



2021 Return & 2022 Forecast

DIPAC Board of Directors Meeting – December 2021

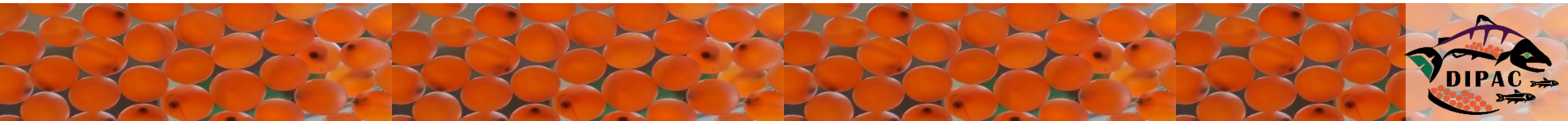
Adam Zaleski

Research Manager

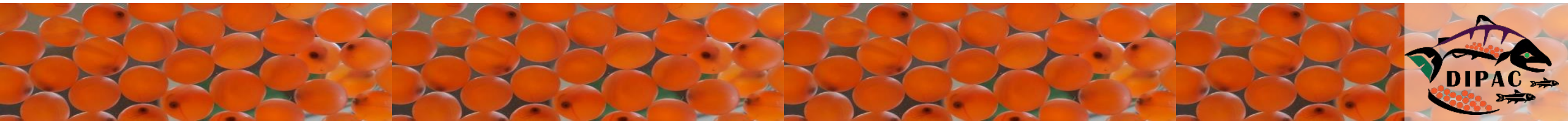
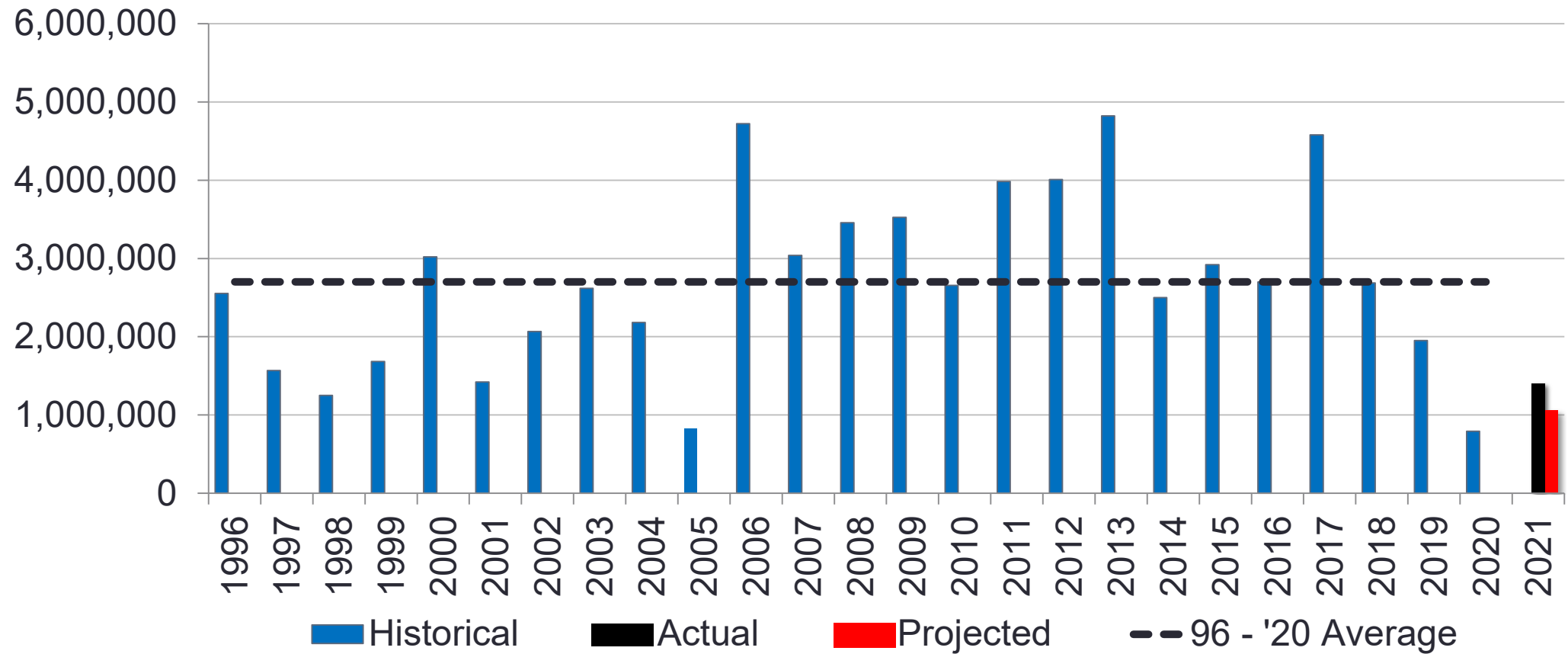


2021 Chum Return

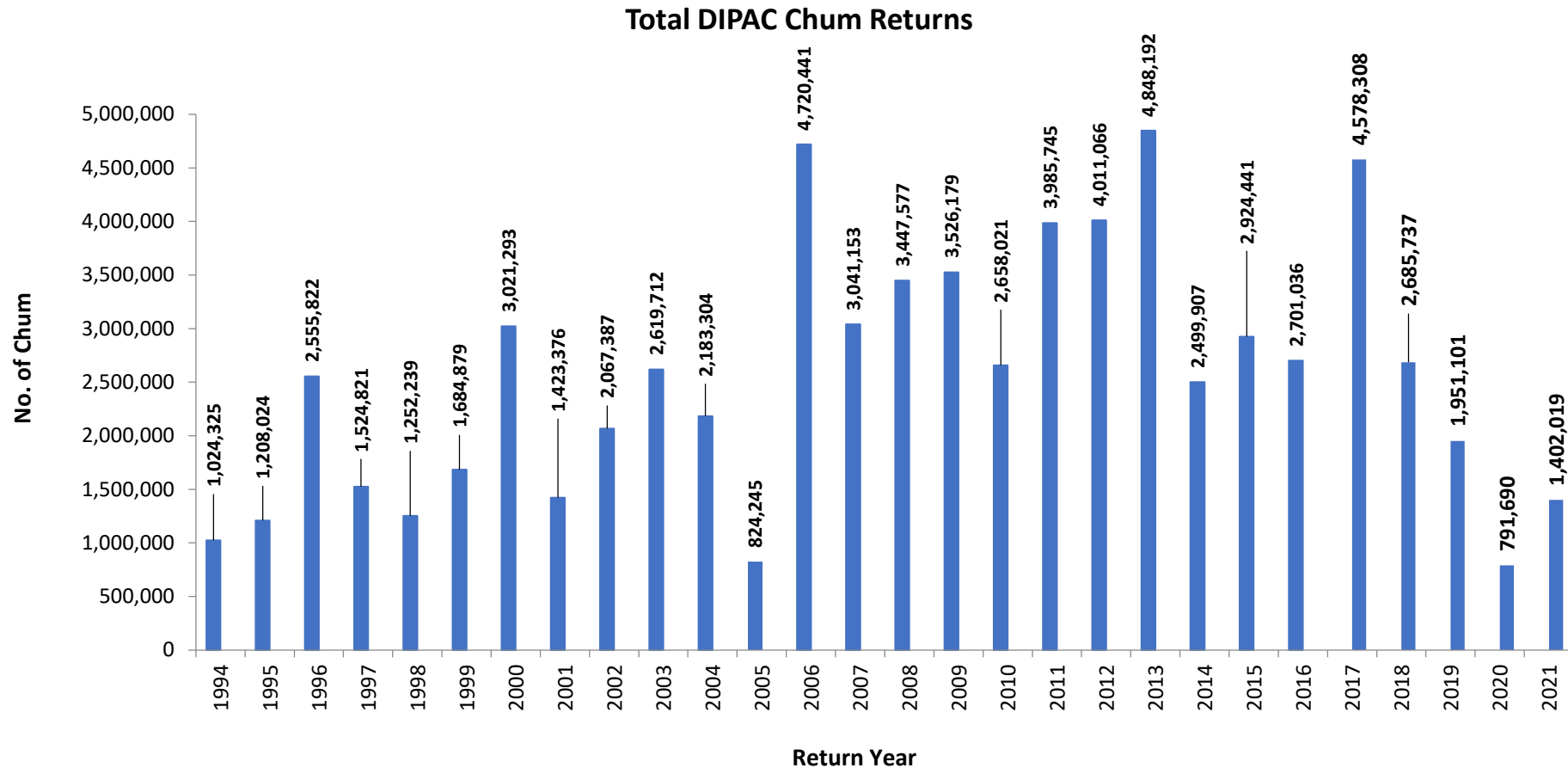
	Age-3	Age-4	Age-5	Age-6	Total
Actual:	53,200	1,266,000	82,200	440	1,402,000
Projected:	82,300	908,700	66,100	5,900	1,063,000
% of Projected:	65%	139%	124%	8%	132%



2021 Chum Return: Actual vs. Projected Harvest

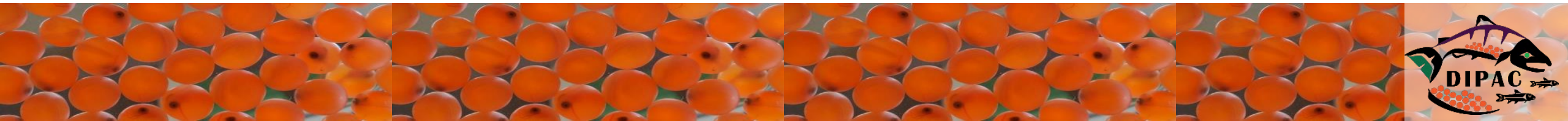
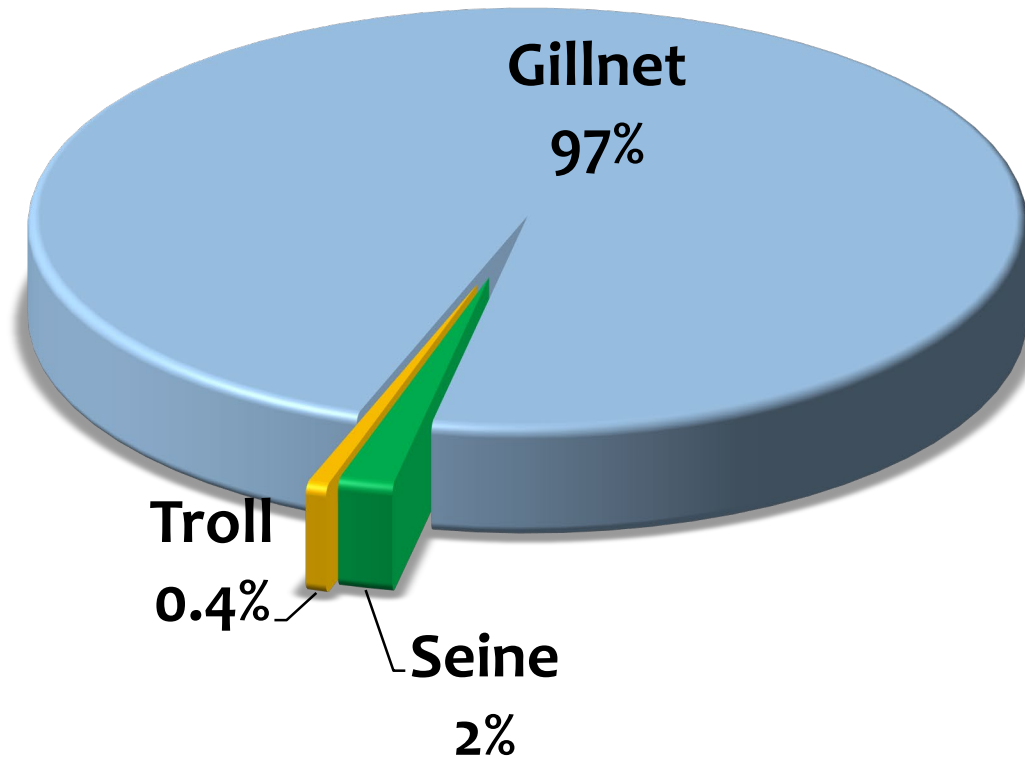


