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September 5, 2018

MEMORANDUM

TO: **Fish and Wildlife Committee Members**

FROM: **Mark Fritsch**

SUBJECT: **Status report on the Melvin R. Sampson Coho Facility and ISRP step review response. Project #1988-115-25**

BACKGROUND:

Presenter: Dave Fast, research manager, and Pat Spurgin, legal /policy analyst, Confederated Tribes and Bands of the Yakama Nation (YN).

Summary: Dave and Pat will summarize YN efforts over the past five years regarding work on the Melvin R. Sampson (MRS) Coho Hatchery (a component of the *Yakima Subbasin Summer and Fall Run Chinook and Coho Salmon Hatchery Master Plan*. The update will also include the details on the response to the condition placed on the project, based on the ISRP review (ISRP document 2012-13), as part of the Council recommendation regarding the Master Plan on October 8, 2013.

Relevance: The YN is proposing to build the MRS Coho Hatchery near the town of Thorpe, WA to spawn and rear 200,000 smolts and 500,000 parr, for acclimation and release in targeted tributaries in the upper Yakima and Naches watersheds. The MRS Hatchery has dual objectives of contributing to harvest and reestablishing natural spawning of coho in tributaries where they historically spawned.

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Background: On July 23, 2012, the Yakama Nation (YN) submitted the Master Plan for the Yakima Subbasin Summer and Fall Run Chinook and Coho Salmon, a component of Project #1988-115-25, *Yakima River Design and Construction-Yakima/Klickitat Fisheries Project (YKFP)* for review under the Council's Three-Step Review Process. On September 17, 2012 the ISRP provided their preliminary review of the Master Plan (ISRP document 2012-13).

On February 25, 2013, the YN submitted additional information in response to the ISRP comments. On July 17, 2013 the ISRP provided its final review (ISRP document 2013-8). The ISRP found that both the coho and summer/fall Chinook programs met scientific review criteria with the qualification that additional ISRP questions and concerns presented in their final review report be addressed in subsequent step review analysis.

On October 8, 2013, based on the ISRP review, the Council recommended to Bonneville that the *Yakima Subbasin Summer and Fall Run Chinook and Coho Salmon Hatchery Master Plan* proceed with Step 2 activities (i.e., preliminary design and environmental review) for the Holmes Ranch component of the coho program[1]. The recommendation was subject to the requirement that the Yakama Nation addresses the issues raised by the ISRP as part of the Step 2 submittal.

On June 5, 2018 the Council received a submittal from the Yakama Nation regarding Project #1988-115-25, *Yakima River Design and Construction-Yakima/Klickitat Fisheries Project (YKFP)*. The submittal is intended to provide the details and information requested as part of the Council decision in 2013.

On July 26, 2018 the ISRP requested a response (ISRP document 2018-6) for additional detail.

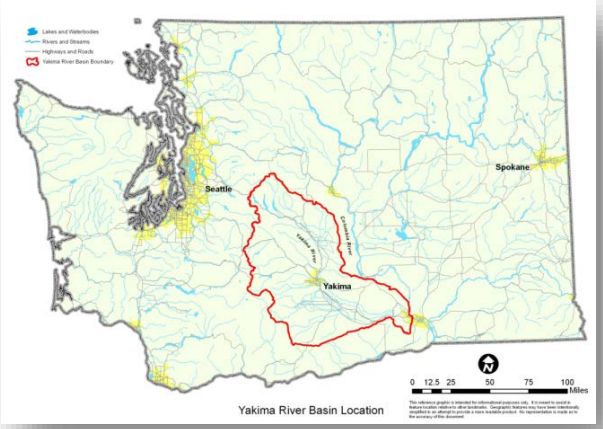
[1] Though both coho and Chinook were addressed in the master plan, coho was the action being addressed by the review and recommendation. Fall Chinook actions will remain as currently reviewed and recommended and any expansion will depend on future revisions and ISRP review and Council recommendation.

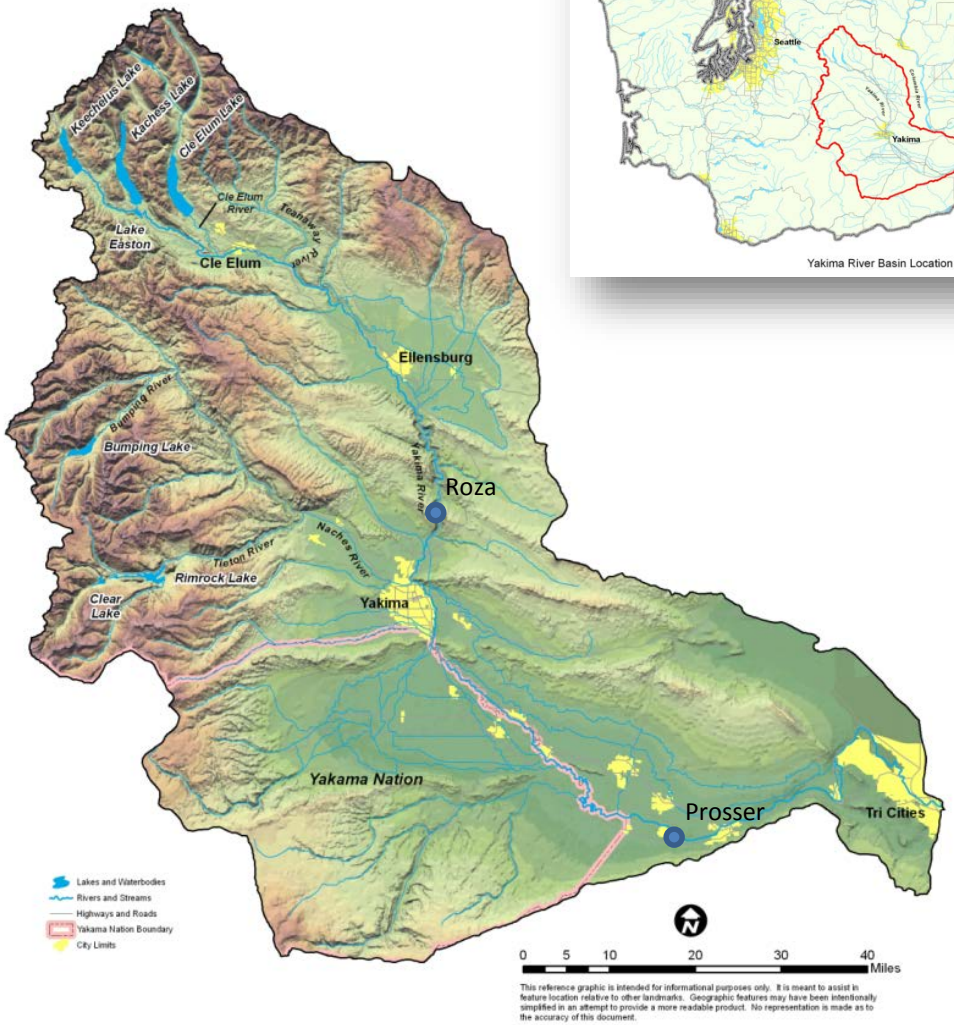
Melvin R. Sampson Coho Hatchery

Presentation to NPCC
September 11, 2018

Map by GIS
Yakama Nation

Basin Overview





- **Basin size = 6,155 sq. miles**
- **Population = 360,000**
- **Irrigated Area = 464,000 acres**
- **Economic Impacts (USDA 2012)**
  - **Food Processing Industry Benefits = $1.4B**
  - **Agricultural Production = 1.8B**
- **Historically, second only to Snake River in supporting Columbia River salmon and steelhead runs**

