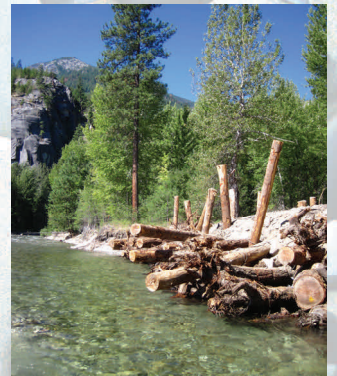
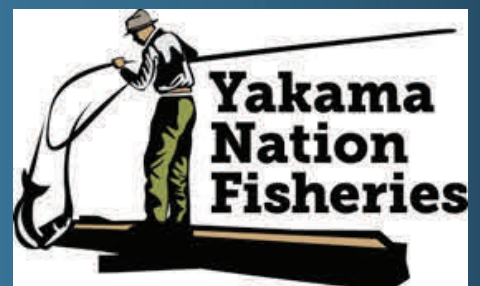


**2013**

**2008 Columbia River Fish Accords Implementation:  
Yakama Nation Habitat Restoration Status and Trends**  
*Expanded Web Version*



Section 1 of a 4 part series



**HONOR. PROTECT. RESTORE.**

## General Introduction to the Status Reports:

The Yakama Nation's Accord Implementation Status Report summarizes achievements in reaching salmon recovery goals described in the Columbia Basin Fish Accord agreement of 2008. The Accord is intended, in part, to allow for the implementation of projects and management actions considered necessary to improve the survival of salmon and steelhead listed under the Endangered Species Act (ESA) to the levels described in the National Oceanic and Atmospheric Administration's 2008 Biological Opinion for Federal Columbia River Power System operations (BiOP). The purpose of the status report is to: 1) track the effectiveness of efforts to implement the projects and management actions described in the Accord agreement, 2) report on the biological effectiveness of implemented projects and actions by monitoring trends in the status of ESA-listed salmon and steelhead populations, and 3) provide information to tribal leadership to aid in development of policy direction. This report will consist of four chapters, three of which will document progress in implementing projects and management actions that improve: 1) salmon habitat, 2) hatchery supplementation, and 3) hydrosystem operations. The fourth chapter will document the status and trends in abundance of ESA-listed salmon and steelhead and other species of priority to the Yakama Nation. Leading up to the release of the comprehensive report, the individual chapters will be available to the public upon completion.

### Table of Contents

<u>Section</u>	<u>Page</u>
General Introduction	2
Foreword	3
Background and Focal Species	4
Major Ecological Concerns	5-6
Habitat Restoration Projects	7
BiOP RPAs	8-9
Habitat Restoration Actions	10
Yakima/Klickitat Habitat Improvement	11
Yakima/Klickitat Project Spotlights	11-12
Upper Columbia Habitat Improvement	13
Upper Columbia Project Spotlights	13-14
Project Implementation Metrics	15-16
Habitat Use & Implementation Pictures	17-18
Photo Credits	19



## Foreword:



Yakama People have known since Time Immemorial that wild salmon need wild rivers to thrive, and we have lived within that balance for hundreds of generations. We also know that much of the wild salmon habitat we depended upon has been lost or degraded by human development of our watersheds. We understand that bringing back abundant wild salmon will require us to restore the habitats they need, and this has become one of this Nation's priorities for salmon recovery. Habitat restoration is about much more than the condition of the streams and rivers of the Yakama Nation. It is about restoring the river, fish, plants, animals and people as well. By restoring the river, we are helping to restore all the treaty-trust natural resources of the Yakama Nation. By understanding and supporting the restoration work that the Yakama Nation is doing as a result of the 2008 Columbia Basin Fish Accord, and by tracking the progress we are making, we have a chance to make sure the right actions are being implemented, and the trend is going in the right direction to make the entire ecosystem healthy once again. It is going to take a while, but we and our partners are working very hard to make sure we get there. This report shows examples of the many actions being taken by the Yakama Nation to correct the losses and restore balance to the needs of salmon as well as humans.

### **Virgil Lewis, Sr.**

Chairman, Fish, Wildlife, and Law and Order Committee  
Yakama Tribal Council

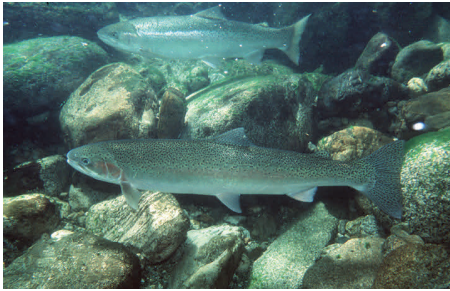
To learn more about the Yakama Nation Fisheries Status and Trends project, please visit [www.yakamafish-nsn.gov/restore/projects/star](http://www.yakamafish-nsn.gov/restore/projects/star). There, you can also leave comments and alert us to any errors or omissions.





## Background and Focal Species

On May 2, 2008, the Yakama Nation signed the Columbia Basin Fish Accords Memorandum of Agreement which provides funds to implement fish and wildlife restoration projects throughout Yakama Nation's Ceded Lands, as well as other areas utilized by aquatic treaty-trust\* species. This report summarizes the Yakama Nation's progress, since 2008, towards achieving Columbia Basin Fish Accords habitat restoration goals.

