

RECLAMATION

Managing Water in the West

Expert Panel update



Winter / Spring 2015



**U.S. Department of the Interior
Bureau of Reclamation**

Expert Panel Evaluation 2016 Overview

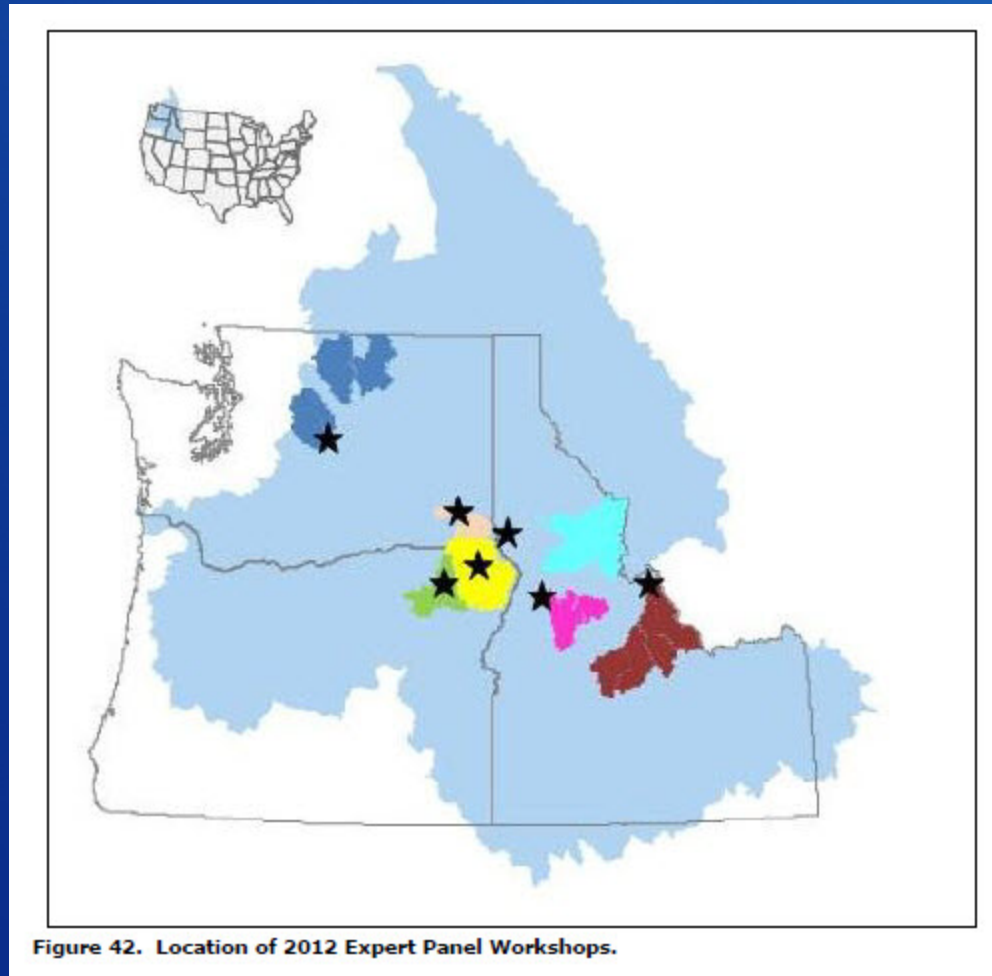
Updates:

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



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Expert Panel Workshop locations



2013 CE Table 35 excerpt

			From RPA Action 35, Table 5		From Expert Panel Results		
ESU	MPG	Population	Estimated Percentage Habitat Quality Improvement of 2007-2009 Actions	Total Estimated Percentage Habitat Quality Improvement of 2007-2018 Actions	Total of Habitat Quality Improvement achieved through 2009 ¹	Running Total of Habitat Quality Improvement achieved through 2011	Habitat Quality Improvement achieved through 2011 + 2012-18 estimates (Look back + Look forward)
Snake River Spring/Summer Chinook	Grand Ronde/ Imnaha	Catherine Creek	4	23	3	5	11
		**Lostine/ Wallowa River	2	2	2	3	7
		Grand Ronde River upper mainstem	2	23	2	4	5
		**Imnaha River mainstem	1	1	1	1	1
Snake River Spring/Summer Chinook	Upper Salmon River	East Fork Salmon River	1	1	2	2	6
		Lemhi River	7	7	12	28	32
		Pahsimeroi River	41	41	41	62	70
		Salmon River lower mainstem below Redfish Lake	1	1	2	3	3
		Salmon River upper mainstem above Redfish Lake	14	14	4	5	13

