

Tom Karier  
Chair  
Washington

Frank L. Cassidy Jr.  
"Larry"  
Washington

Jim Kempton  
Idaho

Judi Danielson  
Idaho



Joan M. Dukes  
Vice-Chair  
Oregon

Melinda S. Eden  
Oregon

Bruce A. Measure  
Montana

Rhonda Whiting  
Montana

June 1, 2006

## MEMORANDUM

**TO:** Council Members

**FROM:** Erik Merrill

**SUBJECT:** ISRP review of 2007-2009 project selection

The Northwest Power Act directs the Council to make recommendations to Bonneville for its funding of fish and wildlife projects, and in doing so, to take into account the advice of the Independent Scientific Review Panel (ISRP). The newly completed report by the ISRP, "ISRP 2006-4: Preliminary Review of Fiscal Year 2007-2009 Proposals for the Columbia River Basin Fish and Wildlife Program" can be found on the Council's website at [www.nwcouncil.org](http://www.nwcouncil.org).

ISRP Chair Dr. Eric Loudenslager, Dr. Peter Bisson, and Dr. Rick Williams will present findings from the ISRP's report.

---

x:\jh\ww\packet\june06#10.doc

# ISRP 2007-09 FWP Proposal Review

---

*Dr. Eric J. Loudenslager*

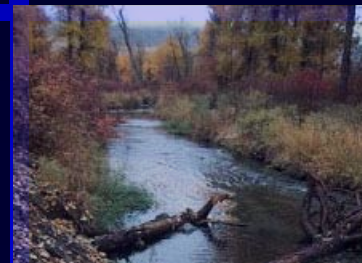
*Dr. Richard Williams*

*Dr. Peter Bisson*

*Northwest Planning and  
Conservation Council*

*Boise, ID*

*June 14, 2006*



# ISRP and Peer Review Group (PRG)

- *Independent Scientific Review Panel*

- Richard Alldredge, Ph.D.
- Peter A. Bisson, Ph.D.
- John Epifanio, Ph.D.
- Linda Hardesty, Ph.D.
- Charles Henny, Ph.D.
- Colin Levings, Ph.D.
- William Liss, Ph.D.
- Eric J. Loudenslager, Ph.D.
- Katherine Myers, Ph.D.
- Thomas Poe, M.S.
- Bruce Ward



- *Peer Review Group*

- Robert Bilby, Ph.D.
- Charles Coutant, Ph.D.
- Jack Griffith, Ph.D.
- Nancy Huntly, Ph.D.
- John "Jack" McIntyre, Ph.D.
- David Philipp, Ph.D.
- Ray White, Ph.D.
- Richard Williams, Ph.D.

Glenn Cada, Ph.D.  
John Gardiner, Ph.D.  
Susan Hanna, Ph.D.  
Roland Lamberson, Ph.D.  
William Percy, Ph.D.  
Dennis Scarnecchia, Ph.D.  
Richard R. Whitney, Ph.D.

- *Council Staff*

- Erik Merrill, J.D., NPCC
- Eric Schrepel
- Maitri Dirmeyer



# 2007-09 Proposal Review Process

*540 Proposals from 140 Sponsors Received January 10, 2006*

---

Each proposal assigned to 3 ISRP/PRG for written review based on 1996 Northwest Power Act Amendment Criteria.

Review Teams met in Portland to discuss and establish a consensus recommendation on each proposal.

Review Teams then summarized their proposals and recommendations for a group of teams – to ensure consistency across teams. And, to identify programmatic issues that arose from the proposals.

Finally, the ISRP “only” met in Portland after all reviews and recommendations were made to confirm consistency and develop programmatic themes.

# Power Act Amendment of 1996

---

- The 1996 amendment to the 1980 Northwest Power Act:
  - *Formed the Independent Scientific Review Panel (ISRP)*
  - *Formalized peer review in the Fish and Wildlife Program*
- Directs the ISRP to conduct an independent peer review based on a determination that projects:
  - *1. are based on sound science principles;*
  - *2. benefit fish and wildlife;*
  - *3. have a clearly defined objective and outcome*
  - *4. with provisions for monitoring and evaluation of result; and*
  - *5. are consistent with the Council's fish and wildlife program.*

