

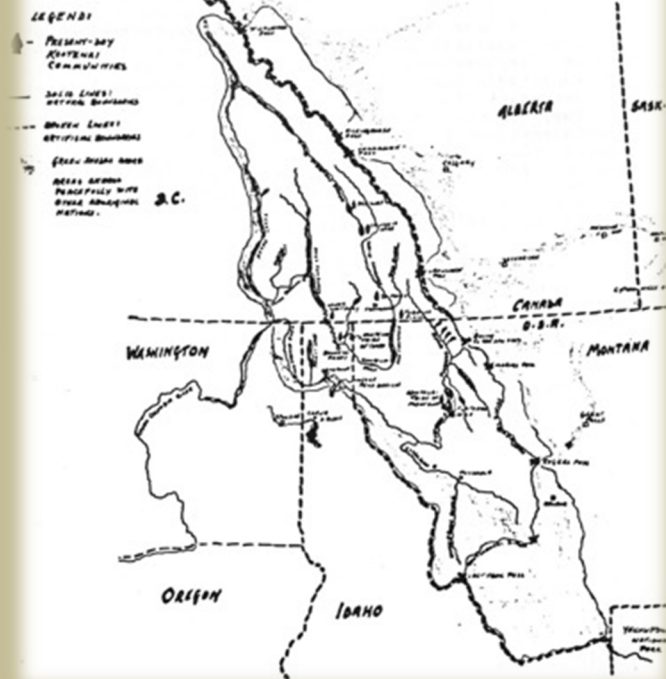
Kootenai River Restoration: Fish & Habitat

Kootenai Tribe of Idaho to KVRI, July 18, 2022





Kootenai Aboriginal Territory



Natural History of Kootenai Valley



Historical Cottonwood Galleries

Early 1900s = 60,000 - 100,000 board feet processed daily





BEFORE

- ✓ Very low White Sturgeon natural recruitment since 1960's.
- ✓ Federally endangered 1994 (USA) and 2006 (Canada).
- ✓ ~ 1,700 (wild) Adult White Sturgeon remain.



