

2019 Post Season Review Ketchikan Management Area



Purse Seine
Districts 1-4

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Commercial Fisheries - Ketchikan

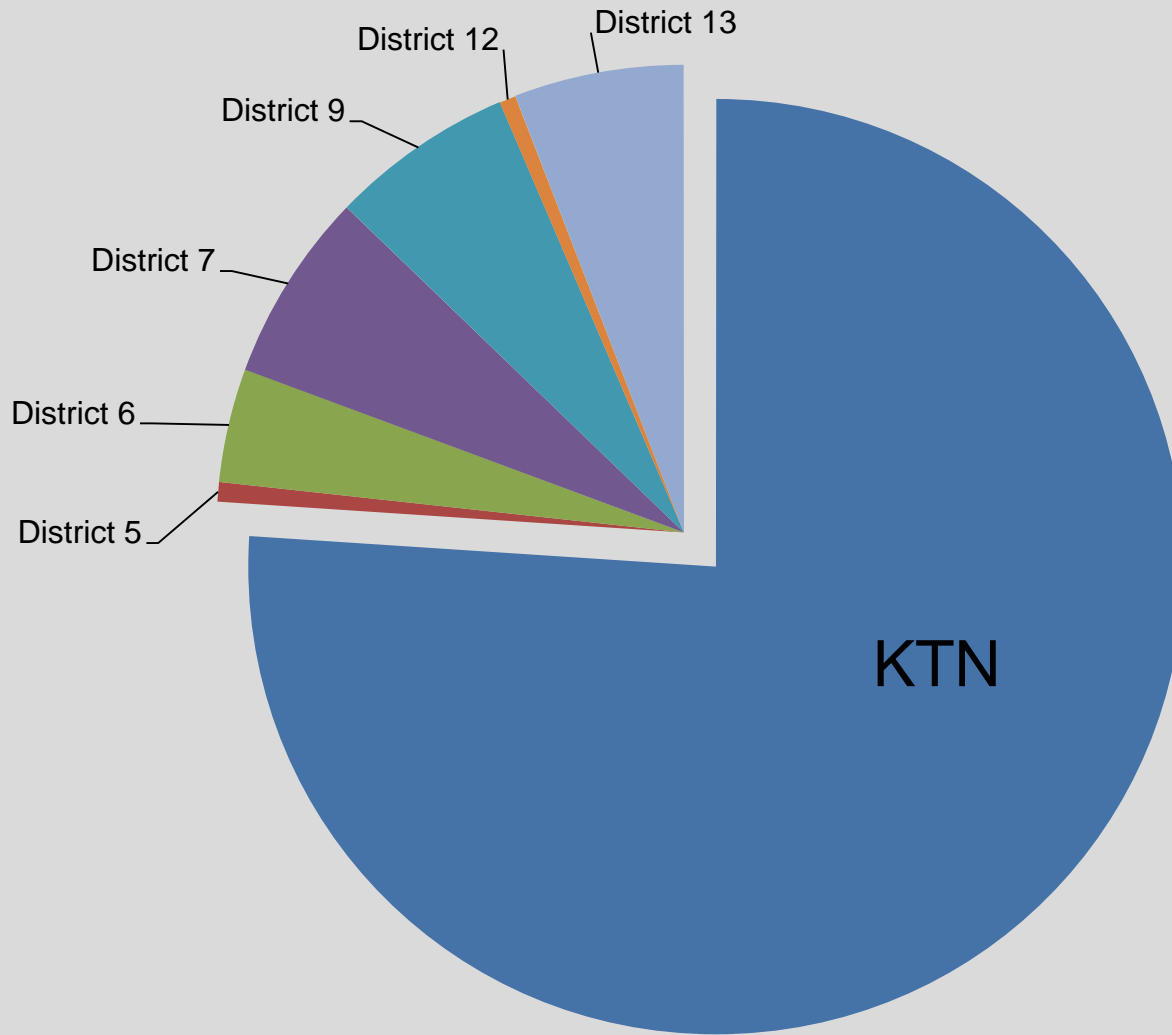
Purse Seine Catch – All Districts in Southeast Traditional Harvest Only – no THA's

District	Chinook >28"	Sockeye	Coho	Pink	Chum	Total	Number of Permits
101	732	38,093	24,809	3,507,893	224,564	3,796,091	132
102	584	33,856	41,250	4,166,382	398,866	4,640,938	145
103	218	24,193	31,981	2,819,188	113,970	2,989,550	107
104	7,176	270,993	77,593	3,528,011	175,212	4,058,985	112
105	1	348	400	124,073	21,836	146,658	10
106	26	6,531	12,492	724,672	24,733	768,454	48
107	450	9,754	3,259	1,209,405	206,300	1,429,168	90
109	165	7,414	24,789	1,169,458	110,799	1,312,625	79
110	0	0	0	***	***	***	***
112	20	5,674	884	104,835	47,223	158,636	74
113	171	36,650	12,324	1,083,004	1,097,926	2,230,075	169
Total	9,543	433,506	229,781	18,436,921	2,421,429	21,531,180	247

Total boats Ketchikan = 203

Total boats all Southeast = 247

Southeast Alaska Purse Seine Traditional Pink Salmon Harvest - 2019



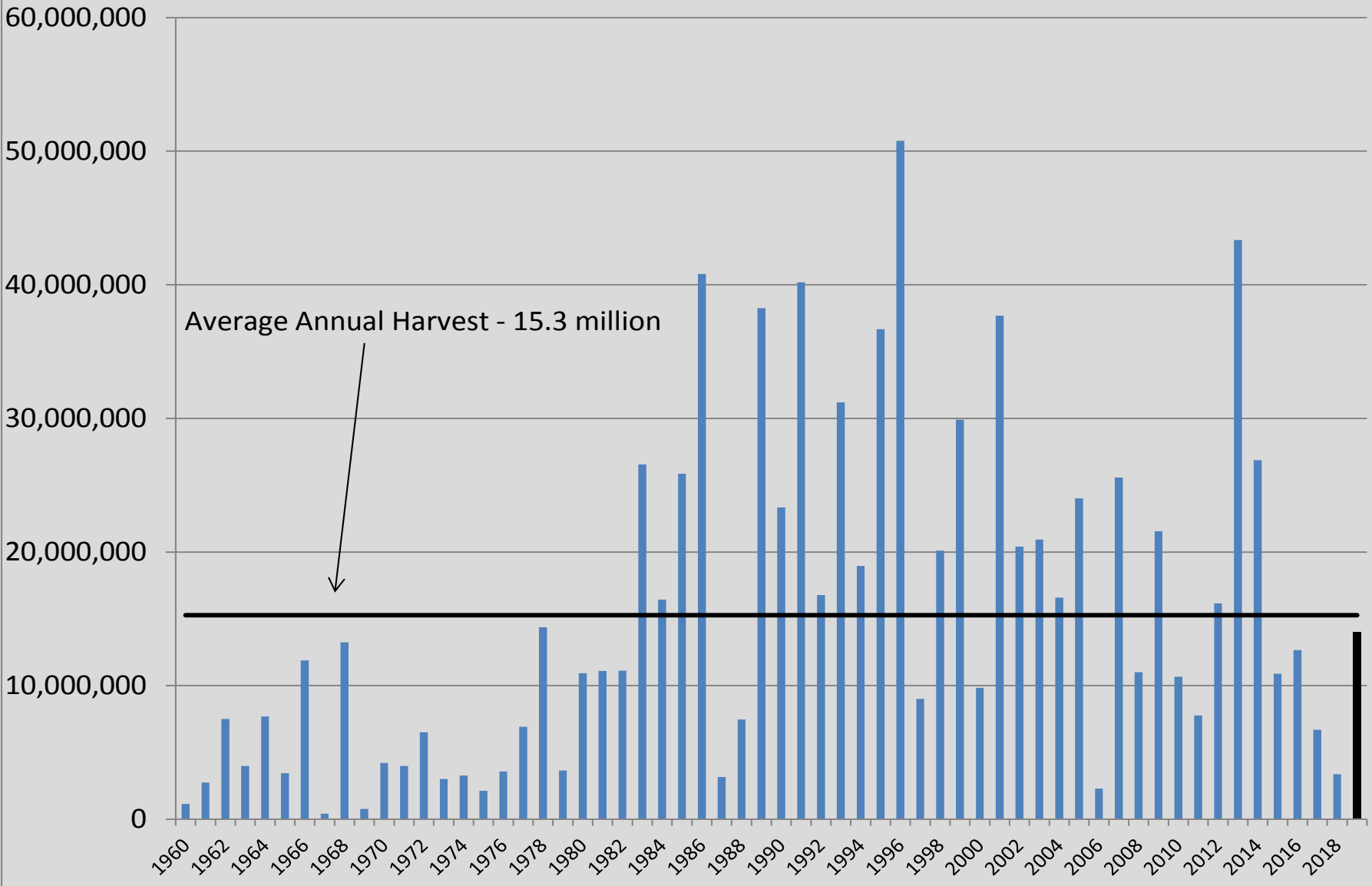


2019 Ketchikan Area Commercial Net Harvests Purse Seine and Gillnet Common Property Fisheries - Districts 1-4

Fishery	Chinook	Sockeye	Coho	Pink	Chum	Totals
PS 101	732	38,093	24,809	3,507,893	224,564	3,796,091
PS 102	584	33,856	41,250	4,168,382	398,866	4,642,938
PS 103	218	24,193	31,981	2,819,188	113,970	2,989,550
PS 104	7,176	270,993	77,593	3,528,011	175,212	4,058,985
GN 101	1,313	15,986	28,800	204,971	182,457	433,527
Carroll THA GN	582	0	0	0	3	585
Carroll THA SN	1,017		9	11	59	1,096
Neets Bay THA GN	3,092	5	0	44	428	3,569
Neets Bay THA PS	6,027	14	6	131	979	7,157
Nakat THA GN	67	218	9,056	7,616	89,385	106,342
Kendrick THA PS	59	862	753	16,248	82,627	100,549
Annette Island GN	505	2,255	14,169	307,147	58,249	382,325
Annette Island PS	188	7,887	3,433	932,514	39,437	983,459
Totals	21,560	394,362	231,859	15,492,156	1,366,236	17,506,173