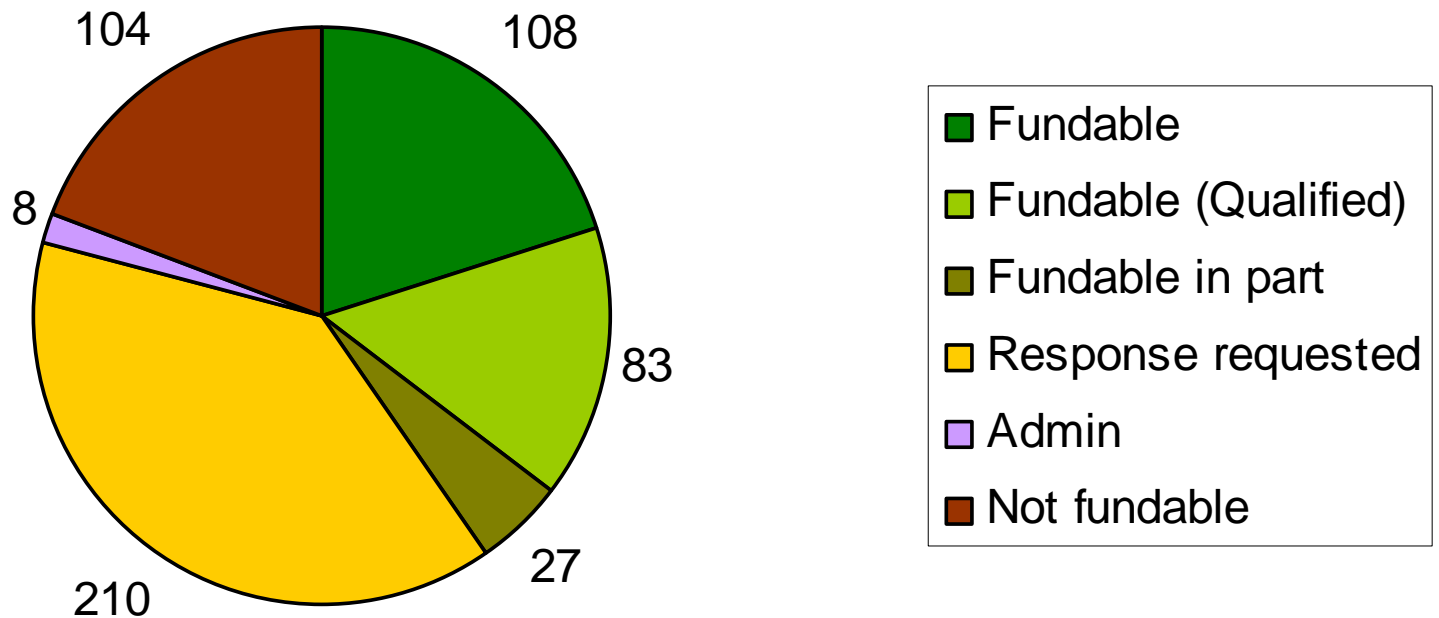
# Review Criteria

---

- Does the proposal clearly describe a problem?
- Do the project tasks provide a solution to the problem?
- Is the problem identified in a subbasin plan?
- Are there likely benefits to fish and wildlife?
- Is there provision for monitoring and evaluation?

# Review Summary

---





# Programmatic Themes

---

- Proposal Quality
- Future Review Process
- Monitoring and Evaluation
- Artificial Production
- Unique Aquatic Species
- Wildlife and Fish Habitat
- Ocean/Estuary/Climate Change



*Sorting coho salmon for spawning.  
Chiwawa Hatchery,  
Wenatchee River, Washington*



# Proposal Quality and Content

---

- Overall Proposal Quality and Content
  - *Continuing to improve*
- Relationship to Subbasin Plans
  - *General relationship rather than specific*
- Justification for Research and Models
  - *Linkage between research and management often weak*
- Results from Ongoing Projects
  - *Proposals varied widely in reporting results and assessing the benefits from past work*
- Use and Dissemination of Information
  - *It appears that project data often remains only locally available.*

