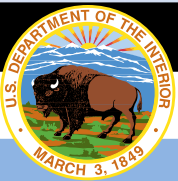


LSRCP 2032



The Next Decade
Nathan Wiese LSRCP



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LSRCP Vision

Fish for the Future



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LSRCP Goal

- Mitigate loss of salmon and steelhead from operation of four Lower Snake River Dams



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Goal of Chinook Review

- Review past 12 years of performance and work on the program
- Identify current bottlenecks to meeting adult mitigation goal of 58,700 Chinook
- Brainstorm ideas to surmount current issues
- Build on our 40-years of experience to outline the next 10-year plan



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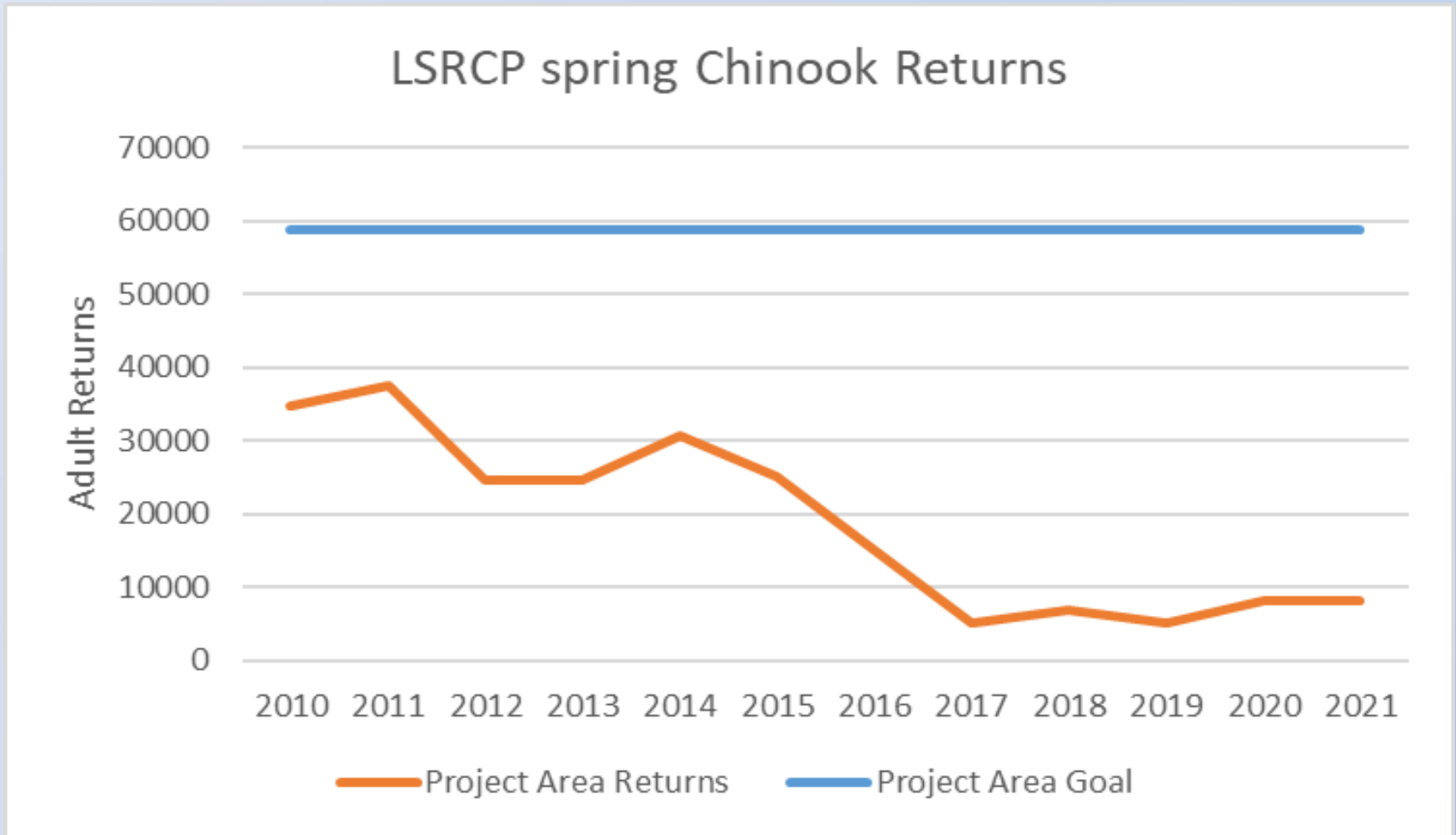
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A Program in Peril?