Historical Chum Returns



2021 Chum Contributions

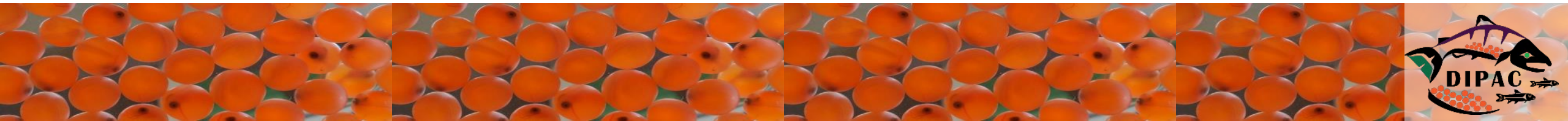
Gillnet, Seine, & Troll Harvest



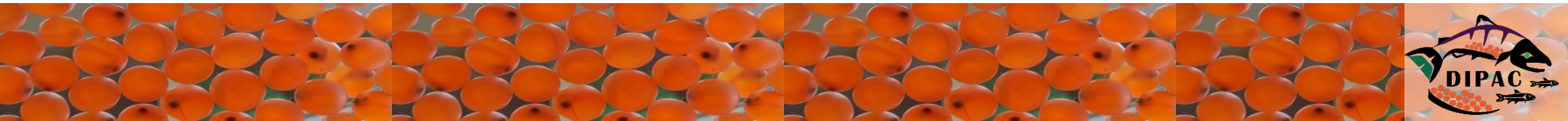
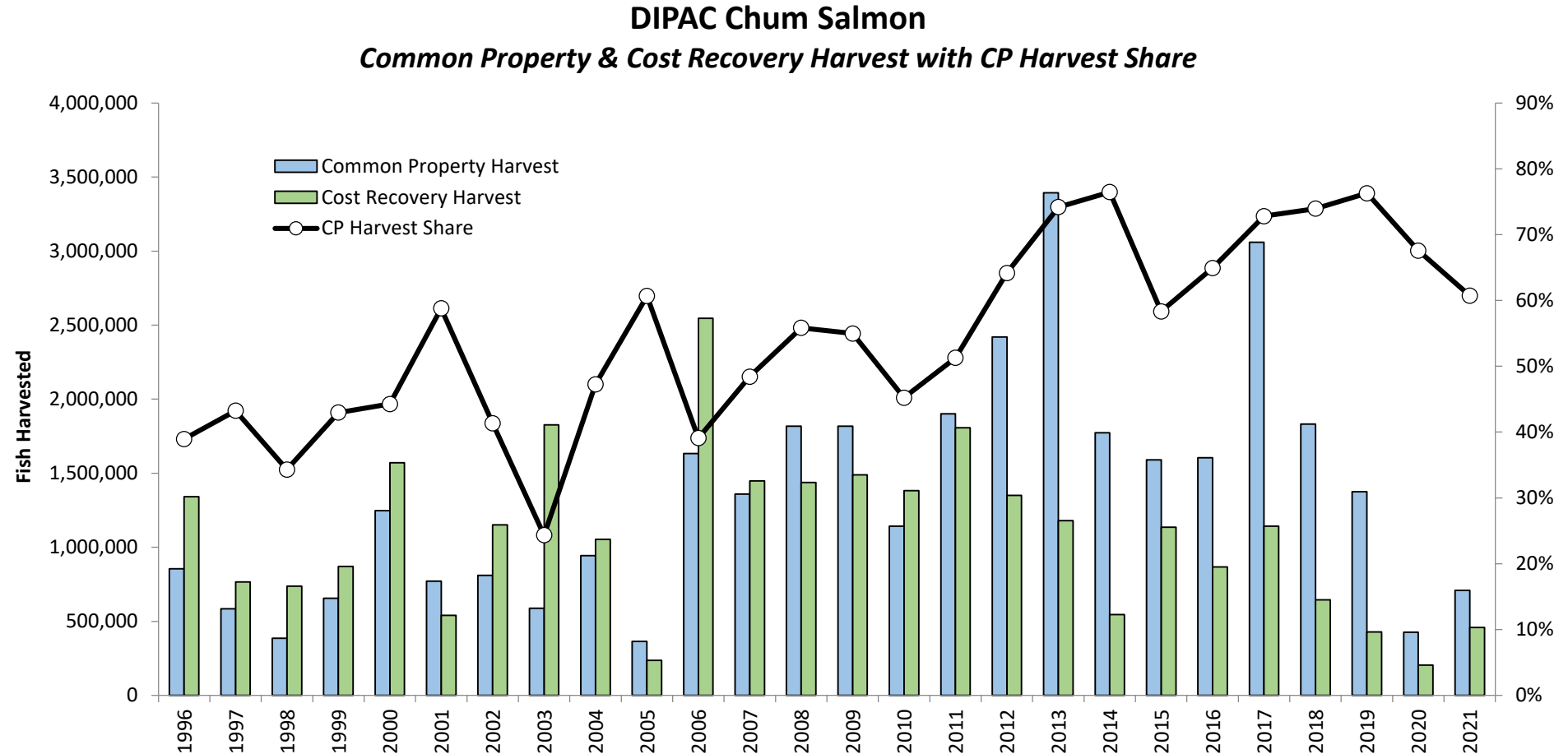
2021 Chum Return:

Contribution, Cost Recovery, & Harvest Shares

	Common Property Harvest	DIPAC Contrib.	% DIPAC Contrib.	Cost Recovery	Total Harvest
Lynn Canal GN	522,400	507,000	97%	458,100	965,000
Taku/Stephens GN	185,300	182,100	98%	40,300	222,400
Homeshore Troll	4,250	3,340	79%		3,340
Amalga CP-Seine	0	0	0%		0
Other Seine	25,400	10,800	43%		10,800
Misc. SEAK	4,000	4,000	100%		4,000
Sport		1,000			1,000
Broodstock & Esc.					195,400
Total	741,400	708,200	96%	498,400	1,402,000
Harvest Shares		59%		41%	

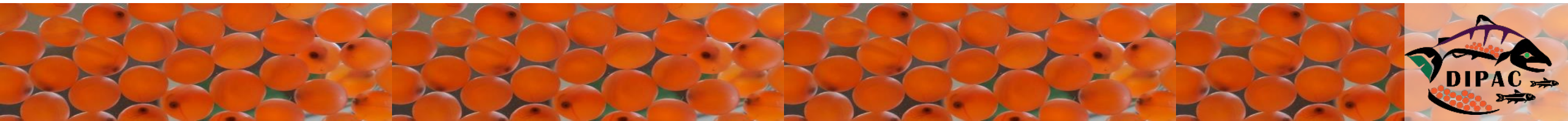


DIPAC Chum Harvest: Cost Recovery, Common Property, & Harvest Shares



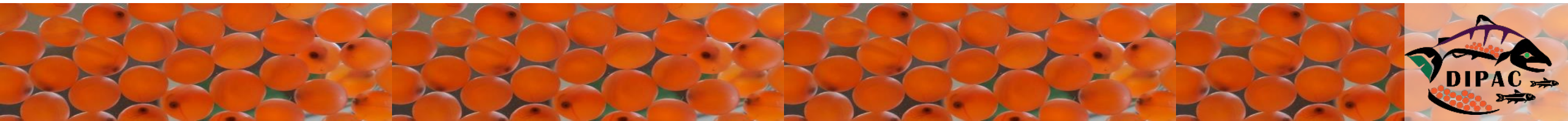
2021 Chum Return: Cost Recovery Summary

	Fish	Pounds
Amalga Harbor	458,100	2,899,000
Gastineau Channel	0	0
Macaulay Hatchery	40,300	216,500
	498,400	3,116,000



Chum Marine Survival

Broodyear	Age 3	Age 4	Age 5	Age 6	Total
2013	0.03%	2.75%	1.15%	0.03%	3.97%
2014	0.09%	0.94%	0.25%	0.01%	1.29%
2015	0.32%	1.65%	0.10%	0.00%	2.08%
2016	0.08%	0.52%	0.08%		0.68%
2017	0.17%	1.17%			1.34%
2018	0.05%				0.05%



Preliminary Alaska Chum Harvest

2021 Weekly Alaska Salmon Harvest Update #14

Harvest Through Statistical Week 37 (9/11/2021)

(Thousand Fish)

	Sockeye			Pink			Keta			Coho			Chinook		
	YTD 2020	YTD 2021	YoY	YTD 2019	YTD 2021	YoY	YTD 2020	YTD 2021	YoY	YTD 2020	YTD 2021	YoY	YTD 2020*	YTD 2021*	YoY
AYK	144	0	-100%	91	261	187%	200	99	-51%	54	6	-89%	7	0	-100%
Kodiak	1,490	3,187	114%	31,264	26,152	-16%	370	400	8%	430	283	-34%	9	7	-22%
Chignik	0	44	-	2,452	608	-75%	0	91	-	0	23	-	0	0	-
Alaska Peninsula	2,852	6,767	137%	21,148	11,517	-46%	969	1,707	76%	231	325	41%	23	11	-52%
Bristol Bay	39,793	40,348	1%	8	1	-88%	294	231	-21%	115	30	-74%	11	4	-64%
Cook Inlet	922	1,494	62%	2,131	1,858	-13%	44	86	95%	144	148	3%	3	1	-67%
Prince William Sound	946	1,294	37%	46,583	64,855	39%	1,423	2,573	81%	264	199	-25%	6	7	17%
Southeast	457	1,043	128%	21,111	45,371	115%	4,400	6,314	44%	698	1,166	67%	198	188	-5%
Statewide	46,601	54,184	16%	124,788	150,601	21%	7,705	11,510	49%	2,263	2,186	-3%	259	225	-13%

Note: Data is subject to revision. Regional totals may not sum to statewide total. *Chinook figures exclude harvest before week 20.

Source: Alaska Department of Fish & Game.