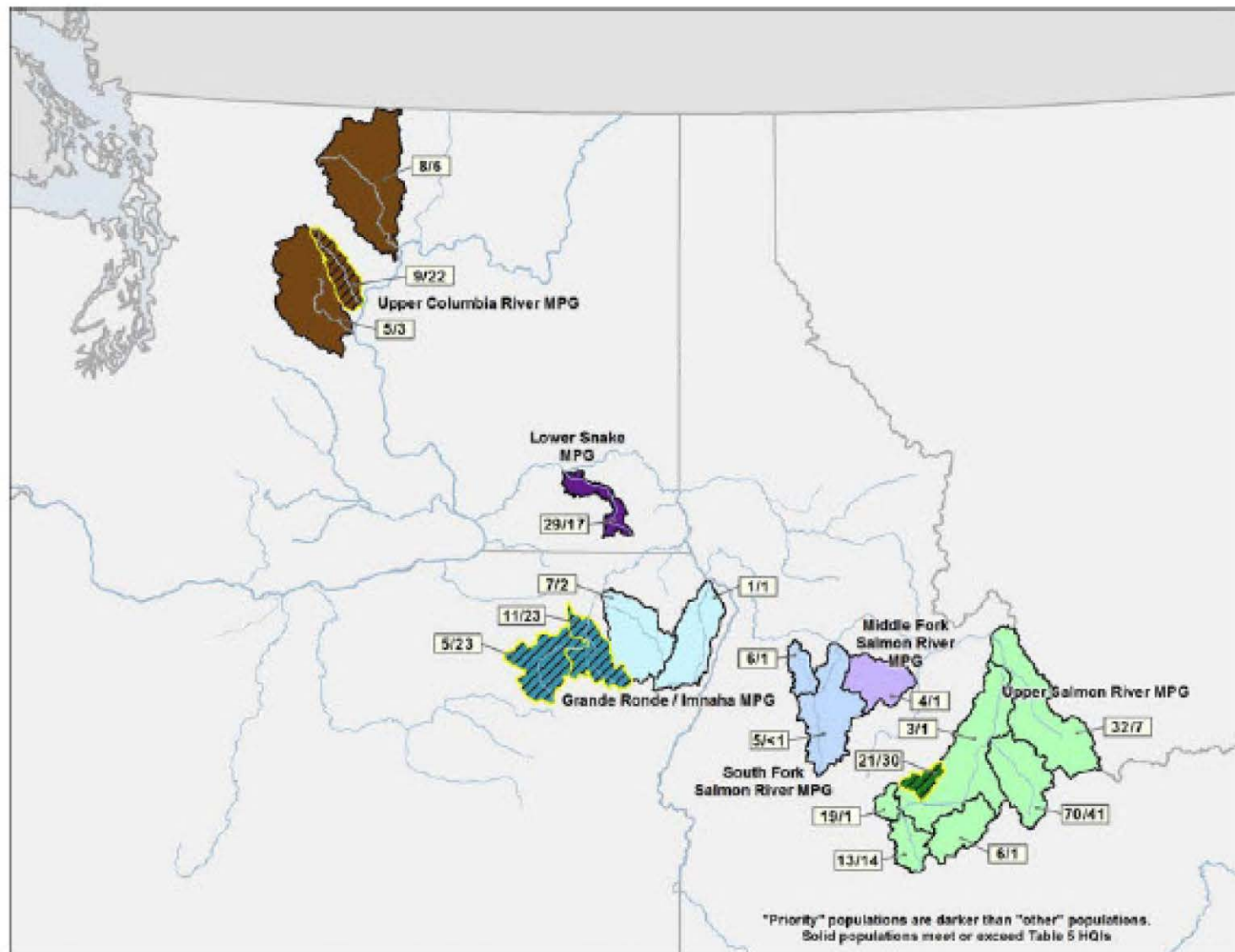


Figure 40. 2012 Projections toward Achieving 100 Percent of 2018 Table 5 Habitat Quality Improvement by 2018 for Chinook Salmon. This map of the Columbia River Basin in Oregon, Washington, and Idaho, depicts (in color) the tributary basins where habitat is being improved by the Action Agencies and partners. Darkest shades depict areas with priority populations. Projected 2018 HQIs based on expert panel results are shown in the white boxes near each basin. The number to the left of the slash represents the percent HQI projected through 2018; the number to the right of the slash represents the percent HQI to be achieved by 2018 for Chinook salmon (RPA 35 Action, Table 5).

