Northwest Power and Conservation Council

October 25, 2012

MEMORANDUM

TO: Fish and Wildlife Committee Members

FROM: Tony Grover, Fish and Wildlife Division Director

SUBJECT: Update on the Walla Walla Hatchery projects status.

Gary James, Fishery Program manager for the Umatilla Tribe, will update the committee on the status of the Umatilla Tribe's Walla Walla Hatchery proposal. Mr. James will talk about the response to ISRP reviews and the next steps he envisions for this hatchery project.

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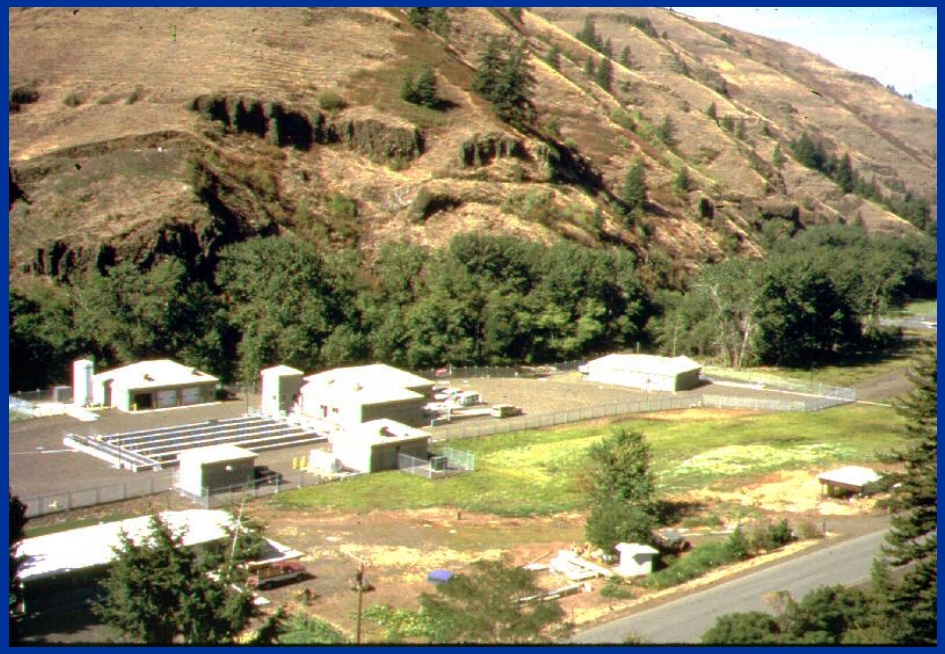
WALLA WALLA SPRING CHINOOK HATCHERY

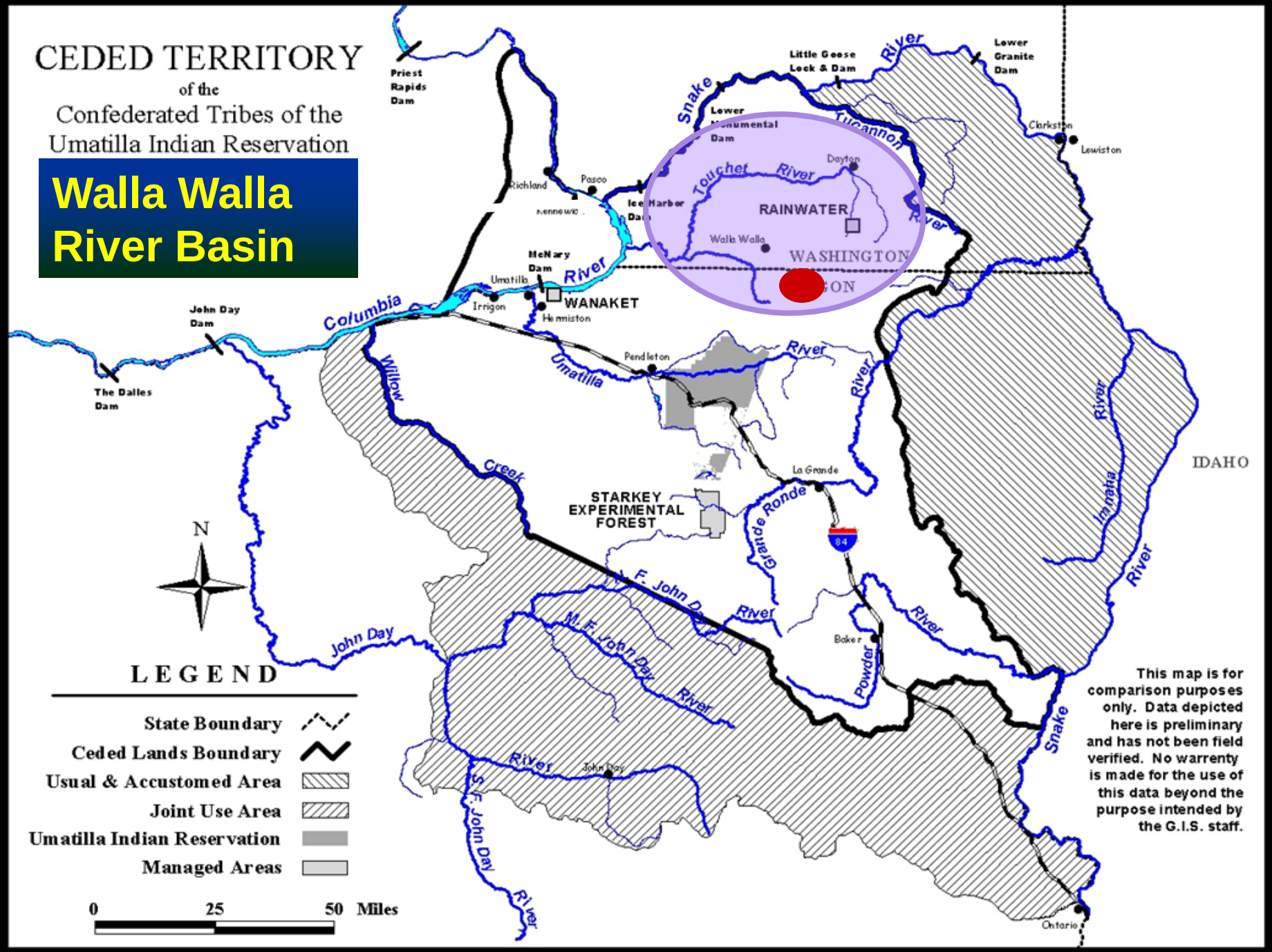
Project Update to NPCC

November 2012



Presentation Topics

- **Project History and Status - CTUIR**
- **Schedule and Costs - BPA**
- **ISRP Concerns & Responses - CTUIR**


