Clear Creek Dam Fish Passage Assessment

2012-2016

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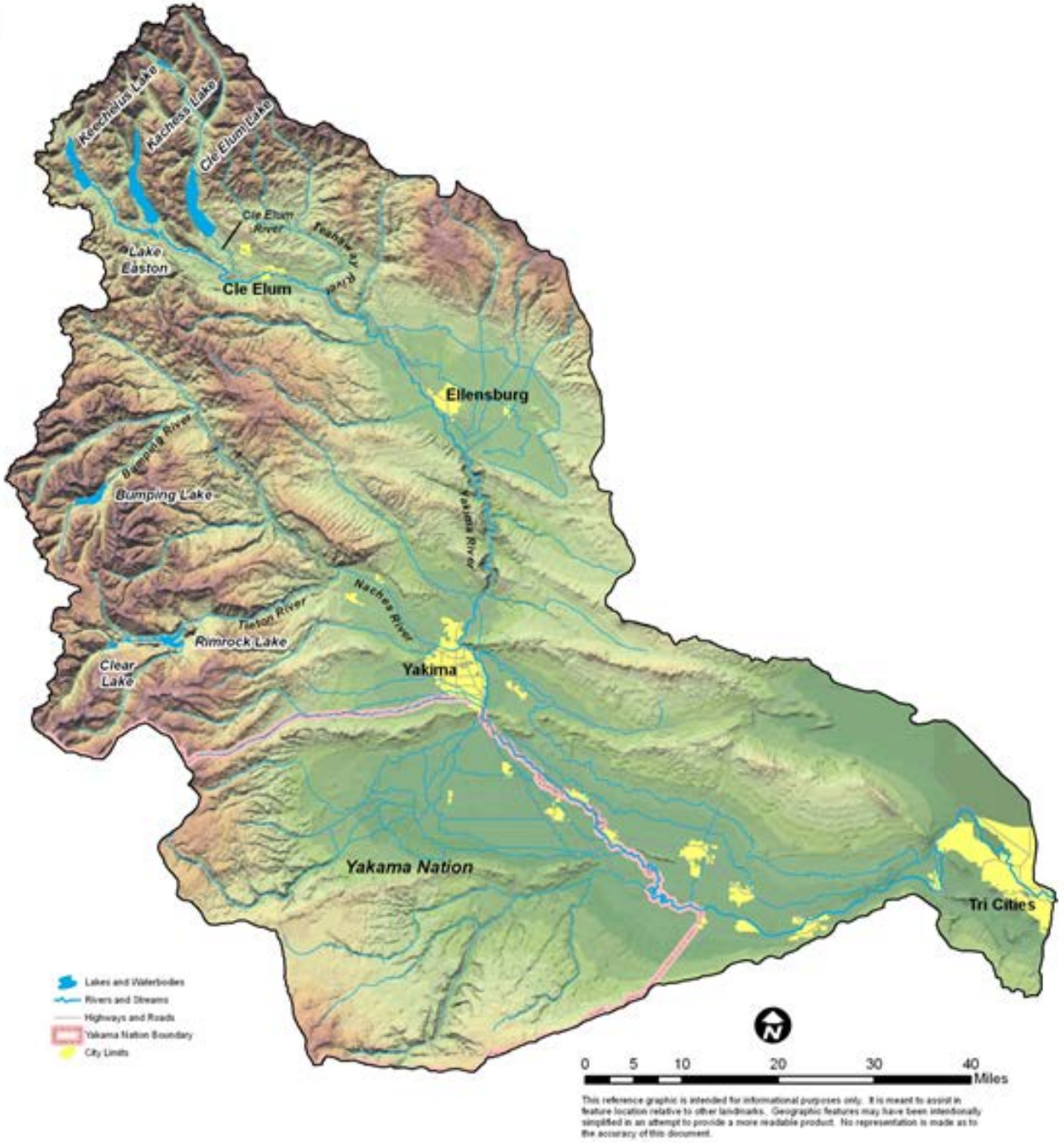
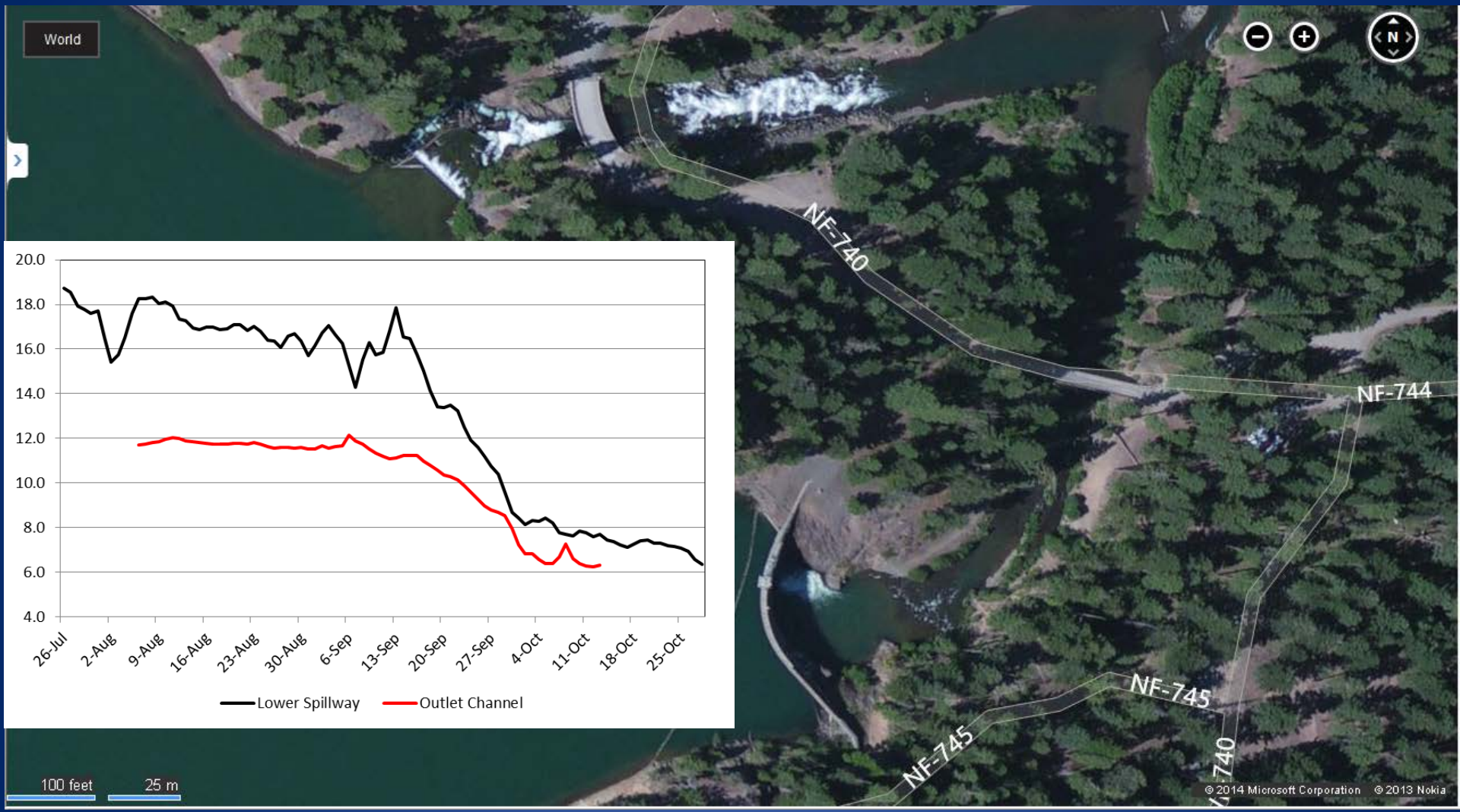

