



2023 Okanogan Juvenile Summer Chinook Monitoring Rotary Screw Trap & Beach Seine



Okanogan Rotary Screw Trap

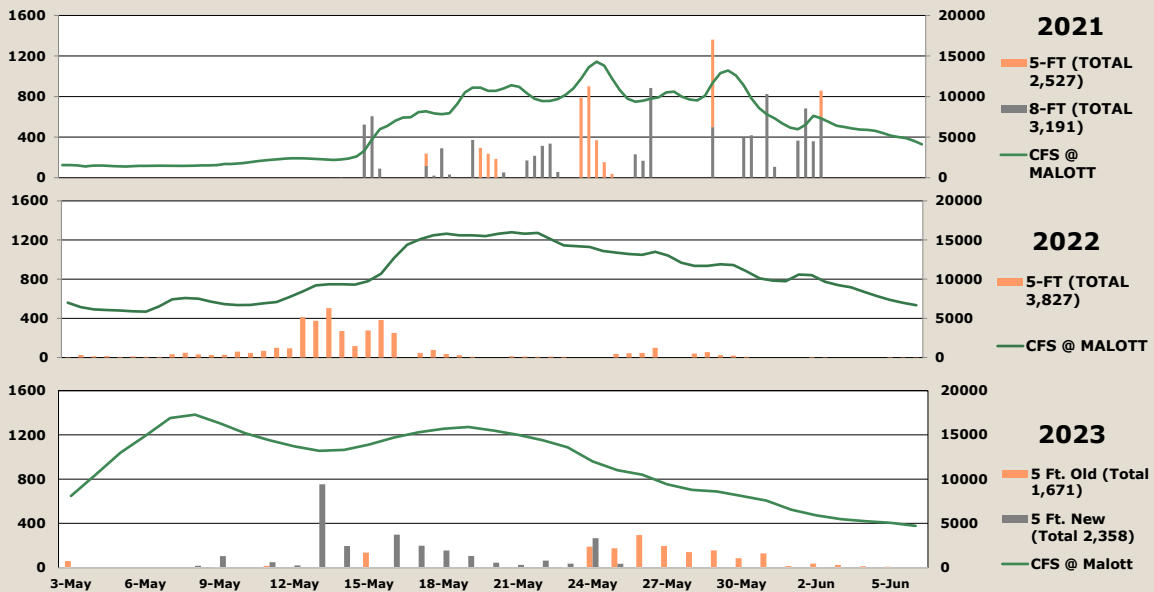


RST Configuration

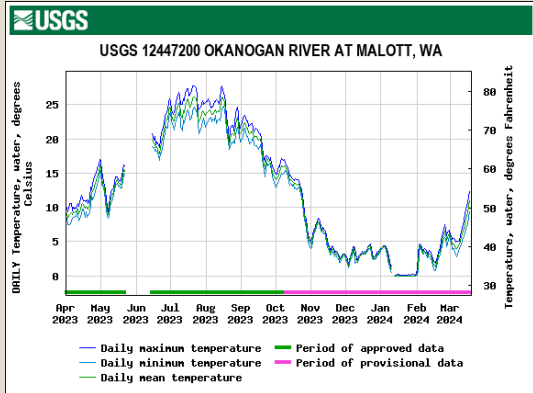
Two 5-ft cones fish along the bank at flows over ~5,000 cfs