CEDED TERRITORY
of the
Confederated Tribes of the
Umatilla Indian Reservation
Walla Walla
River Basin
Priest
Rapids
Dam
Little Goose
Lock & Dam
Lower
Granite
Dam
Snake
River
Lower
Monumental
Dam
Tucannon
River
Clarkston
Lewiston
Dayton
Touchet
River
Richland
Pasco
Ice Harbor
Dam
RAINWATER
Walla Walla
WASHINGTON
McNary
Dam
Umatilla
River
Irrigon
WANAKET
Hermiston
John Day
Dam
Columbia
River
Pendleton
Umatilla
River
Willow
Creek
The Dalles
Dam
La Grande
STARKEY
EXPERIMENTAL
FOREST
Grande Ronde
River
Imnaha
River
IDAHO
84
N
S. F. John Day
River
M. F. John Day
River
John Day
River
Baker
Powder
River
Snake
River
John Day
S. F. John Day
River
Ontario
LEGEND
State Boundary
Ceded Lands Boundary
Usual & Accustomed Area
Joint Use Area
Umatilla Indian Reservation
Managed Areas
0
25
50
Miles
This map is for comparison purposes only. Data depicted here is preliminary and has not been field verified. No warrenty is made for the use of this data beyond the purpose intended by the G.I.S. staff.

Satellite Hatchery Facility Locations

Columbia River

Three Mile Dam

Hermiston

South Fork Walla Walla

Umatilla River

Thornhollow

Minthorn

Imeques

Pendleton

Bonifer

CTUIR Policy Approved Directives

- **Fisheries Program Mission: To provide sustainable harvest opportunities for aquatic species of the first food order by protecting, conserving, and restoring native aquatic populations and their habitats.**

- **Implement a comprehensive Walla Walla water and fish restoration program that includes a Walla Walla spring Chinook hatchery as a key component.**

- **Return 5,000 - 5,500 CHS Walla Walla River mouth to reestablish natural production and fisheries.**

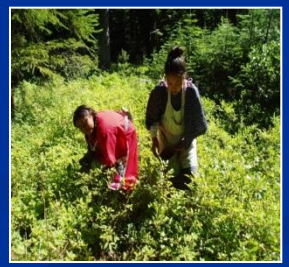
CTUIR's First Foods-Based Mission to Guide Fisheries Restoration

Serving Order

1	2	3	4	5
Water	Salmon	Deer	Cous	Huckleberry







Goal

Restored Floodplain and Increased First Foods for Tribal Use

WW Hatchery Project Support

- CTUIR policy directive
- US v OR agreement
- BPA/CTUIR Accord MOA
- Recommended in order to meet adult return goals in subbasin and recovery plans
- Numerous local watershed partners
- MOA - CTUIR/ODFW/WDFW

Walla Walla Hatchery
Long Project Timeline

1987 : NEOH projects amended in F&W Program

1990-2012 : Implement WW passage/flow projects

2014 : Time ripe time for hatchery construction

Comprehensive Walla Walla Spring Chinook Restoration Strategy

- Fish Passage Improvements
- Instream Flow Enhancement
- Artificial Propagation – Salmon Reintroduction
- Watershed Protection and Restoration
- Stream Habitat Enhancement
- Harvest Management
- Monitoring and Evaluation