Keechelus Lake
Kachess Lake
Cle Elum Lake
Cle Elum River
Teanaway River
Lake Easton
Cle Elum
Ellensburg
Bumping River
Bumping Lake
Yakima River
Naches River
Tieton River
Rimrock Lake
Clear Lake
Yakima
Yakama Nation
Tri Cities
Lakes and Waterbodies
Rivers and Streams
Highways and Roads
Yakama Nation Boundary
City Limits
0 5 10 20 30 40
Miles
This reference graphic is intended for informational purposes only. It is meant to assist in feature location relative to other landmarks. Geographic features may have been intentionally simplified in an attempt to provide a more readable product. No representation is made as to the accuracy of this document.

Built in 1914; raised to 83 feet high in 1918; 5,300 acre-feet; repaired in 1994; fish ladders added.

P33-A10YB-002 View of Clear Creek Dam shortly after completion, showing water flowing over crest. Photographer Unknown. c. 1912.


World
N
NF-740
NF-744
NF-745
NF-745
NF-740
20.0
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
26-Jul
2-Aug
9-Aug
16-Aug
23-Aug
30-Aug
6-Sep
13-Sep
20-Sep
27-Sep
4-Oct
11-Oct
18-Oct
25-Oct
Lower Spillway
Outlet Channel
100 feet
25 m
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Study Objectives

- Determine if and when bull trout attempt to migrate past Clear Creek Dam
- Assess passage success under various flow conditions
- Determine post-spawn migration timing and extent of Clear Lake use

Ancillary objectives include determining spawning frequency, collecting genetic samples, and estimating the size of the NF Tieton bull trout population

Study Methods

- Trap post-spawn fish in September in the NF Tieton River using a picket-weir box trap
- Surgically implant 23mm Half-Duplex PIT tags
- Obtain genetic samples and collect other data
- Construct PIT tag detection arrays at key locations
- Collect movement data