10-Year Plan

- Focused around Project Area goals in total adults and in-place Basins
- Strategizing so when we have returns, infrastructure and plans are in-place
- Prioritize LSRCP resources
- LSRCP toolbox is hatchery smolts/release sites/survival to achieve 58,700 adults



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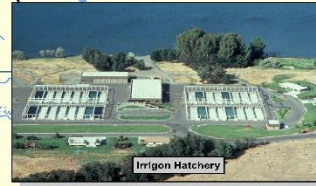
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The LSRCP was authorized by Congress in 1976 to mitigate for fish loss due to the construction and operation of the four dams on the lower Snake River. The program consists of 11 fish hatcheries, 15 spawning and acclimation facilities, 4 fish health labs, and 7 monitoring and evaluation projects. Bonneville Power Administration funds the Fish and Wildlife Service to maintain the LSRCP.



Lyons Ferry Hatchery

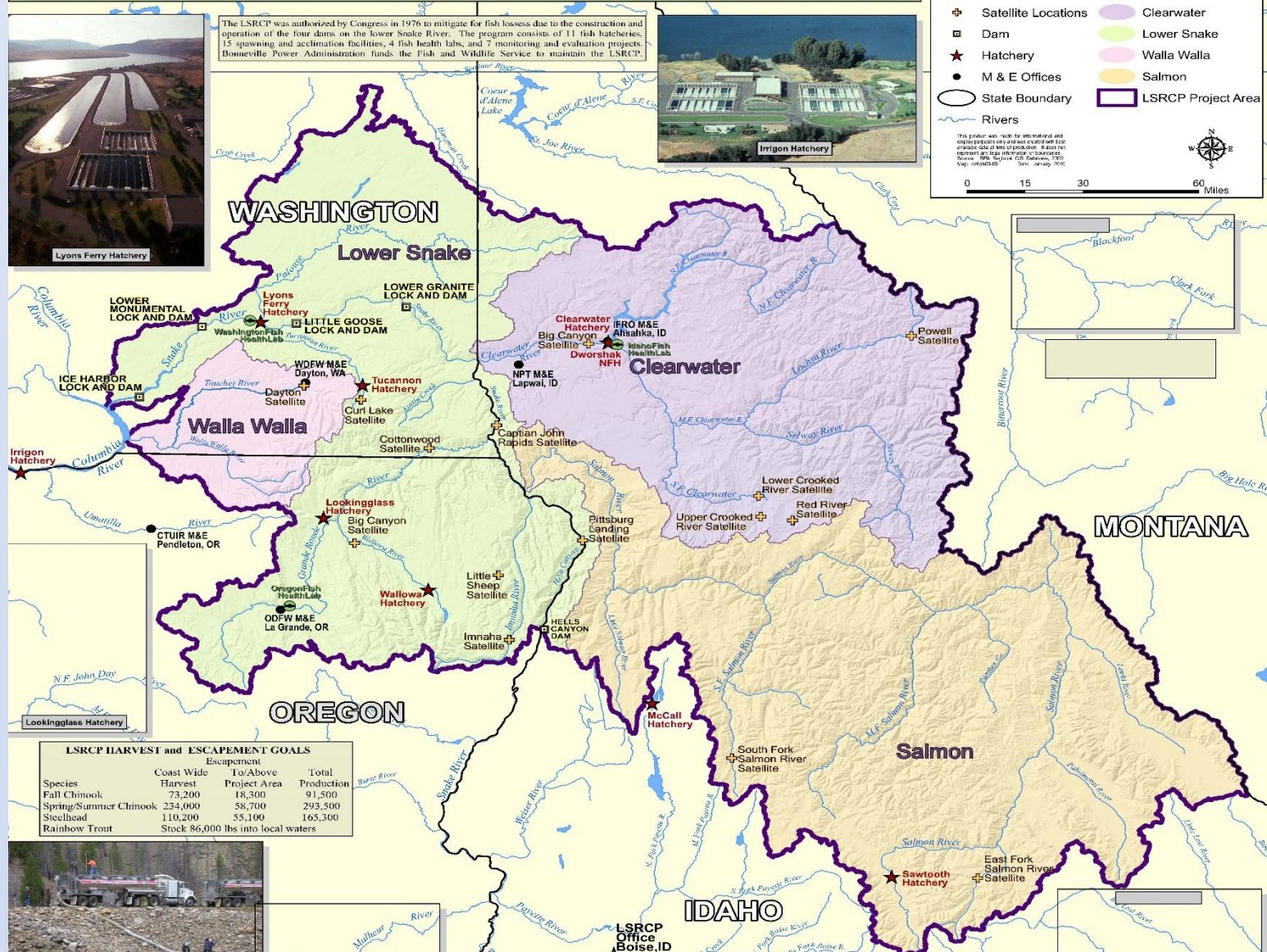
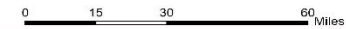