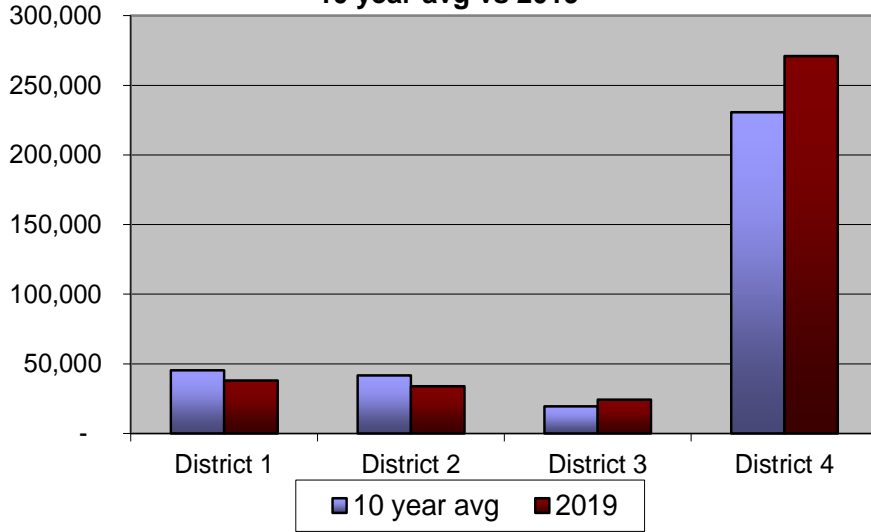


Ketchikan Management Area Traditional Purse Seine Pink Salmon Harvest, 1960-2019

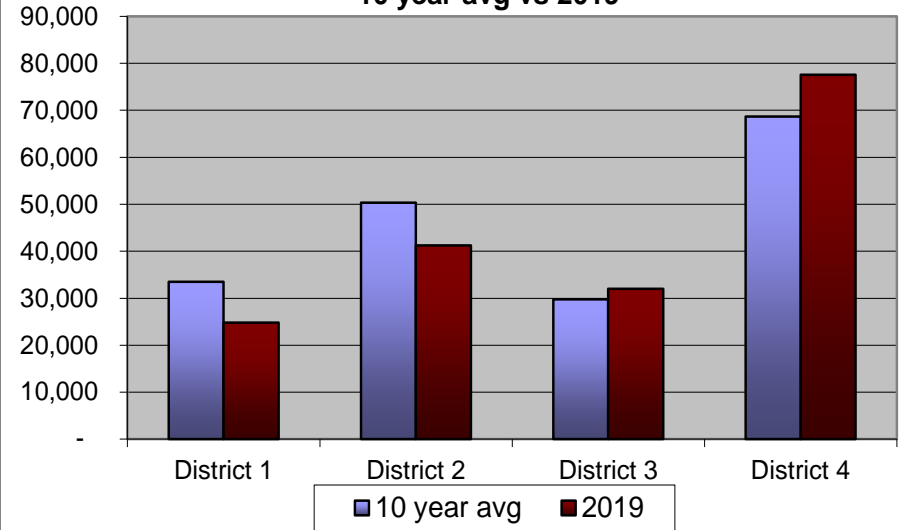


Purse Seine Traditional Harvest All Districts by Species

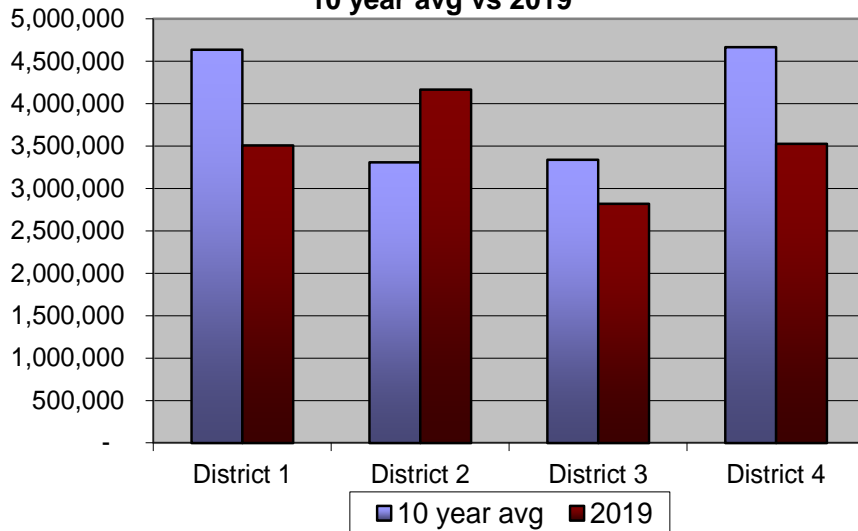
**Purse Seine Sockeye Harvest
10 year avg vs 2019**



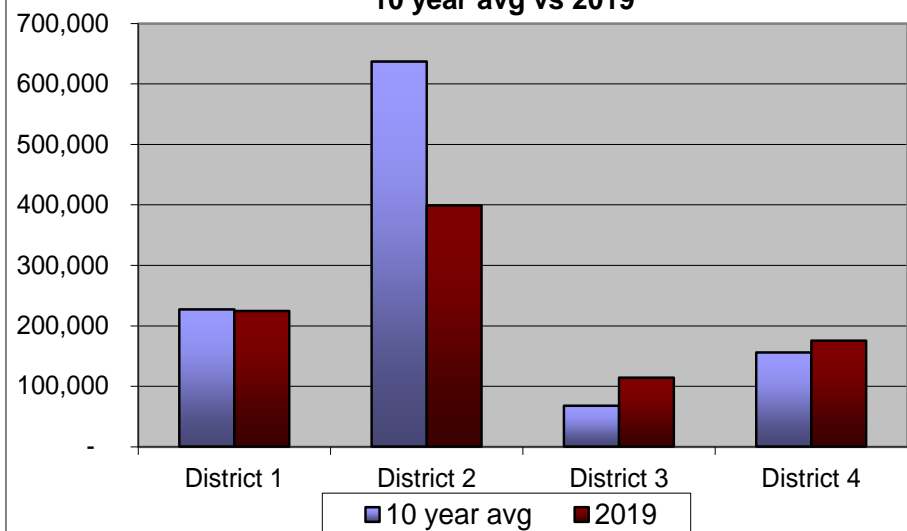
**Purse Seine Coho Harvest
10 year avg vs 2019**



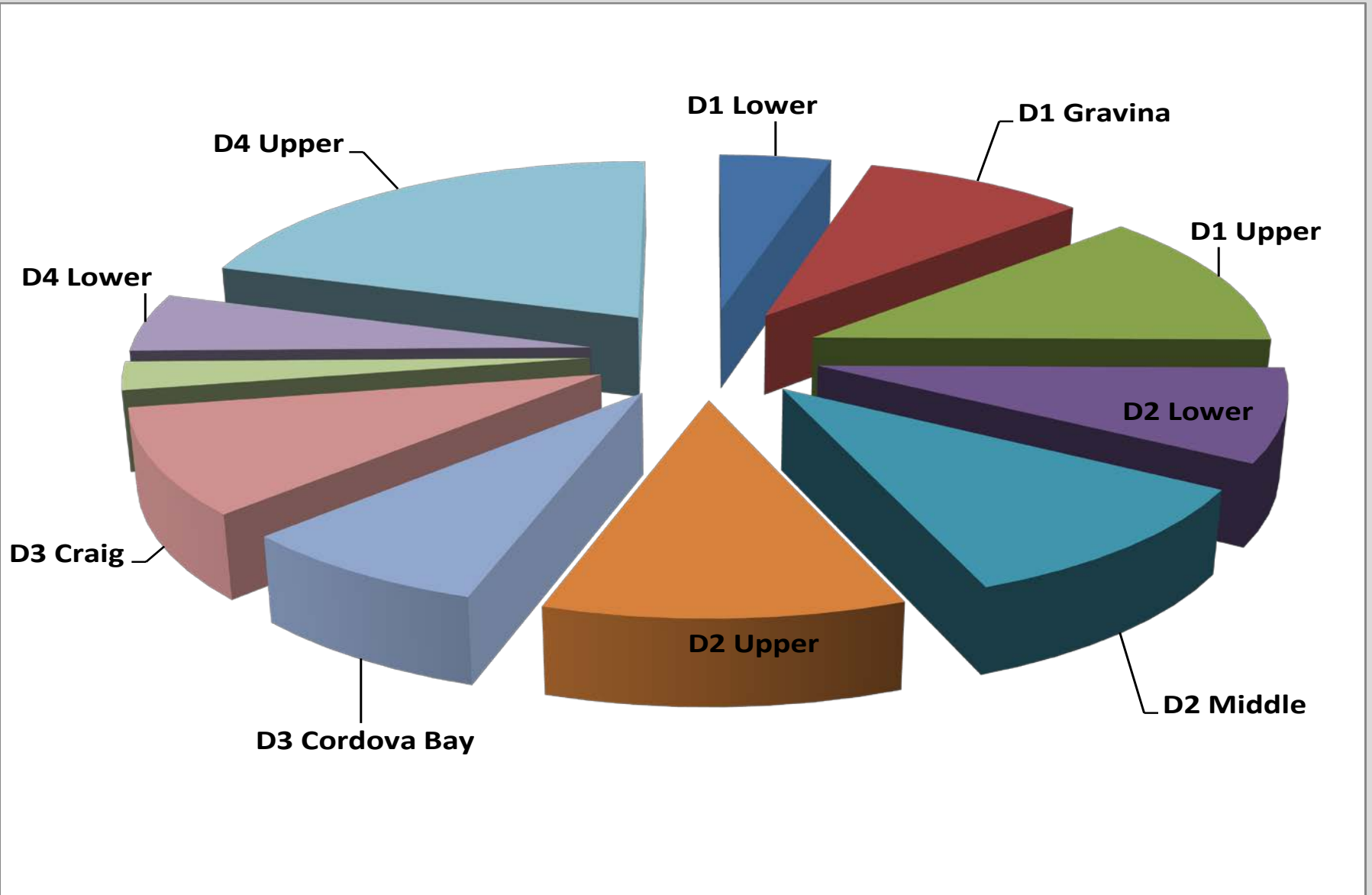
**Purse Seine Pink Harvest
10 year avg vs 2019**



