EXPERT PANEL PROCESS 2016 UPDATE

Presentation to Expert Panel Members Convened by the Grande Ronde Model Watershed
April 29th, 2015

Expert Panel Evaluation 2016 Overview

Updates:

- ✓ Roles of watershed groups and liaisons
- ✓ Challenges to “Incorporating latest science findings”
- ✓ Contract for Coordination and PM support
- ✓ Schedules

RPA 35 and Table 5 Populations

- The FCRPS BiOp identified performance standards (HQI targets) for 56 populations of Chinook and steelhead to be achieved through tributary habitat improvement actions by 2018.
- RPA 35 Table 5 lists 56 populations and their performance standards; 18 of these populations are designated as priority populations.
- The 2011 court order on the 2008 BiOp required the Action Agencies to identify specific actions for implementation through 2018 as needed to meet the Table 5 performance standards for all populations.

2008 FCRPS Biological Opinion

- Expert Panel concept outcome of the Remand Collaboration Habitat Work Group (CHW), convened by NOAA and included the Action Agencies and Pacific Northwest Sovereign states and tribes.
- The CHW was initially convened by NOAA Fisheries in 2006.
- The CHW researched methods for correlating the effects of habitat improvement actions with survival.
- The process represents a cause-and-effect linkage of habitat improvement actions to changes in habitat condition; and changes in habitat condition to changes in survival.

CHW Method

- Relies on Expert Panels to identify limiting factors for assessment units/populations; estimate the current status or condition of each limiting factor; estimate the potential status or condition of each limiting factor; and estimate change in limiting factors as a result of implementing habitat improvement actions.
- Relies on Action Agencies to combine limiting factors into a single habitat condition score; combine habitat condition scores into a single habitat quality score for the population; and translate habitat quality changes into survival. The Action Agencies calculate survival using a formula developed by the CHW.

CHW Assumptions

- Limiting factors are known for each population
- Habitat actions directly affect habitat variables that limit the population
- Habitat variables can be combined to describe local habitat conditions
- Local habitat conditions can be combined to describe overall habitat quality for the entire population
- Changes in overall habitat quality are directly linked to changes in freshwater survival

Expert Panels

- Seven Expert Panels assembled for the 2008/2010 FCRPS BiOp.
- Six address salmon and steelhead populations in the upper Columbia, lower Snake, Wallowa, and Imnaha rivers; the upper Grande Ronde, lower Salmon, and upper Salmon rivers.
- A seventh panel addresses steelhead in the Clearwater River.
- Expert Panels include federal, tribal, state and local stakeholders with knowledge and experience planning and implementing habitat improvement projects and evaluating the affect of habitat improvement actions on salmon and steelhead.
- Expert Panel workshops are convened by the Action Agencies.
- Expert Panels convene once every three years.
- The most recent Expert Panel workshops were convened in 2012.

Expert Panel Sub-basins

Seven Expert Panels were assembled for the FCRPS BiOp. Six panels address salmon and steelhead populations in the Upper Columbia, Lower Snake, Wallowa and Imnaha rivers; the Upper Grande Ronde, Lower Salmon, and Upper Salmon rivers. A seventh panel addresses steelhead in the Clearwater river.

Key Limiting Factors - Valuation

- The Expert Panels "value" limiting factors relative to each factor's Proper Function.
- Low values indicate "poor" relative condition. High values indicate a somewhat "improved" relative condition.
- Expert Panels evaluate current condition of a limiting factor and numerically establish a "low bookend."
- Two additional values bookend the potential of each limiting factor projected at 2018 and 2033. These values mark the "high bookend."
- High bookends gage the potential improvement of a habitat action relative to the low bookend.
- The potential improvement varies based on the limiting factor.

Assessment Units and Weighting

Portions of a drainage with common key limiting factors are designated as assessment units.