Irigun Hatchery

LEGEND

- Fish Health Labs
- Satellite Locations
- Dam
- Hatchery
- M & E Offices
- State Boundary
- Rivers
- Drainages
 - Clearwater
 - Walla Walla
 - Salmon
- LSRCP Project Area

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LSRCP HARVEST and ESCAPEMENT GOALS			
Species	Escapement		
	Coast Wide Harvest	To/Above Project Area	Total Production
Fall Chinook	73,200	18,300	91,500
Spring/Summer Chinook	234,900	58,700	293,500
Steelhead	110,200	55,100	165,300
Rainbow Trout	Stock 86,000 lbs into local waters		



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Average by Basin

- Examine average adult returns
- Use current smolts targets with BY07-16 SARs
 - Touchet (estimated SAR)
 - Clearwater (current smolt targets are higher than average)
- A starting point for “Project Area” Goals
 - Average
 - Downstream harvest



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Average by Basin

LSRCP Chinook Program Performance, Brood Year 2007 - 2016

Basin	Smolts	Basin Adult Goal	SAR BY07-16 Mean	Adults BY07-16 Mean	Adult Shortfall
Northeast Oregon	1,390,000	9,068	0.62%	8,583	(485)
Southeast Washington	475,000	1,152	0.37%*	1,780	628
Clearwater	5,599,000	21,035	0.40%*	22,534	1,499
Salmon	3,000,000	27,445	0.37%	11,000	(16,445)
Total	10,494,000	58,700	0.42%	44,071	(14,629)

