

RECLAMATION

Managing Water in the West

FCRPS BiOp Tributary Habitat Implementation Update



September 27, 2011





U.S. Department of the Interior
Bureau of Reclamation

Goals

- **Meet FCRPS BiOp requirements**
- **Explore ideas to improve the project selection processes to meet BiOp requirements**

Today's Topics

- FCRPS BiOp requirements  
- AA timelines/processes
- Recent planning and implementation tools
- EP prep tasks
- Integration
- Summary

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NOAA Fisheries' Reasonable and Prudent Alternative Table of Actions

Table 5. Estimated Habitat Quality Improvements

ESU	Major Population Group	Population	Estimated Percentage Habitat Quality Improvement of 2007-2009 Actions	Total Estimated Percentage Habitat Quality Improvement of 2007-2018 Actions
Snake River Spring/Summer Chinook	Grand Ronde/Imnaha	Catherine Creek	4	23
		Lostine/Wallowa River	2	2 *
		Grand Ronde River upper mainstem	2	23
		Imnaha River mainstem	1	1 *
	Middle Fork Salmon River	Big Creek	1	1 *
	South Fork Salmon River	Secesh River	1	1 *
		South Fork Salmon River Mainstem	<1	<1 *
	Lower Snake	Tucannon River	7	17
	Upper Salmon River	East Fork Salmon River	1	1 *
		Lemhi River	7	7 *
		Pahsimeroi River	41	41 *
		Salmon River lower mainstem below Redfish Lake	1	1 *
		Salmon River upper mainstem above Redfish Lake	14	14 *
		Valley Creek	1	1 *
		Yankee Fork	10	30
Upper Columbia Spring Chinook	Upper Columbia – Below Chief Joseph	Entiat River	10	22
		Methow River	2	6
		Wenatchee River	1	3

NOAA Fisheries' Reasonable and Prudent Alternative Table of Actions

Table 5. Estimated Habitat Quality Improvements (continued)

ESU	Major Population Group	Population	Estimated Percentage Habitat Quality Improvement of 2007-2009 Actions	Total Estimated Percentage Habitat Quality Improvement of 2007-2018 Actions
Middle Columbia Steelhead	Cascades Eastern Slope Tributaries	Deschutes River – eastside	1	1 *
		Deschutes River – Westside	<1	<1 *
		Fifteen mile Creek (winter run)	<1	<1 *
		Klickitat River	4	4 *
	John Day River	John Day River lower mainstem tributaries	<1	<1 *
		John Day River upper mainstem	<1	<1 *
		Middle Fork John Day River	<1	<1 *
		North Fork John Day River	<1	<1 *
		South Fork John Day River	1	1 *
	Umatilla and Walla Walla River	Touchet River	4	4 *
		Umatilla River	4	4 *
		Walla Walla River	4	4 *
	Yakima River Group	Naches River	4	4 *
		Satus Creek	4	4 *
		Toppenish	4	4 *
		Yakima River upper mainstem	4	4 *
Snake River Steelhead	Clearwater River	Lochsa River	6	16
		Lolo Creek	8	12
		Selway River	<1	<1
		South Fork Clearwater River	5	14

NOAA Fisheries' Reasonable and Prudent Alternative Table of Actions

Table 5. Estimated Habitat Quality Improvements (continued)

ESU	Major Population Group	Population	Estimated Percentage Habitat Quality Improvement of 2007-2009 Actions	Total Estimated Percentage Habitat Quality Improvement of 2007-2018 Actions
Snake River Steelhead	Grand Ronde River	Grand Ronde River lower mainstem tributaries	<1	<1 *
		Grand Ronde River upper mainstem	4	4 *
		Joseph Creek (OR)	<1	<1 *
		Joseph Creek (WA)	4	4 *
		Wallowa River	<1	<1 *
	Hells Canyon	Hells Canyon		
	Imnaha River	Imnaha River		*
	Lower Snake	Asotin Creek	4	4 *
		Tucannon River	5	5 *
	Salmon River	Lower Middle Fork mainstem and tribs (Big, Camas, and Loon Creeks)	1	2
		East Fork Salmon River	2	2 *
		Lemhi River	3	3 *
		Pahsimeroi River	9	9 *
		Salmon River upper mainstem	6	6 *
		Secesh River	1	6
		South Fork Salmon River	<1	1
Upper Columbia Steelhead	Upper Columbia River – below Chief Joseph	Entiat River	6	8
		Methow River	2	4
		Okanogan River	12	14
		Wenatchee River	1	4

* The Action Agencies may provide funding and/or technical assistance for replacement projects should they become necessary for the Action Agencies to achieve equivalent MPG or ESU survival benefits.

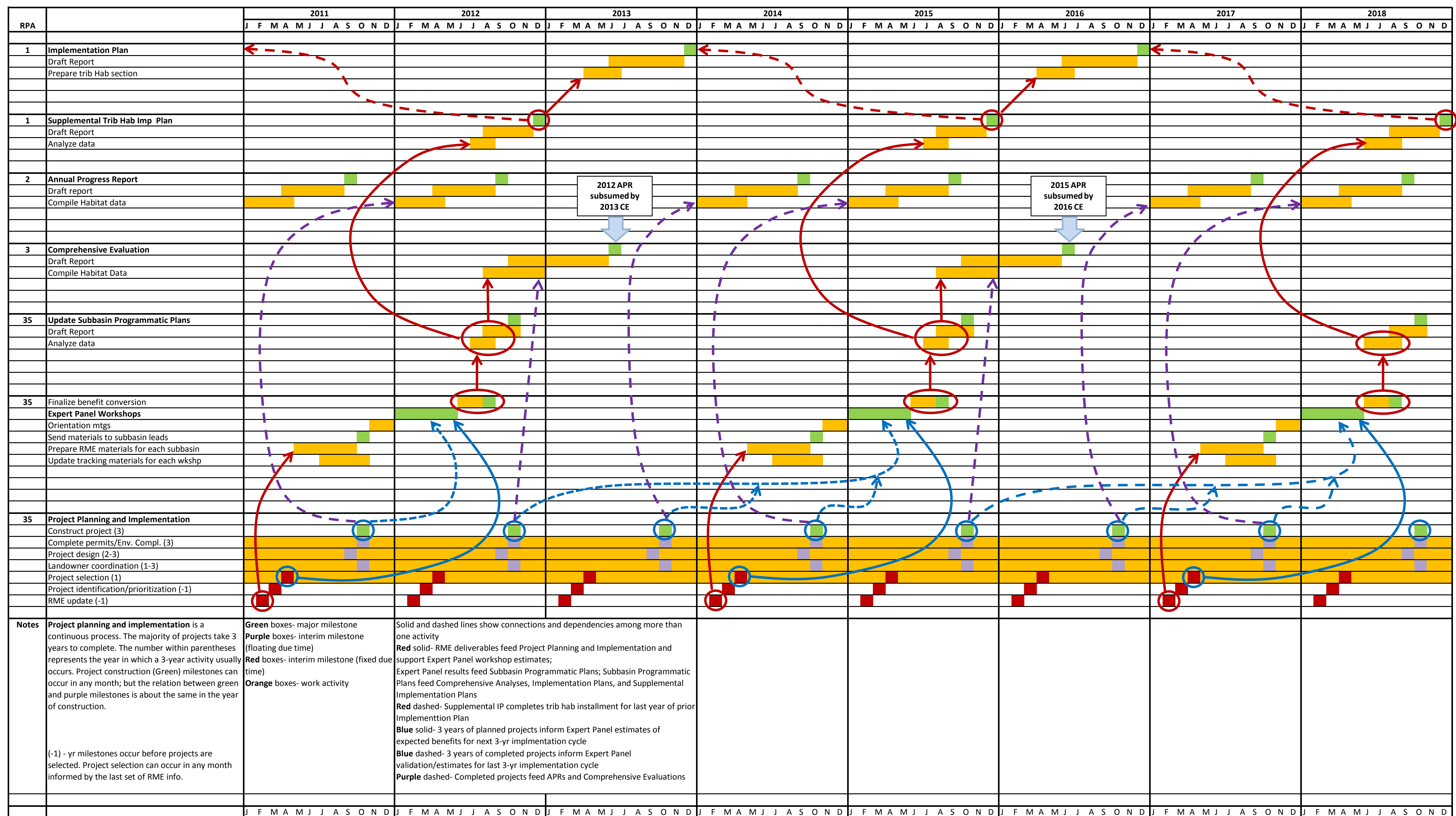
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2010 – 2012 Planned Actions Table