Walla Walla Passage Project Locations

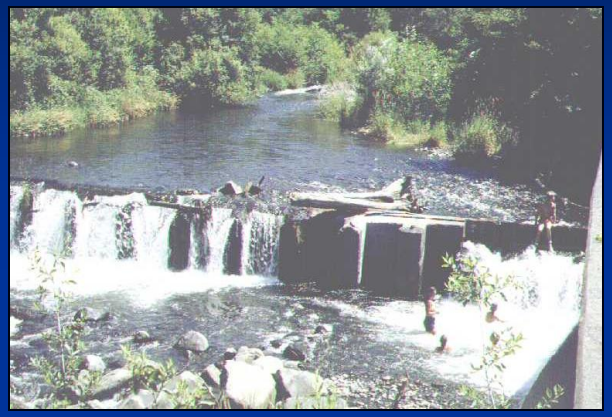
Completed Fish Passage Projects

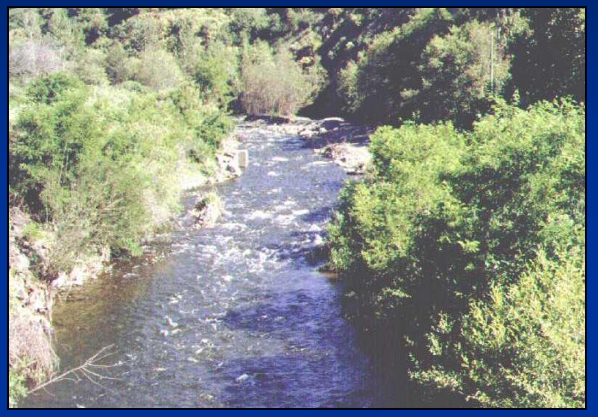
2 Dam Removals

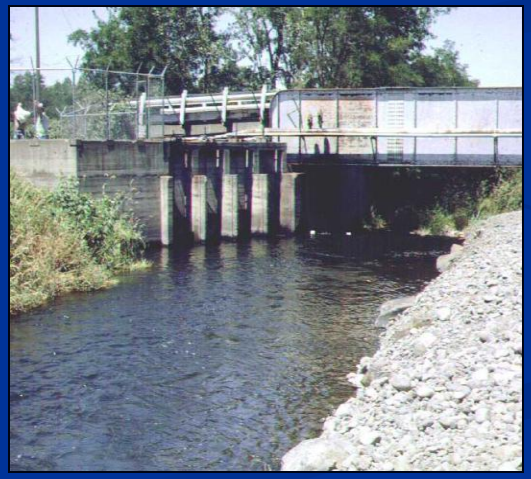
- Marie Dorian
- Maiden

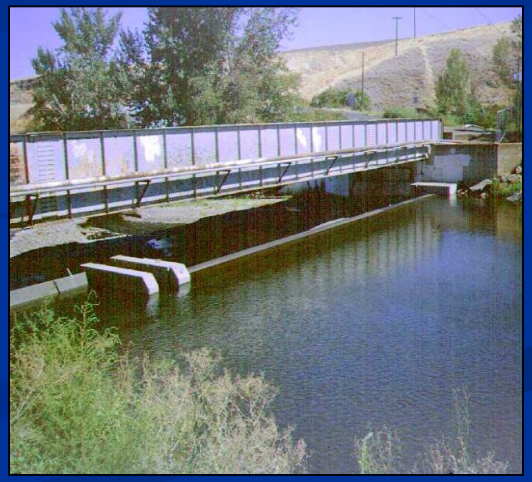
5 Fish Ladders

- Little Walla Walla
- Nursery Bridge (with adult trap)
- Burlingame
- Hofer
- Gose Street

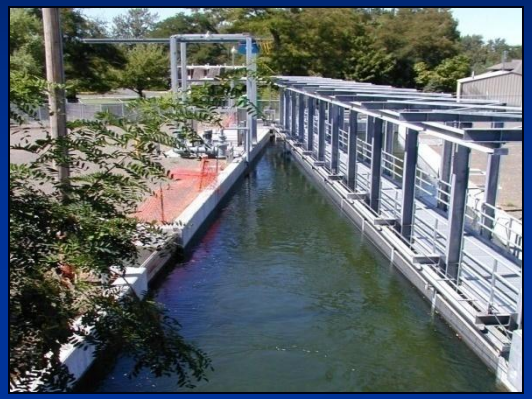








Completed Fish Passage Projects



6 Juvenile Screens

- Little Walla Walla (with smolt trap)
- Burlingame
- Cost shares for Smith-Nelson & City of Walla Walla
- Consolidations for Milton and Garden City/Lowden

3 Ditch consolidations

- Milton, Garden City/Lowden, & Bergevin/Williams

350 New pump intake screens

18 Push-up dams converted to pumps

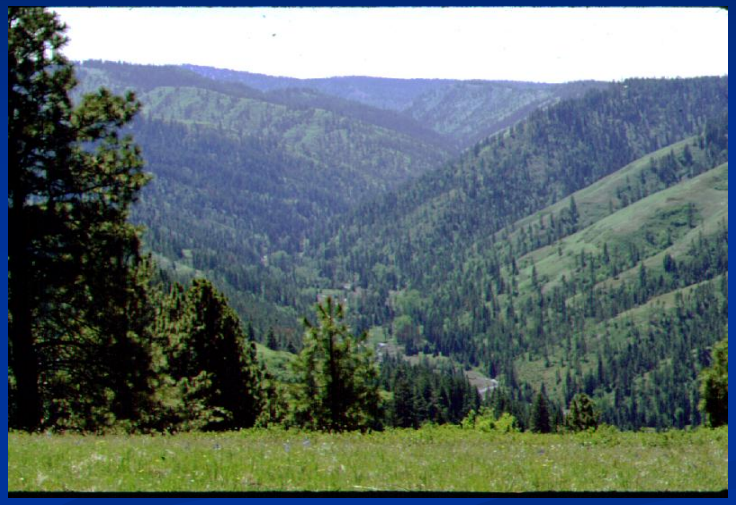
Flow Improvement Progress

Mainstem Walla Walla River reach near state line

- Dry reach in August 1999
- Same area in 2002 with initial flow improvements

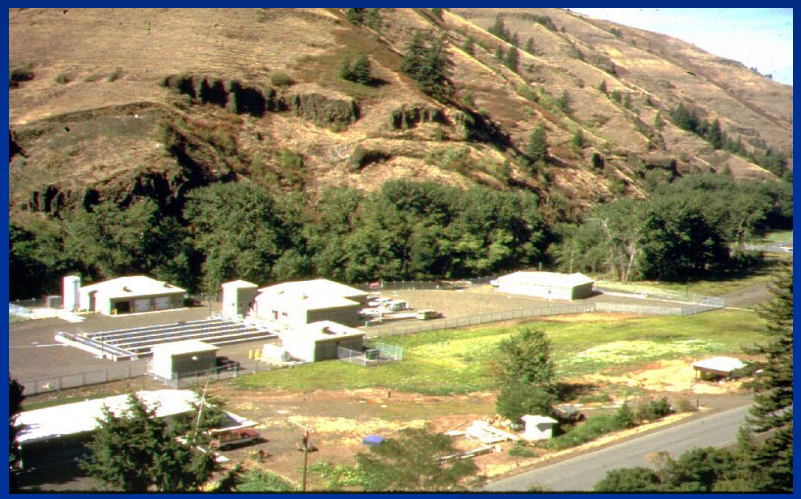
Watershed Protection and Stream Restoration & Enhancement

- Land acquisition
- Riparian fencing and planting
- Channel-floodplain reconstruction
- Instream structure (rock and wood)
- Culvert and barrier improvements