* SARs based on expected or available data, not complete for entirety of BY07-16



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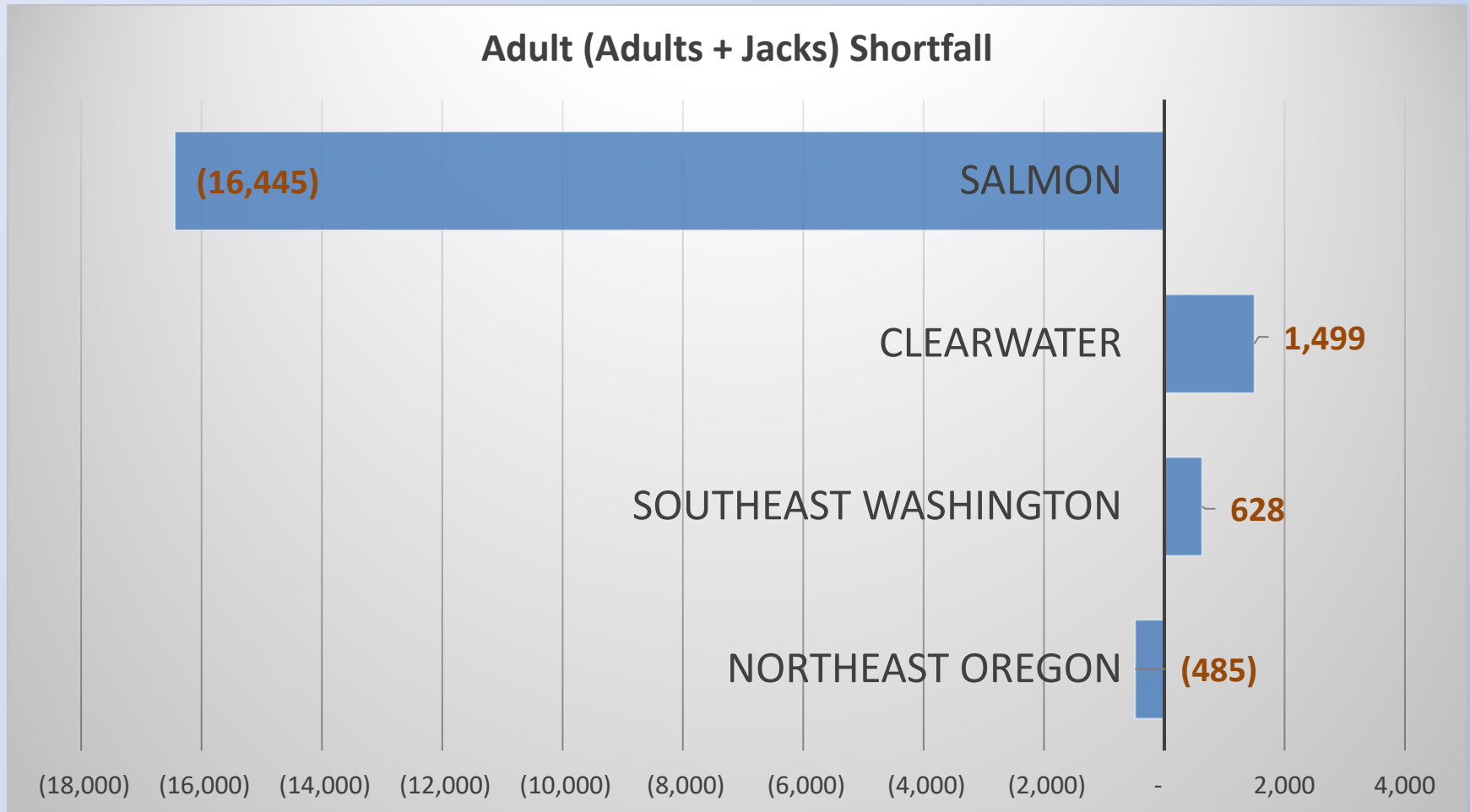
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Average by Basin



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WHAT NOW?



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Considerations

- Management
- Infrastructure
- Endangered Species Act
- Monitoring and Evaluation



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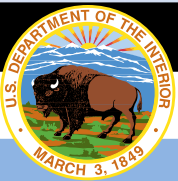
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Management

- Mitigation Goal to optimize harvest share
- U.S v Oregon
- Fishery Goal
- Location
- Harvest versus Broodstock
- Natural population limitations



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Infrastructure

- What can the “concrete” do?
- Logistics (trucking/transfers/etc.)
- Water limitations (temp and quantity)
- New Technology
- Costs



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Endangered Species Act

- Existing Biological Opinions
- Integrated programs
- Segregated programs
- Clearwater Basin
- Remove excess hatchery fish to meet sliding scales