- Like limiting factors, assessment units are weighted based on the contribution of the unit to species life history.
- Expert Panels may adjust assessment unit weights based on supplemental data or information that was not available when the assessment unit weights were reconciled.
- Limiting factors and assessment units are all rolled up into a visual display in the limiting factor pie maps.

Limiting Factors and Weighting

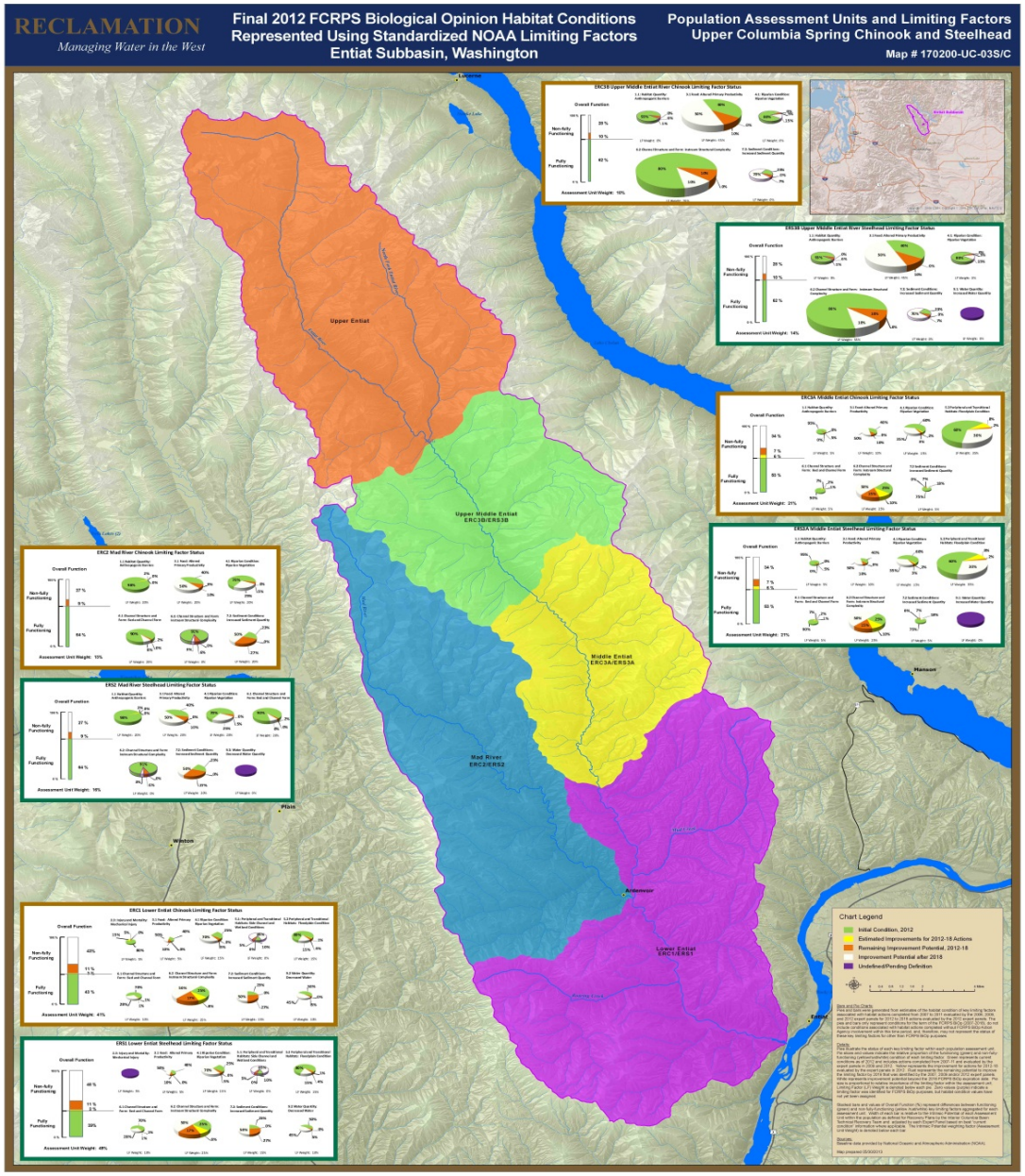
- Limiting factors affect conditions for salmon and steelhead differently.
- Based on the "relative" contribution of a factor, Expert Panels assign a weight between 0 and 1 to each factor.
- The weights are combined for all factors to total "1".
- So, an Expert Panel might assign a weight of 0.6 to stream flow and 0.2 each to riparian condition and in-stream channel complexity if stream flow has a greater relative effect on conditions for salmon and steelhead than the other two factors. Combined the three factors total "1."

