RECLAMATION

Managing Water in the West

Expert Panel update

January 13, 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

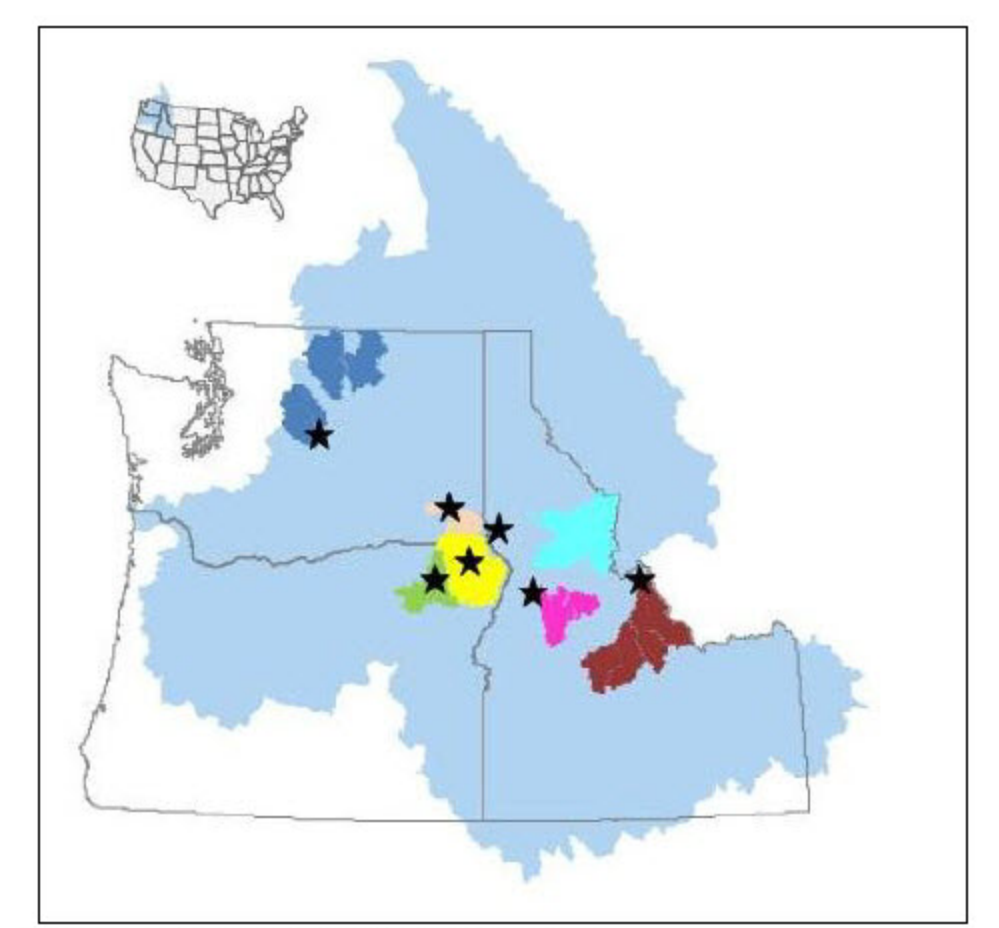

Figure 42. Location of 2012 Expert Panel Workshops.

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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