Presentation Topics

- **2012 Master Plan Review – YN**
- **Project History and Background – YN**
- **Existing and new facilities – YN & BPA**
- **Schedule and Costs – YN & BPA**

2012 Master Plan Elements

Segregated Program (not addressed today)

- **~500,000 smolts**
- **Reared and released at Prosser Hatchery**
- **Adult Returns not targeted for spawning**

Integrated Program

- **Targets natural spawning in Upper Yakima and Naches watersheds**
- **Using combination of adult outplants, and parr and smolt releases in targeted tributaries**
- **Move brood collection upstream to Roza Dam**
- **Spawning and rearing at new MRS Hatchery**

Yakima Coho Hatchery Project History

- **By 1985 counts of coho at Prosser reached zero**
- **1986 Transfers from LCR Hatcheries under *U.S. v OR* for harvest**
- **1994 Subbasin and Master Planning efforts begin - All Stock Initiative**
- **1996 Feasibility study to reestablish coho begins**
- **2007 Initial evaluation proves feasibility**
- **2012 Step 1-2 Master Plan submitted**
- **2018 MRS Coho Hatchery ready to proceed**

ISRP 2018-6 Issues

Prosser Hatchery / Segregated Program

- **Size of program / # of fish for brood stock**
- **Infrastructure modifications and utilization**

Monitoring and Evaluation

- **Biological metrics**
- **Performance by release site and life stage**
- **Clarification of productivity and capacity**

Other

- **More information on Adaptive Management and Decision Rules**
- **Consider Naches / Upper Yakima adaptations**

Will address in Prosser Hatchery Upgrade Master Plan submittal in 2019 (Update of 2012 MP)

Comprehensive Yakima Restoration Strategy

Yakima Basin Integrated Plan

- **Fish Passage Improvements**
- **Instream Flow Enhancement**
- **Floodplain Enhancement**
- **Additional Habitat Restoration Actions**

BPA Projects

- **Habitat Restoration – 1997-051-00**
- **Monitoring & Evaluation – 1995-063-25**
- **Artificial Propagation & Salmon Reintroduction – 1997-013-25**

Harvest Management

- **Co-managed under *U.S. v Oregon***
- **BIA, BPA, and State funding for monitors**

An Emerging Solution

- **Yakima River Basin Integrated Plan Goals:**
  - Provide opportunities for ecological restoration and enhancement, including fish passage
  - Improve water supply during drought years (70% proratable supply)
  - Provide for efficient and adaptable water supply management
  - Contribute to sustainable economy and environment

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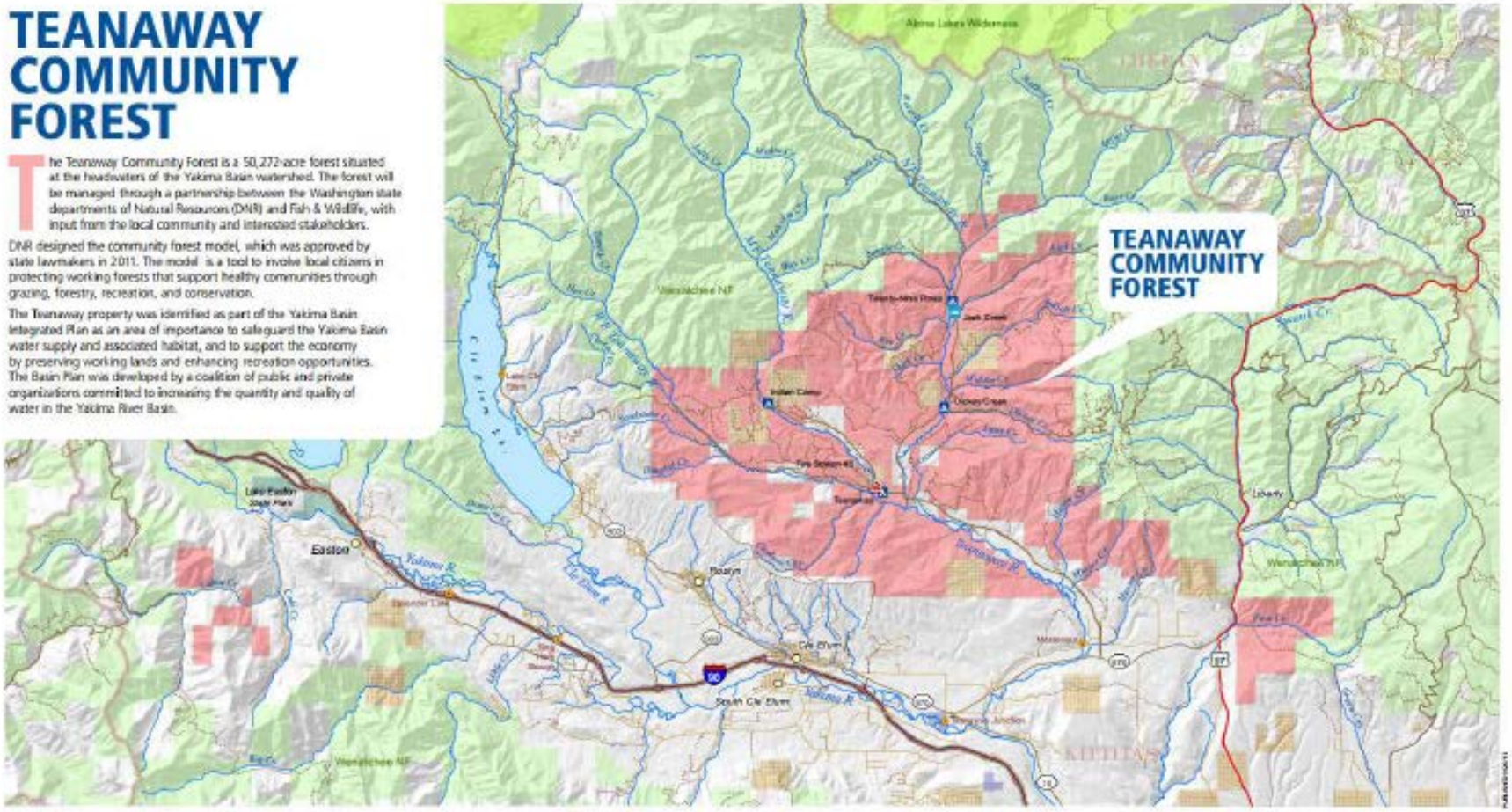
DEPARTMENT OF ECOLOGY State of Washington

TEANAWAY COMMUNITY FOREST

The Teanaway Community Forest is a 50,272-acre forest situated at the headwaters of the Yakima Basin watershed. The forest will be managed through a partnership between the Washington state departments of Natural Resources (DNR) and Fish & Wildlife, with input from the local community and interested stakeholders.

DNR designed the community forest model, which was approved by state lawmakers in 2011. The model is a tool to involve local citizens in protecting working forests that support healthy communities through grazing, forestry, recreation, and conservation.

