

Joan M. Dukes
Chair
Oregon

Bruce A. Measure
Montana

James A. Yost
Idaho

W. Bill Booth
Idaho



Rhonda Whiting
Vice-Chair
Montana

Bill Bradbury
Oregon

Tom Karier
Washington

Phil Rockefeller
Washington

February 23, 2012

MEMORANDUM

TO: Fish and Wildlife Committee Members

FROM: Lynn Palensky, Program Development Manager

SUBJECT: Progress update on Lamprey Synthesis Report

In the final programmatic recommendations for the lamprey projects in the RME/AP review, the Council called for follow-up documents (described below) to be developed during the project funding period. The Co-Chairs of the Lamprey Technical Work Group, Christina Luzier (US Fish and Wildlife Service) and Dave Ward (CBFWA Members Advisory Group), will present a progress update and an overview of the draft report to the Committee on the group's work.

The *Synopsis of Lamprey-Related Projects Funded through the Columbia River Basin Fish and Wildlife Program* is anticipated to be submitted to the ISAB for review in April, 2012.

In its *Final Review of 2010 Proposals for the Research, Monitoring, and Evaluation and Artificial Production Category* the ISRP suggests: *the Inter-Agency Lamprey Technical Working Group would be a possible group of experts that could write a basinwide synthesis including major conclusions that could be drawn at this point with supporting evidence, status and trends, and a candid evaluation of whether tributary habitat projects are improving lamprey returns. A draft outline could be developed based on comments from this RM&E review, other project reviews, and ISAB suggestions (ISAB 2009-3). The ISAB should review the synthesis.*

Columbia River Basin Lamprey Technical Workgroup



Synopsis of Lamprey-Related Projects Funded Through the Columbia River Basin Fish and Wildlife Program



Columbia River Basin

Lamprey Technical Workgroup



Synopsis of Lamprey-Related Projects Funded Through the Columbia River Basin Fish and Wildlife Program

Summary of Lamprey Projects

Response

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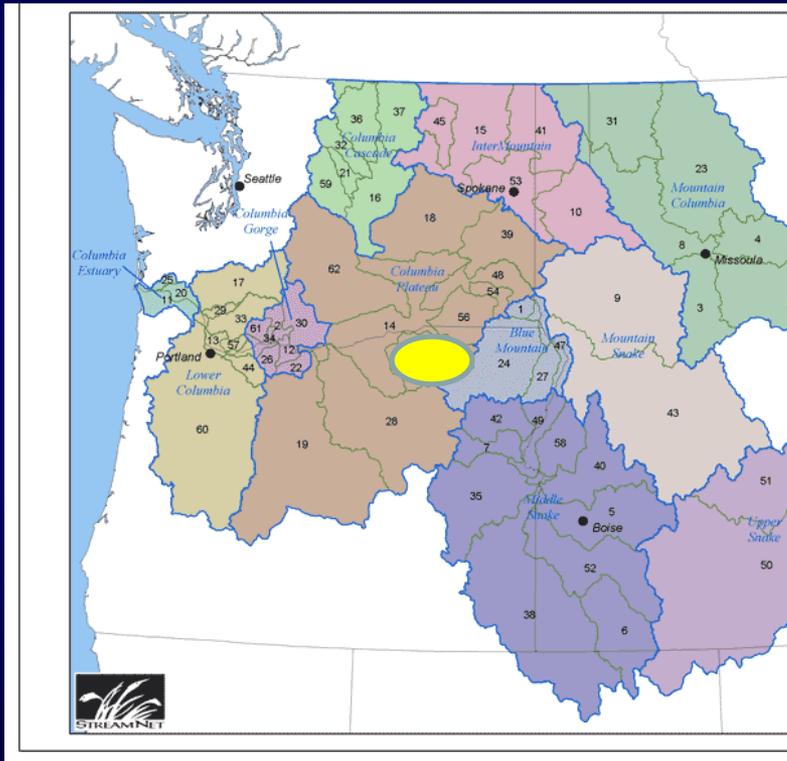
Status