Artificial Propagation – Salmon Reintroduction in WW Basin

- Adult facility 1996 (Ph I)
- Adult outplanting 2000
- First salmon return 2004
- First smolt release 2005
- Master Plan 2008
- New hatchery 2015 (Ph II)



Existing Facilities/Capabilities

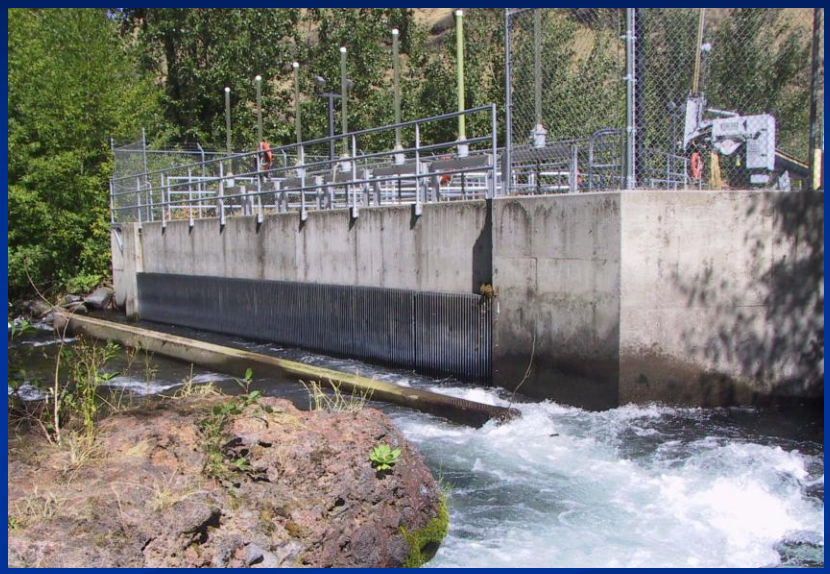
- Broodstock collection trap
- Site property acquisition (18 acres)
- Adult holding and spawning
- Water intake and screening
- Pumps and pipe sizing
- Ozone water treatment
- Effluent settling pond
- Two residences

Existing Adult Holding/Spawning Facility

Existing Adult Holding/Spawning Facility

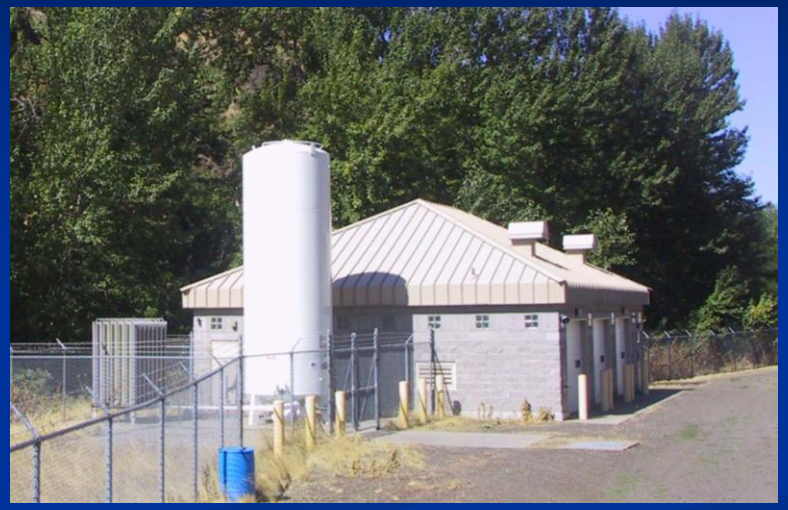
Existing Facility (Ph I) Includes

Water intake, screens, and pumps sufficient for proposed Ph II



Existing Facility (Ph I) Includes

Ozone water treatment and settling pond sufficient for proposed Ph II



Location of proposed Ph II Facilities

WW Hatchery Program Current vs. WW Hatchery

	Current Program	With WW Hatchery
Facility	Adult holding/spawning	Add incubation/rearing
Releases	250K in-river	500K acclimated
Production	Off-site (Carson NFH)	Localized
Est. SAR	.30 planned .24 observed	.55 planned
Hatchery Returns	650 (24% of H goal)	2,750 (100% of H goal)

Umatilla vs WW CHS Programs

	Umatilla	Walla Walla
MS Dams	3	4
Smolt Release	810,000	500,000
Est. SAR	.45	.55
HOR	3,400 (current avg.)	2,750 (full est.)
Est. miles spawning habitat	33	58

Walla Walla CHS Spawning Habitat

CHS Adult Return Goals

	Hatchery	Natural	Harvest Component	Total Goals
MP Goals Upp. MS/ South Fork	2,750	1,100	-	3,850
Subbasin Goals*	2,500-3,000	2,000-3,000	2,000 - 2,500	5,000-5,500

* Goals from Tribal Restoration Plan (1996) and Subbasin Plans (2001 and 2004)

Walla Walla Spring Chinook Returns

Walla Walla Hatchery Facility Costs

- **$1.2M Existing broodstock collection incorporated into Nursery Bridge ladder (completed 2001)**
- **$3.0M Existing Facility (PhI completed 1996)**
- **$12M Budgeted for proposed additions (Ph II)**

Walla Walla Hatchery Project Schedule

Completed

- Master Plan August 2008
- ISRP review and CTUIR responses July 2006, Nov 2008, May 2010
- Pre-design May 2010 – June 2011
- HGMP – 1st draft out March 2011; 2nd draft out July 2012
- Develop MOA and management guidelines Nov 2011 – July 2012
- MOA signed Oct 2012

Projected

- Final HGMP to NOAA Dec 2012
- Potential NPCC recommendation Dec 2012
- Final designs & NEPA/EIS concurrent Jan 2013 – May 2014
- Construct hatchery June 2014 – Oct 2015
- First brood 2015; first smolt release April 2017; first adult return 2019