The Teanaway property was identified as part of the Yakima Basin Integrated Plan as an area of importance to safeguard the Yakima Basin water supply and associated habitat, and to support the economy by preserving working lands and enhancing recreation opportunities. The Basin Plan was developed by a coalition of public and private organizations committed to increasing the quantity and quality of water in the Yakima River Basin.



FACILITIES
- Building
- Campground
- Acclimation Pond
- WDFW Water Access Sites

ROADS
- Interstate
- Major Highway
- Road
- Local Road
- Unimproved Road

HYDROGRAPHY
- Rivers
- Streams

LAND MANAGEMENT
- Teanaway Community Forest
- Washington Dept. of Natural Resources
- USFS Wilderness Areas
- US Forest Service
- Washington State Parks
- Washington Dept. of Fish & Wildlife

0 0.5 1 2 3 4 Miles

LEARN MORE
http://bit.ly/teanaway

WASHINGTON STATE DEPARTMENT OF Natural Resources

Washington Department of FISH and WILDLIFE

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Teanaway Community Forest

- 50,000 + acres protected in 2013
- Joint management by WDFW and WNDR
- Critical to salmon, steelhead, spotted owls, wolves
- Position on landscape for watershed protection

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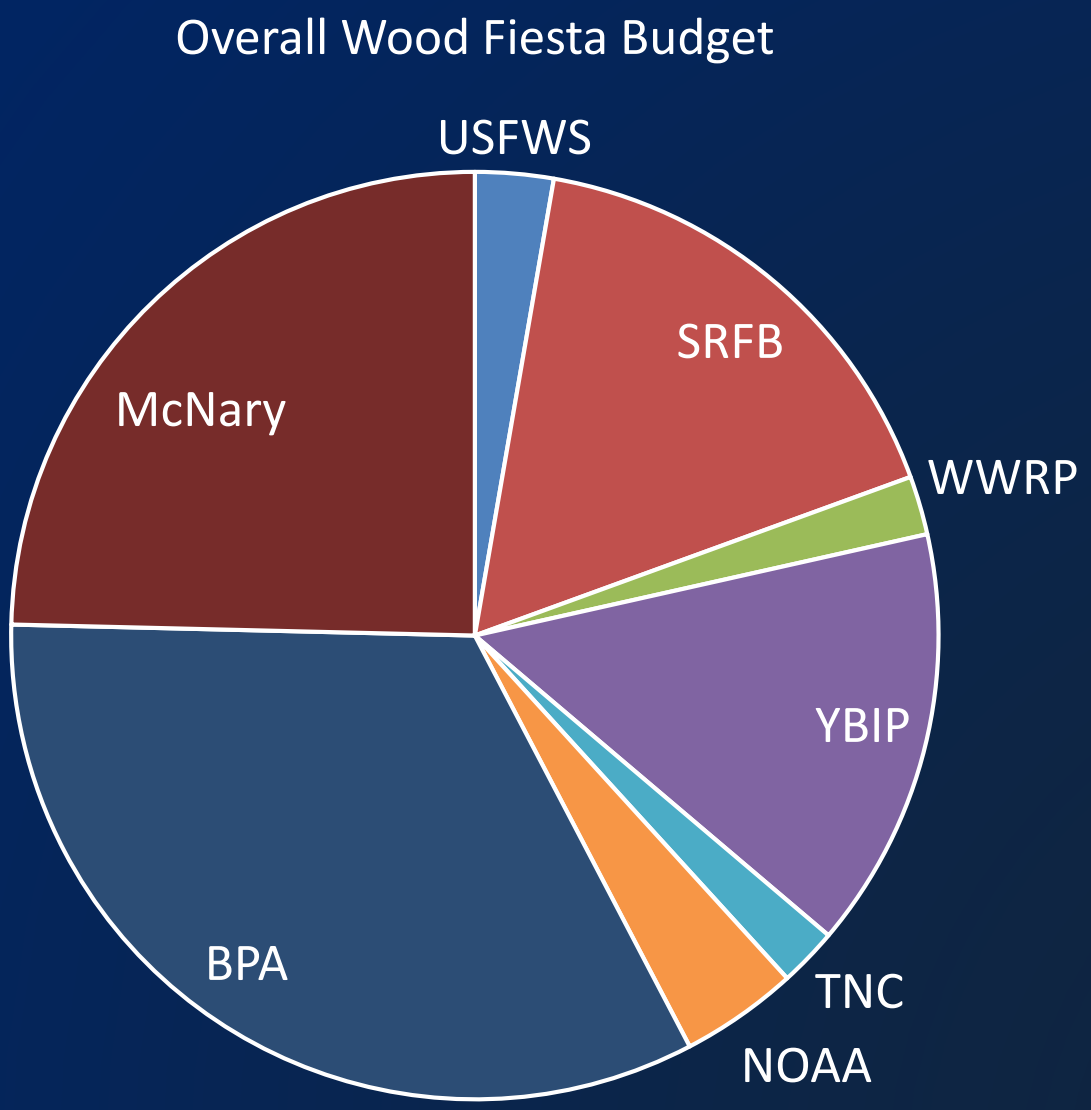
Teanaway Community Forest

Teanaway Community Forest

- Working with Columbia Helicopters out of Portland, OR
- September 24th – October 12th, 2018 project implementation
- 4 flight days in NF Manastash, 2 flight days in Lower Umtanum
- 107 Helicopter can make 18-22 turns/hour, place ~50 logs/hour

Photo Credit: Columbia Helicopters

Budget - $1.8 million



Cle Elum Pool Raise

- Modify radial gates
- Shoreline protection
- Land acquisition

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Yakima Basin Integrated Plan

DC Leadership Group

- Provides the Regional Leadership and the Implementation Committee with assistance on addressing questions of national policy, clarifying and strategizing on authority issues, and identifying potential funding opportunities. ~ Excerpt from Charter
  - Reclamation – YRBWEP
  - BIA – Wapato Irrigation Project improvements
  - USFWS – Partners for Fish and Wildlife and Yakama Nation Fish Passage Program
  - BLM – Water Conservation
  - BPA – Northwest Power and Conservation Council's Fish and Wildlife Program
  - NMFS – Pacific Coastal Salmon Recovery Fund
  - NRCS – Regional Conservation Partnership Program
  - USFS – Land and Water Conservation
  - USACE – Flood Plain Restoration
  - Total FY 2017 estimated Federal funding approximately $50M