Year	NF Tieton Redds
2007	37
2008	28
2009	15
2010	18
2011	11
2012	17
*2013	10

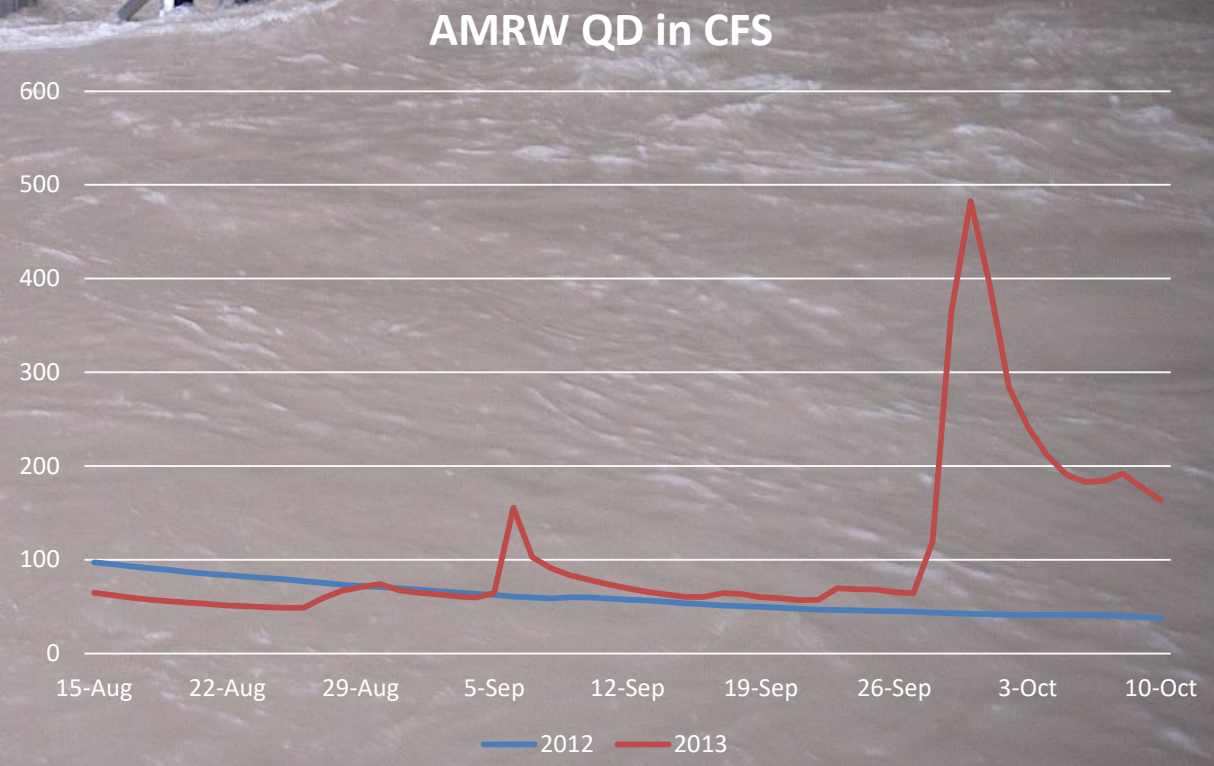
September 9, 2013

EXIT

September 22, 2013

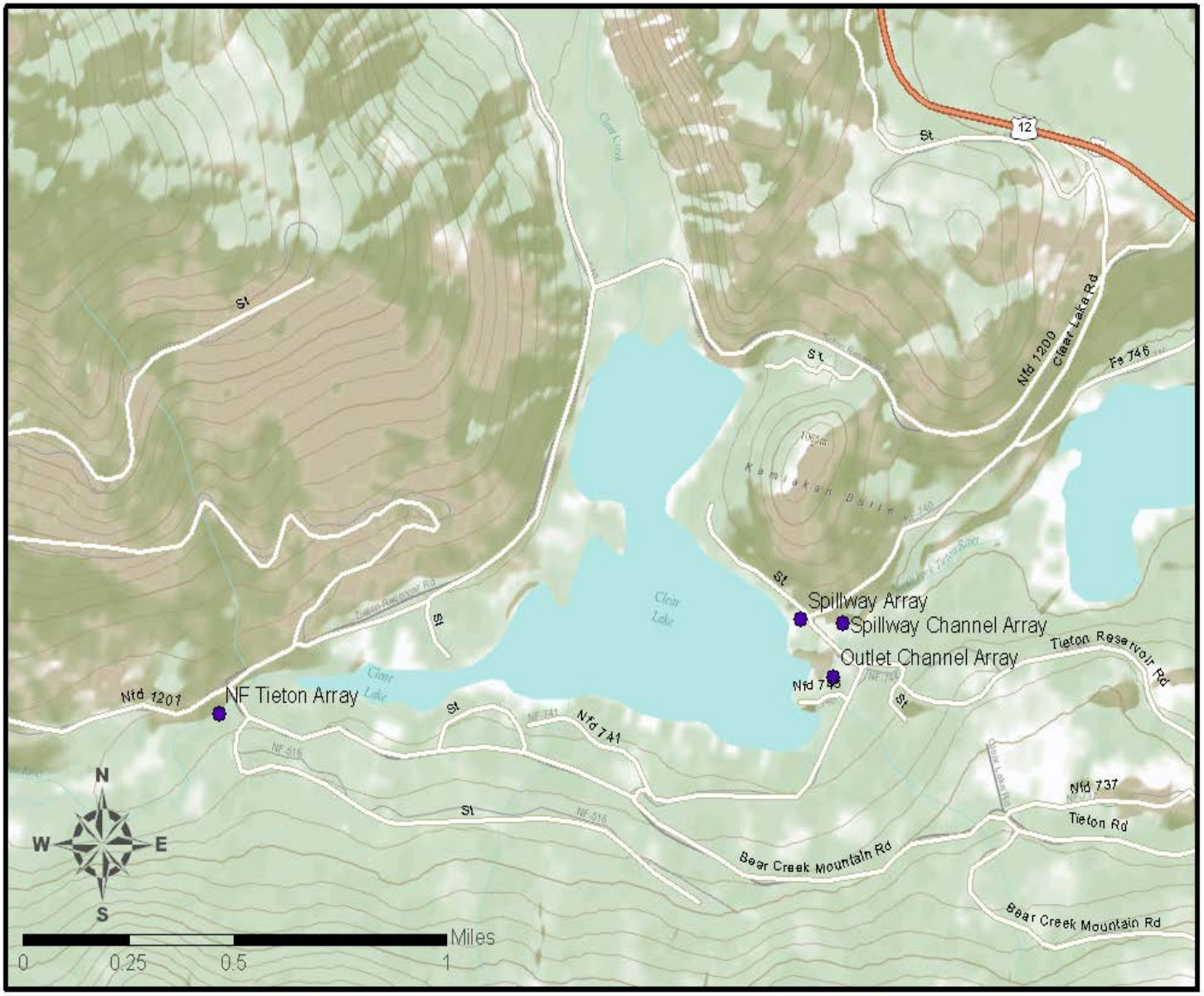
Wasn’t always quite so tranquil

September 29, 2013



Oregon RFID
on
MADE IN U.S.A

General Location of PIT Tag Arrays for Clear Creek Dam Fish Passage Evaluation



Antenna Problems

Preliminary Results

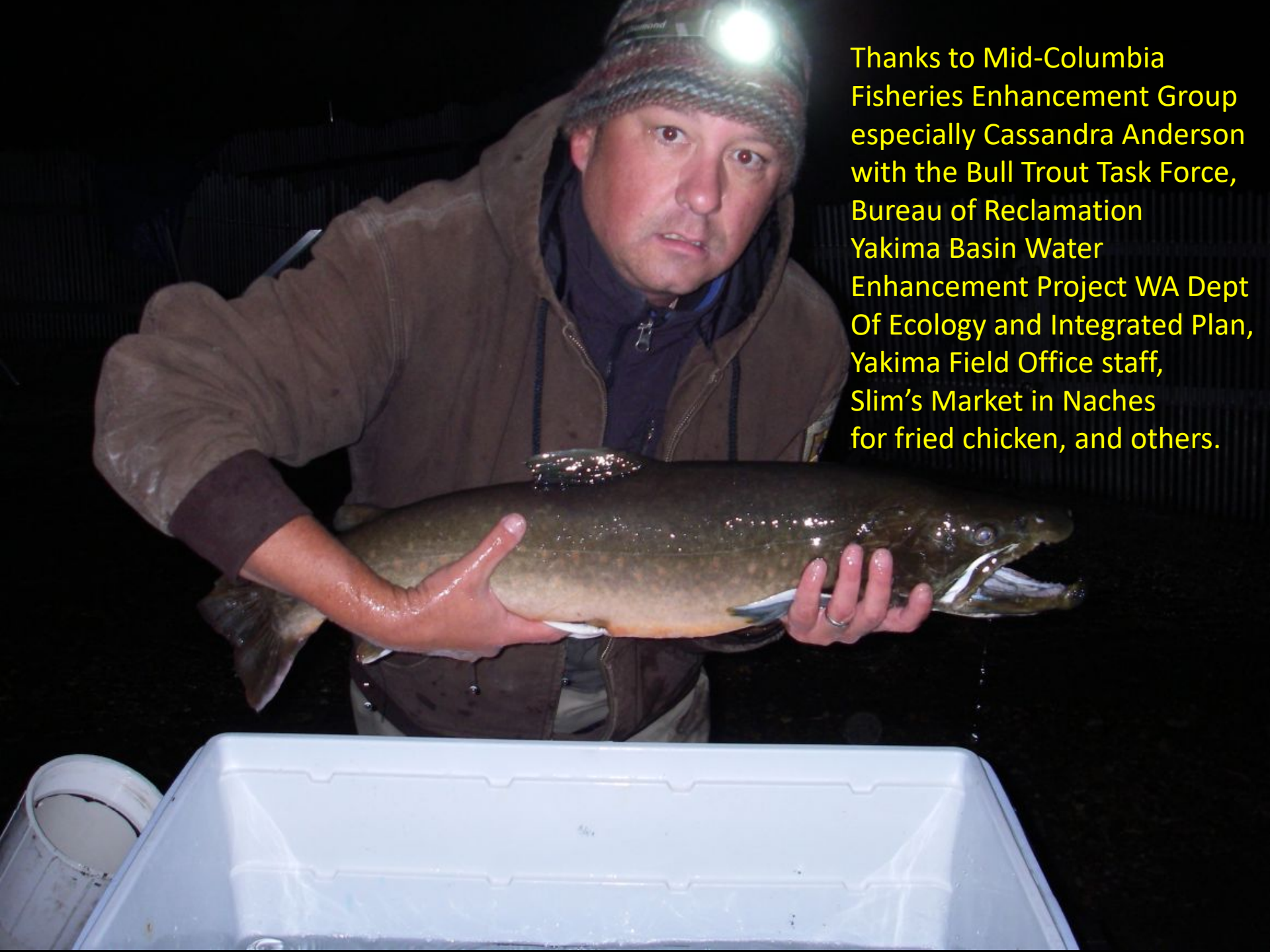
- Trap Operated from Sept. 17-Oct 5, 2012 (maybe late)
- 10 bull trout tagged (6 males, 4 females)
- One female tagged in 2012 was detected at the ladder in the fall of 2012. That same fish was also detected in 2013 at lower spillway on July 18, at the upper ladder on July 29, and on NF Tieton on August 29.
- 7 other fish tagged in 2012 were detected at NF Tieton PIT tag site, but not elsewhere.

Preliminary Results Continued

- Trap operated from Sept. 9-28, 2013
- 16 fish captured (2 recaps), 14 bull trout tagged (5 males, 9 females)
  - All 14 tagged in 2013 were detected at NF Tieton site
- Only two bull trout (one each in 2012 and 2013) have thus far been confirmed emigrating to Rimrock Lake*
- 22 of the 24 bull trout tagged were detected at least once in 2013, at one or more of the PIT tag detection sites
- With only two recaptures in trap, population abundance estimate is 61 +/- 24
- Is the majority of the population residing in Clear Lake?

*Complications with two of our antennae preclude a determination of significance for this statistic

Future Activities



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