2021 Harvest v. Projection

(Thousand Fish)

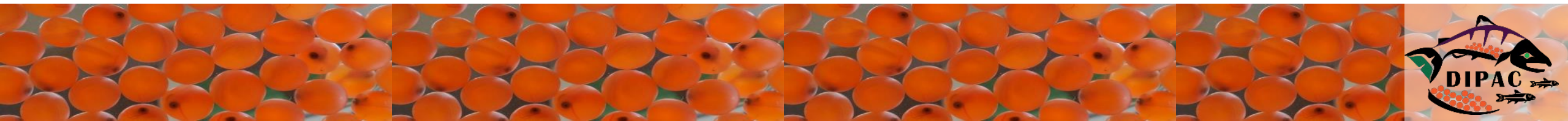
	Harvest	Projection	% Realized
Sockeye	54,184	46,577	116%
Pink	150,601	124,210	121%
Keta	11,510	15,272	75%
Coho	2,186	3,807	57%
Chinook	225	269	84%
Total	218,706	190,135	115%



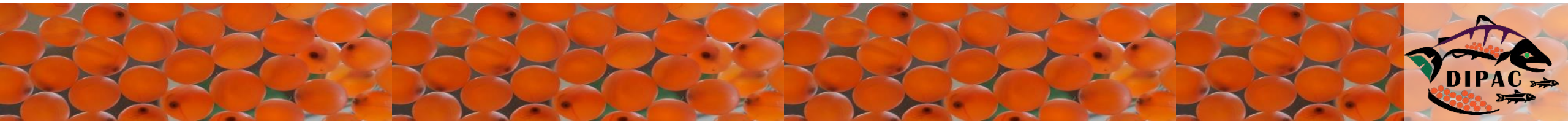
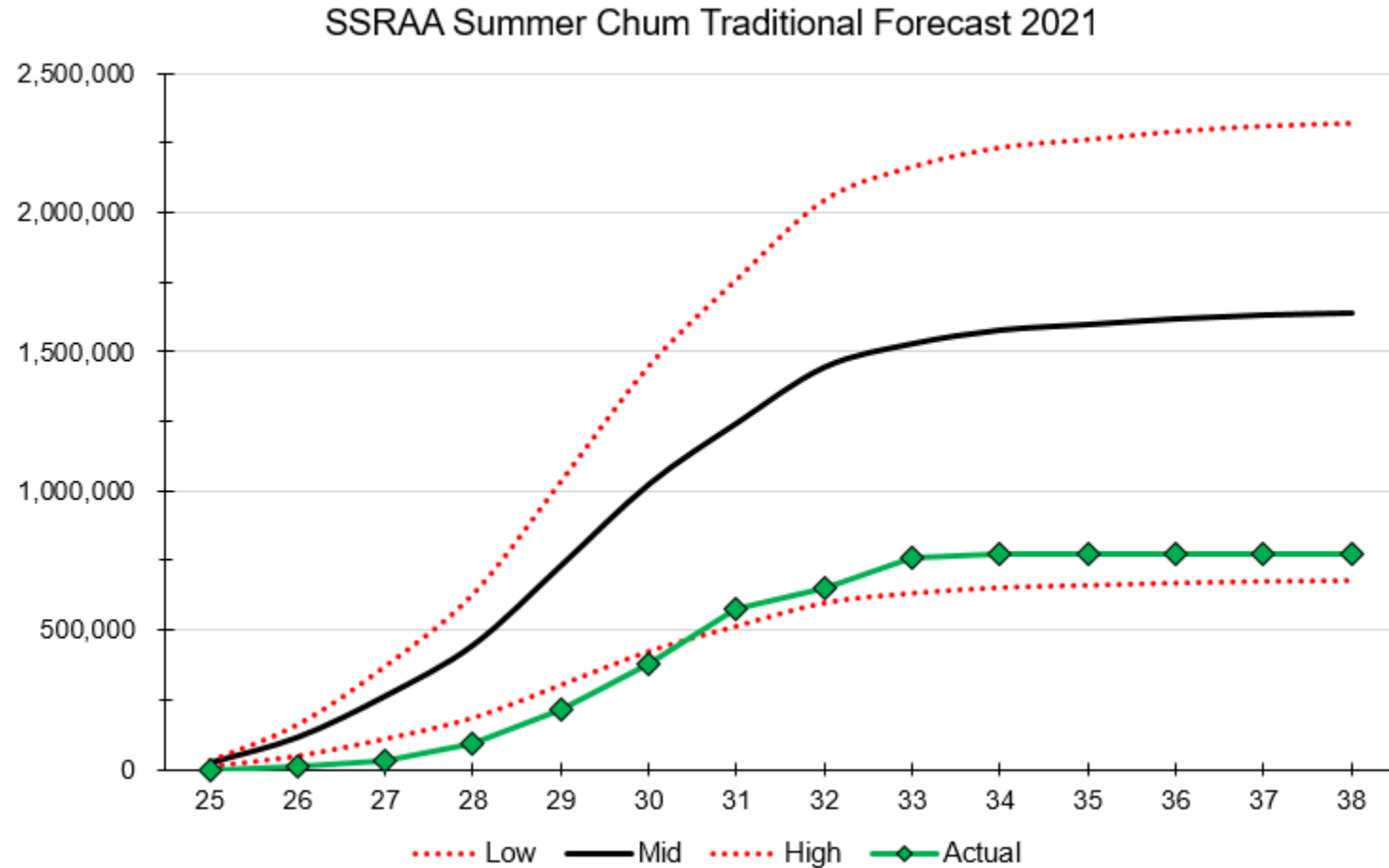
NSRAA: Preliminary Chum Harvest 2021

Site	% of Forecast
Deep Inlet	127%
Hidden Falls	73%
Southeast Cove	35%
Thomas Bay	63%
Crawfish Inlet	62%
Gunnuk Creek	38%
Total	87%

% of Return	Age 3	Age 4	Age 5	Age 6
Total %	8.0%	85.2%	6.6%	0.2%

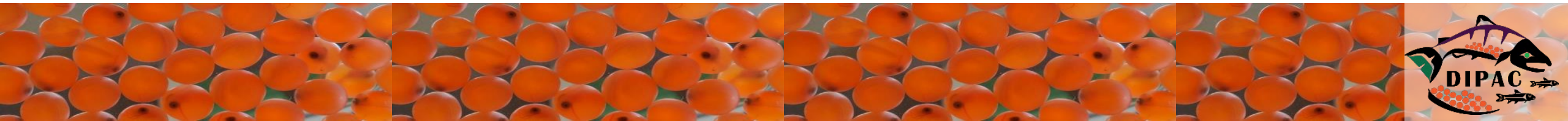


SSRAA: Preliminary Chum Harvest 2021



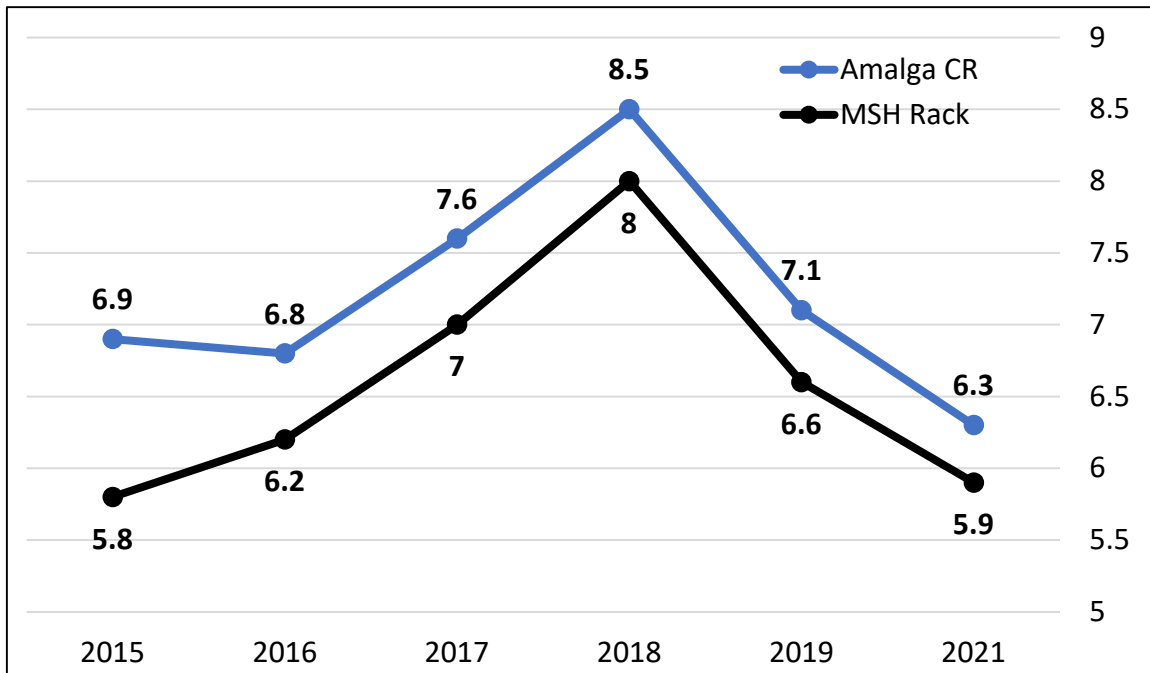
SSRAA: Preliminary 2021 Chum Age Composition

	Age 3	Age 4	Age 5
Anita	71%	28%	2%
Burnett	47%	52%	1%
Kendrick	68%	32%	0%
Nakat	49%	50%	1%
Neets	48%	50%	2%
P. Asumcion	52%	31%	