Last DC Leadership Meeting October 31, 2017, next meeting May 7, 2018

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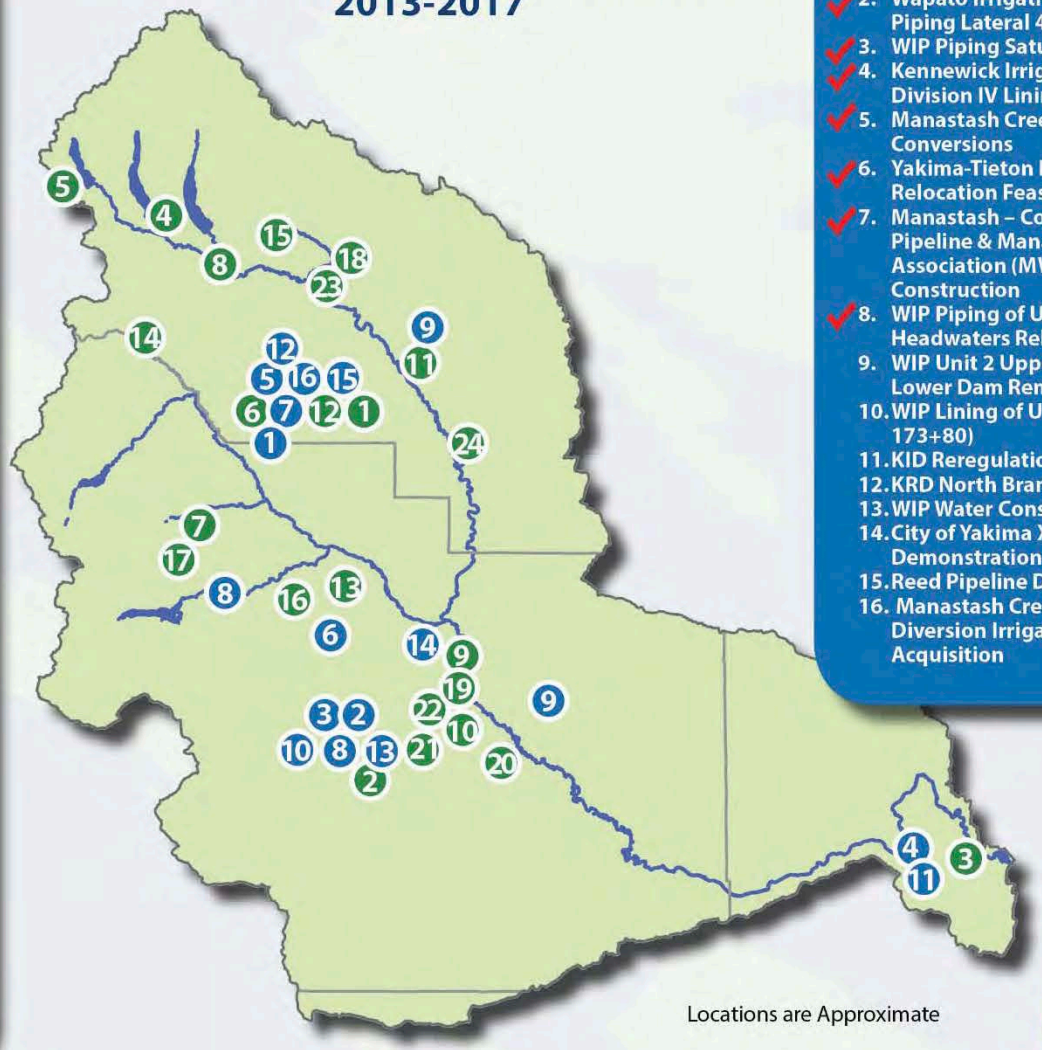
Yakima Basin Integrated Plan Habitat Enhancement/Enhanced Agricultural Conservation Projects 2013-2017

Habitat Enhancement (2013-2017)

1. ✓ Manastash Creek Conservation and Tributary Enhancement Project
2. ✓ Toppenish Creek Habitat Restoration
3. ✓ Bateman Island Causeway Modification Conceptual Design/ Outreach/Permitting
4. ✓ Bull Trout Habitat Improvements (basin wide)
5. ✓ Gold Creek Habitat Assessment and Conceptual Design
6. ✓ Reed Diversion design Barrier Removal
7. ✓ Little Rattlesnake Road Decommissioning
8. ✓ Cle Elum River Side Channel Restoration Project, Phase 2
9. ✓ Gap-to-Gap Property Acquisitions
10. ✓ Upper Wapato Riparian Restoration
11. ✓ Ellensburg Water Company / Coleman Creek Restoration
12. ✓ Reed Diversion Barrier Removal
13. ✓ Trout Meadows Acquisition / Enhancement
14. ✓ Manastash/ Little Naches Land Acquisition
15. ✓ Teanaway Acquisition
16. ✓ Cowiche Easement/Design
17. South Fork Tieton Bull Trout Passage Feasibility and Design
    - ✓ Phase 1
    - Phase 2
18. Teanaway/Indian Creek Restoration
    - ✓ Phase 1
    - Phase 2
19. Gap-to-Gap Outfall Relocation, Land Acquisition and Levee Removal Design and Restoration
20. Yakima Rivermile 89.5 Levee Breach
21. Island Road Floodplain Reconnection - Toppenish Creek
22. Toppenish Creek - 3-way Levee Setback
23. Teanaway Habitat Restoration
24. Upper Yakima Floodplain Acquisition and Design Ringer Loop Road



