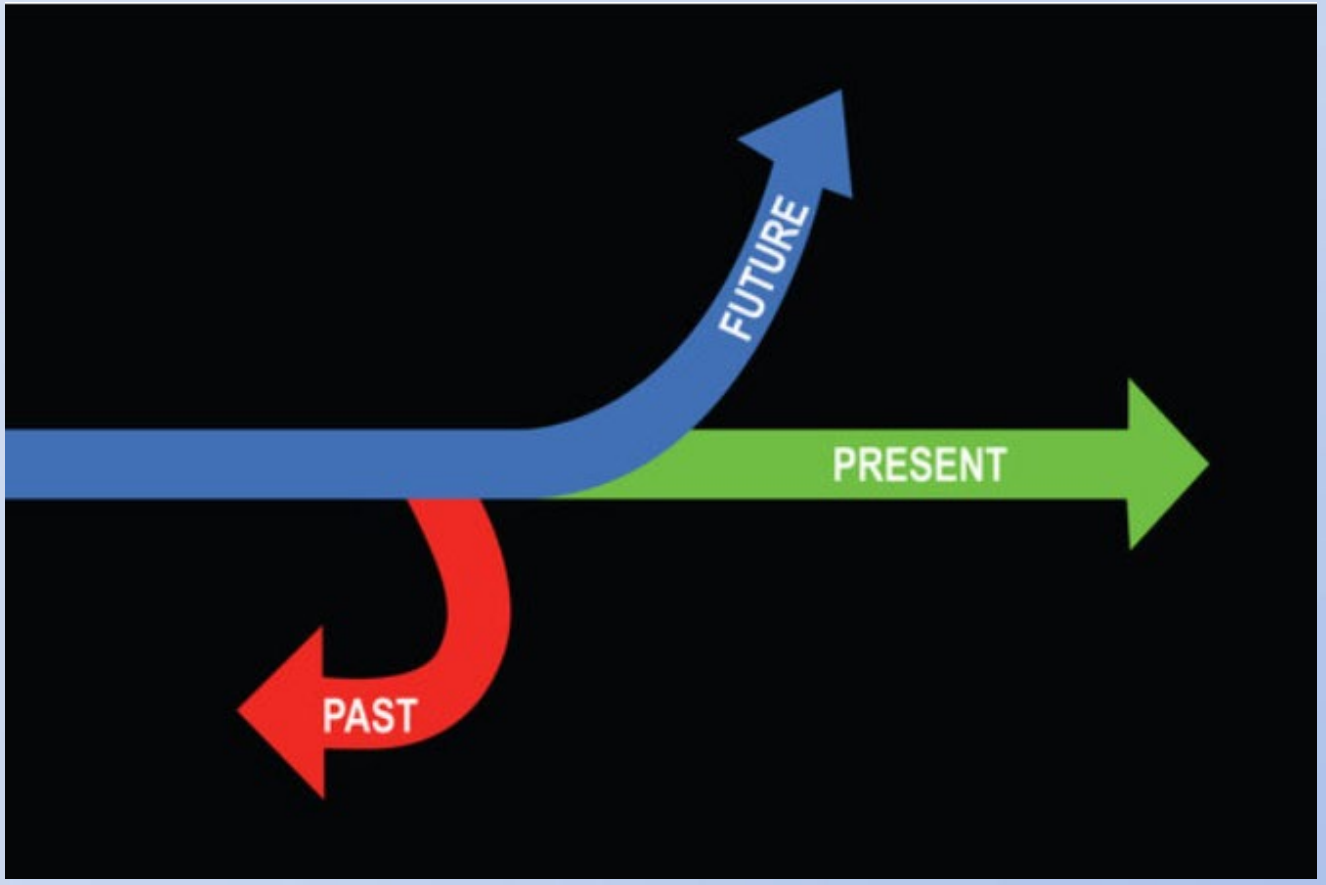
LSRCP – M&E

Year in Review, Present, and Year Ahead



Rod Engle – USFWS Lower Snake River Compensation Plan

Outline

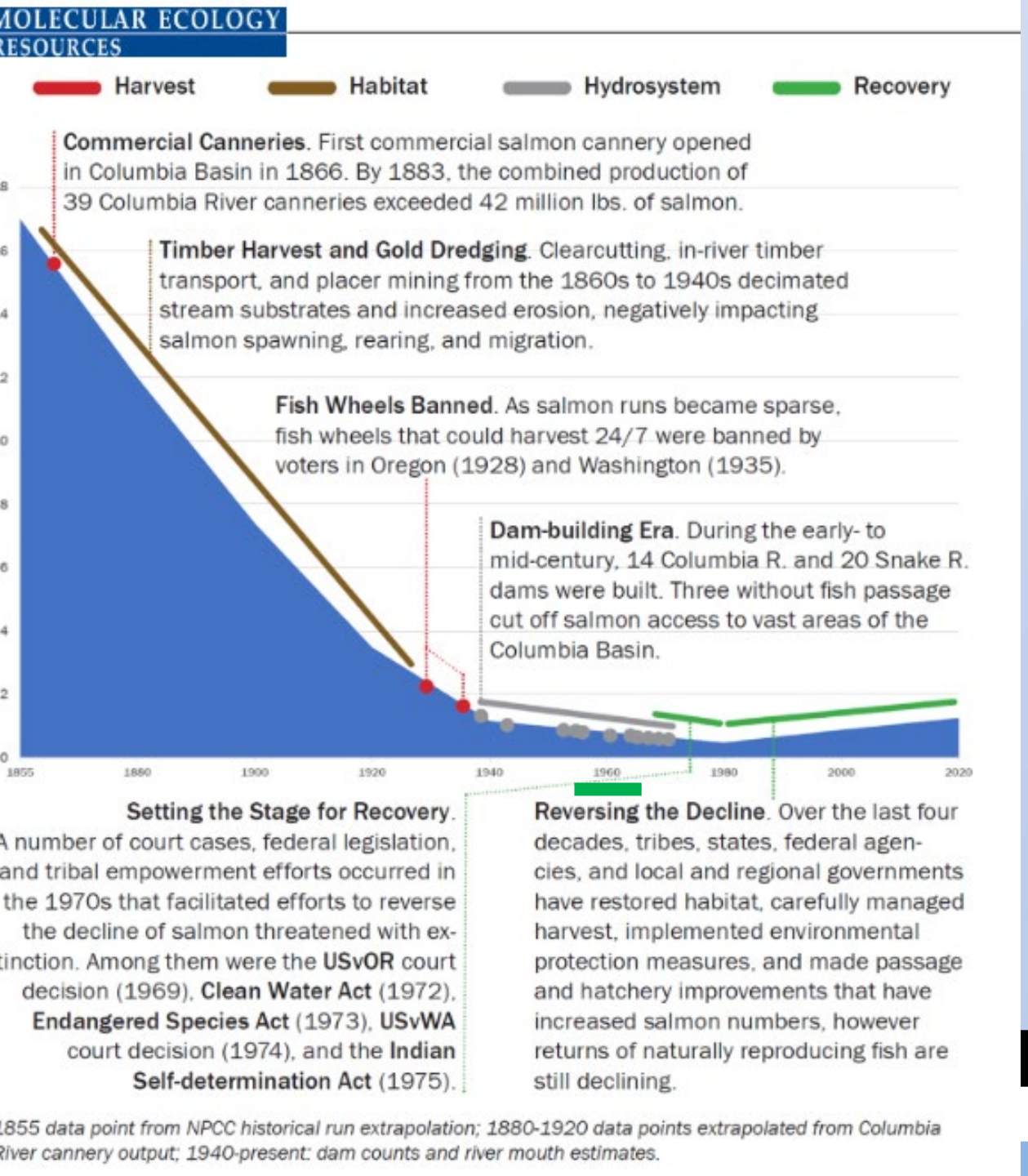
- Performance of programs
  - LSRCP 5-year report
- Steelhead ISRP Review
  - Implementing key recommendations
- Current Priorities
  - Fall Chinook ISRP review
  - Fish Hatchery Infrastructure and Water Vulnerability Analyses (FHIWVA)
- Platooning/covering other responsibilities.
- Improvements to address performance.

LSRCP Program Goals and Harvest Objectives

Species	Project Area Goals	Coastwide Harvest Objectives	Total Adults (Goals + Objectives)
Fall Chinook	18,300	73,200	91,500
Spring/Summer Chinook	58,700	234,800	293,500
Steelhead	55,100	110,200	165,300
Rainbow Trout	86,000 pounds stocked		

Table 1. Computation of Lower Snake River Compensation Measures from COE (1975) and modified from Herrig (1990) to include trout. Year, or years, of maximum counts at McNary Dam between 1954-67 are provided in parentheses. Trout mitigation was specific to the State of Washington for lost fishing opportunity due to inundation from the projects. A higher percent passage (68%) for fall Chinook salmon was observed during the passage period but was discounted by the fisheries agencies (Herrig 1990).

