

# YAKAMA NATION SOCKEYE RESTORATION PROJECT

**MARK JOHNSTON, SR. RESEARCH SCIENTIST, DAVE FAST SR. RESEARCH SCIENTIST, AND BRIAN SALUSKIN, FISH PASSAGE BIOLOGIST**



Spawning Sockeye  
Cle Elum River

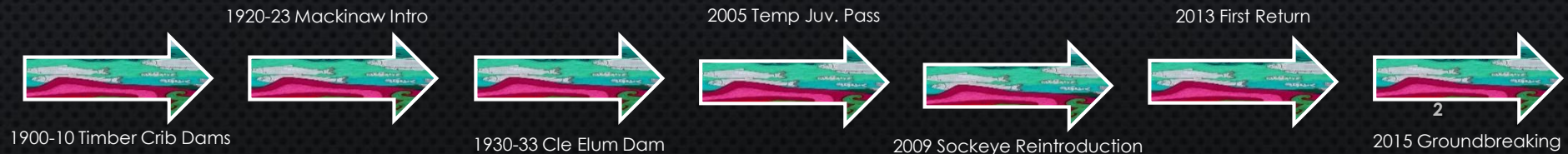




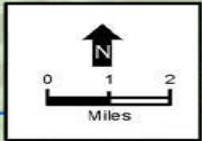
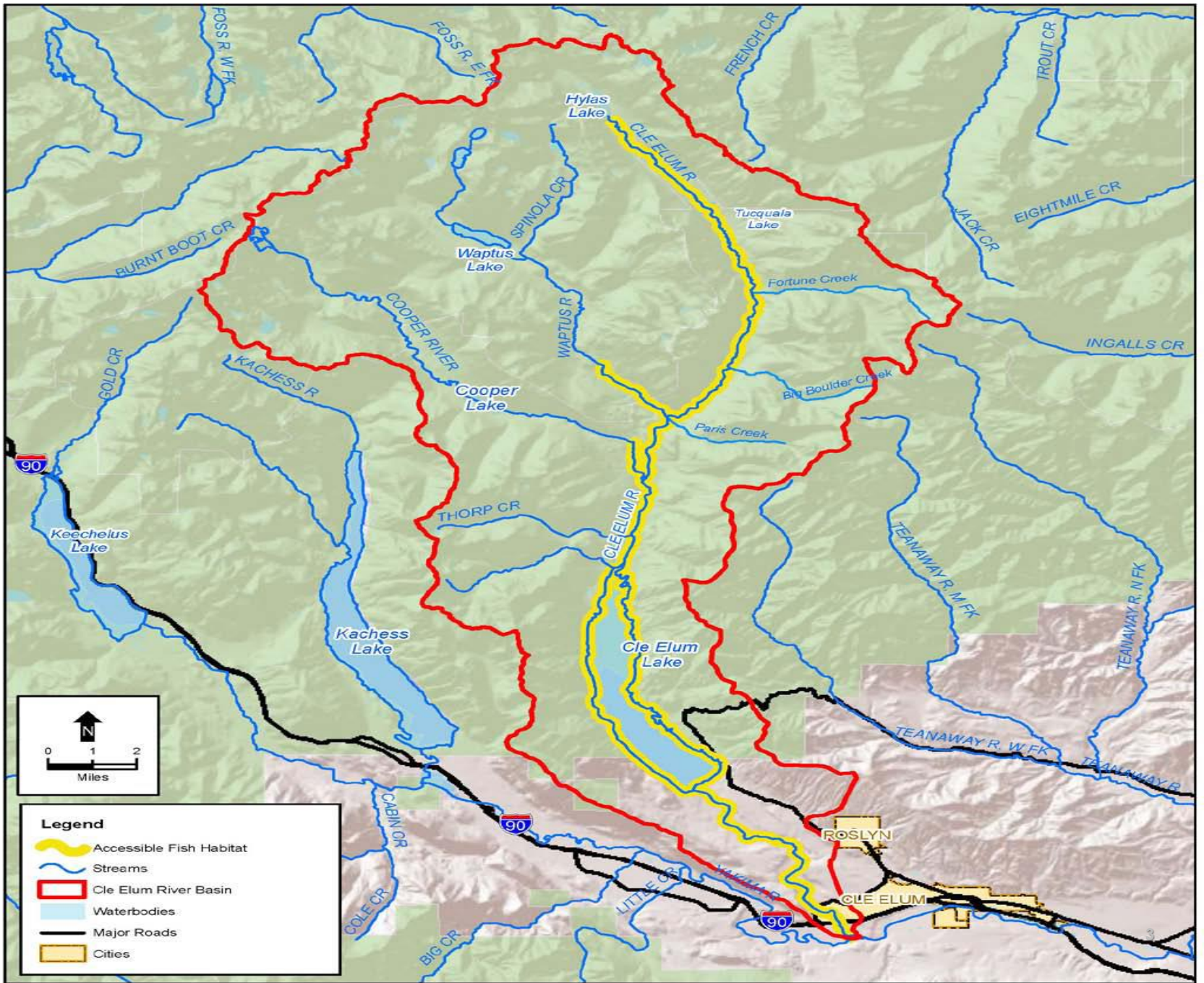
# 1900-10 TIMBER CRIB DAMS