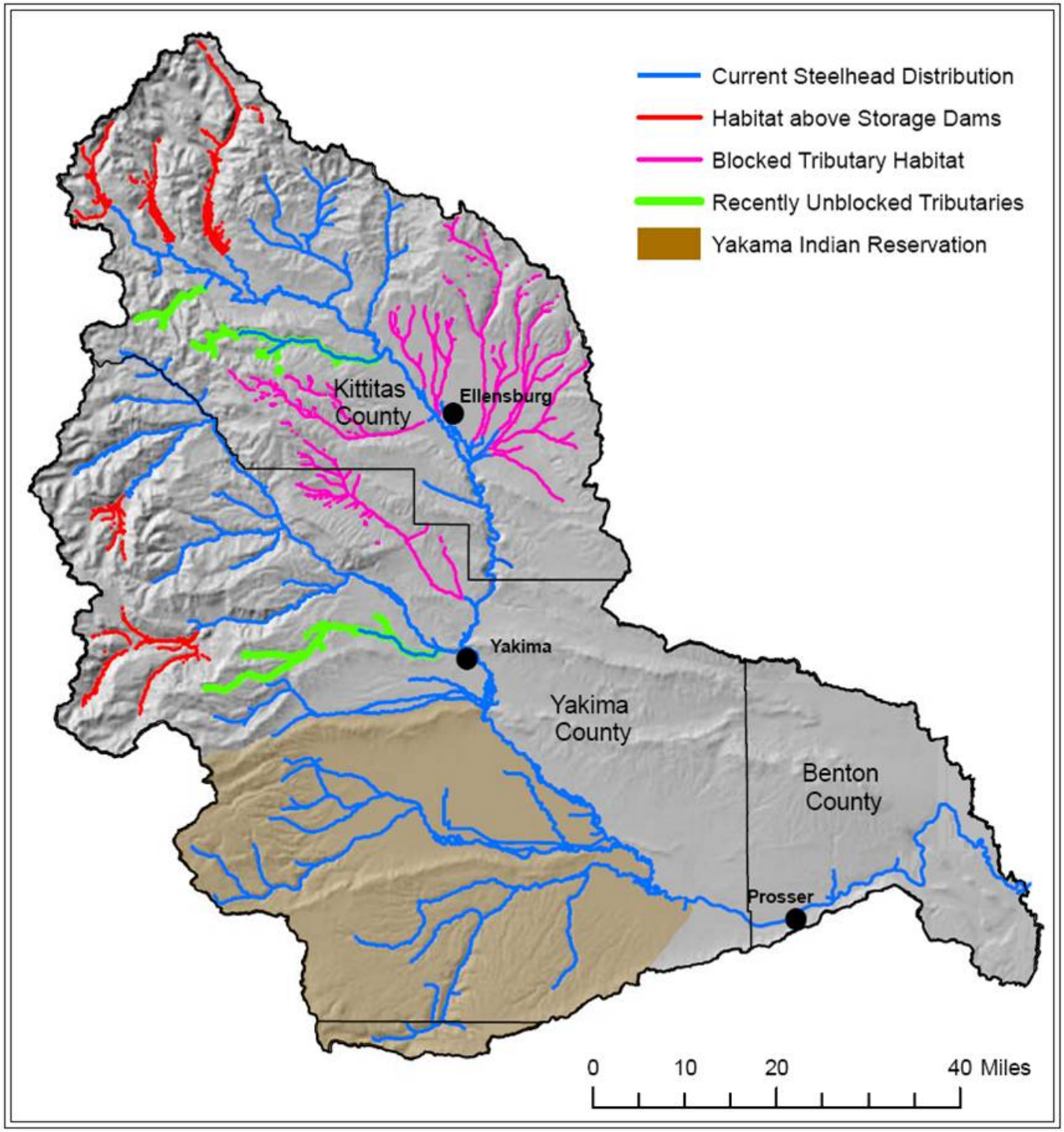
Locations are Approximate

Enhanced Water Conservation (2013-2017)

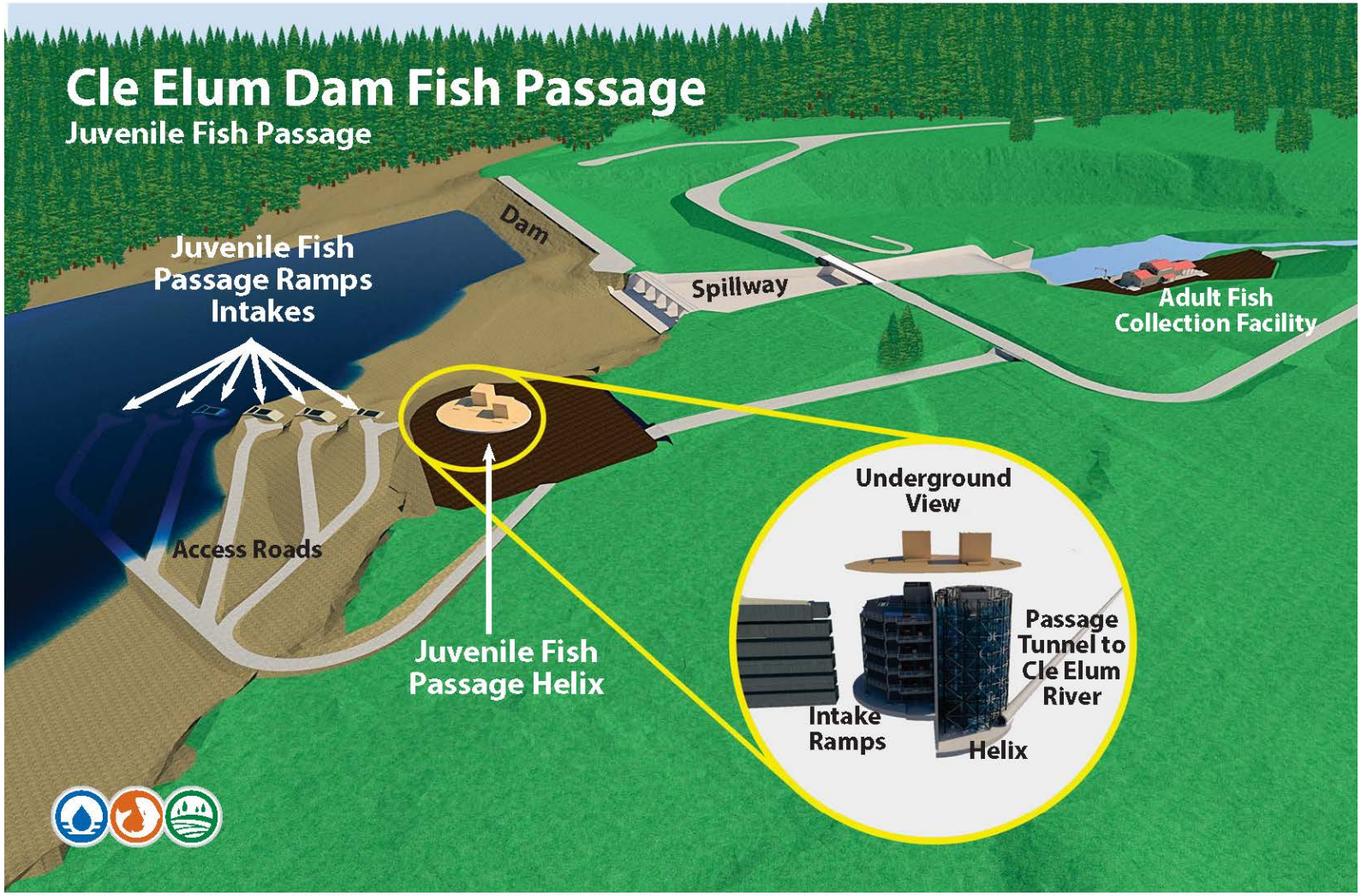
1. ✓ KRD 13.6, 13.8 Lateral Piping Project
2. ✓ Wapato Irrigation Project (WIP) Piping Lateral 4-414C
3. ✓ WIP Piping Satus East Lateral E73
4. ✓ Kennewick Irrigation District (KID) Division IV Lining
5. ✓ Manastash Creek Sprinkler Conversions
6. ✓ Yakima-Tieton ID Diversion Relocation Feasability Study
7. ✓ Manastash – Consolidated Pipeline & Manastash Water Ditch Association (MWDA) Pipeline Construction
8. ✓ WIP Piping of Unit 2 L672 and Headwaters Rebuild
9. WIP Unit 2 Upper Dam Rebuild and Lower Dam Removal
10. WIP Lining of Unit 2 (167+20 to 173+80)
11. KID Reregulation Reservoir Design
12. KRD North Branch Canal Lining
13. WIP Water Conservation Plan
14. City of Yakima Xeriscape Demonstration Project
15. Reed Pipeline Design
16. Manastash Creek, Anderson Diversion Irrigation Water Acquisition

YAKIMA BASIN
BUILDING A FUTURE FOR WATER, WILDLIFE & WORKING LANDS

Rev: 12.26.17


Current Steelhead Distribution
Habitat above Storage Dams
Blocked Tributary Habitat
Recently Unblocked Tributaries
Yakama Indian Reservation
Kittitas County
Ellensburg
Yakima
Yakima County
Benton County
Prosser
0
10
20
40 Miles