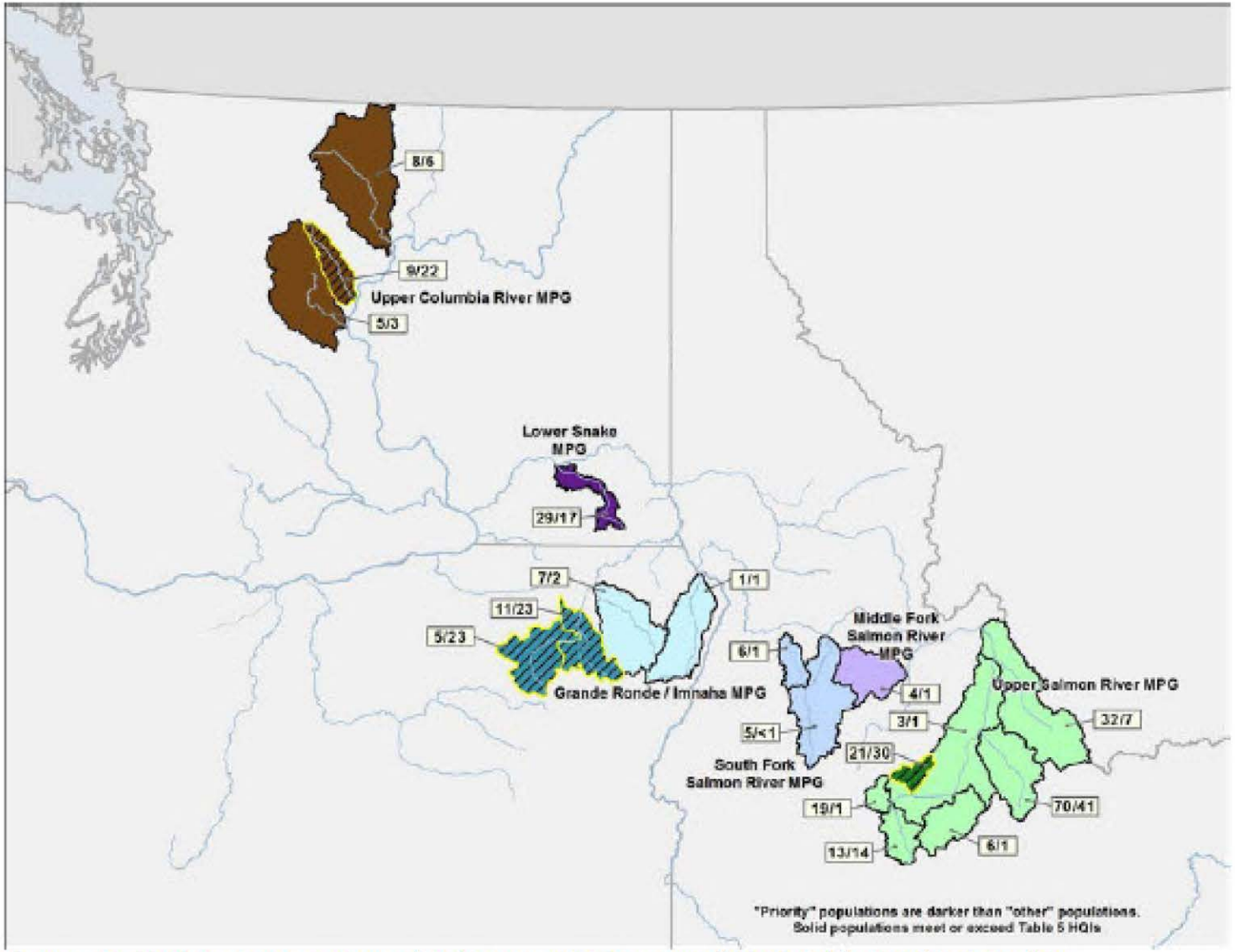


Figure 40. 2012 Projections toward Achieving 100 Percent of 2018 Table 5 Habitat Quality Improvement by 2018 for Chinook Salmon. This map of the Columbia River Basin in Oregon, Washington, and Idaho, depicts (in color) the tributary basins where habitat is being improved by the Action Agencies and partners. 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).