# Future FWP Review Processes

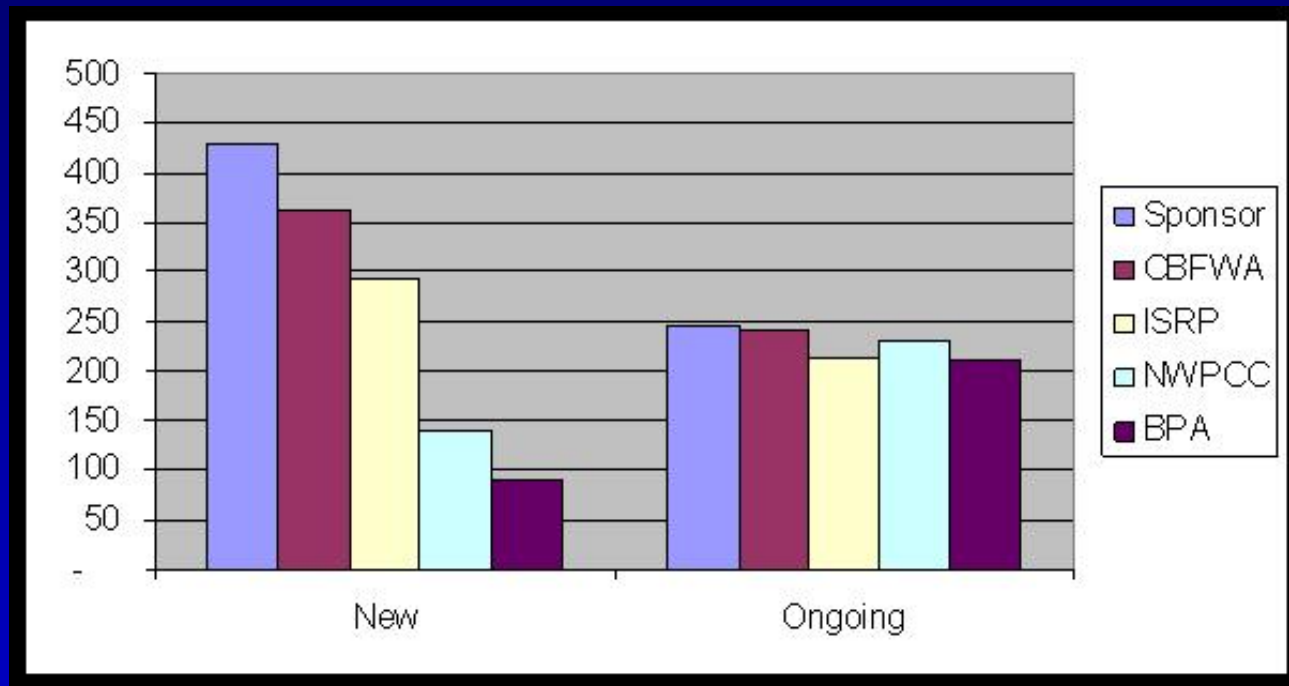
---

- Sequential multi-year provincial reviews
- Develop program level reviews
  - Yakima and Umatilla Subbasins
  - Supplementation
  - Bull Trout and Sturgeon
- Employ the 3-step process to review artificial production initiatives
- Develop an annual innovative solicitation
- Use RFPs for to meet the needs of special topics
  - Long-term fitness effects of supplementation