Upper Columbia River Steelhead and Spring Chinook - Entiat River

Assessment Unit (AU)	Primary Limiting Factor(s) (PLF) by AU	Actions	2010	2010	2011	2011	2012	2012	Comments
			Metric	Planned Value	Metric	Planned Value	Metric	Planned Value	
Lower Entiat	Low Stream flow	Continue Knapp-Wham and Hanan Detwiler irrigation ditch consolidation effort							
Lower Entiat		Continue exploring extension of Entiat Irrigation District line upstream to serve PUD canal/system users							
Lower Entiat		Pursue other water conveyance efficiency and diversion improvements	cubic feet/second restored to stream	2 cfs (McKenzie); USBR stimulus well conversions ~ 2 cfs; Roaring Cr. Well conversion ~ 1.5 cfs; BOR					Surface water effect, savings will be somewhat less.
Lower Entiat		Improve on-farm irrigation application efficiency, scheduling, and general water conservation.		2 cfs (McKenzie); USBR stimulus well conversions ~ 2 cfs; Roaring Cr. Well conversion ~ 1.5 cfs; BOR					Surface water effect, savings will be somewhat less.
Lower Entiat		Provide technical and cost-share assistance for water metering and reporting							
Lower Entiat		Continue conversion of surface water diversions to ground water/well withdrawals, when feasible	cubic feet/second restored to stream	1 cfs (surface to wells)					
Lower Entiat	Riparian condition	Implement riparian planting projects with willing landowners							
Lower Entiat		Work with willing landowners to protect larger, undisturbed riparian areas by first pursuing conservation easement, lease, and options other than outright property acquisition							
Lower Entiat	Floodplain connectivity	Implement Ecosystem Diagnosis and Treatment (EDT) Alternative 5 related to side-channel options	miles of river restored	0.2 miles (Foreman)	miles of river restored	0.3 miles (hatchery)			CMB review comment: planned for implementation in 2010
Lower Entiat	Habitat diversity	Implement EDT Alternative 5, focusing on pool forming structures	miles of river treated	0.2 miles (lower screw trap); 0.2 miles (Foreman); 0.3 miles (B2B Phase 3)	miles of river restored	0.3 miles (4 mile bridge); 0.3 miles (hatchery); 0.3 miles (LBS); 0.3 miles (Keystone)			CMB review comment: implement action in next cycle, 2014, per IMW decision
Lower Entiat	Habitat quantity	Implement EDT Alternative 5, focusing on pool forming structures	miles of river restored	0.2 miles (lower screw trap); 0.2 miles (Foreman); 0.3 miles (B2B Phase 3)	miles of river restored	0.3 miles (4 mile bridge); 0.3 miles (hatchery); 0.3 miles (LBS); 0.3 miles (Keystone)			CMB review comment: implement action in next cycle, 2014, per IMW decision

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Estimated % Change of Limiting Factors from Implementation of 2010-2012 Actions

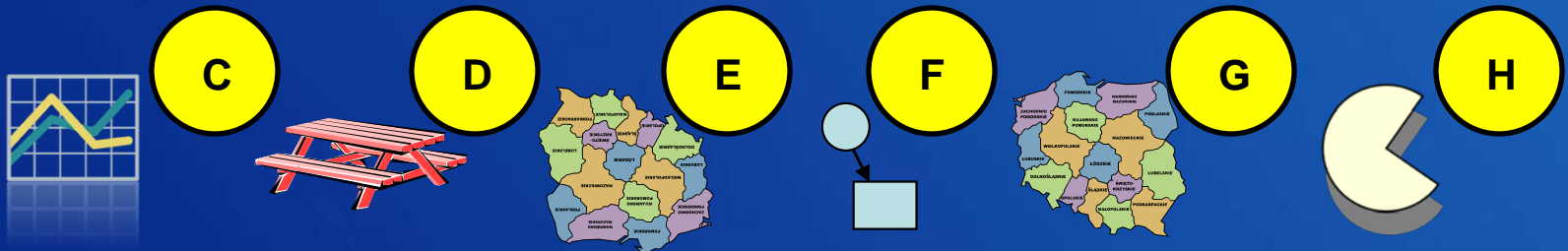
Steelhead - Entiat River

Assessment Unit	Limiting Factor	2010-2012 VALUES					
		Starting Low Bookend	10-12 Estimates		Updated High Bookends		Updated LF Weight
			2018	2033	2018	2033	
Lower Entiat	Excessive Fine Sediment	23	24	24	30	30	10
Lower Entiat	Floodplain connectivity	20	21	21	21	21	6
Lower Entiat	Habitat diversity	15	19	19	41	41	20
Lower Entiat	Habitat quantity	15	19	19	41	41	35
Lower Entiat	Low Stream flow	80	85	85	87	87	2
Lower Entiat	Obstructions/entrainment ¹						
Lower Entiat	Riparian condition	30	30	30	35	40	2
Lower Entiat	Side-channel connectivity	10	12	12	15	15	25
Mad River	Habitat diversity	91	91	91	97	99	33.33
Mad River	Habitat quantity	90	90	90	97	99	33.33
Mad River	Improve streamflow ¹						
Mad River	Two obstructing pipes in Tillicum	98	98	98	100	100	33.33
Middle Entiat	Excessive Fine Sediment	23	24	24	30	30	40
Middle Entiat	Habitat diversity	60	62	62	70	80	35
Middle Entiat	Riparian condition	80	81	82	85	90	20
Middle Entiat	Stormy obstructions to passage	93	93	93	99	99	5
Middle Entiat	Water Quantity ¹						