Timber crib dams constructed by local mill owners between 1904-1910 at the outlet of these four major glacial lakes blocked fish passage to tributaries upstream from the dams.

Timber dams were followed by the large Reclamation storage dams, eliminated access to previously productive spawning and rearing habitat for anadromous salmonids and resident fish and inundated a considerable amount of pristine, high-quality habitat.







**Legend**

- Accessible Fish Habitat
- Streams
- Cle Elum River Basin
- Waterbodies
- Major Roads
- Cities



# 1920-23 MACKINAW INTRO

## MORE TROUT FOR KITTITAS

state of Washington to get 5,000,000 Mackinaw Trout Eggs from Wisconsin—County Game Commission will Ask for All They Can Get

Chairman M. C. Miller of the Kittitas Game Commission Wednesday received word from State Game Warden Darwin that 5,000,000 Mackinaw trout eggs would become available for planting in this state next year. They will come from Wisconsin. Mr. Miller states that the county game commission will immediately apply for all they can get to plant in Lakes Cle Elum, Keechelus and Kachemah which are deep water lakes well adapted to the Mackinaw. This season 50,000 of them were planted in Lake Cle Elum. Mr. Darwin's letter, which contains some other matters of interest to sportsmen, follows:

A holder of a non-resident hunter's license may take the number of birds which it is lawful for him to kill in this state in one day out of the state with him, provided that he executes an affidavit before a notary public or other officer having a seal, stating that the game to be so removed from the state was killed by him in a lawful manner and that said game is not being exported for the purpose of sale. Such affidavit shall describe said birds and shall be attached to said birds while in transit from the state.

The above is the substance of an opinion just rendered to me by the Hon. L. Thompson, Attorney General, and we will govern ourselves accordingly.

The Attorney General gives it as his opinion that Section 5473 Rem. & Bal. Code, which was enacted in 1905, and which expressly permits non-resident hunters to take the kill out of the state as provided above, was not repealed by the passage of the Game Code in 1913. This reverses the construction of the law heretofore given it by the Attorney General and the State Game Warden.

We are laying our plans this year to distribute a large number of Chinese pheasant eggs and a smaller number of Mallard duck eggs without charge from the State Game Farm at Walla Walla to those County Game Commissions and citizens generally in the state who will agree to hatch the eggs and liberate the offspring when it is able to take care of itself.

Will you be good enough to advise me if it is the desire of your Game Commission to accept any of these eggs of either variety, and if so, the number that you desire to have.

If your County Game Commission is unable to handle this, I suggest that you take the matter up with the newspapers of your county and see if they will not interest in it. If they do, you can care to receive eggs on the above conditions. Last year we had hundreds of applications for eggs from persons who desired to raise Chinese pheasants.

We also beg to advise you that we have arranged an exchange with the State of Wisconsin of five million silver trout eggs for five million Mackinaw trout eggs. Mackinaw trout require deep water. Kindly advise if your county desires any of these, and

29 Oct. 1920

## PLANT NEARLY 2,000,000 FRY

Kittitas County Game Commission Make Annual Report—Of Much Interest to Sportsmen Over the County.