**Purse Seine Chum Harvest
10 year avg vs 2019**



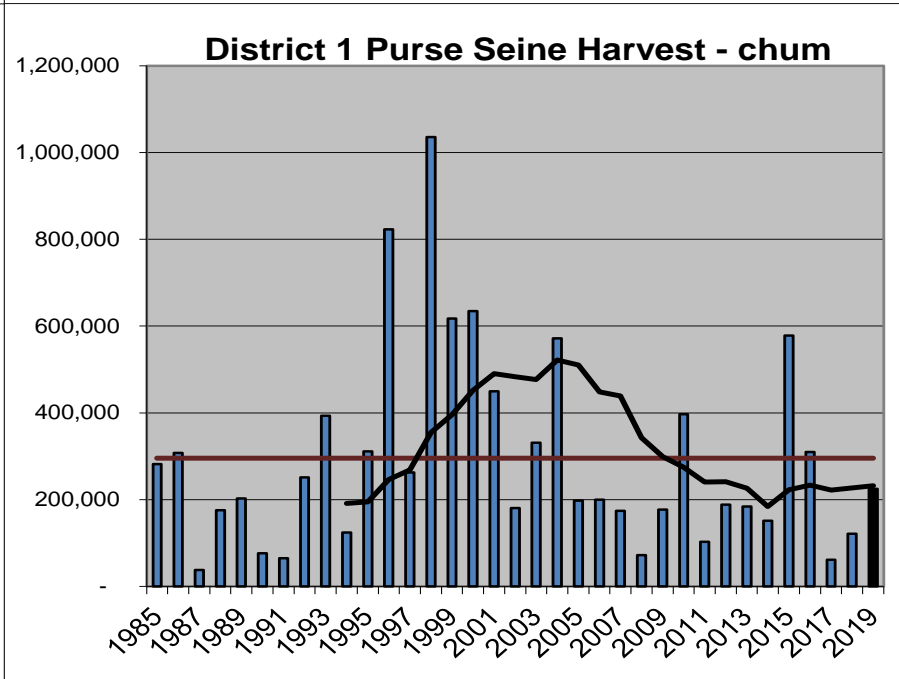
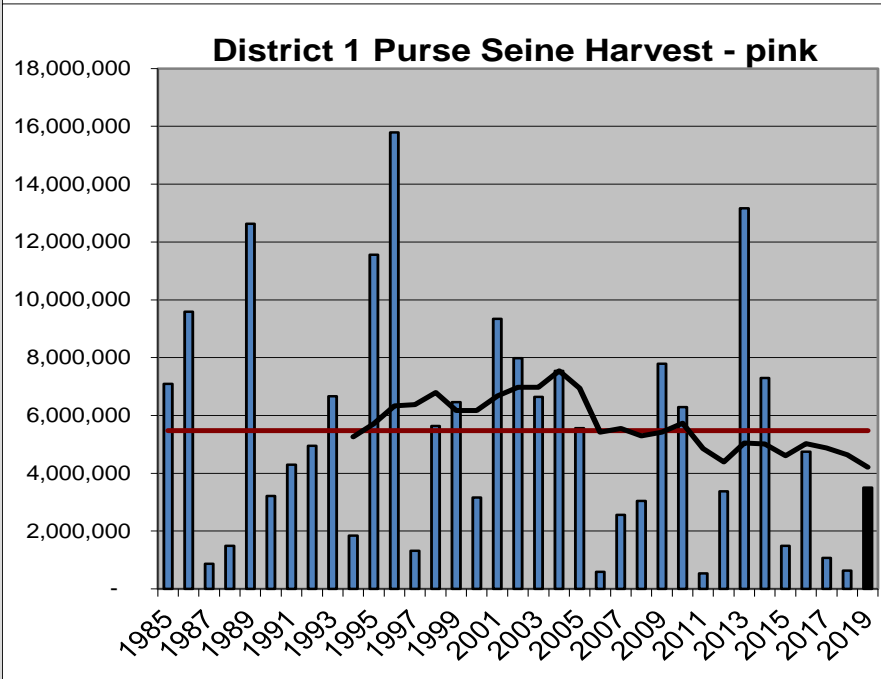
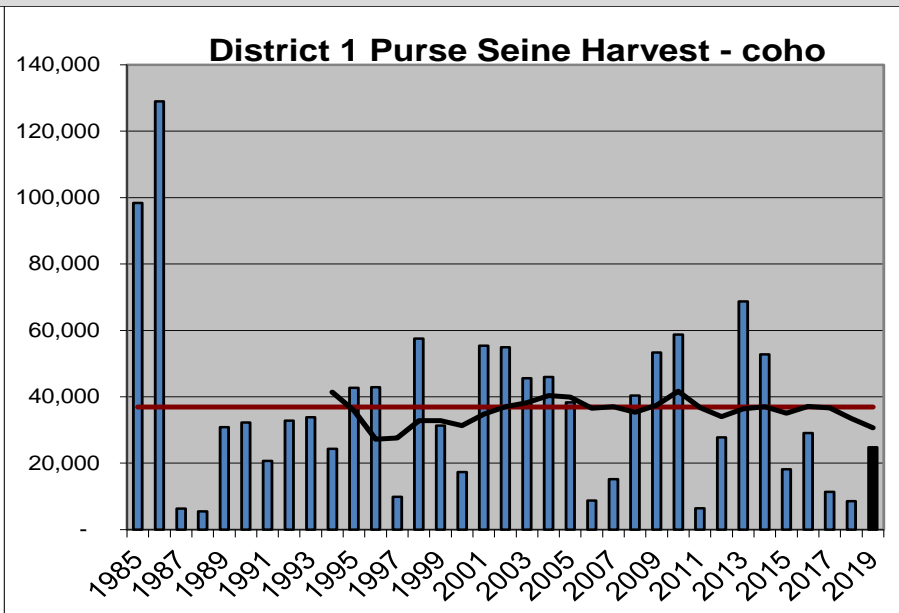
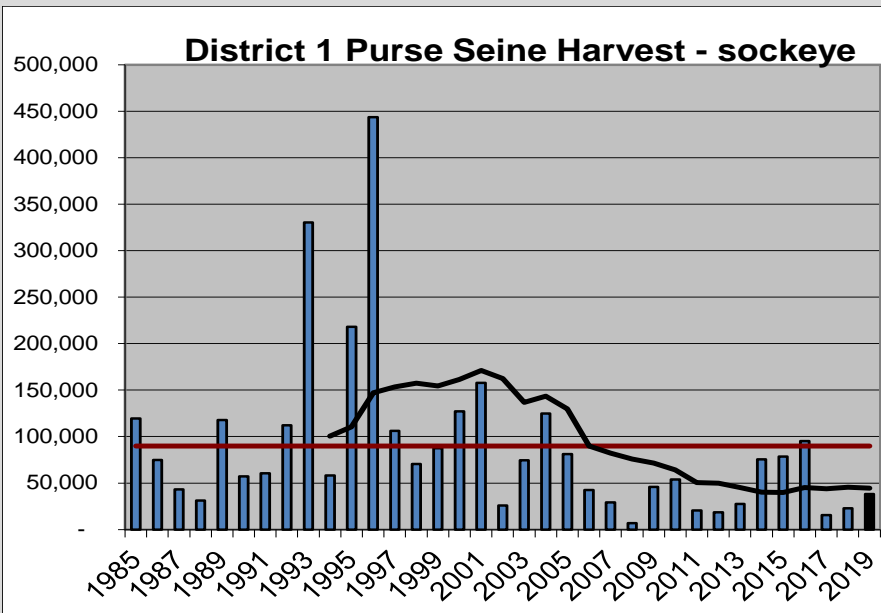
2019 Pink Salmon Harvest in the Ketchikan Management Area



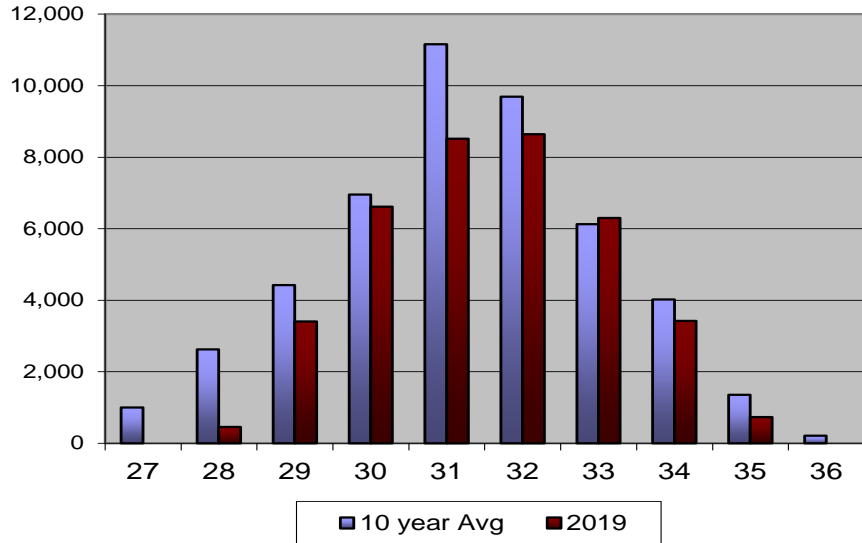
2019 District 1 Purse Seine – Harvest by Opening

Opening	Chinook > 28"	Sockeye	Coho	Pink	Chum	Boats	Hours
28	0	459	385	52,288	5,219	29	15
29	0	1,127	689	162,610	17,116	45	15
29B	0	2,277	841	258,413	25,546	47	15
30	156	2,545	782	208,290	22,114	63	15
30B	258	4,033	1,291	317,580	27,430	52	15
31	116	1,936	743	168,417	16,792	40	15
31B	195	6,618	1,439	384,318	27,512	42	39
32	0	4,502	1,411	413,440	16,180	33	39
32B	0	4,138	2,045	439,267	13,272	41	39
33	0	3,228	1,936	299,652	11,942	31	39
33B	0	3,071	2,224	279,804	10,714	25	39
34	0	1,851	3,834	267,699	13,670	31	39
34B	0	1,650	4,849	215,094	13,780	29	39
35	0	658	2,340	41,021	3,277	13	39
Total	725	38,093	24,809	3,507,893	224,564	132	402

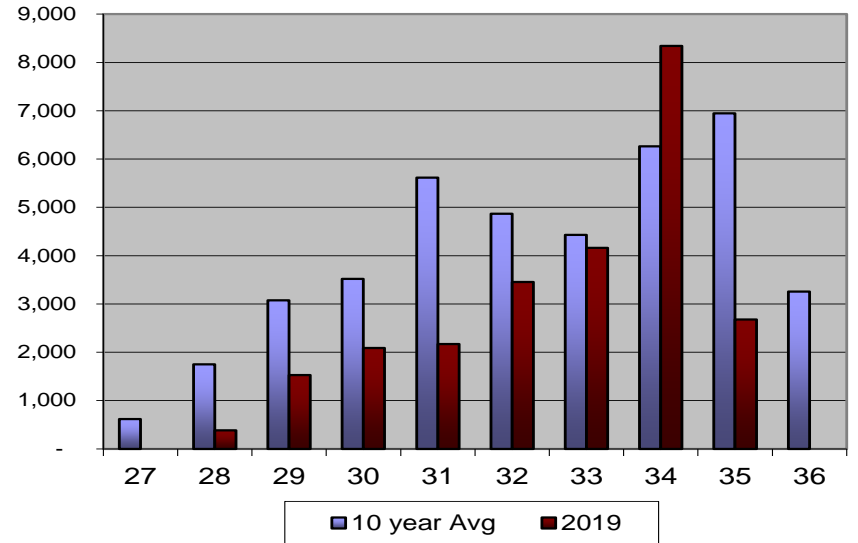
Pinks ranked 28 of 60 since 1960. 10 year avg = 5.5 million pinks.



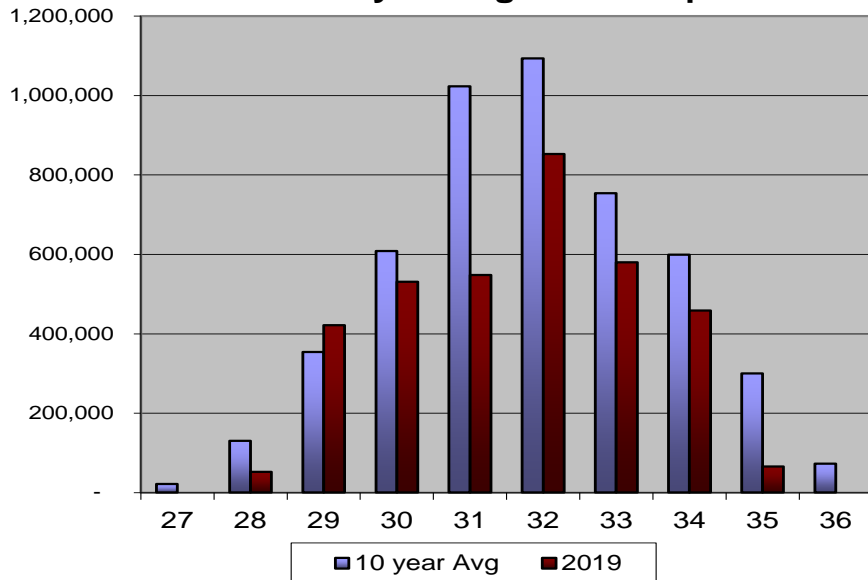
**District 1 Purse Seine Weekly Harvest
10 year avg vs 2019 - sockeye**



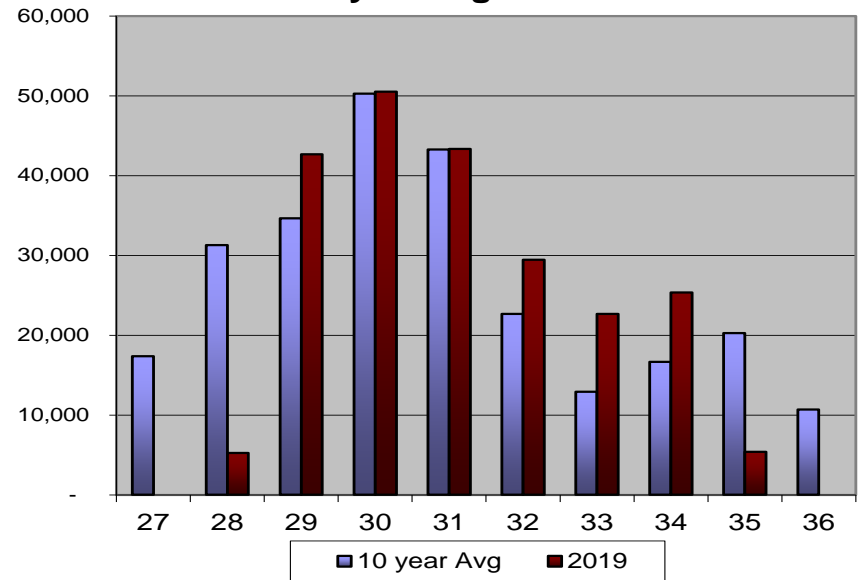
**District 1 Purse Seine Weekly Harvest
10 year avg vs 2019 - coho**



