



# 2022 Okanogan Juvenile Chinook Monitoring Rotary Screw Trap & Beach Seine



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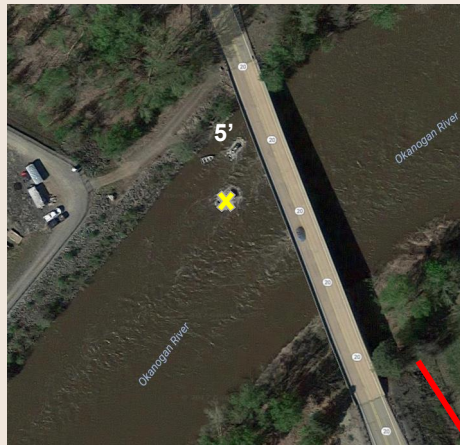
Rotary Screw Trap

RST

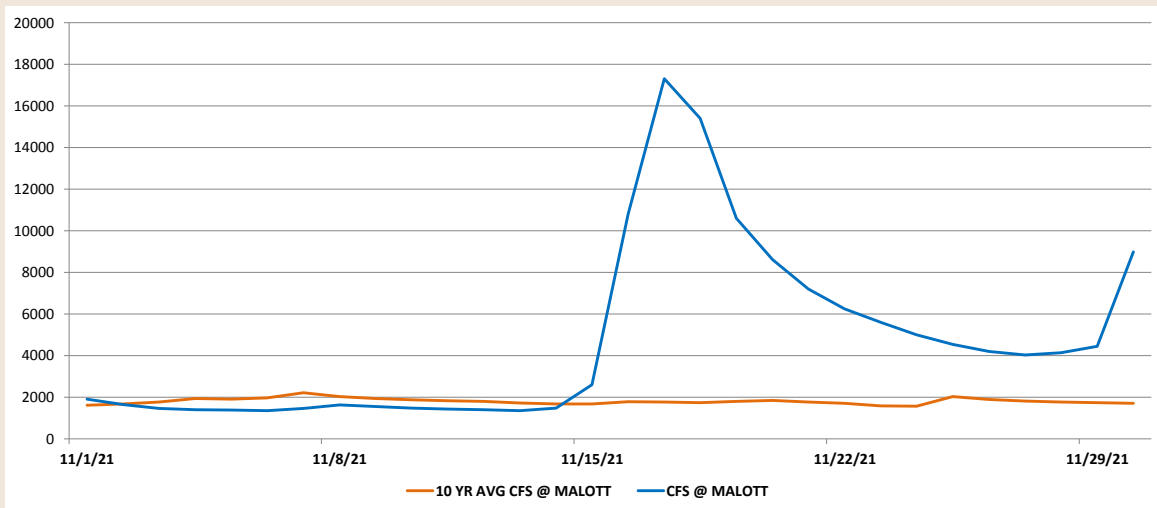


# RST Configuration

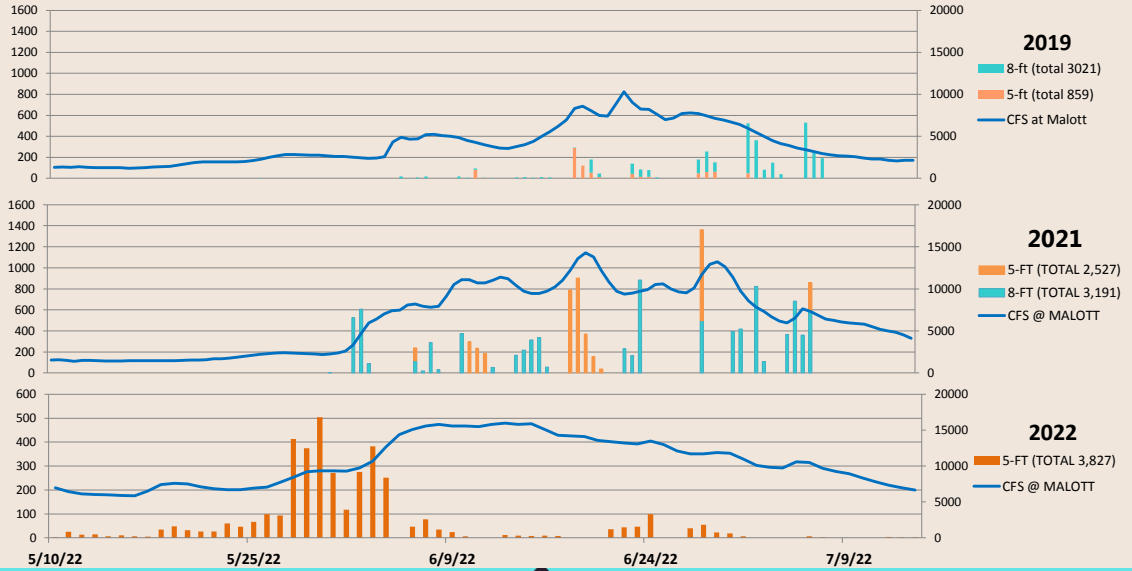
The 5-ft cone fishes along the bank at flows over ~5,000 cfs



