



2023 Salmon Season

RETURNS – VALUE - ALLOCATION – 2024 FORECAST



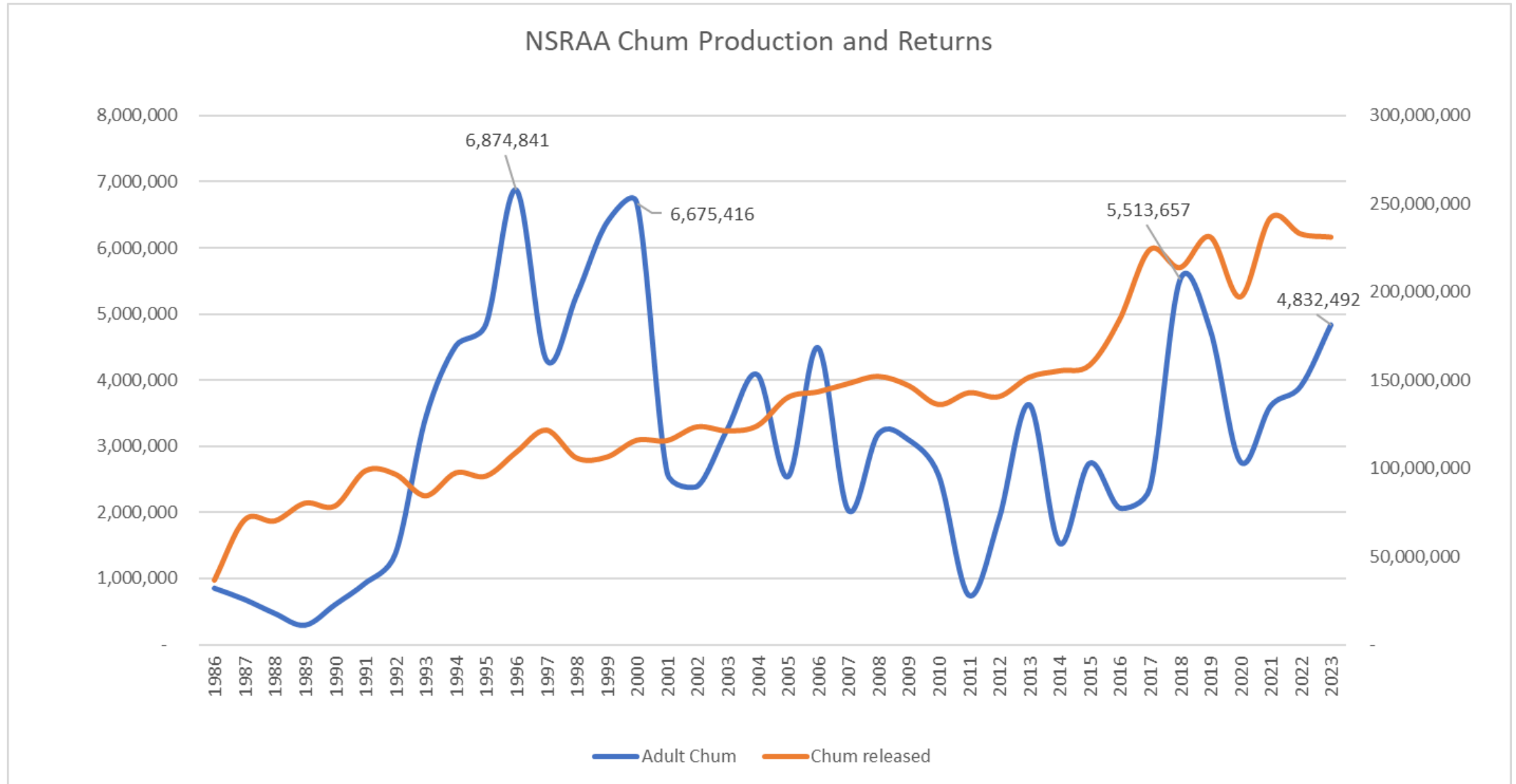
2023 Chum Returns

2023 NSRAA Chum Returns

4,800,000

(6th LARGEST CHUM RETURN OF ALL TIME)

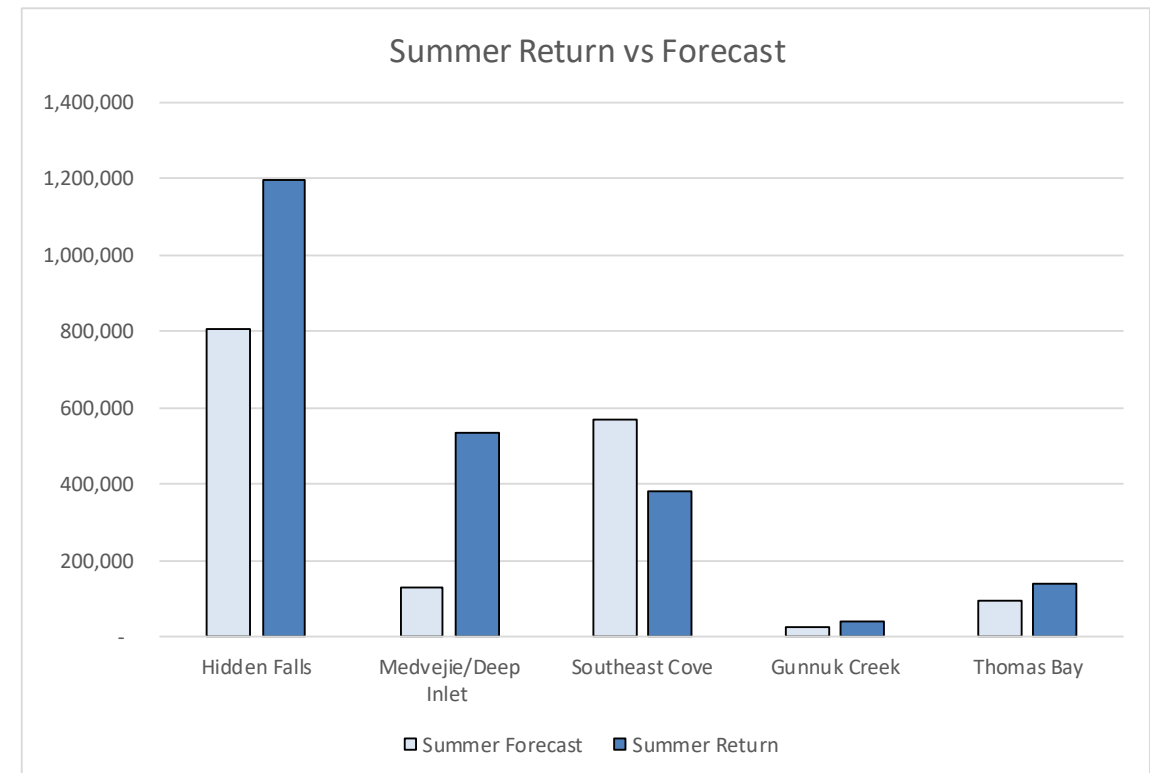
2023 NSRAA Chum Returns



2023 Chum Returns – SUMMER RUN

- Summer total = **2.3 million** fish
 - 141% of forecast
 - Exception = Southeast Cove
- Largest summer egg take in NSRAA history (**230 M**)
 - AKI partnership
- Largest return to Hidden Falls since 2013 (**1.2 M**)
- Biggest ever 3-year-old return (**620,000**)
 - Over double any other year on record
 - Especially at Medvejie
- Small fish

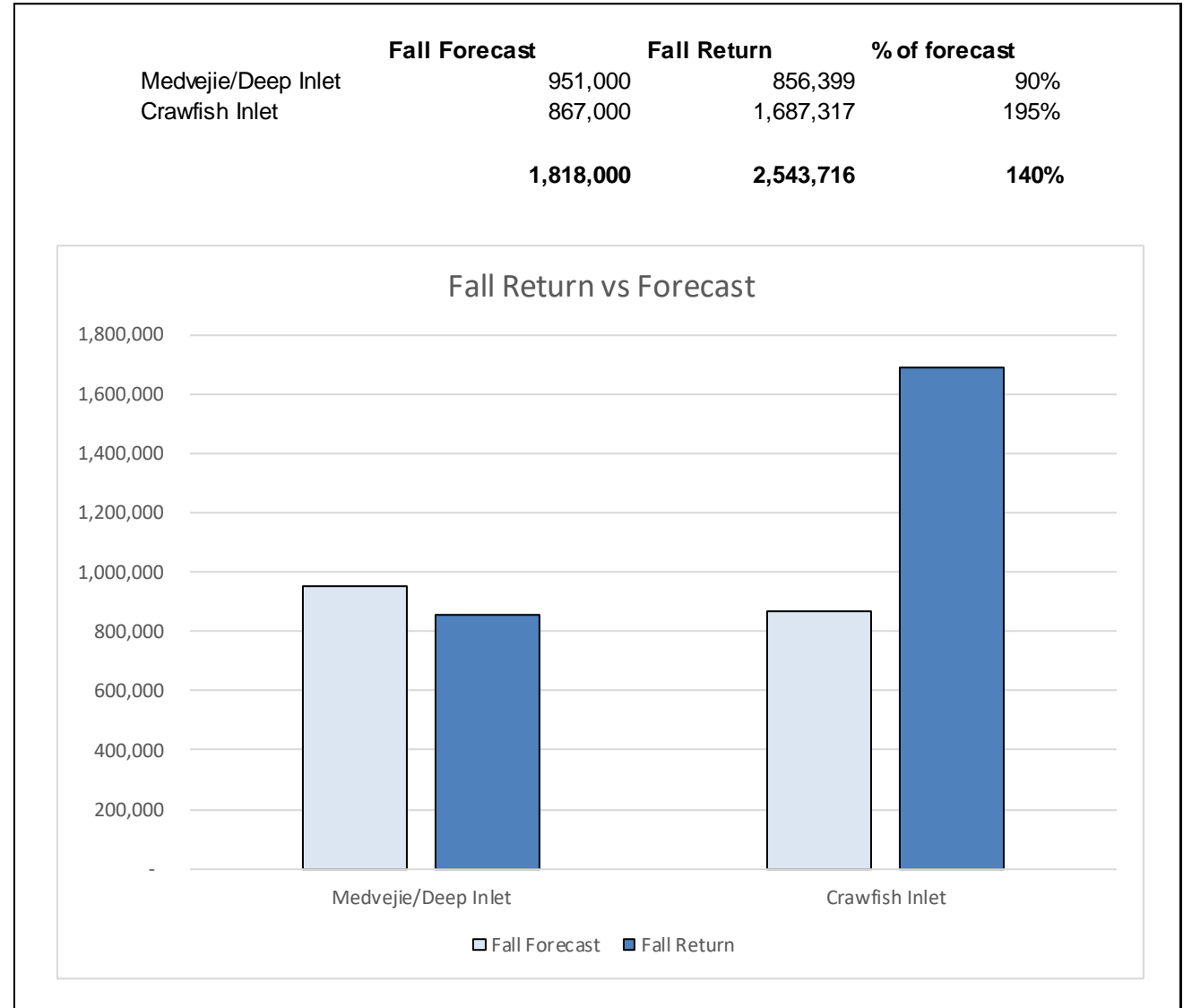
	Summer Forecast	Summer Return	% of forecast
Hidden Falls	806,000	1,194,761	148%
Medvejie/Deep Inlet	127,000	533,944	420%
Southeast Cove	570,000	381,655	67%
Gunnuk Creek	26,000	38,662	149%
Thomas Bay	97,000	139,754	144%
	1,626,000	2,288,776	141%