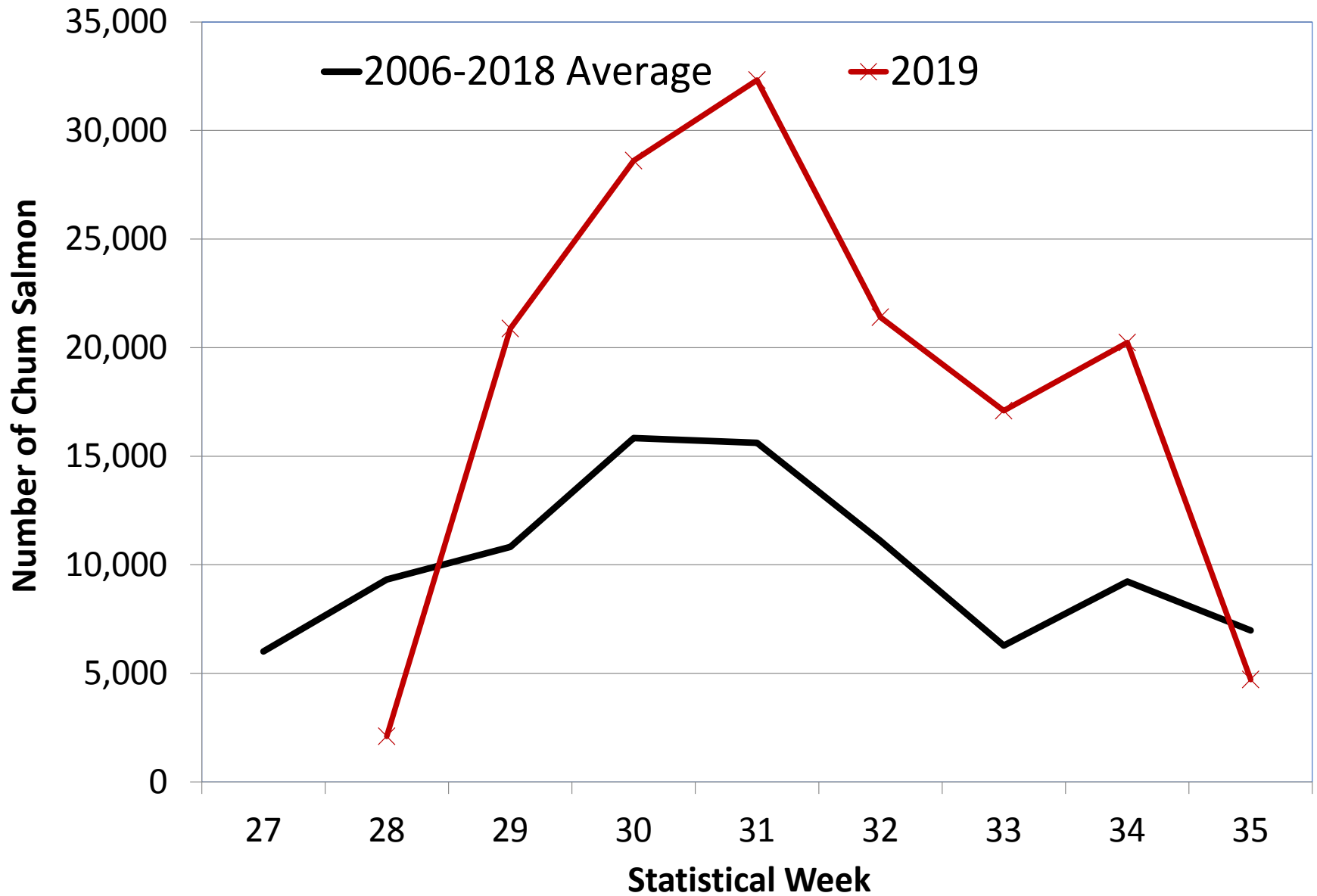
**District 1 Purse Seine Weekly Harvest
10 year avg vs 2019 - pink**



**District 1 Purse Seine Weekly Harvest
10 year avg vs 2019 - chum**



District 1 Purse Seine - Unmarked Chum Salmon

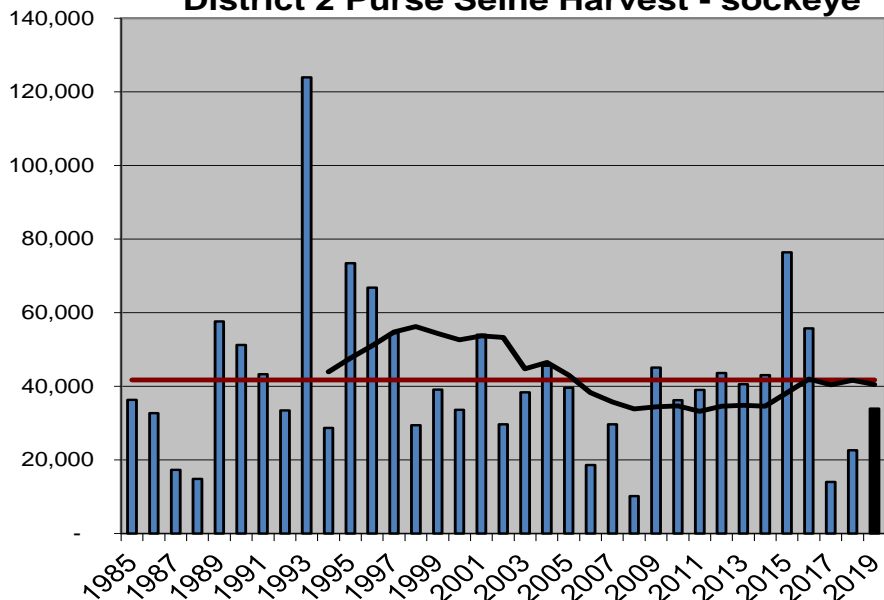


*Chum otolith Data from SSRAA

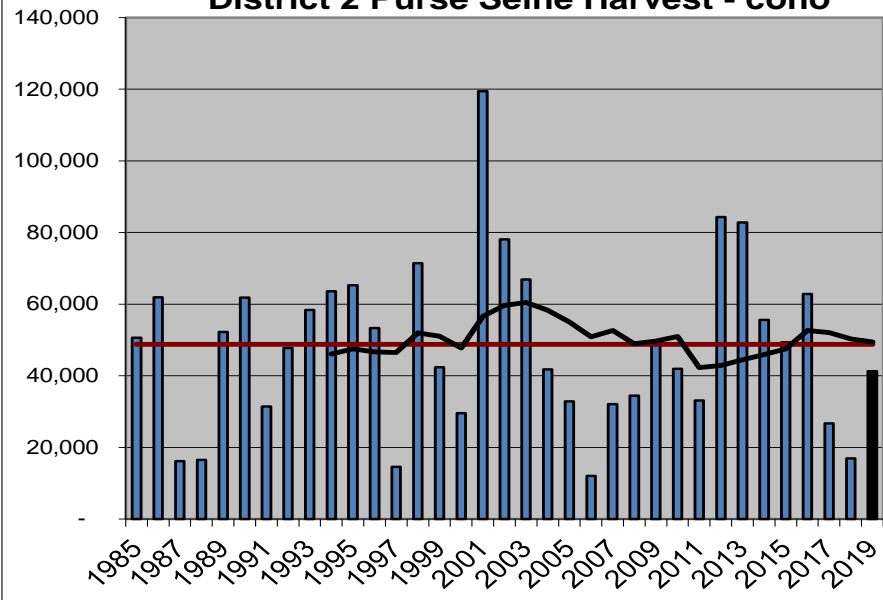
2019 District 2 Purse Seine – Harvest by Opening

	Opening	Chinook > 28"	Sockeye	Coho	Pink	Chum	Boats	Hours
Early outside Kendrick	25	0	50	182	270	470	17	87
	26	0	327	965	1,946	7,495	47	87
	27	0	327	448	3,605	7,914	41	15
	27B	0	155	162	2,459	4,869	21	15
	28	0	653	907	9,547	32,031	38	15
	29	0	988	1,854	28,189	35,787	38	15
	29B	0	1,150	1,269	24,496	32,062	28	15
	30	67	1,116	1,074	45,984	27,705	23	15
	30B	106	1,744	1,504	112,988	35,287	19	15
	31	149	2,839	2,694	260,885	34,288	56	15
Fall Chum Fishery	31B	262	3,676	2,148	430,836	25,020	37	39
	32	0	3,927	2,976	694,815	15,378	45	39
	32B	0	3,086	2,684	496,211	19,384	50	39
	33	0	2,532	2,475	498,164	19,825	36	39
	33B	0	4,695	4,317	701,917	16,360	44	39
	34	0	2,427	3,673	311,278	20,515	23	39
	34B	0	2,930	6,592	375,675	40,380	31	39
	35	0	1,002	3,154	124,978	15,231	29	39
	36	0	196	1,317	32,802	6,854	21	12
	37	0	36	855	9,337	2,011	13	12
Total	584	33,856	41,250	4,166,382	398,866	145	630	

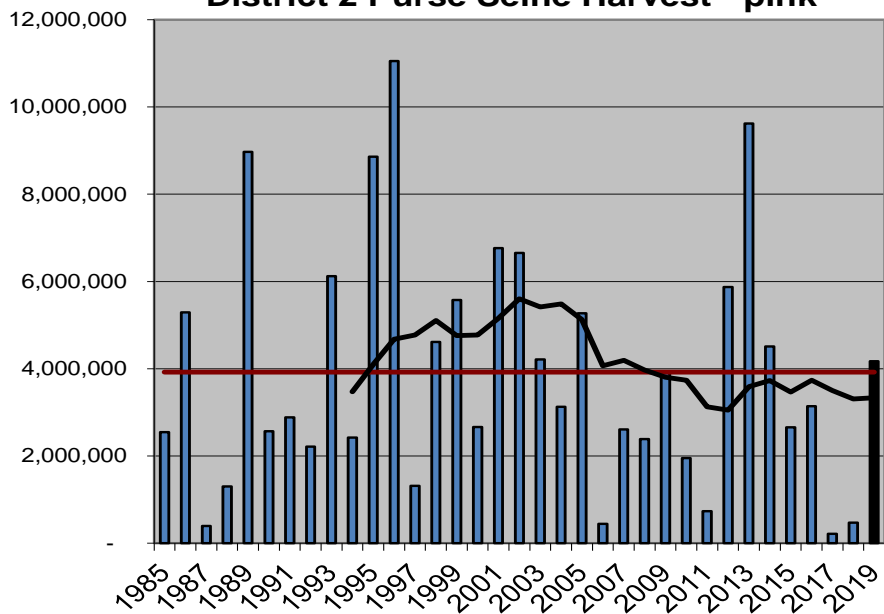
District 2 Purse Seine Harvest - sockeye