Brook Lamprey



Pacific Lamprey Research and Restoration

1994-026-00



First Lamprey Project

Findings Widely Applicable

Important Components

Translocation

Low-Elevation Structures

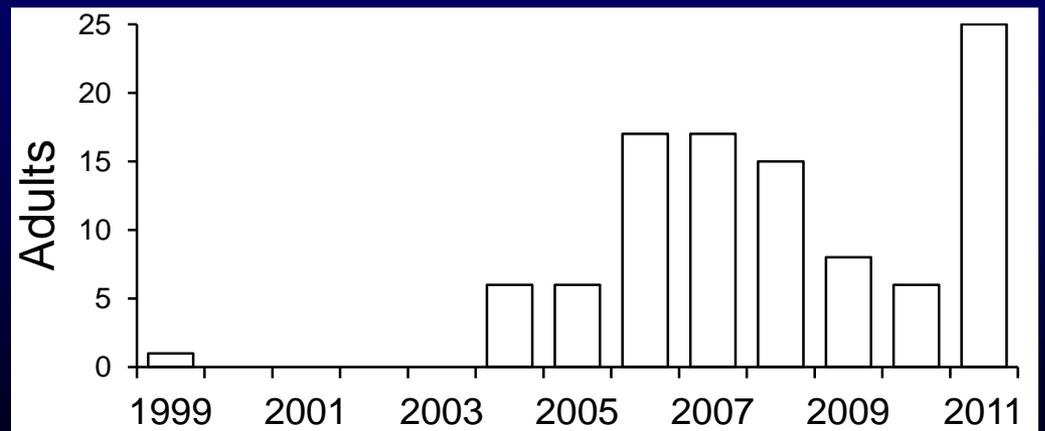
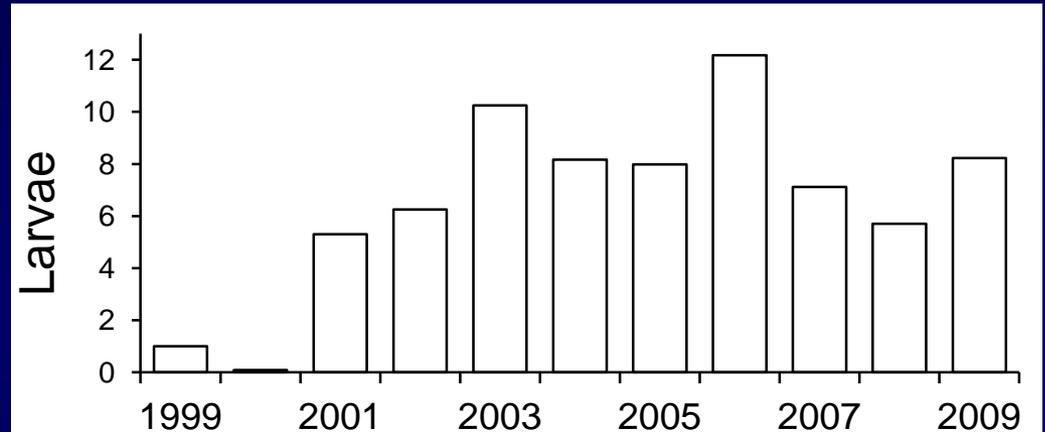
Genetics