2023 Chum Returns – FALL RUN

- Fall total = **2.5 million** fish
 - 140% of forecast
- Poor survival of Medvejie 4-year-olds:
 - **Lowest on record**
 - Presumably, black cod predation
- Great survival of Crawfish 4-year-olds:
 - Uncharacteristically large age cohort
- Deep Inlet Closure
 - Single week – quick brood transport
 - Moved over 60,000 fish
- Terminal buildup
 - Disinterested processors – vessel restrictions
 - Extended fishing time and area in response
 - **Contracted cleanup events**



2023 Chum Returns – COST RECOVERY

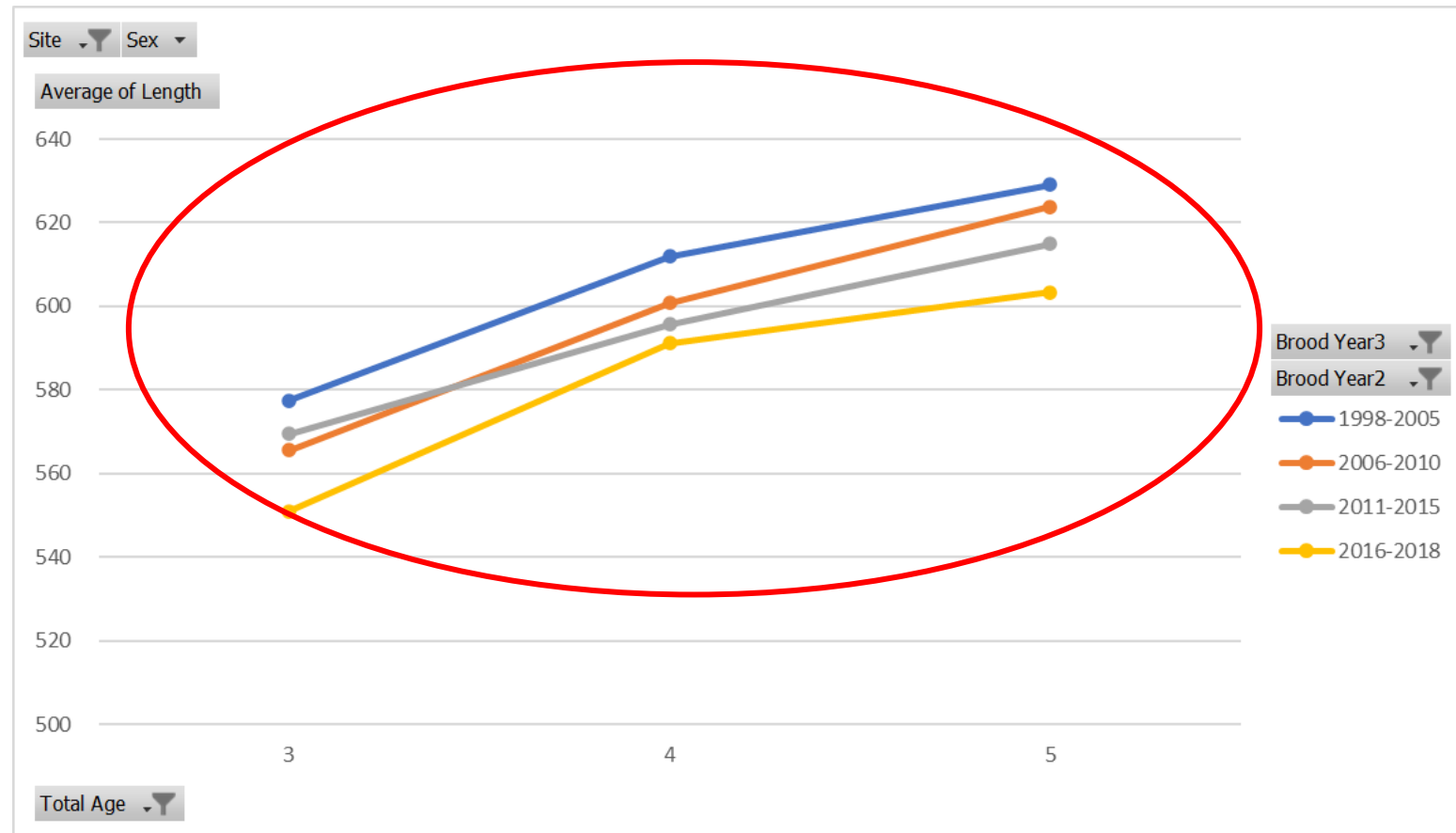
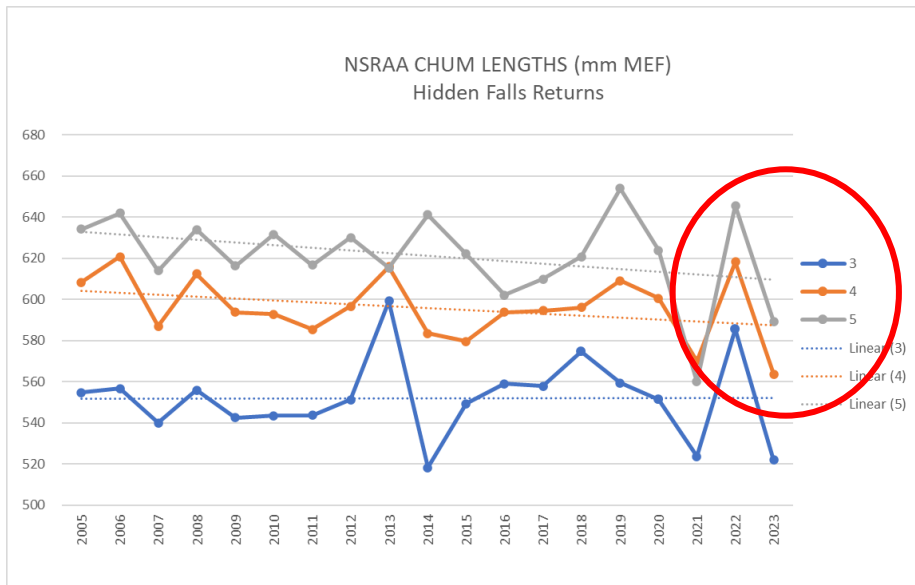
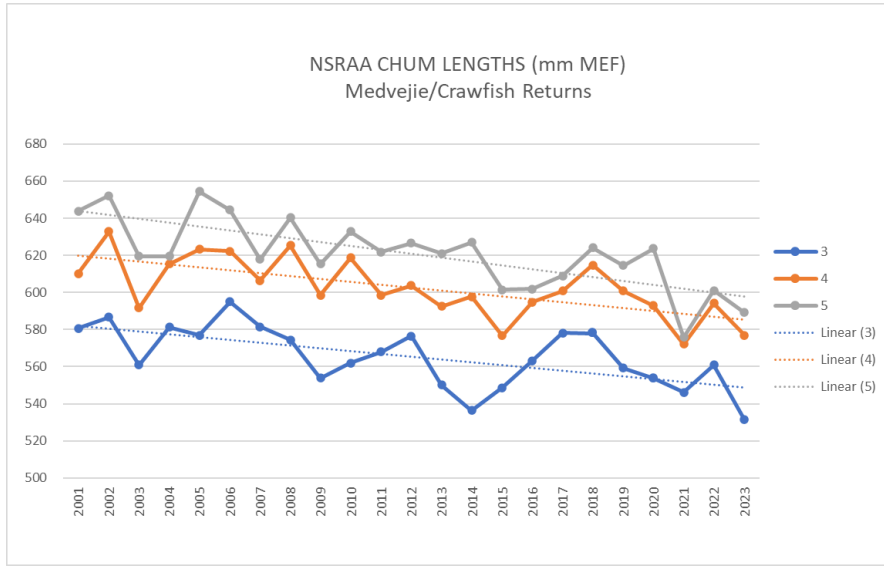
- SOUTHEAST COVE - MISSED GOAL ~\$2 million short
 - Run fell short (69 % of forecast)
 - Small fish compounded problem (52% of CR goal)
 - All fish went to CR
- CRAWFISH - MET GOAL
 - Contract revisions
 - Effectively reduced 2023 price – same lbs landed
 - Portion of 2023 revenue now 2024 “prepayment” ~1.1M
 - Higher-than-expected fish volume maxed out plant capacity daily
 - Excess available for commercial harvest
 - Terminal buildup...
- HATCHERY/CARCASS SALES
 - No interest in hatchery surplus
 - Processed through raceway, sold at carcass price
 - Loss of at least \$400,000



