

Smolt Passage at Pelton Round Butte

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2010 plan, 2023 reality

The Plan in 2010	Implementation in 2023
<ul style="list-style-type: none"> • Release ~500,000 fry per species per year into the upper basin. • 20,000 smolts per species per year into the upper basin 	<ul style="list-style-type: none"> • Release 100,000 Chinook and steelhead smolts into the upper basin and lower basin. • Release excess Chinook broodstock adults into upper basin.
Direct release smolts from trucks into stream	Acclimate smolts prior to release
Fish health monitoring, no specific treatment required	<ul style="list-style-type: none"> • Chinook smolts treated with SLICE to prevent copepod infections • Adults treated with antibiotics to reduce pre-spawn mortality
No guide net on juvenile collector (SWW)	Lead net on juvenile collector (SWW)
Generate according to market demand	Provide fish flows during smolt migration
Direct release smolts into the lower river	Use of stress relief pond
Release adults into reservoir forebay	Release fish directly into spawning grounds (during drought conditions)

Smolt reintroduction



Round Butte Hatchery

- Wizard Falls Hatchery
- Fall River Hatchery



Acclimation

- Camp Polk
- Wizard Falls
- McKay
- Opal



Releases

- SWW Capture
- Direct release

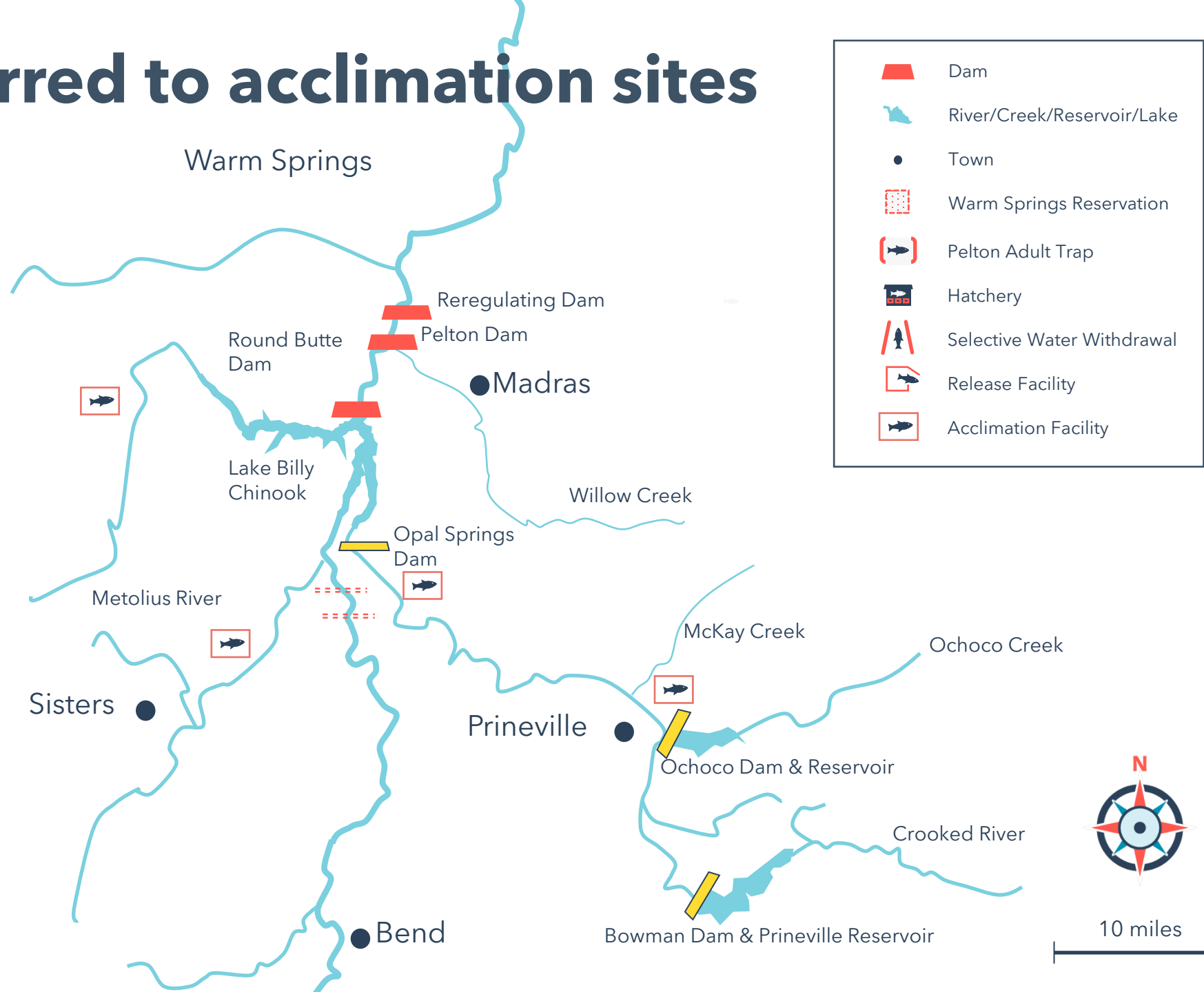


Smolts transferred to acclimation sites



2010: No acclimation

2023: 100% of fish acclimated prior to release



Outline



- Acclimation Releases
- Entry/Travel Time into SWW
- Collection Efficiency
- SWW Collection Numbers



