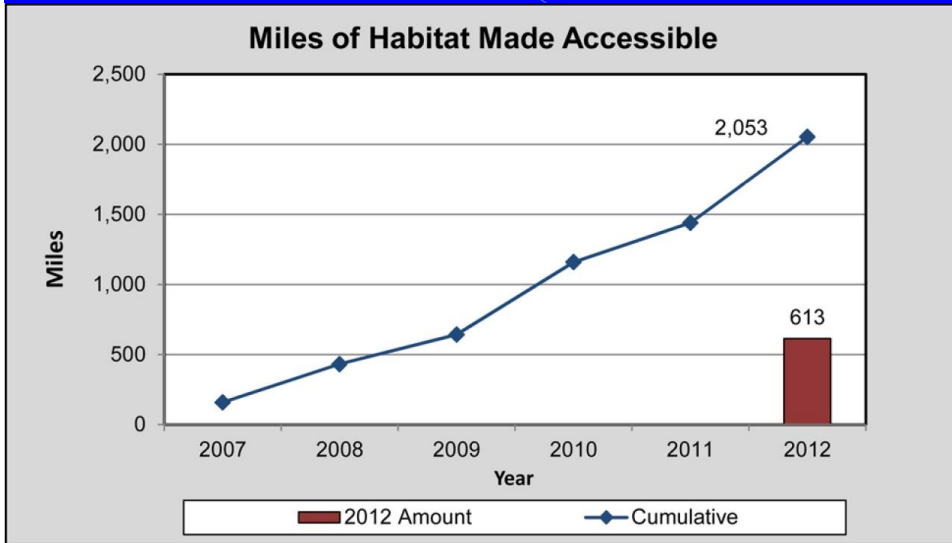
Large wood provides cover and rearing habitat for juveniles in South Fork Clearwater basin

Reconnection of side channel in Shitike Creek, Deschutes basin to improve juvenile growth and survival