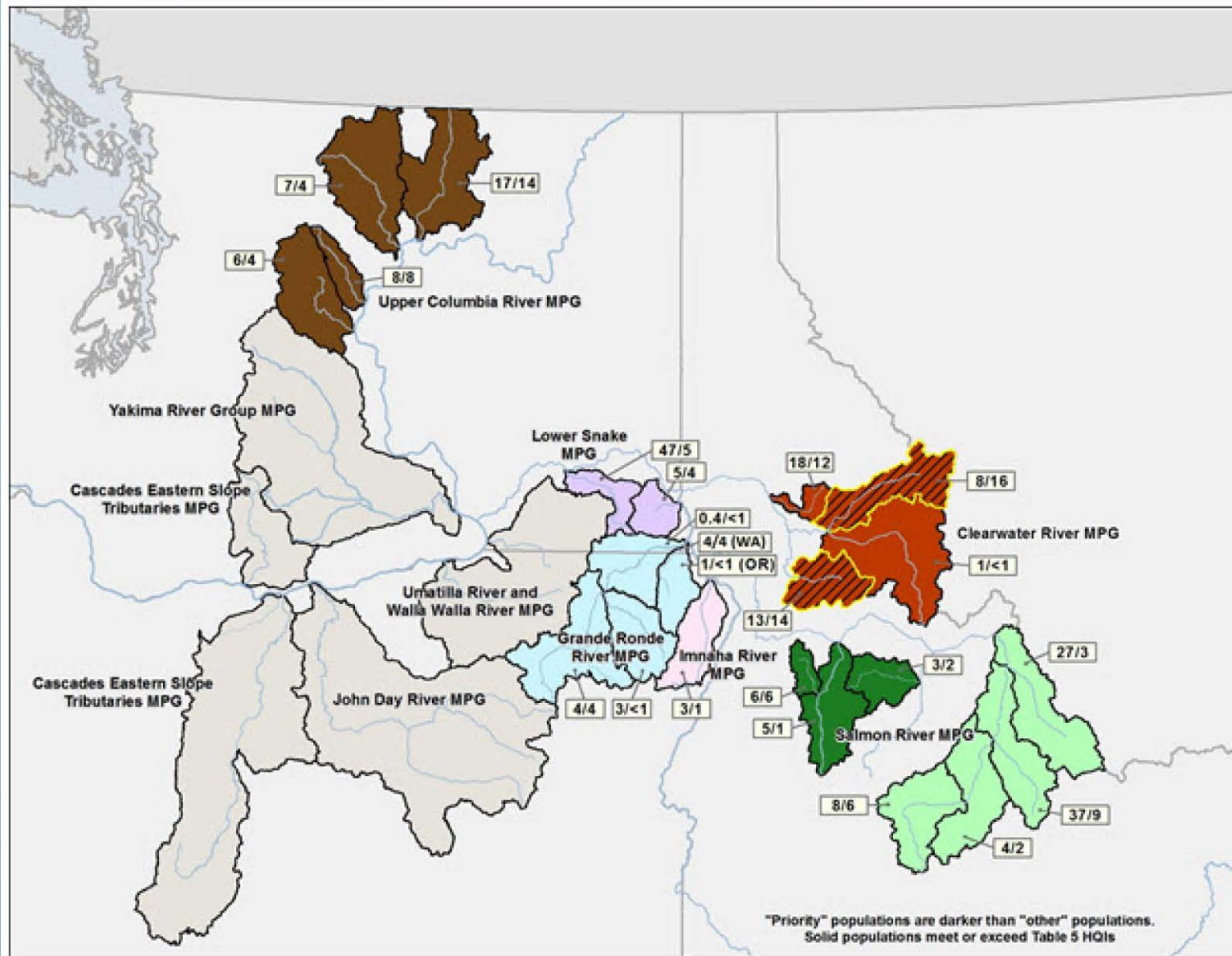


Figure 41. 2012 Expert Panel Projection to Meet or Exceed 100 Percent of 2018 Table 5 Habitat Quality Improvement by 2018 for Steelhead. This map of the Columbia River Basin in Oregon, Washington, and Idaho, depicts (in color) the tributary basins where habitat is being improved by the Action Agencies and partners. Darkest shades depict areas with priority populations. Projected habitat quality improvement values out to 2018 are shown in the white boxes near each basin. The number to the left of the slash represents the expert panel percent habitat quality improvement projected through 2018; the number to the right of the slash represents the percent habitat quality improvement to be achieved by 2018 for steelhead (RPA 35, Table 5).