# 2021 OKANR November Extreme High Flow Event

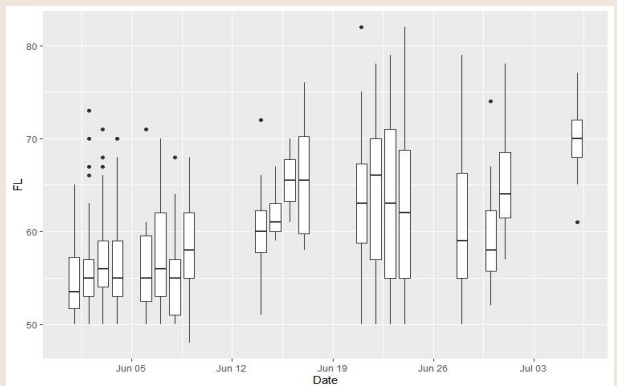
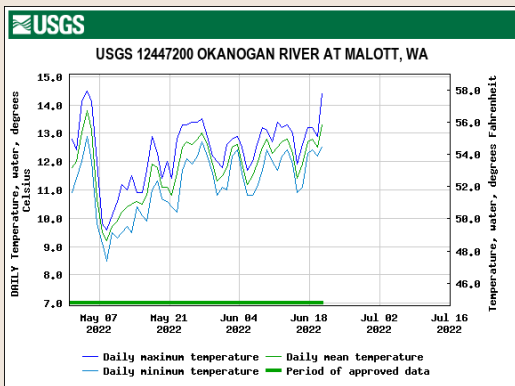


# Flow vs. Total Catch



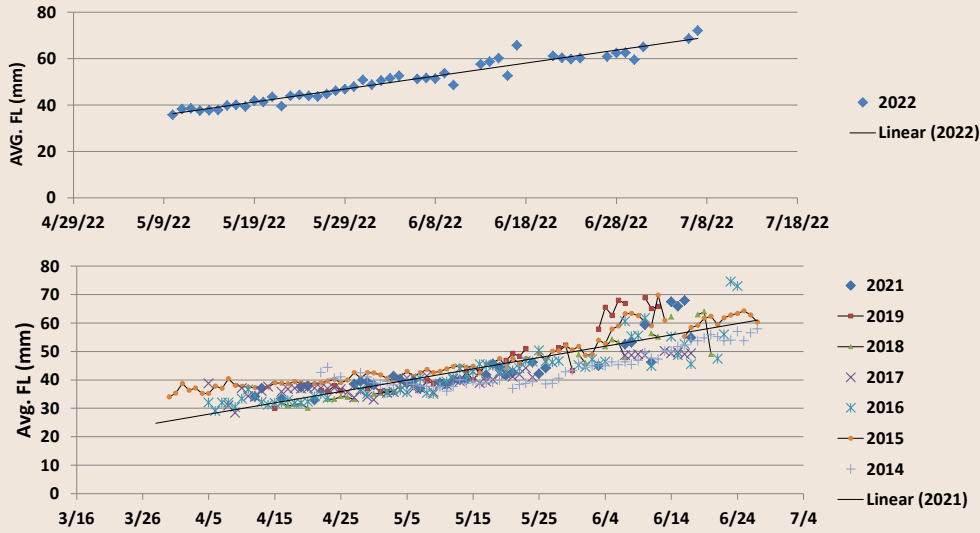
## 2022

817 fish swam away from the RST with a PIT tag.