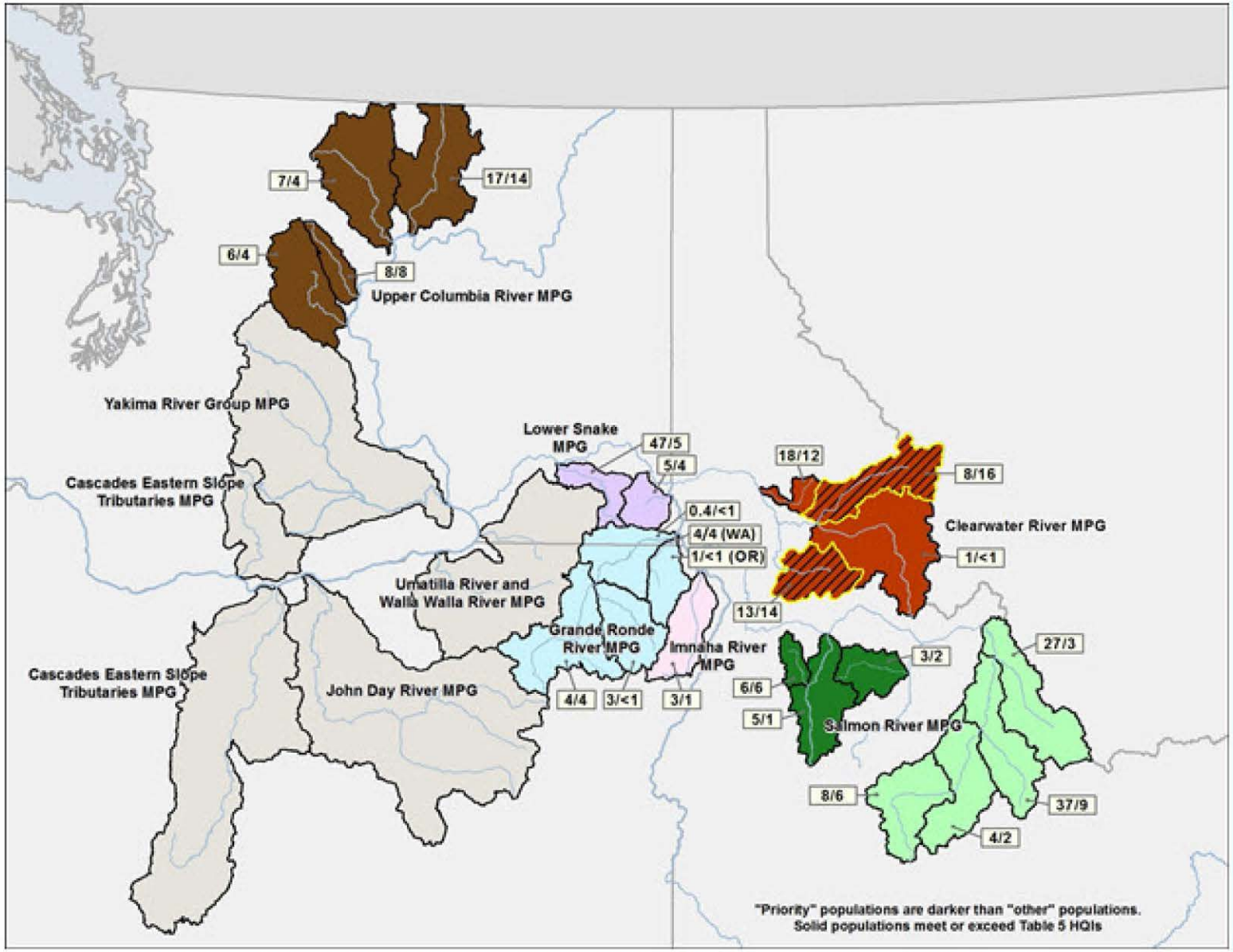


Figure 41. 2012 Expert Panel Projection to Meet or Exceed 100 Percent of 2018 Table 5 Habitat Quality Improvement by 2018 for Steelhead. This map of the Columbia River Basin in Oregon, Washington, and Idaho, depicts (in color) the tributary basins where habitat is being improved by the Action Agencies 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).