Cle Elum Dam Fish Passage



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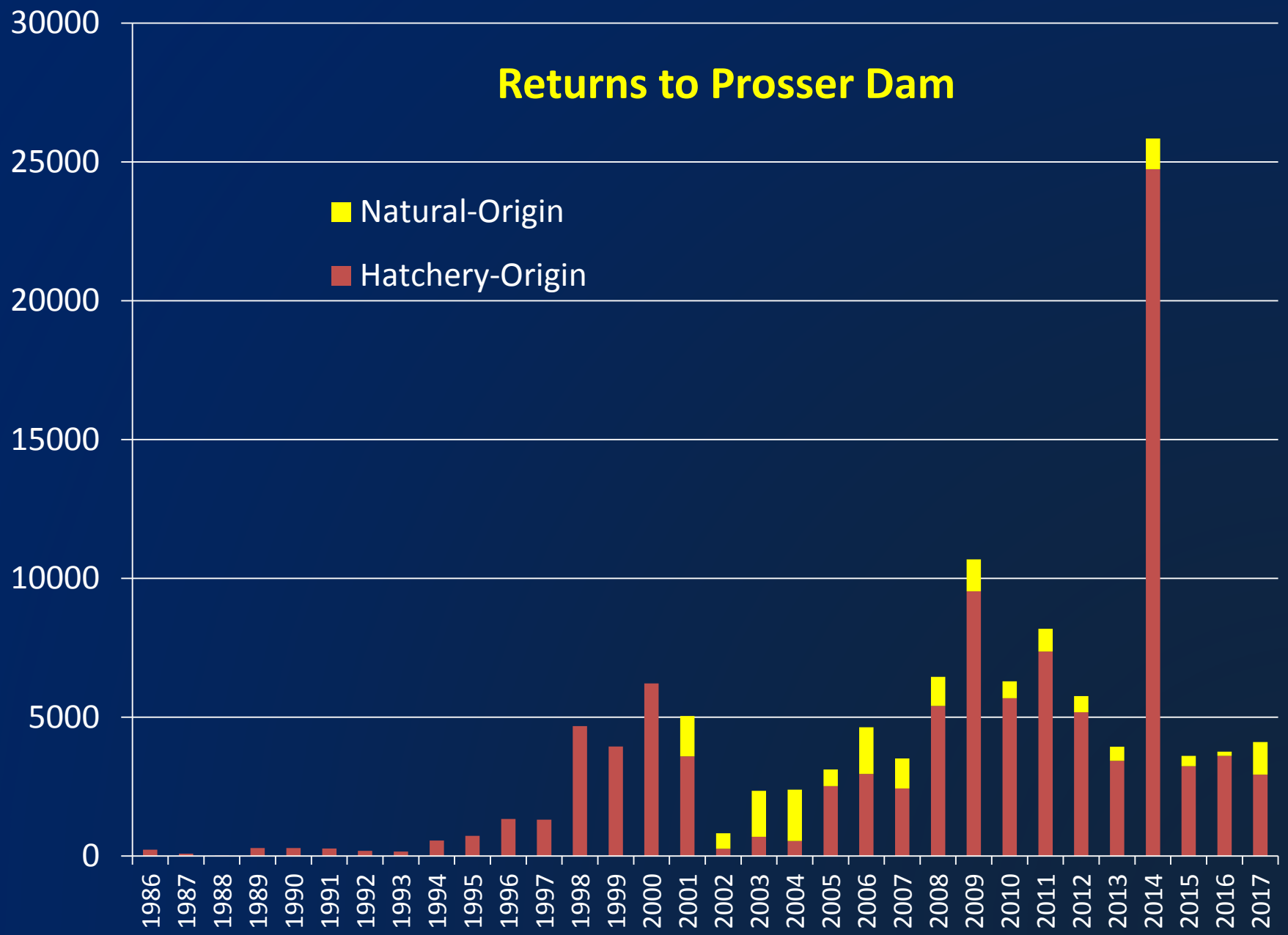
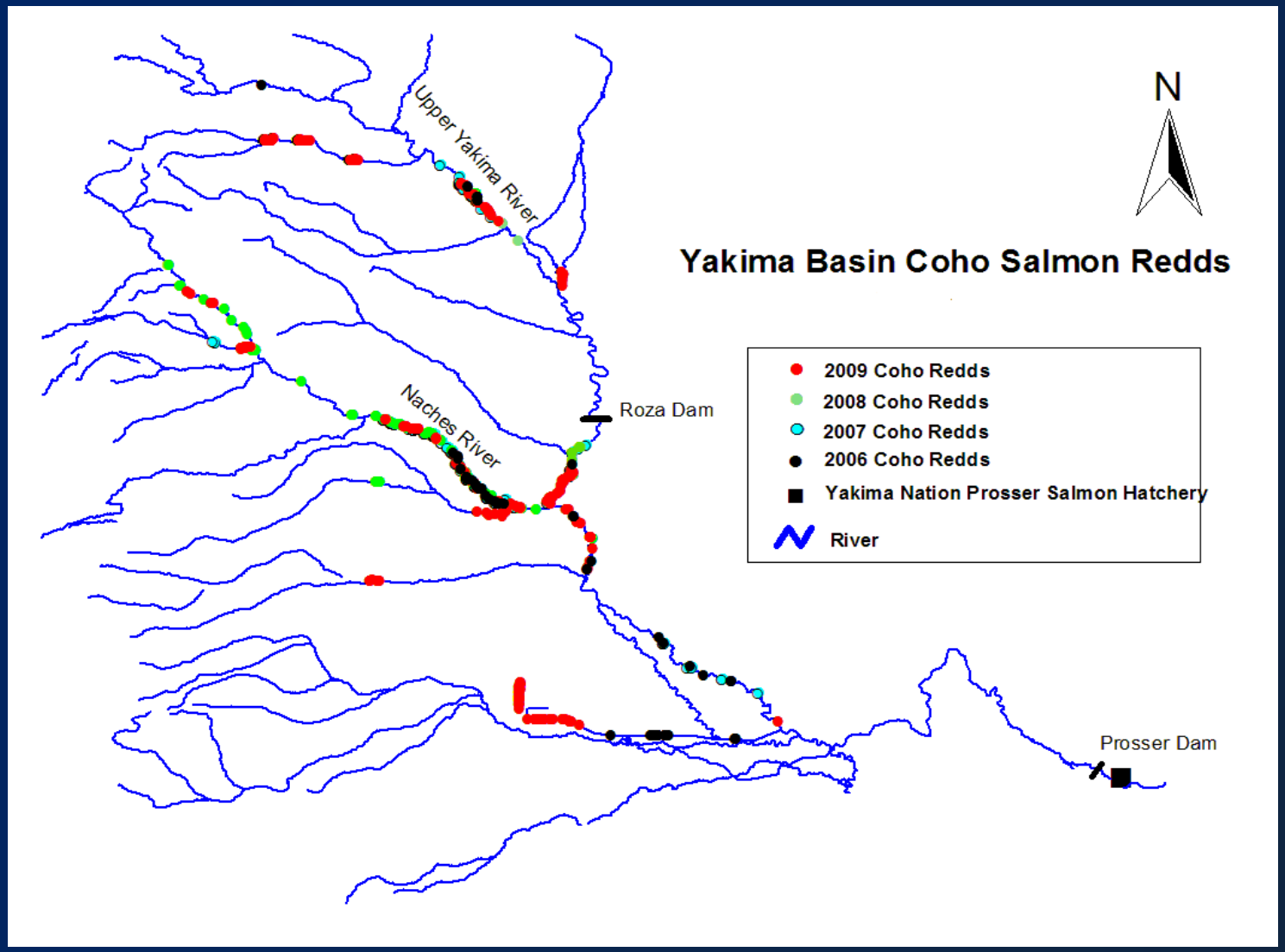
DANGER
KEEP OUT