According to a report of W. E. Crowley, chairman of the Kittitas county game commission, nearly 2,000,000 fish have been reared and distributed in the various streams, lakes and sloughs of the county within the past year. Of this number 1,256,000 were Eastern Brook trout, 114,200 Steelhead trout, 97,000 Rainbow trout, 50,000 Montana Black Spotted trout and 200,000 Cut-throat trout, of a total of 1,717,700. The fish were all hatched at the county hatchery at Cash on a hill about a mile west of South Cle Elum, under the direction of Fred Yeoman.

The planting of the fry have been in the following waters: Eastern Brook—Short & Dunnington ranch, 40,000; Fittover's slough near Yeoman's mill, 40,000; Thorp pond, 40,000; railway slough near Thorp, 40,000; Farrell's slough near Thrall, 35,000; Ringer slough near Thrall, 40,000; Lake on Lookout mountain, 6,000; Cooper lake, 355,000; Swamp lake, 40,000; Deacon slough, near upper Ellensburg bridge, 40,000; Reed creek, Fred Hansen ranch, 40,000; Fish lake, 200,000; Pease slough south of Ellensburg, 75,000; Smith slough south of Ellensburg, 35,000; Lake Keechelus, 100,000; Indian George slough south of Ellensburg, 35,000; Fogarty slough, 35,000; Hansen creek, northeast of Ellensburg, 35,000; Wallace slough near Thorp, 35,000; Wilson creek, 35,000.

Other varieties—Lake Keechelus, Steelhead, 114,200; Taneum Black 500; Taneum creek, Montana Black 97,000; Farrall's slough, 40,000; Cutthroats, 100,000; Nanum creek, Cutthroats, 66,000; Menashtah creek, Cutthroats, 33,000.

In Cooper lake, fish lake and Lake Keechelus, three of the most important lakes within the county, considerably over half a million were planted last year, the total all varieties, being 867,705. 1,132,300 fry were planted in streams, lakes and sloughs in the southern part of the county or easily accessible to residents in that section.

During the year 65 chickens, 60 ducks and a few Chinese pheasants were released. A total of 3,613 county hunting licenses, 27 trappers' licenses, 7 non-resident licenses, and 25 state licenses were issued during 1922. Seventy-eight beaver were trapped and sections of the commission and the money turned in to them. From 20 violations of the game laws were detected. Bounty was paid on 131 coyotes, 12 bobcats, 100 muskrats, 1 wildcat. It is stated that approximately 100 muskrats were killed during 1922. 2,250 magpies were killed during the year and the county by state hunters and poison.

FRIDAY, DECEMBER 24, 1920

## 150,000 EGGS FOR OUR COUNTY

Large Shipment of Mackinaw Trout Eggs Delivered at County Hatchery in South Cle Elum by Darwin

Supt. Higgs of the county hatchery late last week received a shipment of 150,000 Mackinaw trout eggs from State Fish Commissioner Darwin, which he will hatch out next spring for early planting in this county. This is the largest shipment of Mackinaw yet received and the county game commission is very grateful for it, as well as sportsmen generally. Some time ago Representative Hubbell went to the editor stating that Commissioner Darwin secured very favorably disposed.

Last spring 50,000 Mackinaws were planted in Lake Cle Elum. This species of trout will very likely all be placed in large lakes of the county as the Mackinaw grows to a large size and requires deep water. If the Mackinaw thrives here, the people of Kittitas county will have some of the finest fishing imaginable as well as a fish which is the peer of any in the world for eating.

A movement is under way now to trade Silver trout eggs which can be taken in Lake Keechelus in large quantities for brook trout eggs, which are more acceptable here.