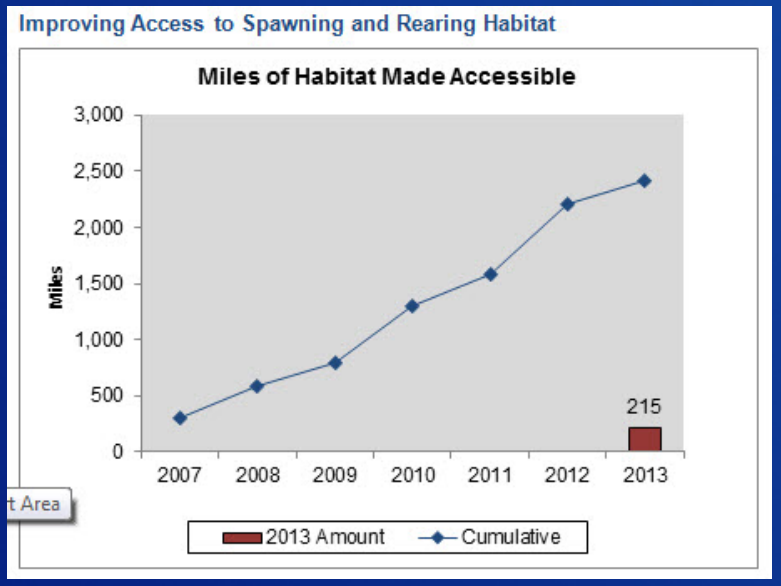
EP Habitat Actions

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 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

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



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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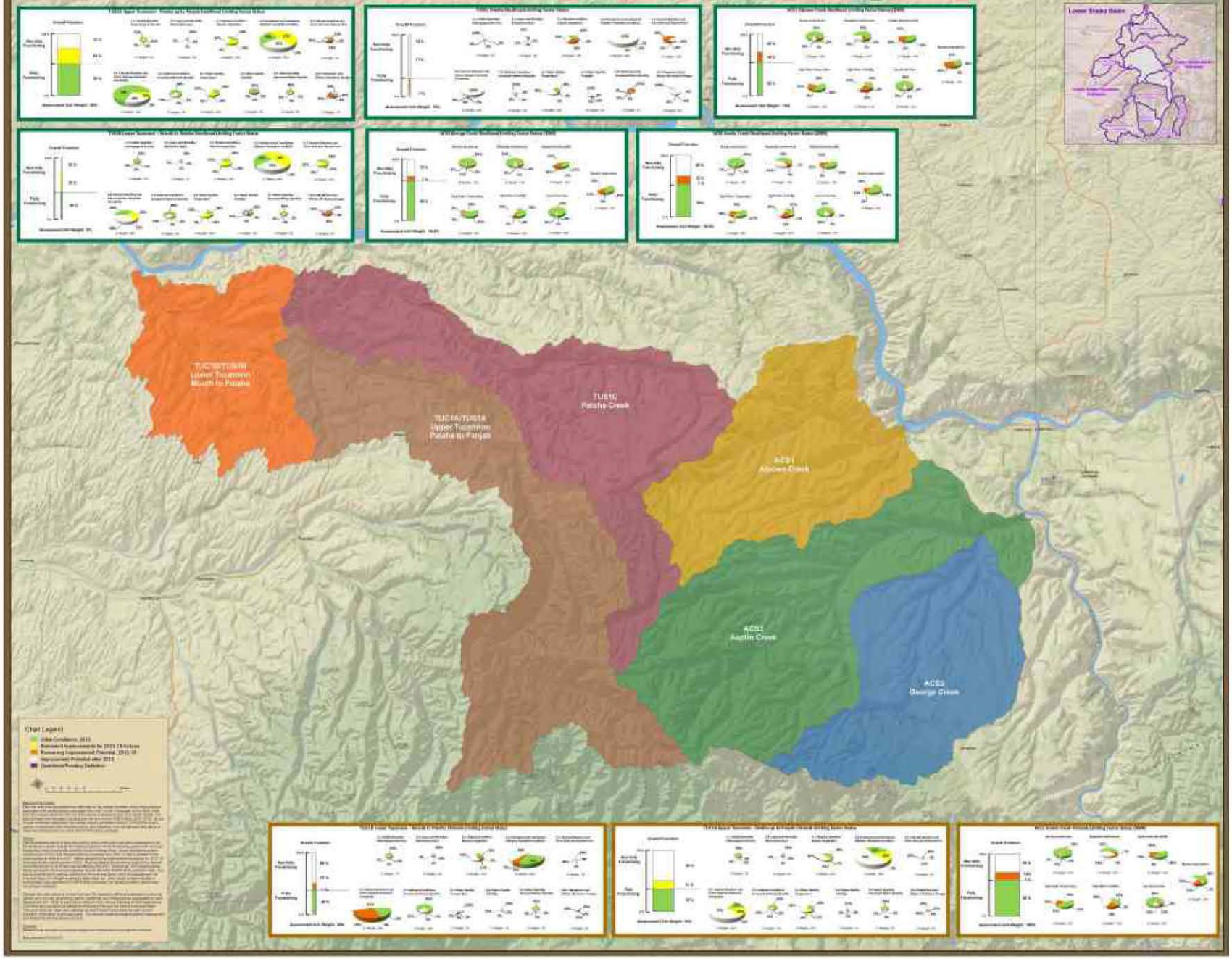
Managing Water in the West