HQIs

- The Action Agencies use Expert Panel input to convert changes in limiting factors to changes in HQIs for all of the FCRPS BiOp RPA 35 Table 5 populations.
- The procedure compares current conditions of a limiting factor to changes in limiting factor resulting from completed or planned work. That change in the status of a limiting factor is determined by the Expert Panels.
- The process considers limiting factors and weights and assessment units and weights. An algebraic equation is used to reconcile the changes in conditions to HQIs.

Expert Panel Pie Maps

To improve on the Expert Panel process, the Action Agencies developed Pie Maps to enhance the panel's ability to view, discuss, and evaluate the effect of habitat actions on limiting factors.



Derivation of HQIs for Analysis of Effects

- 2007 Federal Columbia River Power System Comprehensive Analysis

Appendix C: Analysis of Effects of Tributary Habitat Actions

Understanding the Habitat Workgroup Approach to Estimating Habitat Quality and Freshwater Survival

2016 Expert Panels

Expert Panel Recommendations from 2014 BiOp

Improve Documentation

Incorporate Science Findings

Convene Panels in 2016

The timing of the 2016 workshop is consequent of the 2014 FCRPS BiOp.

The 2016, process will not change. However, we will convene the panels in two sessions, one each focused on the look back and the look forward.

The Action Agencies have conducted meetings like this one in each panel area/watershed to discuss what will happen during those sessions and the work we need to do in advance.

Overall Schedule

Process / Calendar Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Tributary Habitat RPA Implementation Cycle	2007-09			2010-12			2013-15			2016-18		
Annual Progress Report (due by 9/30 of next calendar year)	06-07 included in 2008 APR		★	★	★	★	★	★	★	★	★	★
Expert Panel				Timeframe = 2010 - 2012 (Planning occurs in 2008 & 2009)			Timeframe = 2013 - 2015 (Planning occurs in 2011 & 2012)			Timeframe = 2016 - 2018 (Planning occurs in 2015 & 2016)		
Implementation Plan	Included in the 2007 BA			**Timeframe = 2010 - 2012**			**Timeframe = 2013 - 2015**			**Timeframe = 2016 - 2018**		
Comprehensive Evaluation Report	Timeframe = **2007 - 2012**						Timeframe = **2007 - 2015**					

Detailed Schedule

- January – October 2015: Planning
  - Assemble Project (action) Lists
  - Inventory of RME data relevant for Ex Panel process
  - Compile RME information into usable displays to be presented at Workshops
- October – Dec 2015: "Look Back" Workshops
  - Pre-Meetings to lay out framework and process
  - Evaluation of Look Back list of constructed projects (actions) 2012-2015
- January – May 2016: "Look Forward" Workshops
  - Changes to AU, Limiting Factors (Ecological Concerns) and bookend values
  - Estimate of habitat changes of 2016-2018 Look Forward Project (action) Lists

Review of "Look Back" and 2015 Work Session

Before the Expert Panels convene, participants determine whether planned actions were a) completed as planned, b) completed with additions or subtractions, c) not completed, or d) completed although they were not planned at the earlier workshop.

For the 2016 workshop we are building the look back lists now. We need your help.

The Expert Panel "look back" examines projects that were planned for construction and determines what was gained in terms of metric improvements for each limiting factor in an assessment unit.