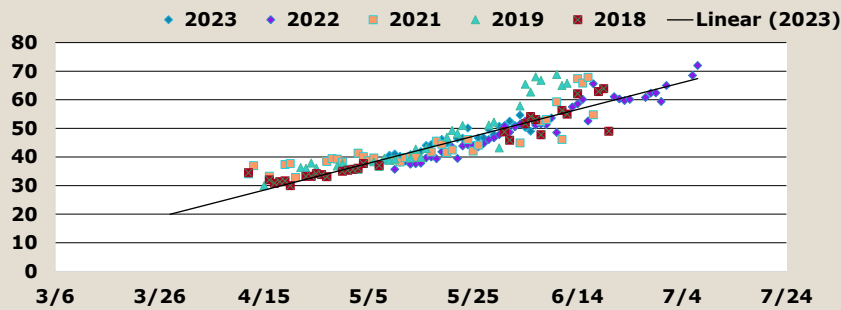
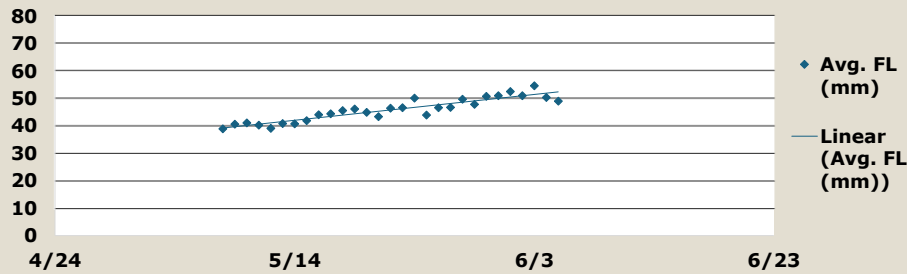
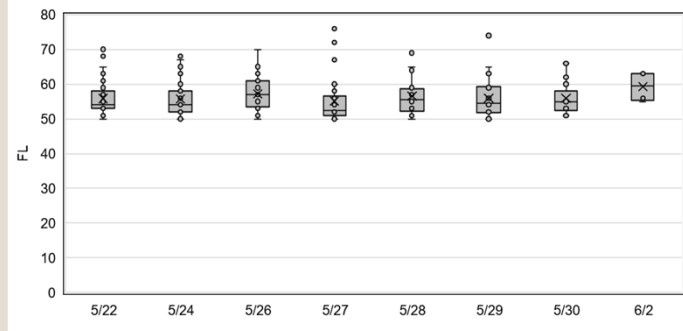
Flow vs. Total Catch



249 PIT tagged fish were released into the Okanogan River



https://natwebsdww02.cr.usgs.gov/nwisweb/data/img/USGS.12447200.296283_296284_296285.00010.00001_00002_00003.20230401.20240319..0.gif



YEAR	Growth Rate (mm FL/day)
2017	.23
2018	.43
2019	.66
2020	N/A
2021	.40
2022	.56
2023	.47

RST Moving Forward...

Logistics

- Configuration (two 5' traps along the margin)
- Operation Schedule (24/7 @ >5,000cfs)

Data Collection

- Efficiency trials during various flow conditions
- Deploying juvenile Chinook PIT tags
- Juvenile PIT tagging inside channel (comparing fish size & growth rates)- accessibility has been limited in recent years