1974



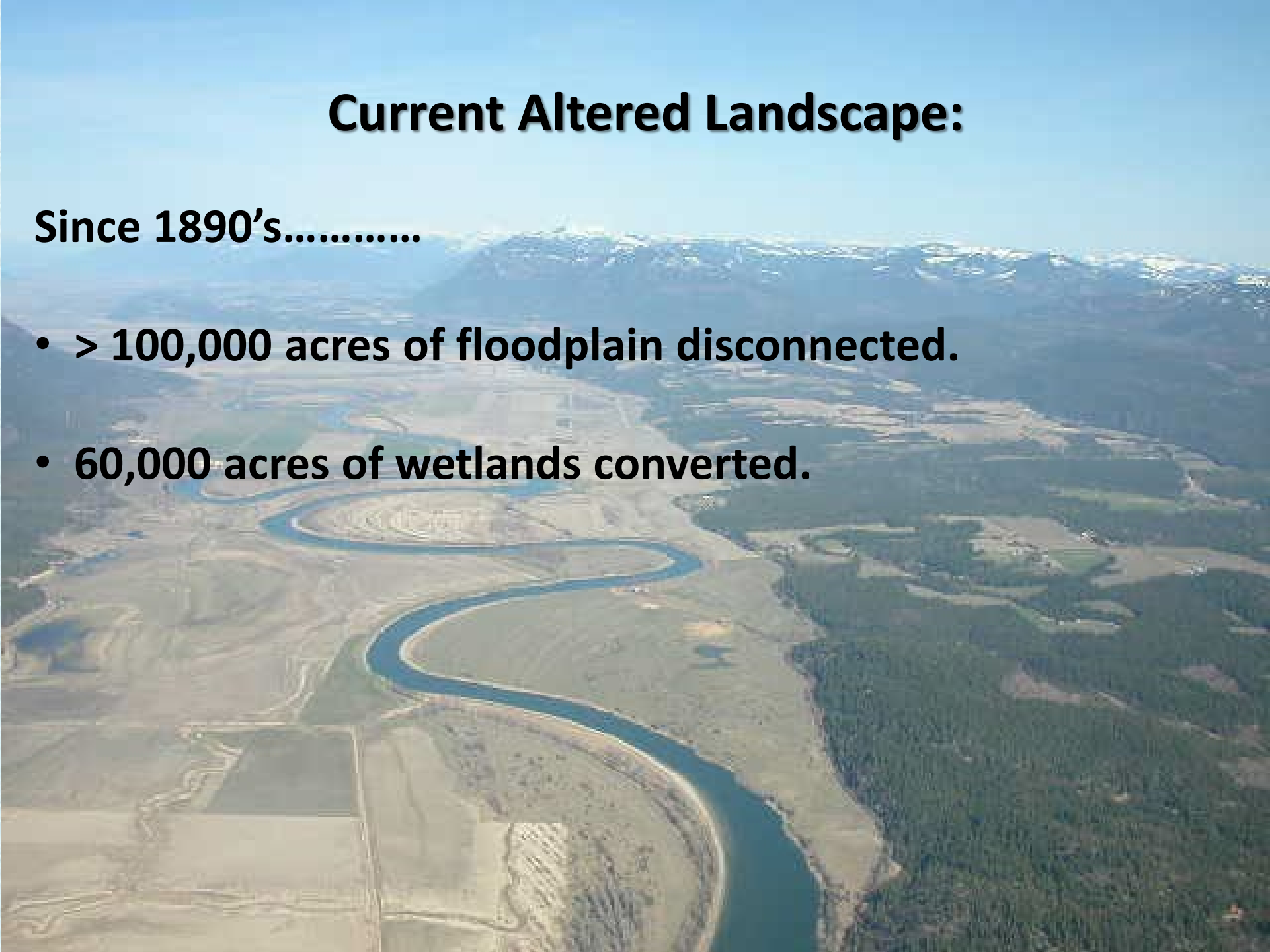
AFTER

- ✓ Burbot were functionally extirpated by 1990's.
- ✓ There were not enough Burbot to support a hatchery program, nor to use for research.