Pacific Lamprey Research and Restoration

1994-026-00

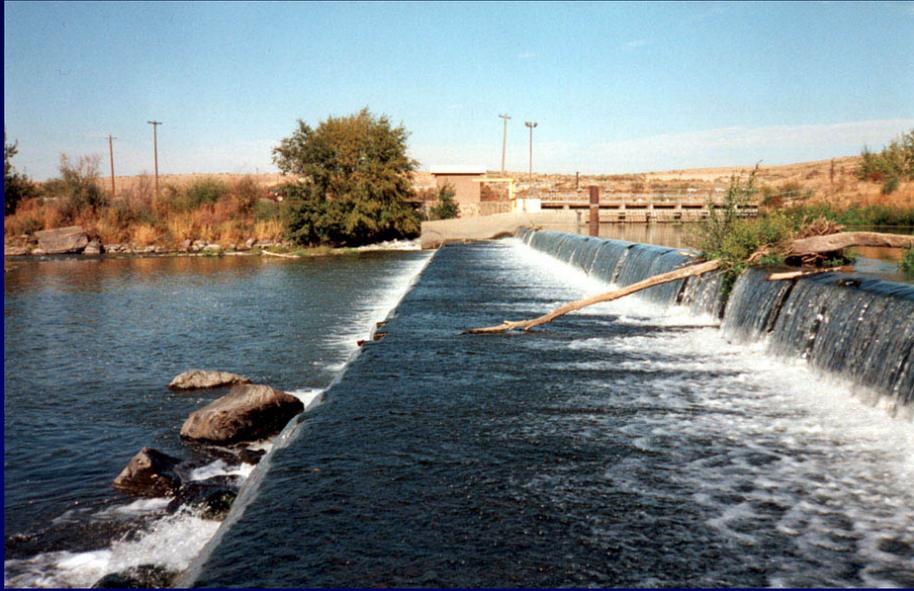
Translocation





Pacific Lamprey Research and Restoration

1994-026-00



Low-Elevation Structures

Pacific Lamprey Genetics

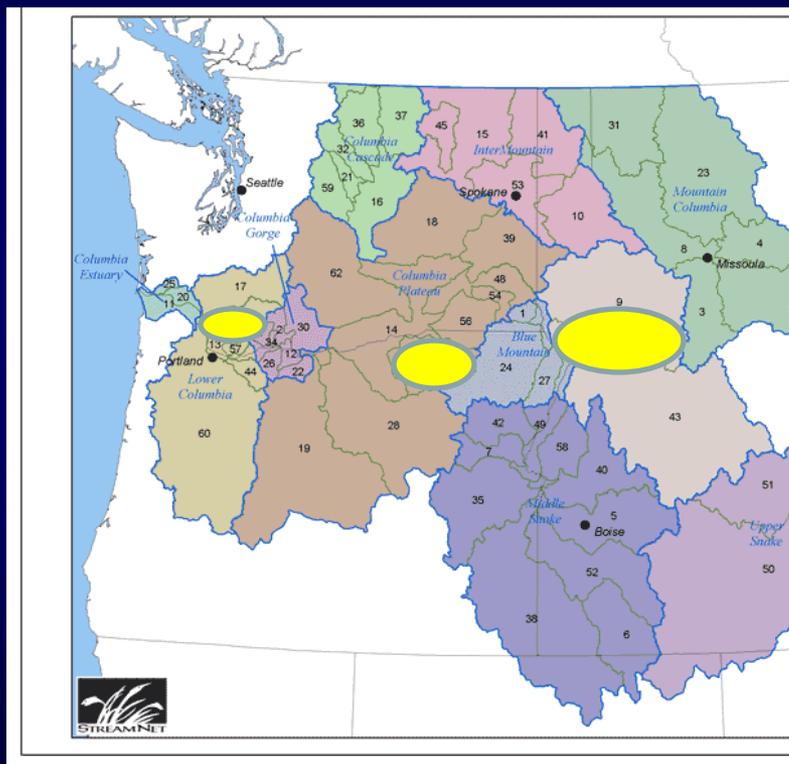




Early Lamprey Survey Projects

Habitat Use and Population Dynamics of Lampreys in Cedar Creek

2000-014-00



Objectives

Abundance

Spawning Requirements

Migration Timing

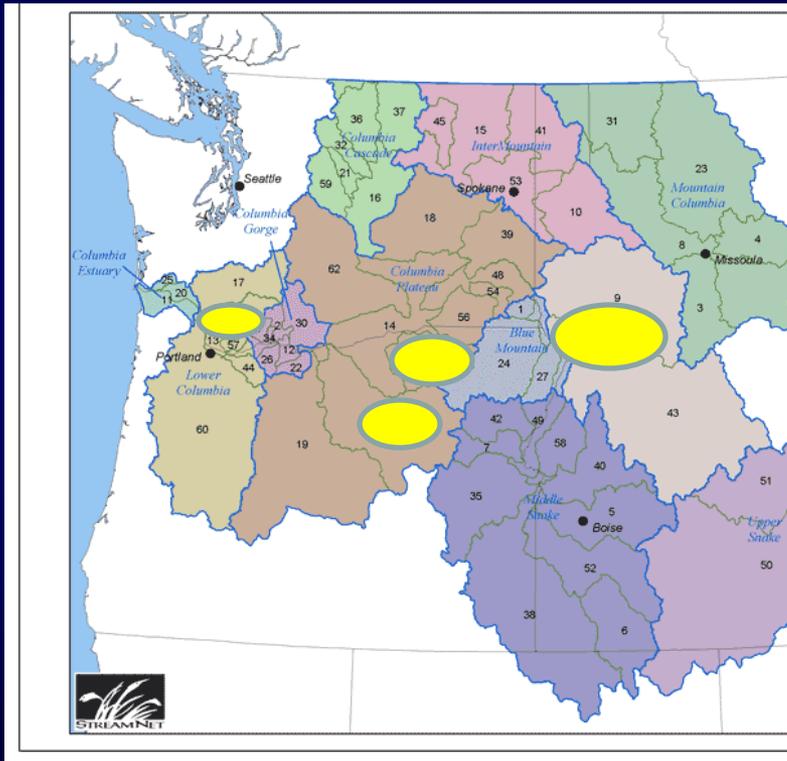
Status of Pacific Lamprey in Idaho

2000-028-00

Early Lamprey Research Projects