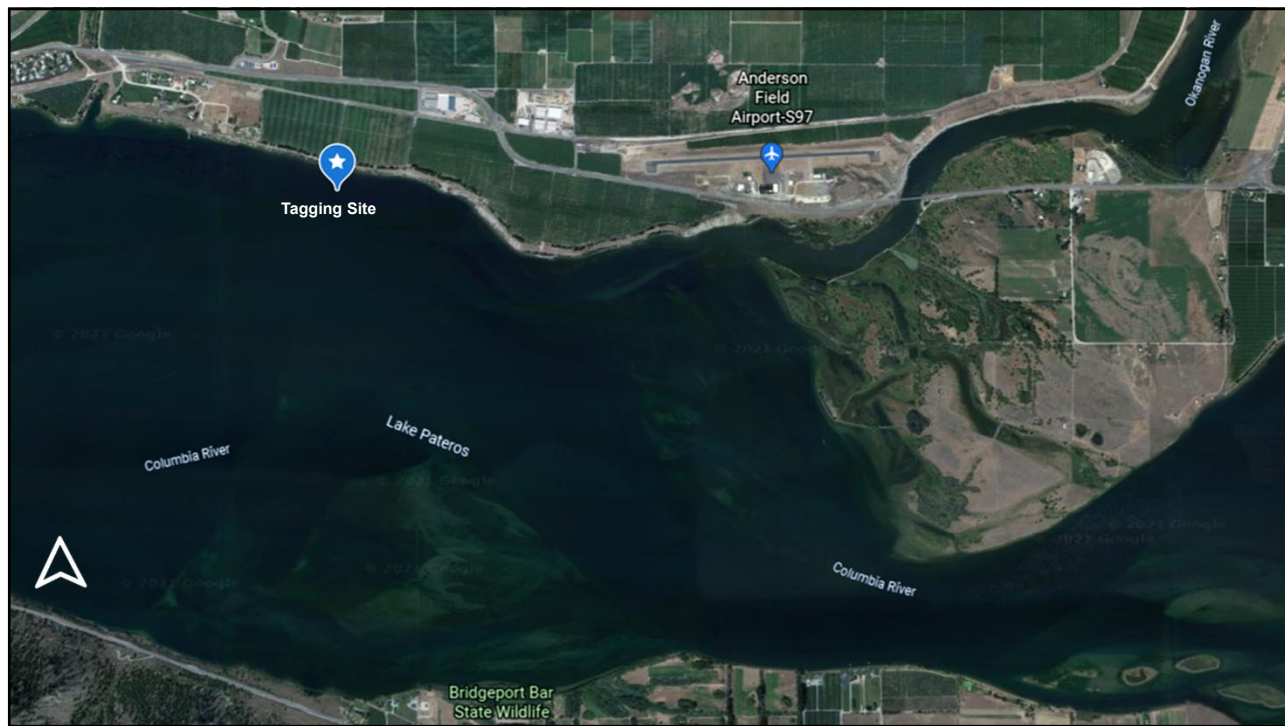
Post Season Analysis

- Does the new rotary screw trap configuration allow us to maximize our ability to collect juvenile Chinook?