EP 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 confinement. will open 18 acres of lowlying
Tucannon River	TUC1A	Upper Tucannon - Pataha up to Panjab	5.2: Peripheral and Transitional Habitats: Floodplain	Project 15, Headquarters	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 confinement and add 1 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 currently at 39 then we are 51% of goal.	No projects identified for this LF @ 2012 workshop

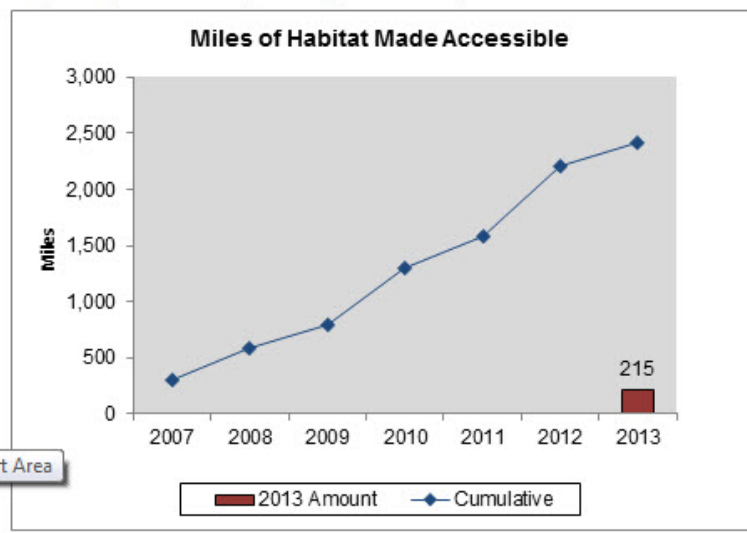
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Are we making appropriate progress ??

2008 BiOp requirements	Types of Actions HQI from Table 5
Implementation Plans (esp 2014 18)	Types of Actions Metrics Planned
Annual Progress Reports	Results of Actions implemented by metric type
Comprehensive Evaluation 2013	Results of Actions implemented by metric type
Expert Panel Reviews (2009, 2012, 2016)	HQI change based on Habitat Actions addressing key Limiting Factors for each Assessment Unit



Improving Access to Spawning and Rearing Habitat



2013 FCRPS Annual Progress Report:

The Action Agencies continue to work with partners to replace culverts and irrigation diversions that block or impede fish passage (see Figure 33). Culvert replacement and barrier removal have some of the most immediate benefits to fish because they quickly reopen habitat.