Lamprey Identification and Thermal Requirements

2000-029-00



Objectives

Differentiate Species
Temperature Requirements

Innovative Project

Upstream Migration, Timing, and Habitat Use

2000-052-00



Current Lamprey Survey Projects



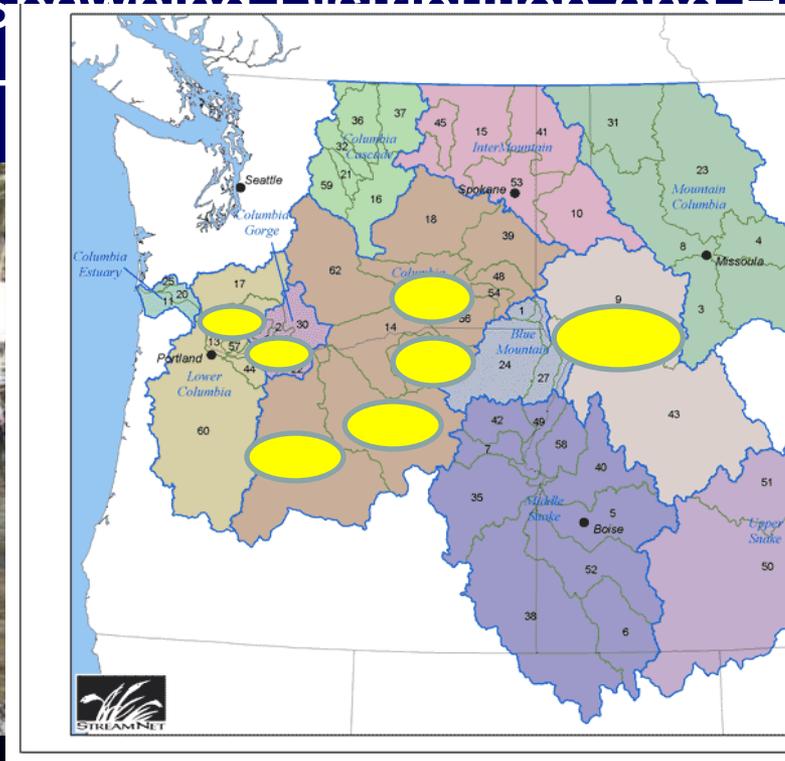
Objectives

Larval Distribution and Habitat
Species Composition

Larval and Adult Abundance

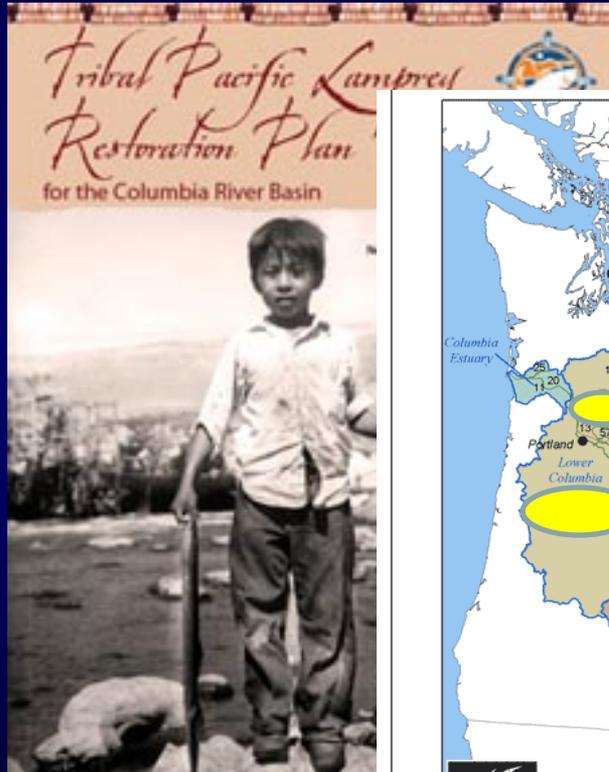
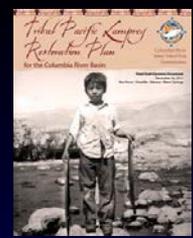
Spawning Distribution and Habitat

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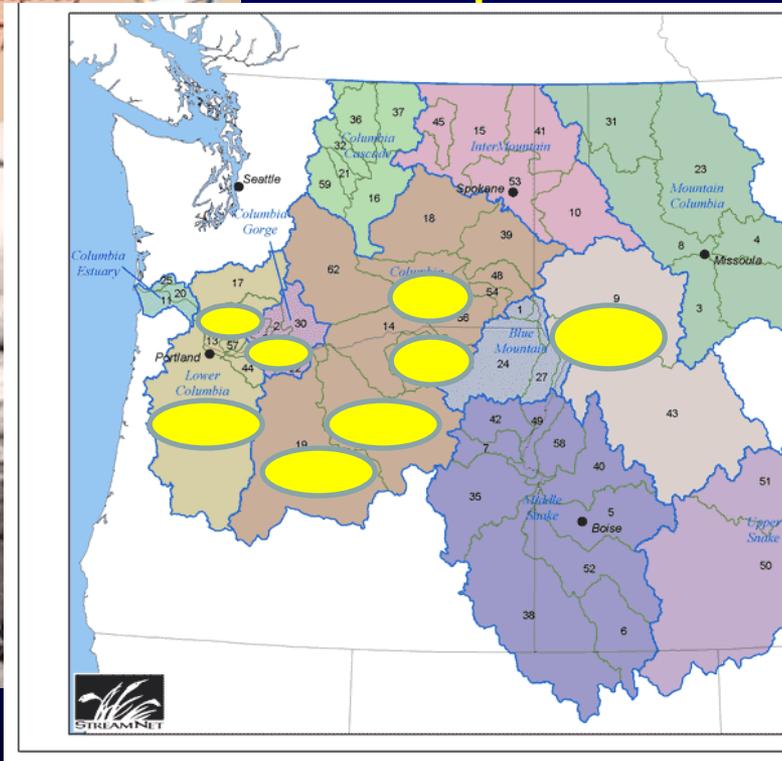