	Fall Chinook Salmon (1958)	Spring-Summer Chinook Salmon (1957)	Steelhead Trout (1962-63)	Trout
McNary Dam Count	97,500	222,100	172,600	
Ice Harbor Dam Maximum Percent Passage (1962-67)	33.5%	55%	66.5%	
Estimated Snake River Pre-Project Run	32,663	122,200	114,800	
Lower Snake River Compensation Goals	18,300	58,700	55,100	86,000 pounds into local waters (WA-79,800, ID-6,200).



LSRCP Mitigation in Context

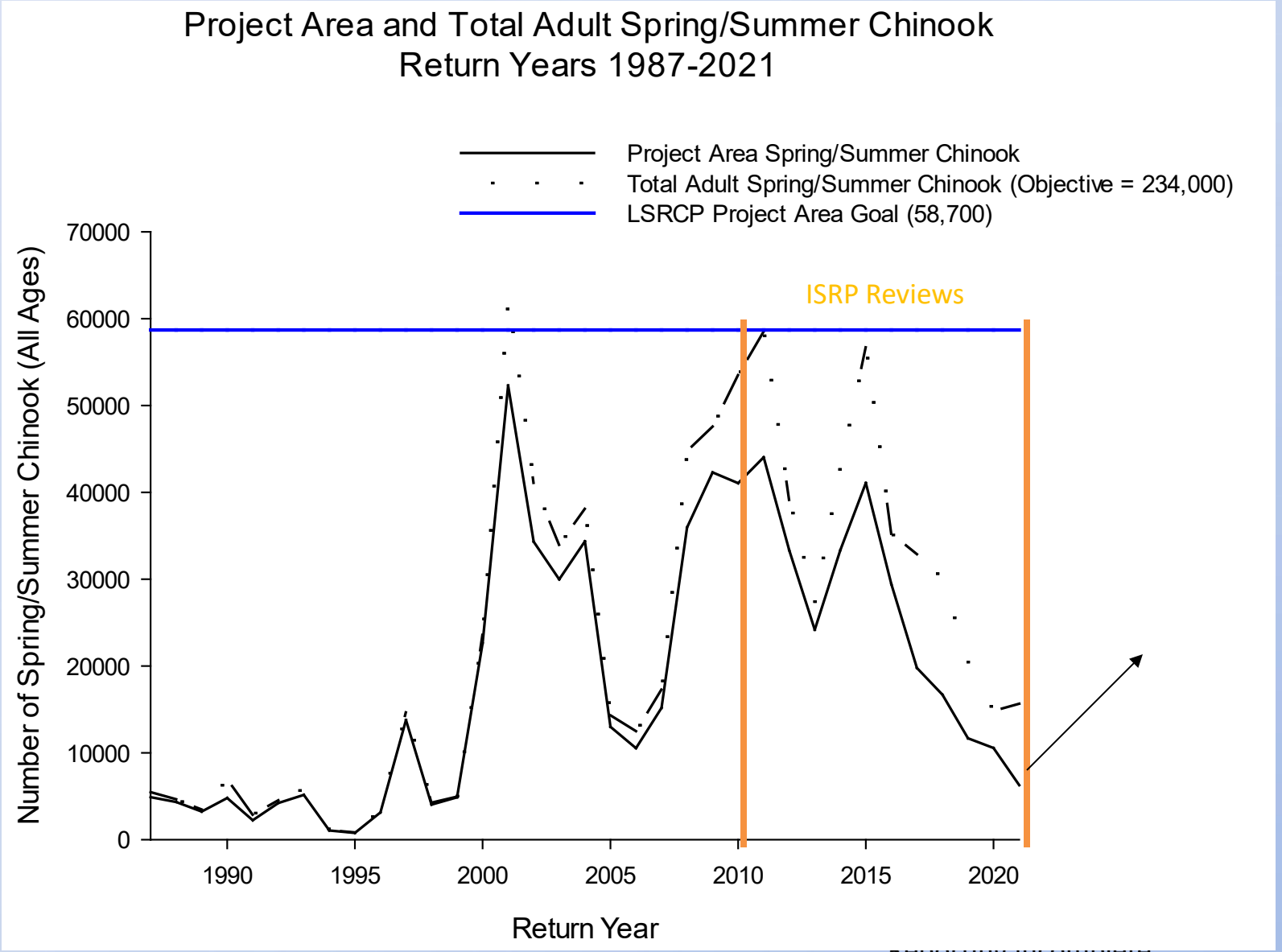
- Figure adopted from FiveCrows et al. 2023 https://doi.org/10.1111%2F1755-0998.13815
  - Maureen Hess NWPCC
- LSRCP mitigation – *"… salmon and steelhead could have been maintained on a sustained yield basis in the late 1940's and early 1950's and could still be maintained if these projects had not been constructed"* - Fish Commission of Oregon 1973
- Coho and sockeye present but not considered by State and Federal agencies as they, *"occur in less numbers in the Snake River system"* – NMFS and USFWS 1972.