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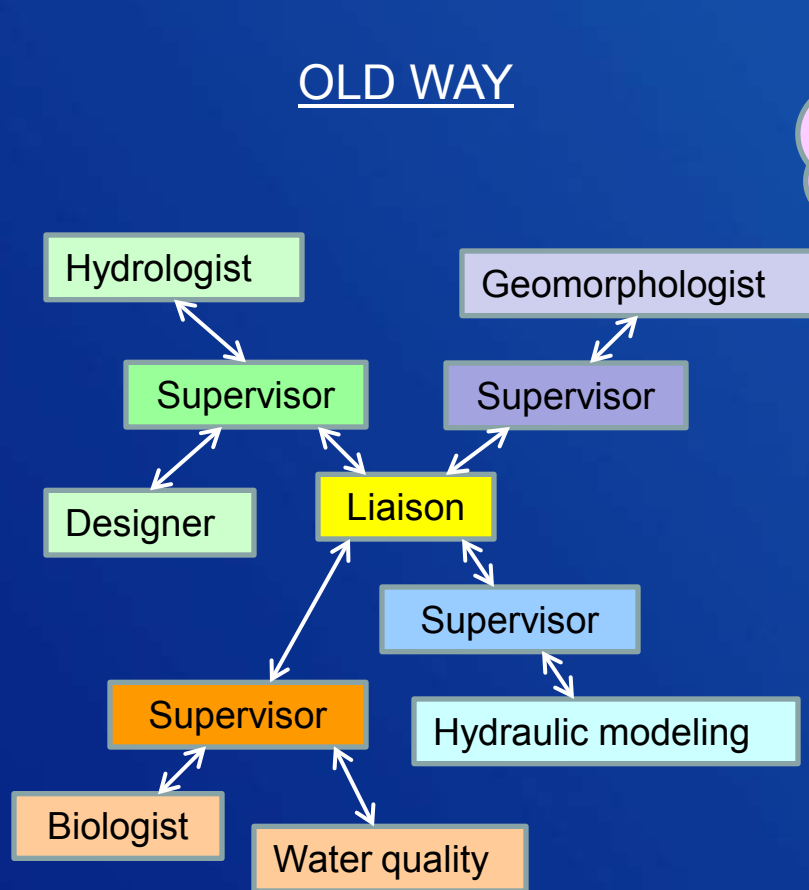
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- AA timelines/processes
- Recent planning and implementation tools



- Summary

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Project Idea

Project Development

Project Implementation

NEW WAY

Upper Columbia

Grande Ronde

Liaison
Hydrologist
Geomorphologist
Hydraulic modeling
Water quality
Designer
Biologist

Liaison
Hydrologist
Geomorphologist
Hydraulic modeling
Water quality
Designer
Biologist

Core Teams

Liaison
Hydrologist
Geomorphologist
Hydraulic modeling
Water quality
Designer
Biologist



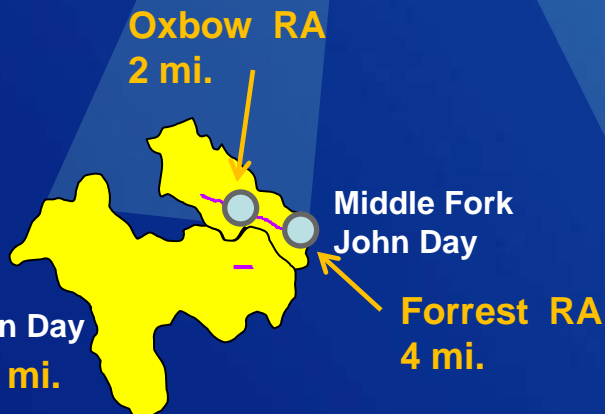
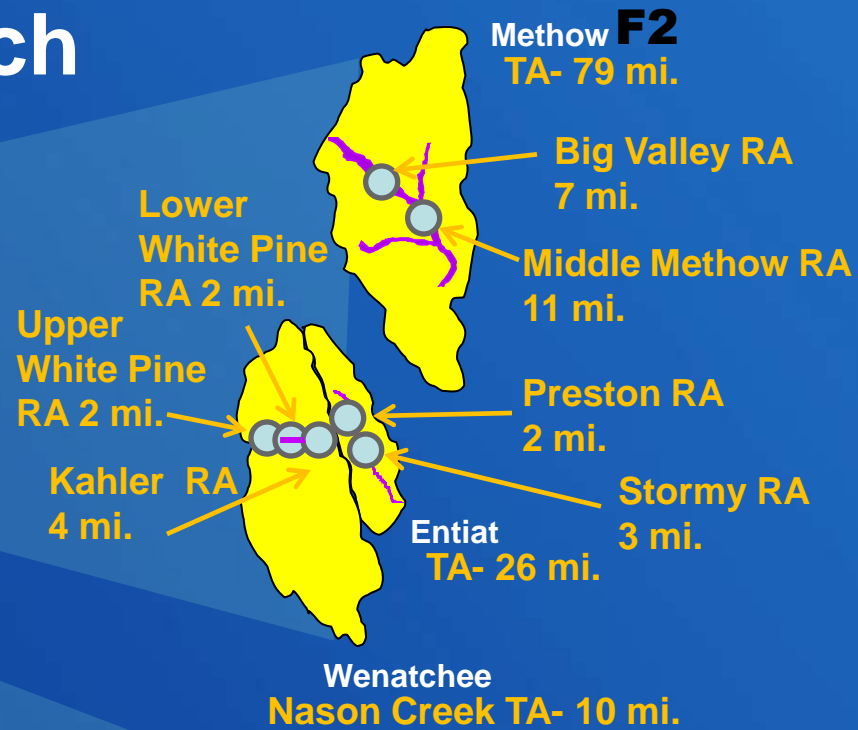
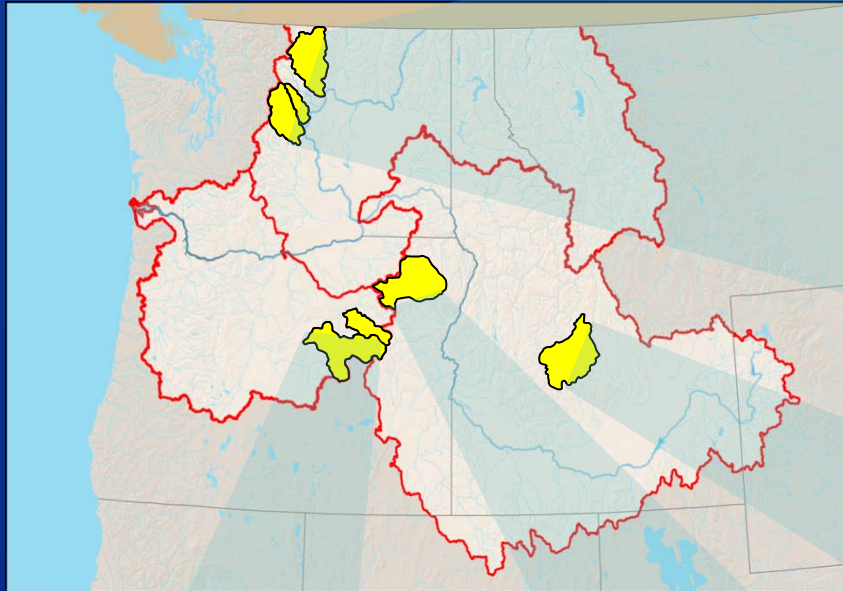
Liaison
Hydrologist
Geomorphologist
Hydraulic modeling
Water quality
Designer
Biologist