Yakima Basin Integrated Coho Program Current vs. Proposed with MRS

Yakima Basin Coho Status



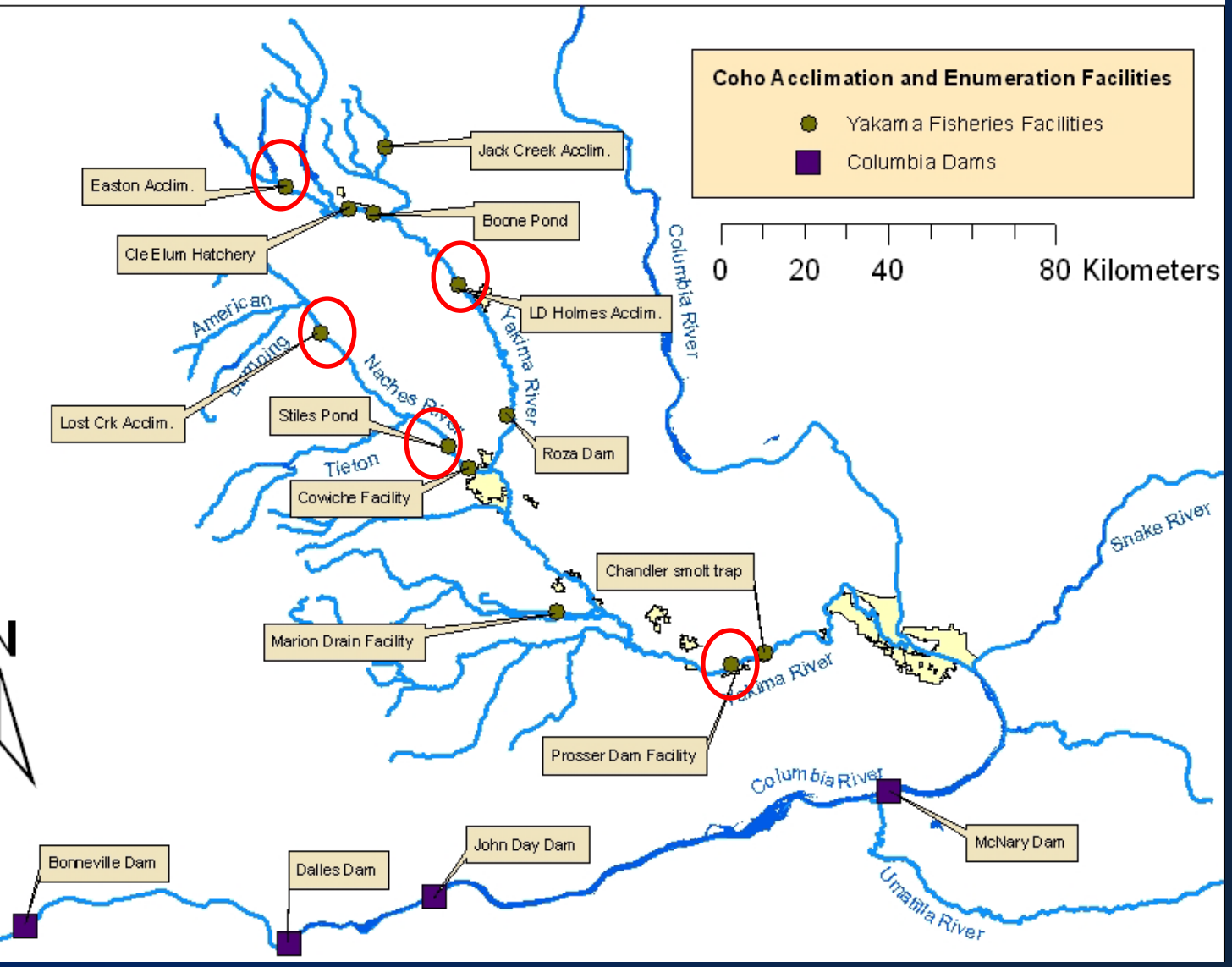
Present Spawning Distribution



Yakima Basin Coho Current vs MRS

	Current	With MRS
Brood Source	50% Local	100% Local
Brood Adults	1,200	~ 1,000
Collect Location	Out-of-Basin Prosser	Prosser Roza
Rearing Location	Prosser	Prosser – Seg MRS - Int
Release Locations	Mainstem	Tributaries

Yakima Basin Coho - Current Program



Brood Source
- 50% Local
- 50% Out-of-Basin

Rearing Location
- Prosser

Releases (~900k)
- Easton 20%
- Holmes 15%
- Lost Cr 15%
- Stiles 20%
- Prosser 25%
- Other 5%