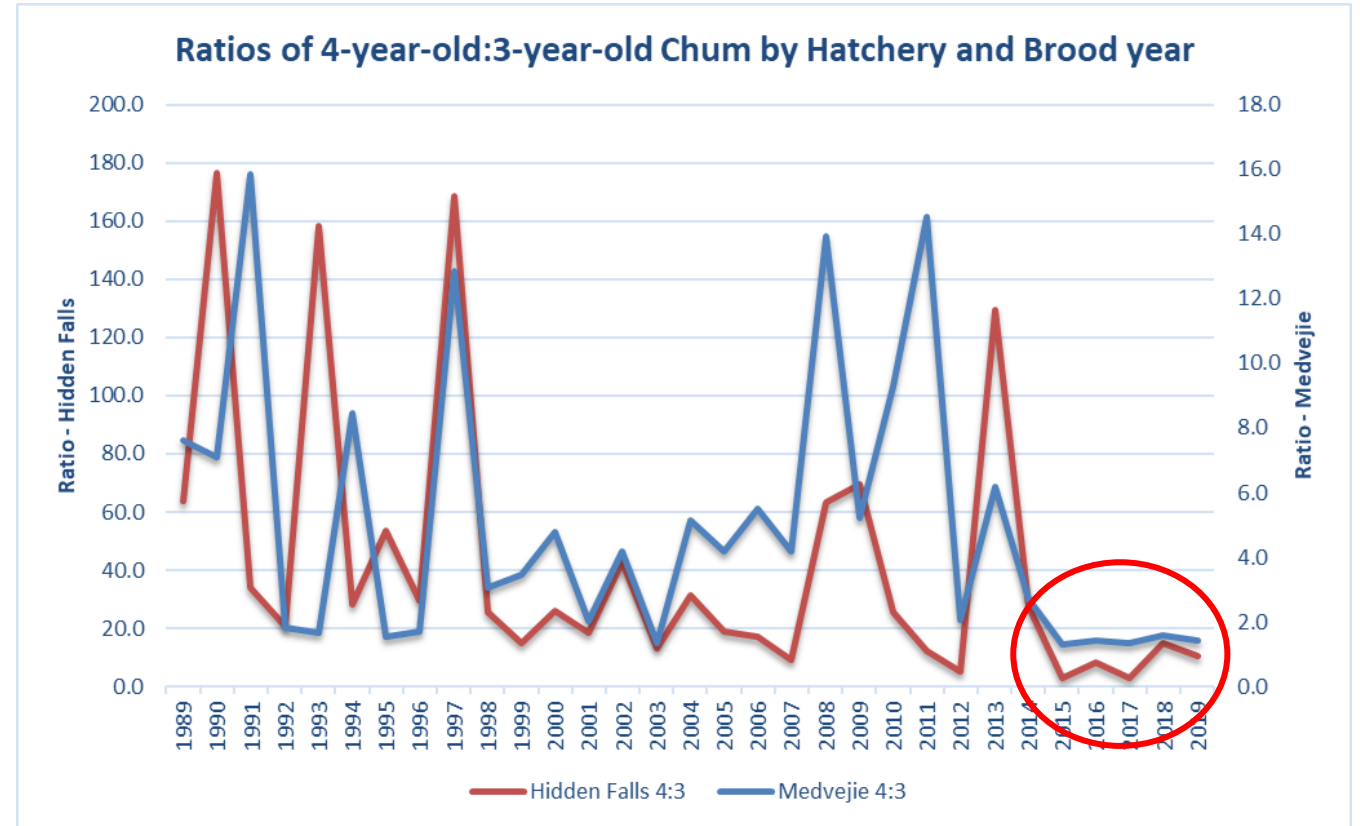
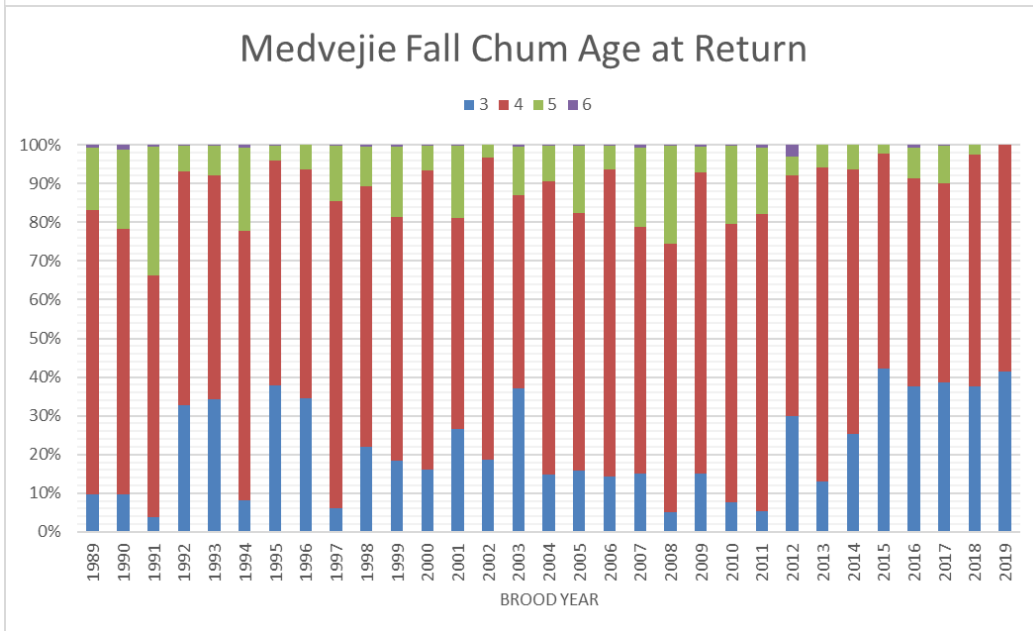
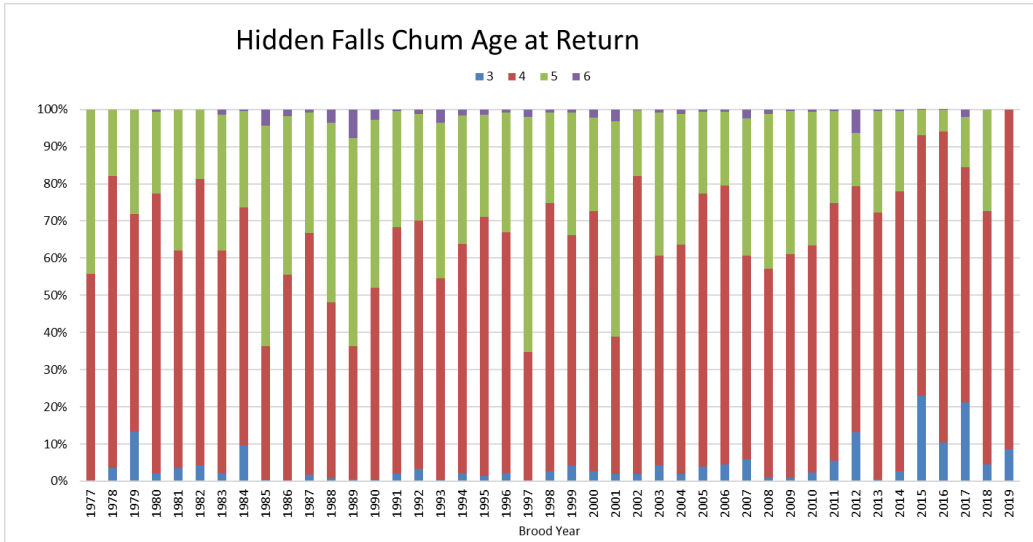
2023 Chum Returns – SIZE

Fish getting smaller over time

4 & 5-year-olds shrunk??



2023 Chum Returns – AGE STRUCTURE



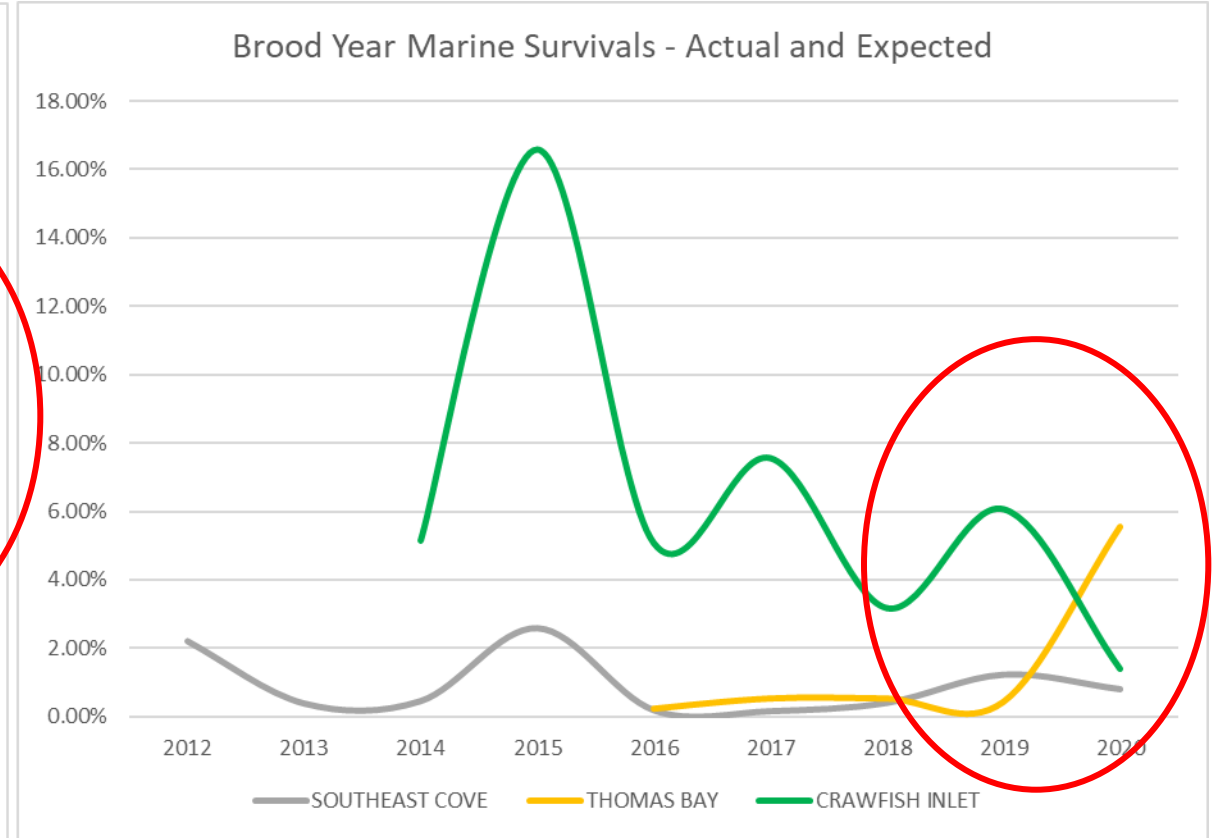
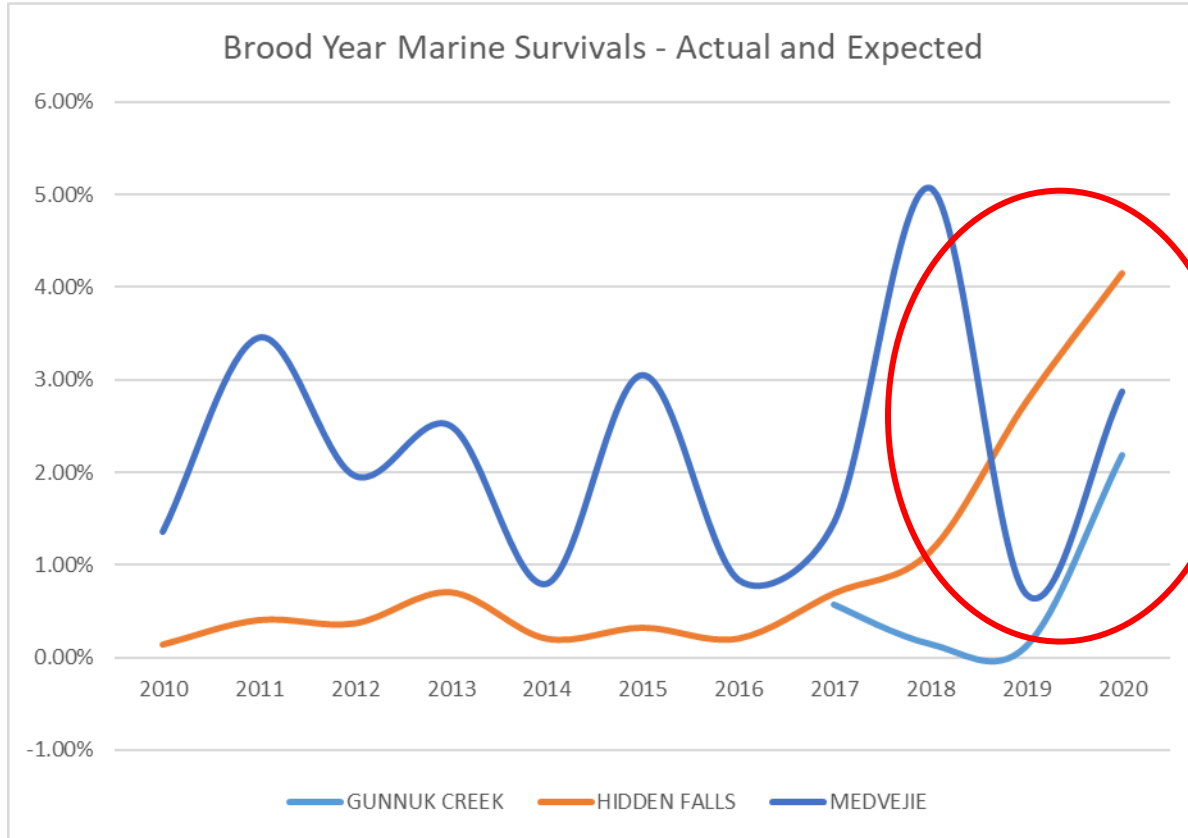
Currently stable ratio 4:3?