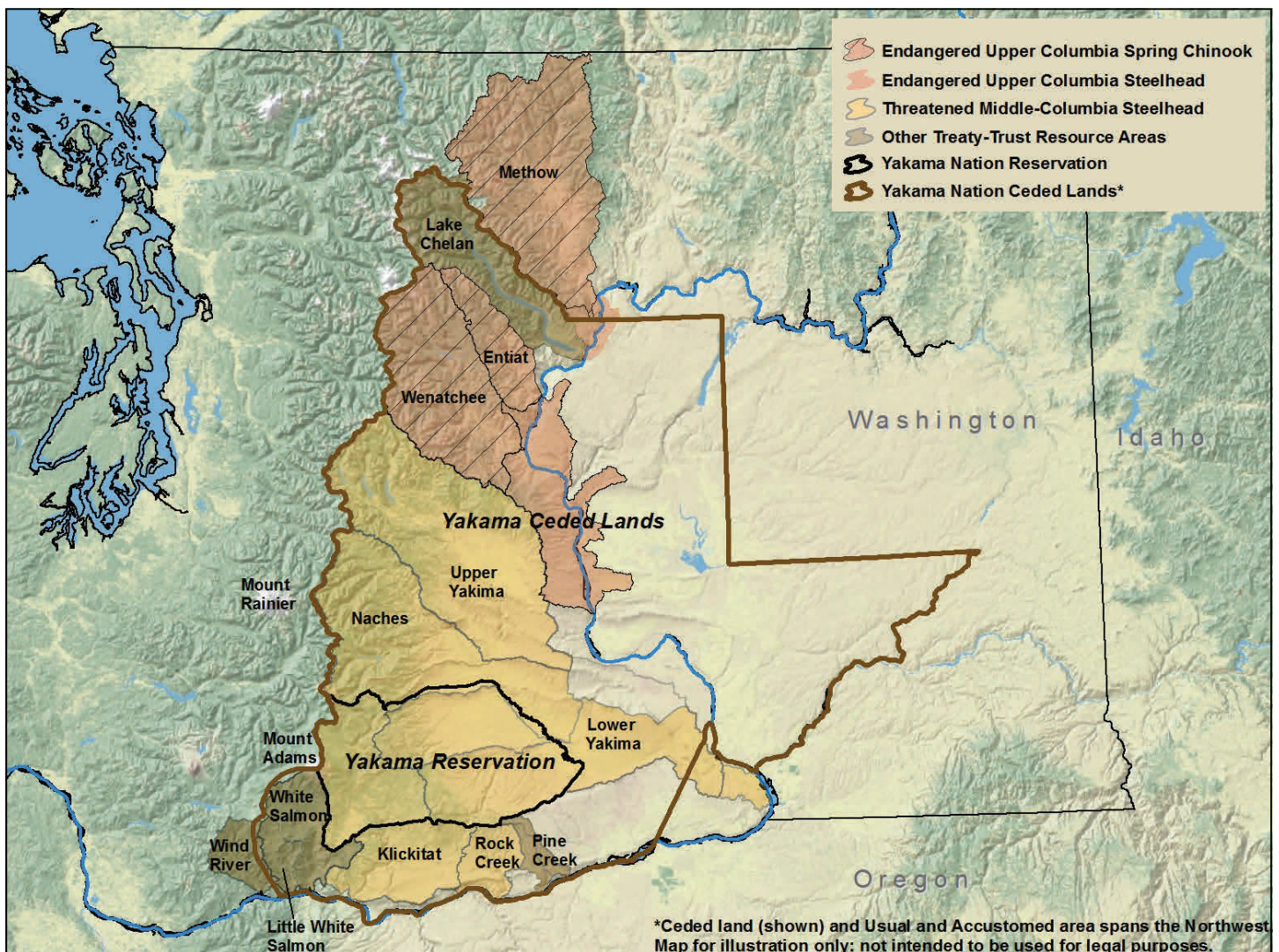


Restoring the natural habitats needed by wild salmon, steelhead, and lamprey is among the highest priorities for Accord funding. ESA-listed species must be able to sustain themselves in their natural habitats, thus their habitats must be healthy, accessible, and abundant to reach delisting goals. The Yakama Nation is implementing a broad



set of actions to restore natural stream function. Because all aquatic resources hold great value to the people of the Yakama Nation, the status and trends of additional species will be described in upcoming reports.

*\*Yakama Nation Treaty of 1855 (12 stat. 951) with the United States of America.*



**HONOR. PROTECT. RESTORE.**



# Major Habitat Ecological Concerns for Chinook Salmon, Steelhead, and Pacific Lamprey in the Yakama Nation's Treaty Trust Resource Areas



**Ecological Concern:** Reduced channel complexity

**Major Causes:** Agriculture and forestry practices

**Effects:** Loss of in-stream habitat such as wood and substrates. Decline of essential depth and pool variability.



**Ecological Concern:** Loss of riparian vegetation

**Major Causes:** Agriculture and forestry practices

**Effects:** Loss of natural shade and in-stream cover, bank erosion, and decreased ability to filter sediment.



**Ecological Concern:** Streambed channelization

**Major Causes:** Road construction

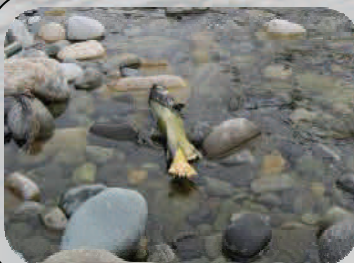
**Effects:** Loss of natural stream form, flow patterns altered, loss of suitable substrates due to increased flow velocities.



**Ecological Concern:** Altered hydrology and water quantity

**Major Causes:** Hydro-operations and agriculture practices

**Effects:** Loss of access to habitats. Natural flows and the timing of those flows are altered causing spawning, rearing, and migration challenges for native fish.



**Ecological Concern:** Low productivity/ high competition

**Major Causes:** Loss of nutrients and increased non-native fish

**Effects:** Reduction in availability of food for native fish.



## Limiting Factors for Salmon and Steelhead in the Yakama Nation's Treaty Trust Resource Areas

Limiting factors\* that exist in all Yakama Nation Treaty Trust Resource areas include:

### **Primary**

- Riparian vegetation
- Streambed and channel form
- In-channel complexity

### **Secondary**

- Altered primary productivity and food competition
- Altered hydrology
- Side channel/wetland connection
- Water quantity

\* Sources are the expert panels for the Upper Columbia and the recovery and subbasin plans for the Yakima and Klickitat.