Walla Walla Hatchery
General Timeline and Costs

Program Area	Occurrence	2013	2014	2015	2016	2017
Step 1 - Planning and Design	One Time					
Step 2 - Environmental Compliance	One Time	$600K				
Step 3 - Final Design	One Time	$800K				
Construction	One Time		$11.5M			
Annual Operations and Maintenance	Annual			→	→	→
Monitoring and Evaluation	Annual	→	→	→	→	→

Note - Estimated costs are within the current Accord project budget

NPCC/ISRP Review Process

- 2005 & 2007 - CTUIR submits MP to NPCC
- 2007 - NPCC staff comments on Master Plan
- Aug 2008 - updated Master Plan resubmitted
- Sept 2008 – project presentation to NPCC
- Nov 2008 - ISRP review of Master Plan ("does not meet..")
- Nov 2008 - CTUIR response to ISRP comments
- May 2010 - Additional CTUIR response to ISRP comments
- May 2010 - ISRP memo ("does not meet scientific criteria")
- Sept 2010 - ISRP Art. Prop. Review discussion/presentation

ISRP Comments – 2008 & 2010

Main Recommendations

1. **'08: Study status quo program for another 10 years to see if goals can be met without proposed hatchery.**
   '10: Study status quo program fish performance more and develop a "proof-of-concept" to justify the proposed hatchery.

2. **'08: Use 10-year study to better understand habitat**
   '10: Provide evidence that habitat is adequate

3. **'08 & '10: Provide a decision framework for an integrated supplementation/harvest program**

4. **'08 & '10: Provide HGMP**

General CTUIR Response to ISRP

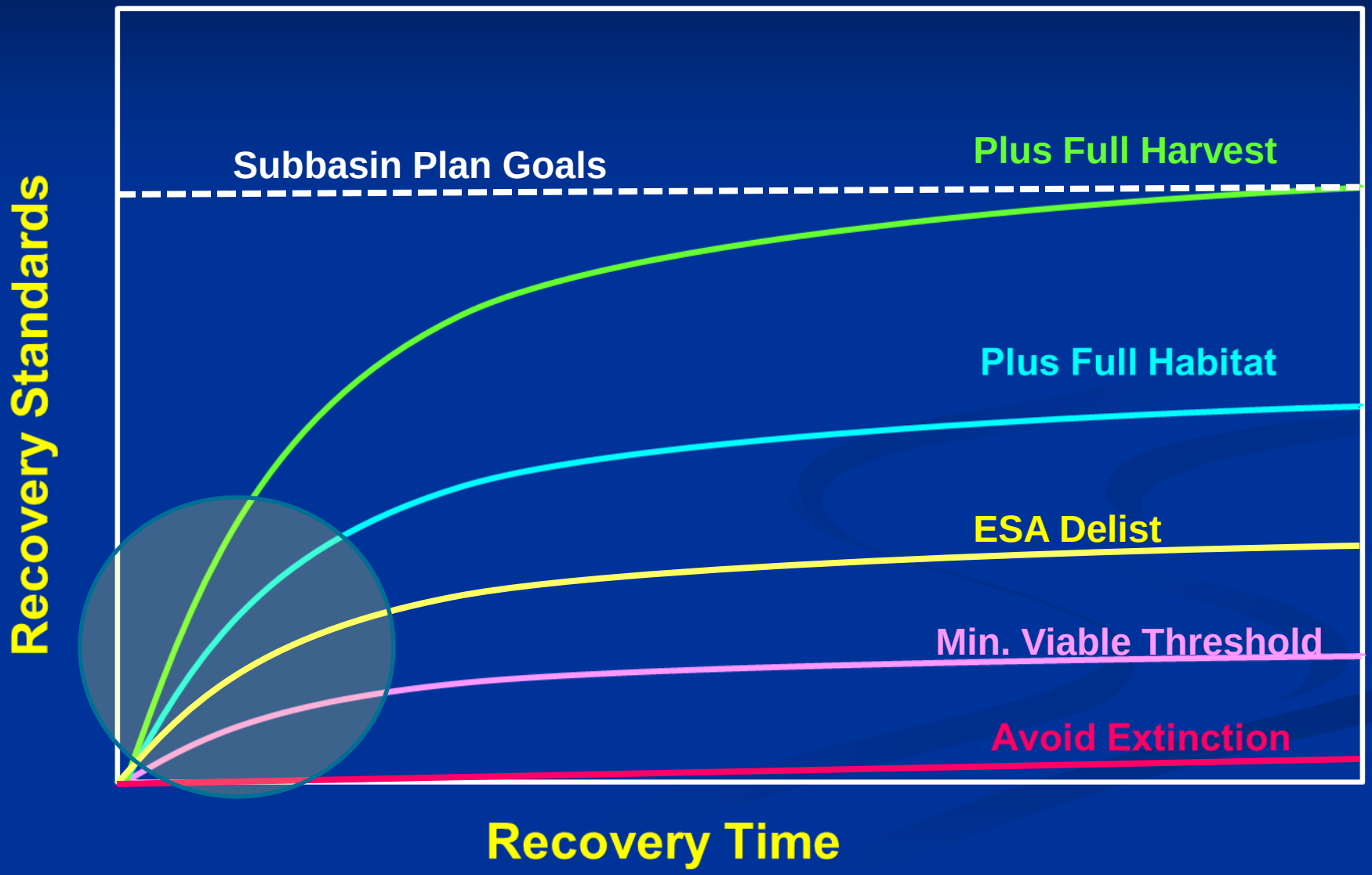
ISRP Main Recommendations	CTUIR Response Summary				CTUIR Position
	Policy Issue	Info Provided	To Be Provided	In M&E Plan	
1. Prove fish performance and project necessity	X	X		X	Much positive info is known and M&E will continue
2. Prove habitat sufficiency	X	X		X	Much positive info is known and M&E will continue
3. H & W fish management framework		X	X	X	Tools: All H, App X, fish mgnt. guidelines, AOP, adaptive mgnt.
4. HGMP			X		New HGMP is near complete, with NOAA okay.