5-year-olds not much of a factor

2023 Chum Returns – MARINE SURVIVAL

Survivals coming up!!

SEC & CI coming down

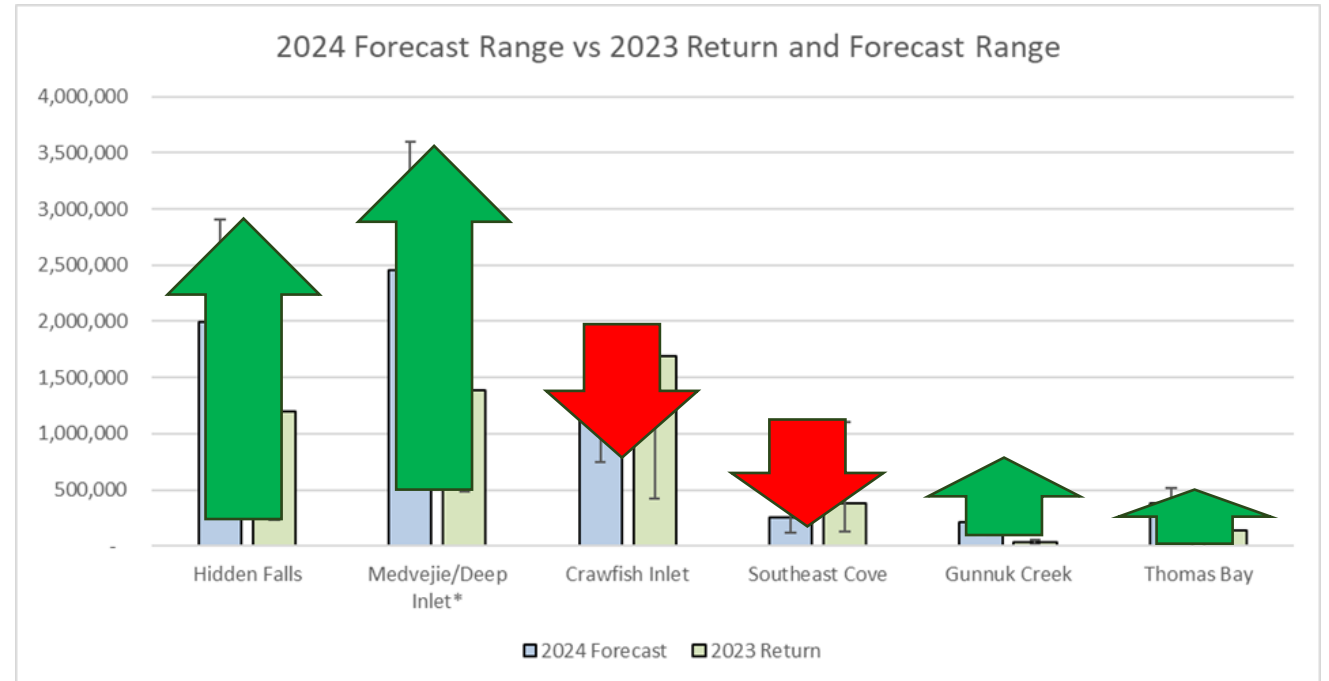
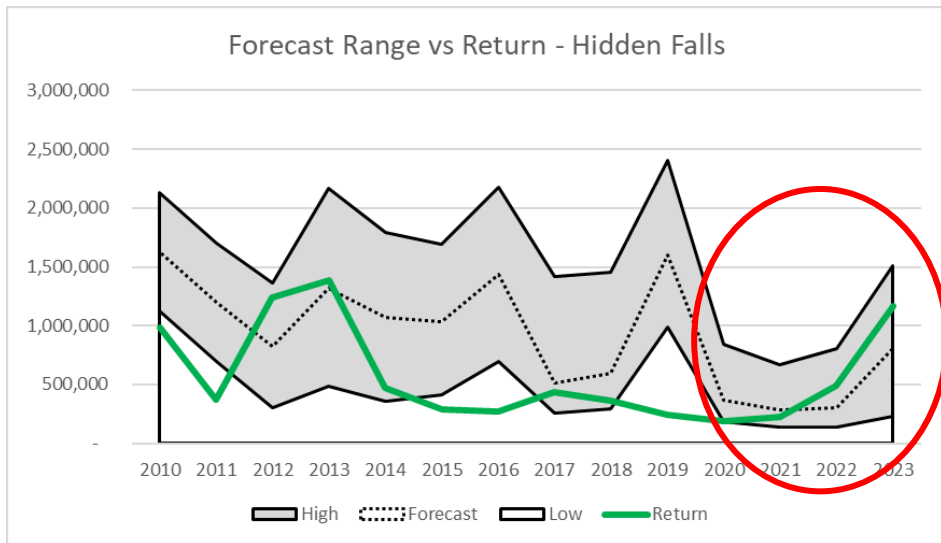
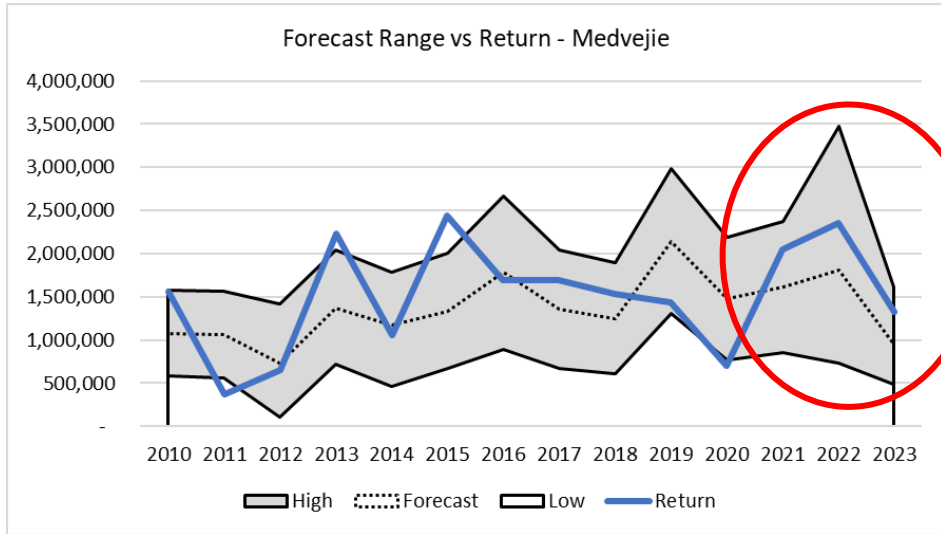


Brood years 2019-2020 are projected

2023 Chum Returns – FORECASTS

6,547,000

(WOULD BE 3rd LARGEST CHUM RETURN OF ALL TIME)



2023 Chum Returns – FORECASTS

HUGE Hatchery Returns

(Especially Bear Cove)

Rack AVG = 30%



<u>Return splits for Medvejie/Deep Inlet:</u>							
<u>Stock</u>	<u>Forecast</u>	<u>Low</u>	<u>High</u>	<u>Percent</u>	<u>Release Site</u>		<u>Total</u>
					<u>Bear Cove</u>	<u>Deep Inlet</u>	
Hidden Falls stock (early run)	1,428,000	687,000	2,385,000	58%	694,000	734,000	1,428,000
Medvejie stock (late run)	1,026,000	863,000	1,212,000	42%	351,000	675,000	1,026,000
	<u>2,454,000</u>	<u>1,550,000</u>	<u>3,597,000</u>		<u>1,045,000</u>	<u>1,409,000</u>	<u>2,454,000</u>
					43%	57%	100%

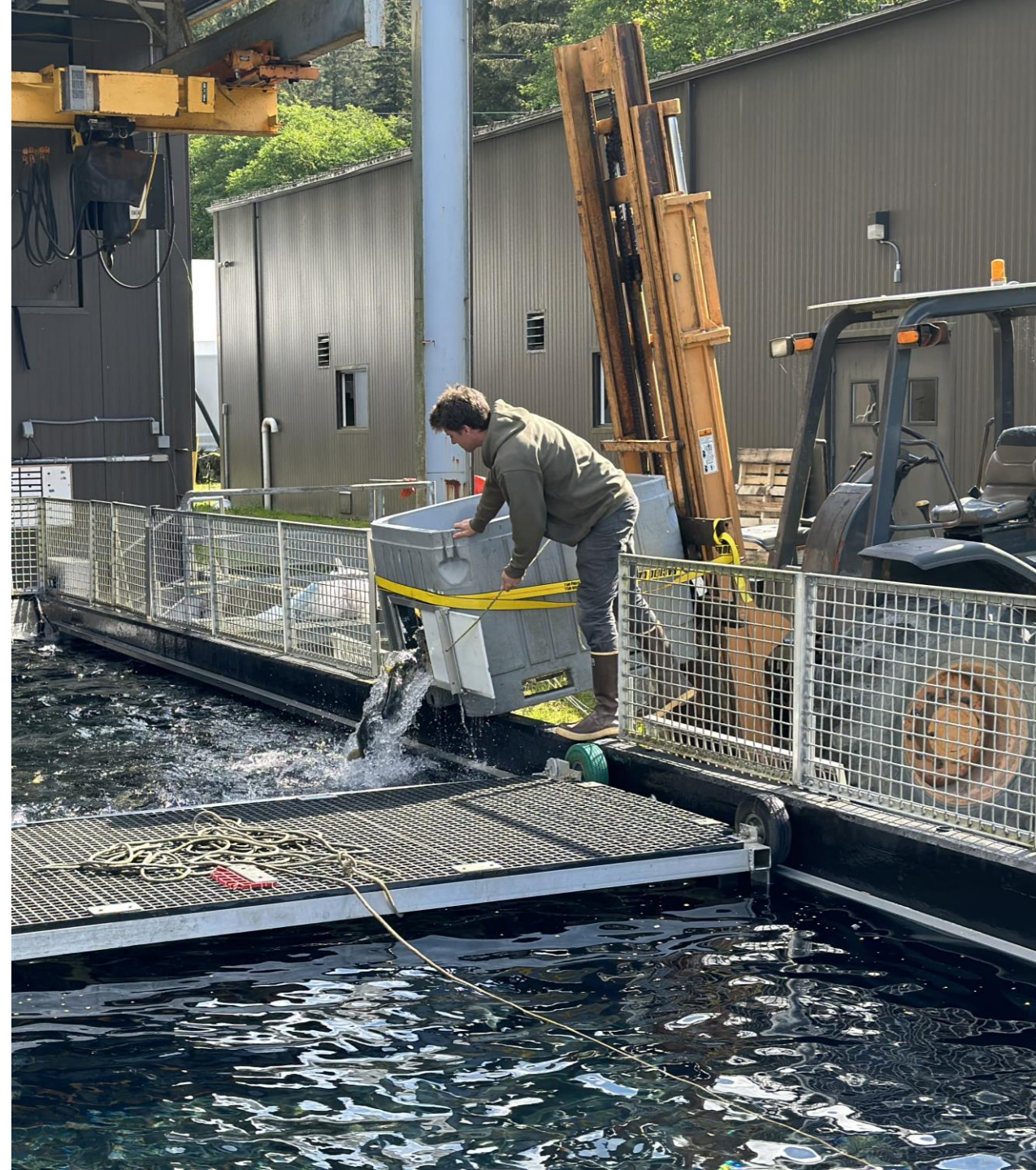
<u>NSRAA Chum split by area</u>	<u>Forecast</u>	<u>Low</u>	<u>High</u>	<u>Percent</u>
"WEST" = MEDVEJIE/ DEEP INLET/ CRAWFISH	3,700,000	2,296,000	5,463,000	57%
"EAST" = HIDDEN FALLS/ SE COVE/ THOMAS BAY/ GUNNUK	2,847,000	923,000	4,075,000	43%
	<u>6,547,000</u>	<u>3,219,000</u>	<u>9,538,000</u>	

Looking Ahead – 2024 Hatchery Returns

- Hidden Falls - 2-million?
 - “Just like old times”
- Medvejie – largest ever?
 - How to protect Chinook?
 - Mixing of chum stocks
- Gunnuk Creek – largest ever?
 - Biggest forecast ever by factor of ~10
 - How to effectively manage?
- **Surplus “escapement” nearly inevitable**

Can we capture value in hatchery surplus??