1920-23 Mackinaw Intro

2005 Temp Juv. Pass

2013 First Return

1900-10 Timber Crib Dams

1930-33 Cle Elum Dam

2009 Sockeye Reintroduction

2015 Groundbreaking



# 1930-33 CLE ELUM DAM





# 2005 TEMPORARY JUVENILE DOWNSTREAM PASSAGE

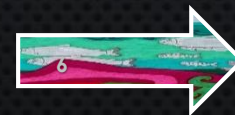
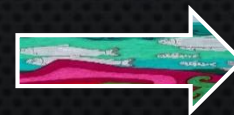
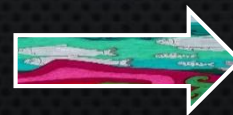
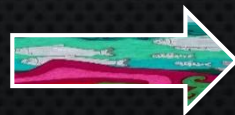
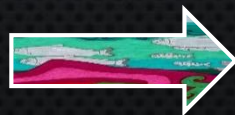
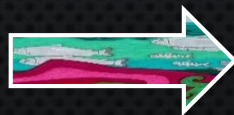
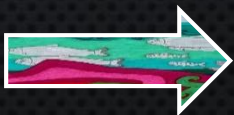


1900-10 Timber Crib Dams

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1920-23 Mackinaw Intro

2005 Temp Juv. Pass

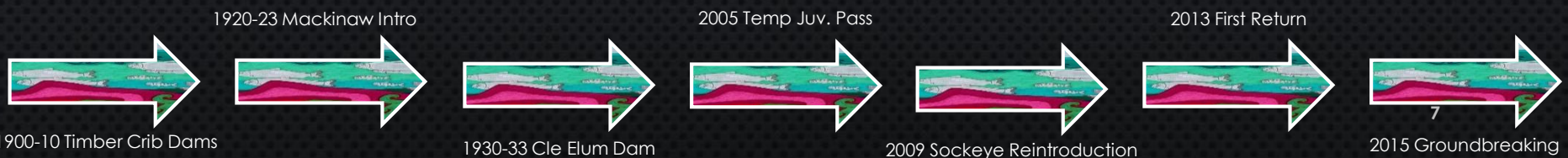
2013 First Return



# 2009-PRESENT SOCKEYE REINTRODUCTION

Year	Real No. Counted	Expanded Estimate
2009	7,823	9,850
2010	386	525
2011	297	2,501
2012	1,758	6,496
2013	1,758	14,019
2014	515	675
2015	266	47,897
2016	185	505
2017	1,053	4,500
2018	14,179	12,322
2019	2,883	29,001
2020	324	498
2021	324	498
2022	324	498
2023	324	498
2024	324	498
2025	324	498
2026	324	498
2027	324	498
2028	324	498
2029	324	498
2030	324	498

## 4.) RETURNING ADULTS BACK TO THE YAKIMA BASIN





# 2009-PRESENT SOCKEYE REINTRODUCTION

2009 THE REINTRODUCTION WAS COMMEMORATED WITH AN CELEBRATION AND WELCOME CEREMONY FOR THIS RESOURCE THAT HAS BEEN MISSING FROM THE YAKAMA NATION PEOPLE FOR OVER 100 YEARS.



1900-10 Timber Crib Dams



1920-23 Mackinaw Intro

1930-33 Cle Elum Dam



2005 Temp. Juv. Pass

2009 Sockeye Reintroduction



2013 First Return

2015 Groundbreaking





# 2013 SOCKEYE FIRST RETURN

## Sockeye Enumeration

IN 2013 THE FIRST RETURNING SOCKEYE FROM OUR REINTRODUCTION IN 2009 WAS COMMEMORATED WITH A CELEBRATION AND CEREMONY.

Daily Count

120  
100  
80  
60  
40  
20  
0

6/5/2012 6/12/2012 6/19/2012 6/26/2012 7/3/2012 7/10/2012 7/17/2012 7/24/2012 7/31/2012 8/7/2012 8/14/2012 8/21/2012 8/28/2012 9/4/2012 9/11/2012 9/18/2012 9/25/2012 10/2/2012 10/9/2012

Total: 703

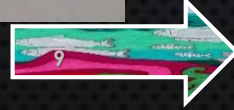
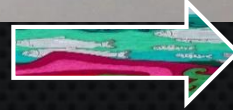
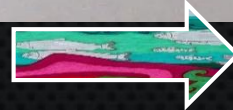
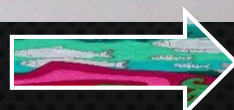
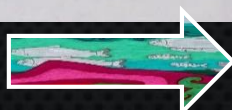
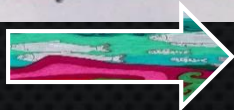
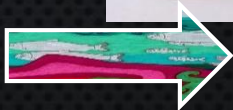