CTUIR Issues with ISRP Response

1. **Main areas of disagreement are policy related:**
   - Questioned if hatchery is right tool and necessary
   - Questioned project rationale and goals
   - Claimed that self-sustaining natural population must be established prior to implementing a harvest program (can't do both)
   - Suggested "modest reintroduction with natural colonization"
   - Master Plan should consider options to avoid hatchery-wild interactions and allow natural population to rebuild naturally

- ✓ ISRP provided some good science input but should stick to science only
- ✓ Instead of providing judgment on the role of supplementation, ISRP should focus on how best to technically achieve the policy-established goals
- ✓ ISRP input questions CTUIR's TREATY FISHING RIGHTS!

Trajectory of Fish Recovery Programs



CTUIR Issues with ISRP Response

2. **Recommended standards are unrealistic:**
   - **Perceived failure of 10-yr hatchery jumpstart program to achieve replacement constitutes "failed proof-of-concept" therefore proposal does not meet scientific criteria**
   - **Overemphasis on establishing self sustaining natural production**
   - **Project should not be considered until more habitat enhancement, more M&E and better fish performance can be shown.**

- ✓ **A standard requiring scientific certainty ("proof-of-concept") before program implementation can proceed is inappropriate**
- ✓ **This distracts from the proposed adaptive management approach which emphasizes working simultaneously to improve habitat and be informed by M&E to enhance salmon for all uses including harvest**
- ✓ **There are many positive signs of improved habitat and fish performance**

General CTUIR Response to ISRP

Information has already been provided:

- Natural production capacity to justify goals
- Habitat enhancements completed and planned
- Fish reintroduction performance and increasing trends
- Appendix X to guide H & W fish management

ISRP did not acknowledge or understand the work completed

Recommendation already identified in proposed M&E:

- More study on fish passage, natural production habitat sufficiency, and comparison of this and other hatchery programs

ISRP did not acknowledge that much is known and uncertainities will continue to be evaluated to inform an adaptive management process

Estimating Natural Production Capacity

- Subbasin plan EDT production estimates
- Documentation of available habitat
- Observation of spawner densities
- Observation of suitable juvenile rearing habitat

CHS Fish Management Approach

- Implement supplementation production program for natural production enhancement and harvest
- Produce and release 500K smolts annually
- 100% external mark
- Trap/collect brood/count returns at Nursery Bridge Dam
- Annual fish disposition (broodstock, pass above, outplant to Mill Creek, and harvest) as per co-manager guidelines.
- M&E to determine success – adaptive changes

Program Management Framework of Comanagers

1. All H Analyzer (AHA) Model

- Included in MP to evaluate production alternatives
- Provided insight for H & W fish management, PNI, etc.

2. Appendix X Adult Fish Disposition Model

- In MP to plan for balance in escapement, brood, outplanting & harvest
- Used to inform H & W fish management and development of guidelines

3. Comanager Adult Management Guidelines

- Detailed guidelines help to scope program and fish disposition options
- Condensed version to guide annual operations (sliding scale disposition)

4. Comanager RM&E to inform Adaptive Mangement

- Research uncertainties and monitor program performance
- Inform adaptive management (necessary change)

5. Comanager Annual Operations Planning (AOP's)

- Informed by M&E and management guidelines to define annual plan

Fish Disposition Management
(Master Plan App X to provide guidance)

- Purpose is to guide annual fish disposition decisions (weir management tool)
- Based on seeding habitat above NBDam at 1,100 spawners
- Incorporates NORs into broodstock
- As NORs increase pNOS and pNOB increase
- As HORs increase fish will be available for outplanting into Mill Creek and for harvest
- Adaptive management can be applied as necessary through comanager AOP process

Draft WW Adult CHS Management Guidelines

Total Run Size	Brood-stock (500K OR/WA pgm.)	Escape-ment OR	Mill Cr. Out-planting	Oregon Harvest	WA MS Harvest	Spawn Escape-ment OR	Escape-ment WA	WA Harvest Touchet	WA MS Harvest	Spawn Escape-ment Touchet	TOTAL In-River Harvest	CTUIR Harvest	State Harvest (each)
250	150	200	0	0	0	50	50	0	0	50	0	0	0
500	250	400	0	0	0	150	100	0	0	100	0	0	0
750	350	600	50	0	0	200	150	0	0	150	0	0	0
1000	350	800	100	38	0	313	200	13	0	188	50	25	13
1250	350	1000	150	75	0	425	250	25	0	225	100	50	25
1500	350	1200	200	113	0	538	300	38	0	263	150	75	38
2000	350	1600	300	188	0	763	400	63	0	338	250	125	63
2500	350	2000	400	413	0	838	500	138	0	363	550	275	138
3000	350	2400	400	638	85	928	600	106	21	473	850	425	213
3500	350	2800	400	938	125	988	700	156	31	513	1250	625	313
4000	350	3200	400	1275	170	1005	800	213	43	545	1700	850	425
4500	350	3600	400	1613	215	1023	900	269	54	578	2150	1075	538
5000	350	4000	450	1913	255	1033	1000	319	64	618	2550	1275	638
5500	350	4400	450	2288	305	1008	1100	381	76	643	3050	1525	763
6000	350	4800	450	2663	355	983	1200	444	89	668	3550	1775	888