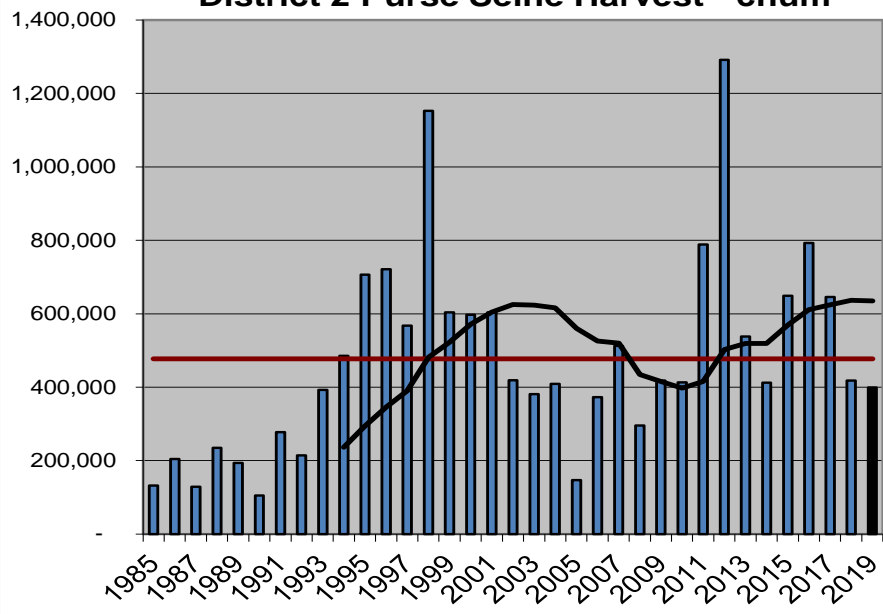
District 2 Purse Seine Harvest - coho



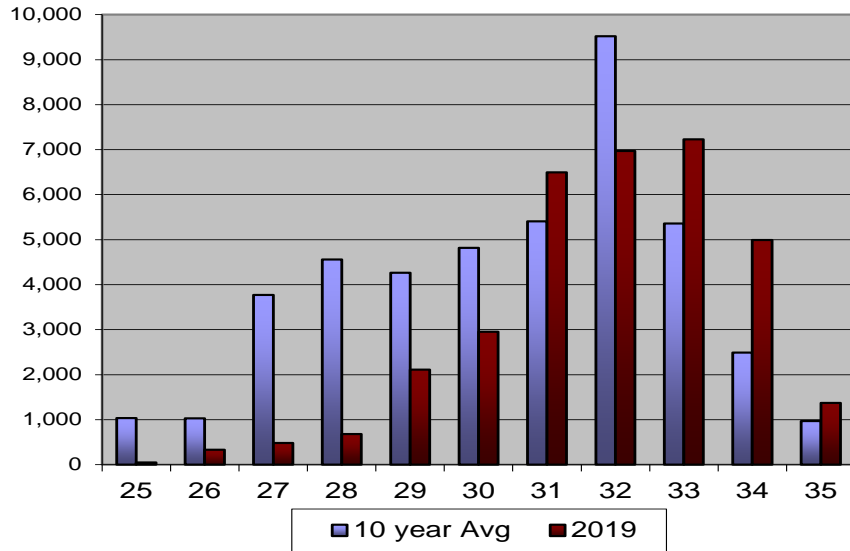
District 2 Purse Seine Harvest - pink



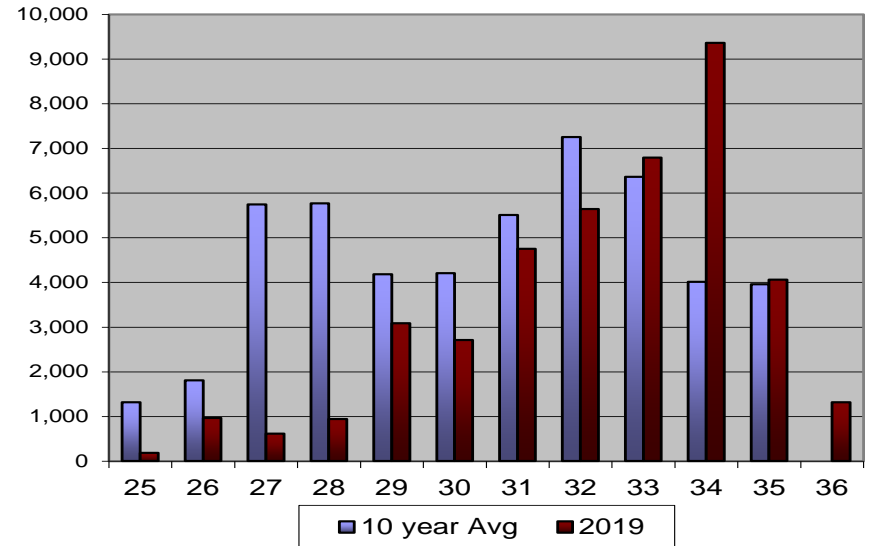
District 2 Purse Seine Harvest - chum



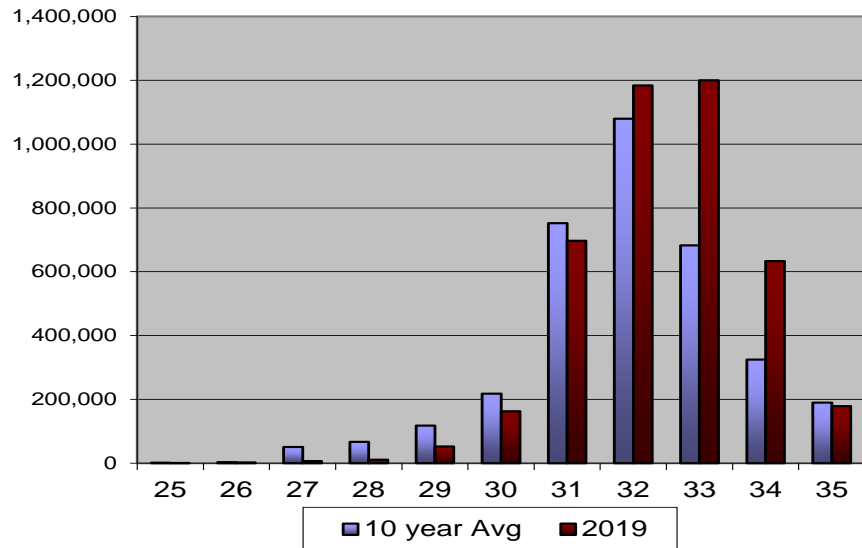
**District 2 Purse Seine Weekly Harvest
10 year avg vs 2019 -sockeye**



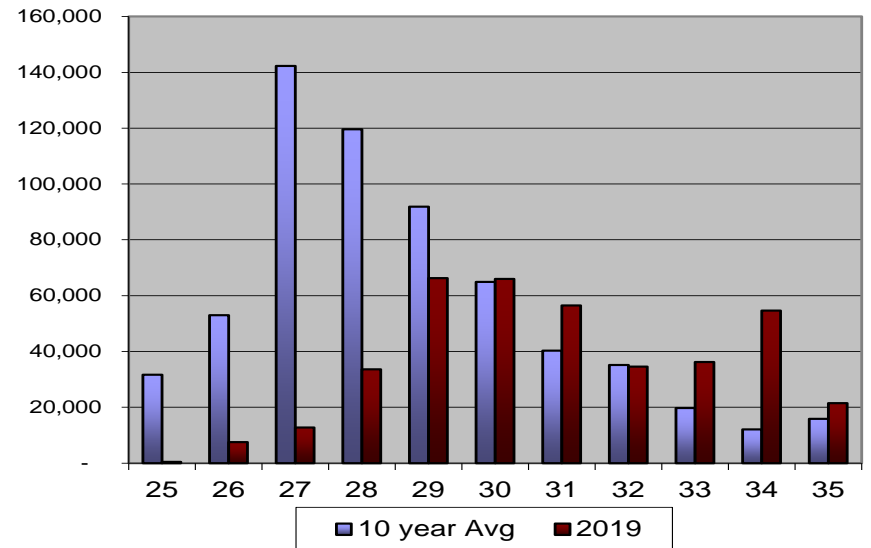
**District 2 Purse Seine Weekly Harvest
10 year avg vs 2019 -coho**



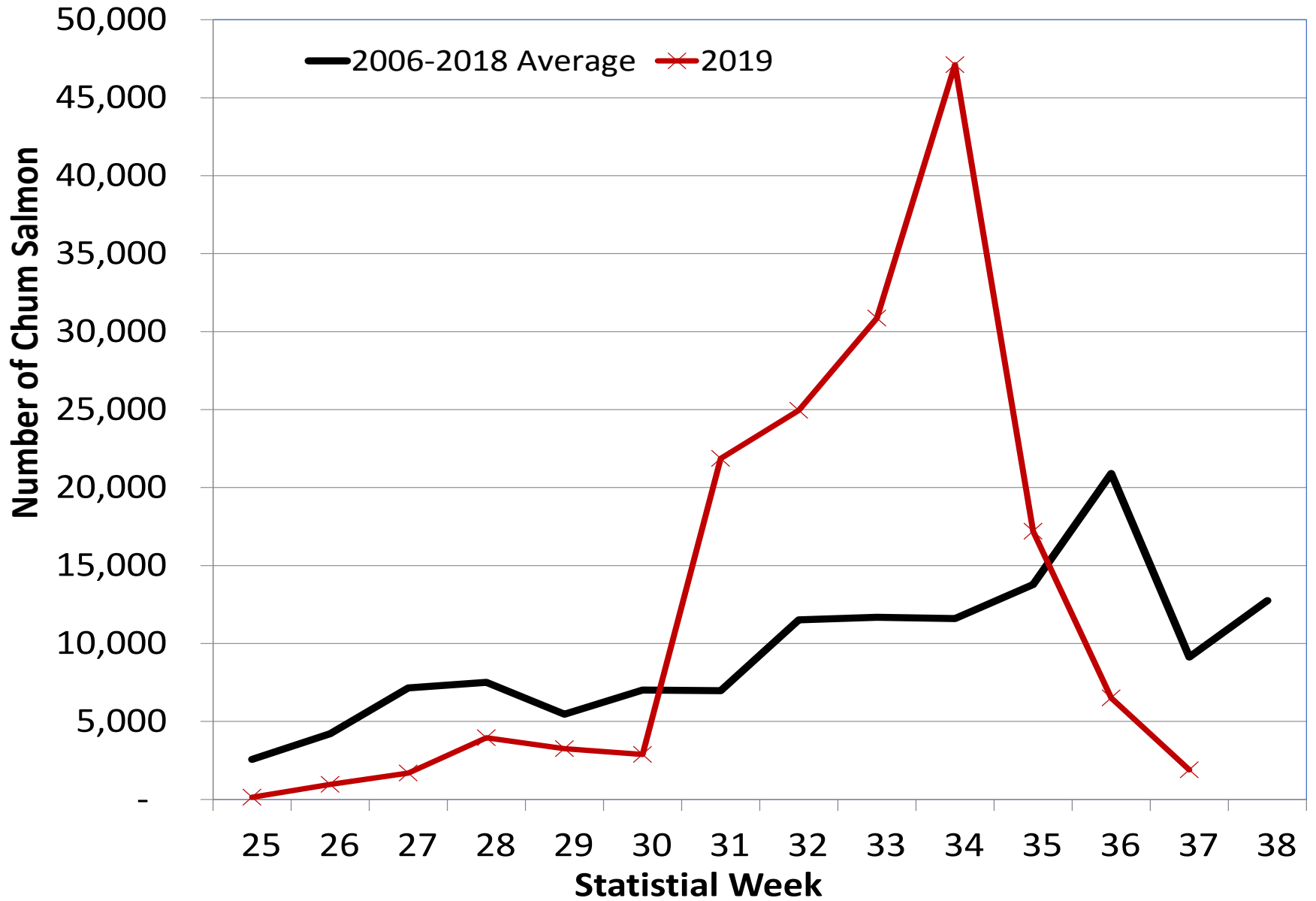
**District 2 Purse Seine Weekly Harvest
10 year avg vs 2019 -pink**