Implement Tribal Pacific Lamprey Restoration Plan 2008-524-00



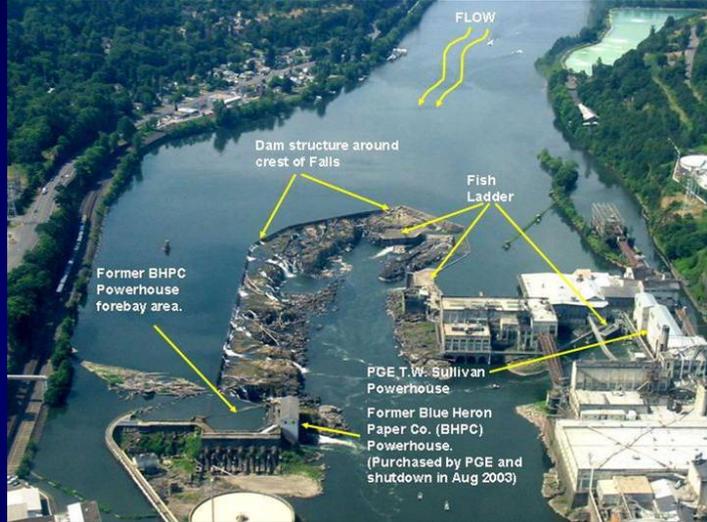
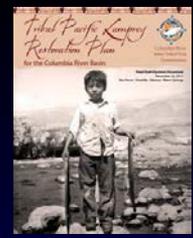
Comprehensive Basin-Wide Project



Plan and Tributary Passage
Implementation Strategies
Pollutants/Water Quality
Education
Stages