[USGS Current Conditions for USGS 12447200 OKANOGAN RIVER AT MALOTT, WA](#)

# Growth Rate



Year	Growth Rate (mm FL/day)
2014	.26
2015	.35
2016	.37
2017	.23
2018	.43
2019	.66
2020	N/A
2021	.40
2022	.56

# 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 in side channel (comparing fish size & growth rates)

## Post Season Analysis

- Does the new rotary screw trap configuration allow us to estimate juvenile outmigration?



# Juvenile Beach Seining



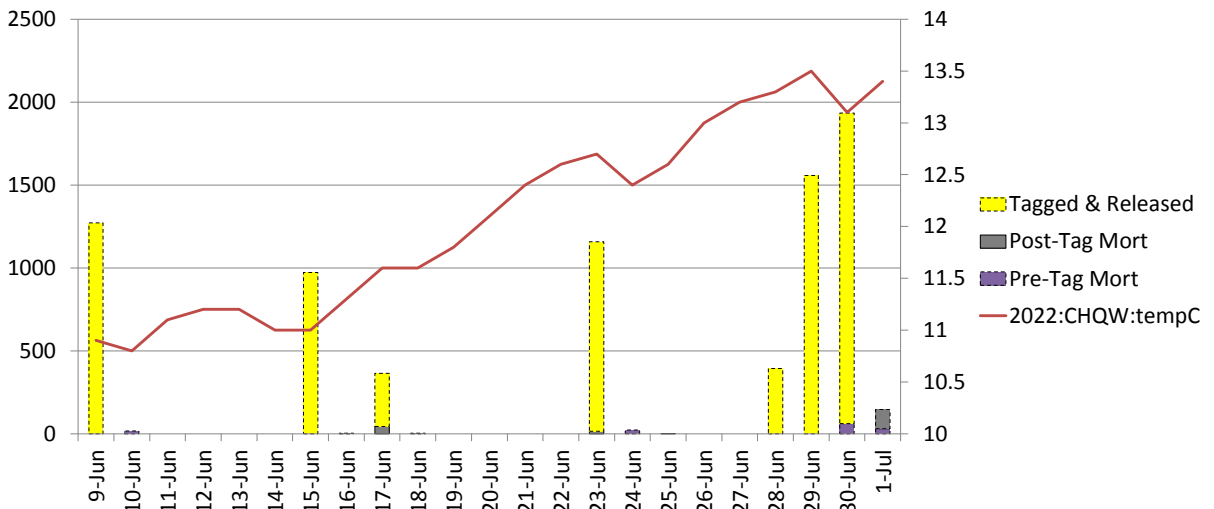
## Gebbers Landing



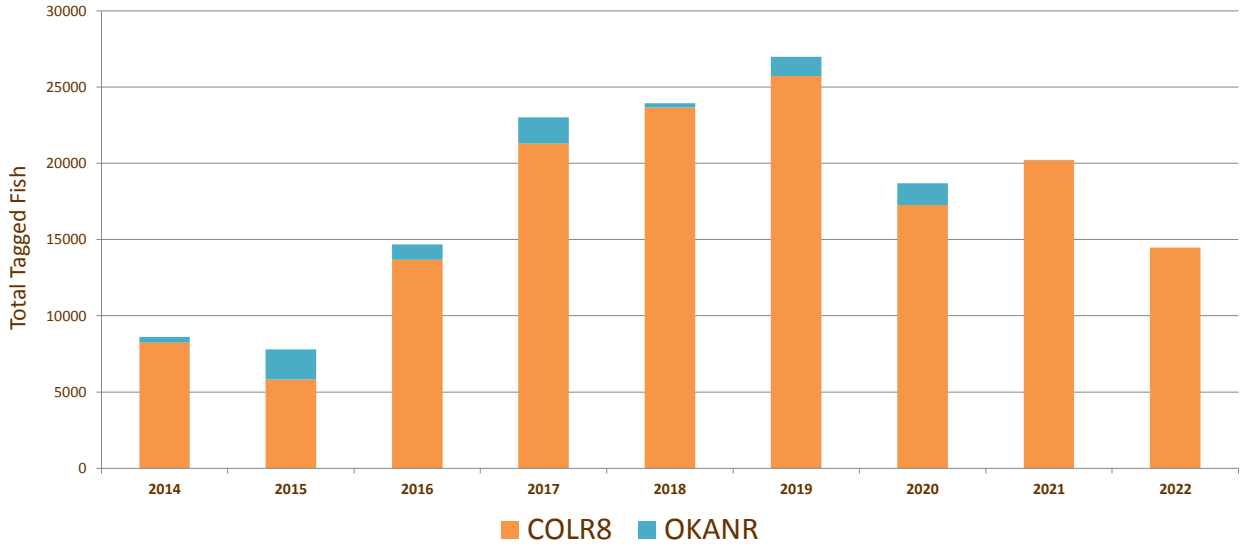
## Juvenile Beach Seine PIT Tag Effort @ Gebbers Landing