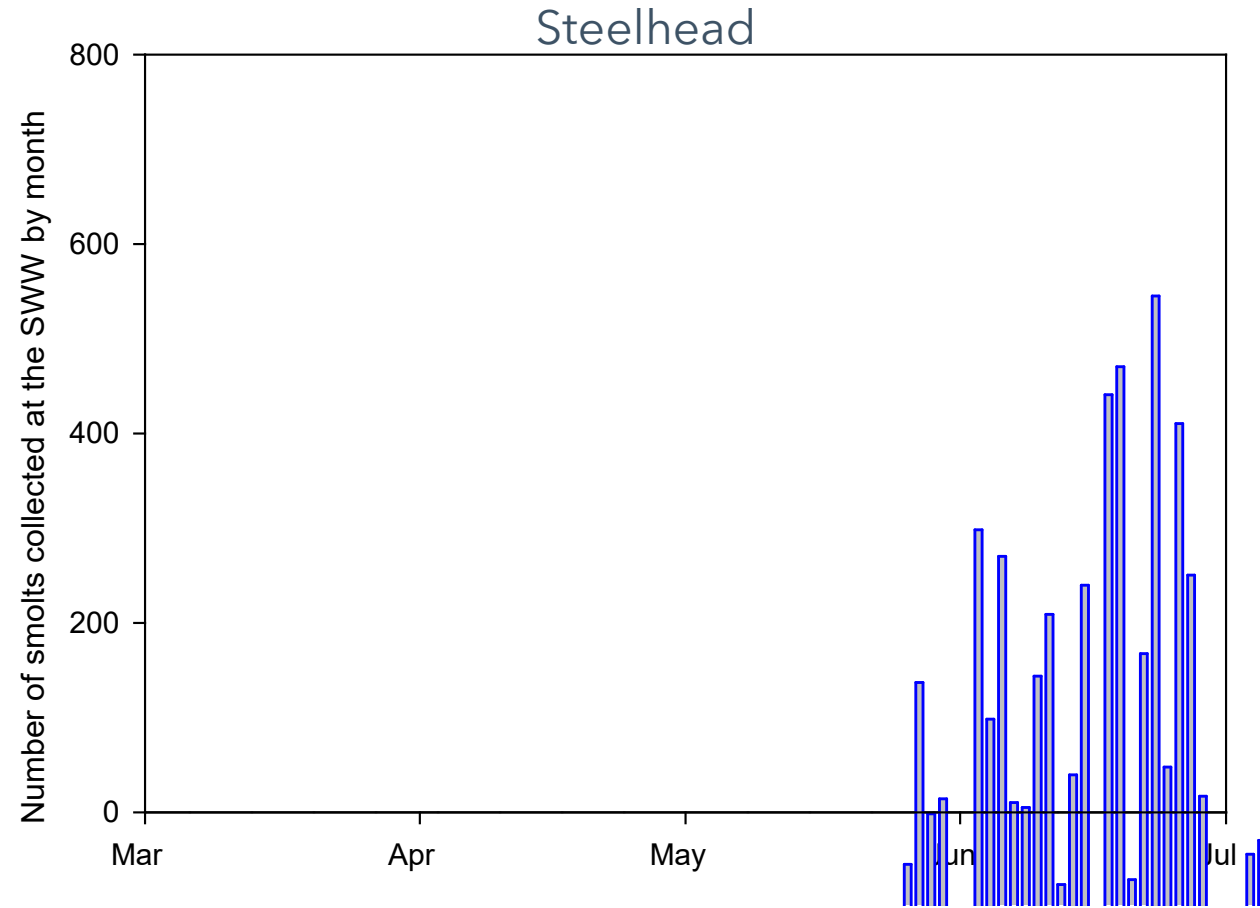
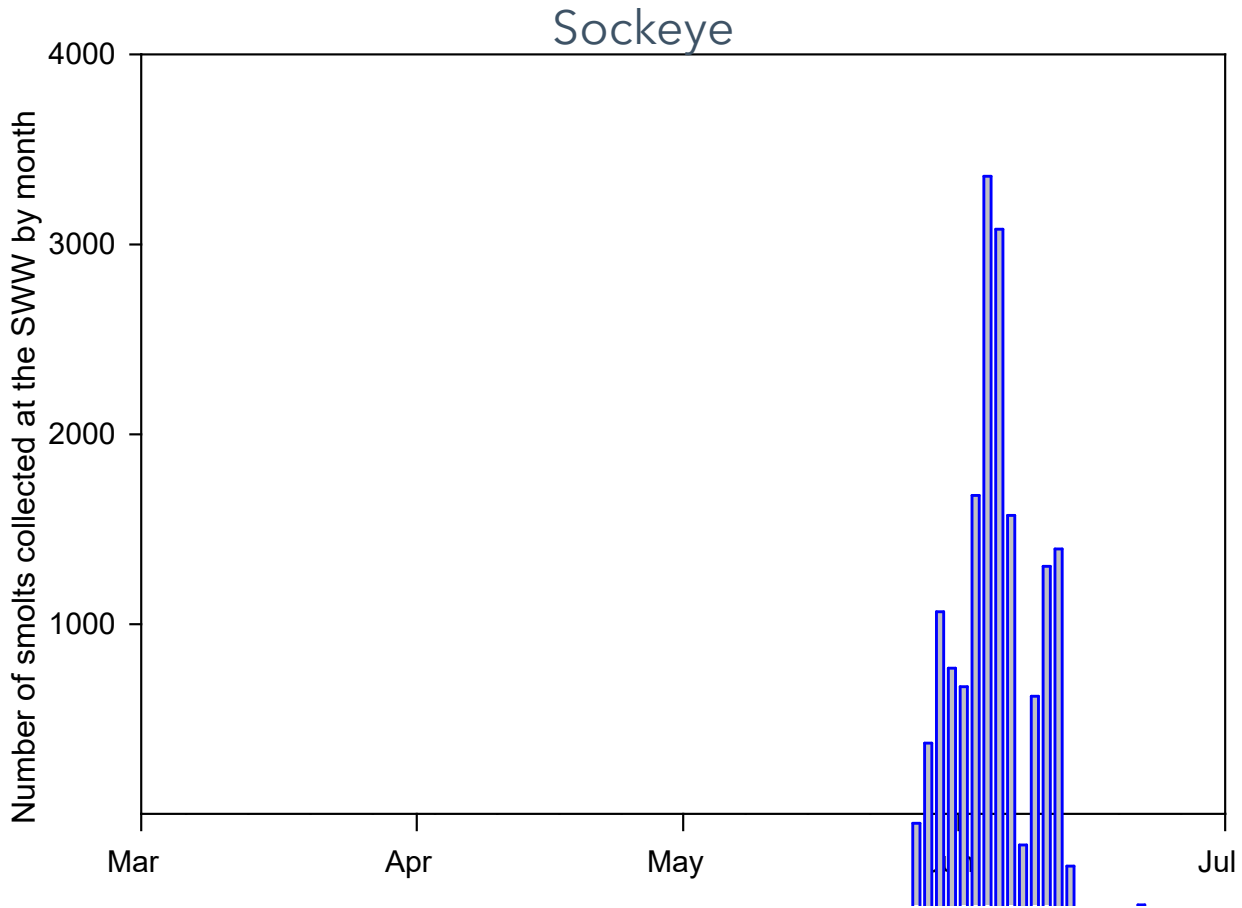
2023 Steelhead acclimation releases

	Camp Polk	LBC - Deschutes River arm	McKay Creek	Opal Springs	LBC - Crooked River Arm	Lower Deschutes
Camp Polk	44,610	400				18,418
McKay Creek			11,157			
Opal Springs				13,331	400	13,110