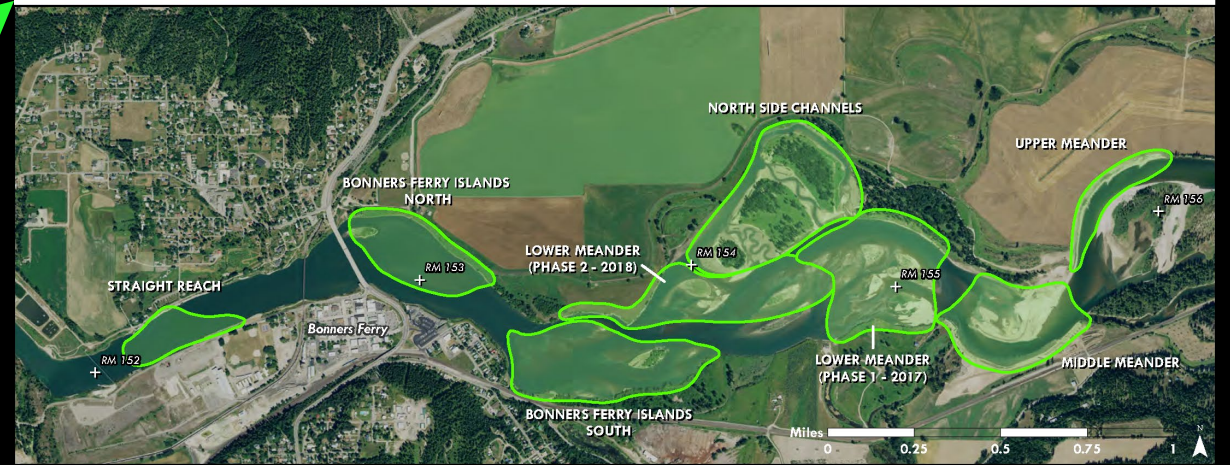
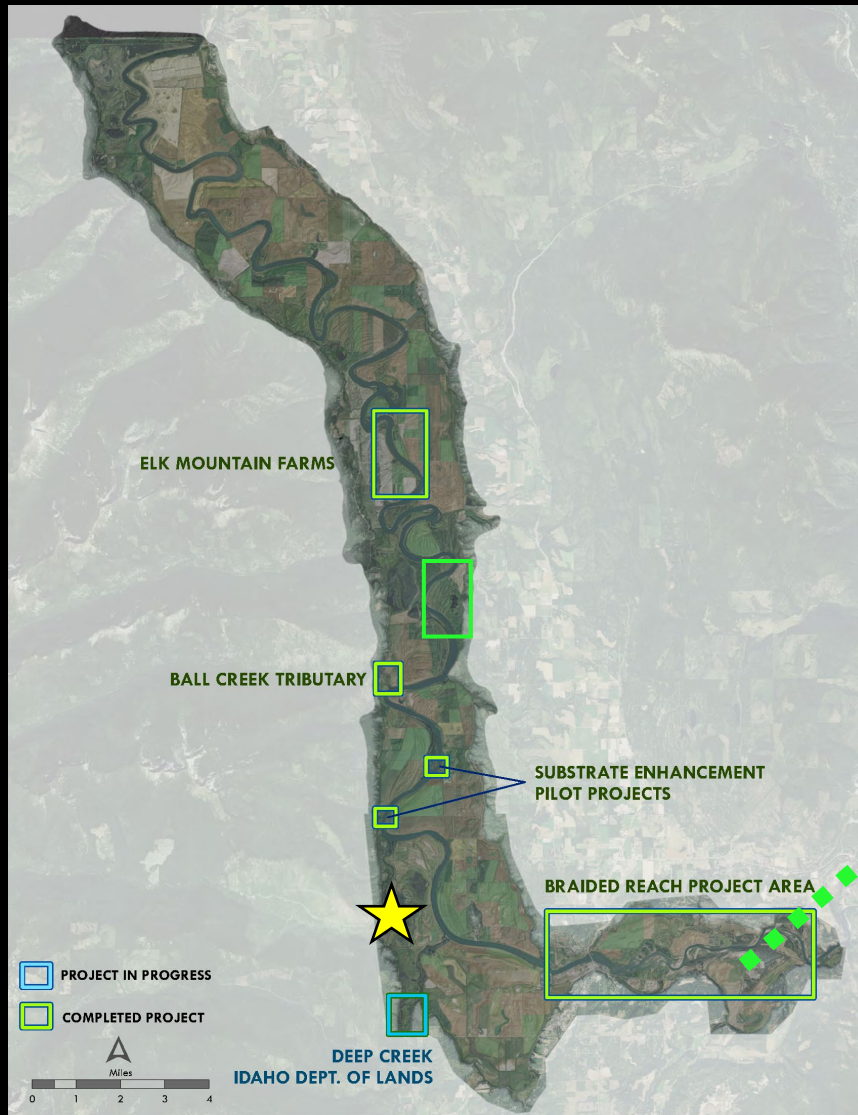
Current Altered Landscape:

Since 1890's.....

- **> 100,000 acres of floodplain disconnected.**
- **60,000 acres of wetlands converted.**