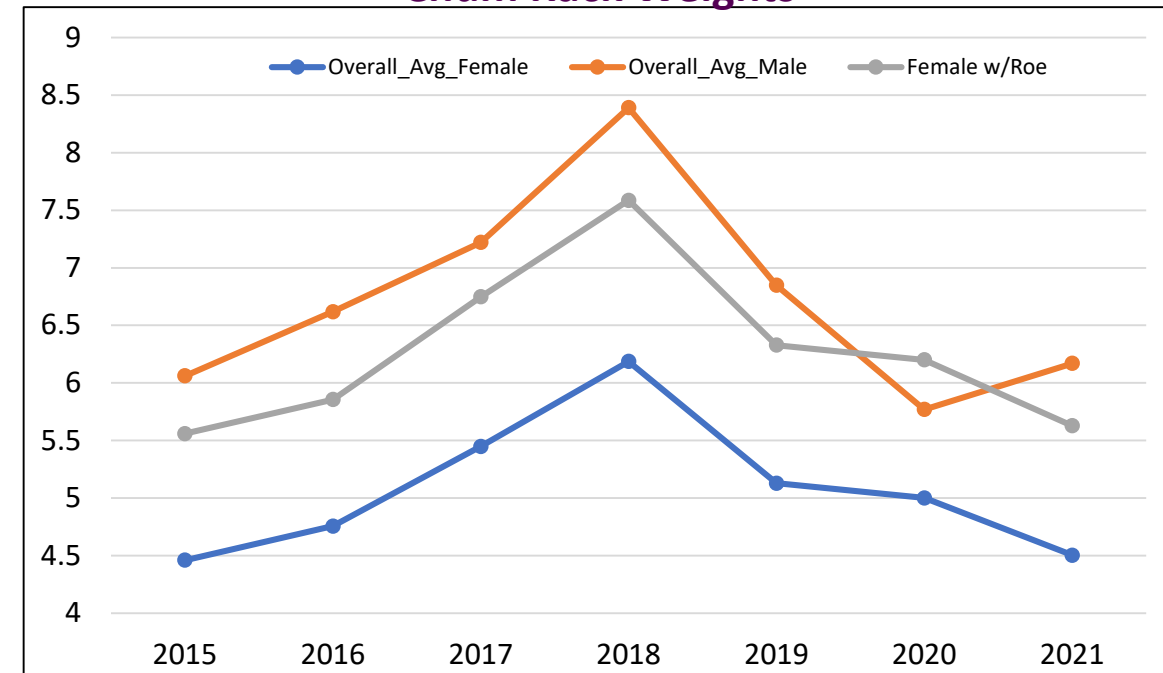


Chum Average Weights

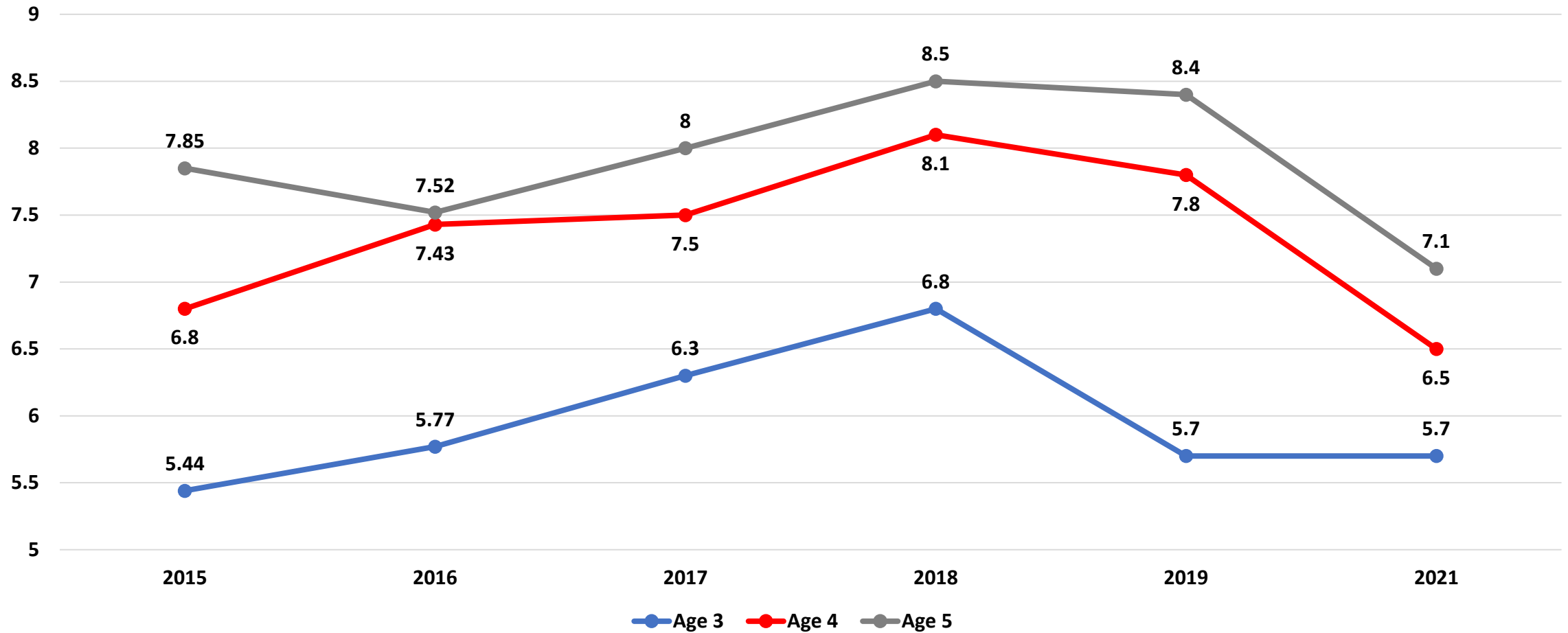
Return Year	Amalga CR	MSH Rack
2015	6.9	5.8
2016	6.8	6.2
2017	7.6	7.0
2018	8.5	8.0
2019	7.1	6.6
2021	6.3	5.9



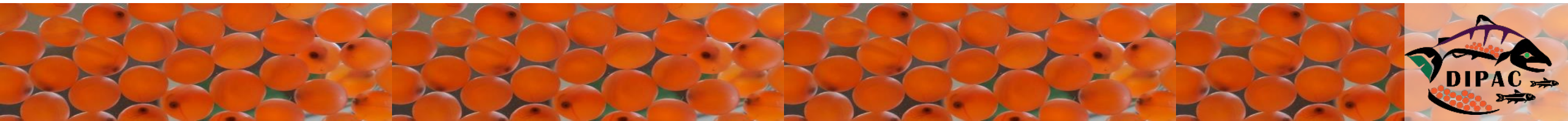
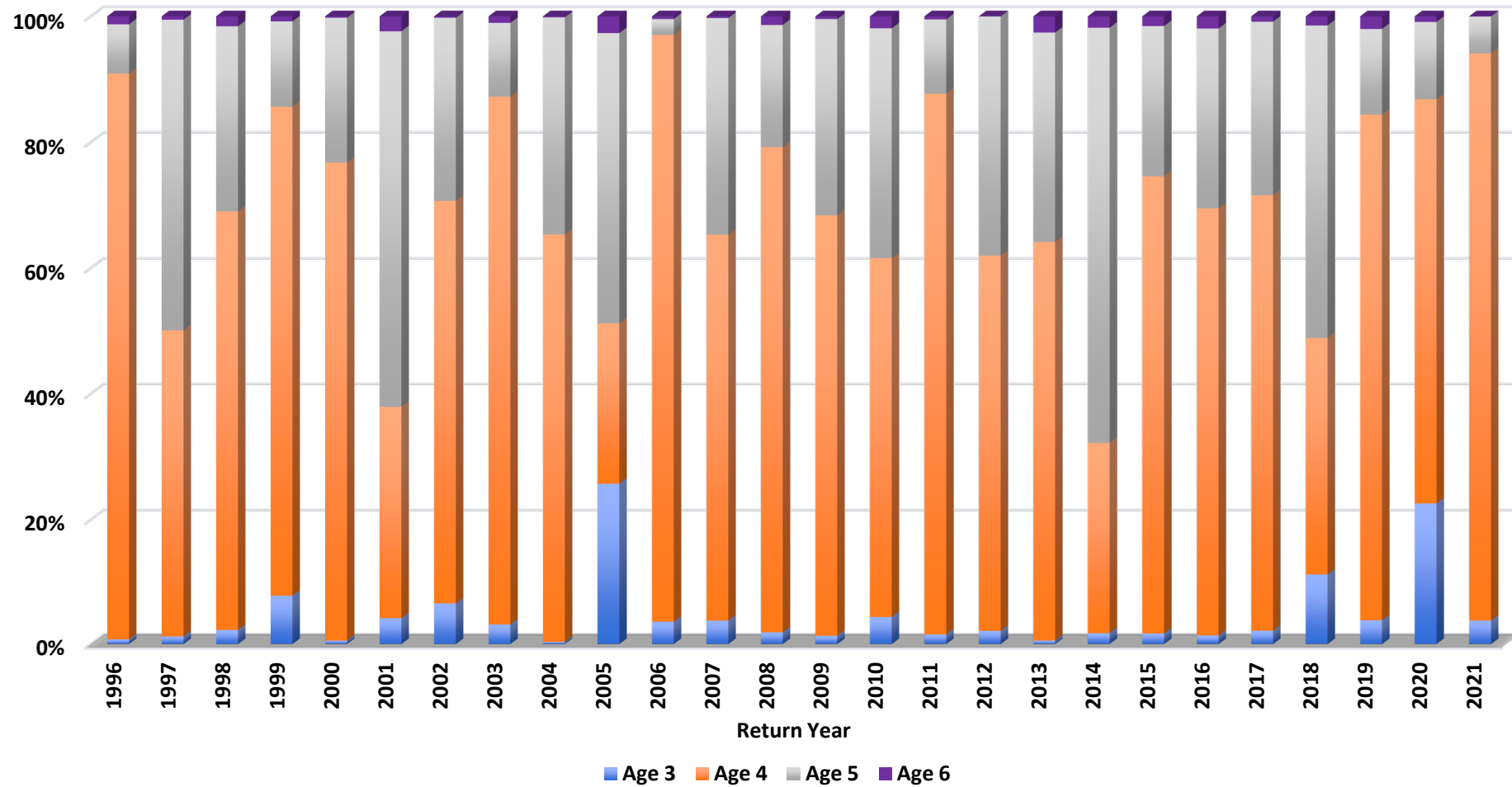
Chum Rack Weights



Chum Average Weights by Age



Chum: Shifting Age Composition

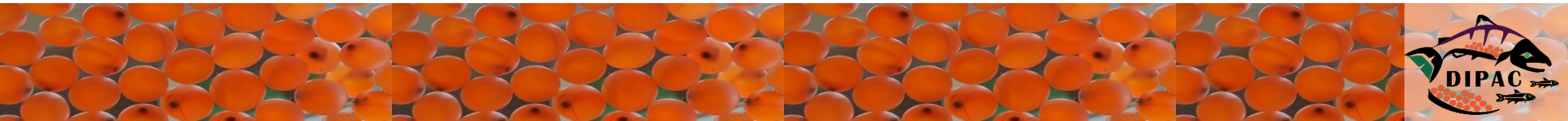


Sockeye



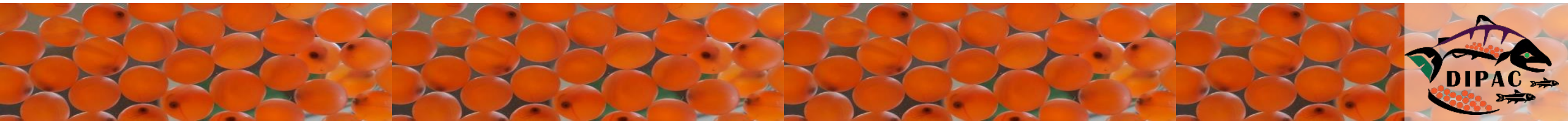
2021 Sockeye Return: Totals by Age

	Age-4	Age-5	Total
Actual:	13,100	31,100	44,200
Projected:	7,800	98,300	106,100
% of Projected:	168%	60%	42%



2021 Sockeye Return

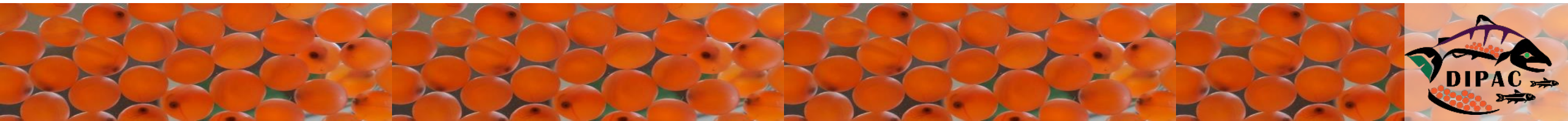
	Common Property	Cost Recovery	Broodstock ¹	Total
Actual:	25,500	11,600	7,000	44,200
Projected:	69,500	29,800	6,800	106,100
% of Projected:	37%	39%	100%	42%
1) Includes end-of-season unmarketable fish.				