Final 2012/2009 FCRPS Biological Opinion Habitat Conditions Represented Using Standardized NOAA Limiting Factors Lower Snake River Tucannon (2012) - Asotin (2009) Subbasins

Population Assessment Units and Limiting Factors
Lower Snake River Chinook and Steelhead

Map# 170601-TUC-01 S/C



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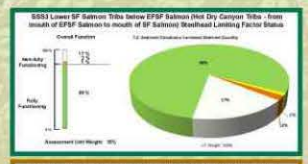
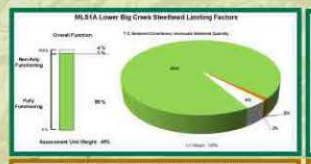
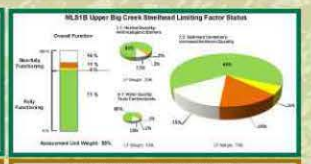
Managing Water in the West

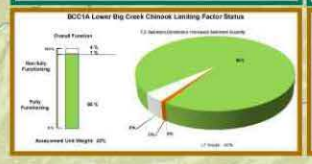
Final 2012 FCRPS Biological Opinion Habitat Conditions Represented Using Standardized NOAA Limiting Factors
South Fork Salmon and Lower Middle Fork Salmon Subbasins, Idaho

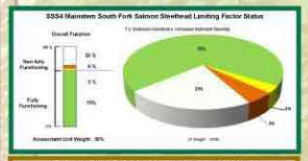
Population Assessment Units and Limiting Factors
Chinook and Steelhead
Map # 170602-SAL-01 S/C