Table 2. Distribution of salmon and steelhead requiring hatchery compensation by the Columbia Basin Fisheries Technical Committee's Lower Snake Hatchery Subcommittee in 1974 (WDFW 1974). Values were derived by multiplying 48% loss rate to estimated run escapements developed within the U.S. Army COE Special Report (COE 1975) except for fall Chinook salmon. Rounding errors with the LSRCP goals were acknowledged by the subcommittee.

Area	Fall Chinook salmon	Spring-Summer Chinook salmon	Steelhead
Snake River			
Below Lewiston	5,000		
Lewiston to China Gardens	3,580		2,208
China Gardens to Pleasant Valley	1,689		
Pleasant Valley to Hells Canyon	4,459		
Hells Canyon Dam Fish Facilities	3,648	1,200	2,736
Tucannon River		1,152	1,632
Clearwater River	68	288	20,736
Asotin Creek			816
Grande Ronde River		5,856	7,632
Salmon River		46,656	16,896
Imnaha River	68	3,216	1,920
Small Tributaries		288	528
Totals	**18,512**	**58,656**	**55,104**

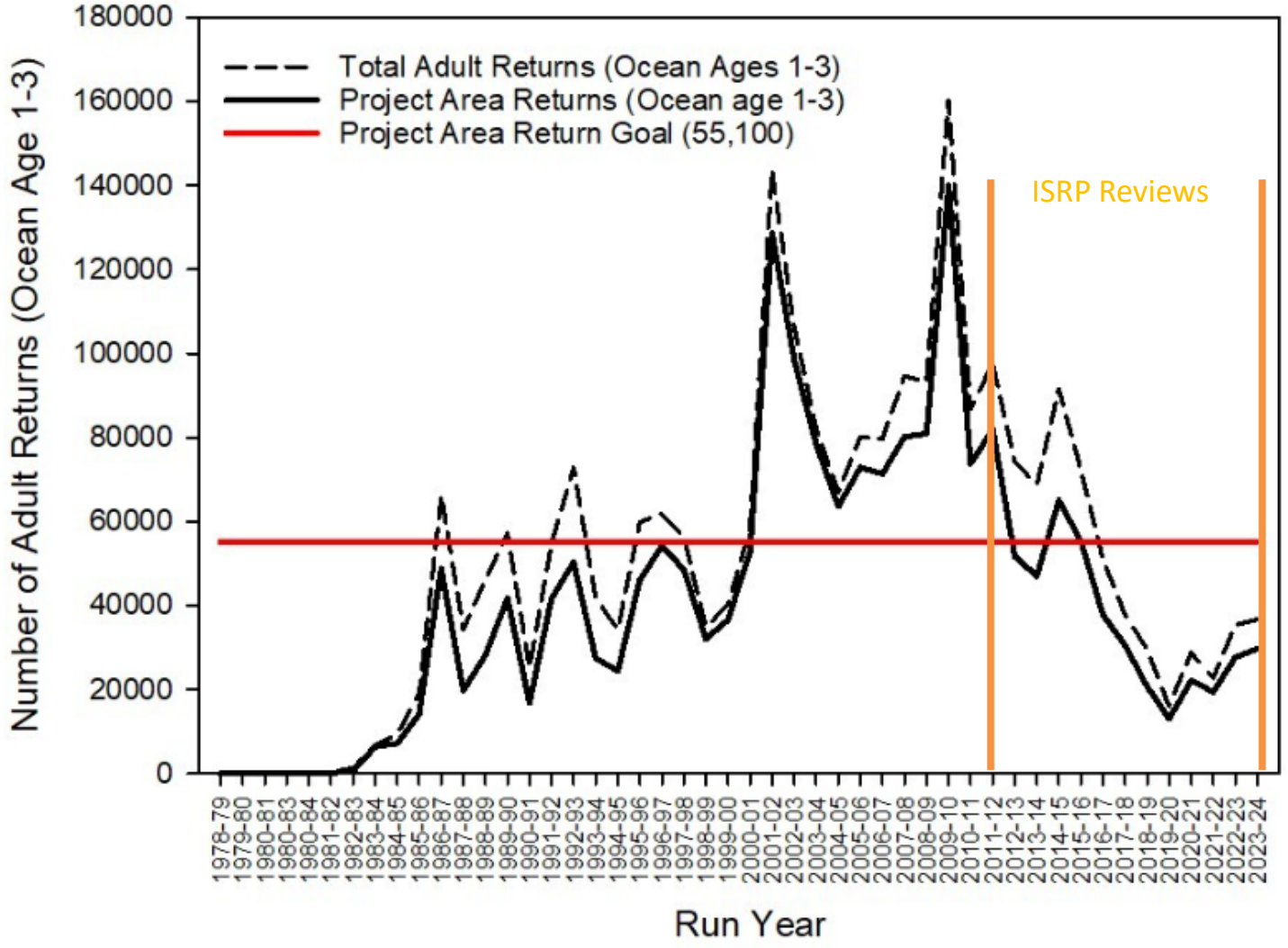
Table 3. Allocation of compensation (adults) by State as suggested by Columbia Basin Fisheries Technical Committee (reproduced from WDFW 1974). This allocation was not to be used as a specific indicator of release sites.