KRHRP: Work to Date





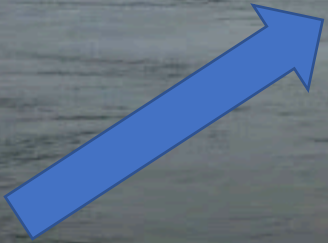




09/27/2012

Upper Meander Pile Structure

Flow





2012 Project: North Side Channels (pre-project conditions)



2012 Project: North Side Channel during construction



10/24/2012



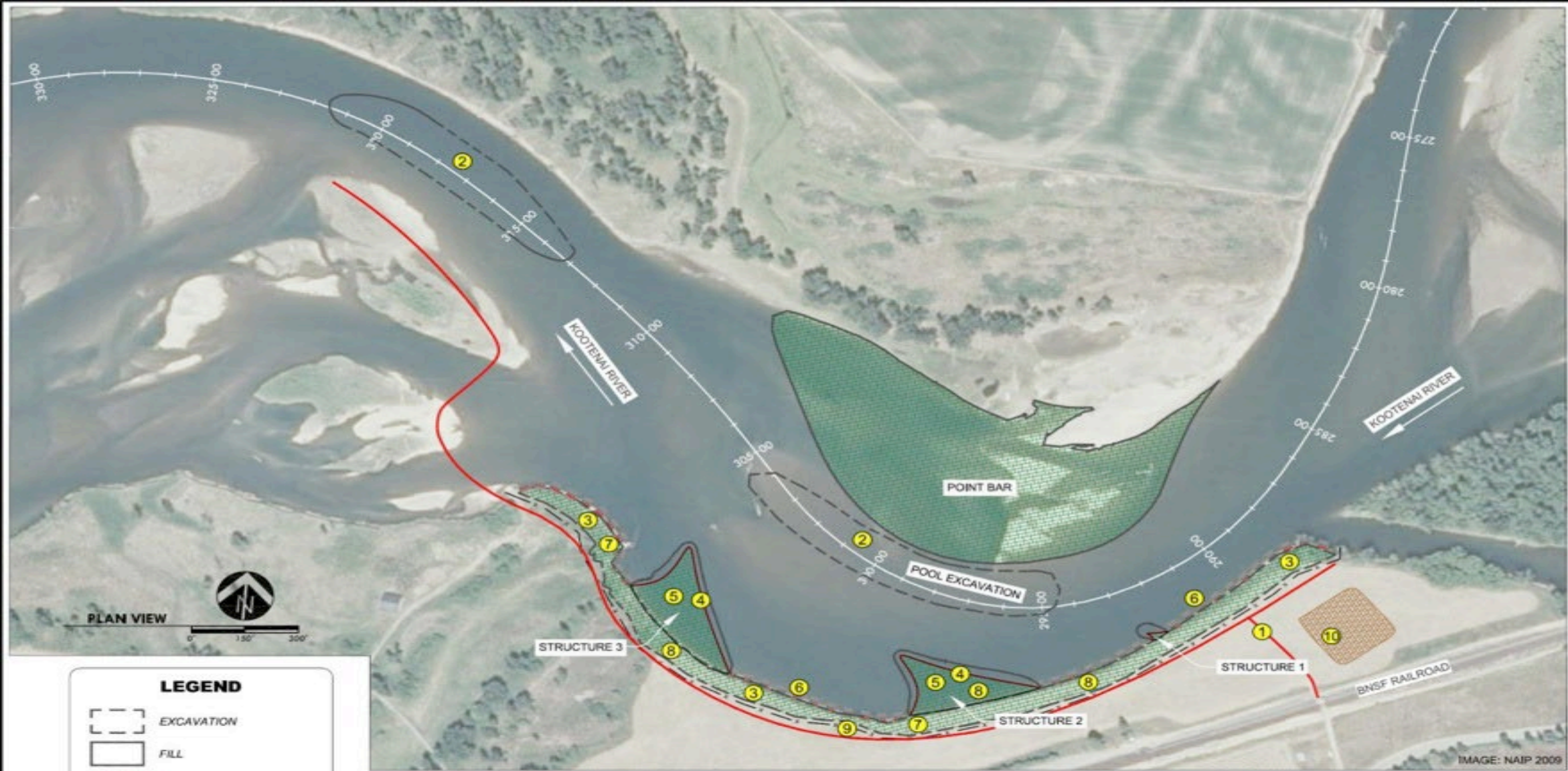
**Kokanee
in
North
Side
Channels
Project**



2013 Project: Middle Meander pre-project condition







PLAN VIEW



LEGEND

	EXCAVATION
	FILL
	FLOODPLAIN ROUGHNESS TREATMENT
	DESIGNATED STAGING AREA
	PLANTING AREA
	LARGE WOOD BANK STRUCTURE
	RIPARIAN EXCLOSURE FENCE

CONSTRUCTION NOTES

- | | |
|--|---|
| <ul style="list-style-type: none"> 1 PROJECT SITE ACCESS, STAGING AND CONSTRUCTION SEQUENCING TO BE PERFORMED ACCORDING TO DRAWING 4.0. 2 EXCAVATE POOL PER DRAWING 6.0 - 6.3. 3 EXCAVATE AND GRADE RIVERBANK TO 4:1 SLOPE PER DRAWINGS 6.0 - 6.3. 4 INSTALL PILES 3 FT OC PER PILE SCHEDULE AND PER DRAWINGS 8.2 - 8.5. 5 BACKFILL INTERIOR OF PILES AND STRUCTURE WITH SALVAGED RIPRAP, LARGE LOGS AND EXCAVATED RIVERBANK MATERIAL PER DRAWINGS 8.2 - 8.5. | <ul style="list-style-type: none"> 6 CONSTRUCT LARGE WOOD BANK STRUCTURES PER DRAWING 8.0. 7 ESTABLISH ROUGHNESS ON CONSTRUCTED SURFACES WITH MICROTOPOGRAPHY GRADING AND WOOD PLACEMENT PER DRAWING 8.1. 8 INSTALL CONTAINERIZED PLANTS, SEED AND WEED MATS ON CONSTRUCTED SURFACES PER DRAWING 9.0, 9.1, 9.2. 9 INSTALL RIPARIAN EXCLOSURE FENCE PER DRAWING 9.0. 10 PROJECT SITE RECLAMATION TO BE PERFORMED ACCORDING TO DRAWING 10.0. |
|--|---|