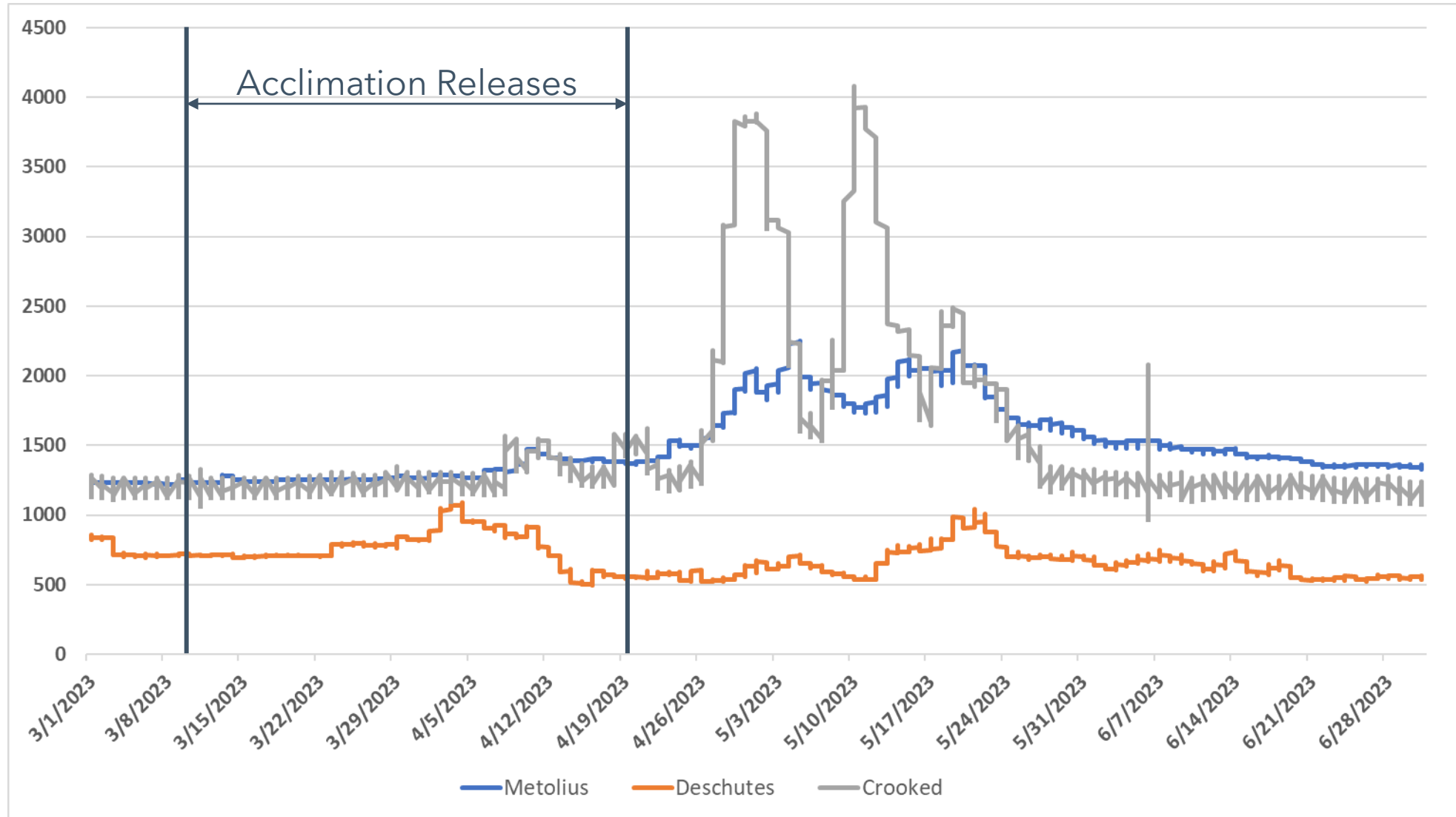
- ODFW PIT tagged 3,600 for release from acclimation facilities



2023 timing of smolts into SWW



2023 Spring Tributary Flows



2023 travel time into SWW

Release Site	Number PIT tagged	Number PIT tags collected (SWW)	Distance to SWW (Km)	Median Travel Time (d)	Median Km/day	Range of Km/day
Whychus Creek	1,200	274	43.1	39	1.16	0.5 - 9.1
DRA	400	115	14.2	41	0.33	0.2 - 2.2
Crooked R.	1,600	88	77.2	62	1.28	0.9 - 2.7
Opal Springs	800	320	16.0	34	0.43	0.2 - 7.4
CRA	400	93	14.9	35	0.39	0.2 - 13.7