	Washington			Oregon		Idaho	
Area or Basin	Spring Chinook salmon	Fall Chinook salmon	Steelhead	Spring Chinook salmon	Steelhead	Spring-Summer Chinook	Steelhead
Snake River							
Below Lewiston		5,000					
Lewiston – Hells Canyon		9,728	2,208				
Hells Canyon Dam		3,648			1,368	1,200	1,368
Tucannon River	1,152		1,632				
Clearwater River		68				288	20,736
Asotin Creek			816				
Grande Ronde River				5,856	7,632		
Salmon River						46,656	16,896
Imnaha River		68		3,216	1,920		
Small Tributaries					264	288	264
Totals	**1,152**	**18,512**	**4,656**	**9,072**	**11,184**	**48,432**	**39,264**

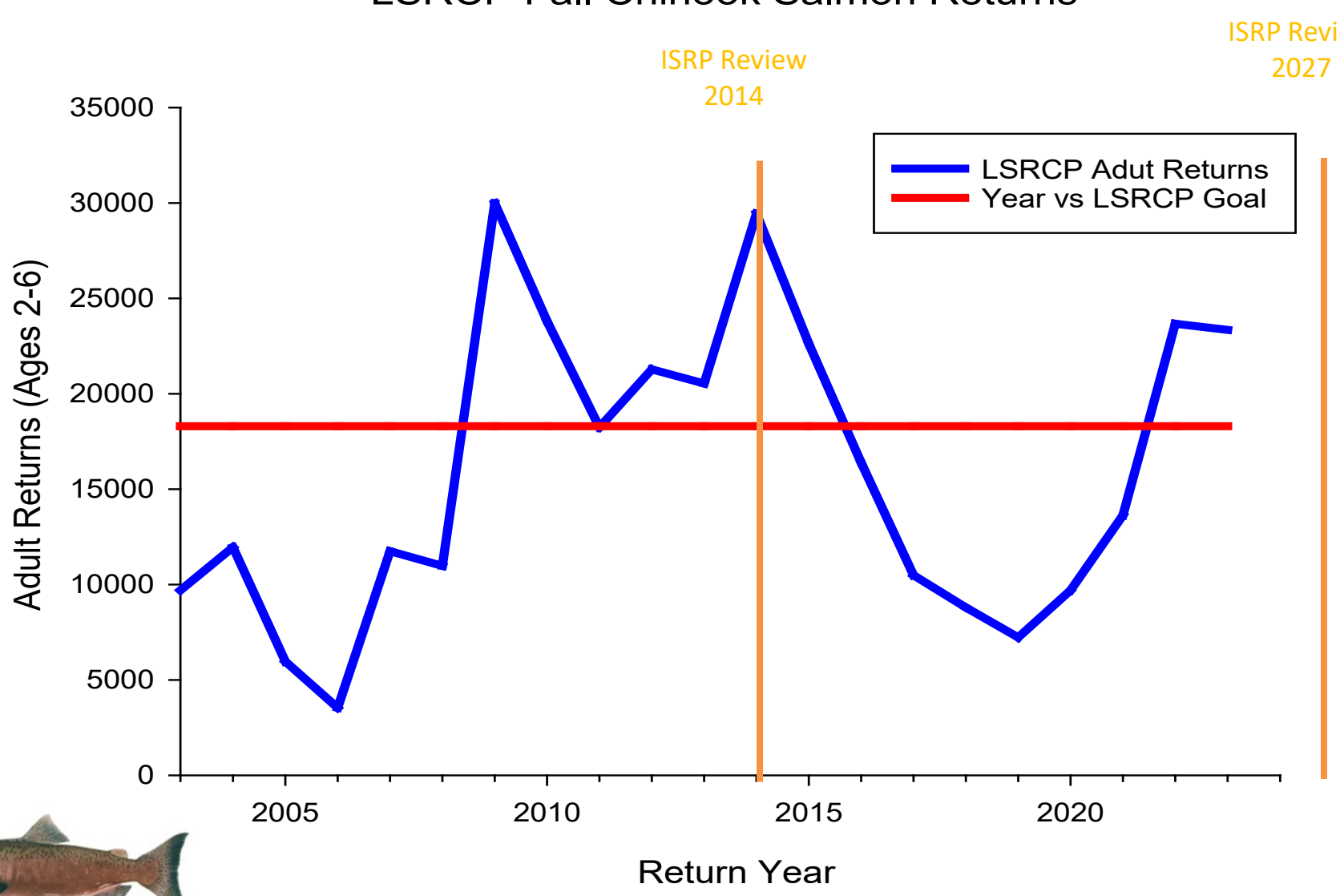


Reporting incomplete

Lower Snake River Compensation Plan Returns of Steelhead from 1978/79-2023/24 Run Years



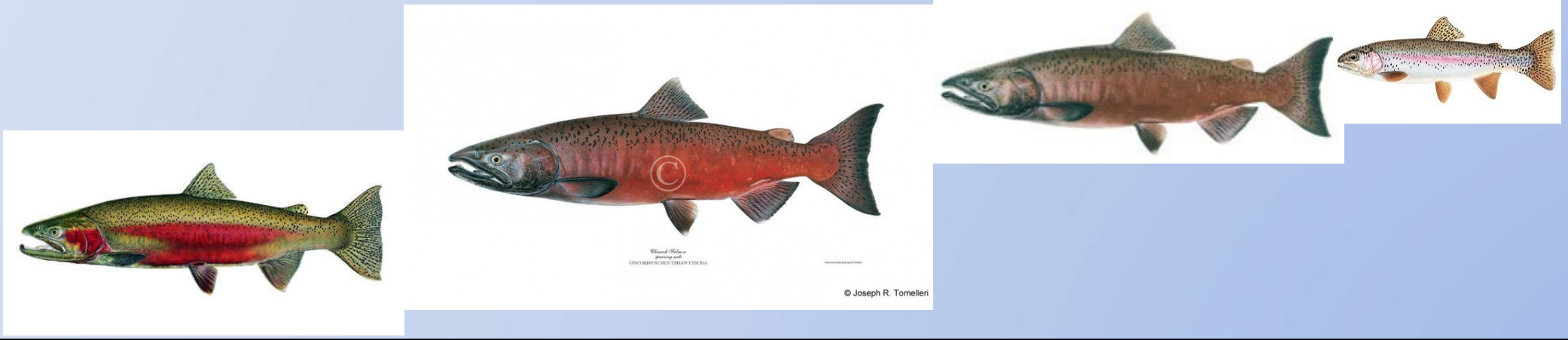
LSRCP Fall Chinook Salmon Returns



Data Summary by Bill Young - NPT

Program Performance

- 5-year report – Summer 2026
  - Focus on recent performance (<2024)
  - ESA coverage/consultations
  - Programmatic changes implemented



Steelhead ISRP Review – Key Findings

- Continue to monitor sport and tribal fisheries in the project area to estimate key performance metrics and characterize success.
- Continue to monitor straying by LSRCP steelhead adults into Mid-Columbia River natural populations to determine if the recent reduced levels are sustained in the future.
- Develop and implement sound study designs to assess the benefits and risks of supplementation programs in the Touchet, Tucannon, Imnaha, and East Fork Salmon rivers.

Steelhead ISRP Review – Key Findings

- Use a structured decision process to evaluate the benefits and risks of the proposed future alternatives for both the Tucannon and Touchet river programs. Under current conditions, there appears to be a limited set of actions that can be taken to address performance, overshoot, and straying.
- Complete climate change assessments for the hatcheries that are at most risk.
- Develop and implement a systematic decision process to prioritize infrastructure improvements. Investment of $200M for infrastructure improvements is critical to the future success of the program. It is essential that the most important and beneficial projects are implemented, especially because $400M in projects have already been proposed.