## Major Ecological Concerns by Subbasin

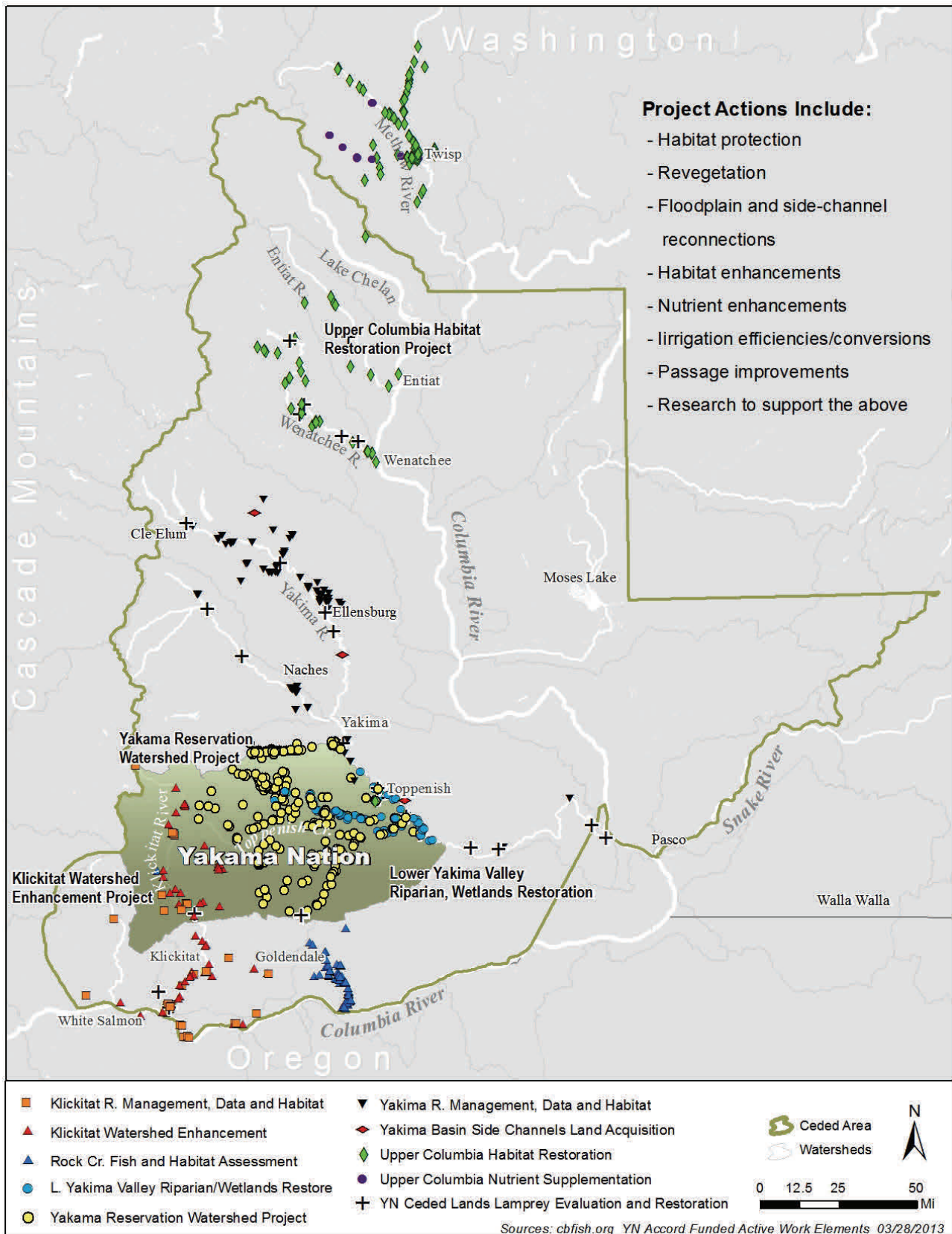
Limiting Factor/Ecological Concern	Subbasin <sup>a</sup>					Species <sup>b</sup>	
	W	E	M	K	Y	CHK	STH
Altered primary productivity (may include food competition)	X	X	X	X	X	X	X
Riparian condition ( may include riparian vegetation , LWD recruit-	X	X	X	X	X	X	X
Water quantity (flow timing and more extreme hydrograph – decreased and increased water quantity)	X	X	X	X	X	X	X
Channel structure and form (includes bed and in-stream structural complexity)	X	X	X	X	X	X	X
Increased sediment quantity	X	X	X	X	X	X	X
Peripheral and transition habitats (floodplain condition, side channel and wetland condition/connections)	X	X	X	X	X	X	X
Water quality (temperature)	X			X	X	X	X
Habitat quantity (anthropogenic and natural barriers)	X	X	X	X	X	X	X
Injury/mortality (may include mechanical injury, harassment, poaching, incidental take)	X	X	X		X	X	X
Threat of future degradation		X				X	X
Threat of future development		X	X			X	X
Introduced competitors and predators			X			X	X

<sup>a</sup> Wenatchee (W), Entiat (E) , Methow (M), Klickitat (K), Yakima (Y)

<sup>b</sup> Spring Chinook (CHK), Steelhead (STH)



# Yakama Nation Accord-Funded Habitat Restoration Projects





## BiOp RPAs

The “Reasonable and Prudent Actions” (RPAs) that were included in NOAA’s BiOp are recommendations to reduce the potential impact of federal hydrosystem operations on ESA-listed species in the Columbia River Basin. Areas covered include fish passage, hydrosystem spill, predation management, and hatchery reforms as well as habitat strategies. Summarized in the tables below are RPAs specific to tributary habitat restoration and tributary habitat monitoring. Restoration projects prioritized in the MOA are driven by the BiOP recommendations.

RPA	Sub-RPA to which YN Contributes (and other RPAs)	Implementation Plan
<b>RPA 34</b> - Protect and Improve Tributary Habitat 2007-2009	34.1 Action agencies provide funding & technical assistance. 34.2 For infeasible projects, implement comparable replacements.	2007-2009, implement projects identified in the FCRPS Biological Assessment, Attachment B.2.2-2, Tables 1-5a.
<b>RPA 35</b> - Protect and Improve Tributary Habitat 2010-2018	35.1 Fund and/or assist specific habitat projects	Implementation of projects identified in 2009, 2013, and 2016 implementation plans, so that all projects needed to reach tributary survival benefits are fully funded by 2018 (1/3 of projects in each cycle).