Willamette Falls Lamprey Escapement Estimate 2008-308-00



Objectives

Estimate Lamprey Escapement
Develop Long-Term Index

2010 Passage = 22,000-36,000

2010 Harvest = 4.4% - 7.3%



Columbia River Basin Lamprey Technical Workgroup

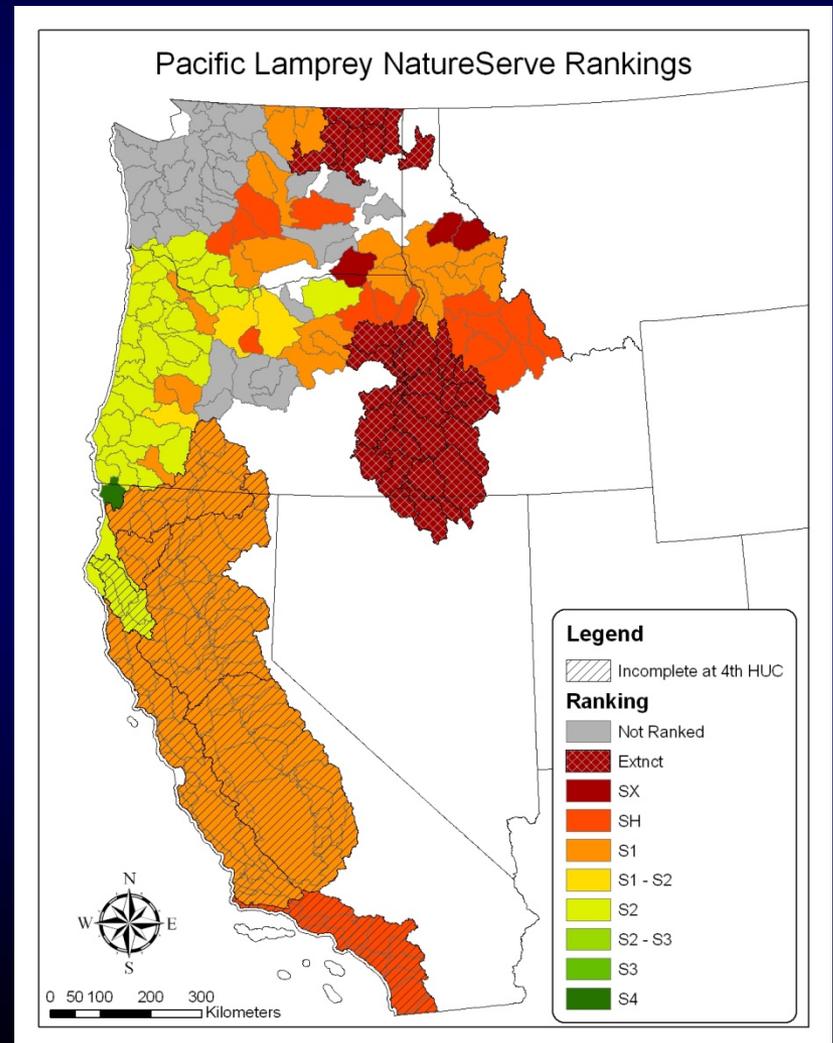
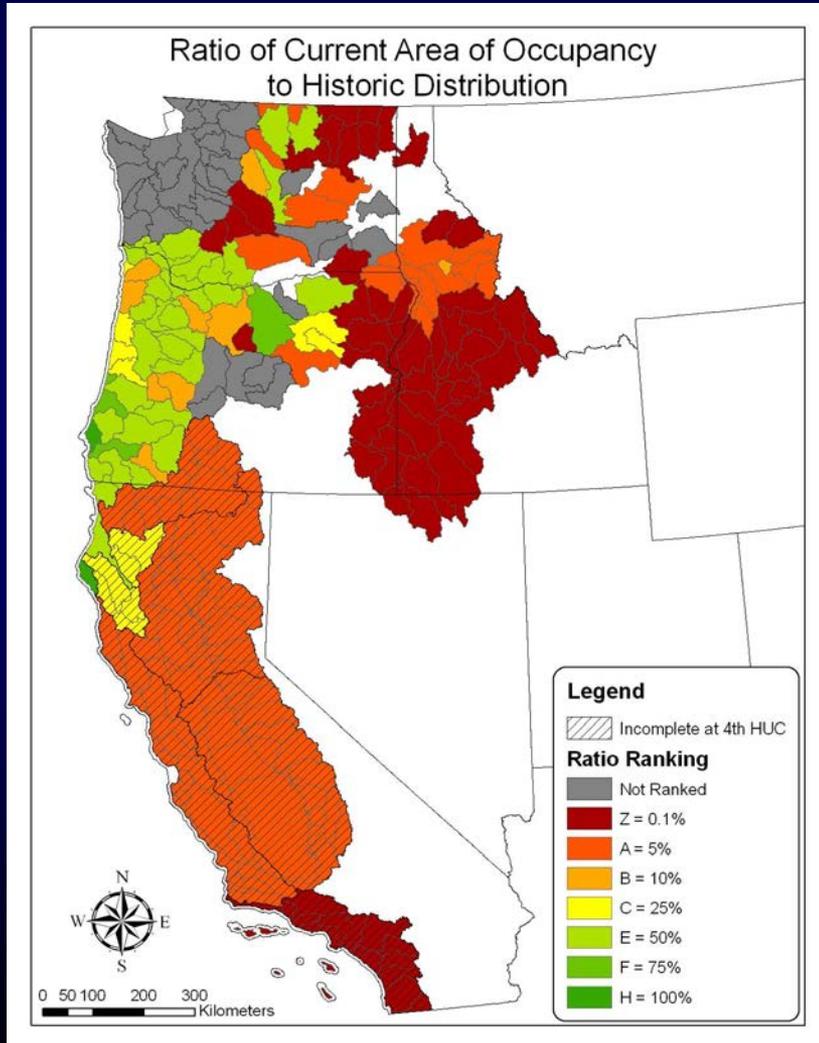


Response by LTWG to ISRP Questions

1. General Conclusions
2. Limiting Factors
3. Impediments to Recovery
4. Tribal Restoration Plan
5. Coordination
6. Escapement Goals
7. Status
8. Brook Lamprey