- 1st Generation (2018 - 2021)
- .55% SAR target not met immediately

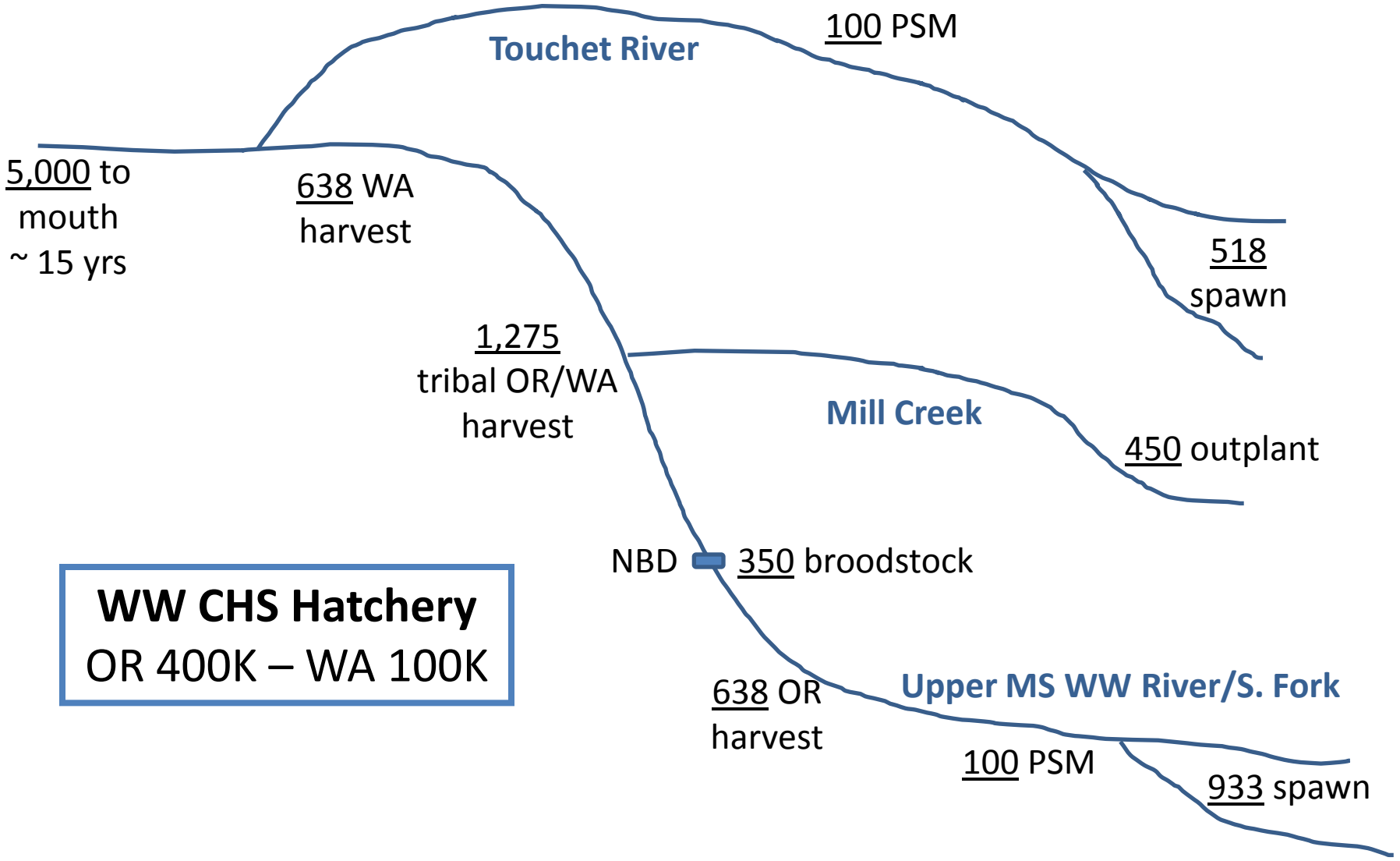
- 5 to 10 years/2nd Generation (2022 - 2025)
- H returns + one generation N returns

- 10 to 15 years/3rd Generation (2026+)
- H returns + two generations N returns

Draft WW Adult CHS Management Guidelines

Total Run Size	Broodstock	Spawning Escapement	Mill Creek Outplanting	In-River Harvest (% of run)
250	150	100	0	0 (0%)
500	250	250	0	0 (0%)
750	350	400	50	0 (0%)
1000	350	600	100	50 (5%)
1250	350	800	150	100 (8%)
1500	350	1000	200	150 (10%)
2000	350	1400	300	250 (12.5%)
2500	350	1600	400	550 (22%)
3000	350	1800	400	850 (28%)
3500	350	1900	400	1250 (36%)
4000	350	1950	400	1700 (43%)
4500	350	2000	400	2150 (48%)
5000	350	2100	450	2550 (51%)
5500	350	2100	450	3050 (55%)
6000	350	2100	450	3550 (59%)

Walla Walla Basin Adult Spring Chinook Return Projections & Expected Disposition



WW M&E Performance Indicators

(existing project #2000-039-00 received top ISRP review)

Adult abundance & performance

- Spawning escapement (spawning surveys and/or adult counts at dams, weirs and traps)
- Total population abundance
- Fish per redd
- Redds per mile
- Recruits per spawner (P:P)

Juveniles abundance & performance

- Smolt production
- Smolts per redd
- Survival & run timing
- Smolt to adult return (SAR)

Diversified Management Approach

- Umatilla – aggressive habitat and hatchery actions (reintroductions) to restore water/fish ecological function and develop near-term fisheries
- John Day – wild fish management emphasis with no hatchery intervention
- Grande Ronde – hatchery program emphasizing genetic conservation of ESA listed species
- Walla Walla – like Umatilla but with more emphasis on natural fish spawning and in broodstock. Touchet River and Mill Creek to receive adult outplanting.

Status of New HGMP

- HGMP submitted for current program in May 2009
- March 2011 - new draft out for comanager review
- July 2012 - 2nd draft out for comanager re-review
- Nov 2012 - anticipate getting last of comanager comments
- Dec 2012 - final new HGMP to NOAA*

*NOAA has already provided a few editorial comments and expressed no concern with increasing production from 250-500K.

*Program will operate under existing HGMP for several more years and final approval of new HGMP will be confirmed by an approved BiOp but it is not known when that will happen.