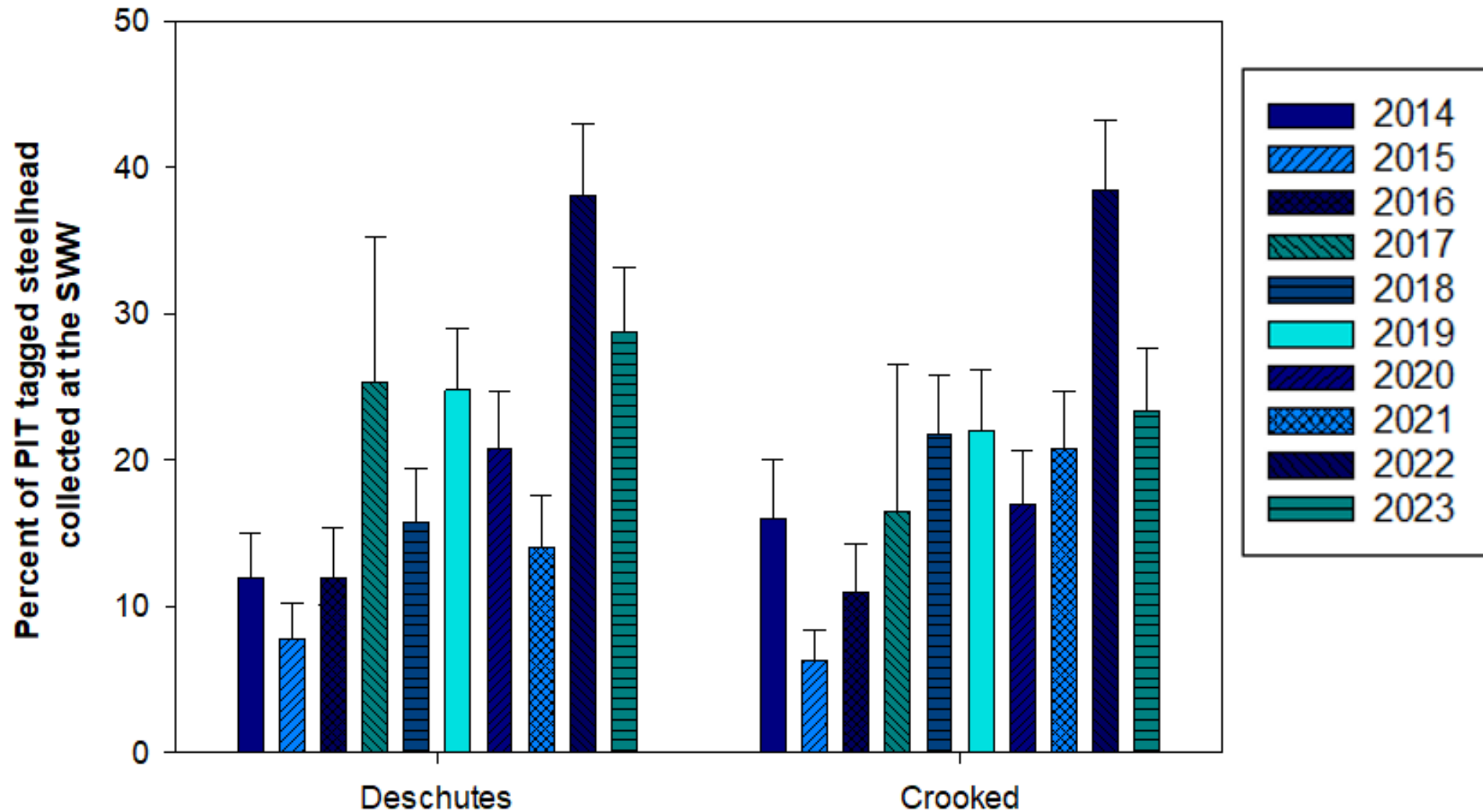


2023 percent captured

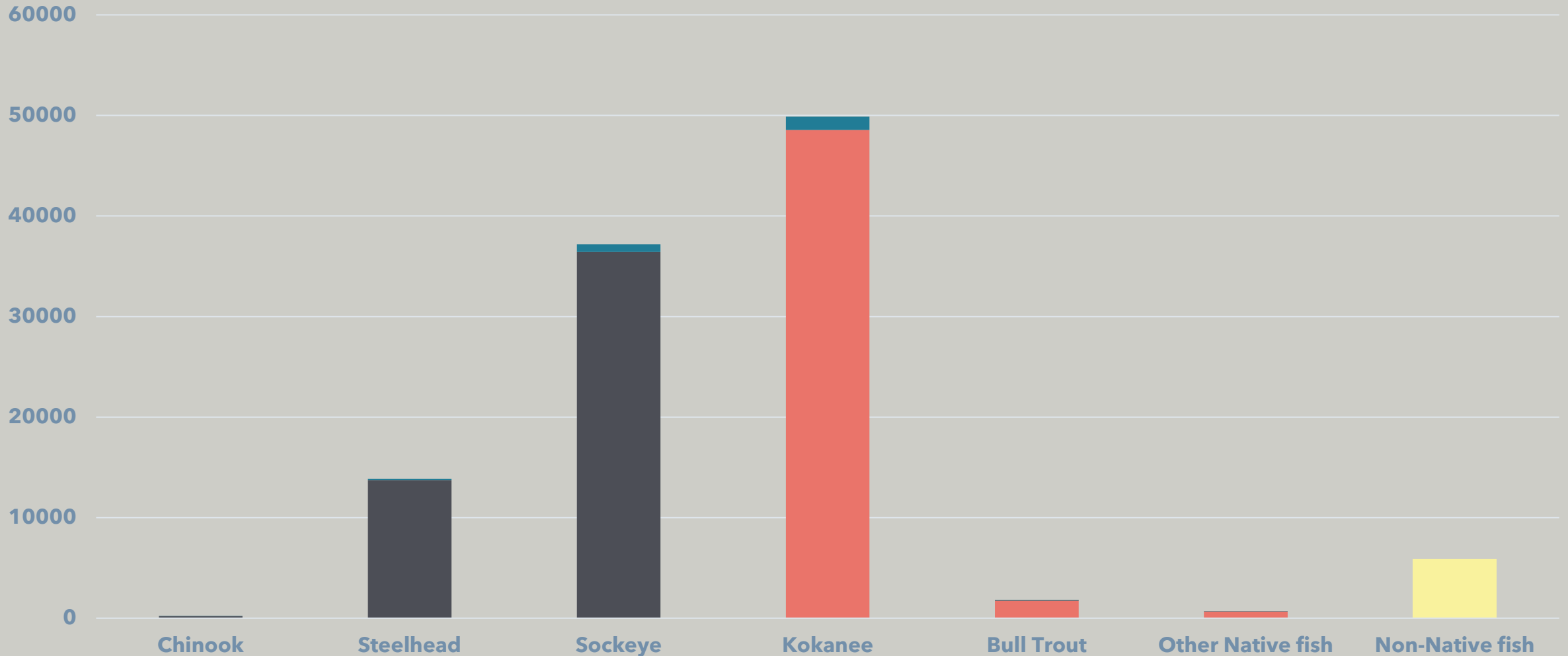
Release Site	Number PIT tagged	Number PIT tags collected (SWW)	Distance to SWW (Km)	Percent Collected	95% CI
Whychus Creek	1,200	274	43.1	22.9%	20-25%
DRA	400	115	14.2	28.8%	24-33%
Crooked R.	1,600	88	77.2	5.5%	4-7%
Opal Springs	800	320	16.0	40%	37-43%
CRA	400	93	14.9	23.4%	19-28%