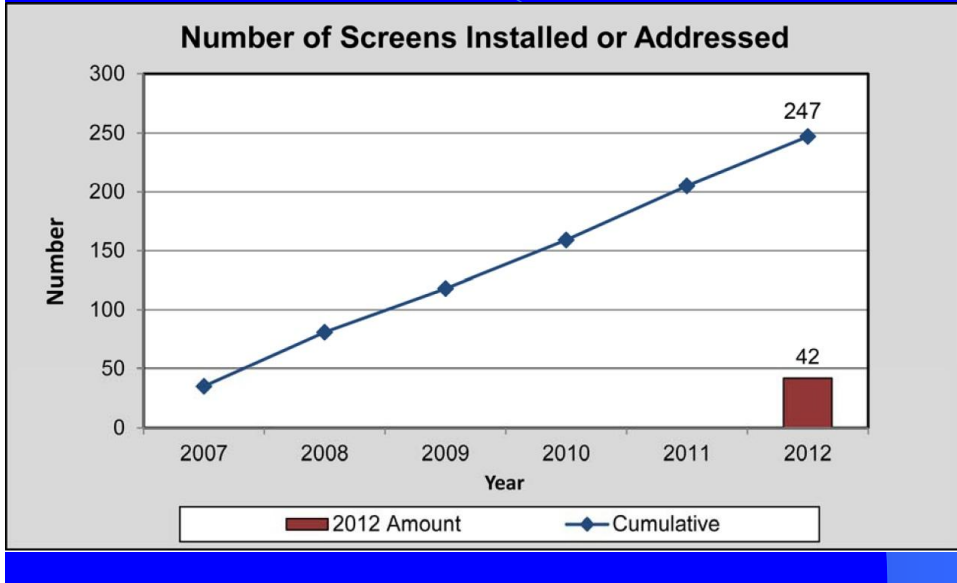
# Habitat Actions



# Fish Barriers



# Fish Screens



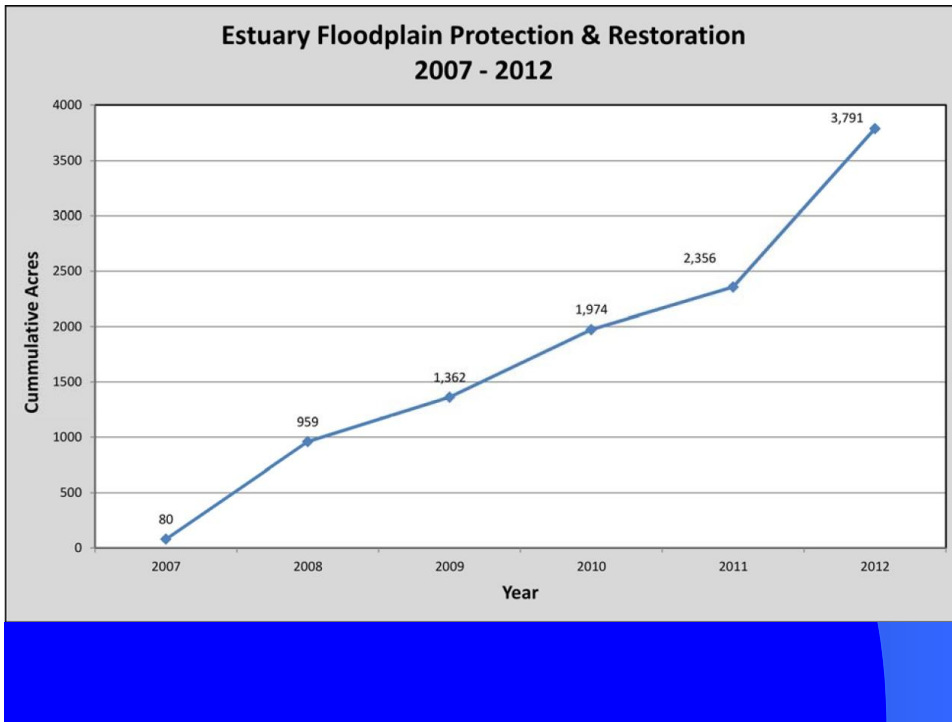
# Fish Screen Examples



Irrigation canal diverted under creek to avoid fish entrainment in upper Yakima River

Fish screen in Lemhi River where an estimated 71% of Chinook smolts had been killed by entrainment (Walters et al. 2012)



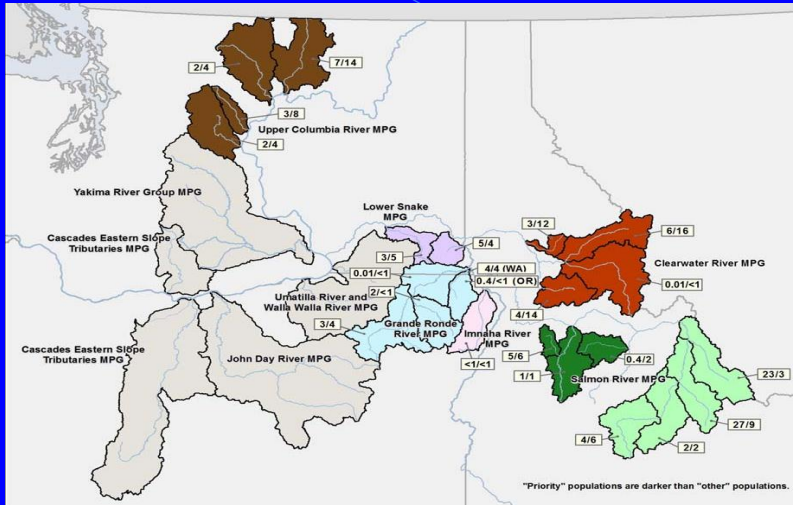


## Estuary Example



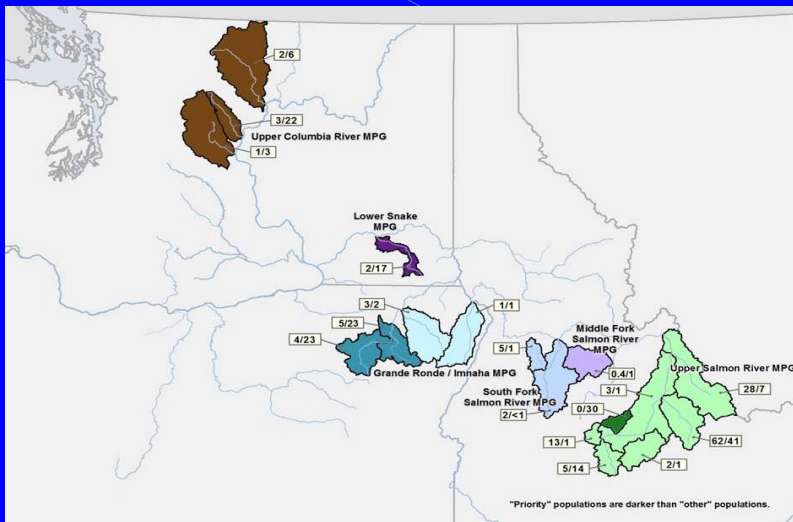
Estuarine habitat provides opportunity for juvenile salmonids to grow and acclimate to salt water before entering the ocean

## Tributary Habitat Quality Improvement (%) Steelhead, 2007 - 2011



Source: BOR 2013. Draft Comprehensive Evaluation. Values based on "Expert Panel" opinion & subject to change.

## Tributary Habitat Quality Improvement (%) Chinook, 2007 - 2011



Source: BOR 2013. Draft Comprehensive Evaluation. Values based on "Expert Panel" opinion & subject to change.



## Take Home Message

- Strategic restoration framework needed for full salmon recovery
- Improve coordination and collaboration
- Progress is being made toward BiOp habitat goals to avoid jeopardy – progress to full recovery is uncertain
- RM&E needed to confirm progress