1900-10 Timber Crib Dams

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1920-23 Mackinaw Intro

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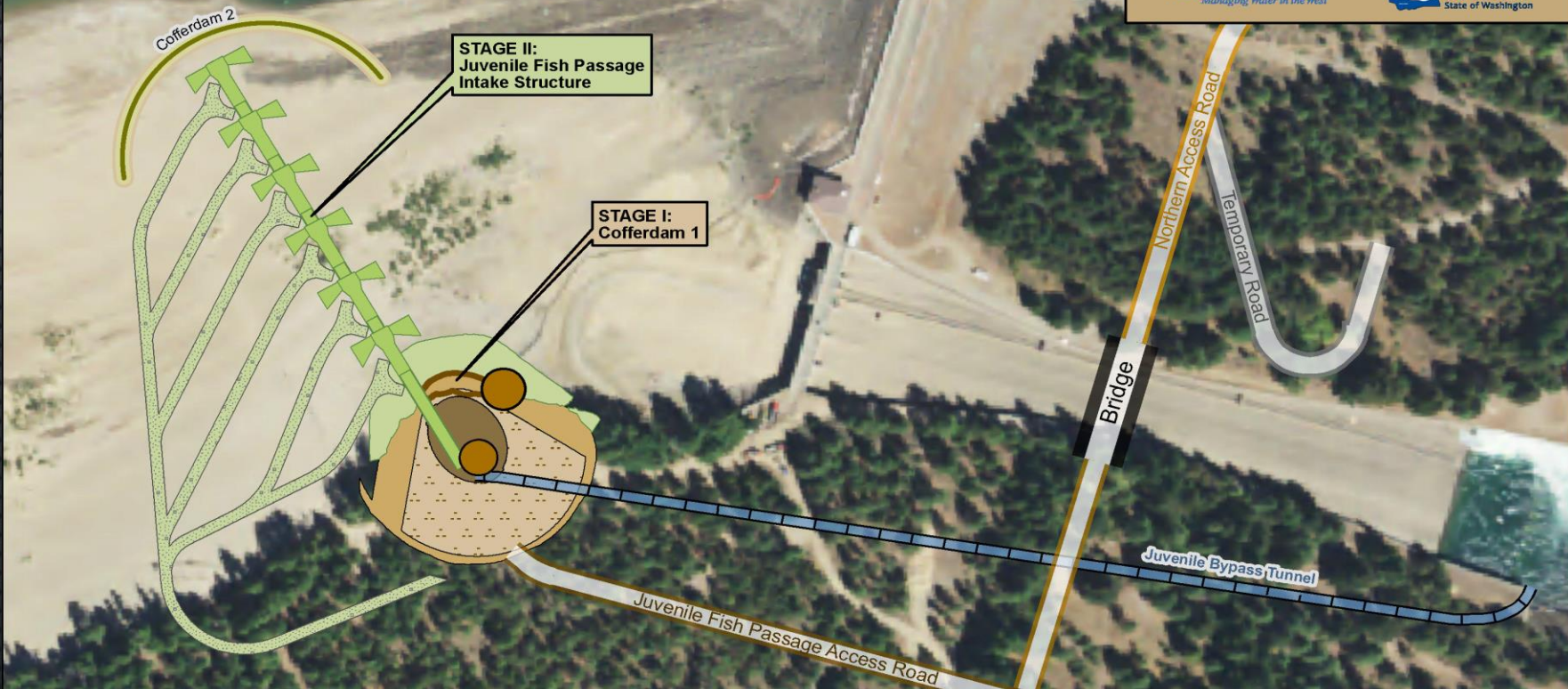
Cle Elum Reservoir