RIVER DESIGN GROUP, INC.
 5098 Hwy 93 South
 WAHLECHA, WA 99177
 WA 509.852.4927
 WA 509.852.4928

311 SW Jefferson Avenue
 Corvallis, OR 97333
 OR 541.758.2929
 OR 541.758.8134

Kootenai Tribe of Idaho

Kootenai River Habitat Restoration Project
Middle Meander Restoration Design
Restoration Plan

NO.	DATE	BY	DESCRIPTION	CHK
1	11-29-12	NW	35% Design	NO
2	03-04-13	SW	UPDATE FOR PERMITTING	NO
3	04-16-13	NW	REVISIONS	NO

preliminary

-not for construction-

PROJECT NUMBER
8DC-12-010

SHEET NUMBER
3.0

Middle Meander - Construction





Hydraulics

Deposition

Scour Pool

Eddy









March 23, 2017 – Bonners Ferry Islands Constructed Islands



Bank Revegetation

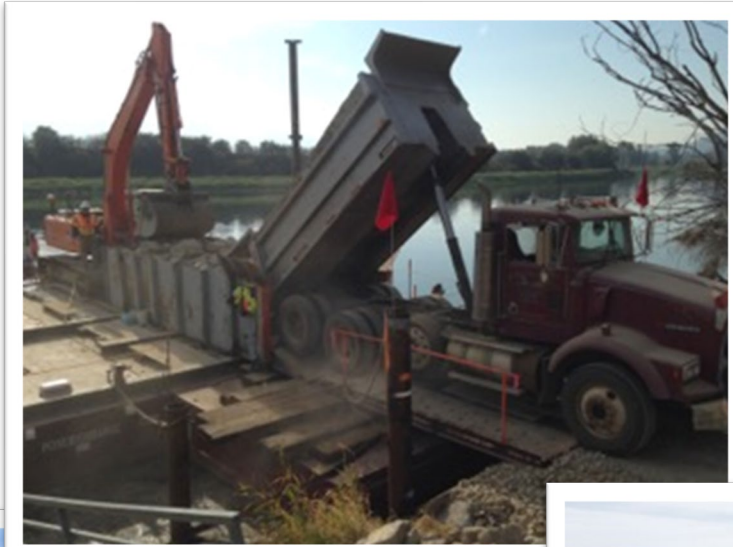


Willow Bundles





Substrate Enhancement Pilot Project (SEPP)

