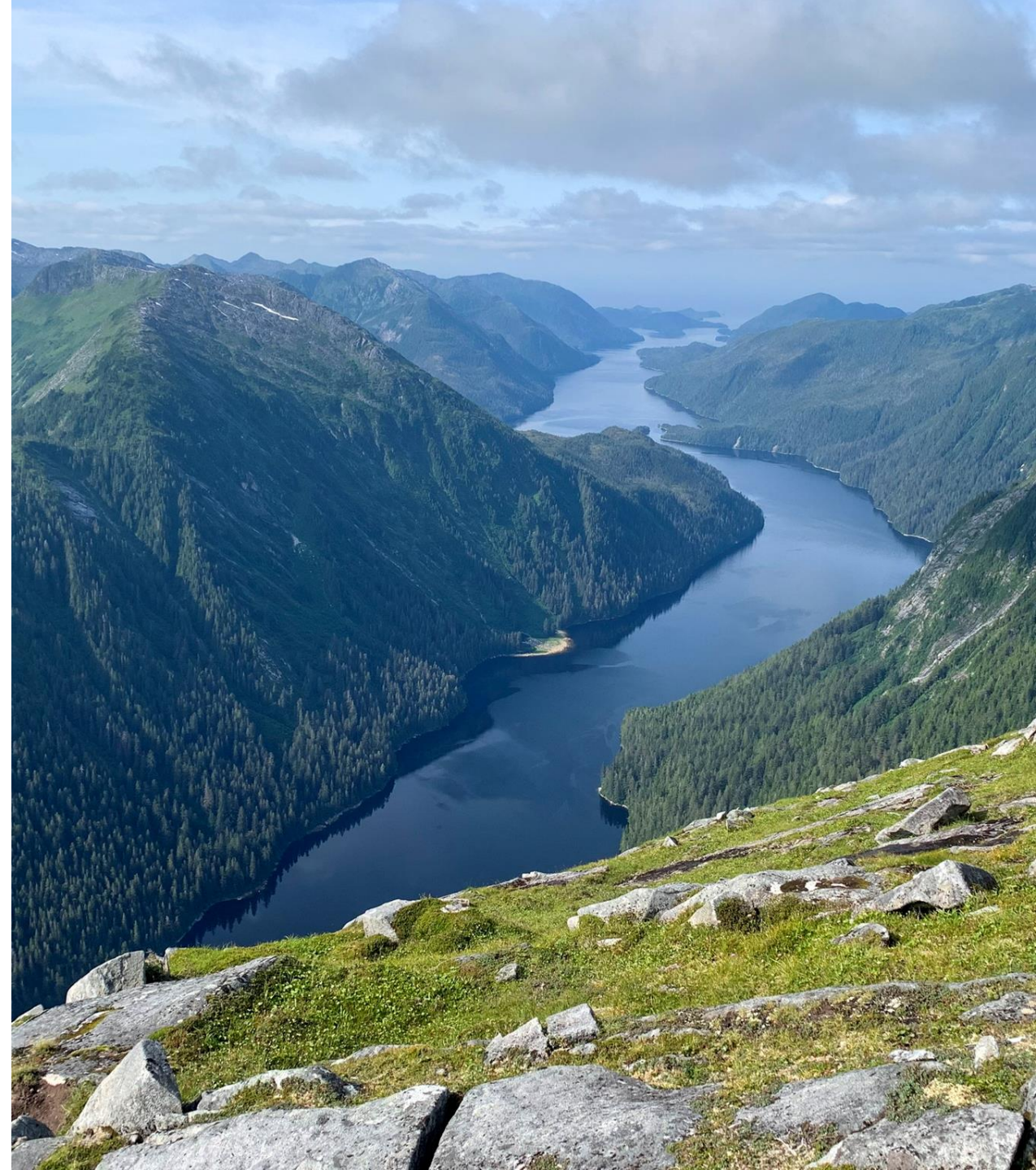
Will surplus overwhelm hatchery staff??



Looking Ahead – 2024

Other Sites

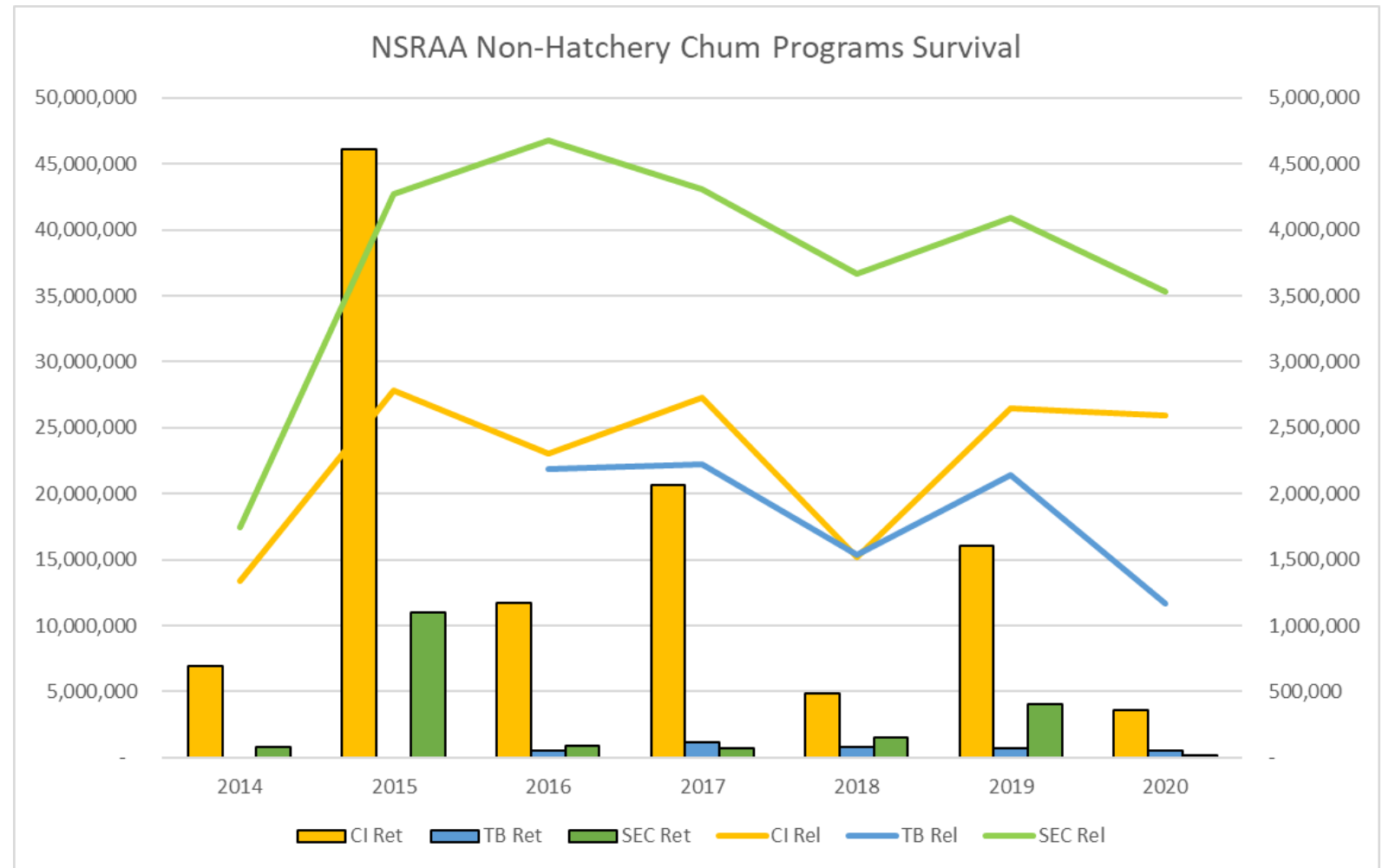
- Southeast Cove
 - Poor survival / 3-year-old return
 - **Should look elsewhere for CR**
- Thomas Bay
 - Could be something!
 - **Most ever 3-year-olds x5**
- Crawfish Inlet
 - **How long will this great (>7%) survival last?**



Looking Ahead – 2024

Other Sites

- Southeast Cove
 - Poor survival / 3-year-old return
 - **Should look elsewhere for CR**
- Thomas Bay
 - Could be something!
 - **Most ever 3-year-olds x5**
- Crawfish Inlet
 - **How long will this great (>7%) survival last?**