For the 2016 workshop we have developed Excel spreadsheet to compile the look back lists.

For the 2016 workshop we would like to develop project summary sheets for the look back projects to illustrate the suite of implemented actions and the metrics delivered for each limiting factor.

Review of "Look Forward" and 2016 Work Session

- The Expert Panel "look forward" examines habitat improvement actions and associated metrics for the next implementation cycle (2016 to 2018).
- Projects are evaluated for each limiting factor in each assessment unit and for each population (Chinook, steelhead).

For the 2016 workshops the look forward could involvement modification of assessment units and weights and limiting factors and weights depending on their status or updated data and information like that assembled for the Atlas process.

Project Lists 2012-2015 and 2016-2018

	A	B	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	ESU	CSRO SubBasin	AUCode	Assessment Unit	2012StandardizedLF	Project 1	Project 1 Completed CY	Project 2	Project 2 Compelted CY	Project 3	Project 3 Compelted CY					
2	UC Spring Chinook	Entiat	ERC1	Lower Entiat	2.3: Injury and Mortality: Mechanical Injury											
3	UC Spring Chinook	Entiat	ERC1	Lower Entiat	3.1: Food: Altered Primary Productivity											
4	UC Spring Chinook	Entiat	ERC1	Lower Entiat	4.1: Riparian Condition: Riparian Vegetation											
5	UC Spring Chinook	Entiat	ERC1	Lower Entiat	5.1: Peripheral and Transitional Habitats: Side Channel and Wetland Conditions											
6	UC Spring Chinook	Entiat	ERC1	Lower Entiat	5.2: Peripheral and Transitional Habitats: Floodplain Condition											
7	UC Spring Chinook	Entiat	ERC1	Lower Entiat	6.1: Channel Structure and Form: Bed and Channel Form											
8	UC Spring Chinook	Entiat	ERC1	Lower Entiat	6.2: Channel Structure and Form: Instream Structural Complexity											
9	UC Spring Chinook	Entiat	ERC1	Lower Entiat	7.2: Sediment Conditions: Increased Sediment Quantity											
10	UC Spring Chinook	Entiat	ERC1	Lower Entiat	9.2: Water Quantity: Decreased Water Quantity											
11	UC Spring Chinook	Entiat	ERC2	Mad River	1.1: Habitat Quantity: Anthropogenic Barriers											
12	UC Spring Chinook	Entiat	ERC2	Mad River	3.1: Food: Altered Primary Productivity											
13	UC Spring Chinook	Entiat	ERC2	Mad River	4.1: Riparian Condition: Riparian Vegetation											
14	UC Spring Chinook	Entiat	ERC2	Mad River	6.1: Channel Structure and Form: Bed and Channel Form											
15	UC Spring Chinook	Entiat	ERC2	Mad River	6.2: Channel Structure and Form: Instream Structural Complexity											
16	UC Spring Chinook	Entiat	ERC2	Mad River	7.2: Sediment Conditions: Increased Sediment Quantity											
17	UC Spring Chinook	Entiat	ERC3A	Middle Entiat	1.1: Habitat Quantity: Anthropogenic Barriers											
18	UC Spring Chinook	Entiat	ERC3A	Middle Entiat	3.1: Food: Altered Primary Productivity											
19	UC Spring Chinook	Entiat	ERC3A	Middle Entiat	4.1: Riparian Condition: Riparian Vegetation											
20	UC Spring Chinook	Entiat	ERC3A	Middle Entiat	5.2: Peripheral and Transitional Habitats: Floodplain Condition											
21	UC Spring Chinook	Entiat	ERC3A	Middle Entiat	6.1: Channel Structure and Form: Bed and Channel Form											
22	UC Spring Chinook	Entiat	ERC3A	Middle Entiat	6.2: Channel Structure and Form: Instream Structural Complexity											
23	UC Spring Chinook	Entiat	ERC3A	Middle Entiat	7.2: Sediment Conditions: Increased Sediment Quantity											