John Day

Upper Salmon

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USBR Tributary and Reach Assessments, 2011



Grande Ronde



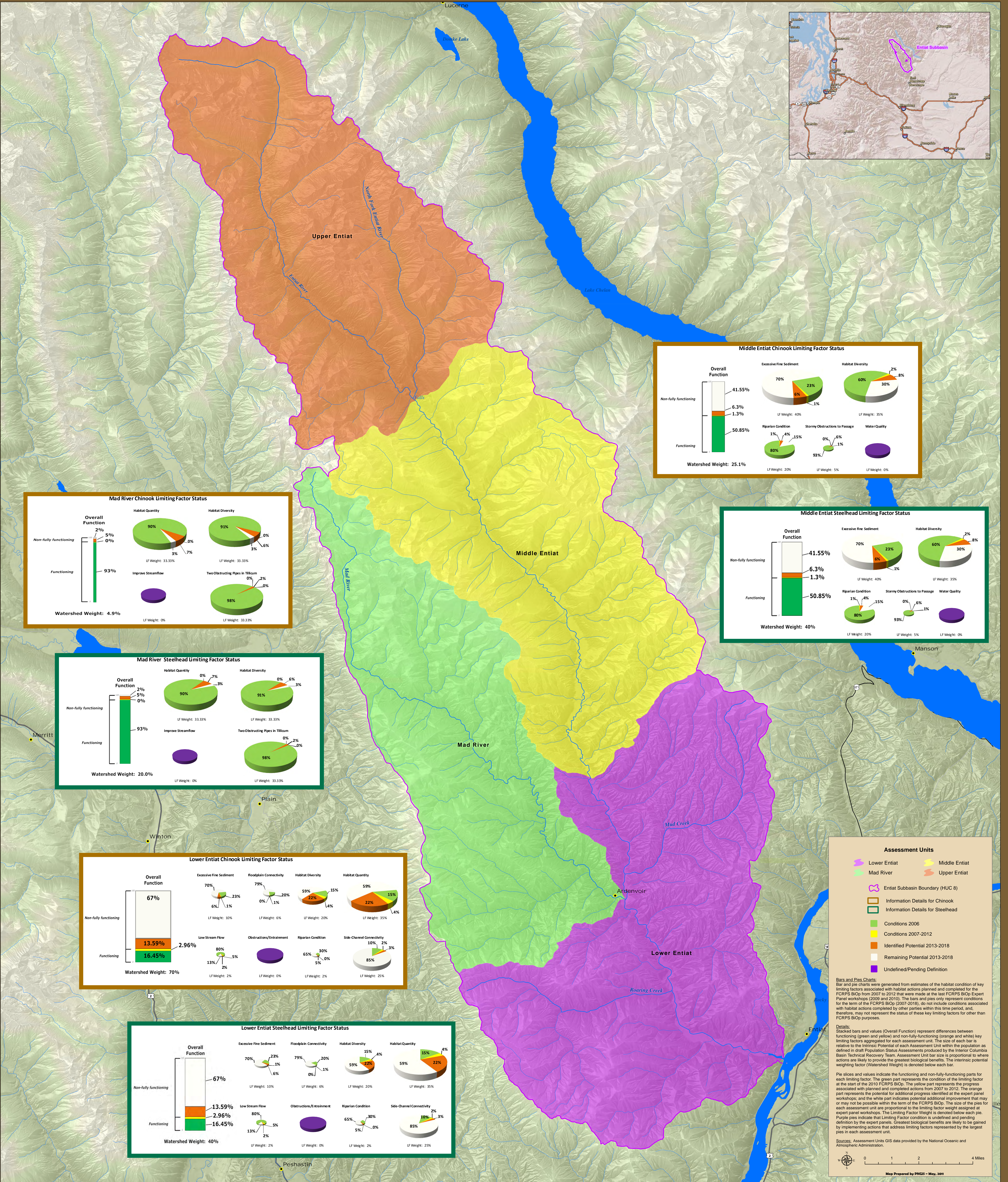
Catherine Creek TA- 59 mi.



Upper Salmon

Yankee Fork TA- 18 mi.