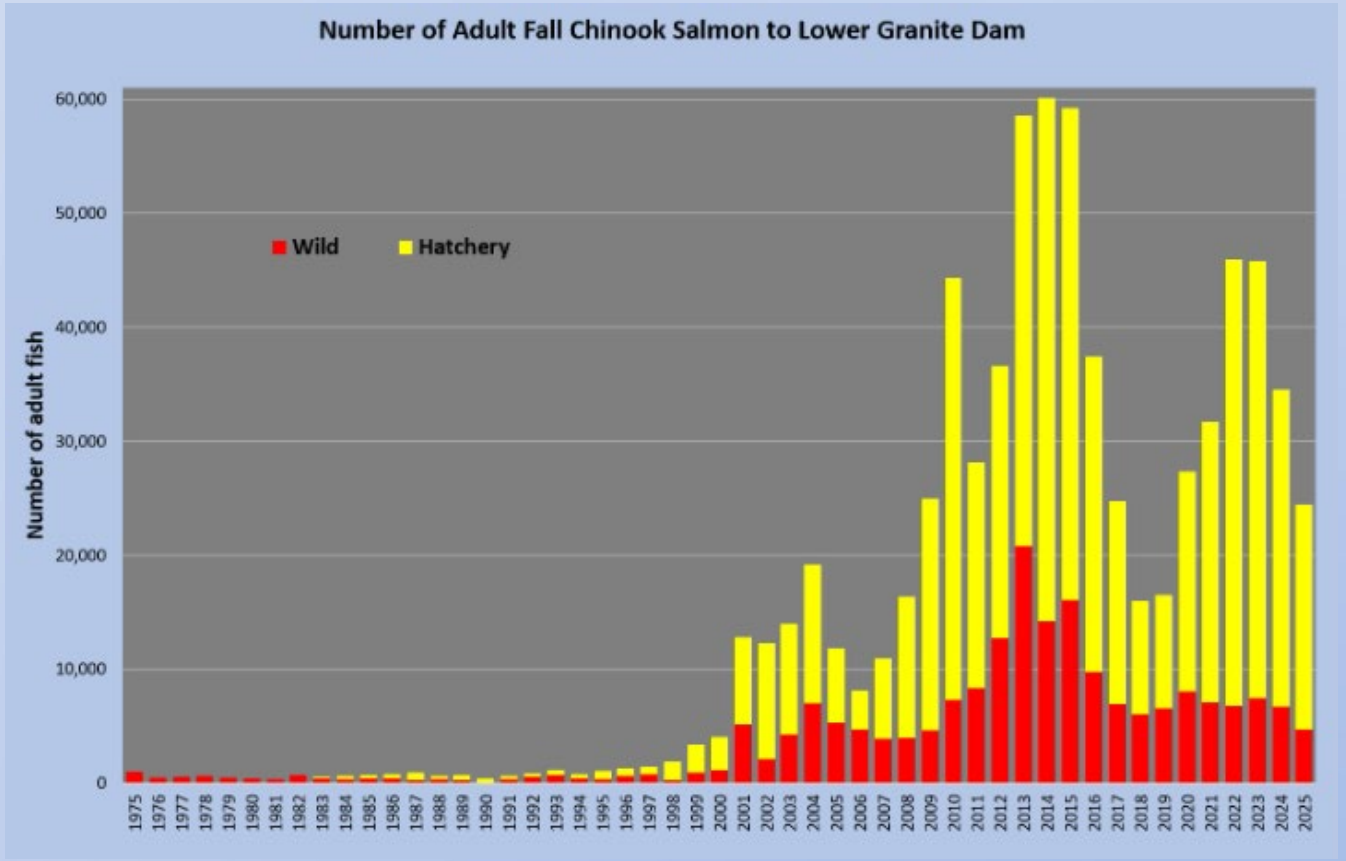
Steelhead ISRP Review – Key Findings

- Develop approaches and conversion factors to maintain continuity and comparability of SAR and SAS data generated with new Parentage Based Tagging (PBT) and PIT tag methods with past data generated using Coded Wire Tag (CWT) methods.
- Clearly articulate the basis and justification for adjusting SAR and SAS targets when smolt production levels are changed.
- The LSRCP and cooperators should develop a shared database for all data including Parental Based Tagging (PBT), develop systematic data quality assurance and analytical processes to maintain up-to-date estimates of key performance metrics, and work with the Coordinated Assessments Partnership (CAP) to complete entry of data and metadata into the Coordinated Assessments Data Exchange (CAX) database for key hatchery performance indicators.

Snake River Fall Chinook + Trout ISRP Review

January 26-28, 2027 in Clarkston, WA

- Significant changes in program since last ISRP review in 2013.
  - ESA Consultations (x2) and Recovery plan
  - Conversion of yearling program releases to sub-yearlings (FCAP and LFH).
  - Program evaluations completed, methodologies changed, and Natural Production Emphasis Area implemented.
  - Small group meetings monthly, pre-meeting with ISRP, full meeting in Jan.
  - Inclusive of other SRFC programs (IPC/NPTH)
  - With completion, LSRCP will have completed this cycle of program reviews.
  - Trout program review will be a first, specific effort.