# 2015 GROUNDBREAKING

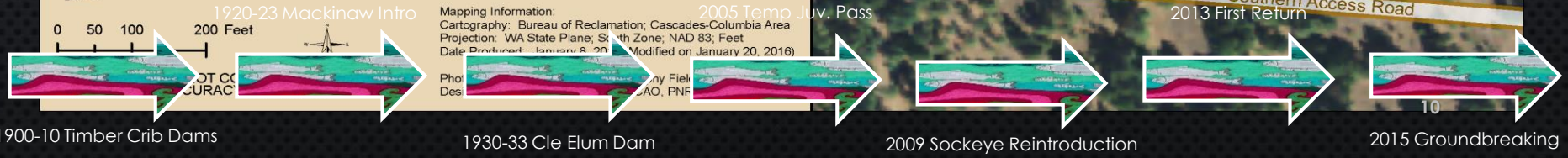
Cle Elum Juvenile Fish Passage Facility  
 Columbia River Basin Water Resource Management Plan

RECLAMATION  
 Managing Water in the West

DEPARTMENT OF  
 ECOLOGY  
 State of Washington



Road System	Stage I Features	Stage II Features
Northern Access Road	Juvenile Fish Passage Helix	Multilevel Intake Structure
Southern Access Road	Secant	Stage II - Ground Work
Temporary Road	Stage I - Ground Work	O&M Roads
Juvenile Fish Passage Access Road	Cofferdam 1	Cofferdam 2
Bridge	Operations Yard	
Juvenile Bypass Tunnel		



Mapping Information:  
 Cartography: Bureau of Reclamation, Cascades-Columbia Area  
 Projection: WA State Plane; South Zone; NAD 83; Feet  
 Date Produced: January 8, 2015 Modified on January 20, 2016

Photo Descriptions:  
 1900-10: Timber Crib Dams  
 1920-23: Mackinaw Intro  
 1930-33: Cle Elum Dam  
 2005: Temp Juv. Pass  
 2009: Sockeye Reintroduction  
 2013: First Return  
 2015: Groundbreaking



# 2013-PRESENT MACKINAW OUTRO

## REMOVAL/REDUCE (BEGAN IN 2013)

- REQUIRED-MACKINAW REMOVAL PROPOSAL
- WDFW PARTNERSHIP
- SCIENTIFIC COLLECTORS PERMIT FROM YN FISH AND WILDLIFE COMMITTEE