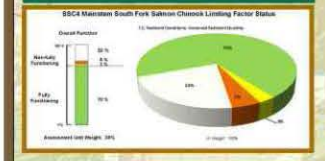


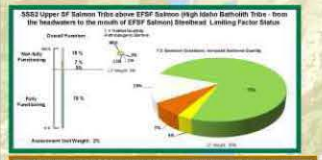


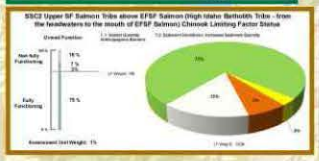


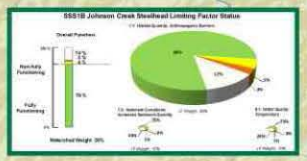


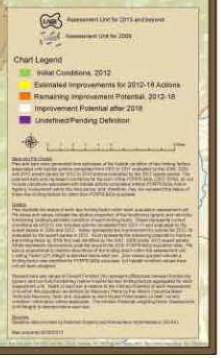


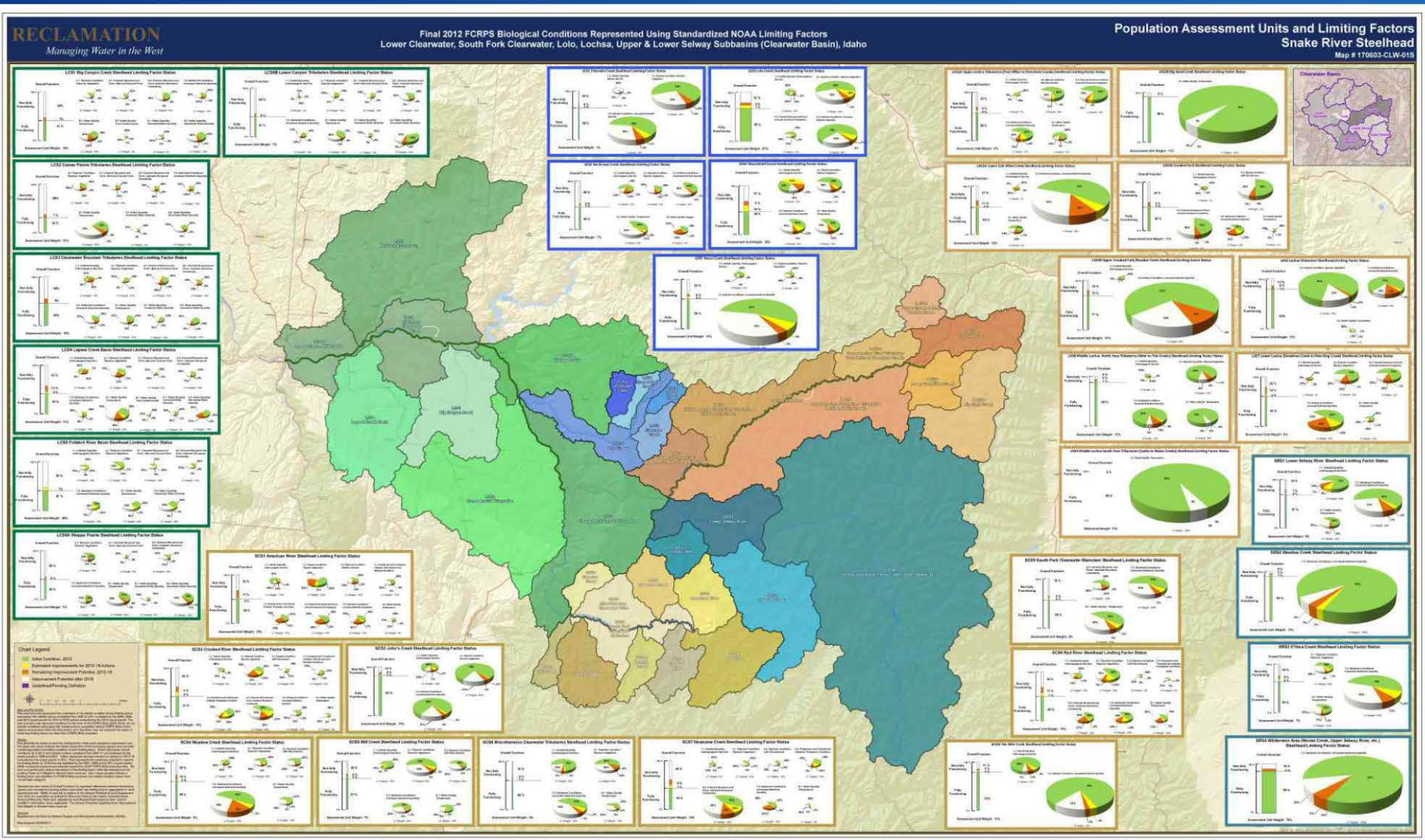












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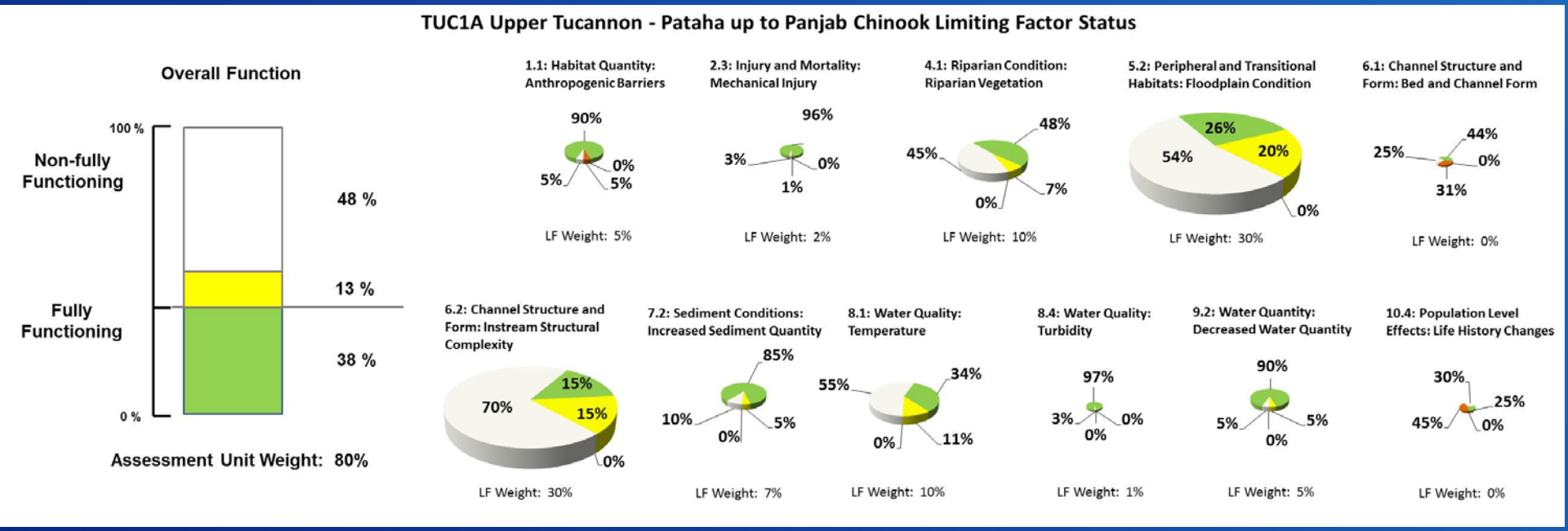
Pie Charts



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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,	WQ/Riparian:	Protect 1 riparian mile	1.52 Stream miles protected
	5.2: Floodplain Condition, 7.2: Increased Sediment Quantity, 8.1: Temperature,		Improve 1.5 riparian miles	1.53 Stream miles improved
	8.2: Oxygen, 8.4: Turbidity			24.55 Riparian acres protected
			Improve 1,618 riparian acres	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
	4.2: LWD Recruitment			22.85 Stream miles improved
	7.2: Increased Sediment Quantity		Protect 24 riparian acres	1 Riparian acres protected
	8.1 Temperature			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		Protect 257 riparian acres	21 Riparian acres protected
	7.2: Increased Sediment Quantity, 8.1: Temperature, 8.2: Oxygen			

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
1	ESU	CSRO SubBasin	AUCode	Assessment Unit	2012StandardizedLF	Project 1	Project 1 Completed CY	Project 2	Project 2 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

RECLAMATION

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.				