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Chart Legend

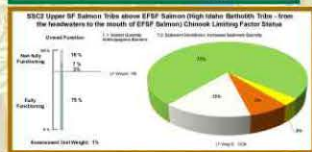
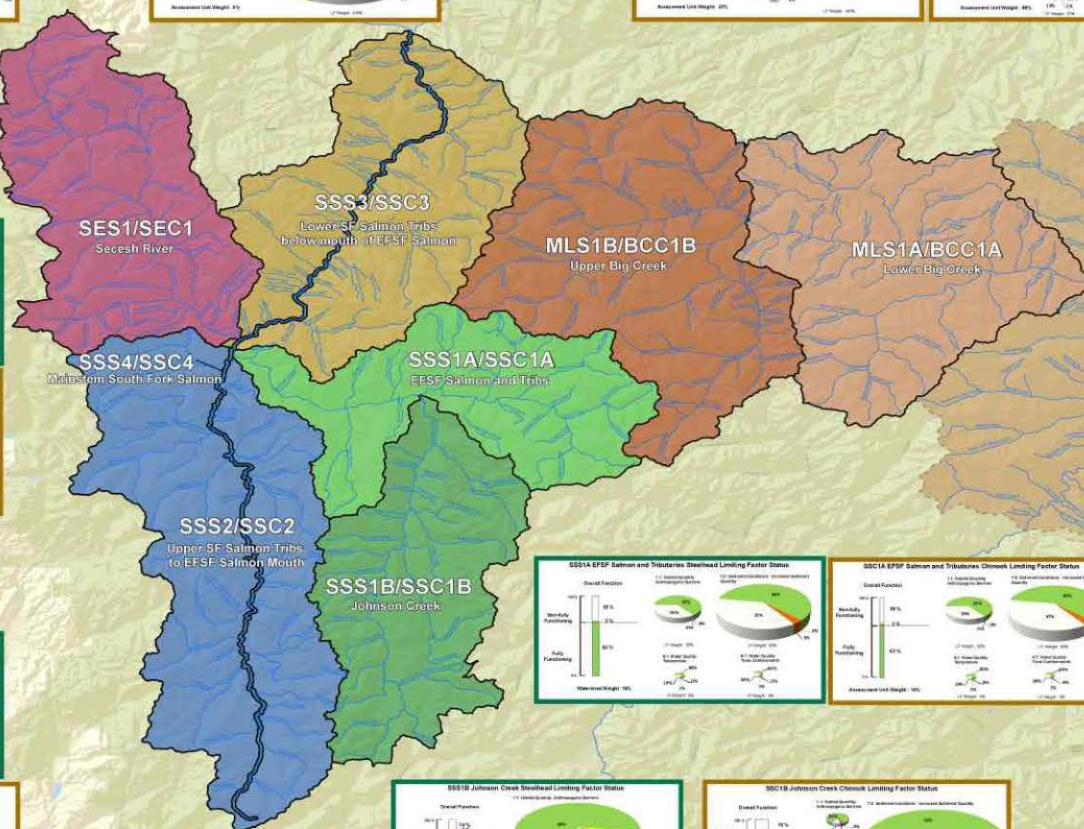
- Chinook Population, 2012
- Steelhead Population, 2012
- Population Assessment Unit, 2012
- Population Assessment Unit, 2009
- Population Assessment Unit, 2012
- Population Assessment Unit, 2009

Notes

1. The map shows the boundaries of the subbasins and the population assessment units. The population assessment units are defined by the following criteria:

- Chinook: 100,000 to 200,000
- Steelhead: 100,000 to 200,000
- Population Assessment Unit, 2012: 100,000 to 200,000
- Population Assessment Unit, 2009: 100,000 to 200,000
- Population Assessment Unit, 2012: 100,000 to 200,000
- Population Assessment Unit, 2009: 100,000 to 200,000



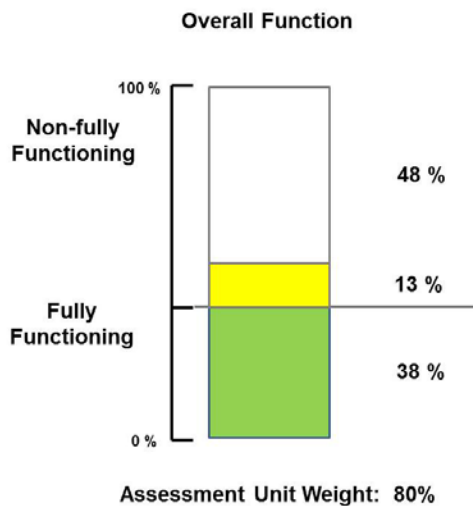




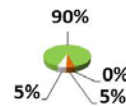


Pie Charts

TUC1A Upper Tucannon - Pataha up to Panjab Chinook Limiting Factor Status

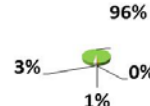


1.1: Habitat Quantity: Anthropogenic Barriers



LF Weight: 5%

2.3: Injury and Mortality: Mechanical Injury



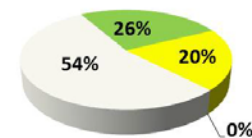
LF Weight: 2%

4.1: Riparian Condition: Riparian Vegetation



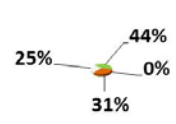
LF Weight: 10%

5.2: Peripheral and Transitional Habitats: Floodplain Condition



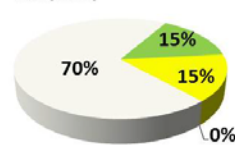
LF Weight: 30%

6.1: Channel Structure and Form: Bed and Channel Form



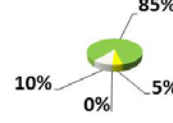
LF Weight: 0%

6.2: Channel Structure and Form: Instream Structural Complexity



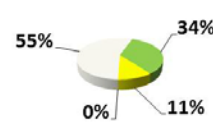
LF Weight: 30%

7.2: Sediment Conditions: Increased Sediment Quantity



LF Weight: 7%

8.1: Water Quality: Temperature



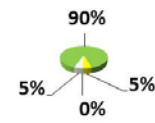
LF Weight: 10%

8.4: Water Quality: Turbidity



LF Weight: 1%

9.2: Water Quantity: Decreased Water Quantity



LF Weight: 5%

10.4: Population Level Effects: Life History Changes



LF Weight: 0%

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Annual Progress Report example