2023 collection efficiency



2023 SWW collection numbers



■ RB Dam Forebay

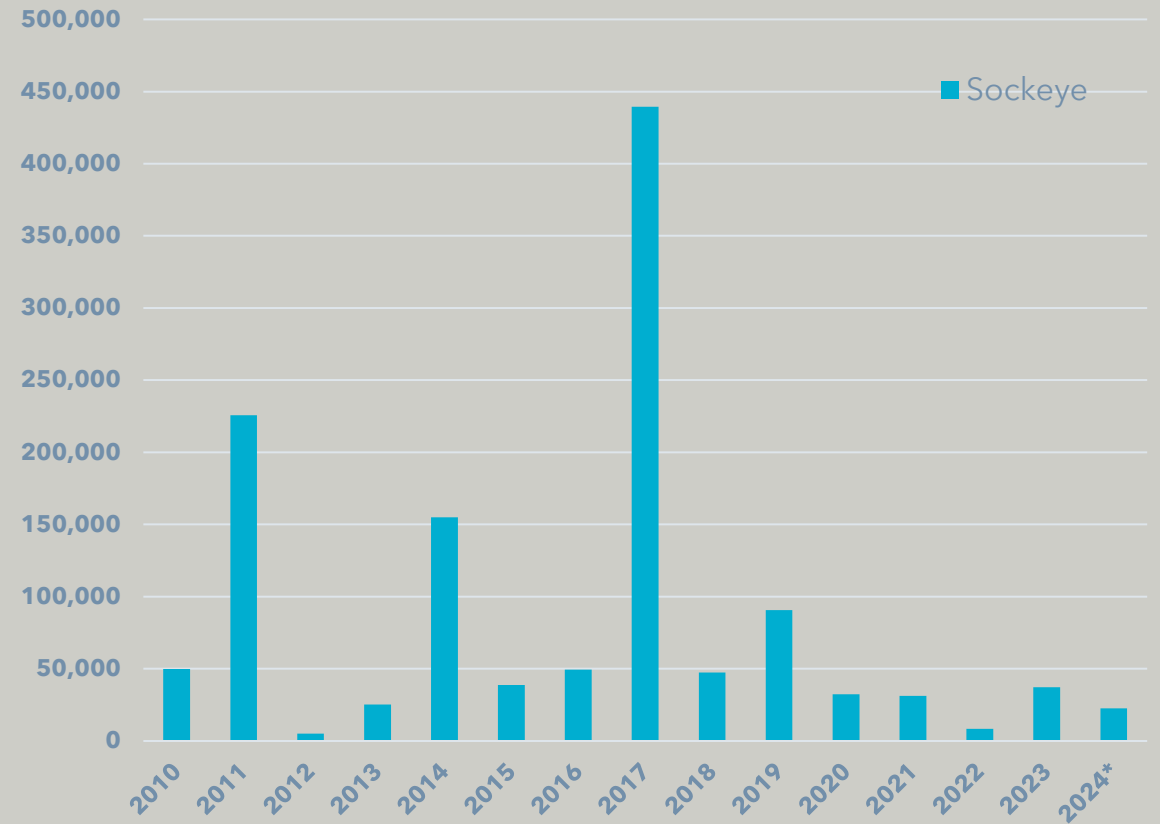
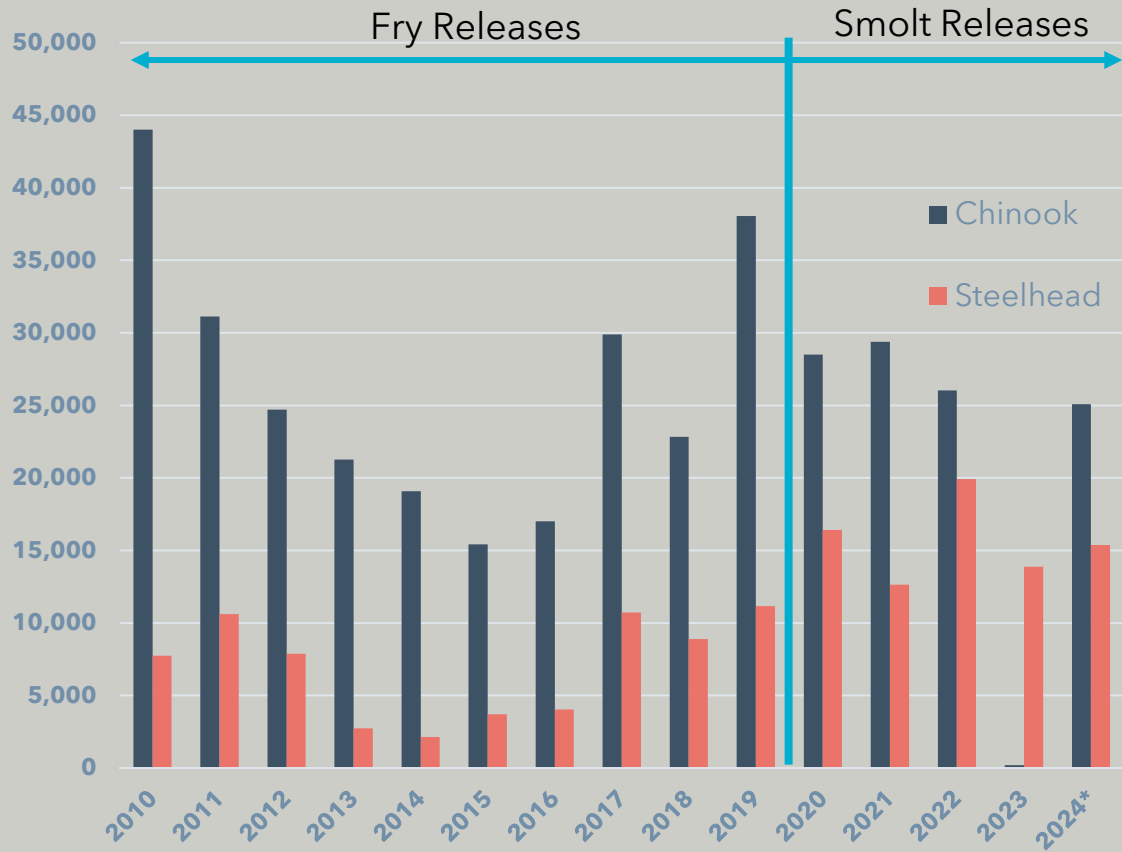
■ Lower Deschutes River