# New Projects Compete Directly with Ongoing -

## *New projects face a higher hurdle for funding*

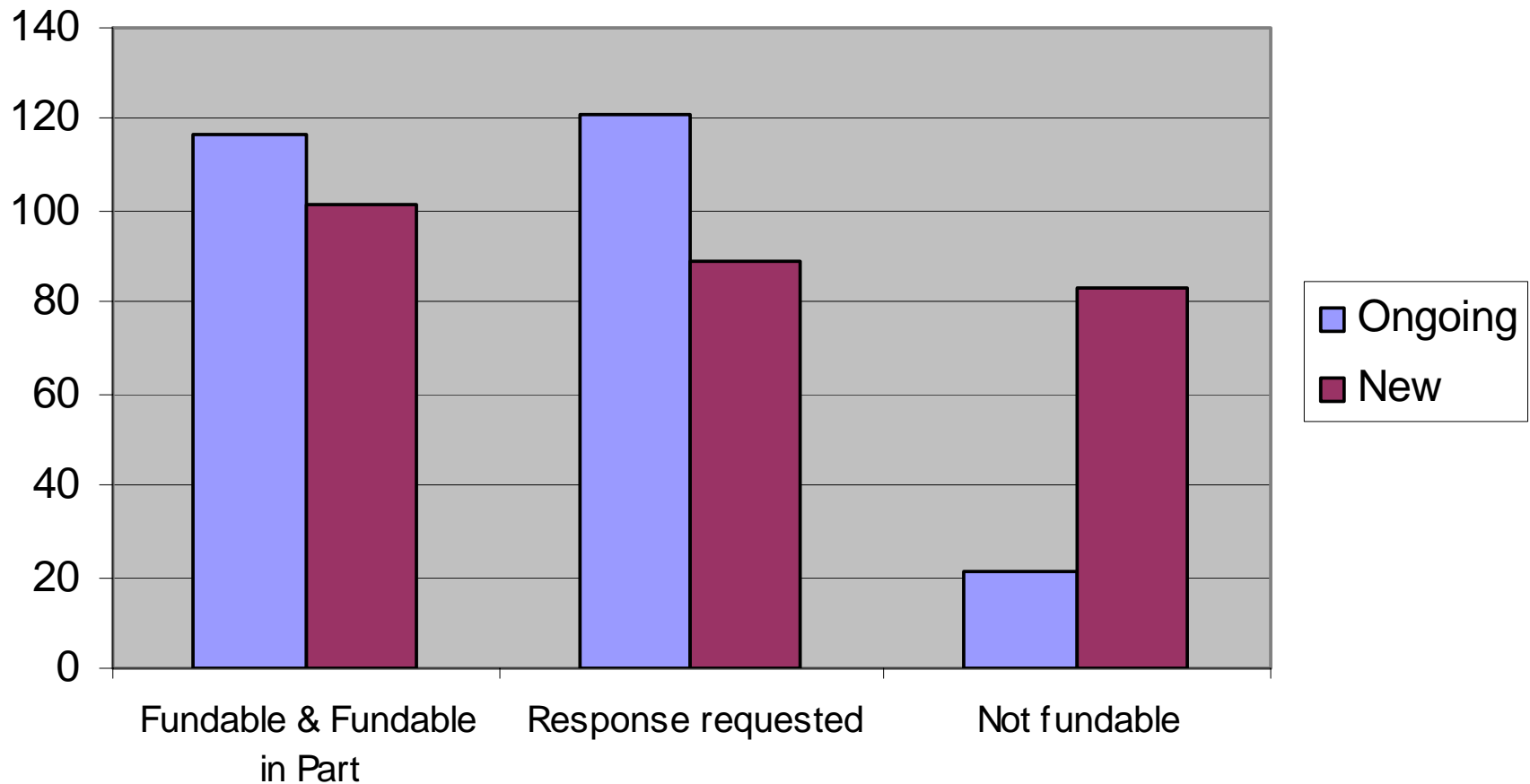
---



*Tracking the number of new and ongoing provincial review proposals (2001-2003). The graph shows the stability of the ongoing work through the process.*

**Recommendation:** The ISRP recommends that alternative review paths be investigated for continuing and new projects

# Preliminary Review Summary 07-09



# Monitoring and Evaluation

---

- The effectiveness of Fish and Wildlife Program projects is difficult to assess because monitoring and evaluation either is not conducted or, if conducted, is not adequately reported.
- In general proposals for ongoing projects lacked detail on monitoring conducted, data obtained, results of data analyses, and evaluation.
- Adaptive management is not possible without sound information provided by effective monitoring and evaluation.

# Monitoring and Evaluation



*Steelhead and Chinook trap, Imnaha River, Oregon*

- ISRP has worked with projects sponsors since 1997 to provide guidance on M&E needs
  - *Blue Mountain Provincial Report (ISRP 2001-12A)*
  - *Retrospective Report (2005- 14)*
- ISRP has worked from 2003 to present with Action Agencies, CBFWA, and Council staff on developing a coordinated regional RM&E plan
  - Standardized data collection supports efforts such as subbasin planning.
    - *PNAMP – Pacific Northwest Aquatic Monitoring Partnership*
    - *CSMEP – Collaborative Systemwide Monitoring and Evaluation Project*

# M&E for Individual Projects

- Every project should have a monitoring and evaluation component of some sort.
  - *Implementation Monitoring*
  - *Effectiveness Monitoring*
- Individual projects should be able to identify and describe project- and program-level means to evaluate their effectiveness.

