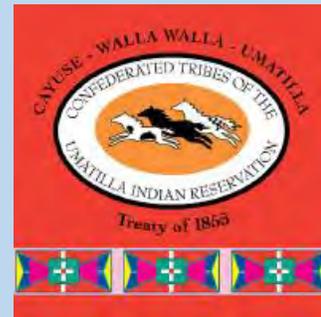
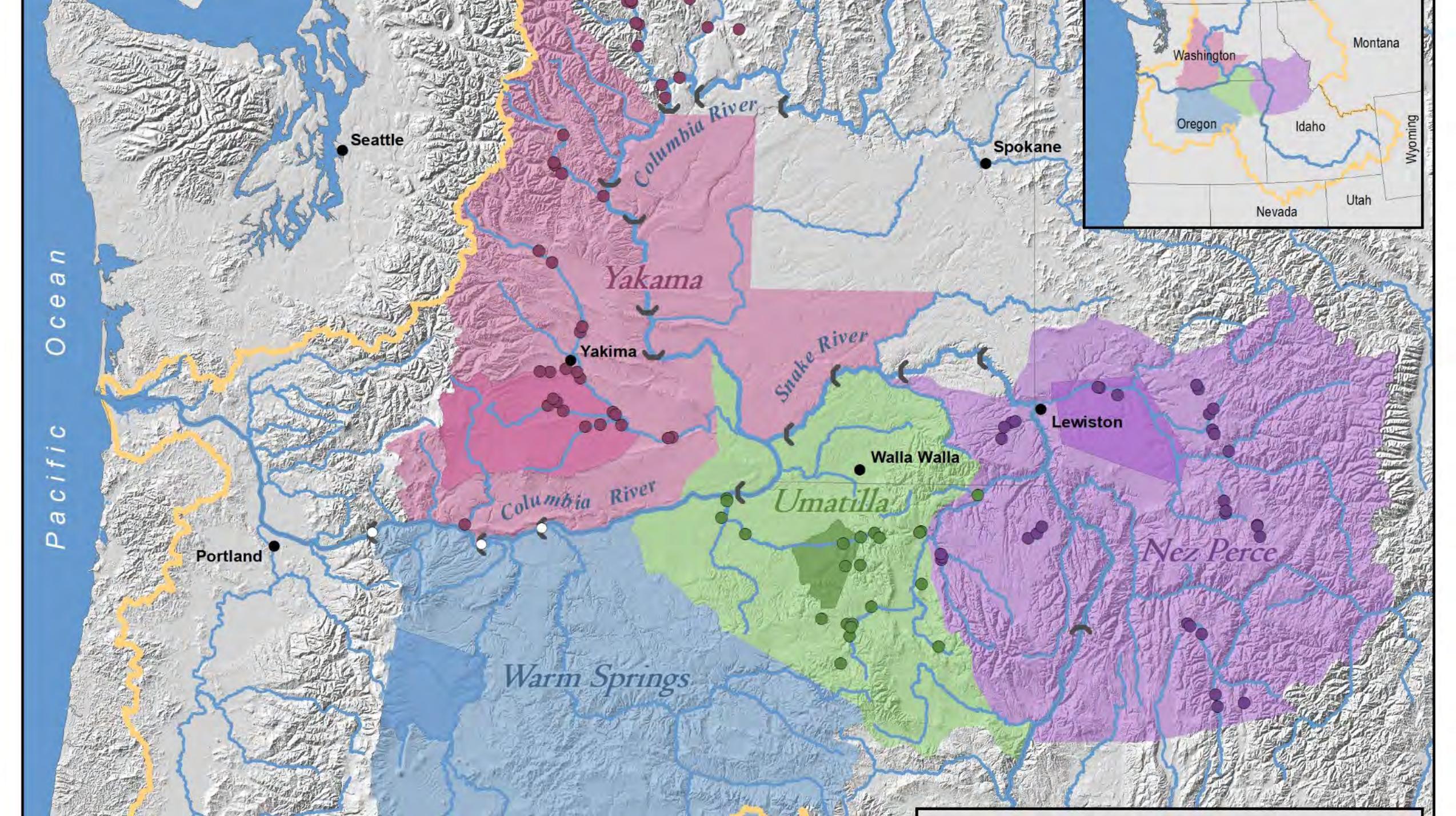