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Monitoring and Evaluation

- Release sites
- Size at Release
- Release timing
- Migration survival
- Straying rates
- SARs
- Harvest Evaluation
- Databases - FINS



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**YOU CAN'T
GET THERE**



FROM HERE

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Northeast Oregon (-485)

Basin	Facility	Location	Smolts	Basin Adult Goal	BY07-16 Mean	Expected Adults
Northeast Oregon	Lookingglass	Catherine	150,000	970	0.58%	870
Northeast Oregon	Lookingglass	Lostine	250,000	1,654	0.86%	2,150
Northeast Oregon	Lookingglass	Upper Grande Ronde	250,000	1,617	0.44%	1,100
Northeast Oregon	Lookingglass	Lookingglass Creek	250,000	1,617	0.57%	1,425
Northeast Oregon	Lookingglass	Imnaha River	490,000	3,210	0.62%	3,038
		Basin Total	1,420,000	9,068	0.62%	8,583



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Southeast Washington (+628)

Basin	Facility	Location	Smolts	Basin Adult Goal	BY07-16 Mean	Expected Adults
Southeast Washington	Lyons Ferry/Tucannon	Tucannon	225,000	1,152	0.18%	405
Southeast Washington	Lyons Ferry/Tucannon	Touchet*	250,000		0.55%**	1,375
		Basin Total	475,000	1,152	-	1,780

* Touchet program added to temporarily mitigate low Tucannon performance

**Touchet SAR based on expected, no adult return data yet



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Clearwater Basin (+1499)

Basin	Facility	Location	Smolts	Basin Adult Goal	BY07-16 Mean	Expected Adults
Clearwater	Clearwater	North Fork Clearwater	709,000	9,347	0.24%	1,709
Clearwater	Clearwater	Clear Creek	720,000		0.50%	3,564
Clearwater	Clearwater	Lower Selway	400,000		0.43%	1,724
Clearwater	Clearwater	Red River	1,280,000		0.26%	3,328
Clearwater	Clearwater	Lochsa	640,000	2,553	0.26%	1,664
Clearwater	Dworshak	North Fork Clearwater	1,650,000	9,135	0.57%	9,405
Clearwater	Dworshak/ NPTH	Lapwai	200,000		0.57%	1,140
Basin Total			5,599,000	21,035		22,534



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Basin Total			5,599,000	21,035		22,534



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Upper Salmon (-16,445)

Basin	Facility	Location	Smolts	Basin Adult Goal	BY07-16 Mean	Expected Adults
Upper Salmon	McCall	South Fork Salmon	1,000,000	8,000	0.50%	5,000
Upper Salmon	Sawtooth	Sawtooth Weir	1,700,000	19,445	0.30%	5,100
Upper Salmon	Sawtooth	Yankee Fork	300,000		0.30%	900
		Basin Total	3,000,000	27,445	0.37%	11,000



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LSRCP View

58,700

Hatchery Adults



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Management Opportunities

- Focus on NE Oregon (-485 adults) and Salmon Basins (-16,445 adults)
 - Clearwater Basin and SE Washington have made significant changes over the past decade
- Utilize release sites with highest SARs
- Expand and enhance existing programs



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Infrastructure Opportunities

Basin	Facility	Smolts	Expected Adults
NE Oregon	Lookingglass	80,000	485
Salmon	McCall/Sawtooth	1,470,000	5,710
Salmon	Expansion of Existing/New Facilities	3,600,000	10,800
	Total	5,150,000	16,995



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ESA Opportunities

Basin	Location	New Smolts	Brood Females
Salmon	Yankee Fork*	600,000	176
Salmon	Panther Creek*	400,000	118
Total		1,000,000	294