RPA	Sub-RPA to which YN Contributes (and other RPAs)	Implementation Plan
<b>RPA 56</b> - Monitor and Evaluate Tributary Habitat Conditions and Limiting Factors	56.1 Implement research in select areas of the pilot study basins	Research in UC to quantify relationships between habitat conditions and fish productivity.
	56.2 Implement habitat status/trend monitoring as component of pilot studies	Habitat status and trend monitoring of the pilot studies in the UC.
	(56.3 Develop strategy for habitat status/trend monitoring for ESA fish)	Regional strategy for limited habitat status and trend monitoring for ESA fish populations.
<b>RPA 57</b> - Evaluate the Effectiveness of Tributary Habitat Actions	57.1 Entiat-Study ways to improve channel complexity & fish productivity	Channel complexity action effectiveness pilot study in the Entiat.
	57.4 Wenatchee/Methow/John Day-Habitat/fish productivity assessment	Project and watershed level assessments of habitat and fish productivity in Wenatchee/ Methow.
	(57.5 Refine models relating habitat actions to ecosystem function)	Refine models to related habitat actions to ecosystem function and salmon survival.

## Yakama Nation Accord Funded Lead Habitat Restoration Projects- RPAs Addressed

RPA	Projects
<b>Yakima River Basin, Klickitat, Rock Creek</b>	
34, 35	1988-120-25: Yakima River Management, Data and Habitat Yakima/Klickitat Fisheries Project (YKFP)- YN
34, 35	1992-062-00: Lower Yakima Valley Riparian Wetlands Restoration- YN
34, 35	1996-035-01: Yakama Reservation Watershed Project-YN
34, 35	1997-051-00: Yakima Basin Side Channels Land Acquisition- YN
<b>Klickitat River</b>	
34, 35	1988-120-35: Klickitat River Management, Data and Habitat- YN
	1997-056-00: Klickitat Watershed Enhancement- YN
<b>Rock Creek</b>	
34, 35	2007-156-00: Rock Creek Fish and Habitat Assessment- YN
<b>Upper Columbia</b>	
	2008-471-00: Upper Columbia Nutrient Supplementation– YN
34, 35	2009-003-00: Upper Columbia Habitat Restoration- YN

### Restoration Projects Summary

To address mitigation needs outlined in the MOA and BiOp RPAs, Yakama Nation Fisheries and Wildlife Programs are:

- Targeting Chinook, steelhead, coho, sockeye, Pacific lamprey, and white sturgeon
- Implementing 100+ project actions since 2008, including:
  - Habitat protection
  - Revegetation
  - Floodplain and side-channel reconnections
  - Nutrient enhancements
  - Irrigation efficiencies/ conversions
  - Passage improvements
  - Research to support the above
- Partnering with federal and state government, non-profit organizations, and others





## Yakama Nation Accord-Funded Habitat Restoration Actions Addressing Ecological Concerns (2008 – Present)\*



**Ecological Concern:**  
Loss of riparian vegetation

**Actions:** Plantings, maintenance, fencing, and weed removal

**Project Actions:** 107

**Benefits:** Increased shading, reduced erosion, increased food sources, habitat complexity



**Ecological Concern:**  
Streambed channelization

**Actions:** Decommission/remove roads, realign/connect/create side channels, create/restore/enhance wetlands and floodplain

**Project Actions:** 69

**Benefits:** Increased habitat quantity/quality, water quantity/quality

**Ecological Concern:**  
Reduced channel complexity

**Actions:** Install structures to increase in-stream complexity, create new channels, wetland/floodplain reconnection



**Project Actions:** 24

**Benefits:** Increased habitat complexity, increased sinuosity, reduced erosion



**Ecological Concern:**  
Low productivity/ high competition

**Actions:** Carcass plantings, invasive species control, and research

**Project Actions:** 39

**Benefits:** Improved flow, habitat quantity, water quality

**Ecological Concern:**  
Altered hydrology and water quantity

**Actions:** Install fish passage structures, screening, remove barriers, acquire water rights, improve irrigation efficiency, (also, restore watershed)



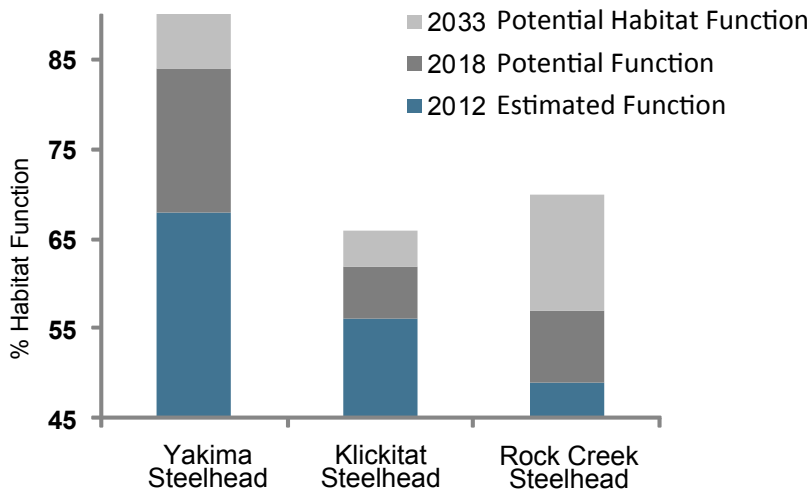
**Project Actions:** 4

**Benefits:** Improved quality and quantity of available food

*\*For a comprehensive list of planned and completed activities, please visit [www.yakamafish-nsn.gov](http://www.yakamafish-nsn.gov)*