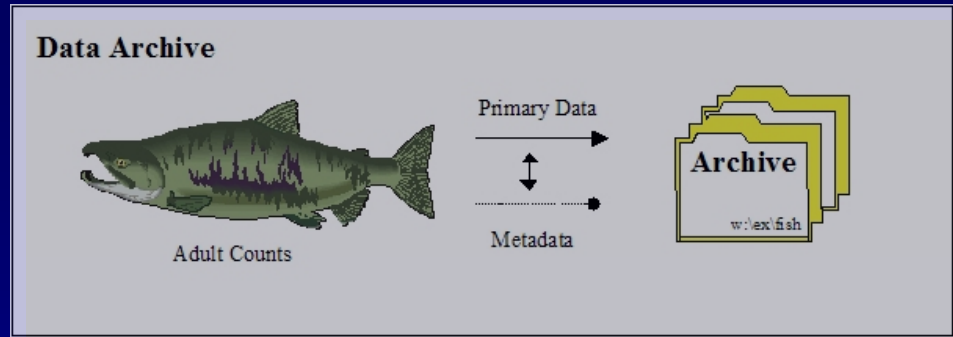


*Stream restoration, Asotin Creek*

**Recommendation:** Establish statistical design and analysis support for projects that have limited statistical expertise. This support would answer questions about design and analysis and provide workshops on statistical topics of common interest in the Program.



# Databases and Data Reporting



- Basic data, readily accessible through a regional database, is needed by sponsors and the program for adaptive management.
- Projects should be required to report results at specific milestones as a condition for continued funding.
  - Link *Pisces*, the BPA tracking database, to emphasize reporting of data and biological results, as well as task completion.

**Recommendation:** Ensure that data generated by public funds is readily available thoroughly publicly accessible websites.

# Tagging Programs

---



*Processing adult fish at Roza Dam,  
Yakima River. Orange circle for tag  
detection.*

- Review tagging projects.
- Determine if there is unnecessary expense and duplication of research efforts as a result of competing tagging technologies.
- A comprehensive programmatic review to make progress toward ensuring these projects are executed in the best service to the Fish and Wildlife Program.

# Wildlife Monitoring and Evaluation

---

- HEP and M&E
  - *HEP should only be used as an initial scoring system for Wildlife mitigation agreements. ISRP recommends that HEP not play a role in biological monitoring.*
- Choice of Species to Monitor
  - *Select species that would be expected to show responses at the project scale.*
  - *Use low-cost techniques such as targeted census, aerial or other remote imagery, or photo-points.*



*Bighorn Sheep,  
Middle Fork Salmon, Idaho*

# Artificial Production

- Anadromous Salmon and Steelhead Mitigation Production – Principally for Harvest
- Supplementation for Conservation and Harvest
- Captive Propagation for Conservation



*Artificial Stream,  
Nez Perce Tribal Hatchery,  
Clearwater River, Idaho*



# Anadromous Salmon and Steelhead Mitigation Principally for Harvest

---



- Hatchery fish complicate determining the status of natural production

**Recommendation:** Consider an RFP to develop methods to evaluate the effects of the large-scale production programs for harvest on the abundance, productivity, and diversity of naturally spawning populations.

*Egg incubation trays  
US Army Corp file photo*

# Supplementation

- Inadequate Evaluation of Demographic Effects
- No Evaluation of Long-term Fitness Effects
- April 2006 Workshop to Coordinate Evaluation

**Recommendation:** Follow-up workshop on demographic effects to advance the experimental design.

**Recommendation:** An RFP to conduct an experiment on the long-term fitness effects of supplementation.



*Cle Elum Supplementation  
and Research Hatchery  
Yakima River, Washington*

# Unique Species in the Columbia River Basin

---

## Sturgeon



*ISRP member Dr. John Epifanio  
with sturgeon below Bonneville Dam*

**Recommendation:** For sturgeon the FWP should focus on understanding the apparent reproductive bottleneck at the egg and larval stages through well-focused, comparative field research in habitats with both successful and unsuccessful reproduction.



# Unique Species in the Columbia River Basin

---



Lamprey

Bull Trout



Lamprey and bull trout proposals include the same type of enumeration, genetic, and life history studies in different watersheds, rather than focusing on solutions to the decline of these species.

# Wildlife and Fish Habitat Projects

---

## In-depth Periodic Review Needed for Subbasin Habitat Programs

- The use of habitat information from subbasin assessments in the current round of proposals was inconsistent.
- Some proposals used subbasin assessments and limiting factor analyses thoughtfully, others did not.