IDFG Summarized Data

No LSRCP Annual Meeting in 2027

Fish Hatchery Infrastructure and Water Vulnerability Analysis (FHIWVA)

- Small Team
  - John Erhardt, Eli Felts, Greg Burak, Shane Vatland-NPT, Rod Engle, Alison Deary, +2 vacancies.
  - Modeled after USFWS effort, started in 2023 with McCall and Sawtooth FHs.
  - Collaborative with LSRCP partners.
- Opportunity to think and plan strategically on infrastructure and operational needs while considering external impacts.
- ISRP – Effort is sound, assessments needed.

FHIWVA – Cont'd

Priority	Location	Facility	Species	Associated release sites	Associated non-LSRCP Programs	Starting-Ending Timeframe
1a	Upper Salmon River	Sawtooth Fish Hatchery	Summer Chinook salmon	Yankee Fork	Sockeye Salmon program (BPA)	2022-
1b	Upper Salmon River	Sawtooth Fish Hatchery	Steelhead	NA	N/A	2025-
2a	Clearwater River – Dworshak spring Chinook salmon	Dworshak National Fish Hatchery	Spring Chinook salmon		Dworshak B-Steelhead Program (COE)	2026-
2b	Clearwater River – Clearwater Fish Hatchery	Clearwater Fish Hatchery	Spring Chinook salmon	Red River (South Fork Clearwater), Powell Acclimation Site (Lochsa River)	N/A	2026-
3	South Fork Salmon River	McCall Fish Hatchery	Summer Chinook salmon	South Fork Salmon River (Satellite Facility)	Johnson Creek/JCAPE (BPA)	2022-
4	Tucannon River	Tucannon Fish Hatchery	Spring Chinook salmon	Tucannon River (On-station, Curl Lake acclimation, mouth release)	N/A	TBD
5	Snake River	Lyons Ferry Hatchery and Fall Chinook Acclimation Project (FCAP)	Snake River Fall Chinook	FCAP Facilities (Salmon River, Big Canyon, Captain Johns), On-station Lyons Ferry, Big Canyon	NPTH Fall Chinook (BPA), Idaho Power Company	TBD
6	SE Washington Release Sites	Tucannon/Lyons Ferry Fish Hatchery	Steelhead	On-station, Tucannon River, Grande Ronde-WA, Walla Walla/Touchet rivers	N/A	TBD
7	NE Oregon	Lookingglass Fish Hatchery	Spring/summer Chinook salmon	Imnaha, Upper Grande Ronde, Catherine Creek, Lookingglass Creek, Lostine River	N/A	TBD
8a	NE Oregon	Irrigon Fish Hatchery	Steelhead	Little Sheep (Imnaha), Big Canyon (Wallowa)	N/A	TBD
8b	NE Oregon	Wallowa Fish Hatchery	Steelhead	On-station, Big Canyon (Wallowa)	N/A	TBD

- Could change existing and future infrastructure projects and programs through modeling of impacts and discussion of considerations.
- Examples
  - Clearwater FH; intake, water supply
  - DNFH pipeline considerations
  - McCall FH; intake and brood holding.
  - Tucannon FH; habitat and stream modeling informing weir site.
- Opportunity to better shape projects, program operations and consider additional needs.

Figure 2. Median August and September water temperatures at 15m, 20m, and 25m depths in the forebay of Dworshak Dam, Idaho by year. Dashed line (56°F) is optimal temperature for rearing Chinook Salmon at Dworshak National Fish Hatchery and Clearwater Fish Hatchery. Currently, a snorkel can be adjusted at the Dworshak Dam by the operators to provide water to the hatcheries from depths down to about 20m. Data provided by John Erhardt, U.S. Fish and Wildlife Office – Idaho Fish and Wildlife Coordination Office (personal communication, March 28, 2025).

Project Management + Coordination

- Lookingglass Ladder and Intake
  - Loss of Chris Starr, splitting of duties.
- Shutdown and loss of other FWS employees; triage of work, platooning or assuming duties
- Will continue into the near future; impacts to LSRCP program delivery.
  - reach out on needs.

Improvements to Address Performance

- Red River production movement to Clear Creek (spring Chinook).
  - Significant change to address survival benefits
- Development of changes in upper Grande Ronde (spring chinook).
  - Program teetering on the brink.
- Changes to SE Washington steelhead programs (steelhead).
  - Changes coming based on performance.

Questions