Clearwater | Entiat | GR Lwr Tribs | Lostine Wallowa | Lower Salmon | Lower Snake | Methow | Okanogan | UGR | Upper Salmon | Wenatchee | Exam

Tyee Habitat Restoration Project

Structure Summary

River Mile 22.26 (Element 6-7): Floodplain Connection ELJ

Objective	• Increase the complexity at the outlet of the backchannel on river right • Maintain the hydraulic connection between the backchannel and the river • Recruit additional wood
Design Notes	• Intended to function during annual snowmelt runoff through peak flow events, may provide limited habitat at low summer flow • 2, 60' long key members placed at grade • Piles buried 6' below grade • Cabled rocks and native backfill used as ballast

Project Summary Sheet Example

Expert Panel Habitat Actions

Population	Code	Assessment Unit	2012 Standardized Limiting Factor	Action	Work Element	Metric	Metric Plan Value	Project source documentation	Plan Comment
Tucannon River	TUC1A	Upper Tucannon - Pataha up to	1.1: Habitat Quantity: Anthropogenic	No Action					
Tucannon River	TUC1A	Upper Tucannon - Pataha up to	2.3: Injury and Mortality: Mechanical Injury	No Action					
Tucannon River	TUC1A	Upper Tucannon - Pataha up to Panjab	4.1: Riparian Condition: Riparian Vegetation	Project 1 relocate campground from floodplain to upland area	181. Create, Restore, and/or Enhance Wetland	1691. # of acres of riparian habitat restored/re-established	3 wetland acres enhanced	Conceptual Restoration Plan, Reaches 6-10 Tucannon River Phase II, SRSRB Implemntation	move campground up slope out of floodplain
Tucannon River	TUC1A	Upper Tucannon - Pataha up to Panjab	4.1: Riparian Condition: Riparian Vegetation	Riparian planting: Project Area 10 & 11 fourty acres each, Project Area 12 eighteen acres, Project Area 17 seventeen acres	47. Plant Vegetation	1403. # of riparian acres treated	115 acres	Conceptual Restoration Plan, Reaches 6-10 Tucannon River Phase II, SRSRB Implemntation Schedule	Areas Burn on WDFW and residential areas near Last Resort
Tucannon River	TUC1A	Upper Tucannon - Pataha up to Panjab	5.2: Peripheral and Transitional Habitats: Floodplain Condition	Project 14 remove channel confining structures and material	180. Enhance Floodplain/Remove, Modify, Breach Dike	1441. # of miles of habitat accessed to the next upstream barrier(s) or likely limit of habitable range	0.03 miles	Conceptual Restoration Plan, Reaches 6-10 Tucannon River Phase II, SRSRB Implemntation Schedule	This metric is a bit odd is not good for representing reducing confiment. will open 18 acres of lowlying
Tucannon River	TUC1A	Upper Tucannon - Pataha up to Panjab	5.2: Peripheral and Transitional Habitats: Floodplain	Project 15, Headquaters	180. Enhance Floodplain/Remove, Modify, Breach Dike	1441. # of miles of habitat accessed to the next upstream barrier(s) or likely limit of habitable	0.16 miles	Conceptual Restoration Plan, Reaches 6-10 Tucannon River Phase II, SRSRB Implemntation	This structure prevents lateral movement of the channel
Tucannon River	TUC1A	Upper Tucannon - Pataha up to Panjab	5.2: Peripheral and Transitional Habitats: Floodplain	Project 22 River levee removal to encourage lateral channel migration	180. Enhance Floodplain/Remove, Modify, Breach Dike	1441. # of miles of habitat accessed to the next upstream barrier(s) or likely limit of habitable	0.56 miles	Conceptual Restoration Plan, Reaches 6-10 Tucannon River Phase II, SRSRB Implemntation	would reconect 2.45 acres of floodplain and require 190 ft of
Tucannon River	TUC1A	Upper Tucannon - Pataha up to Panjab	5.2: Peripheral and Transitional Habitats: Floodplain Condition	Project 23 Ramirez	180. Enhance Floodplain/Remove, Modify, Breach Dike	1441. # of miles of habitat accessed to the next upstream barrier(s) or likely limit of habitable range	0.41 miles	Conceptual Restoration Plan, Reaches 6-10 Tucannon River Phase II, SRSRB Implemntation Schedule	Approx 9.5 acres of lowlying floodplain possible, 890 ft of setback levee
Tucannon River	TUC1A	Upper Tucannon - Pataha up to Panjab	5.2: Peripheral and Transitional Habitats: Floodplain Condition	Project 8 Curl Lake Levee	30. Realign, Connect, and/or Create Channel	1476. # of stream miles after treatment	0.29 miles	Conceptual Restoration Plan, Reaches 6-10 Tucannon River Phase II, SRSRB Implemntation Schedule	This conceptual plan could be constructed without reconfiguring the lake and would reduce confinment and add I acre of