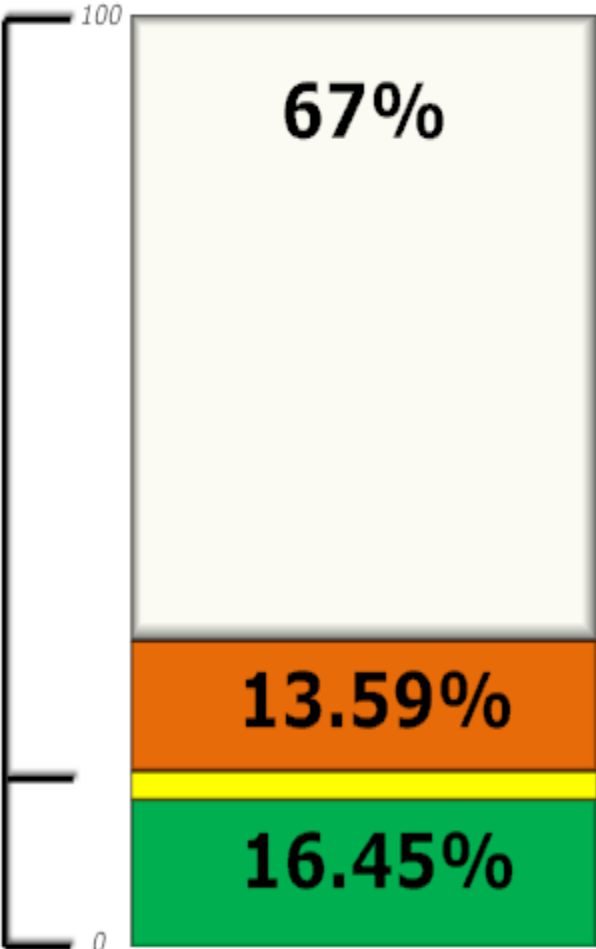
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Lower Entiat Chinook Limiting Factor Status