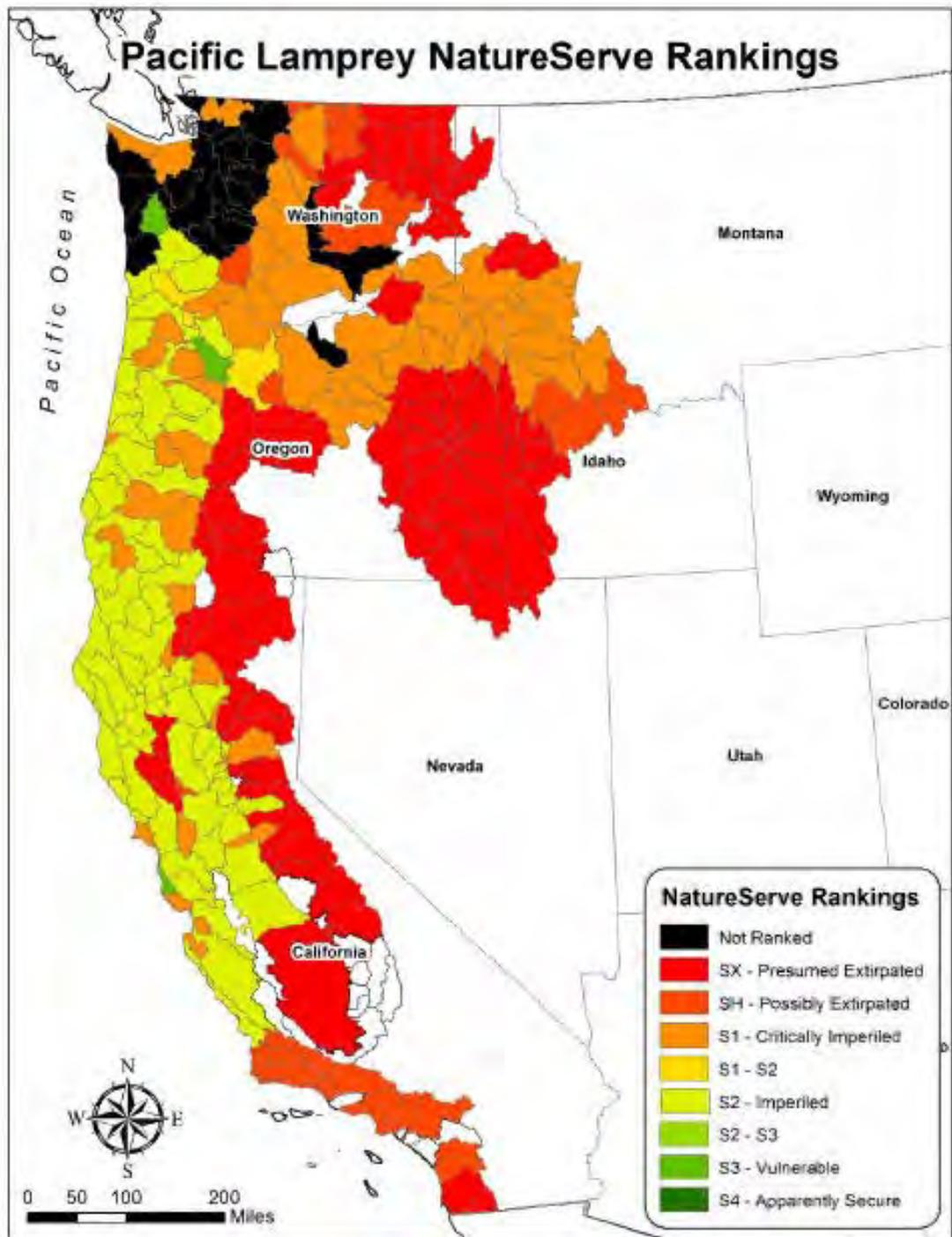