*Permitting already exists for Crystal Springs Hatchery project



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M&E Opportunities

Spring/Summer Chinook Fish Per Pound (FPP) and Smolt to Adult Survival (SAS)					
Facility	FPP	SAR	Granite Survival	River Miles	Density Index
Sawtooth	20.0	0.30%	54%	847	0.30
Lyons Ferry	13.4	0.37%		373	0.16
McCall	20.1	0.50%	64%	670	0.25
Clearwater	16.2	0.33%	66%	474	0.30
Dworshak	19.8	0.57%	77%	454	0.30
Lookingglass	25.5	0.62%	66%	532	0.15



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2023

- Examine new infrastructure potential
- Examine expansion McCall, Sawtooth, and Lookingglass programs
- Use Panther and Yankee Fork permitting for up to 1 million smolts
- Examine release locations
- Submit proposals to NOAA for additional release locations
- Complete infrastructure audits



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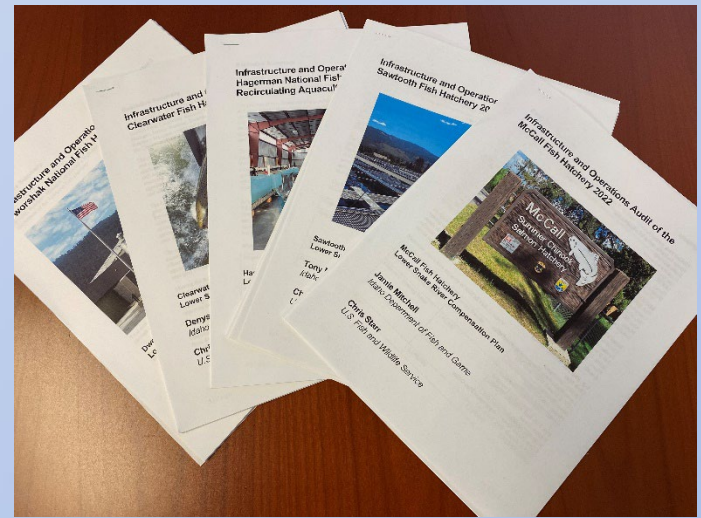
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2024-2026

- Identify additional smolts and transport logistics
- Identify deficits to meeting adult targets and develop infrastructure plans to address
- Additional proposals to NOAA



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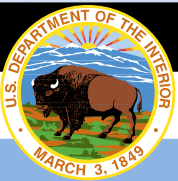
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2027-2032

- Monitor program and report success

**Mission
Accomplished!**



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Well....Sort Of....

We have lots of goals:

- What infrastructure needs do you foresee?
- What management considerations (broodstock availability, fishing locations, etc.) are important to you?
- What opportunities do you see within the program?
- What research needs does LSRCP need to address?
- How can LSRCP help you achieve your fishery objectives?
- What do you want the LSRCP program to achieve in the next 10 years?



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What is the Plan?

- Build a 10-year plan to meet mitigation targets
- Prioritize action items
- Seek resources to implement
- Implement and adaptively manage



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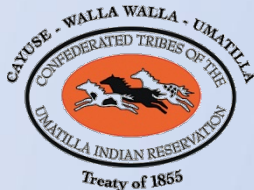
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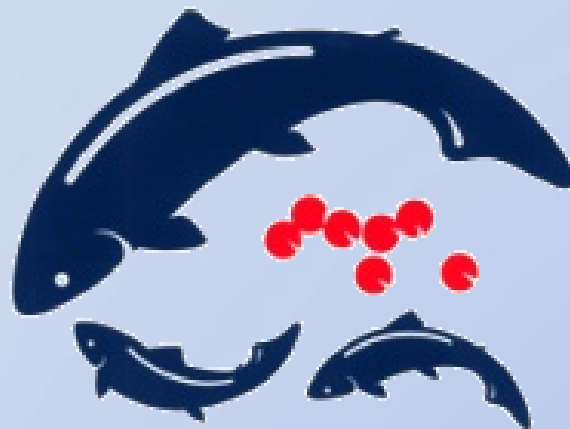
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Lower Snake River Compensation Plan Program



**US Army Corps
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LOWER SNAKE RIVER
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