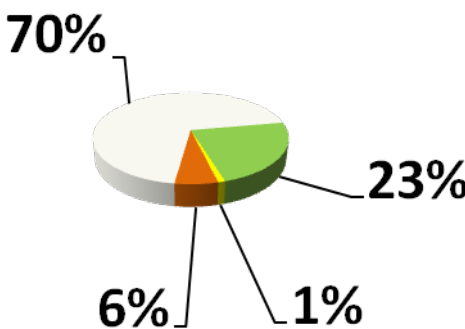
H1

Overall Function



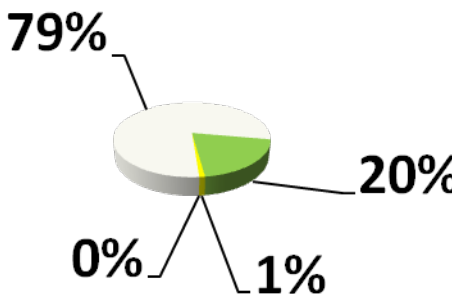
Watershed Weight: 70%

Excessive Fine Sediment



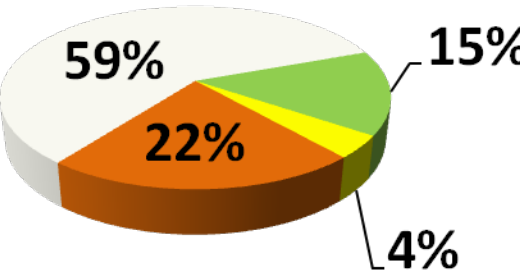
LF Weight: 10%

Floodplain Connectivity



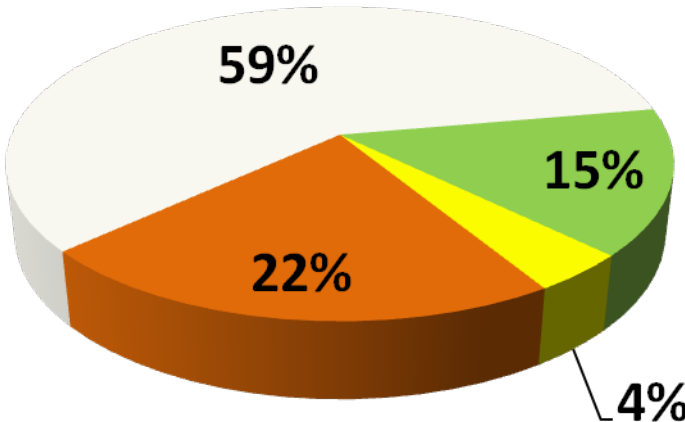
LF Weight: 6%

Habitat Diversity



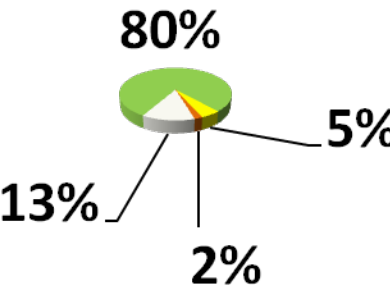
LF Weight: 20%

Habitat Quantity



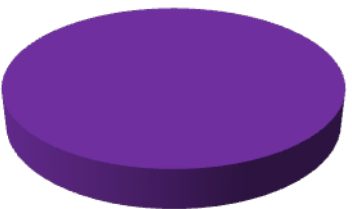
LF Weight: 35%

Low Stream Flow



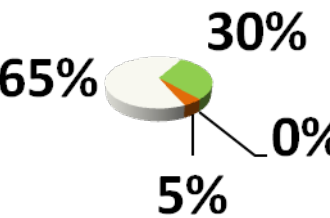
LF Weight: 2%

Obstructions/Entrainment



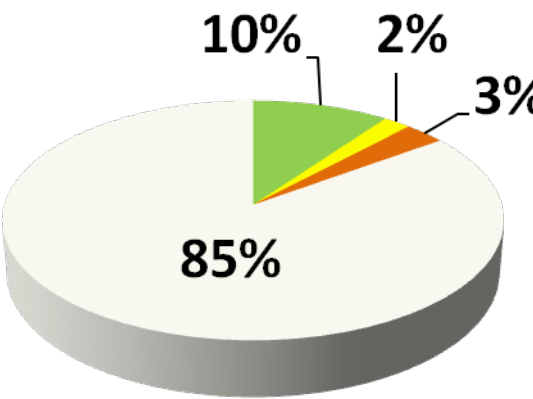
LF Weight: 0%

Riparian Condition



LF Weight: 2%

Side-Channel Connectivity



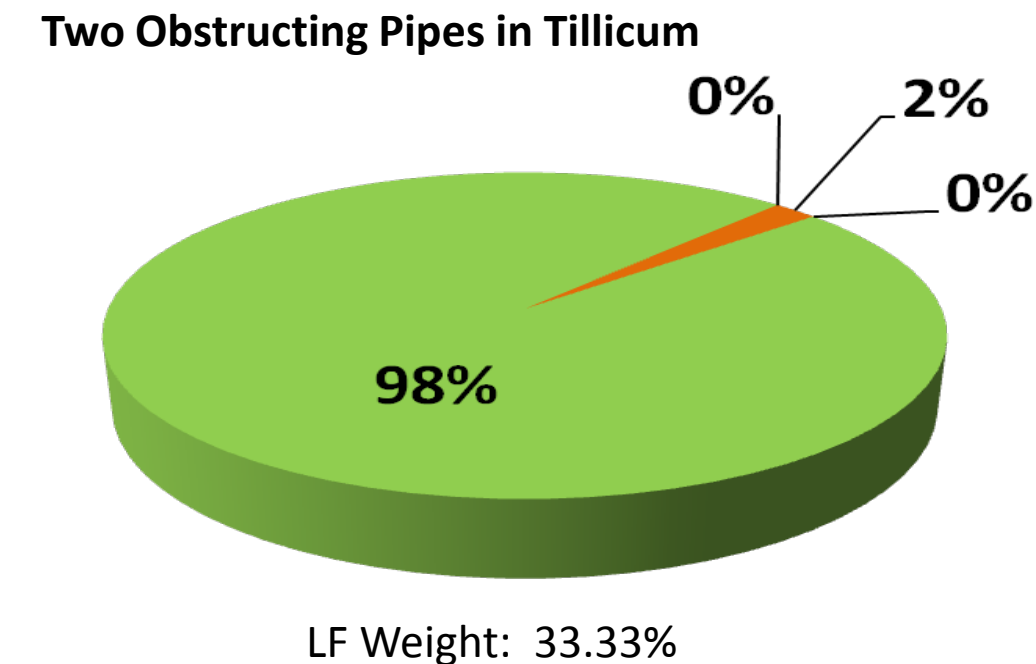
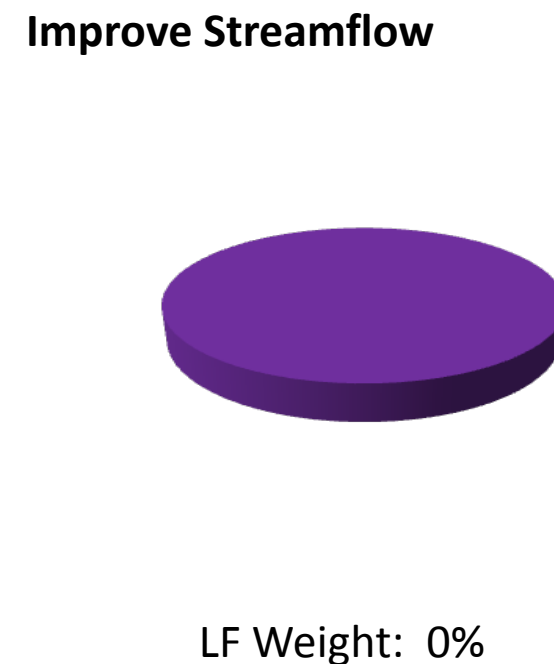
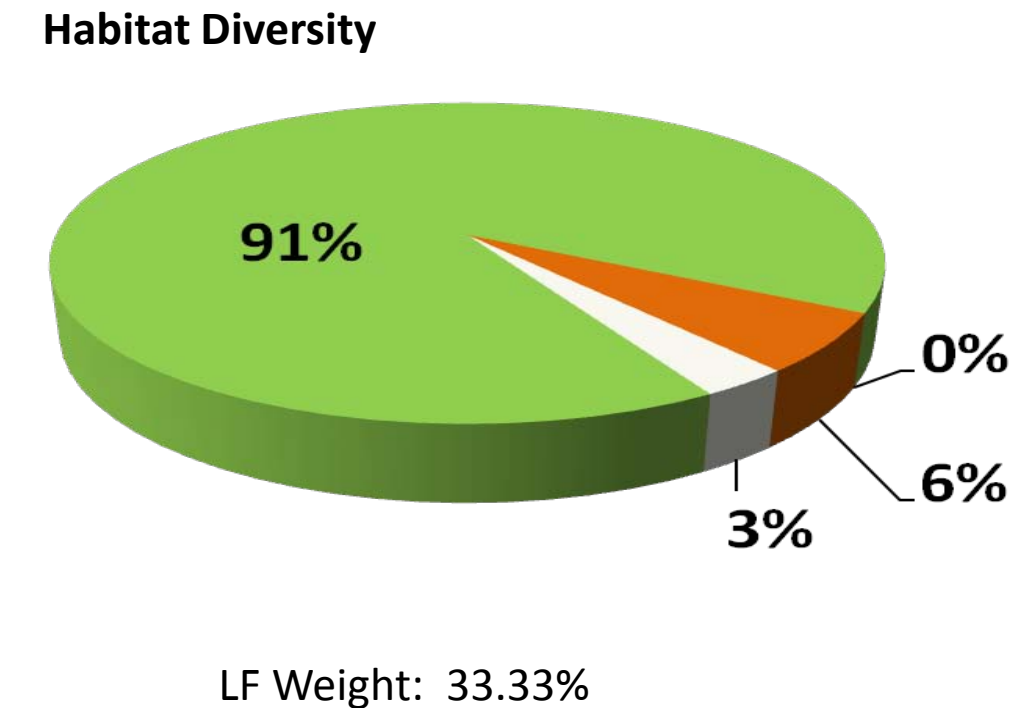
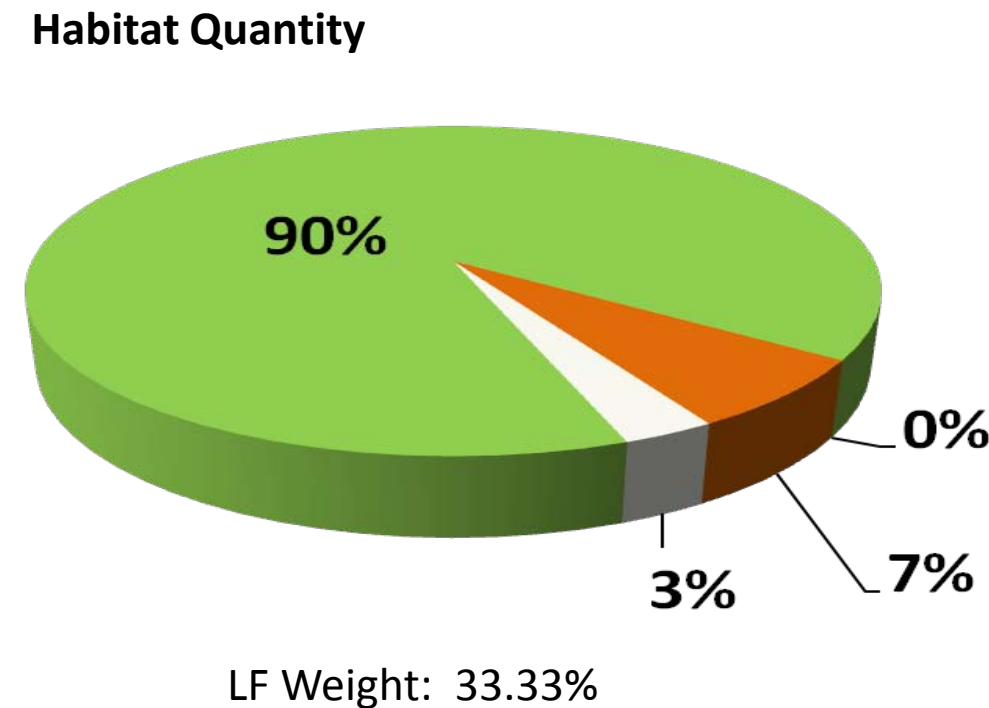
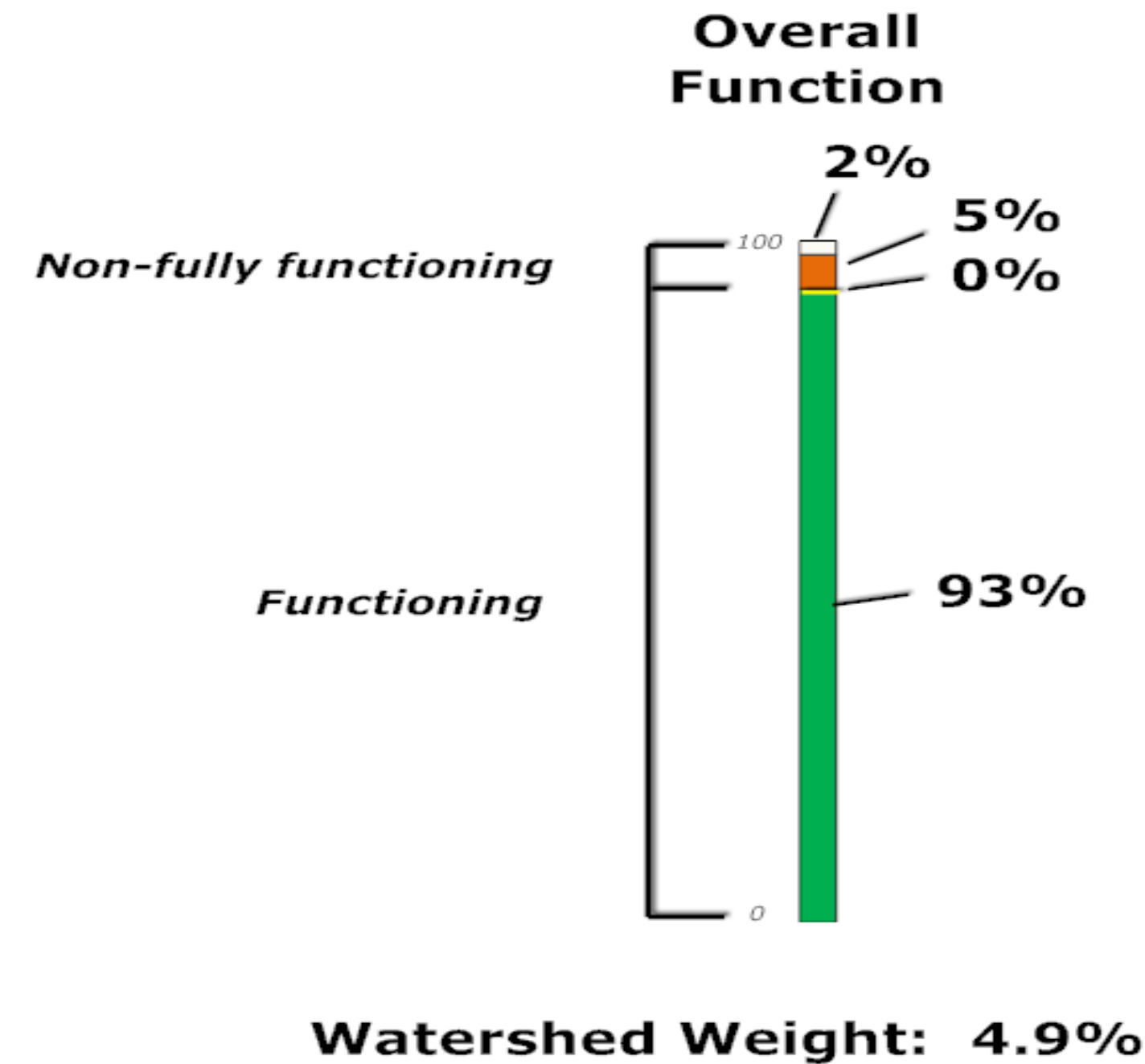
LF Weight: 25%