Master Plan for Pacific Lamprey Artificial Propagation, Translocation, Restoration, and Research – UPDATE

Laurie Porter – CRITFC; Brian McIlraith and Dave Ward – HDR; Aaron Jackson and Gary James – Umatilla Tribe; Ralph Lampman and Bob Rose – Yakama Nation; Dave Statler – Nez Perce Tribe

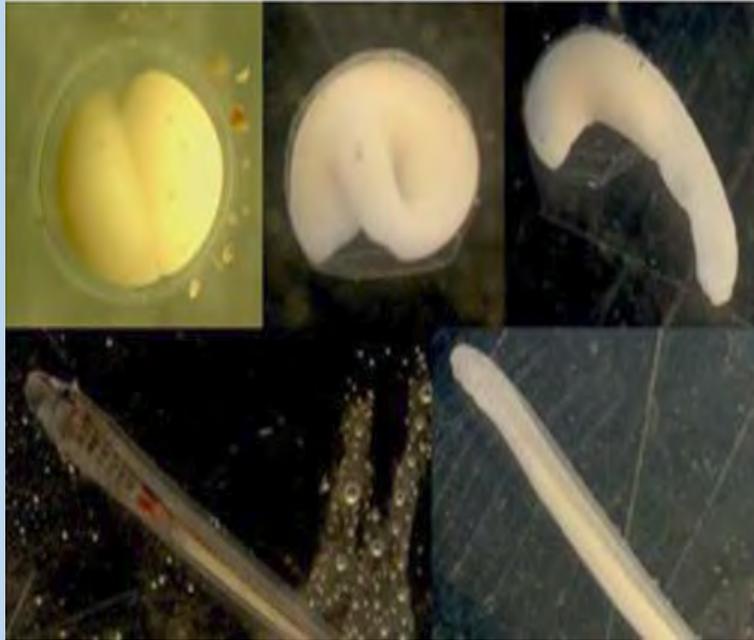






Lamprey Master Plan

- Purpose: Evaluate the feasibility of using artificial propagation and translocation techniques to better understand and restore Pacific Lamprey throughout its range
- The plan is a phased approach; phases overlap
- Geographic scope is within subbasins in the mid and upper Columbia River Basin
- Need for proactive restoration techniques, availability of larval/juveniles
- 2018 - ISRP finds that the Master Plan meets scientific review criteria
- Over 20 years of research by the projects supports the MP



Phase 1 – Lamprey Master Plan

- Laboratory Propagation
- 2012 - 2020



REVIEWS

Occurrence of pathogens in Pacific lamprey (*Entosphenus tridentatus*)

Aaron D. Jackson  · Mary L. Moser · Sam T. Onjukka · Scott LaPatra ·
Kenneth M. Lujan · Corie Samson · Melissa G. White · Marilyn Blair ·
Linda Rhodes · Ralph Lampman · Alexa N. Maine · Jeffrey C. Jolley

Received: 3 July 2018 / Accepted: 18 June 2019

© This is a U.S. Government work and not under copyright protection in the US; foreign copyright protection may apply 2019



Phase 2 - Lamprey Master Plan

- Field Phase – Outplanting of larval and juvenile lamprey and biological research to inform future actions
- 2018-2026

CHAPTER TWENTY TWO

DEVELOPING TECHNIQUES FOR ARTIFICIAL PROPAGATION AND EARLY REARING OF PACIFIC LAMPREY (*ENTOSPHEMUS TRIDENTATUS*) FOR SPECIES RECOVERY AND RESTORATION