2021 Sockeye Return:

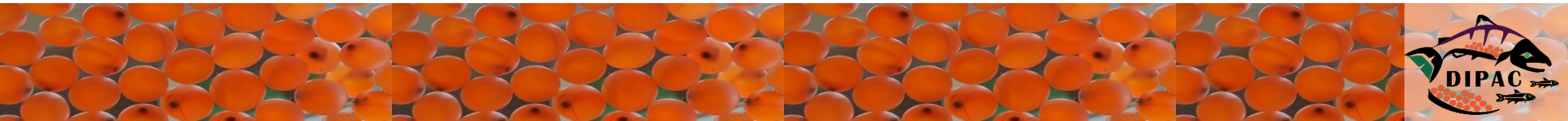
Contribution, Cost Recovery, & Harvest Shares

	CP Harvest	DIPAC Contribution	% DIPAC Contribution	Cost Recovery	Total Harvest
District 11 Gillnet	47,700	8,800	18%	11,600	20,400
Other Gillnet	91,700	7,600	8%	0	7,600
Seine	26,700	5,100	19%	0	5,100
Personal Use	4,000	4,000	100%	0	4,000
Broodstock					7,000
Total	170,100	25,500		11,600	44,200
Harvest Shares		69%		31%	

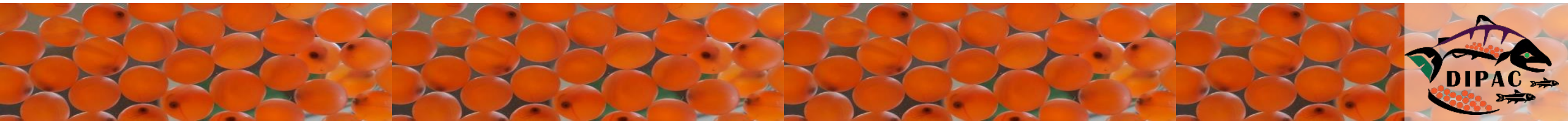
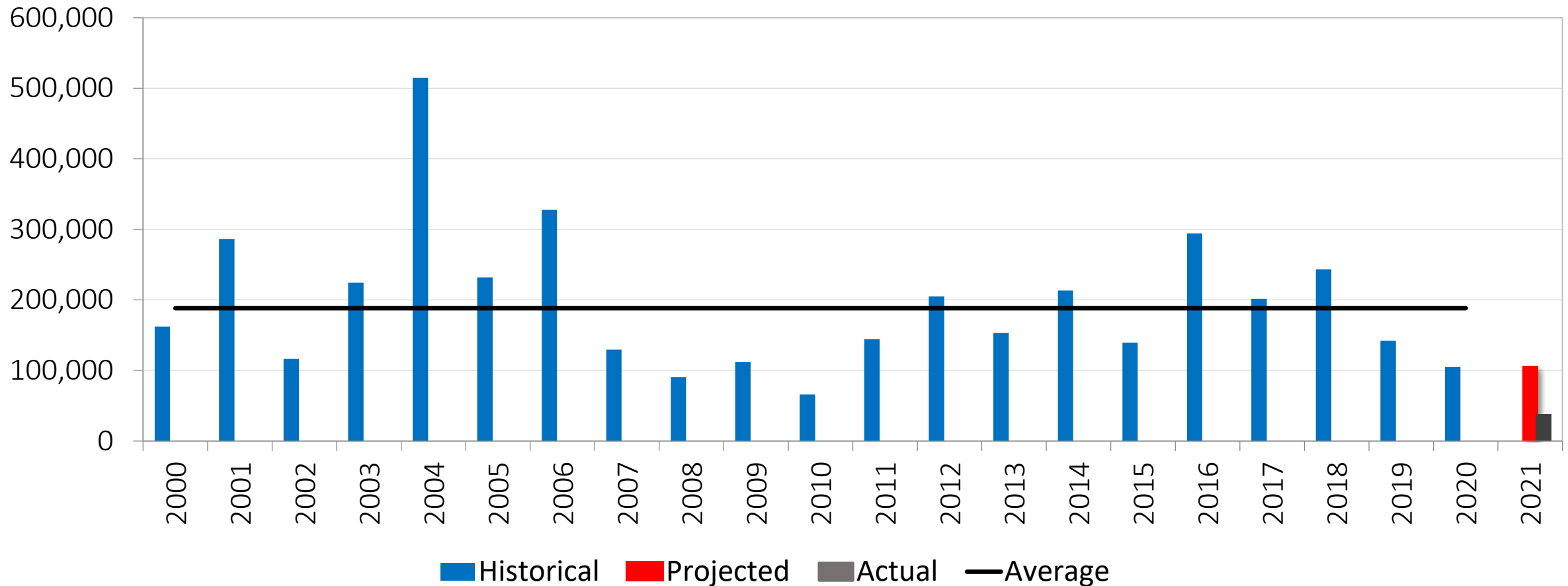


Sockeye Marine Survival

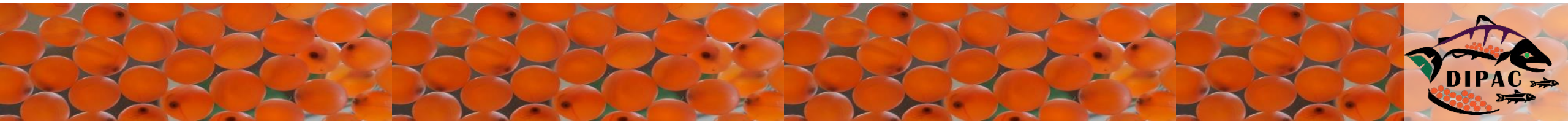
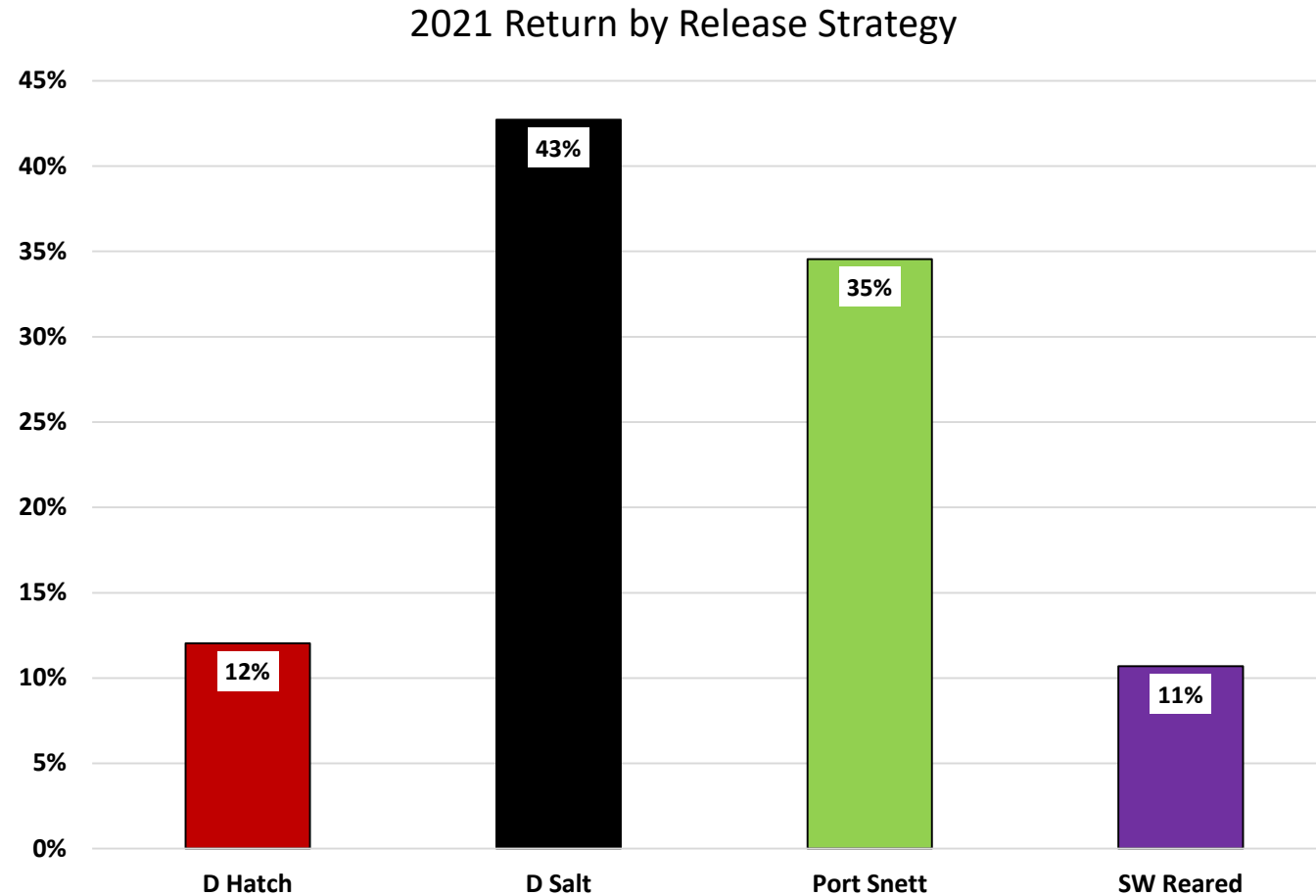
Broodyear	Age 3	Age 4	Age 5	Total
2013	0.13%	1.07%	0.29%	1.5%
2014	0.23%	2.60%	0.76%	3.6%
2015	0.00%	0.75%	0.26%	1.0%
2016	0.20%	0.93%	0.33%	1.5%
2017	0.11%	1.26%		1.4%
2018	0.01%			0.01%



2021 Sockeye Return: Actual vs. Projected Return



2021 Sockeye Returns by Release Strategy

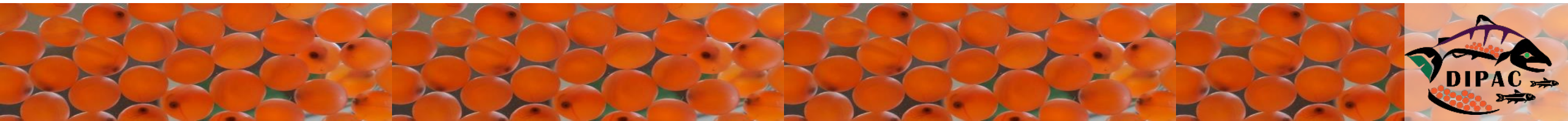


Chinook



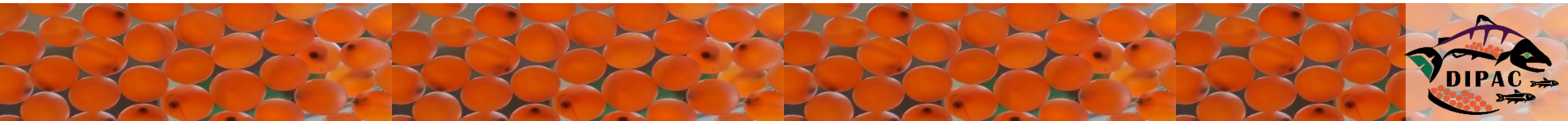
2021 Chinook Return

Juneau Program (large adults age 5 – 7)					
Troll	Gillnet & Seine	Marine Sport	Sport: Freshwater/Shoreline	Rack, CR, & Escape.	Total
260	470	580	1,900	510	3,700
				2021 Forecast	2,300
				% of Forecast	160%



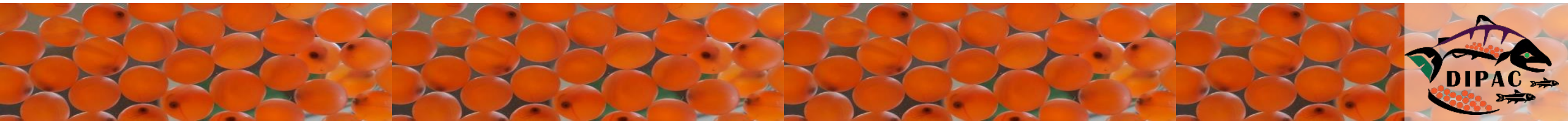
Chinook Marine Survival: All Sites

Broodyear	Age 3	Age 4	Age 5	Age 6	Total
2014	0.07%	0.14%	0.83%	0.05%	1.09%
2015	0.03%	0.51%	0.81%	0.03%	1.39%
2016	0.32%	0.21%	0.58%		1.11%
2017	0.02%	0.19%			0.21%
2018	0.06%				0.06%