	<u>2020</u>	<u>2021</u>	<u>2022</u>
TOTAL DAYS FISHED	26	10	20
# SETS	220	79	207
AVERAGE SETS/DAY	7.86	7.90	10.3
TOTAL CATCH	20,340	29,043	21,110
CATCH PER UNIT EFFORT	92.45	367.63	101.9
HOR RECAPTURES	1,878	379	784

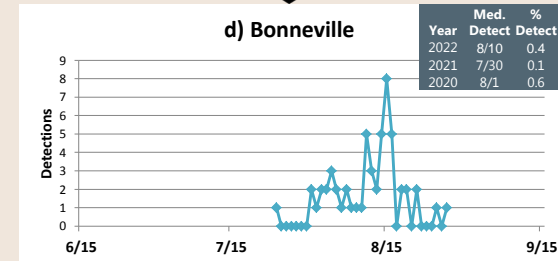
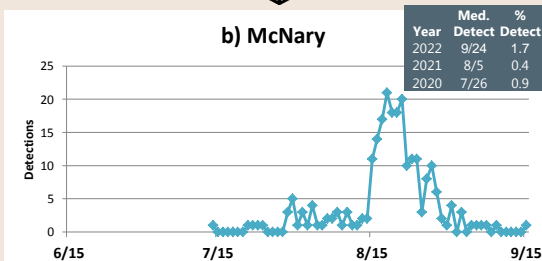
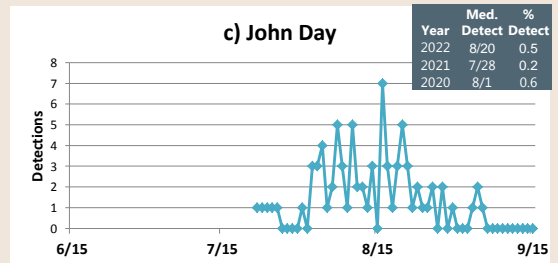
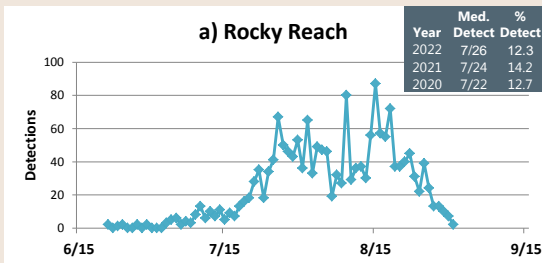
### Tagging vs. Water Temperature



# 14,469 TOTAL PIT TAGS DEPLOYED IN 2022

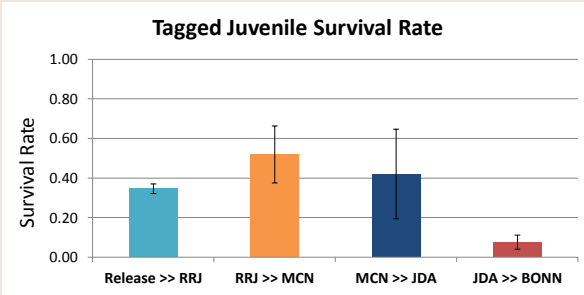


## Distribution of Detections



# Juvenile Outmigration Survival Estimates

Release Year	RRJ	MCN	JDA	BONN
2020 (18,700)	2,839	173	128	113
2021 (20,200)	2,869	72	35	16
2022 (14,469)	1,737	243	77	55



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

## HIGH FIVES TO OUR TECHNICIANS!

>>>Amber Cate<<<

>>Jesse Marchand<<

>>John Pakootas<<

>>>Tatum Gunn<<<

>>Vertis Campbell<<