*Klickitat River Valley, Washington*

# Wildlife and Fish Habitat Projects

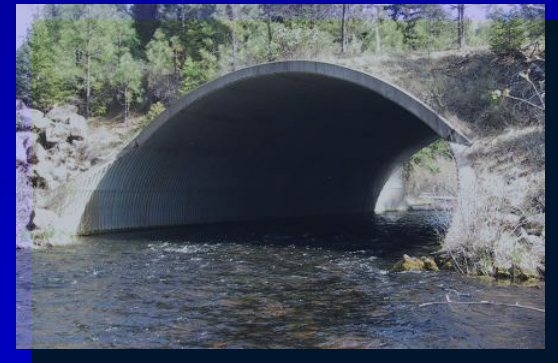
## In-depth Periodic Review Needed for Subbasin Habitat Programs

- few proposals used modeling tools to forecast the biological benefits from projects, even though these tools (e.g., EDT) were used in the assessments.



*Complete fish migration barrier, Sommers Cr., Kalama River*

*Open Bottom Arch Bridge Replacement  
Warms Springs River –  
Deschutes Subbasin*



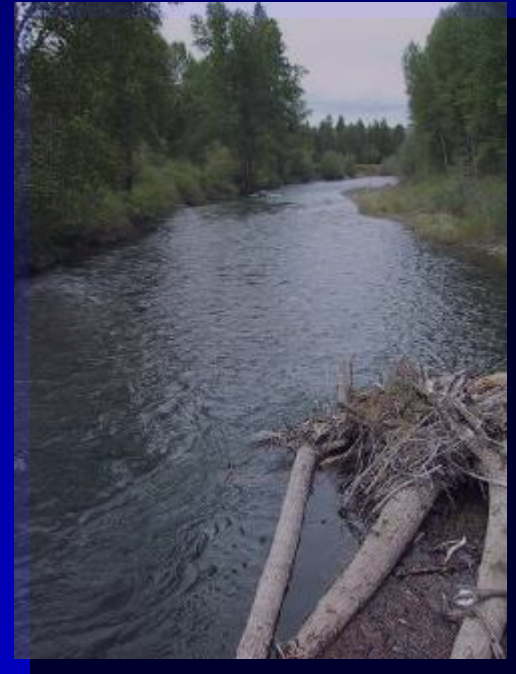
**Recommendation:** The ISRP recommends that Council request the ISRP and ISAB to review habitat restoration strategies and actions in major subbasins on a multi-year rotating basis.

# Wildlife and Fish Habitat Projects

---

## Demonstrating Restoration at the Watershed Scale

- A pressing habitat restoration issue in the Columbia River Basin is to demonstrate that tributary habitat improvement projects, guided by watershed assessments, actually increase the abundance, productivity, spatial structure and diversity of focal species.



*Teaway Creek,  
Yakima Subbasin*

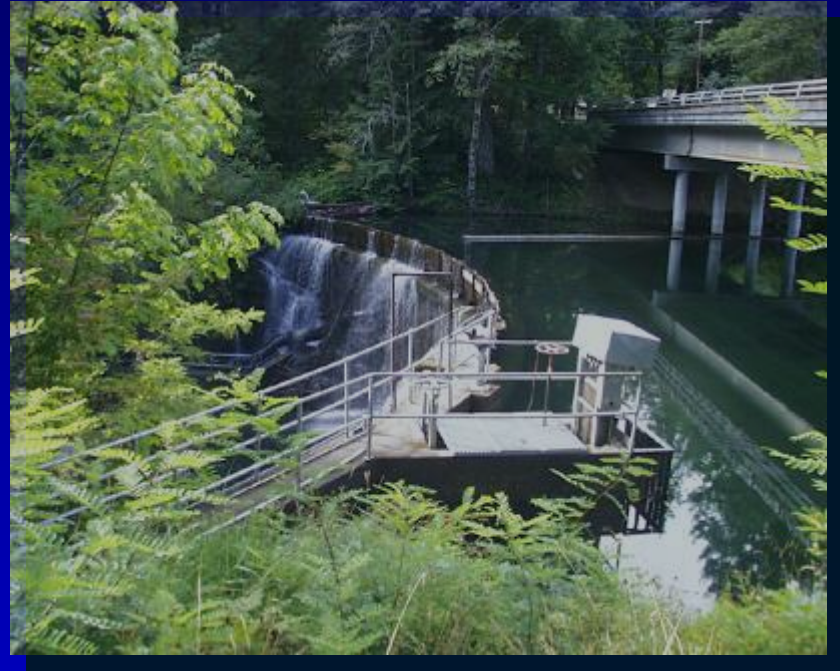
**Recommendation:** The ISRP recommends that the Council host a workshop to examine the lessons from successful Model Watershed projects that have been implemented in the Columbia Basin and elsewhere.