**District 2 Purse Seine Weekly Harvest
10 year avg vs 2019 -chum**



District 2 Seine - Catch of Unmarked Chum Salmon

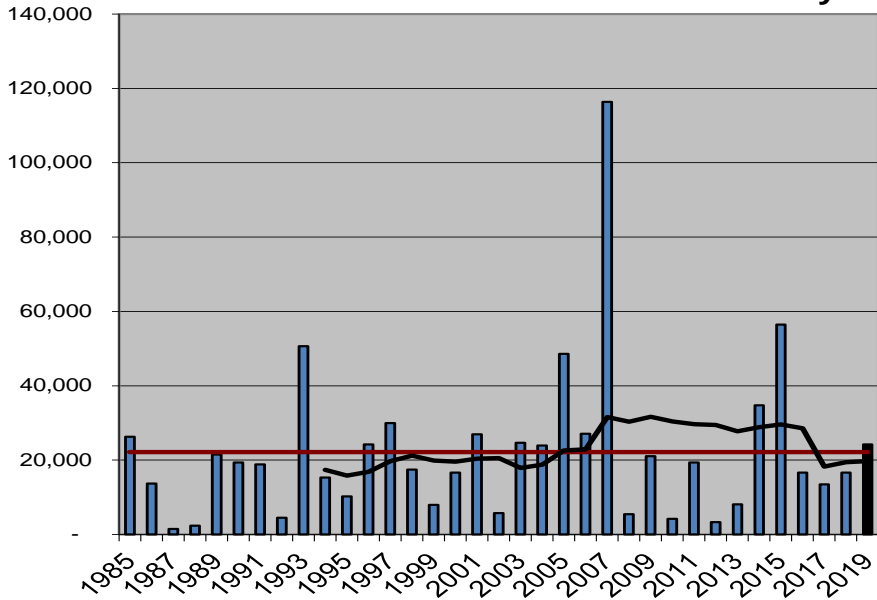




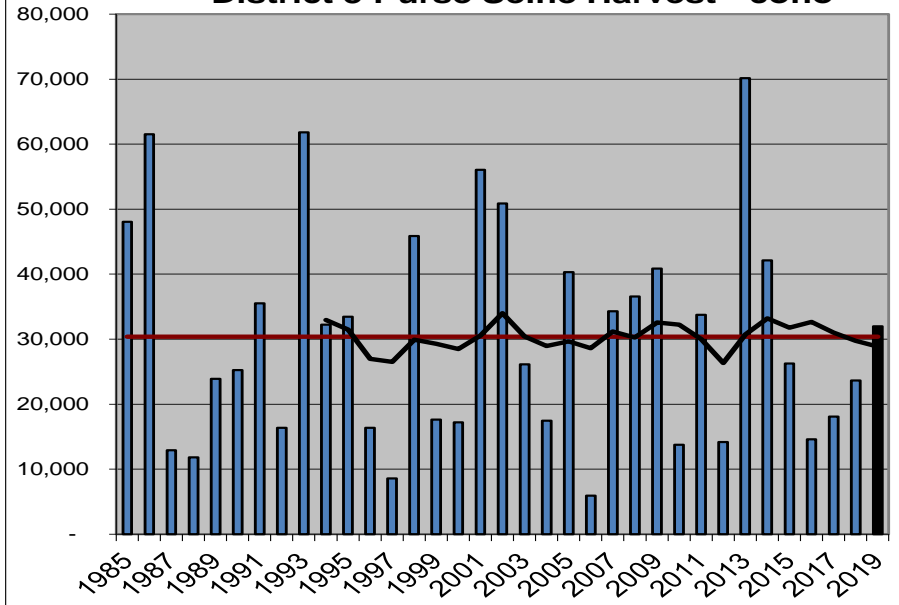
2019 District 3 Purse Seine – Harvest by Opening

Opening	Chinook > 28"	Sockeye	Coho	Pink	Chum	Boats	Hours
30	70	540	738	13,064	903	8	15
30B	41	463	569	32,411	1,006	7	15
31	14	453	186	22,237	459	4	15
31B	93	2,471	1,024	98,354	4,160	11	39
32	0	5,849	3,852	517,249	12,865	49	39
32B	0	4,021	5,219	788,519	15,629	51	39
33	0	3,924	5,803	545,554	21,070	54	39
33B	0	4,469	5,304	448,724	24,241	50	39
34	0	1,479	4,587	239,818	23,168	38	39
34B	0	431	3,914	100,954	9,406	24	39
35	0	93	785	12,304	1,063	4	39
Total	218	24,193	31,981	2,819,188	113,970	107	357

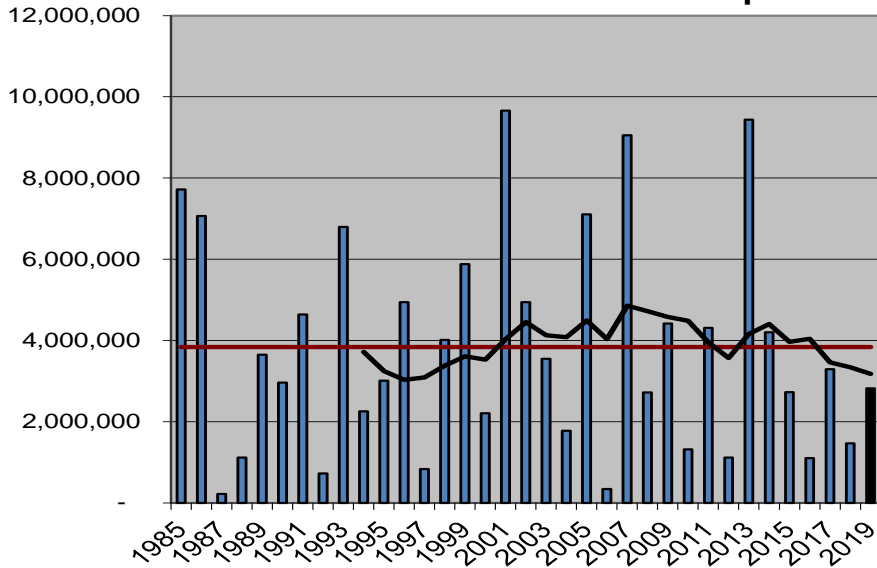
District 3 Purse Seine Harvest - sockeye



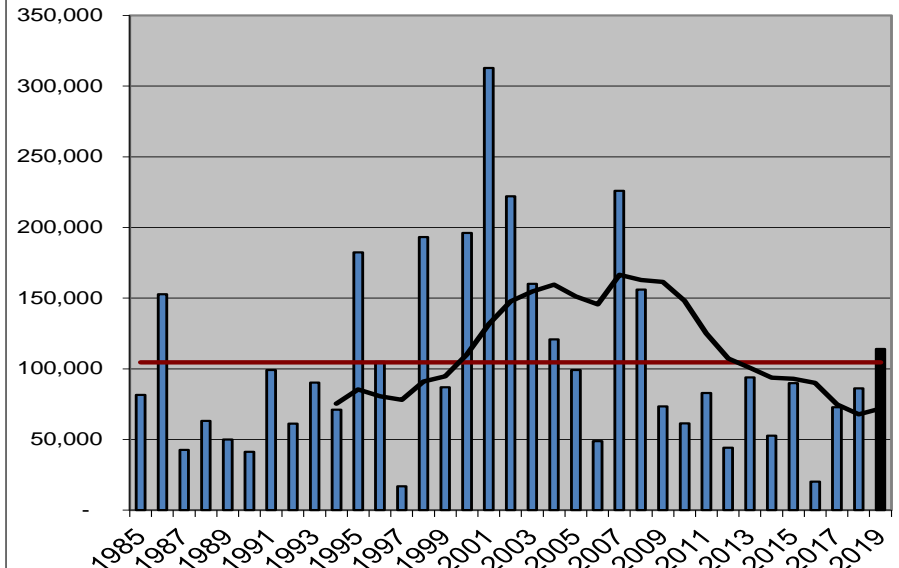
District 3 Purse Seine Harvest - coho



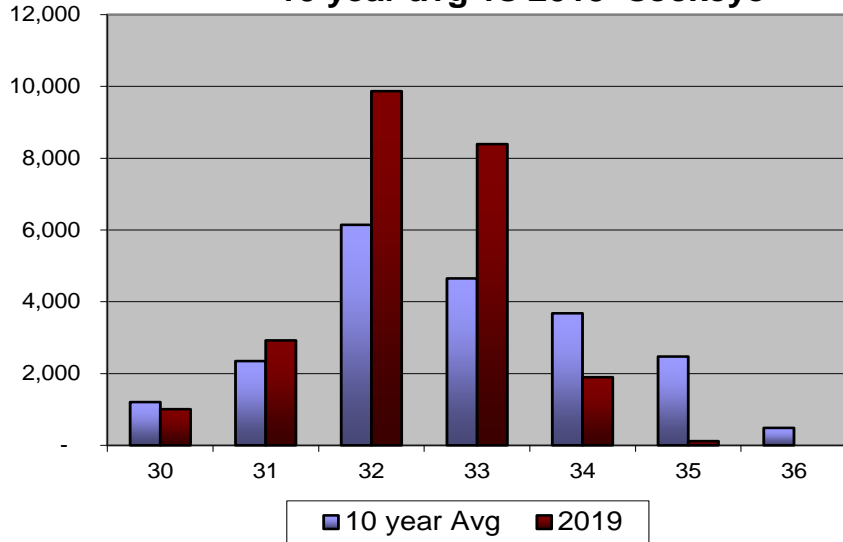
District 3 Purse Seine Harvest - pink



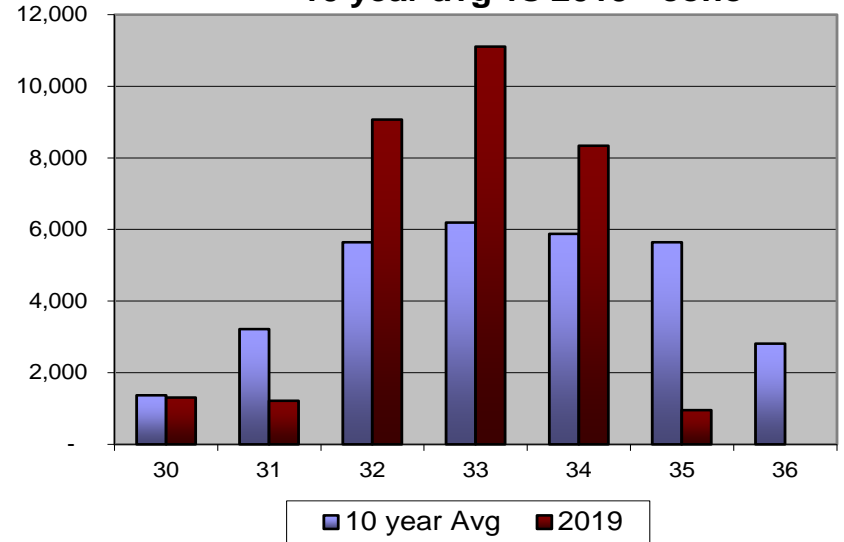
District 3 Purse Seine Harvest - chum



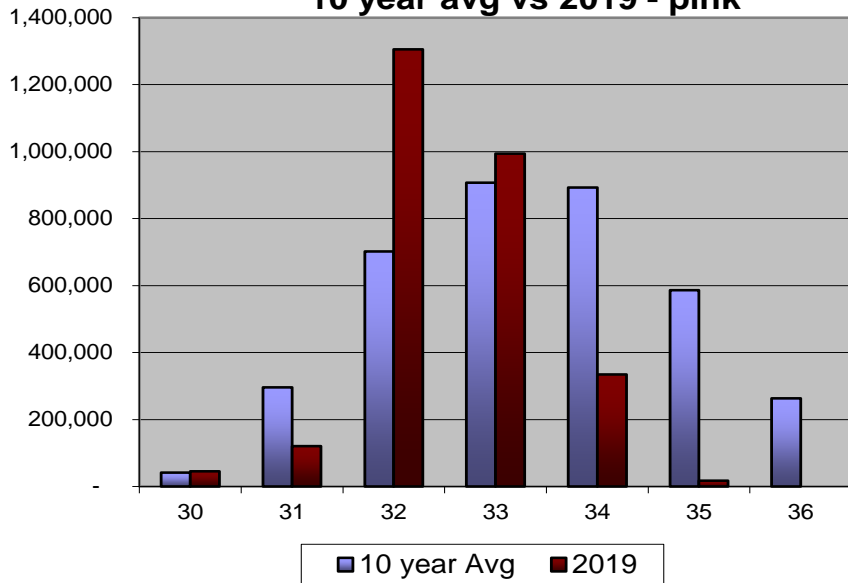
**District 3 Purse Seine Weekly Harvest
10 year avg vs 2019- sockeye**



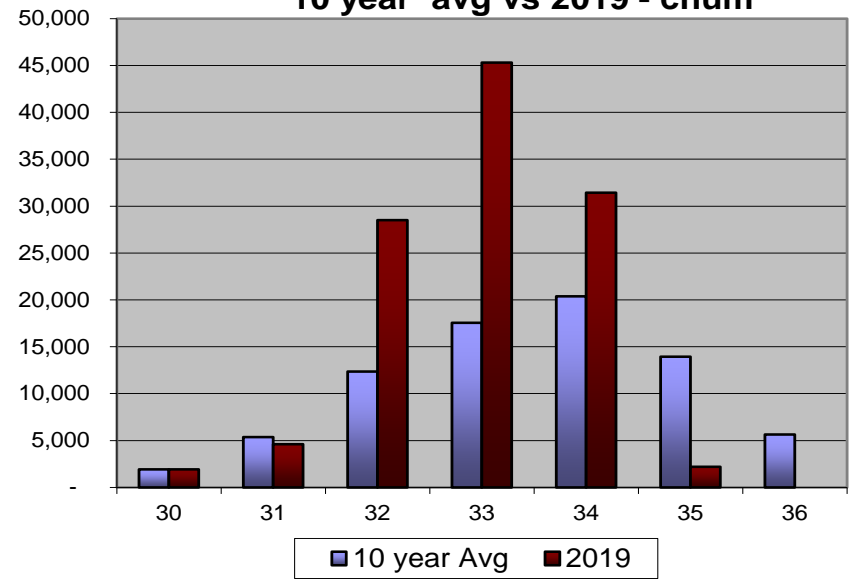
**District 3 Purse Seine Weekly Harvest
10 year avg vs 2019 - coho**



**District 3 Purse Seine Weekly Harvest
10 year avg vs 2019 - pink**



**District 3 Purse Seine Weekly Harvest
10 year avg vs 2019 - chum**



The District 4 Purse Seine fishery is managed prior to statistical week 31 to achieve 2.45% of the Annual Allowable Harvest (AAH) of the combined Nass/Skeena sockeye run in that year.