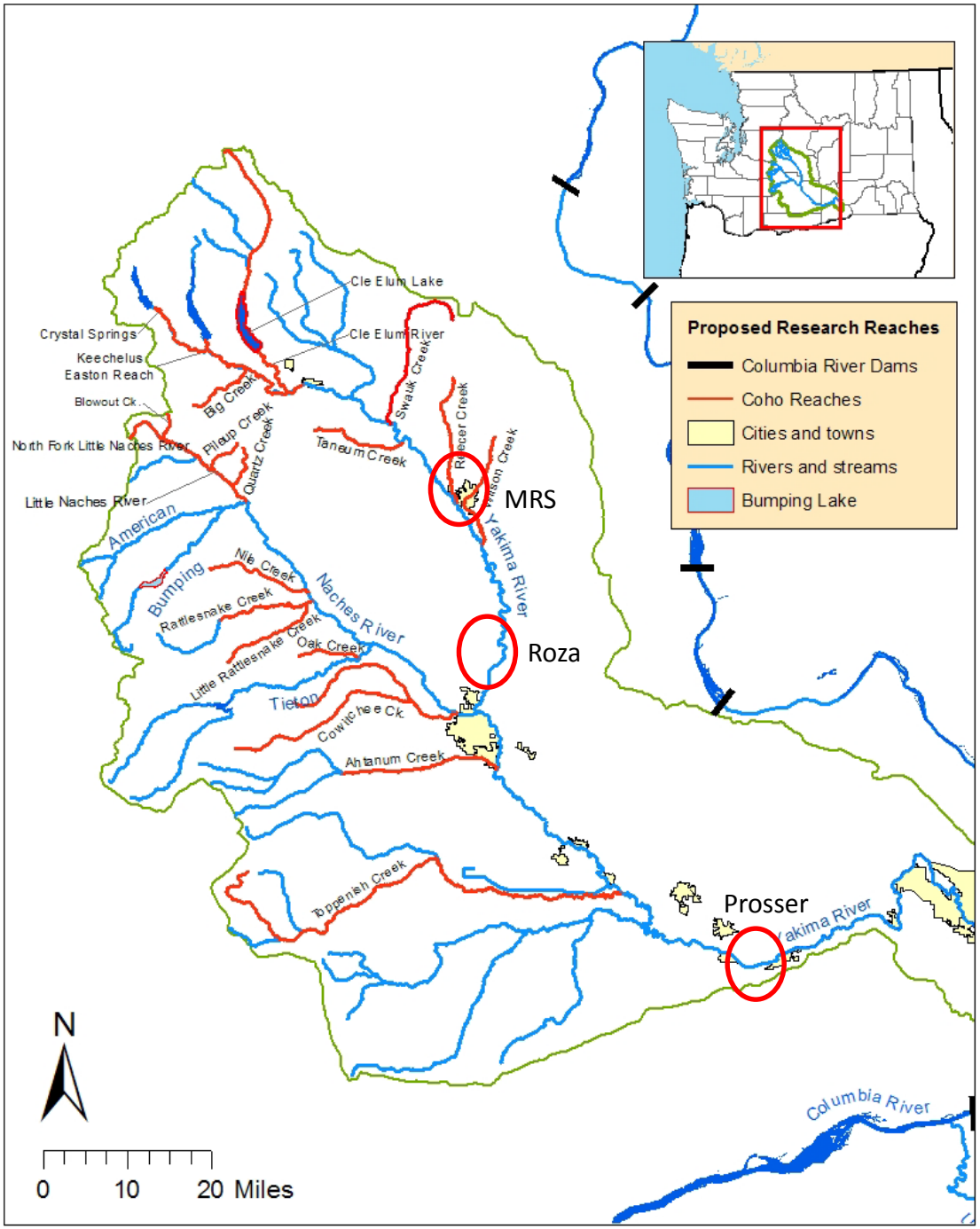
New Coho Program

Brood Source
100% Local

Adult Brood Collection
Prosser – Segregated (450)
Roza – Integrated (600)

Rearing (Smolts/Parr)
Prosser – Segregated (500k)
MRS – Integrated (700k)

Releases
Segregated @ Prosser
Integrated in targeted tributaries shown on map



Yakima MRS Coho Hatchery Project Products and Schedule

Step 1

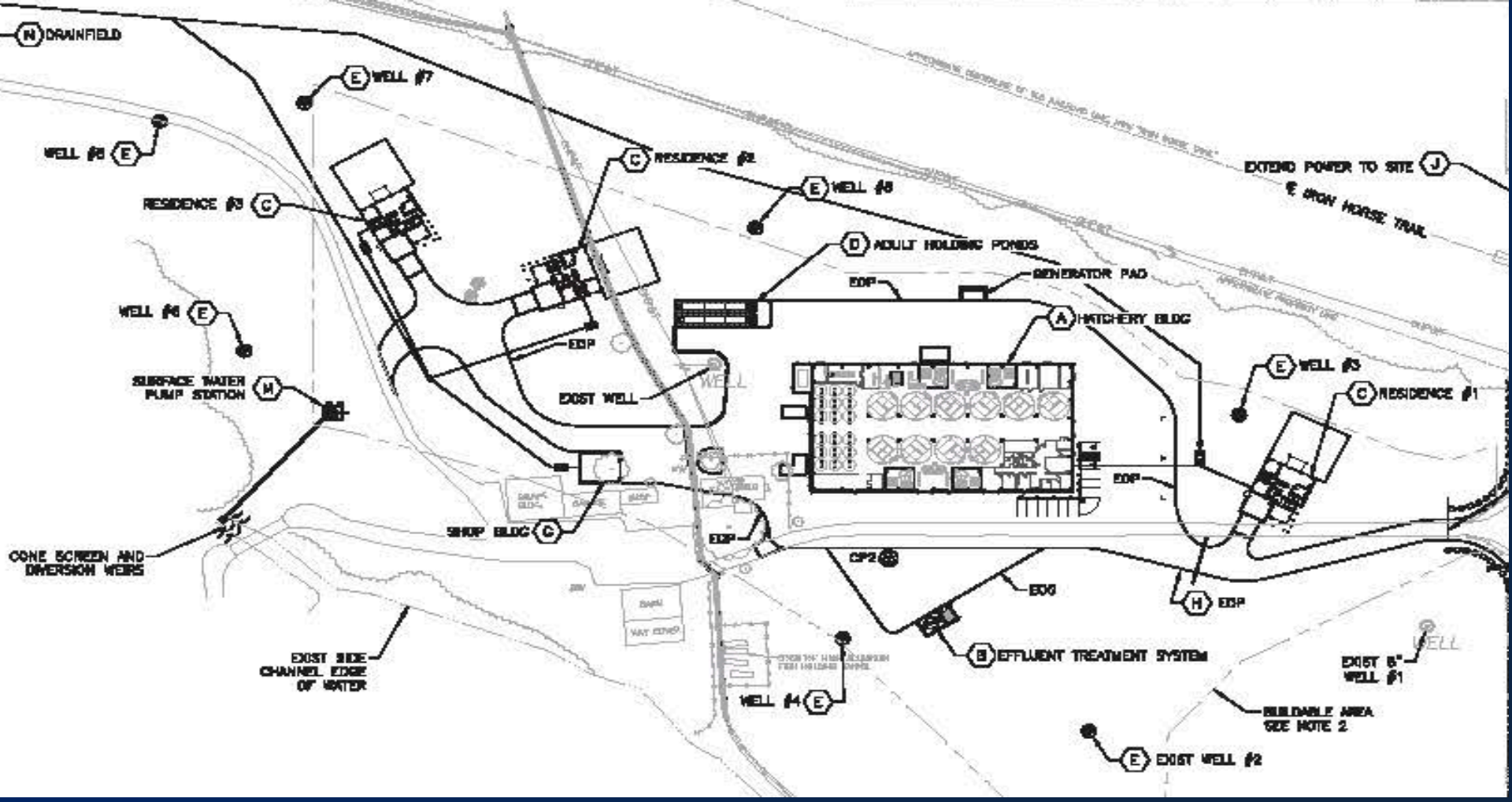
- **Master Plan and preliminary design May 2012**
- **Council approved Master Plan July 2013**

Step 2 and 3

- **Design updates & NEPA/EIS 2015 - 2016**
- **Final designs & NEPA/EIS 2017 – 2018**
- **M&E draft plan 2018; M&E final plan 2019**

Construction and Operations Start-up

- **Construct hatchery September 2018 – late 2019**
- **First brood 2019; first smolt release April 2021; first adult return 2022**



- 30k sf hatchery building
- Early rearing grow-out
- 10 circular rearing ponds
- 9 groundwater wells
- Effluent treatment
- Utilities

Proposed YKFP Coho Facility

Yakima MRS Coho Hatchery Timeline and Costs

	Occurence	2014-2017	2018	2019	2020
Environmental Compliance	One Time	$600 k			
Design	One Time	$1.55 m			
Construction	One Time		$14.4 m		
O&M	Annual			→	→
M&E	Annual	→	→	→	→

Yakima River Coho Reintroduction

An example of Hatchery Reform

1. ***Yakima River Coho goes extinct***
2. ***Use lower Columbia Coho stocks cultured for many generations for reintroduction***
3. ***Establish a locally adapted coho stock in 20 years***
4. ***Moving from a couple hundred adults annually to several thousand***
5. ***Begin to move localized coho back into historic habitats***
6. ***Build a high tech fish hatchery and begin using Natural Origin Adults for reintroduction***
7. ***Use a phased approach to fill all historic coho habitat with progeny of Natural Origin Coho, all the while providing large numbers of hatchery coho for tribal and non tribal fisheries***
8. ***Captured "the essence of hatchery reform"***