## Yakima/ Klickitat — Percent Improvement in Habitat Quality



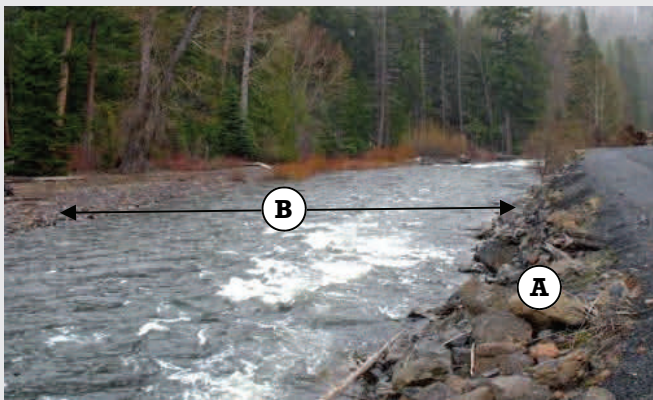
- 2007: 58%\* of potential habitat healthy and accessible
  - 2018: 64% habitat healthy/ accessible
  - 2033: 72% habitat healthy/ accessible
- \* Percentages represent an average

Yakama Nation Fisheries Program staff and other experts estimated the current health of habitat for fish, as well as future conditions following completion of the 2008 Accords restoration projects.

Habitat function is estimated based on the degree to which habitat conditions affect the health of fish populations. Restoration actions are intended to reverse the impact of past land use practices that have impaired habitat function.

Following are examples of the types of actions that the Yakama Nation has implemented to improve habitat conditions for fish.

### PROJECT SPOTLIGHT: Upper Klickitat River In-Channel and Floodplain Enhancement Project



Started on April 24, 2010 | Completed on November 2, 2010; Accord-funded

#### Problem

Road development resulted in changes to the river that negatively affected steelhead and spring Chinook. When the road was built, rocks (A) were installed along its edge to prevent damage by the river. The road and rock combination caused the river to become “channelized” (B) which resulted in the loss of its the natural meandering pattern. In addition, large wood that provided places for fish to feed and live throughout their lives was altered or removed.

#### Restoration Actions

To improve habitat complexity, water quality, and reduce channelization, the Yakama Nation replaced the uniform rock structure with 65 log jams (C), strategically placed boulders, reconnected or created 0.5 miles of side-channel, stabilized 0.5 miles of streambank, planted riparian vegetation, and created numerous pools.

#### Benefits

Returning 1.68 miles of the river to a more complex configuration, the Yakama Nation restored productive spawning, rearing, and holding habitat for salmon, steelhead, and other fish and wildlife species. Additional benefits to the Yakama Nation are reduced road maintenance costs.



## Project Implementation — Project Spotlights

### PROJECT SPOTLIGHT: Klickitat River Floodplain Restoration Project (“Haul Road Removal”)



Started in 2001 | Phase 4 In-Progress 2013; Multiple Funding Sources and Partners (Including the Salmon Recovery Funding Board and YN-Accord)

#### Problem

Eighty years ago, a railroad grade was built along the Klickitat River to haul timber to the mill downstream. Converted to asphalt in the 1950s (A), the road became unnecessary when the mill closed in the early 1990s. Located in the active floodplain, parts of the deteriorating road washed out in 1996. The road impeded the natural river function, restricting fish habitat development, simplifying the river, and impacting overall river health.

#### Restoration Actions

To restore natural river processes and healthy fish habitat, 4.35 miles of the road, fill, and rip-rap were removed (B), river banks re-sloped, and riparian areas revegetated. Asphalt was also removed along 8 miles of road. Floodplains, tributaries, and side channels were reconnected, culverts removed, and roughness elements installed.

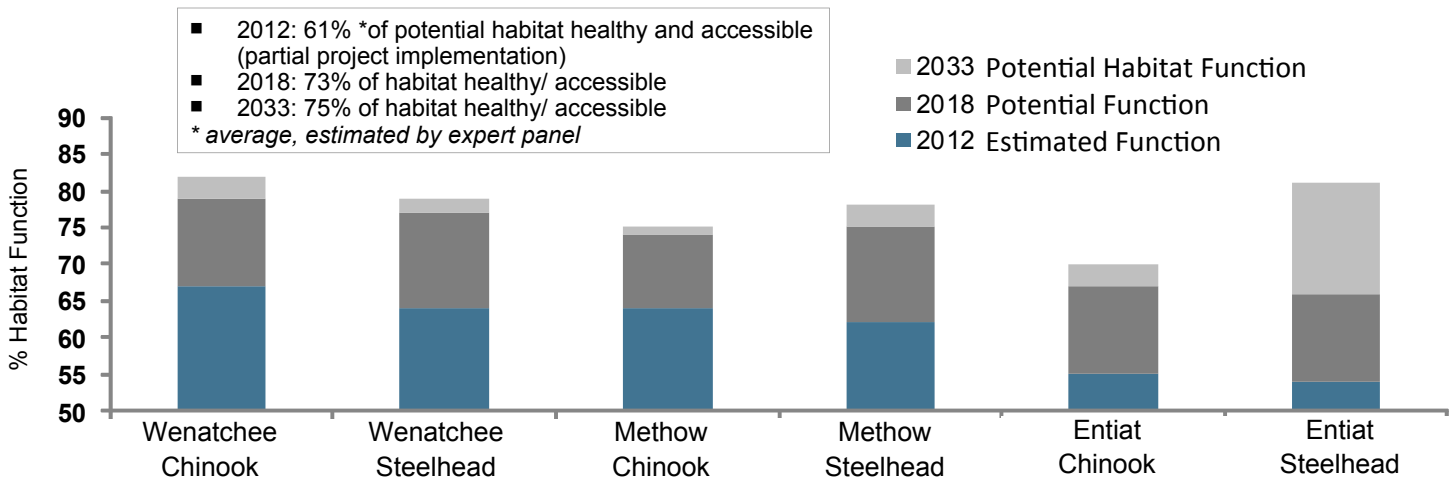
#### Benefits

Restoration efforts have led to healthy river functions in priority fish habitat areas, creation of and connection to secondary channels (C), and restoration of riparian and floodplain areas. This provides increased habitat quantity and quality for fish and wildlife using the riparian and floodplain areas.