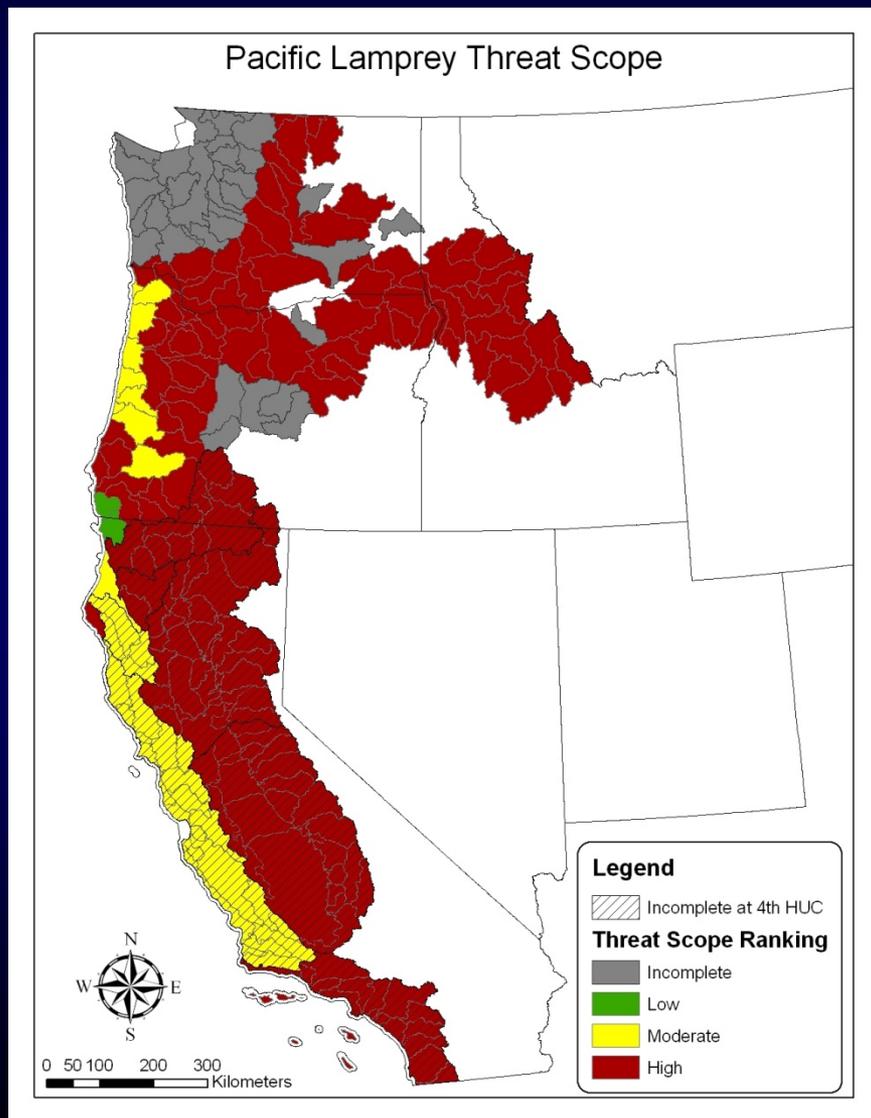
General Conclusions and Status

Are lamprey recovering in the basin?





Limiting Factors

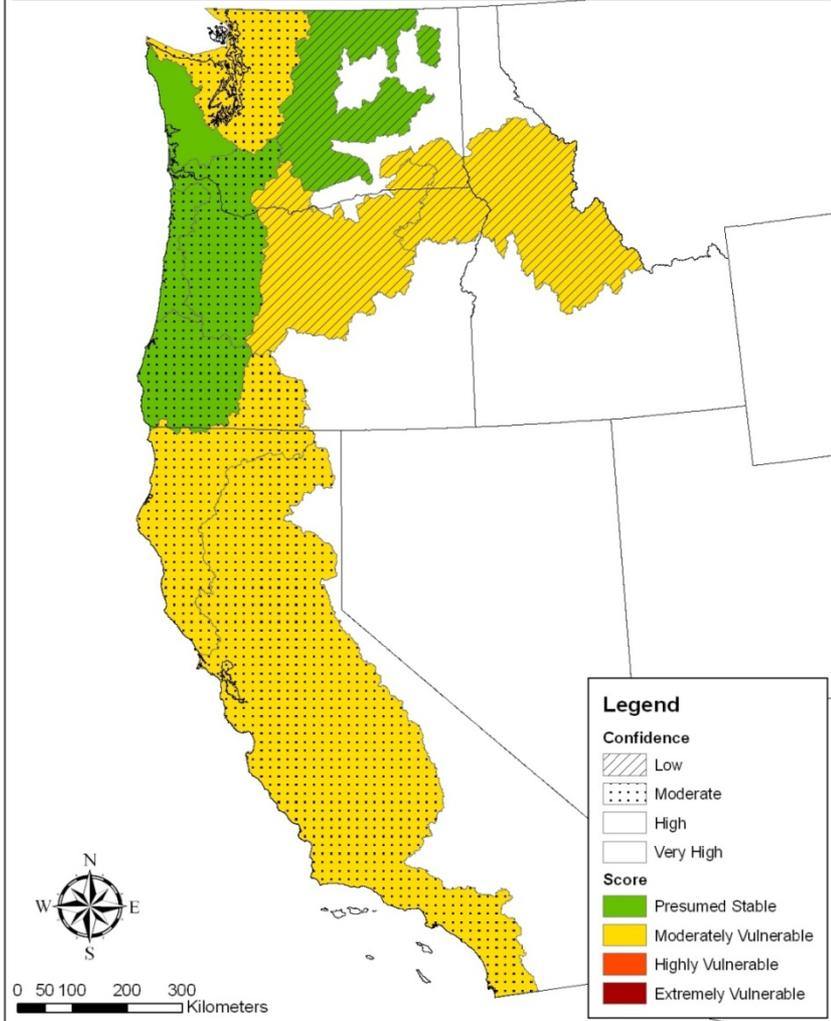


1. Passage
2. Dewatering and flow management
3. Stream and floodplain degradation
4. Poor water quality
5. Predation
6. Ocean conditions
7. Climate change