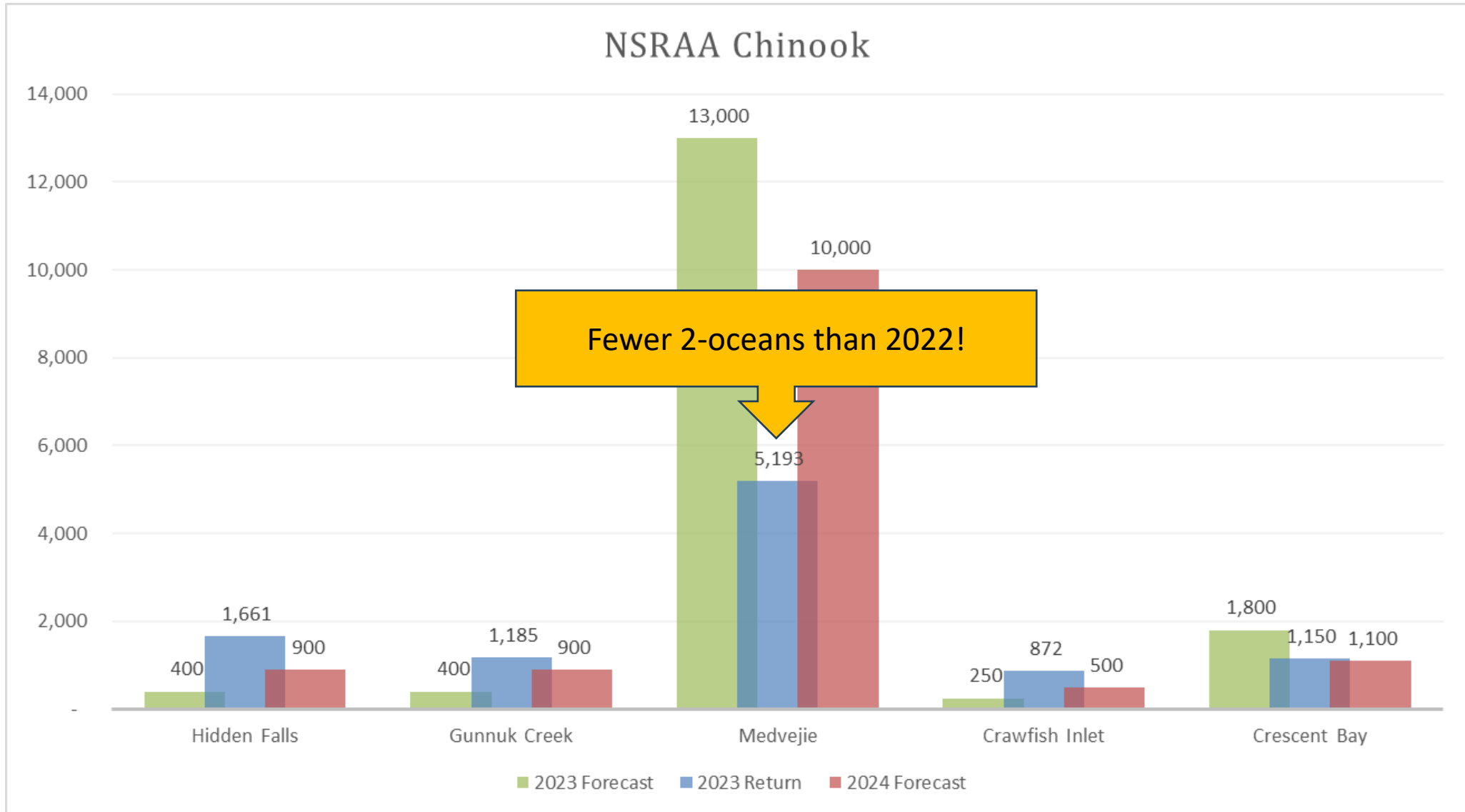
2023 Chinook Returns

2023 Chinook Returns

- Severe lack of 3-ocean adults in Medvejie returns
 - Brood shortages at Medvejie
 - No Cost Recovery
 - Lower contribution in troll fisheries
- Exceeded forecast at Gunnuk & Hidden Falls
 - Supplemented Medvejie egg take



2024 Chinook Forecast





2023 Coho Returns

2023 Coho Returns

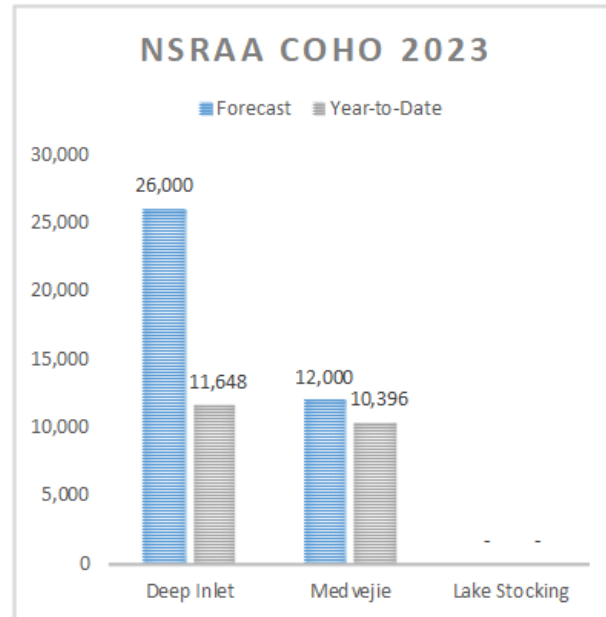
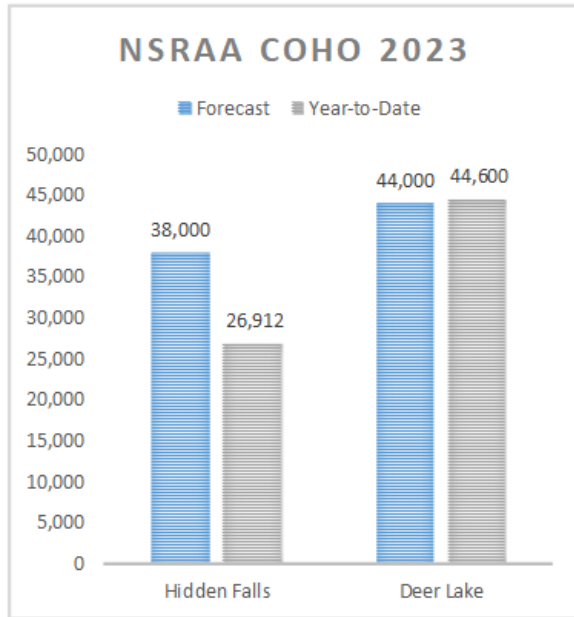
- Relatively poor survival at Hidden Falls and Deep Inlet, but high survival at Bear Cove and Deer Lake
- Hidden Falls saw first real cost recovery effort and harvest since 2015
- Coho cost recovery at Deer Lake came in under expectations \$160K



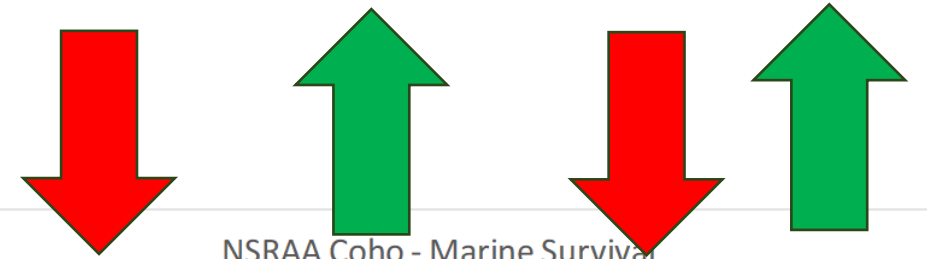
2023 Coho

NSRAA 2023 COHO

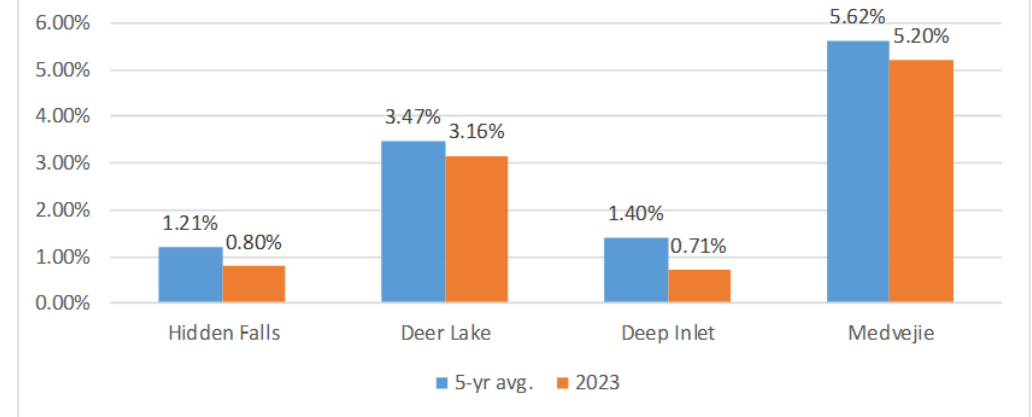
Update: 10/3/2023



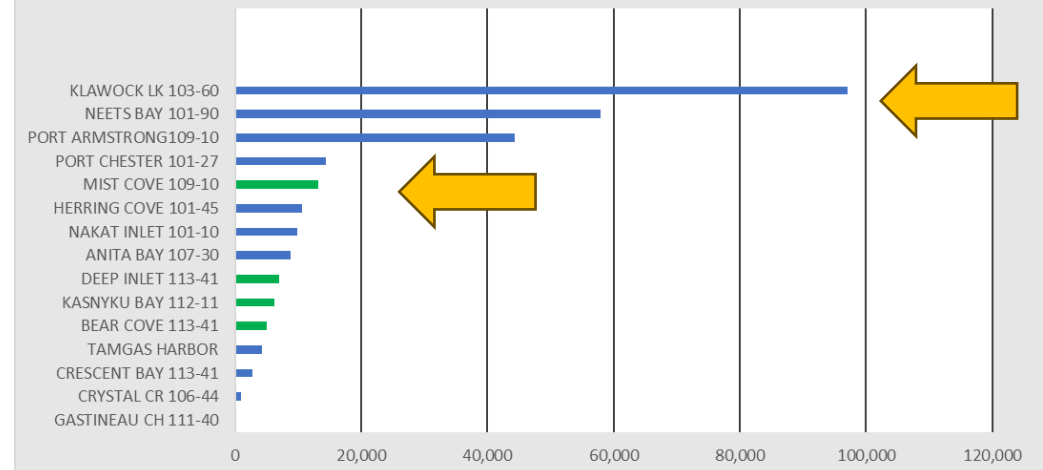
Site	Forecast	Return	% of Fcast	Smolt Release	Marine Survival to Date
Hidden Falls	38,000	26,912	70.8%	3,375,361	0.80%
Deer Lake	44,000	44,600	101.4%	1,413,417	3.16%
Deep Inlet	26,000	11,648	44.8%	1,649,843	0.71%
Medveje	12,000	10,396	86.6%	199,977	5.20%
Lake Stocking	-	-	-	-	-
Total	120,000	93,556	77.96%	6,638,598	