2012/02/13 13:03:46

NW

35.1 F



2012/02/12 16:41:39

E

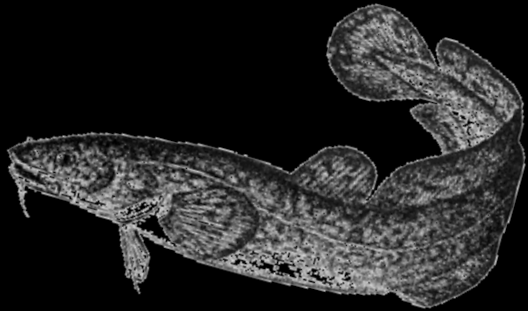
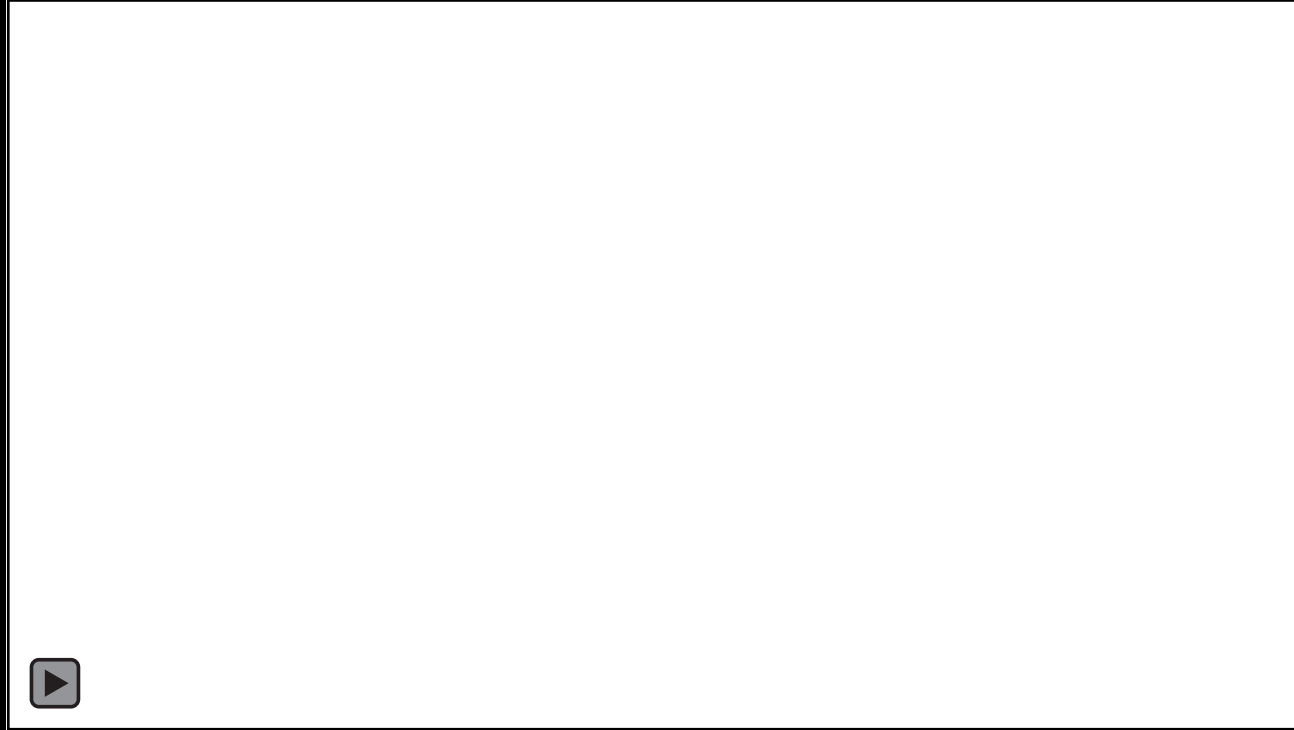
1.7 C

Picture of IDFG staff conducting winter hoopnet surveys, which provide almost all recapture data for adult Burbot

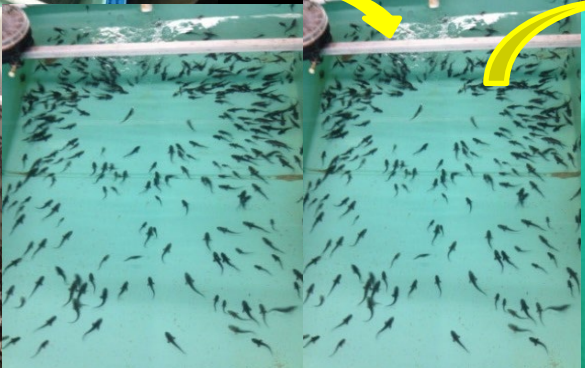


Parental Based Tagging (IDFG)



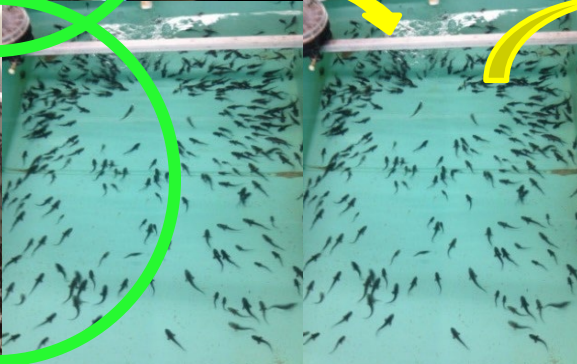
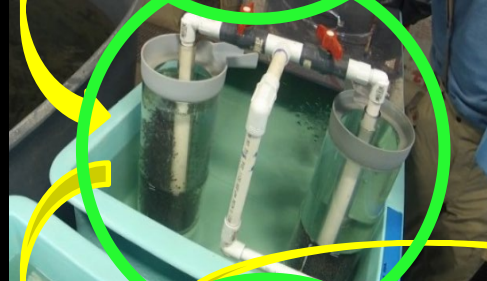