## GILL NETTING

- UP TO 6 GILL NETS USED AND THE FOLLOWING INFORMATION COLLECTED,  
WEIGHTS, LENGTHS AND HEADS FOR AGING

## BY-CATCH

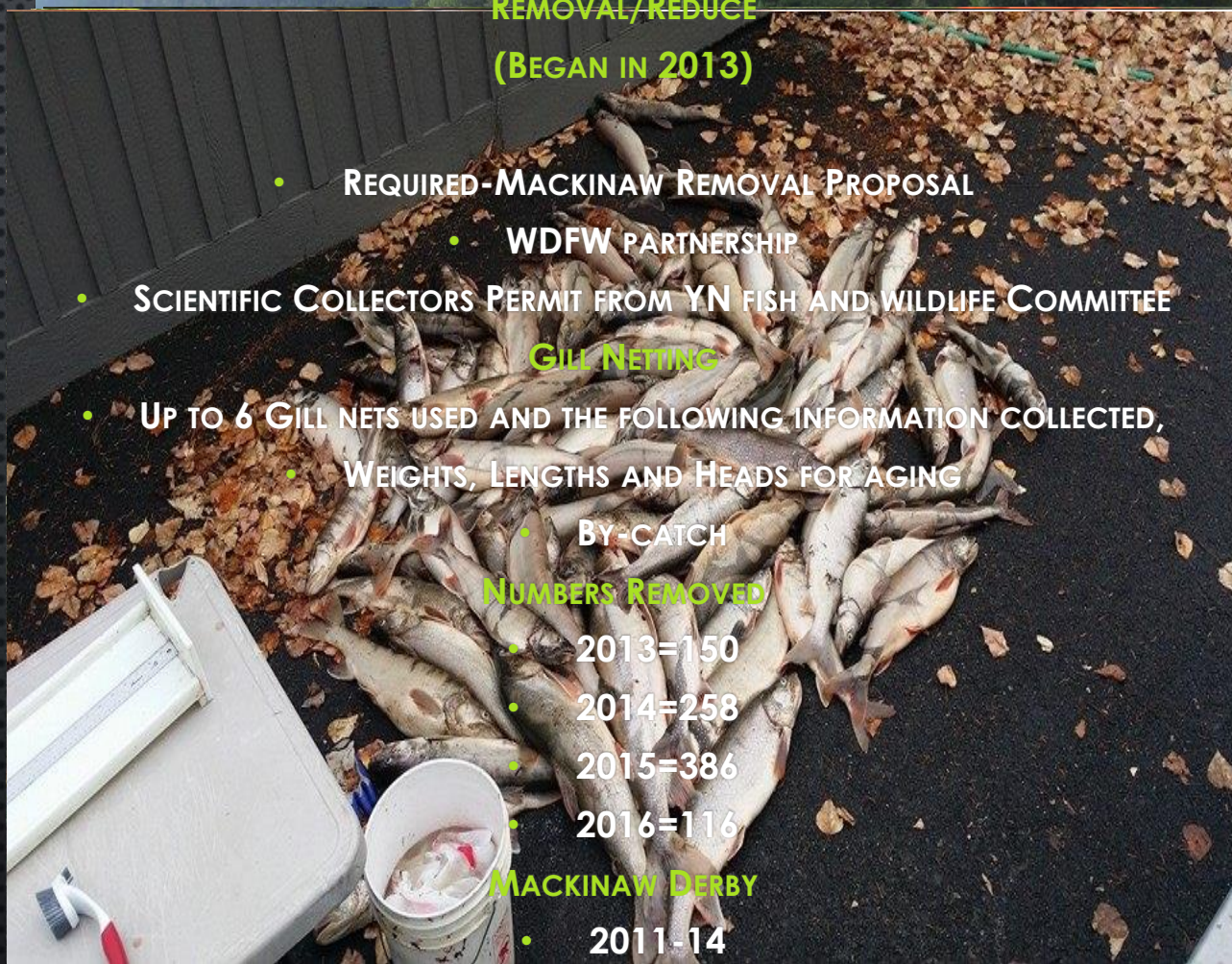
## NUMBERS REMOVED

- 2013=150
- 2014=258
- 2015=386
- 2016=116

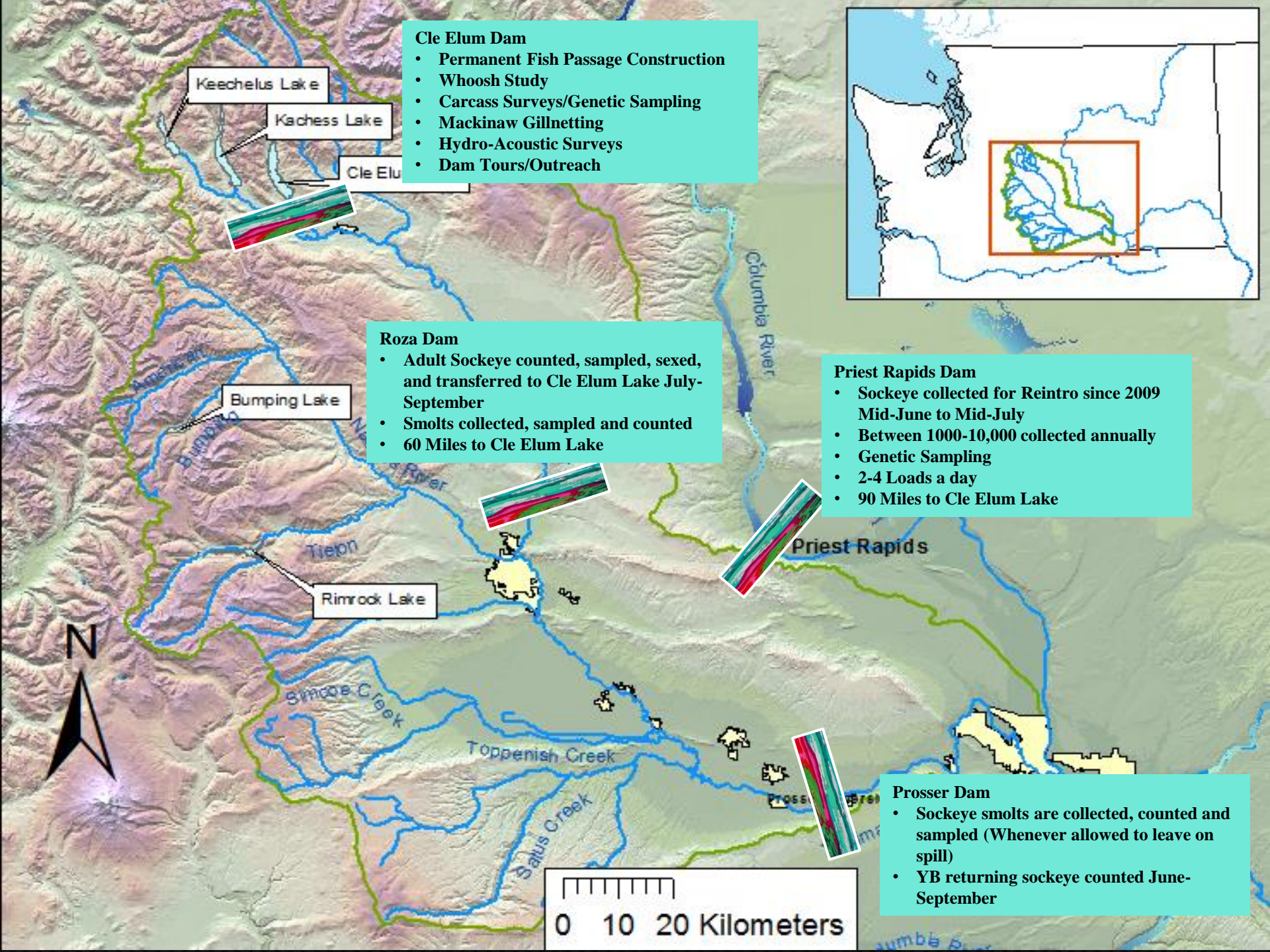
## MACKINAW DERBY

- 2011-14

- 112 MACKINAW REMOVED
- OVER 75 ENTRIES PER YEAR







**Cle Elum Dam**

- Permanent Fish Passage Construction
- Whoosh Study
- Carcass Surveys/Genetic Sampling
- Mackinaw Gillnetting
- Hydro-Acoustic Surveys
- Dam Tours/Outreach

**Roza Dam**

- Adult Sockeye counted, sampled, sexed, and transferred to Cle Elum Lake July-September
- Smolts collected, sampled and counted
- 60 Miles to Cle Elum Lake

**Priest Rapids Dam**

- Sockeye collected for Reintro since 2009
- Mid-June to Mid-July
- Between 1000-10,000 collected annually
- Genetic Sampling
- 2-4 Loads a day
- 90 Miles to Cle Elum Lake

**Prosser Dam**

- Sockeye smolts are collected, counted and sampled (Whenever allowed to leave on spill)
- YB returning sockeye counted June-September

Keechelus Lake

Kachess Lake

Cle Elu



Bumping Lake



Rimrock Lake



Simcoe Creek

Toppenish Creek

Status Creek







# KÁLUX

## Sockeye







**Senior Research Scientists**

Dr. Dave Fast & Mark Johnston

Paul Huffman

**Bookkeeper**

Ida Sohappy Ike YKFP

**Fish Technicians**

Chuck Carl, Kevin Segar,

Steve Blodgett, Arnold Barney,

Joy Jay Pinkham III, Andrew Lewis,

Brady Carl, Gene Sutterlicht Jr.



**YN Public Relation**

Emily Washines

**Bookkeeper**

Monica Clark FRM



**Conservation Geneticist**

Andrew Matala

**Fish Science Department**

Peter Galbreath CRITFC

aka Money Man

**Watershed Programs Coordinator**

Laura Gephart



**Fish Biologist**

Richard Bussanich

**Fisheries Manager**

Howie Wright



**Fish Biologist**

Joel Hubble

**YRBWEP Manager**

Wendy Christensen



**Sr. Fish Biologist**

Mark Woodward & Rod O'Conner



# QUESTIONS