NSRAA Coho - Marine Survival



2023 Troll Coho - Alaska Hatchery Contributions

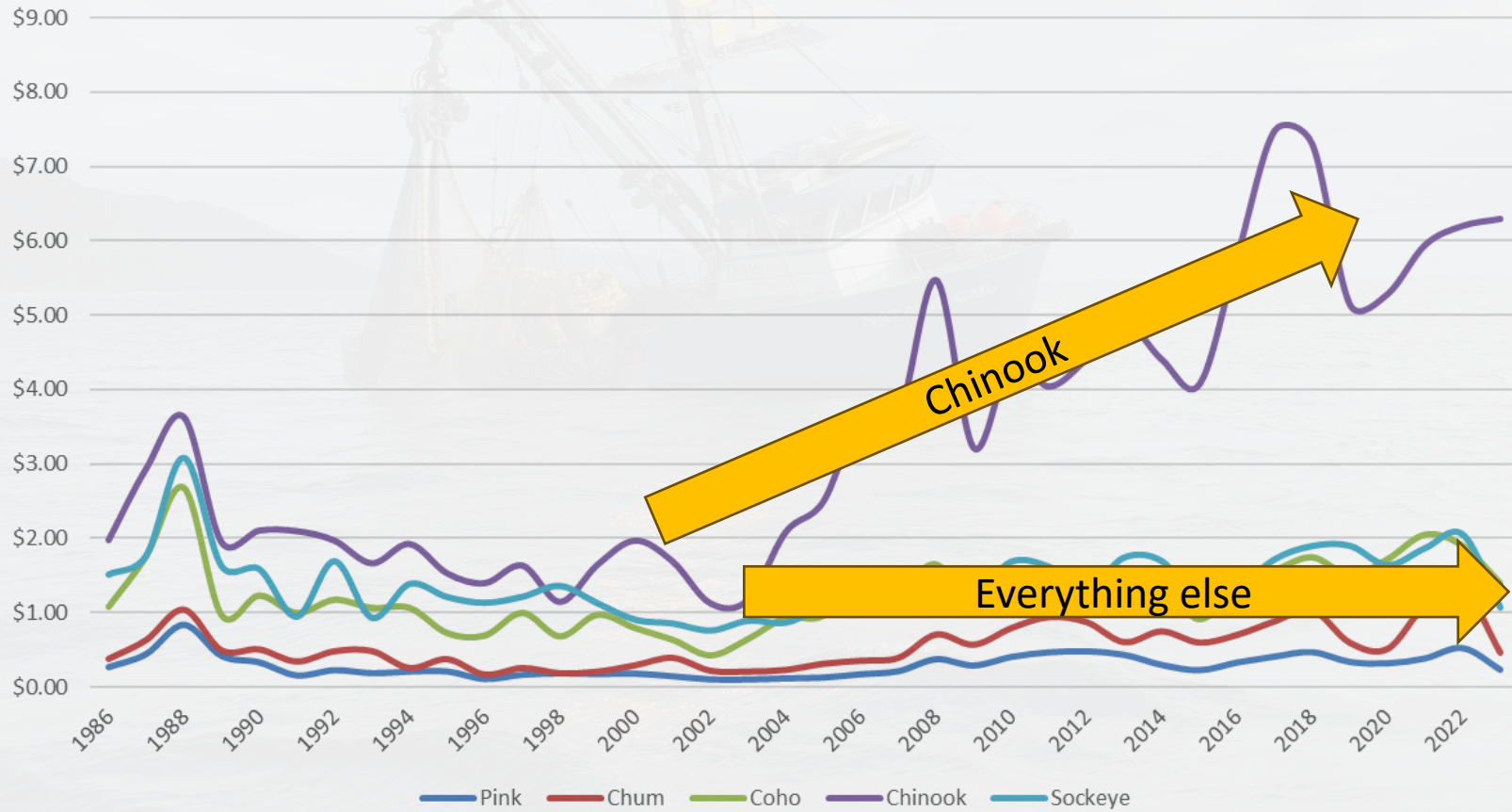




2023 Salmon Value

2023 Commercial Salmon Value - PRICES

Salmon Price History



	2023 \$/lb	Rank/38 years
Pink	\$0.23	20
Chum	\$0.46	22
Coho	\$1.39	13
Chinook	\$6.30	3
Sockeye	\$1.07	30

2023 Commercial Salmon Value - PRICES

2023 Avg Chum Price = \$0.46/lb.



2023 Commercial Salmon Value – NSRAA

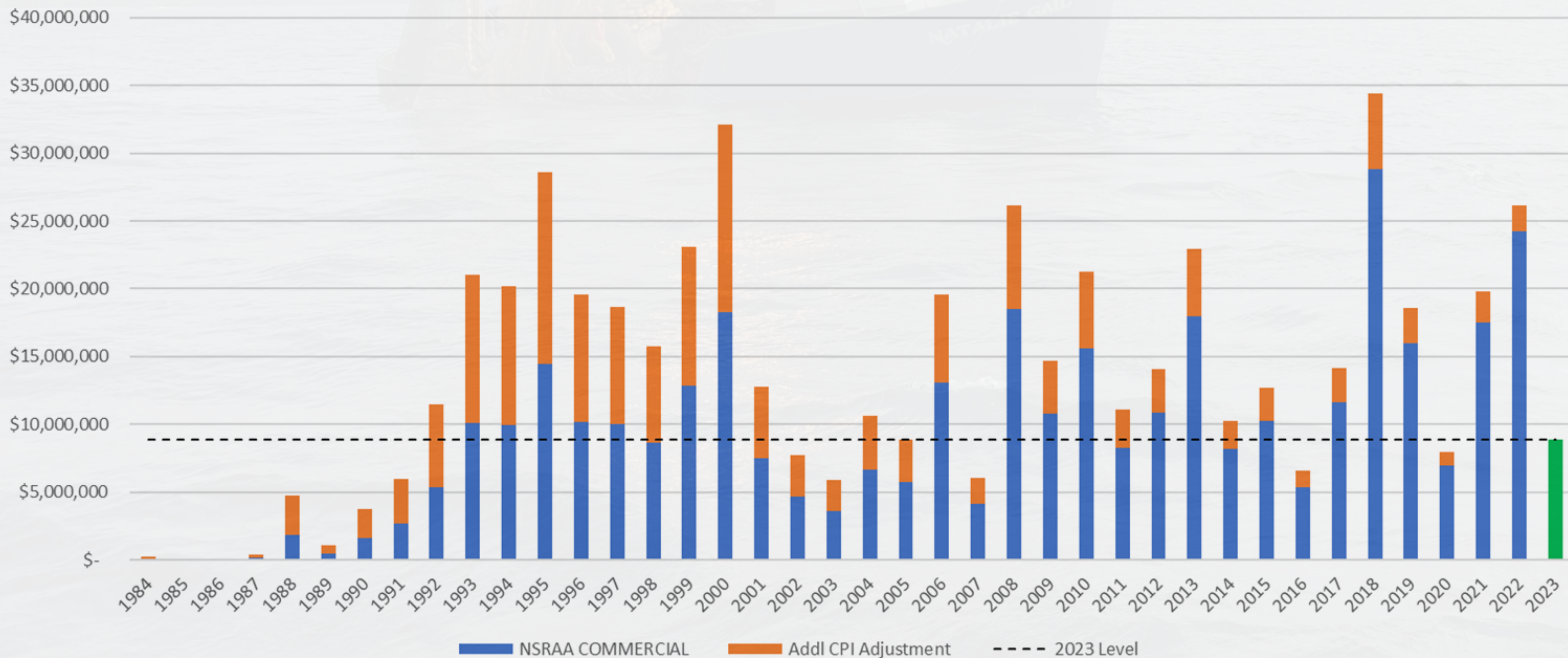
NSRAA % of Total SEAK Value - Excludes CR



NSRAA % of all SEAK Commercial Value

- 2023 = 9.4%
- Ranks 20th in 40 years
- 10-year avg = 13.1%

NSRAA Historical Commercial Value - Excludes CR

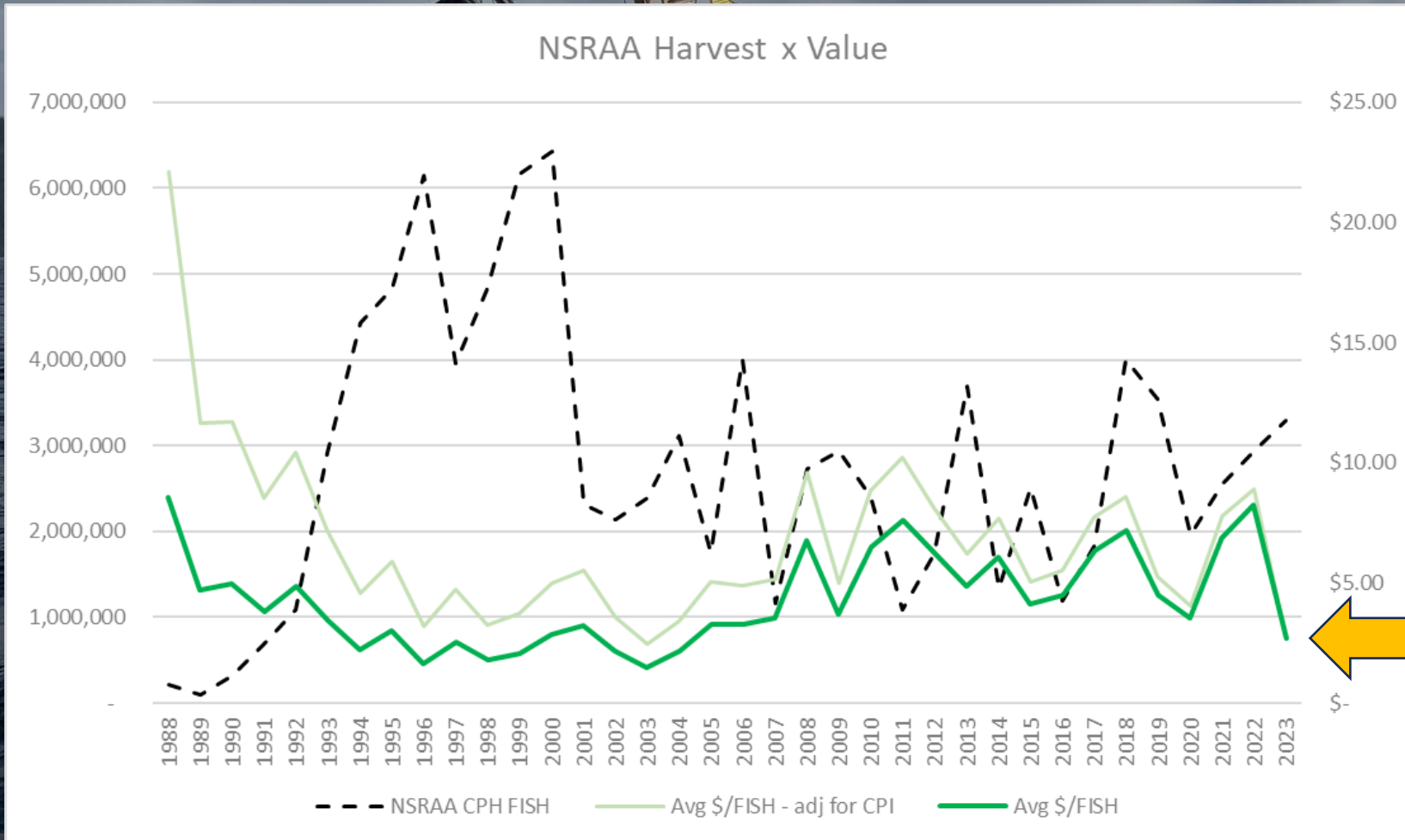


\$ 8.9 M

20th in 40 years
26th in 40 years
(with CPI ADJ)

2023 Commercial Salmon Value – NSRAA

\$/FISH = \$2.71



30th in 38 years

**37th in 38 years
(with CPI ADJ)**

Second only to 2003

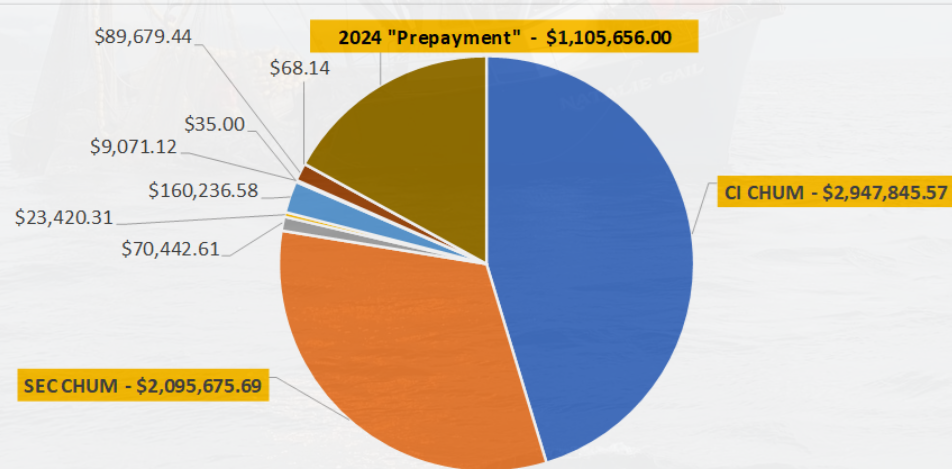


2023 Cost Recovery Value – NSRAA

2023 Cost Recovery

Project	CR-FISH	CR-INCID	CR-CARC	CR-EGG	Cost Rec Subtotal	Disposal Cost	Net income
Crawfish Chum	\$3,011,603.02	\$451.65			\$3,012,054.67	-\$64,209.10	\$2,947,845.57
Southeast Cove Chum	\$2,124,656.00	\$992.29			\$2,125,648.29	-\$29,972.60	\$2,095,675.69
Medvejie Chum	\$1,408.33		\$69,034.28		\$70,442.61		\$70,442.61
Hidden Falls Chum			\$23,420.31		\$23,420.31		\$23,420.31
Deer Lake Coho	\$159,414.78	\$821.80			\$160,236.58		\$160,236.58
Medvejie Chinook	\$35.26		\$9,035.86		\$9,071.12		\$9,071.12
Hidden Falls Chinook			\$35.00		\$35.00		\$35.00
Hidden Falls Coho	\$89,437.04	\$242.40			\$89,679.44		\$89,679.44
Medvejie Coho			\$68.14		\$68.14		\$68.14
2024 Crawfish "Prepayment"	\$1,105,656.00				\$1,105,656.00		\$1,105,656.00
Grand Total	\$5,386,554.43	\$2,508.14	\$101,593.59	\$0.00	\$5,490,656.16	-\$94,181.70	\$6,502,130.46