Non-fully functioning

Functioning

Mad River Chinook Limiting Factor Status

H2



EP Prep tasks

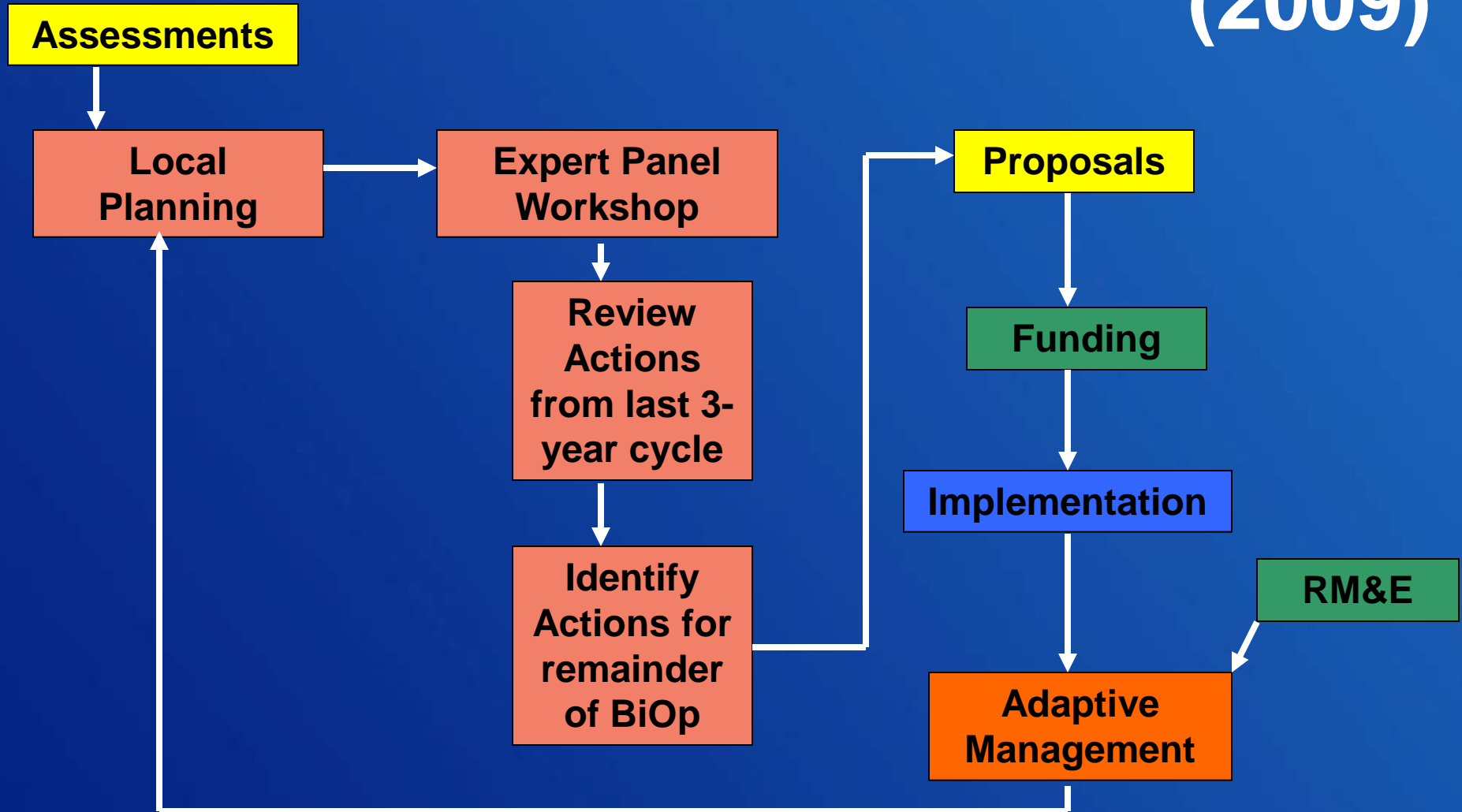
- **Standardizing Limiting Factors**
- **Building list of 2009-2012 completed projects**
- **Building list of 2013-2018 projects**
- **Developing database system to manage workshop proceedings**
- **Working w/NOAA FSC to support EPs (and watershed planning groups) with readily-available, relevant monitoring info**
- **EP workshops completed by April**