	Limiting Factors Identified	Metric Category	2013 - 2018 Planned Metrics	2013 Completed Metrics (Annual Report Requirement)
* Catherine Creek	9.2: Decreased Water Quantity	Flow:	Protect 3,230 AF, 3 cfs	457.4 af, 2.8 cfs protected
		Entrainment:	Address 1 screen	
	1.1 Anthropogenic Barriers	Passage:	Improve 14 barriers, 30.8 miles	3 Barriers improved 6.1 mi.
	6.1: Bed and Channel Form, 6.2 Instream Structural Complexity	Complexity:	Improve 19.2 instream miles	0.34 Instream miles improved
	4.1: Riparian Condition, 4.2: LWD Recruitment, 5.1: Side Channel and Wetland Conditions, 5.2: Floodplain Condition, 7.2: Increased Sediment Quantity, 8.1: Temperature, 8.2: Oxygen, 8.4: Turbidity	WQ/Riparian:	Protect 1 riparian mile Improve 1.5 riparian miles Improve 1,618 riparian acres	1.52 Stream miles protected 1.53 Stream miles improved 24.55 Riparian acres protected 50.9 Riparian acres improved
Big Sheep Creek	1.1: Anthropogenic Barriers	Passage:	Improve 4 barriers, 20.7 miles	
* Grand Ronde River Upper Mainstem	9.2: Decreased Water Quantity	Flow:	Protect 1,782 AF, 6.5 cfs	87.6 AF, 0.33 cfs protected
	1.1: Anthropogenic Barriers	Passage:	Improve 3 barriers, 5 miles	2 Barriers improved 3 miles
	6.1: Bed and Channel Form, 6.2 Instream Structural Complexity	Complexity:	Improve 43.8 instream miles	3.25 Instream miles improved
	4.1: Riparian Condition	WQ/Riparian:	Improve 31 riparian miles	1.14 Stream miles protected 22.85 Stream miles improved
	4.2: LWD Recruitment 7.2: Increased Sediment Quantity 8.1 Temperature		Protect 24 riparian acres	1 Riparian acres protected 180.5 Riparian acres improved
Imnaha River Mainstem	1.1: Anthropogenic Barriers	Passage:	Improve 3 barriers, 16 miles	
		Complexity:		
		WQ/Riparian:		
Lostine River	9.1: Increased Water Quantity, 9.2: Decreased Water Quantity	Flow:	Protect 30 cfs	1188 AF, 15 cfs protected
	1.1: Anthropogenic Barriers	Passage:	Improve 6 barriers, 41.3 miles	2 Barriers improved 12 mi.
	6.1: Bed and Channel Form, 6.2 Instream Structural Complexity	Complexity:	Improve 1.6 instream miles	0.06 Instream miles improved
	4.1: Riparian Condition	WQ/Riparian:		1.28 Stream miles protected
	5.2: Floodplain Condition 7.2: Increased Sediment Quantity, 8.1: Temperature, 8.2: Oxygen		Protect 257 riparian acres	21 Riparian acres protected

RECLAMATION

2016 Expert Panel process

- **EP Team with Cardno coordination / facilitation**
- **Compiling Project Lists** – utilize tools such as Lower Snake Stock Status Review
- **Project Summary Sheets**
- **Biological Rationale & documentation**
- **Incorporating / referencing science**
- **Displaying results including website update**
- **Info roll-up for next Comprehensive Evaluation and future Consultation**