EP Habitat Functions

Population	Code	Assessment Unit	2012 Standardized Limiting Factor	Low Bookend	2013-2018	2033	High 2018	High 2033	LF Weight	AU Weight	LF Weight and Bookend Comments	Estimates Comments
Tucannon River	TUC1A	Upper Tucannon - Pataha up to Panjab	1.1: Habitat Quantity: Anthropogenic Barriers	90	90	90	95	95	5%	80%	Progress towards 2018 bookend = 95%; Starbuck Dam, DeRuwe falls, vortex weir below Panjab, hixon creek and isolated/rare perennial/spring creeks with culverts.	No Chinook barrier projects identified at 2012 workshop
Tucannon River	TUC1A	Upper Tucannon - Pataha up to Panjab	10.4: Population Level Effects: Life History Changes	25	25	25	70	90	0%	80%	PLACEHOLDER. Straying/by-passing Tucannon River due to unknown but presumed reservoir affects or water quality/quantity in the Tucannon. 25%-50% of the natural origin SPC are by-passing the Tucannon River and ascending the Snake River.	
Tucannon River	TUC1A	Upper Tucannon - Pataha up to Panjab	2.3: Injury and Mortality: Mechanical Injury	96	96	96	97	98	2%	80%	Progress towards 2018 bookend = 99%.	No projects identified at 2012 EP workshop
Tucannon River	TUC1A	Upper Tucannon - Pataha up to Panjab	4.1: Riparian Condition: Riparian Vegetation	48	55	75	55	75	10%	80%	Progress towards 2018 bookend = 87%; Data from Table D-3b of Anchor 2011 Tucannon geomorphic assessment - % coverage > 5' height	
Tucannon River	TUC1A	Upper Tucannon - Pataha up to Panjab	5.2: Peripheral and Transitional Habitats: Floodplain Condition	26	46	50	46	50	30%	80%	Metric = Confinement. Progress towards 2018 bookend = 57%; 31 of 37 miles between King Grade and upper extent of SPC distribution are artificially confined (2011); terry's project unconfined 10% of the reach in the fall of 2011; assessment shows 28 projects that would improve to 76% but with human capacity limitations achieving 50% is most likely.	Estimate based on approx. 70 acres of low lying floodplain reconnect.
Tucannon River	TUC1A	Upper Tucannon - Pataha up to Panjab	6.1: Channel Structure and Form: Bed and Channel Form	44			75	85	0%	80%	Progress towards 2018 bookend = 59%; Goal not in recovery plan but reference stream (Wenaha) is 17. If goal is 17 and we are curently at 39 then we are 51% of goal.	No projects identified for this LF @ 2012 workshop

RME and Expert Panel Spreadsheets

Incorporating data for Expert Panel Habitat Function changes

- Trend data for key limiting factors
  - CHaMP / PIBO
  - HabRate / EDT
  - Atlas GIS layers and tools

- Look Forward “Framework changes”
  - AU area and weighting
  - Limiting Factors and weighting
  - Bookends (current condition – may have changed)