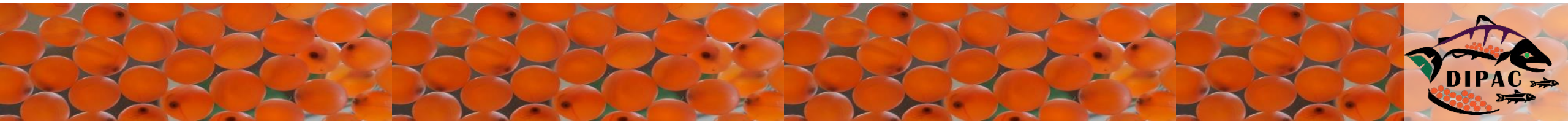


Chinook: Release Site Marine Survival

Release Site	% Marine Survival
Auke Bay	1.2%
Fish Creek	0.7%
Lena Cove	1.2%
Macaulay	1.3%
Thane	1.2%

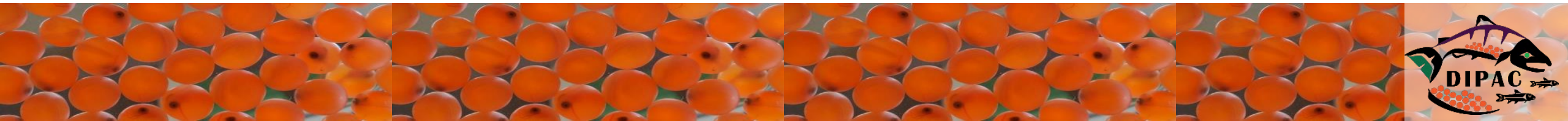


Coho

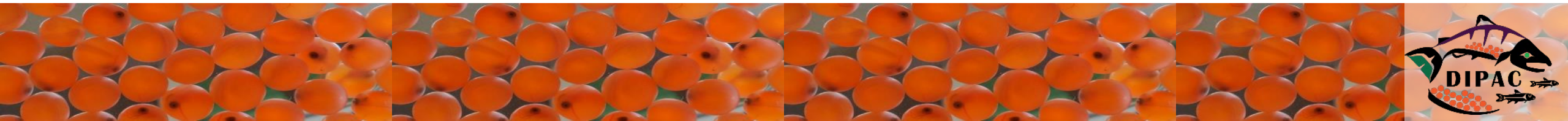


Coho Returns

Troll	Gillnet & Seine	Marine Sport	Gastineau Shoreline	Cost Recovery	Brood & Donations	Total	% Marine Survival
5,500	11,800	1,300	8,000	15,100	1,100	42,800	4.3%
					2021 Forecast	44,000	4.4%
					% of Forecast	97%	

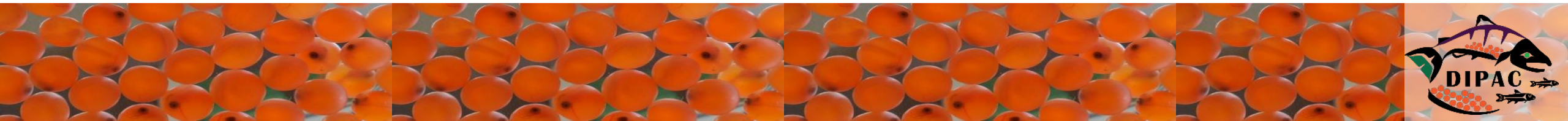
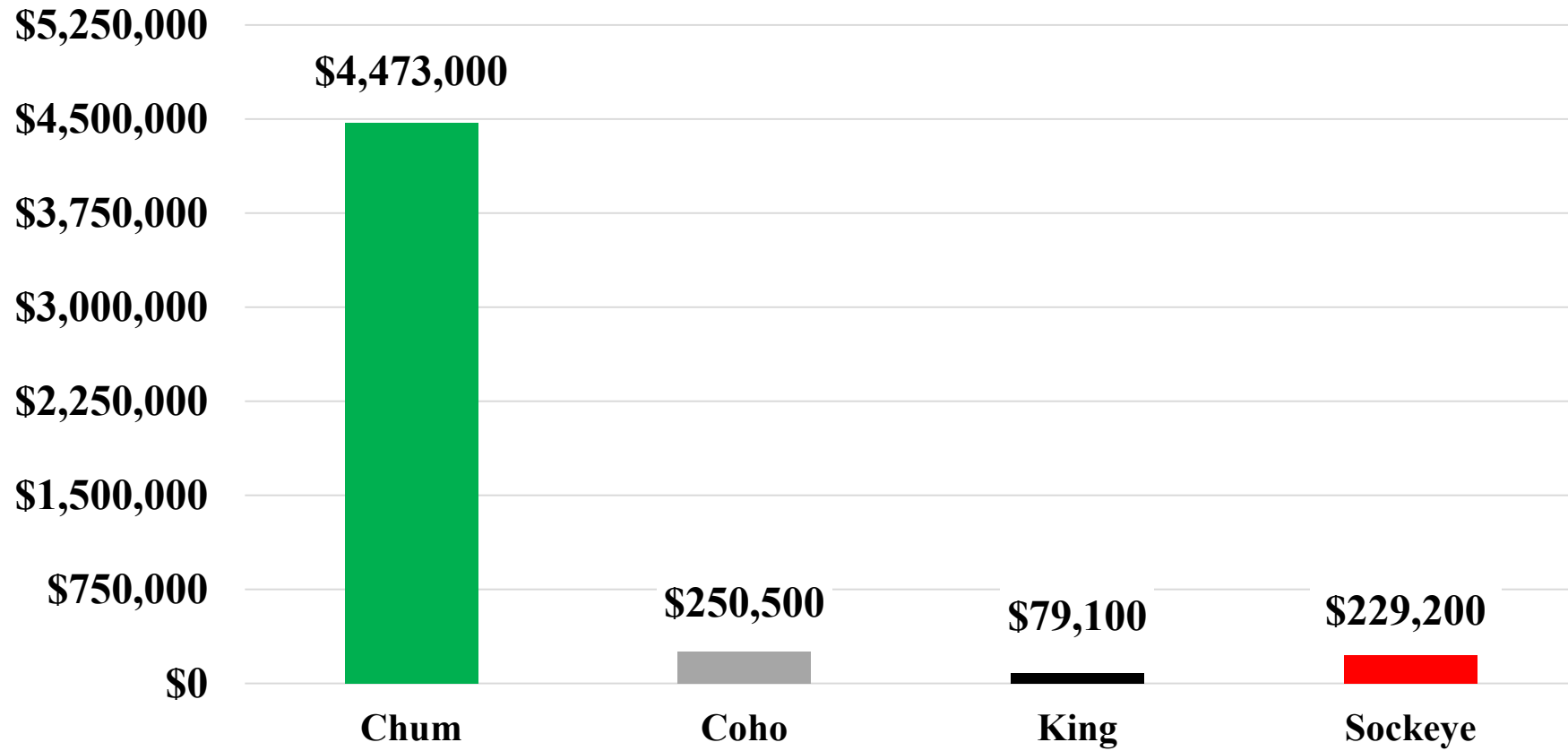


Estimated Value (\$) Contributions

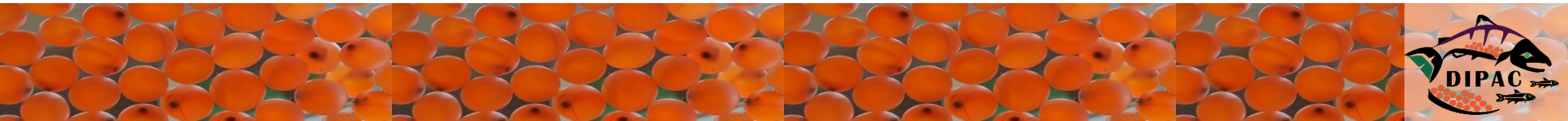
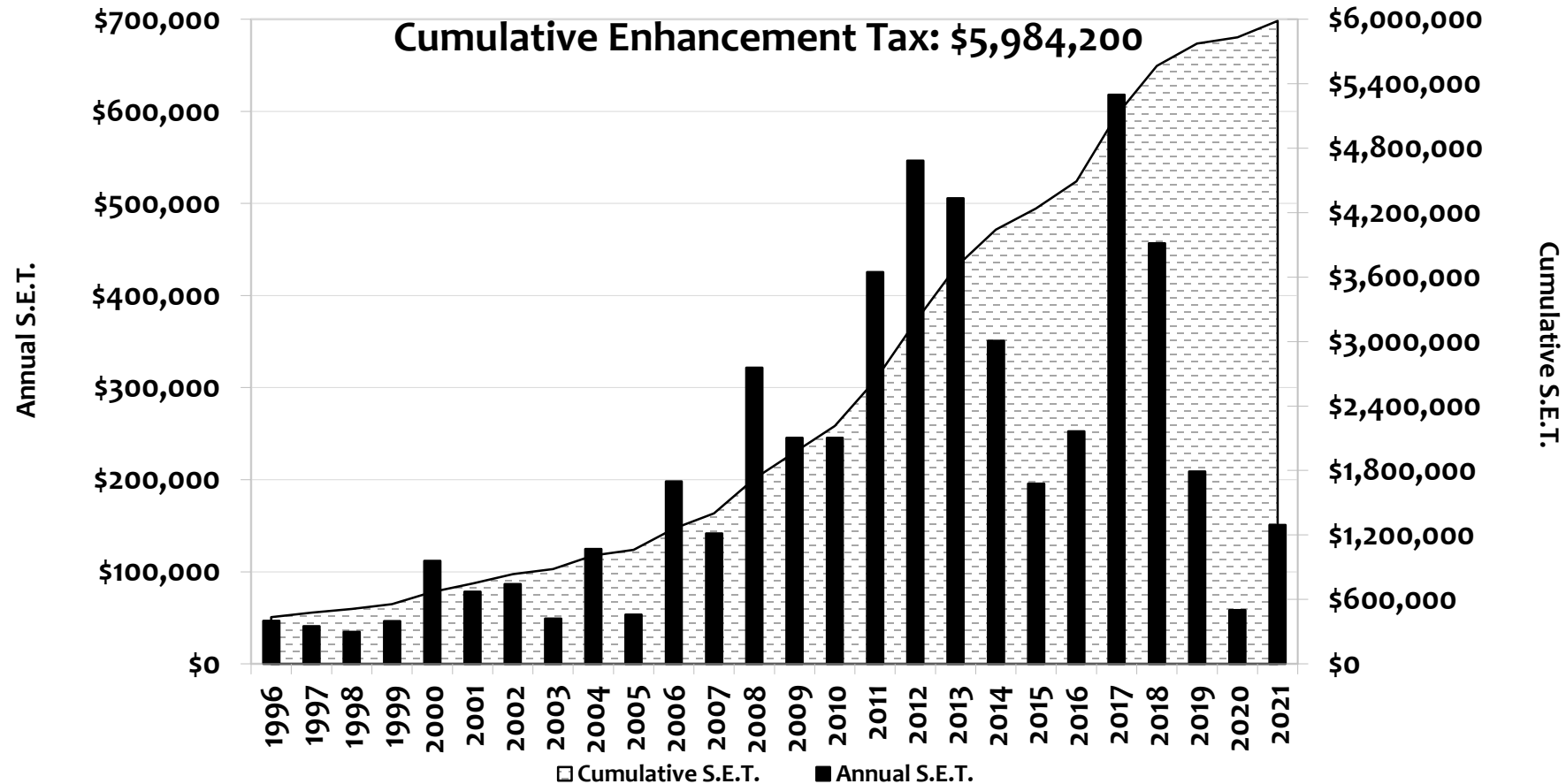