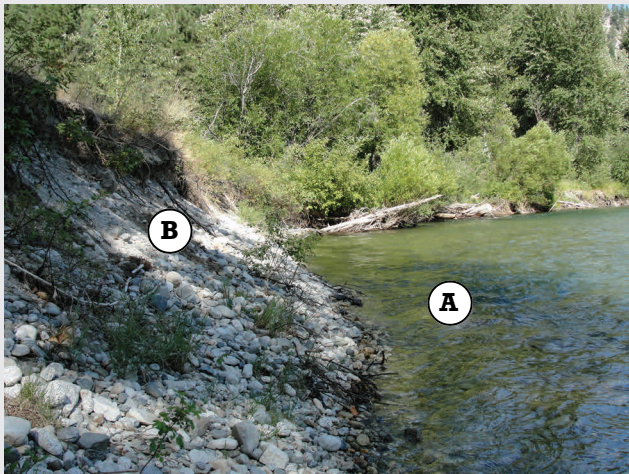


*Aerial photos (at left) reveal a change in the landscape after the Haul Road was removed. In 1996, the straight roadbed is clearly visible (1). In 2013, the roadbed has been removed, a side-channel has developed and stream-side vegetation has become established (2).*

## Upper Columbia — Percent Improvement in Habitat Quality



### PROJECT SPOTLIGHT: Entiat River “3-D” Habitat Enhancement Project



Started on July 16, 2011 | Completed on October 31, 2012; Accord-funded

#### Problem

Past land use practices reduced the amount of large wood in a section of the Entiat River. The reduction of wood resulted in the loss of fish habitat quantity and complexity (A), as well as greater river movement and bank erosion (B) compared to similar river reaches that were not impacted. The prior land use practices also reduced off-channel rearing habitat.

#### Restoration Actions

To improve habitat complexity and quantity, improve floodplain connection and reduce erosion rates, seven log structures (C) were constructed. In addition, 0.75 miles of off-channel habitats were created at five locations, and 9 acres of streamside (*riparian*) area were planted with native vegetation.

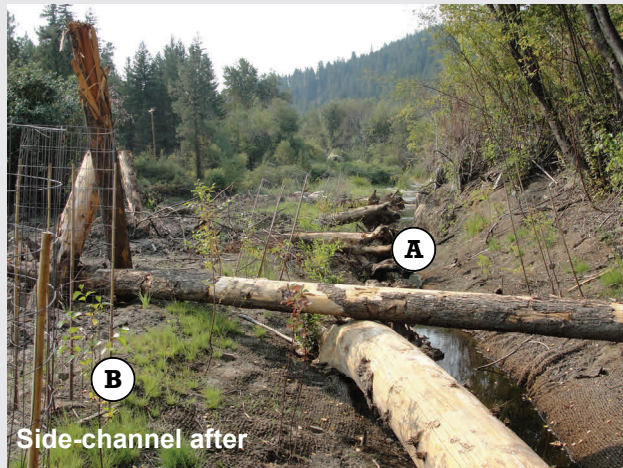
#### Benefits

The engineered log structures have helped to create pools for fish habitat, provide refuges during high flows and capture additional wood that helps to stabilize the migrating channel as well as increase habitat complexity. The addition of off-channel rearing habitats has benefited juvenile fish in numerous ways. As the native vegetation plantings age, they will help to increase fish habitat complexity and stability.



## Project Implementation — Project Spotlights

### PROJECT SPOTLIGHT: Chewuch (Methow) River Mile 10 Fish Habitat Enhancement Project



Started on September 12, 2011 | Completed on October 19, 2012; Accord-funded

#### Problem

Due to past land use practices, as well as riprap along the streambank, River Mile 10 of the Chewuch River was lacking instream habitat complexity and off-channel habitats. These conditions provided little opportunity for the recruitment of woody material. In addition, the channel had become unstable and disconnected from the floodplain. To compound the habitat deficiencies, an undersized culvert was also present. Since the location is considered a critical area for threatened and endangered fish, addressing the limiting factors was a priority.

#### Restoration Actions

To restore River Mile 10, 0.25 miles of off-channel habitat was created (A), 1.64 acres of stream-side (riparian) area were planted with native vegetation (B), the undersized culvert was removed, and 8 engineered log structures were installed (C) totaling 0.85 miles of restored river. To further enhance fish populations in the Chewuch River, the Yakama Nation is implementing similar actions at River Mile 8 and has proposed work from River Mile 11.75 to River Mile 13.

#### Benefits

By creating off-channel habitat and improving stream-side habitat complexity, rearing and holding habitat was provided for juvenile and adult fish. Benefits from the work were realized almost immediately as steelhead were observed in the side-channel five days after construction (D). Stabilizing streambanks, reconnecting the floodplain, and planting riparian vegetation has helped the river function in a natural and healthy manner which will help create and maintain fish habitat into the future. Primary fish species benefiting from these efforts include spring Chinook, steelhead, bull trout, and other resident fish.