RME and Expert Panel Spreadsheets

Assessment Unit Code	Assessment Unit Names	Assessment Unit Weight (%)	2013-2018 Planned Restoration Actions
WEC1	Chiwawa	27.3	0
WEC2	Chumstick	4.0	1
WEC3	Icicle	2.4	1
WEC4	Little Wenatchee	6.5	0
WEC5	Lower Wenatchee	5.9	4
WEC6	Mission	2.6	0
WEC7	Nason	14.0	14
WEC8	Peshastin	5.6	2
WEC9A	Middle Wenatchee	1.5	0
WEC9B	Upper Wenatchee	16.1	18
WEC10	White	14.1	1
	Total	100.0	41

AU and Limiting Factor Summary

Assessment Unit		Habitat Quantity			Injury and Mortality				Food			Riparian Condition		Peripheral and Transitional Habitats				Channel Structure and Form	
Code	Name	Anthropogenic Barriers 1.1	Natural Barriers 1.2	HQ-Competition 1.3	Predation 2.1	Pathogens 2.2	Mechanical Injury 2.3	Contaminated Food 2.4	Altered Primary Prod. 3.1	Food-Competition 3.2	Alt. Prey Sp. Comp. & Div. 3.3	Riparian Condition 4.1	LWD Recruitment 4.2	S. Chan. & Wetland Cond. 5.1	Floodplain Condition 5.2	Estuary Conditions 5.3	Nearshore Conditions 5.4	Bed and Channel Form 6.1	Instream Structural Comp. 6.2
WEC1	Chiwawa	X							X			X			X				X
WEC2	Chumstick	X										X		X					X
WEC3	Icicle	X					X					X							X
WEC4	Little Wenatchee								X			X			X				X
WEC5	Lower Wenatchee	X										X		X				X	X
WEC6	Mission	X										X		X				X	X
WEC7	Nason	X							X			X		X				X	X
WEC8	Peshastin	X										X		X				X	X
WEC9A	Middle Wenatchee	X																X	X
WEC9B	Upper Wenatchee	X										X		X					X
WEC10	White								X			X		X					X
	Total:	**9**	**0**	**0**	**0**	**0**	**1**	**0**	**4**	**0**	**0**	**10**	**0**	**7**	**2**	**0**	**0**	**5**	**11**

Catherine Creek and Grande Ronde Atlas Processes

The Atlas tool uses existing science, current research, and current knowledge to inform a strategic and integrated plan for improving habitat.

The Atlas does not duplicate other efforts. The Atlas synthesizes information from other efforts to identify and prioritize actions that are anticipated to improve conditions for habitat and ESA listed fish.

The Atlas

- establishes a forum for coordination and collaboration
- uses existing documents, assessments, data, research, and information
- prioritizes actions needed to address key limiting factors for ESA listed fish
- identifies high priority actions
- provides a framework that ensures objectivity, transparency, and accountability
- facilitates adaptive planning and management

Catherine Creek and Grande Ronde Atlas Processes

Development of Atlas Conceptual Restoration Opportunities

Supporting Documents

- Bureau of Reclamation

http://www.usbr.gov/pn/fcrps/habitat/panels/index.html

- Taurus (cbfish.org) – Expert Panel Resources as of 2012

http://www.cbfish.org/ExpertPanel.mvc/PreWorkshopFiles

- Taurus (cbfish.org) – Excel workbook step by step

http://www.cbfish.org/Content/ExpertPanel/Expert_Panel_Prep_Workbook Step-by-Step_Guide.pdf

- RPA's for Tributary Habitat and Table 5 Priority Population Groups

http://www.salmonrecovery.gov/Files/BiologicalOpinions/2008/2008%20BiOp.pdf

HCW Evaluation and Conversion Process (Prepared by T. Hillman)

http://www.usbr.gov/pn/fcrps/habitat/panels/reference/1C-RemandHabitatApproachforExpertPanels.pdf