Dan Aitken, KTOI Sturgeon Technician



Parental Based Tagging

Univ. CA-Davis:
Aviva Fiske, PhD Candidate
Dr. Andrea Schreier



Dan Aitken, KTOI Sturgeon Technician

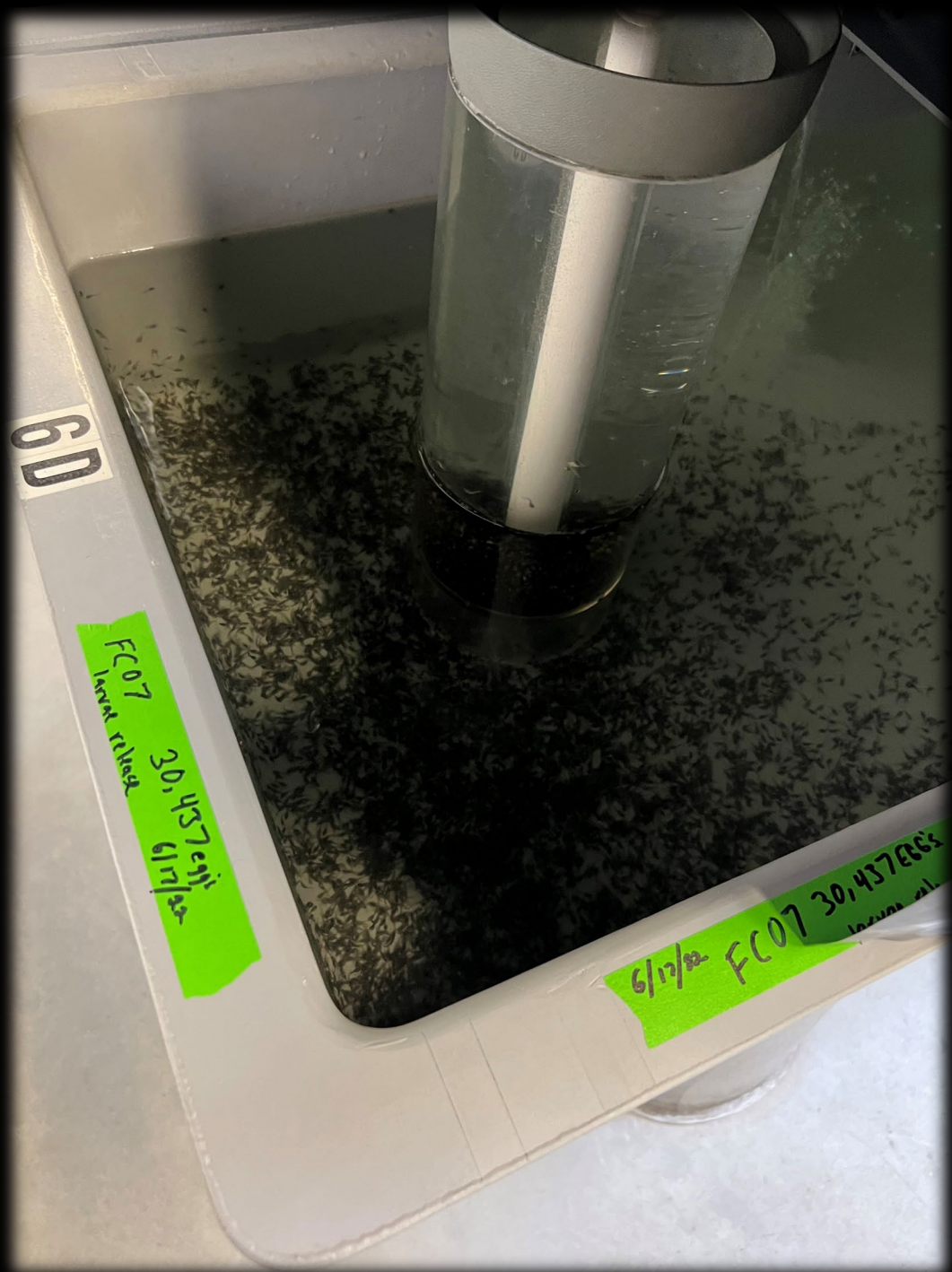


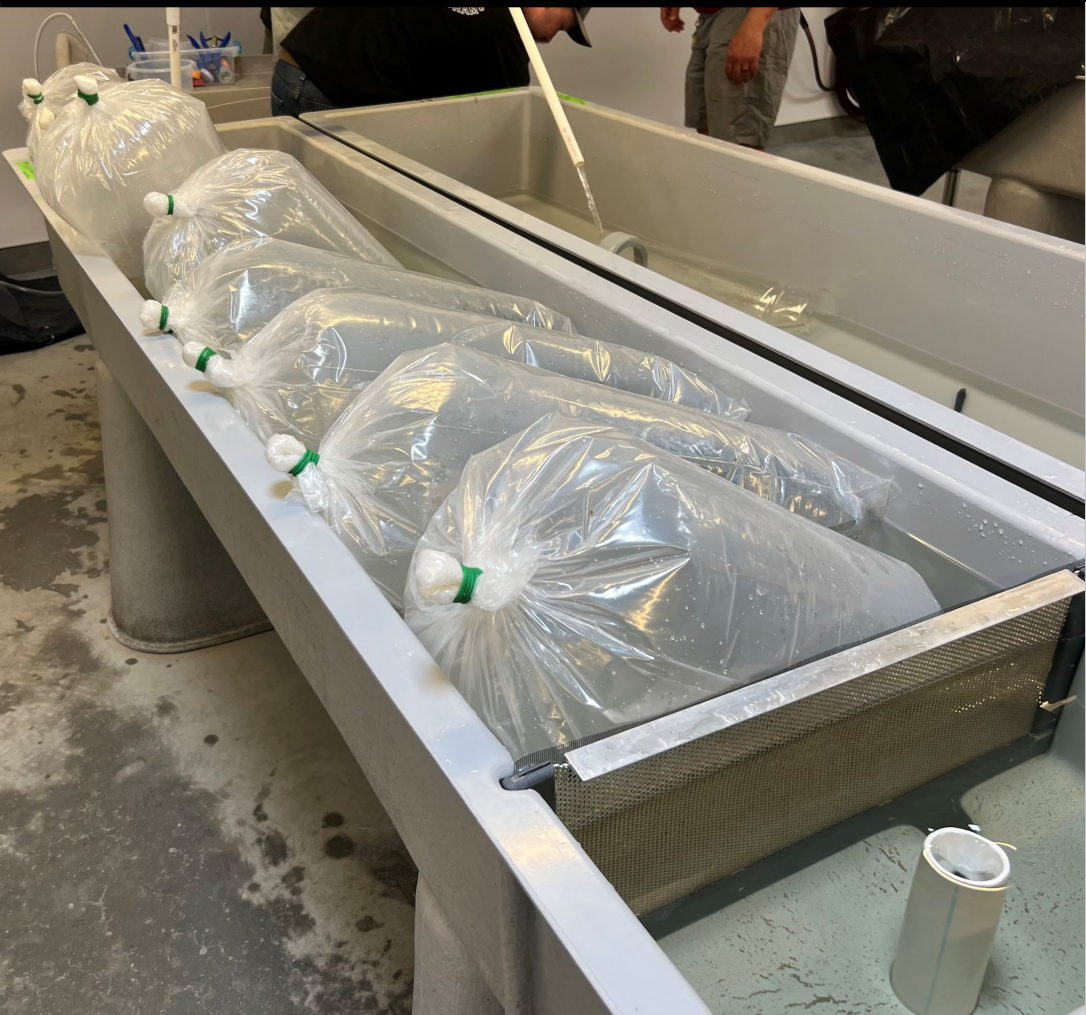
KTOI Staff Preparing Female



Mark Elliston, KTOI Technician









09/27/2012















Collaboration



We thank Bonneville Power Administration &
Northwest Power and Conservation Council



Committment