■ Mortalities

■ Euthanized

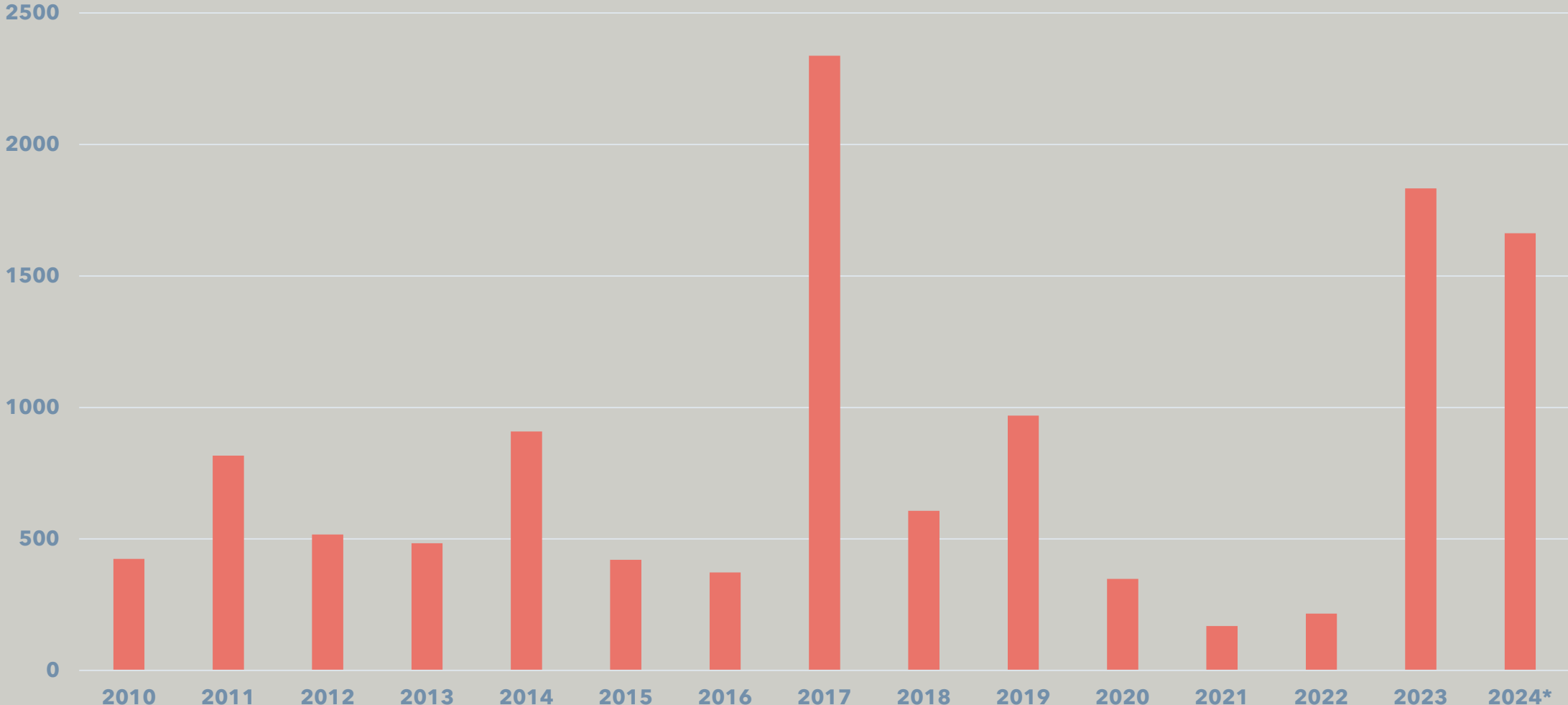


2010 - 2024 SWW smolt collection



* = Jan - June 2024

2010 - 2024 SWW Bull Trout collection



Summary

- On average, capturing more Chinook and steelhead smolts
- Smolt reintroduction requires less adults than fry reintroduction - almost half
- Using smolts is not a novel idea
- Annual environmental variability: more flow in spring = better smolt capture





Questions

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