Integration

- USBR- BPA- NOAA- NPCC- CRITFC- Watershed Partners
- Planning- Funding- Implementation- Reporting- RME- Adaptive Management-

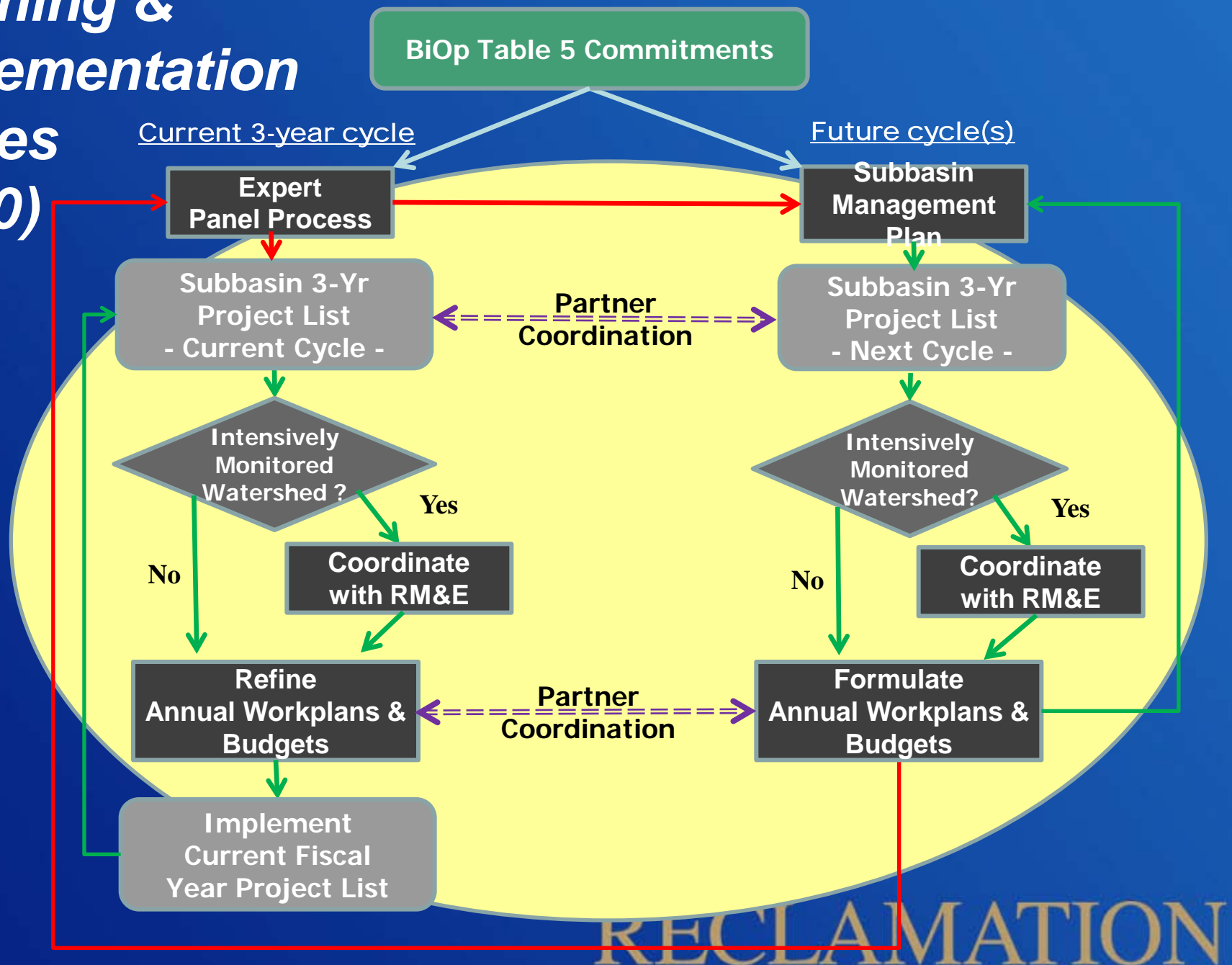
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Generalized Implementation Cycle (2009)



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Planning & Implementation Cycles (2010)



Summary

- **FCRPS BiOp table 5 commitments are paramount**
- **AAs and region have two BiOp implementation cycles behind us**
- **Results indicate where progress is in line and where focus is needed**
- **Tools help illustrate what can be done and where to do it to provide greatest biological benefits**
- **Reclamation has made significant internal adjustments to better address table 5 commitments and provide technical services for this effort**
- **Reclamation contributions aid integrated approach to plan and implement habitat improvement projects among regional partners, (but not all the way there yet)**

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