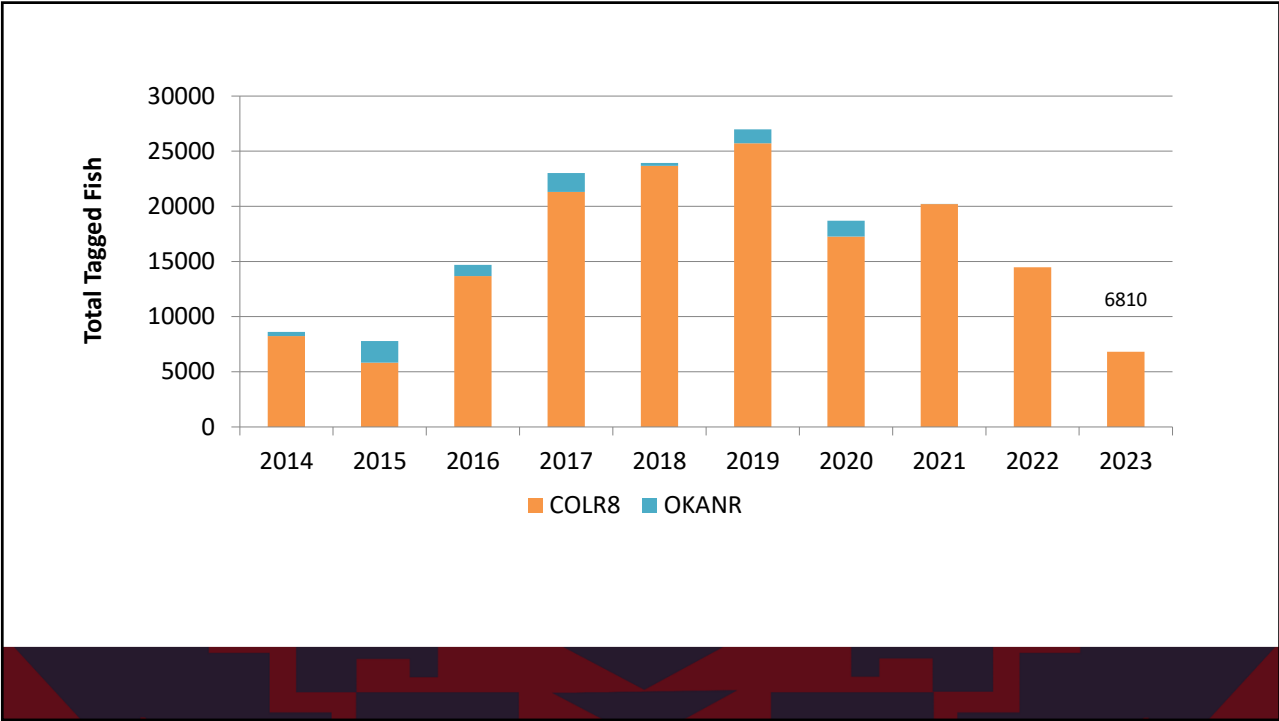
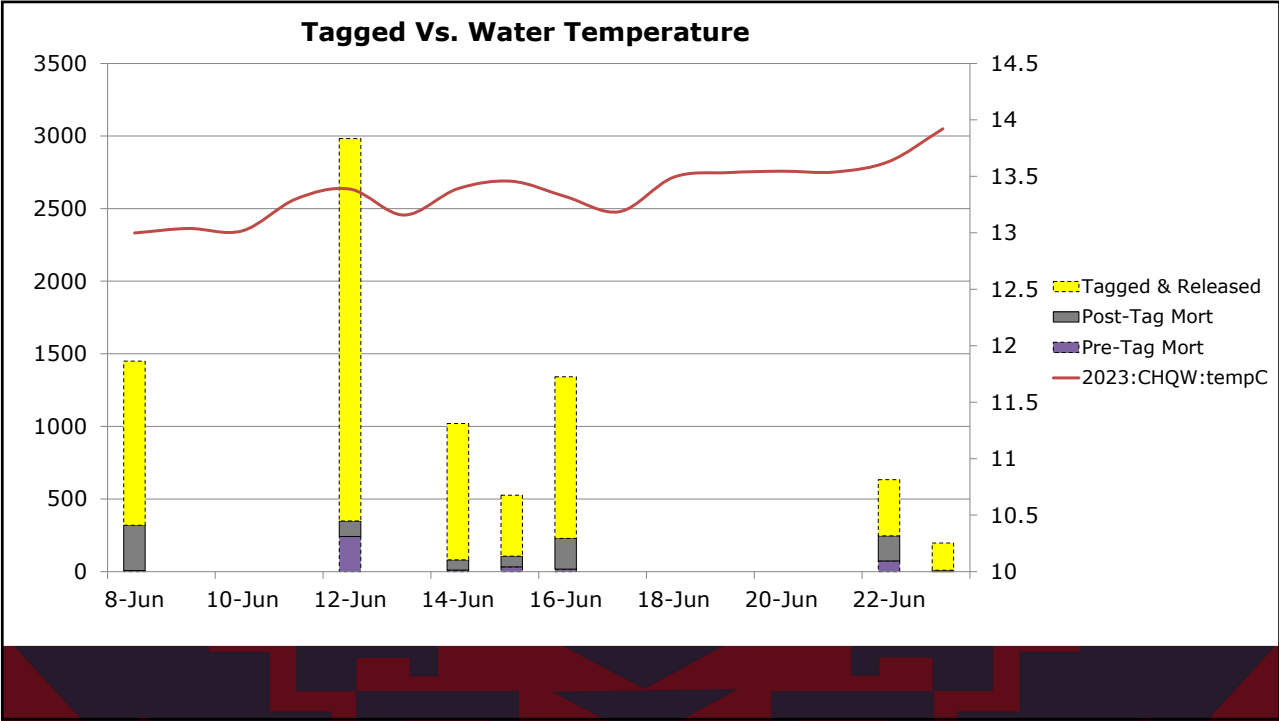
Juvenile Beach Seining and PIT Tagging