# Wildlife and Fish Habitat Projects

## Tributary Dam Removal

- There is a high likelihood that several dams in tributaries of the Columbia Basin will be removed.
  - Marmot, Condit, and Hemlock Dams
- There were proposals to monitoring the ecological impacts of removing the dams and the recolonization of formerly unoccupied habitat.



*Hemlock Dam – Wind River Subbasin*

**Recommendation:** The ISRP recommends the Council pay close attention to the implementation of dam removals in the Columbia Basin and ensure, perhaps through targeted research solicitations, that dam decommissioning and post-removal effects are properly monitored.

# Wildlife and Fish Habitat Projects

## Irrigation Improvement and Water Banking

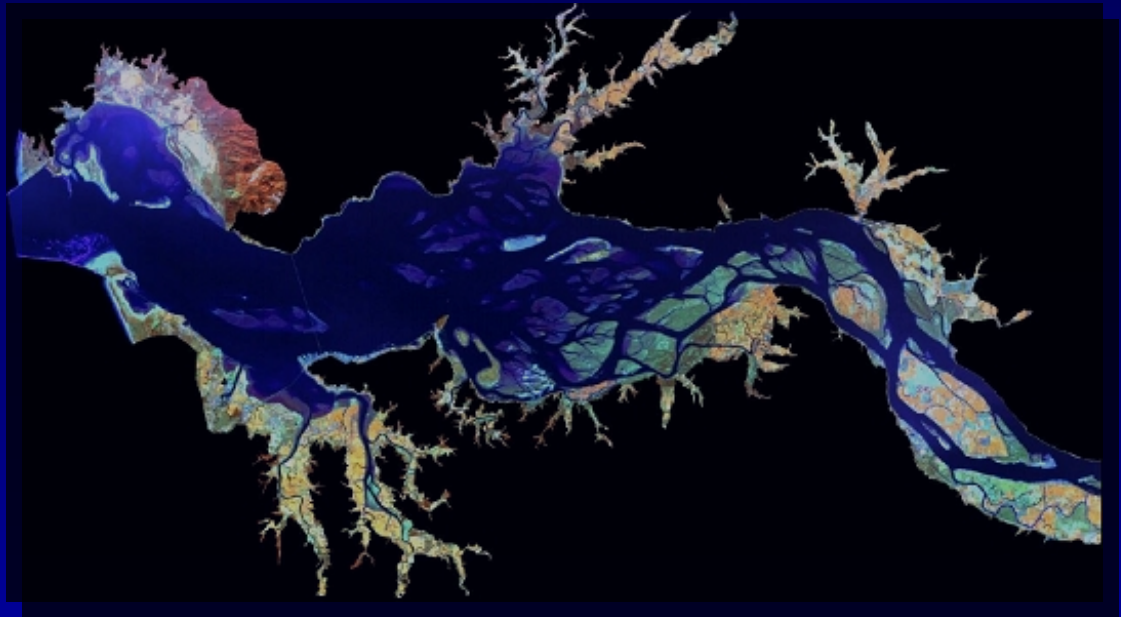
- Proposals to improve irrigation efficiency raise questions about water rights and in-stream flows.
- The destination of “saved” water should be specified, at least in part, to benefit fish.
- There remain questions about the impacts on return flow and downstream users when open ditches are enclosed.



*Taneum Creek Diversion – Yakima Subbasin*

**Recommendation:** The ISRP recommends Council consider using the Columbia Basin Water Transaction Program's criteria to evaluate projects proposing improved irrigation efficiency to preserve in-stream flow. Nearly all the instream flow projects could be evaluated and prioritized through the water transactions program (Project 200201301).

# Ocean Estuary/Lower Columbia River



- The region has become more aware of the extent that anadromous fish are affected by changes in the estuary, nearshore, and ocean conditions and the potential negative effects of operation of the hydropower system on those areas.

**Recommendation:** The ISRP concurs with the recommendation of the Retrospective report that "... the Council should encourage innovative ecosystem-based research and monitoring in the estuary, with emphasis on the effects of the hydrosystem (altered flows, primarily) on all components of the ecosystem."