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

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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

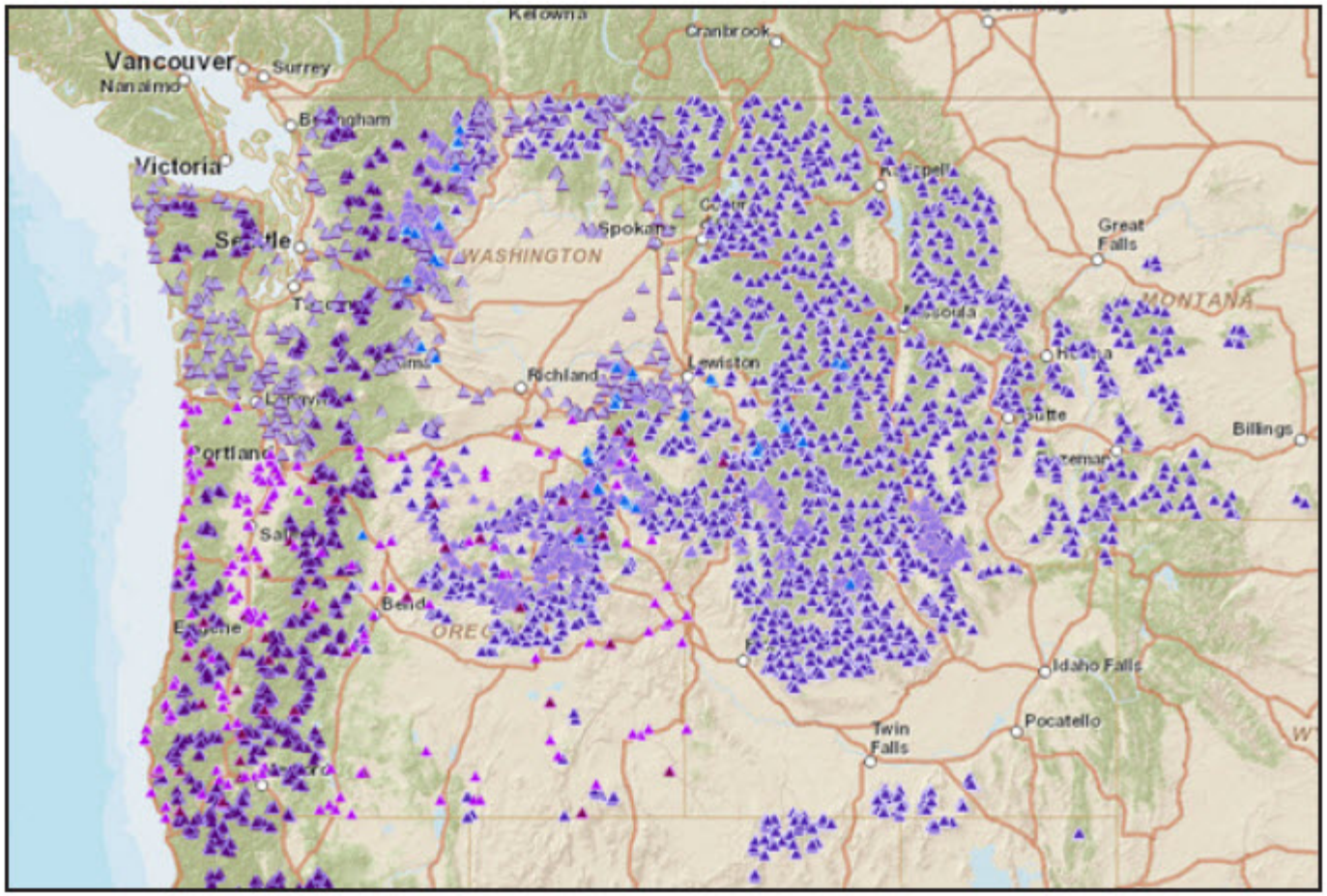

Figure 47. Monitoring Explorer tool: map of monitoring sites and links to data systems.

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Reporting Schedule

Process	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			Timeframe Look Back = 2012 - 15 Look Forward = 2016-18			Timeframe = 2016 - 2018		
Implementation Plan	Included in the 2007 BA			**Timeframe = 2010 - 2012** **(Due 12/31/09)**			**Timeframe = 2013 - 2015** **(Due 12/31/12)**			**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 ?