## Project Implementation — Accomplishments

Planned and actual BPA-funded habitat restoration completed by Yakama Nation Fisheries from 2008 – Present where actual accomplishments equal or exceed planned values. (Values as of July 3, 2013) (as reported by Pisces, BPA's reporting site)

Metric	Planned	Actual
Miles of dike removed or modified	0.2	0.2
Acres maintained	1000	1200
Acres protected by fence maintenance	2506.5	2666.5
Acres of riparian non-wetland habitat protected by fencing	30.5	30.5
Acres of upland non-wetland habitat protected by fencing	358.27	358.27
Acres of wetland habitat treated	1.52	1.53
Culvert partial passage barriers removed	1	1
Features developed	20	20
Flow of water returned to the stream as prescribed in the water acquisition in cfs	72559	72559
Flow rate at the new screen diversion allowed by the water right in cfs	3	3
Miles road or trail created/relocated in the upland zone	0.44	0.44
Miles of left streambank fenced	2.07	2.07
miles main channel created	2.25	2.25
Miles of road improved or decommissioned in an upland area	0.75	0.75
Miles protected in riparian non-wetland	0.5	0.5
Miles of road improved or decommissioned in an upland area	1.13	1.13
Miles of road or trail blocked in the upland zone	2	2
Miles of road or trail created/relocated in the upland zone	1.5	1.5
Miles of stream after treatment	0.05	0.05
Miles of stream treated with spawning gravel	0.5	0.5
Miles of streambank protected by fence maintenance	63	81
Pools created for only complexity	8	8
Quantity of water protected by screening in acre-feet/year	8.9	88.9
Revetment/rip rap/other structures installed for stabilization and complexity	2	2
Riparian acres protected	16335.1	16395
Riparian miles protected	120	120.7
Riparian miles treated	307.93	315.59
River miles treated	0.38	0.38
Rootwad structures installed for both stabilization and complexity	7	7
Upland acres protected	72974.7	73877.7
Water gaps	5	5
Weirs or fishway chutes or pools installed	8	8
Wetland acres protected	73	82
Wetland acres treated	80.3	80.3



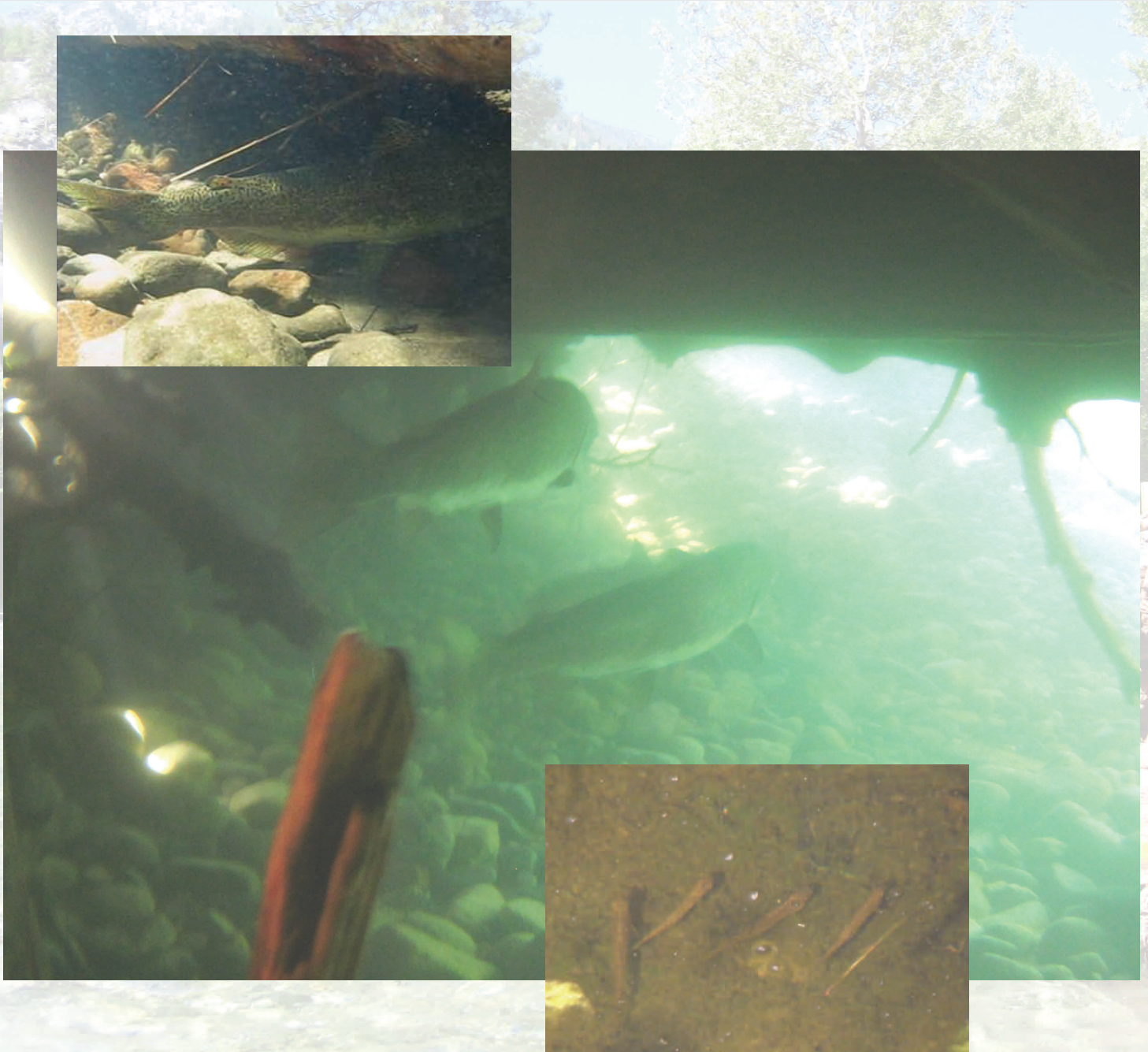
## Project Implementation — Accomplishments

Planned and actual BPA-funded habitat restoration completed by Yakama Nation Fisheries from 2008 – Present, where actual accomplishments are less than the planned values (Values as of July 3, 2013) (As reported in Pisces, BPA’s reporting site)