2021 Contributions

2021 Ex-Vessel Values
From DIPAC Salmon Enhancement Projects
Total Value: \$5,031,800

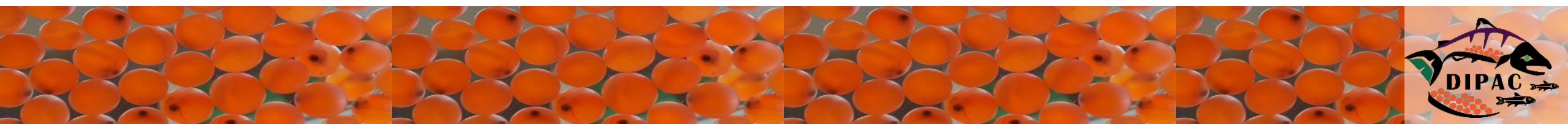
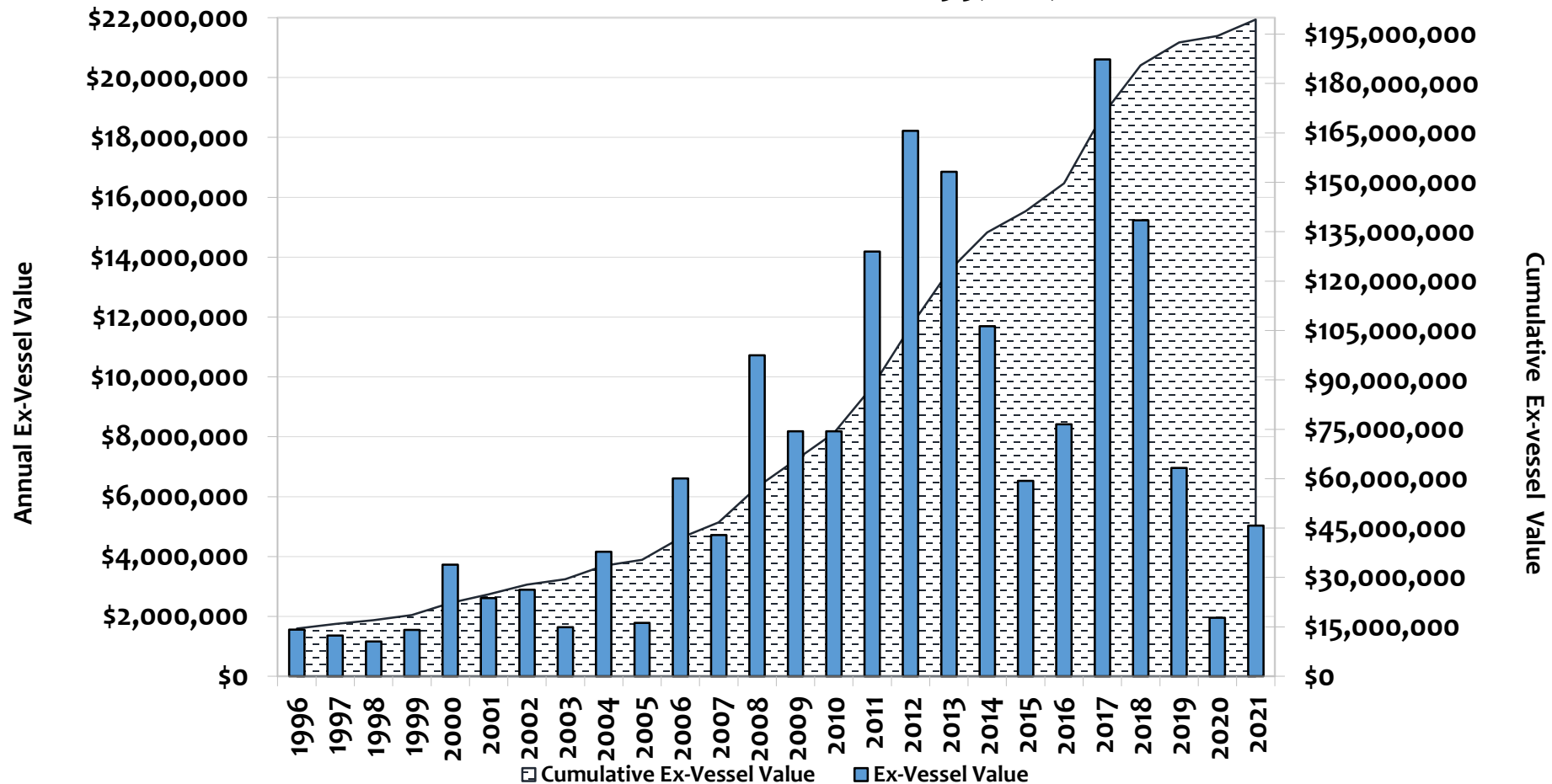


Salmon Enhancement Tax on DIPAC Salmon Contributions



DIPAC Salmon Contributions

Cumulative Ex-Vessel Value: \$199,472,200

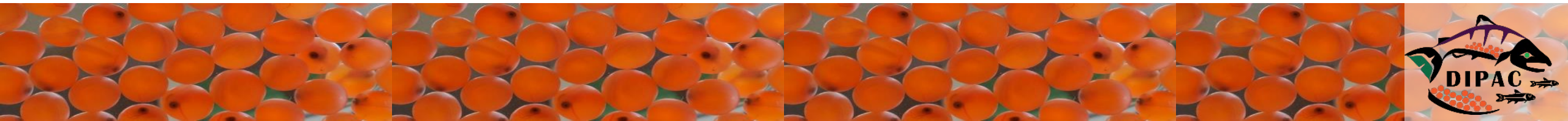


2021 Preliminary Value by Agency & Gear

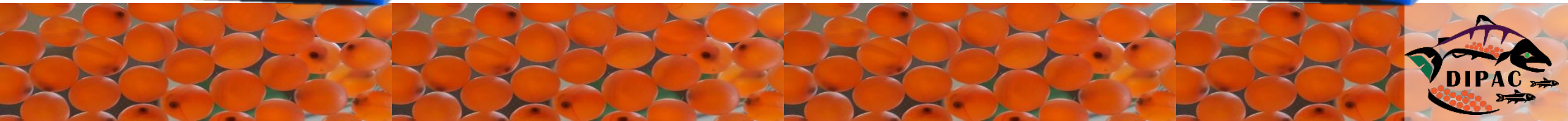
	Troll		Gillnet		Seine		Total
NSRAA	\$	5,748,072	\$	2,490,136	\$	9,292,702	\$ 17,530,910
SSRAA	\$	2,953,571	\$	3,798,791	\$	5,575,033	\$ 12,327,395
DIPAC	\$	152,044	\$	4,748,640	\$	131,597	\$ 5,032,281
AKI	\$	682,165	\$	8,896	\$	28,221	\$ 719,283
SSSC	\$	246,390	\$	30,268	\$	78,402	\$ 355,059
TOTAL	\$	9,782,242	\$	11,076,731	\$	15,105,956	\$ 35,964,929
		27%		31%		42%	100%

NSRAA includes SJ at Deep Inlet (AKI Chinook, coho only)

SSSC chum estimate from NSRAA otolith sampling

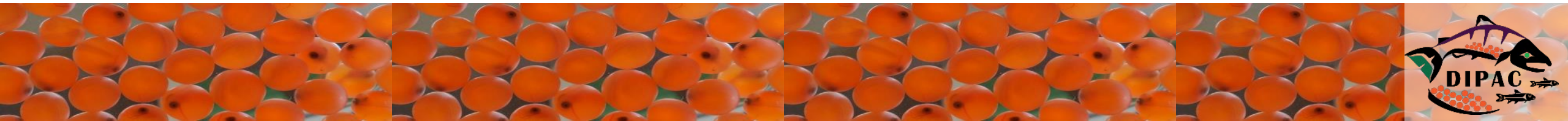


2022 Forecast



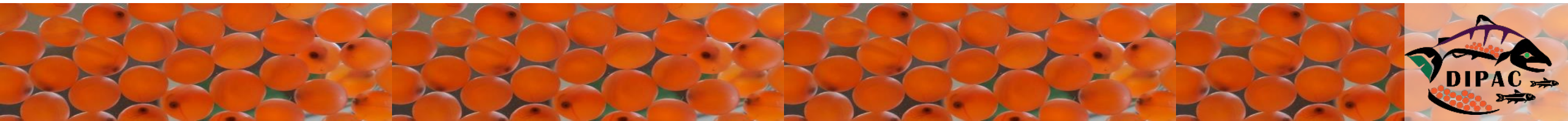
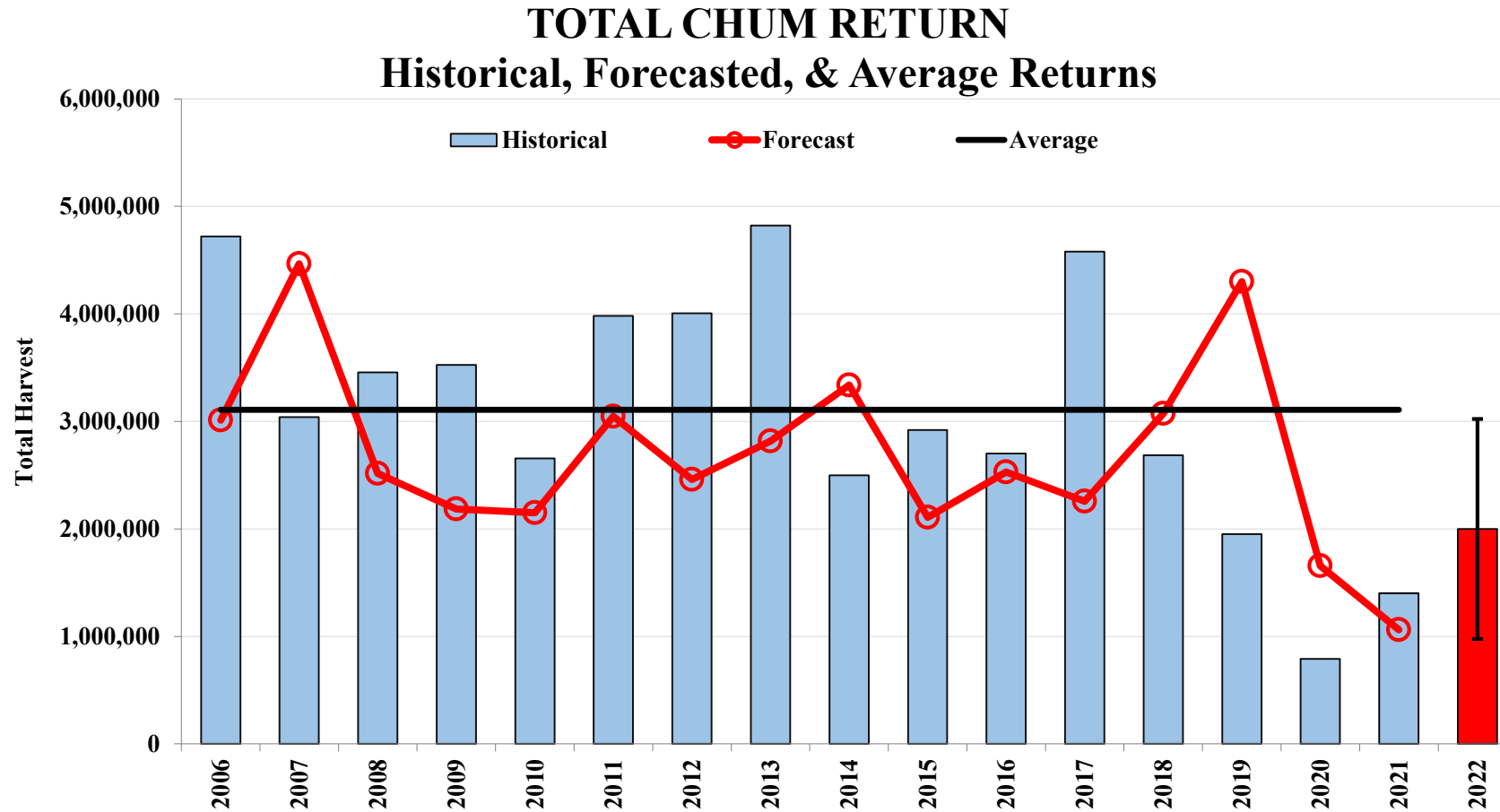
2022 Preliminary Chum Forecast