- The AAH is calculated as the combined total run of adult Nass and Skeena sockeye salmon in that year minus the combined Nass and Skeena escapement target of 1.1 million fish or the actual in-river escapement; whichever is less.
- The total run calculation includes the catch of Nass and Skeena sockeye in the boundary area fisheries and the escapement to the Nass and Skeena rivers. The cumulative catch includes sockeye salmon in the Alaskan Districts of 101, 102, 103, 104 and 106 net fisheries and Canadian areas 1, 3, 4 and 5 net fisheries plus Canadian in-river fisheries.

For 2019:

- Skeena preseason forecast of 1.714 million
- Nass preseason forecast of 620K
- Combined preseason forecast of 2.334 million
 - Estimated pre-week 31 AAH of approx. 30K sockeye
 - First in-season forecast on July 9 was for a TRTC of less than 300K

2019 District 4 Purse Seine – Harvest by Opening

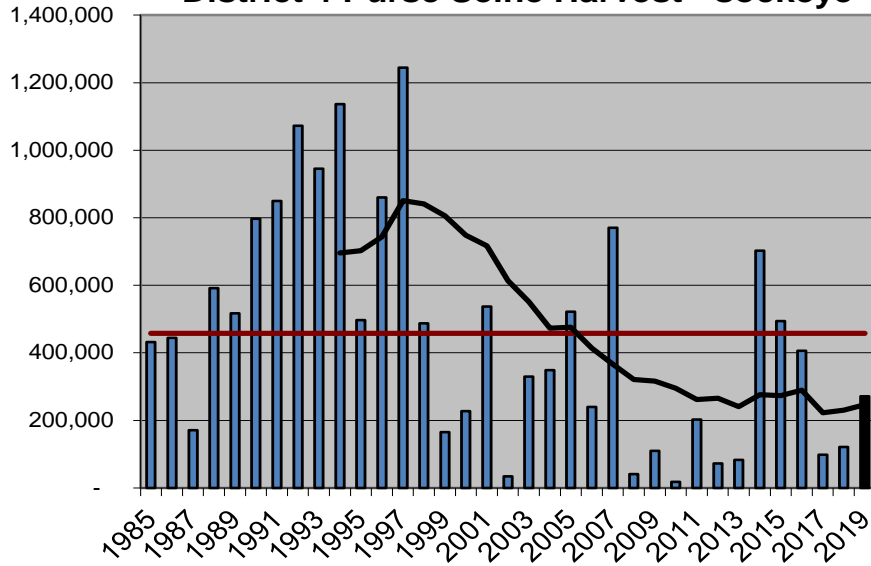


Treaty
Period

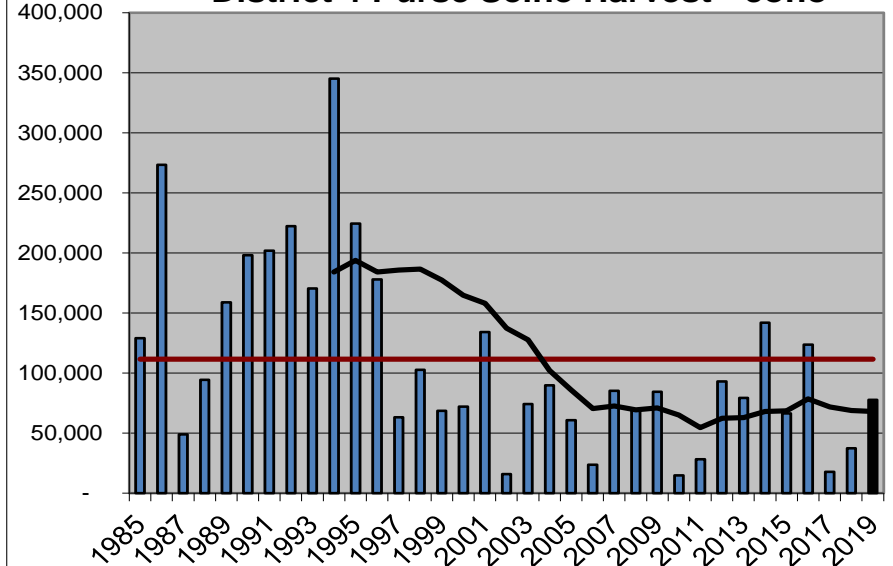
Opening	Chinook > 28"	Sockeye	Coho	Pink	Chum	Boats	Hours
28	0	959	2,229	6,420	1,995	26	12
28B				CLOSED			
29	0	2,679	2,935	19,209	5,962	11	12
29B	0	5,761	3,201	71,108	6,975	17	10
30				CLOSED			
30B				CLOSED			
31	1,429	22,124	5,224	598,209	14,619	48	15
31B	5,745	52,441	13,036	983,188	29,762	88	39
32	0	30,516	4,340	500,532	26,588	56	39
32B	0	29,974	8,231	447,968	23,701	39	39
33	0	69,430	19,347	515,787	31,174	56	39
33B	0	30,100	8,584	245,664	17,699	41	39
34	0	23,355	8,346	104,688	12,138	22	39
34B	0	3,654	2,120	35,238	4,599	13	39
Total	7,174	270,993	77,593	3,528,011	175,212	112	322

- Pre-week 31 sockeye catch = 9,399 (Treaty Period Avg. = 95,300)
- Third lowest treaty-period sockeye harvest since 1985
- D4 was open for 34 hours out of a potential 90 hours during the treaty period. Avg. hours is 61.

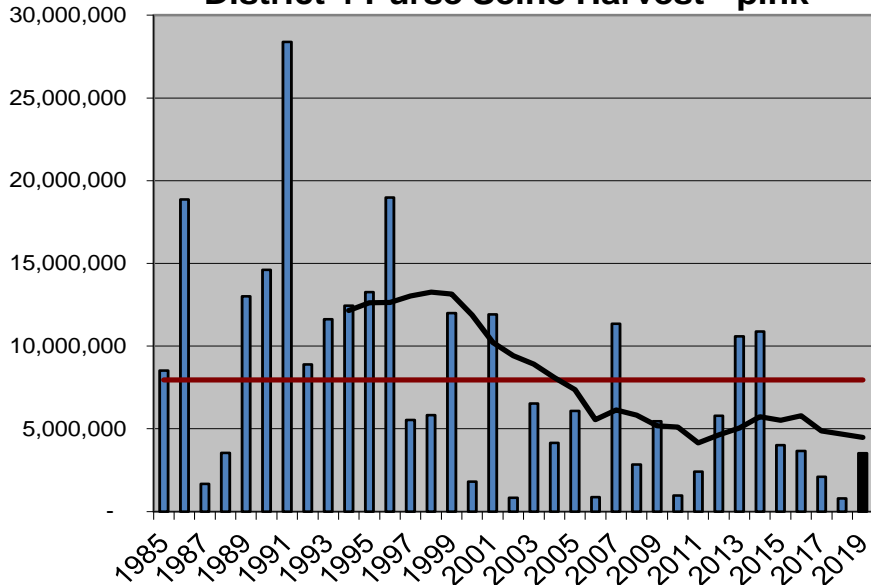
District 4 Purse Seine Harvest - sockeye