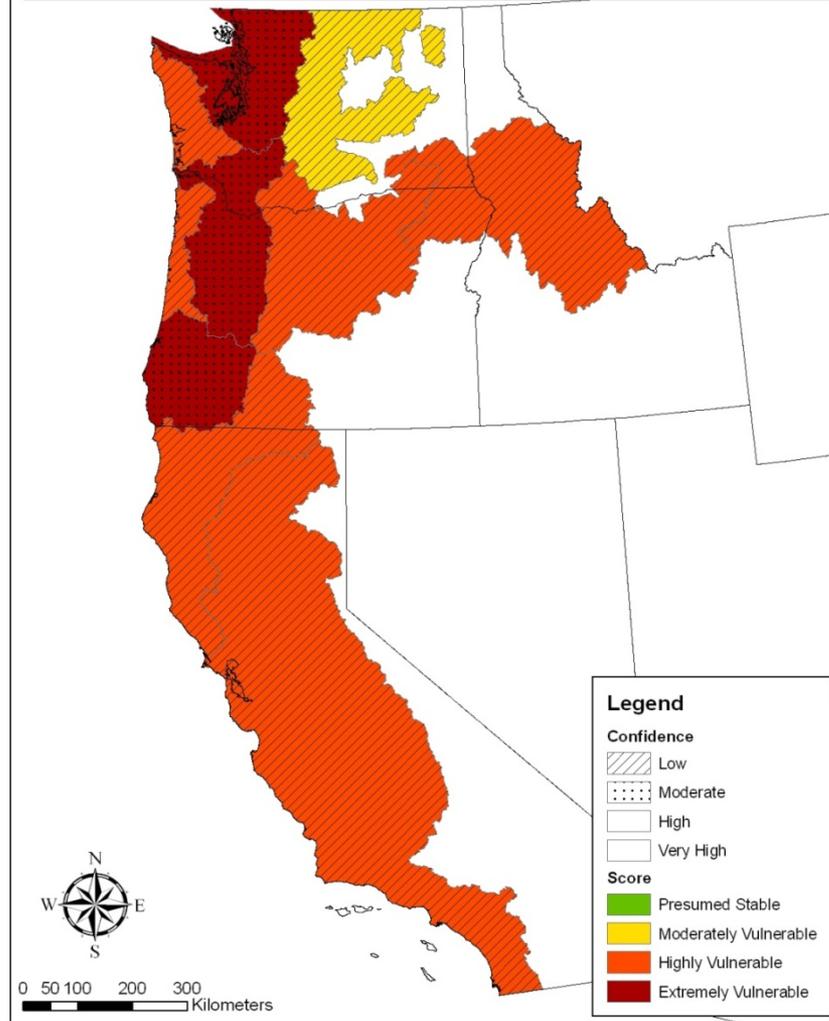


Climate Change

Climate Vulnerability Results for the A1b Mid Century Model Run



Climate Vulnerability Results for the A2 End Century Model Run





Impediments to Recovery

1. Lack of resources
2. No requirement for recovery
2. Slow progress on fixes



BEST MANAGEMENT PRACTICES
TO
MINIMIZE ADVERSE EFFECTS TO
PACIFIC LAMPREY
(*Entosphenus tridentatus*)



(Photo courtesy of U.S. Fish and Wildlife Service)

U.S. Fish and Wildlife Service
April 2010





Tribal Restoration Plan



Finalized in December 2011

- Mainstem and tributary passage and habitat
- Supplementation and augmentation
- Contaminants and water quality
- Outreach and education
- Research, monitoring and evaluation

Not a master plan though incorporates information in other regional lamprey planning documents



Other Plans

U.S. Army Corps of Engineers

- 10 year Passage Plan for lamprey

NPCC Fish and Wildlife Program

PUD and State Lamprey Plans

USFWS Pacific Lamprey Assessment and Template for Conservation Measures

- Assessment
- Conservation Agreement
- Regional Implementation Plans
- Lamprey Summit III





Coordination and Metrics

- Coordination has improved
- Key issues like sampling efficiencies, tag development, survival estimation, and escapement are being worked on
- Monitoring and evaluation to provide such metrics is needed
- Workgroup members working on these issues and collaborate
- Forums for discussion have increased





Western Brook Lamprey

- Genetic analyses for WBL indicate fine scale population structure
- Funding for non-anadromous lamprey status research is needed



Columbia River Basin Lamprey Technical Workgroup



Synopsis of Lamprey-Related Projects Funded Through the Columbia River Basin Fish and Wildlife Program



Questions?



CHELAN COUNTY