\$ 6.5 M

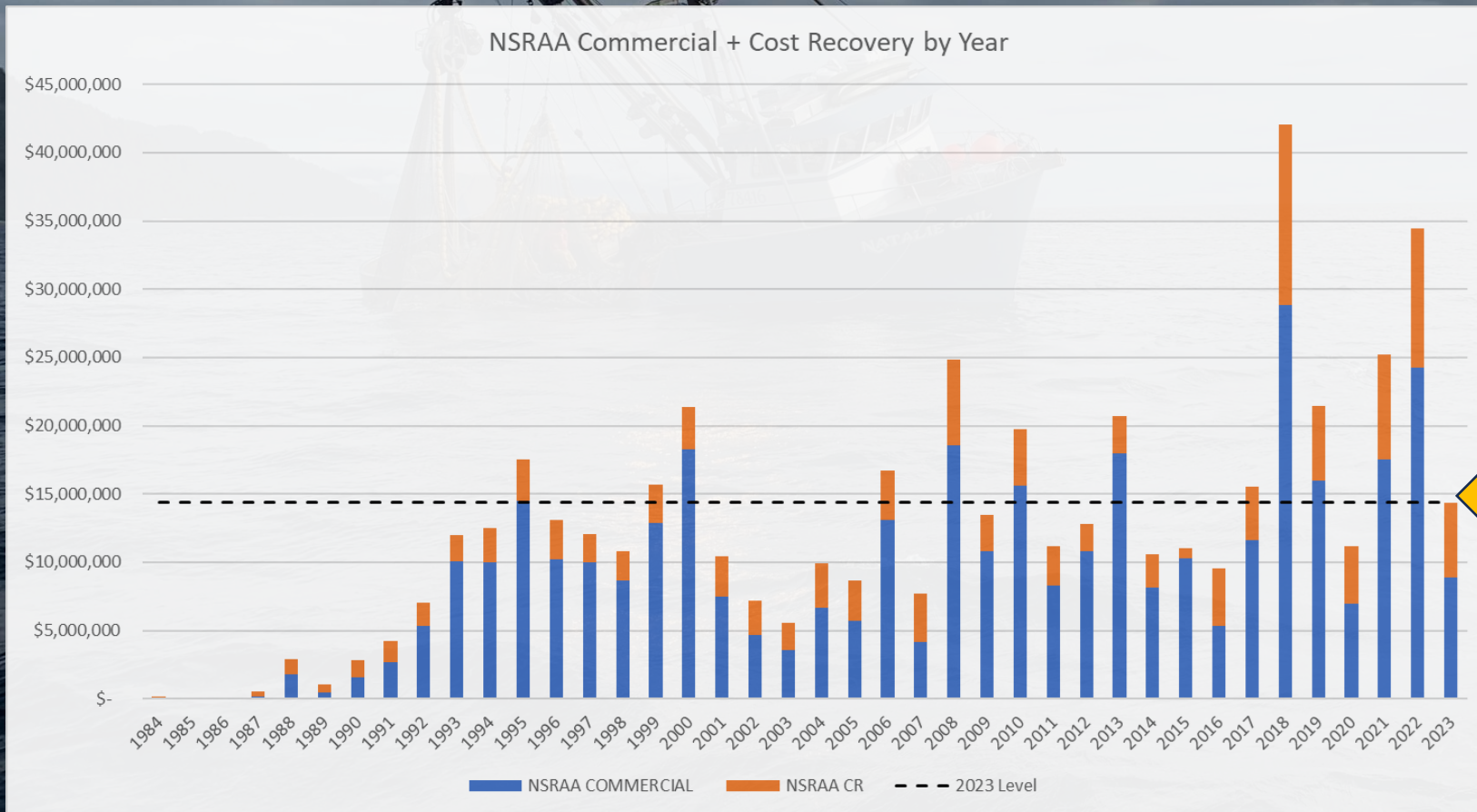


\$2 million shy (SEC)

\$94K in disposal cost!

- Crawfish Chum
- Southeast Cove Chum
- Medvejie Chum
- Hidden Falls Chum
- Deer Lake Coho
- Medvejie Chinook
- Hidden Falls Chinook
- Hidden Falls Coho
- Medvejie Coho
- 2024 Crawfish "Prepayment"

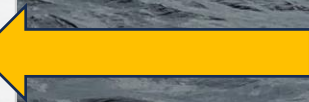
2023 Salmon Returns: Total Value: \$14.4 Million



\$ 8,893,284

\$ 5,490,656

\$ 14,383,940



13th in 40 years

**24th in 40 years
(With CPI ADJ)**

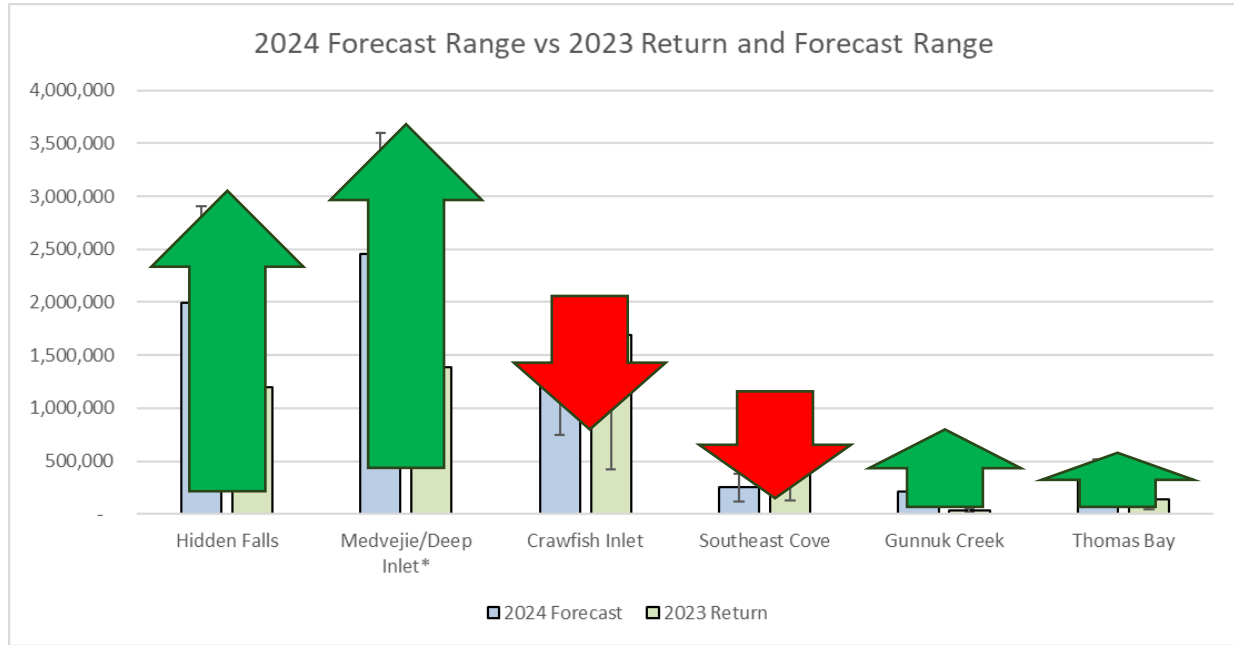
2024 PRELIMINARY Forecasts



2024 PRELIMINARY Forecasts

Oct 2023

NSRAA 2024 Return Projections					
Site	Projected Return	Range		2023 Return	2023 Forecast
		Low	High		
Chum					
Hidden Falls	1,996,000	559,000	2,905,000	1,194,761	806,000
Medvejie/Deep Inlet*	2,454,000	1,550,000	3,597,000	1,390,342	951,000
Crawfish Inlet	1,246,000	746,000	1,866,000	1,687,317	867,000
Southeast Cove	259,000	118,000	383,000	381,655	570,000
Gunnuk Creek	211,000	111,000	273,000	38,662	26,000
Thomas Bay	381,000	135,000	514,000	139,754	97,000
	6,547,000	3,219,000	9,538,000	4,832,491	3,317,000
Chinook					
Hidden Falls	900	350	2,200	1,661	400
Gunnuk Creek	900	350	2,200	1,185	400
Medvejie	10,000	1,500	22,500	5,193	13,000
Crawfish Inlet	500	250	1,000	872	250
Crescent Bay	1,100	600	1,700	1,150	1,800
	13,400	3,050	29,600	10,061	15,850
0-ck Chinook					
Medvejie	50	-	100	105	100
Crawfish Inlet	600	350	900	1,097	300
	650	350	1,000	1,202	400
Coho					
Hidden Falls	36,000	18,000	72,000	26,912	38,000
Deer Lake	82,000	41,000	165,000	44,600	44,000
Lake Stocking	-	-	-	-	-
Medvejie	11,000	6,000	22,000	10,396	12,000
Deep Inlet	17,000	8,000	33,000	11,648	26,000
	146,000	73,000	292,000	93,556	120,000
ALL SPECIES TOTALS:	6,707,050	3,295,400	9,860,600	4,937,310	3,453,250



Return splits for Medvejie/Deep Inlet:					Release Site		
Stock	Forecast	Low	High	Percent	Bear Cove	Deep Inlet	Total
Hidden Falls stock (early run)	1,428,000	687,000	2,385,000	58%	694,000	734,000	1,428,000
Medvejie stock (late run)	1,026,000	863,000	1,212,000	42%	351,000	675,000	1,026,000
	2,454,000	1,550,000	3,597,000		1,045,000	1,409,000	2,454,000
					43%	57%	100%

NSRAA Chum split by area				
	Forecast	Low	High	Percent
"WEST" = MEDVEJIE/ DEEP INLET/ CRAWFISH	3,700,000	2,296,000	5,463,000	57%
"EAST" = HIDDEN FALLS/ SE COVE/ THOMAS BAY/ GUNNUK	2,847,000	923,000	4,075,000	43%
	6,547,000	3,219,000	9,538,000	

KEY TAKEAWAYS



- SURVIVALS ARE MOSTLY GREAT!!
- NSRAA WILL HAVE LOTS OF CHUM RETURNING TO HATCHERIES IN 2024!!
- HOWEVER - LIKELY A BROOD STOCK SHORTAGE FOR MEDVEJIE CHINOOK!!
- VALUE IS MOSTLY TERRIBLE!!

HOW/WHERE DO WE WANT TO RECOVER COSTS IN 2024??

Questions?