Metric	Planned	Actual
Acres of non-wetland habitat protected	16	1
Acres of non-wetland habitat treated	2.51	2.21
Acres of riparian habitat restored/re-established	50	0
Acres of riparian non-wetland habitat protected	1146	544
Acres of riparian non-wetland habitat treated	441.25	429
Acres of riparian wetland habitat protected	626.99	326
Acres of riparian wetland habitat treated	68	61
Acres of upland non-wetland habitat protected	823.09	105.09
Acres of upland non-wetland habitat treated	223.7	222.7
Acres of upland wetland habitat protected	50	0
Acres of wetland affected by treatment	9.79	2.49
Acres of wetland habitat protected	301.61	1
Alternate water sources installed in the riparian	4	2
Barriers	10	4
Miles of fence installed in riparian area	13.9	12.49
Miles of habitat accessed to the next upstream barrier or likely limit of habitable range	657.3	501.01
Miles of road decommissioned in a riparian zone	0.8	0
Miles of road or trail created/relocated in the riparian zone	0.1	0
Miles of primary stream reach improved	15	0
Miles protected in riparian wetland	4	3
Miles of side channel created	0.2	0
Miles of stream with improved complexity	22.72	12.07
Miles streambank protected	7.3	0
Other exclusion structures	3	1
Riparian acres treated	389.8	376.3
Screens addressed	1	0
Small scale push-up or diversion dam partial passage barriers	2	1
Stream miles after treatment	1.5	1
Structures installed	411	299
Upland acres treated	100.3	97.2

***“The balance for all of our survival, that depends on the balance between these fish, this forest, the water and one is not without the other.”***

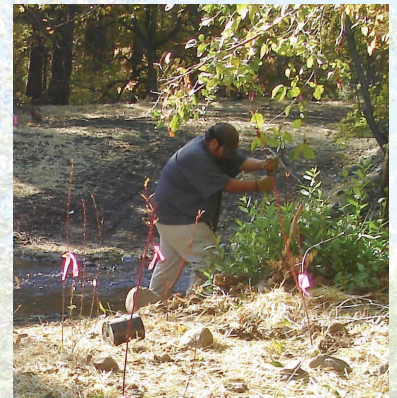
**Yakama Nation Councilwoman Stella Washines**



Examples (above) of fish using restored habitats immediately following the completion of projects by the Yakama Nation. Clockwise from top to bottom: Klickitat River Meadows Restoration, 3-D Habitat Enhancement (Entiat Subbasin), Goodfellow Side-Channel Reconnection (Wenatchee Subbasin) (photos, YN).



**Examples of Yakama Nation restoration work and the people making it happen.**



Pictured above: Rentschlers Meadow & Panther Creek restoration, upper Satus Creek (YN, 2003, 2013), Juvenile lamprey restoration, Prosser Hatchery (YN, 2013), Hancock Springs Restoration, Methow subbasin (YN, 2009)



## Photo Credits

Photo	Credit	Year	Page
Councilman Virgil Lewis, Sr.	Darla Leslie YN Review		-
<i>Panther Creek Fish Passage Barrier Removal, Yakima Subbasin</i>	<i>K. Clayton, YN</i>	2011	<b>cover</b>
<i>Klickitat Meadows Restoration, Upper Klickitat Subbasin</i>	<i>W. Conley, YN</i>	2004	<b>cover</b>
<i>3-D Habitat Enhancement, Entiat Subbasin</i>	<i>C. Clemmons, YN</i>	2012	<b>cover</b>
<i>Goodfellow Floodplain Reconnection, Wenatchee Subbasin</i>	<i>J. Breidert, YN</i>	2010	<b>cover</b>
<i>Hancock Spring, Methow Subbasin</i>	<i>J. Jorgensen, YN</i>	2012	<b>cover</b>
Focal Species: Steelhead	E. Keeley	NA	3
Focal Species: Spring Chinook	E. Keeley	NA	3
Focal Species: Pacific Lamprey	R. Lampman, B. Jenkins	YN/ ODFW	3
Ecological Concerns (Reduced Channel Complexity): Toppenish Creek, Yakima Subbasin, Reach Assessment	YN	2011	4
Ecological Concerns (Loss of Riparian Vegetation): Toppenish Creek, Yakima Subbasin, Yakama Reservation Watershed Project	YN	2007	4
Ecological Concerns (Streambed Channelization): Little Rattlesnake Creek, Naches Subbasin	J. Mathews, TFW-YN	2013	4
Ecological Concerns (Low Productivity/Competition): Carcass Twisp River, Natural Production Restoration Project	John Jorgensen, YN	2012	4
Ecological Concerns (Altered Hydrology and Water Quantity): Tepee Creek, Klickitat Watershed Enhancement Project	W. Conley, YN	2004	4
Ecological Concerns (Altered Hydrology and Water Quantity): Peshastin Creek, Wenatchee Subbasin, Reach Assessment	Interfluve for YN	2010	4
Ecological Concerns background photo: Hancock Springs (Methow)	J. Jorgensen, YN	2012	4
Addressing Ecological Concerns (Loss of Riparian Vegetation): Panther Creek, Yakama Reservation Watershed Project	K. Clayton, YN	2013	6
Addressing Ecological Concerns (Reduced Channel Complexity): Hancock Springs (Methow)	J. Jorgensen, YN	2009	6
Addressing Ecological Concerns (Streambed Channelization): Klickitat River Floodplain Restoration Project Phase 2	W. Conley, YN	2011	6
Addressing Ecological Concerns (Low Productivity/Competition): Yakima River Coho Project	T. Newsome, YN	2009	6
Addressing Ecological Concerns (Altered Hydrology and Water Quantity): Toppenish Creek Culvert, Removal Yakima Subbasin, Yakama Reservation Watershed Project	S. Adams, YN	2008	6
Addressing Ecological Concerns background photo: Little Rattlesnake Creek, Naches Subbasin	J. Mathews, TFW-YN	2013	6
Project Spotlight: Upper Klickitat River In-Channel and Floodplain Enhancement Project	D. Lindley, N. Romero, YN	2007, 2010	7
Project Spotlight: Klickitat River Floodplain Restoration Project	W. Conley, YN	2009, 2012	8
Aerial photos	Google Earth	2013	8
Project Spotlight: 3D Project, Entiat Subbasin	C. Clemmons, YN	2010, 2012	10
Project Spotlight: Chewuch (Methow) River Mile 10 Fish Habitat Enhancement Project	C. Butler, YN	2011, 2012	11



**HONOR**

**PROTECT**

**RESTORE**



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