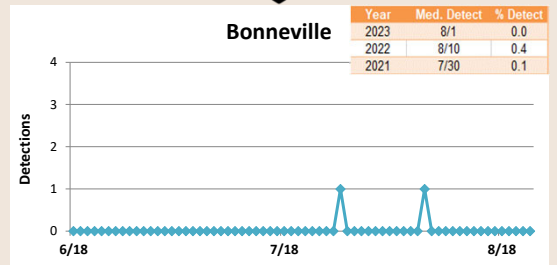
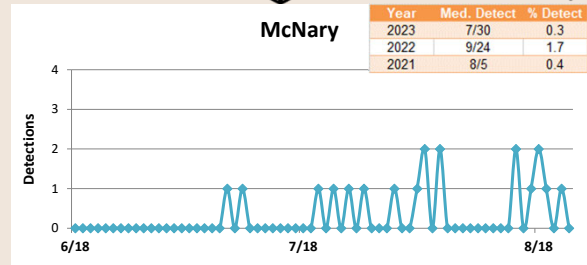
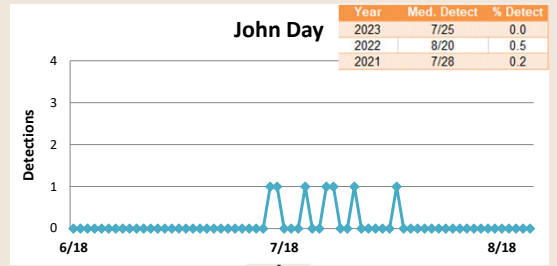
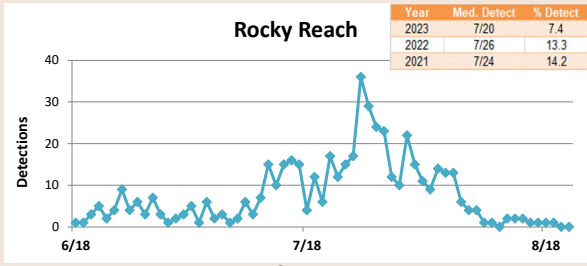


Juvenile Beach Seine PIT Tag Effort @ Gebbers Landing

	<u>2021</u>	<u>2022</u>	<u>2023</u>
TOTAL DAYS FISHED	10	20	15
# SETS	79	207	87
AVERAGE SETS/DAY	7.90	10.3	5.8
TOTAL CATCH	29,043	21,110	10,325
CATCH PER UNIT EFFORT	367.63	101.9	118.6
HOR RECAPTURES	379	784	43

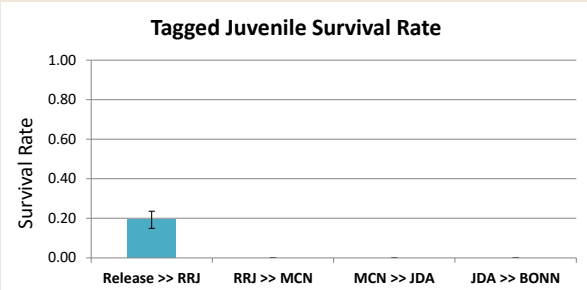


Distribution of Detections



Juvenile Outmigration Survival Estimates

Release Year	RRJ	MCN	JDA	BONN
2021 (20,200)	2,869	72	35	16
2022 (14,469)	1,737	243	77	55
2023 (6,810)	586	19	8	4



Cormack/Jolly-Seber Estimates (Cormack 1964, Jolly 1965, Seber 1965)

Thank you to our staff for their time and effort with these projects

>>>Amber Cate<<<

>>John Pakootas<<

>>>Jasper Abrahamson<<<

>>Vertis Campbell<<

>>Brian Dietz<<