Project Lists 2012-15 and 2016-18

	A	B	D	E	F	G	H	I	J	
	ESU	CSRO SubBasin	AUCode	Assessment Unit	2012StandardizedLF	Project 1	Project 1 Completed CY	Project 2	Project 2 Completed CY	Project 2
1	UC Spring Chinook	Entiat	ERC1	Lower Entiat	2.3: Injury and Mortality: Mechanical Injury					
2	UC Spring Chinook	Entiat	ERC1	Lower Entiat	3.1: Food: Altered Primary Productivity					
3	UC Spring Chinook	Entiat	ERC1	Lower Entiat	4.1: Riparian Condition: Riparian Vegetation					
4	UC Spring Chinook	Entiat	ERC1	Lower Entiat	5.1: Peripheral and Transitional Habitats: Side Channel and Wetland Conditions					
5	UC Spring Chinook	Entiat	ERC1	Lower Entiat	5.2: Peripheral and Transitional Habitats: Floodplain Condition					
6	UC Spring Chinook	Entiat	ERC1	Lower Entiat	6.1: Channel Structure and Form: Bed and Channel Form					
7	UC Spring Chinook	Entiat	ERC1	Lower Entiat	6.2: Channel Structure and Form: Instream Structural Complexity					
8	UC Spring Chinook	Entiat	ERC1	Lower Entiat	7.2: Sediment Conditions: Increased Sediment Quantity					
9	UC Spring Chinook	Entiat	ERC1	Lower Entiat	9.2: Water Quantity: Decreased Water Quantity					
10	UC Spring Chinook	Entiat	ERC1	Lower Entiat						
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

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Project Completion Reports

Why are we doing all this ?

Components of reporting

- Sponsor / participants list
- Metrics
- Narrative summary
- Photos

Reporting tools

- USBR PIF / Fact Sheets
- BPA PISCES / TAURUS
- Annual Progress Report

M2 Obannion Project (WDFW)				
Project Name: M2 Obannion Project (WDFW)				
Project Action: Channel complexity, riparian reestablishment				
Project Sponsor: MSRF				
Project Design: Anchor QEA				
Landowner(s): Private landowner, WDFW, DNR, Okanogan County Public Works				
Partners: Reclamation, MSRF, Anchor QEA, WDFW, UCSRB, BPA, PRCC, USGS			Reclamation Development Costs: \$1,366,094	
Funding Source(s): BPA, PRCC, Salmon Recovery Fund and Habitat Conservation Plan Tributary Funds			Implementation Cost: \$2,107,000	
Project Location:	State: Washington		County: Okanogan	Stream: Methow River
	Latitude: 48° 25' 4.4034" N		Longitude: 120° 8' 40.668" W	
	Township: 34	Range: 21, 22	Section: 25, 30	¼ Section: NW/SW of 30; NE/SE of 25
Project Status: Complete				
Project Phase: Monitoring				
Milestones	Funding: Secured			
	Design: Completed			
	Permitting: Completed			
	Construction Start Date: June 14, 2013			
	Construction Completion Date: October 23, 2013			
Biological Benefit	Species: Upper Columbia River (UCR) spring Chinook salmon, UCR steelhead, Columbia River bull trout, Pacific lamprey			
	Benefit Type: Restore main channel function, side channel reconnection, partial culvert replacement, riparian enhancement			
Metric: Improved habitat complexity on 0.3 miles of side channel and 0.5 miles of main channel via 24 engineered logjam structures, replacement of 2 culverts barriers, 1,000 feet of new floodplain channel created, 1,100 feet of levee removal to increase floodplain connectivity and riparian vegetation improvement on 12 acres. 0.3 miles made accessible.				

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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

Research, Monitoring & Evaluation

Incorporating data for Expert Panel Habitat Function changes

- Trend data for key limiting factors
- Look Forward “Framework changes”
- AU area and weighting
- Limiting Factors and weighting
- Bookends (current condition – may have changed)

Lower Snake Stock Status Review

- Merge fish information with limiting factors and habitat improvement actions implemented and planned to 2018
- CHaMP and MBACI for trend data