RALPH LAMPMAN, MARY MOSER,
AARON JACKSON, ROBERT ROSE,
ANN GANNAM AND JAMES BARRON

Introduction

Of highest importance to the lower Columbia Basin Native American tribes is the focus on protection and enhancement of "First Foods" such as water, salmon (*Oncorhynchus* species), Pacific lamprey (*Entosphenus tridentatus*), deer (*Odocoileus* species), cots root (*Sagittaria latifolia*), and huckleberry (*Vaccinium parvifolium*). These foods are central to the perpetual cultural, economic and sovereign benefit of the tribes. Lamprey or "eels" are served at tribal longhouse ceremonies and traditional funerals when they are available. The First Food serving ritual in the longhouse reminds people of the promise the foods made to the people and the people's reciprocal responsibility to respectfully use and take care of the foods. Humans have failed to carry out this reciprocal responsibility as demonstrated by the declining Columbia Basin Pacific lamprey

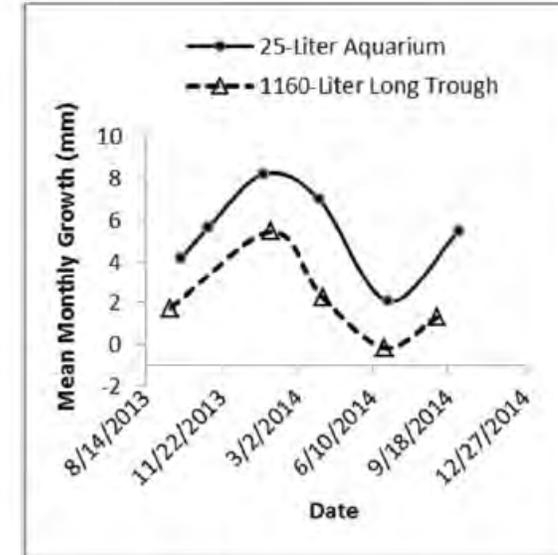


Fig. 22-17. Mean monthly growth (mm) observed for Pacific lamprey larvae hatched and reared in Prosser Fish Hatchery between 2013 and 2014 in two different tank settings.

Phase 3 - Lamprey Master Plan

- Synthesis Phase – Evaluation of results from Phases 1-2 and planning next steps towards recovery
- 2022 - 2029



Figure 5-5. East Lamprey Facility at Prosser Fish Hatchery.

Phase 4 – Lamprey Master Plan

- Full Implementation Phase – Implement restoration and supplementation actions
- 2020 - 2029

Current status of Implementation of Lamprey Master Plan

- Continuing to actively restore Pacific Lamprey through adult translocations
- Ongoing laboratory artificial propagation research
- Completing environmental compliance review through the Bonneville Power Administration
- Finalizing RM&E Program for Phase 2 objectives
- Anticipated implementation of Phase 2 objectives in Spring 2020

Lamprey Master Plan – Frequently Asked Questions



TIMETABLES:

USFWS BA:

- Submit BA to USFWS in Jan 2020.
 - Wait at most 120 days for USFWS response to issue Bi-Op coverage.
 - 2 separate offices Wenatchee and Spokane.
 - Assuming concurrence from USFWS.

NMFS Addendum:

12 pages, same time table, but quick turn-around anticipated.
No longer requiring a BA but an addendum.

EA:



Master Plan: Pacific
Lamprey Artificial
Propagation,
Translocation,
Restoration, and
Research

Conceptual phase to address
Step 1 – Master Plan review
elements

Prepared By:
Columbia River Inter-Tribal Fish Commission
Yakama Nation
Confederated Tribes of the Umatilla Indian
Reservation
Nez Perce Tribe

March 23, 2018

EA:

Pacific Lamprey Artificial Production and Release Research

Scoping: March 11, 2019 - April 11, 2019 (*30 days*)

Draft EA: January 2020

Go Public/BPA website (*30 days, Public comments similar to scoping*).

Final EA: Early Spring 2020

Any new comments added into the final.

FONSI: Late Spring 2020



Acknowledgements

Questions?



Heath Trays
(for eggs)

Circular Tank
(for adults)

10 Gallon
Aquarium
(for larvae)

Incubation Troughs
(for prolarvae/larvae)

02/09/2015

Figure 5-6. West Lamprey Facility (incubation room) at Prosser Fish Facility.