CTUIR/ODFW/WDFW MOA for Walla Walla Hatchery Design, Construction & Operations

MEMORANDUM OF AGREEMENT

CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION DEPARTMENT OF NATURAL RESOURCES
and
OREGON DEPARTMENT OF FISH AND WILDLIFE
and
WASHINGTON DEPARTMENT OF FISH AND WILDLIFE

Regarding Walla Walla Spring Chinook Hatchery Design, Construction and Operations

Purpose

The Confederated Tribes of the Umatilla Indian Reservation's Department of Natural Resources (CTUIR DNR), Oregon Department of Fish and Wildlife (ODFW), and Washington Department of Fish and Wildlife (WDFW) are recognized as tribal and state co-managers of hatchery operations for salmon and steelhead in the Walla Walla River Basin. A Walla Walla Spring Chinook Hatchery Master Plan (WWHMP) was submitted to the Northwest Power and Conservation Council by CTUIR DNR in August 2008. The objective of this CTUIR-sponsored and BPA Fish Accord-funded project is to contribute to Walla Walla spring Chinook restoration by locally producing spring Chinook-smolts at a hatchery constructed on the South Fork Walla Walla River. The project is a key component in the overall Walla Walla spring Chinook restoration program that will complement other efforts such as flow, fish passage and stream habitat improvements. The project is expected to produce enough returning adults to provide for broodstock, supplementation and harvest throughout the Walla Walla Basin (upper mainstem and tributaries, Mill Creek and the Touchet River). The terms of this Agreement identify the Walla Walla Spring Chinook Hatchery design, construction and operations supported by the co-managers.

Terms

1. Hatchery Design and Construction
Co-managers support design and construction of incubation, early rearing, and final rearing facilities at the existing South Fork Walla Walla Adult Holding and Spawning Facility in order to accommodate a production capacity of 500,000 yearling spring Chinook smolts (as detailed in the WWHMP). This enhanced facility would then be known as the Walla Walla Hatchery.

2. Hatchery Production Level
Co-managers support annual production of up to 500,000 spring Chinook to be reared full term at the new facility (as per US v OR agreement Table B1. Footnote G). For purposes of developing the Hatchery Genetic Management Plan (HGMP) analysis, production would be split with up to 400,000 reared/acclimated on site and released directly into the South Fork Walla Walla River; up to 100,000 would be transported into the upper Touchet River. Actual and future adjustments in production levels and release location (as mentioned in WWHMP) will be made as per co-manager agreement through Annual Operations Plans (AOP's).

3. Management Guidelines for Fish Disposition
In contrast to initial management in the neighboring Umatilla Basin, brood collection, harvest, and escapement into the upper mainstem portion of the subbasin will be managed in an attempt to expedite the restoration of a naturally reproducing population. This natural production emphasis is incorporated into the WWHMP which allocates hatchery and natural origin adults for broodstock, natural spawning escapement, outplanting, and harvest.

In order to avoid annual negotiations regarding management decisions for spring Chinook returning to the Walla Walla River, co-managers will develop Walla Walla River Adult Spring Chinook Management Guidelines similar to those used successfully in the Umatilla Basin. Fish disposition such as harvest, broodstock collection, spawning escapement and adult outplanting will be determined based on these guidelines and sliding scale preseason run projections and then incorporated into AOP's. It is assumed that co-manager harvest planning would target an equal 50/50 tribal/state share. Any adjustments to the management guidelines would be made as per co-manager agreement during annual AOP discussions. The parties will work together in good faith to resolve any differences including elevating issues to CTUIR/ODFW/WDFW policy representatives as necessary.

4. Hatchery Effectiveness Monitoring and Evaluation
CTUIR DNR and WDFW will continue the BPA-funded project "Walla Walla Basin Collaborative Monitoring and Evaluation" to evaluate the hatchery and natural production effectiveness of the Walla Walla Hatchery project. The spring Chinook management approach in the Walla Walla Basin will allow for direct comparisons between restoration and supplementation strategies within the Walla Walla Subbasin as well as in neighboring subbasins.

5. HGMP/Federal Consultation
The parties to this agreement will propose to the federal government that all terms of agreement in this MOA be incorporated into the final Walla Walla Hatchery HGMP.

6. Modification and Withdrawal.
Modifications of this MOA can be made at any time as per written agreement of all parties. Any Party may withdraw from this Agreement at any time by serving written notice to the other Parties. Included in the notice shall be an explanation as to the reason for withdrawal. Upon withdrawal of any Party, any remaining Party may withdraw upon notice to the remaining Party.

Signatures:

CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION, DEPARTMENT OF NATURAL RESOURCES

Eric J. Quaempts, Director — Date 9/5/12

OREGON DEPARTMENT OF FISH AND WILDLIFE

for Roy Elicker, Director — Date 10/30/12

WASHINGTON DEPARTMENT OF FISH AND WILDLIFE

Philip Anderson, Director — Date 10/30/12

Summary

- Master Plan Completed
- Extensive ISRP review/presentation/response completed
- Phase I of hatchery project completed
- Results of Phase I & II salmon reintroduction is positive
- Preliminary designs completed - costs are within budget
- HGMP near complete - NOAA okay
- Co-manager MOA completed
- Need NPCC project support - December meeting?
- Start NEPA & final designs January 2013

Anticipated Project Benefits

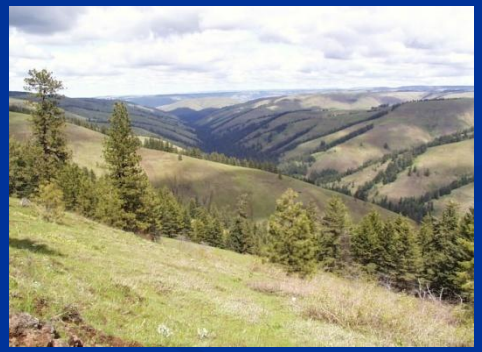
Natural Production

Harvest

Broodstock

Questions?








Protecting & Enhancing First Foods – Revival of Traditional Fisheries