Monitoring Sites from 2013 APR

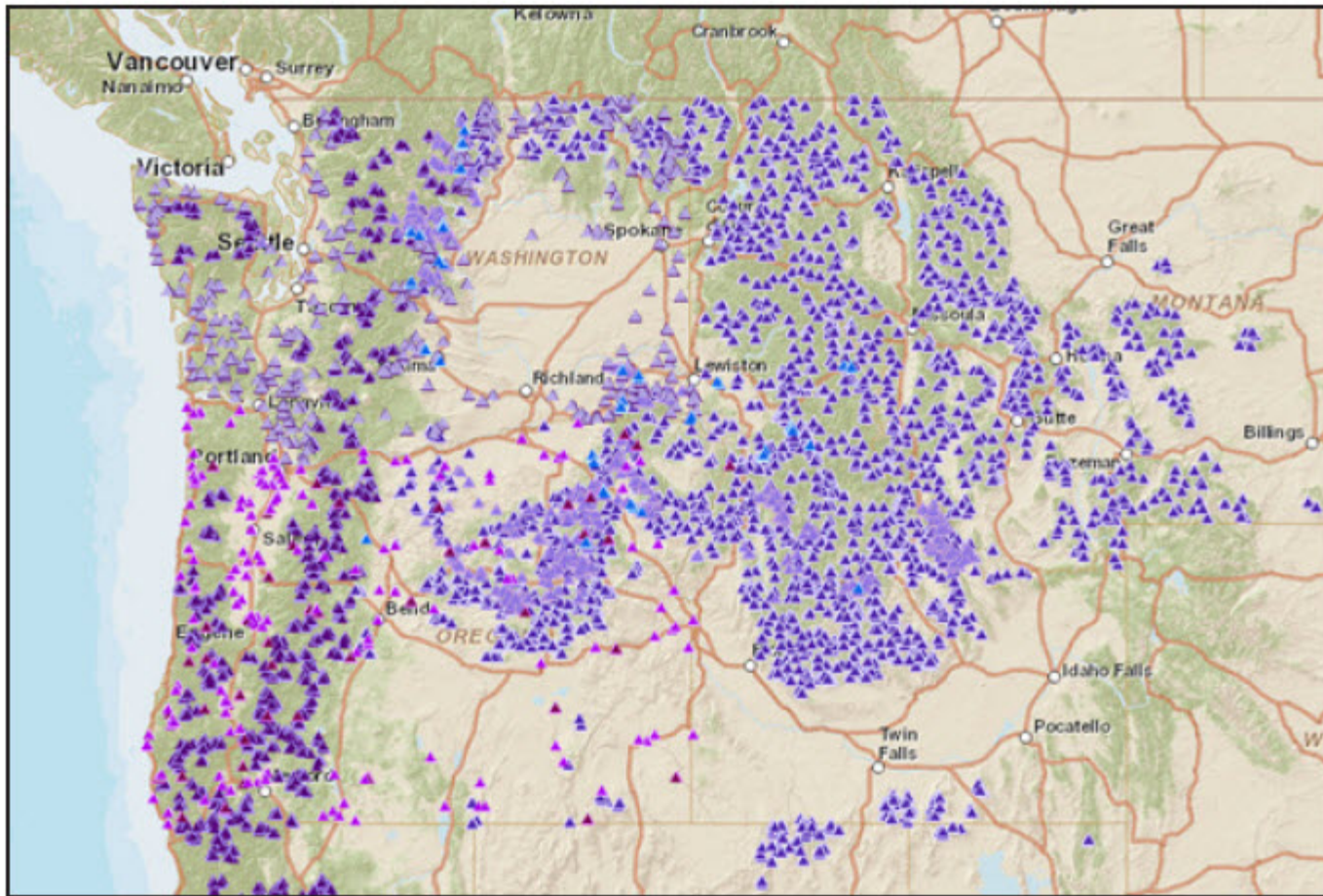


Figure 47. Monitoring Explorer tool: map of monitoring sites and links to data systems.

RECLAMATION

Reporting Schedule

Process	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Tributary Habitat RPA Implementation Cycle	2007-09			2010-12						2016-18		
Annual Progress Report (due by 9/30 of next calendar year)	06-07 included in 2008 APR★	★	★	★	★	★	★	★	★	★	★	★
Expert Panel				Timeframe = 2010 - 2012			15 6-18			Timeframe = 2016 - 2018		
Implementation Plan	Included in the 2007 BA★			Timeframe = 2010 - 2012 (Due 12/31/09)★			2015★			Timeframe = 2016 - 2018 (Due 12/31/15)		
Comprehensive Evaluation Report	Timeframe = 2007 - 2012 (Due 6/30/13)						Timeframe = 2007 - 2015 (Due 6/30/16)★			No Report Due★		

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Expert Panel 2015-2016 Schedule

- **January – Sept 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 in 2016
- **Oct – Dec 2015: Pre-Meetings**
 - Pre Meetings to lay out framework and process
 - Changes to AU, Limiting Factors (Ecological Concerns) and bookend values for “Look Forward”
- **January – May 2016: Ex Panel Workshops**
 - Evaluation of habitat changes of “Look Back” list of constructed projects (actions) 2012 2015
 - Estimate of habitat changes of “Look Forward” list of planned projects (actions) 2016 2018



Questions ?