	Low End	Mid Point	High End	Common Property	Cost Recovery	Brood
Taku/Stephens	220,700	524,000	827,400	274,300	59,800	190,000
Lynn Canal/ Amalga	755,100	1,475,000	2,195,000	992,300	483,000	
Total	975,800	1,999,000	3,023,000	1,267,000	542,800	



2022 Chum Forecast

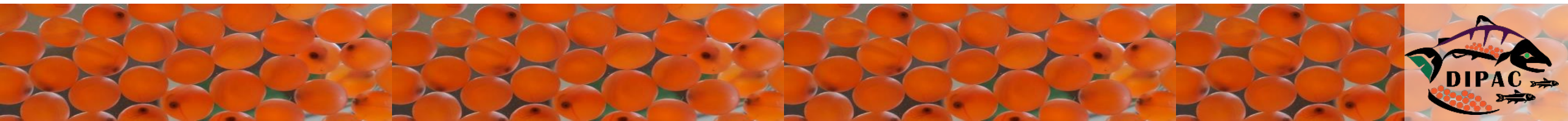
Historical & Projected Returns



2022 Sockeye Forecast

	Low End	Mid Point	High End
Age 5	0	13,000	29,000
Age 4	34,200	47,900	61,700
Total	34,200	60,900	90,600

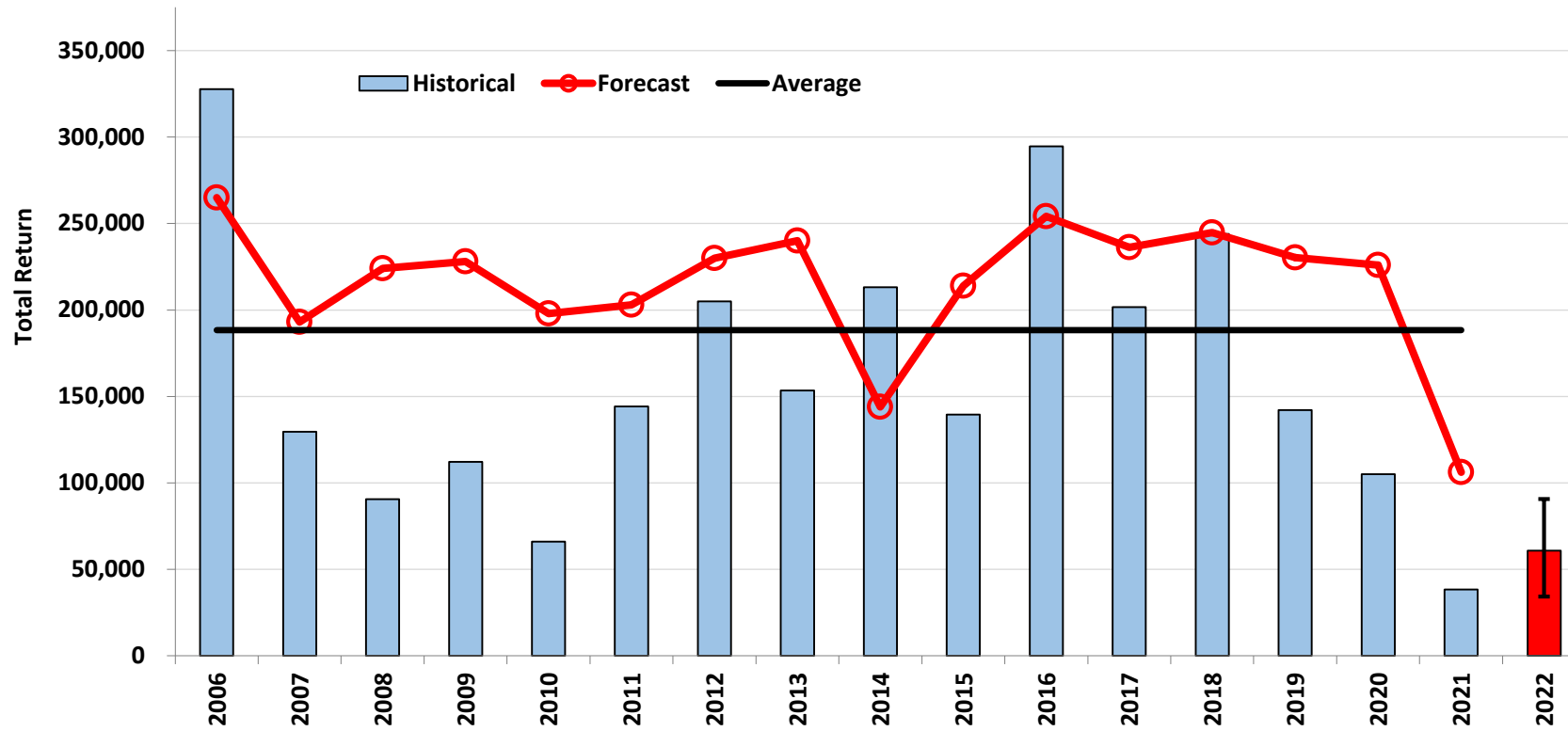
Harvest Share Goal		Average Harvest Shares	
70% CP:	38,000	51% CP:	27,100
30% CR:	16,100	49% CR:	27,000
Broodstock:	6,800	Broodstock:	6,800



2022 Sockeye Forecast

Historical & Projected Returns

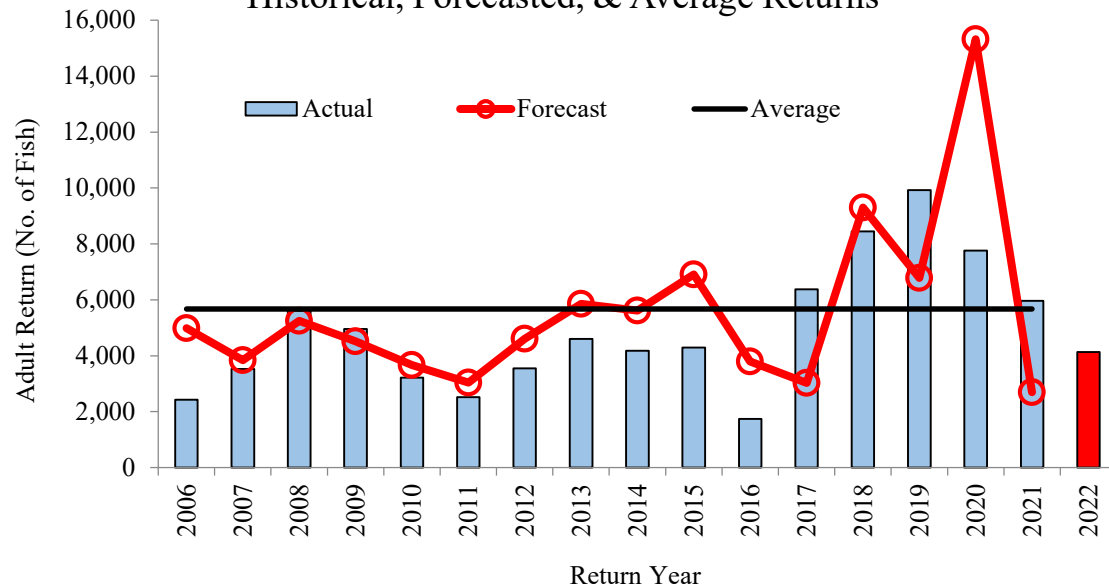
DIPAC SOCKEYE SALMON
Historical, Forecasted, & Average Returns



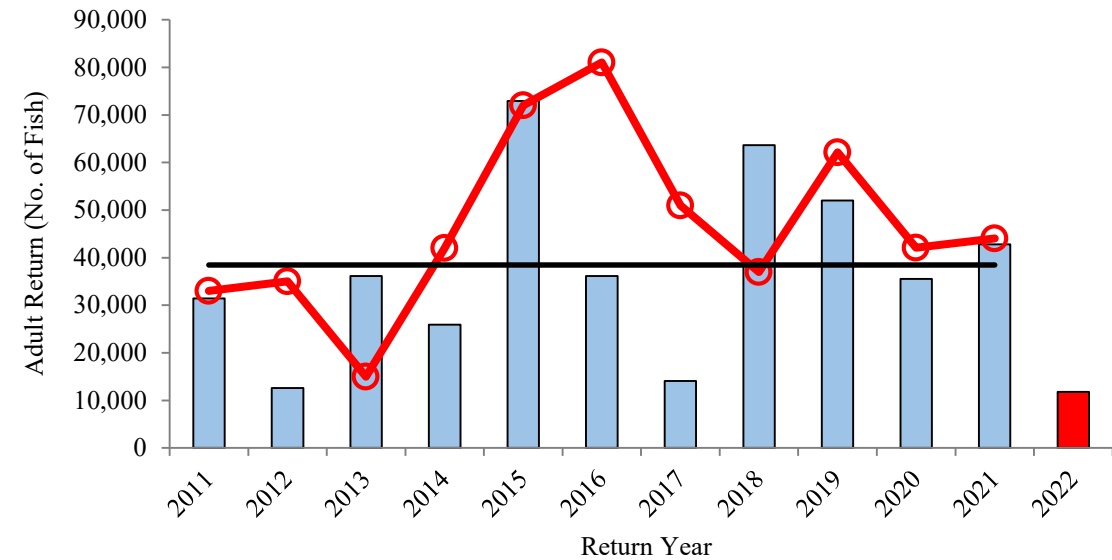
2022 Chinook & Coho Forecast

	Number Returning	Marine Survival
Chinook (large adults, ages 5-7)	3,900	0.2%
Coho	11,800	3.9%

TOTAL KING RETURN
Historical, Forecasted, & Average Returns



TOTAL COHO RETURN
Historical, Forecasted, & Average Returns





Thank You.