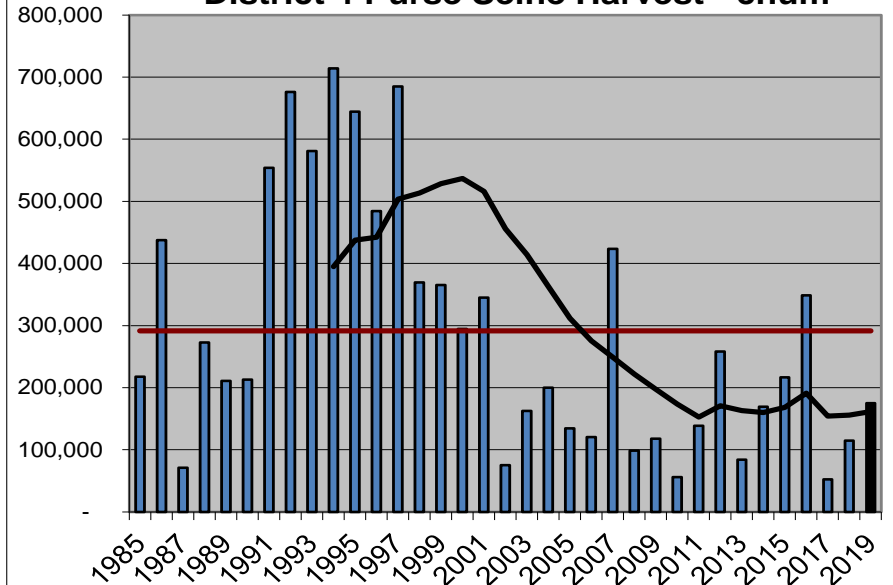
District 4 Purse Seine Harvest - coho



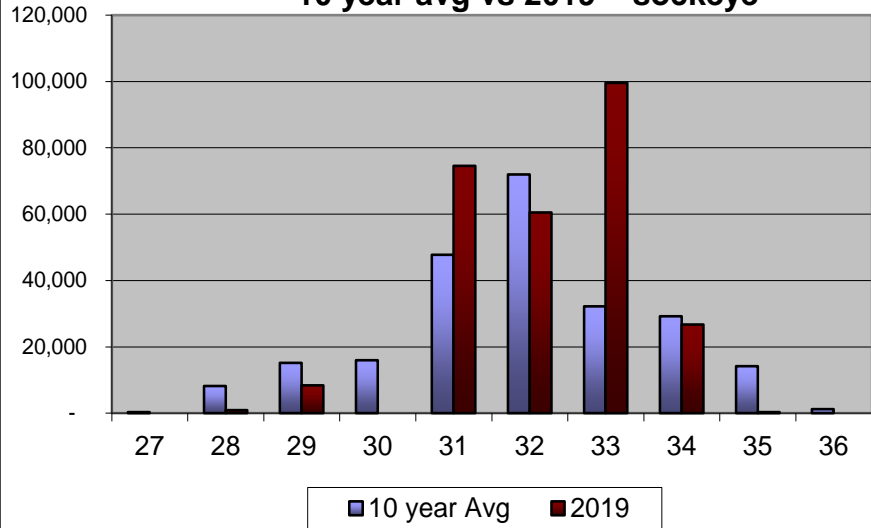
District 4 Purse Seine Harvest - pink



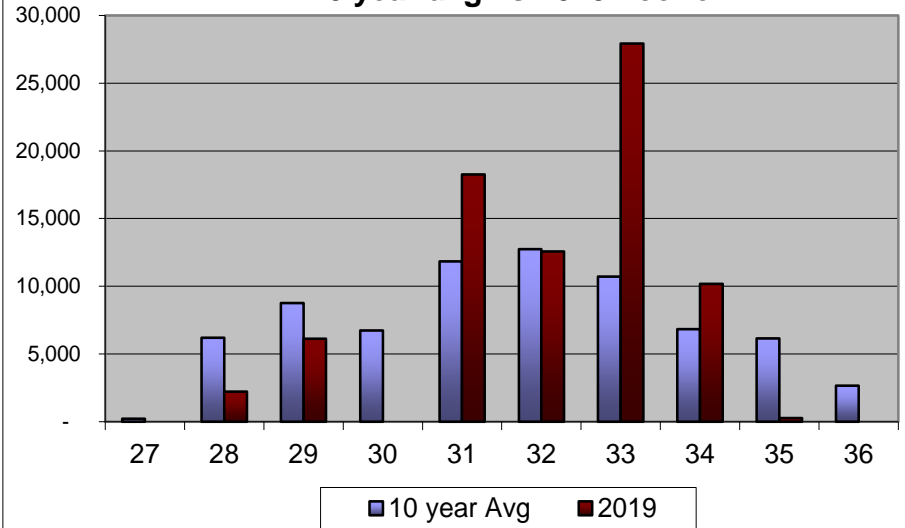
District 4 Purse Seine Harvest - chum



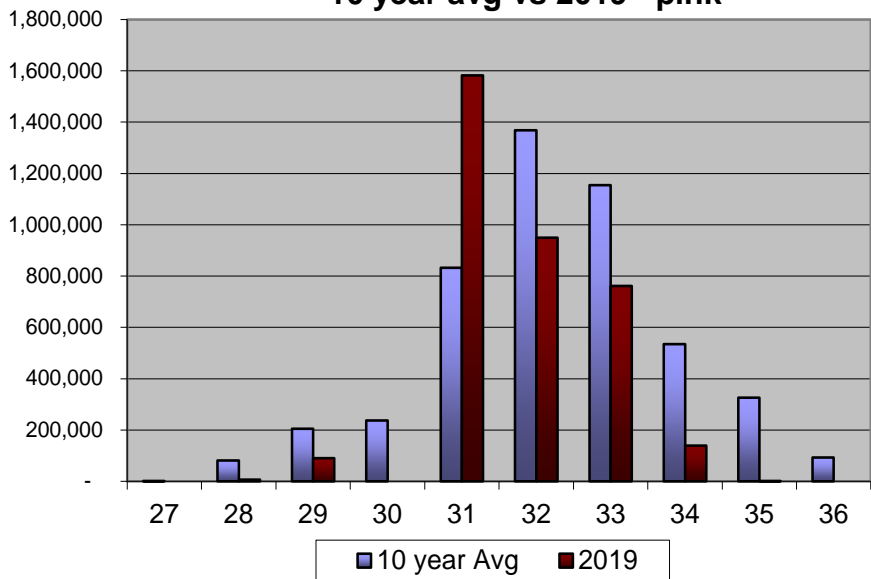
**District 4 Purse Seine Weekly Harvest
10 year avg vs 2019 - sockeye**



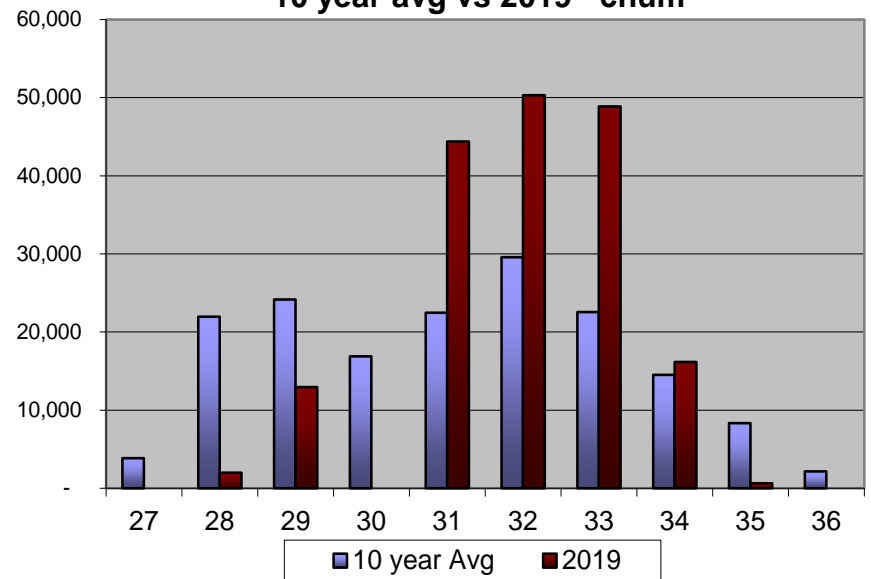
**District 4 Purse Seine Weekly Harvest
10 year avg vs 2019 - coho**



**District 4 Purse Seine Weekly Harvest
10 year avg vs 2019 - pink**



**District 4 Purse Seine Weekly Harvest
10 year avg vs 2019 - chum**



District 104 – Purse Seine

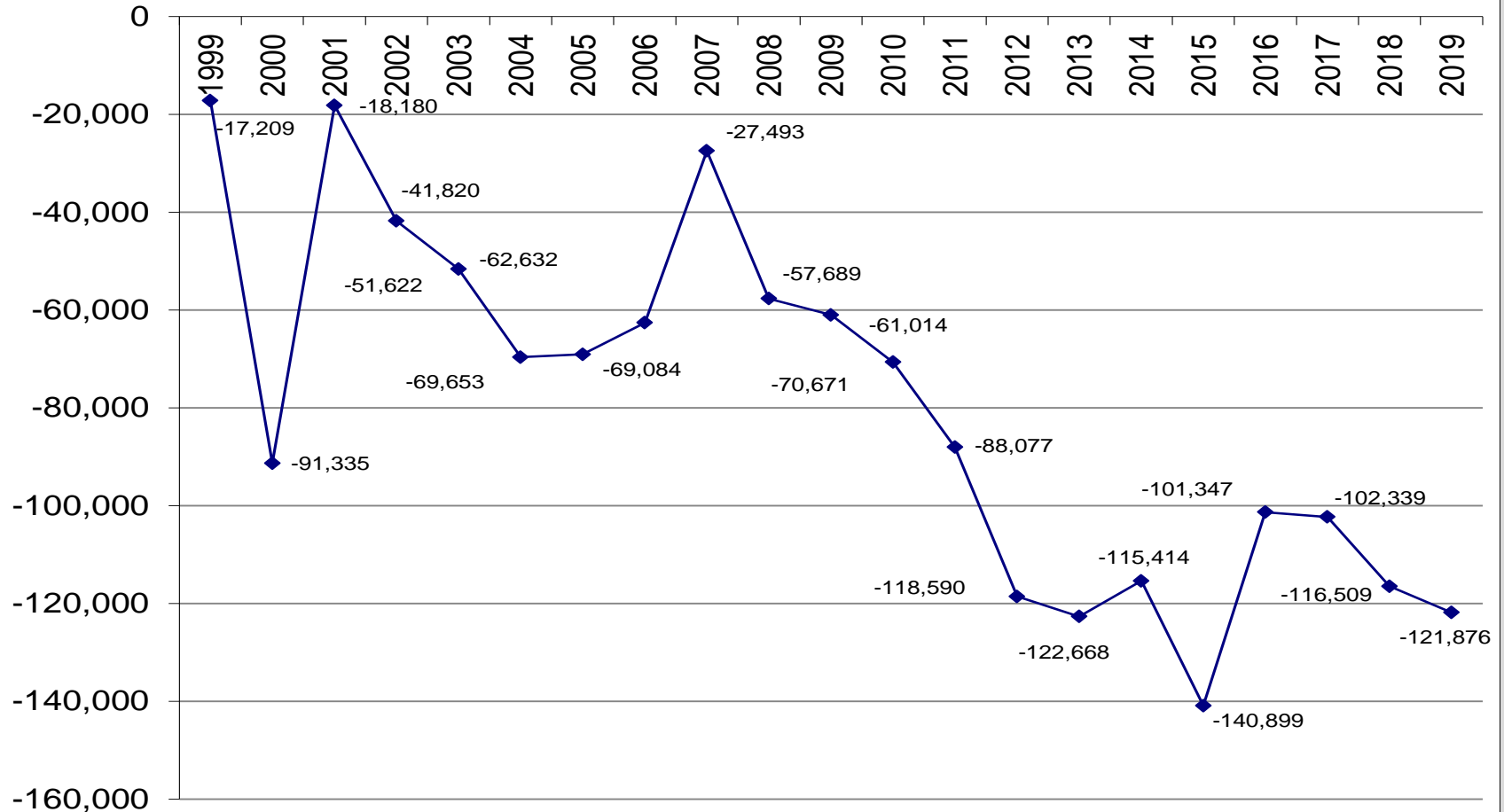
Fishery Performance, 2019 (preliminary)

	Nass/Skeena Total Return	Nass/Skeena Escapement	Allowable Nass/Skeena AAH	Allowable D4 Harvest (2.45%)	Total Pre- Week 31 Sockeye Harvest	Actual Nass/Skeena Harvest	Overage/ Underage Per Year	Cumulative overage / (underage)
1999	1,771,048	936,705	834,343	20,441	7,664	3,232	-17,209	-17,209
2000	5,318,227	1,100,000	4,218,227	103,347	48,969	29,221	-74,126	-91,335
2001	4,965,286	1,100,000	3,865,286	94,700	203,090	167,854	73,154	-18,180
2002	2,776,504	1,051,335	1,725,169	42,267	26,554	18,627	-23,640	-41,820
2003	3,306,526	1,100,000	2,206,526	54,060	84,742	44,258	-9,802	-51,622
2004	2,620,994	1,100,000	1,520,994	37,264	30,758	19,233	-18,031	-69,653
2005	1,770,472	1,000,142	770,330	18,873	35,690	19,442	569	-69,084
2006	3,650,525	1,100,000	2,550,525	62,488	89,615	68,940	6,452	-62,632
2007	2,752,076	1,100,000	1,652,076	40,476	112,135	75,615	35,139	-27,493
2008	2,531,703	1,100,000	1,431,703	35,077	6,262	4,880	-30,197	-57,689
2009	1,602,960	1,053,859	549,101	13,453	15,971	10,128	-3,325	-61,014
2010	1,395,619	956,957	438,662	10,747	4,612	1,091	-9,656	-70,671
2011	2,487,985	1,100,000	1,387,985	34,006	25,280	16,599	-17,407	-88,077
2012	2,737,168	1,100,000	1,637,168	40,111	18,300	9,598	-30,513	-118,590
2013	981,476	642,461	339,015	8,306	13,102	4,228	-4,078	-122,668
2014	3,824,537	1,100,000	2,724,537	66,751	114,375	74,005	7,254	-115,414
2015	3,015,042	1,100,000	1,915,042	46,919	43,873	21,433	-25,486	-140,899
2016	2,140,259	1,100,000	1,040,259	25,486	110,346	65,039	39,553	-101,347
2017	1,422,783	1,100,000	322,783	7,908	12,036	6,916	-992	-102,339
2018	2,086,491	1,100,000	986,491	24,169	19,743	9,999	-14,170	-116,509
2019	1,200,000	800,000	400,000	9,800	9,399	4,433	-5,367	-121,876

- 2019 pre-season AAH = approx. 30K Final AAH = approx. 9K
- After the midweek opening in week 29, the AAH was approx. 5K

District 104 – Purse Seine

104-PS - Cumulative Overage/Underage



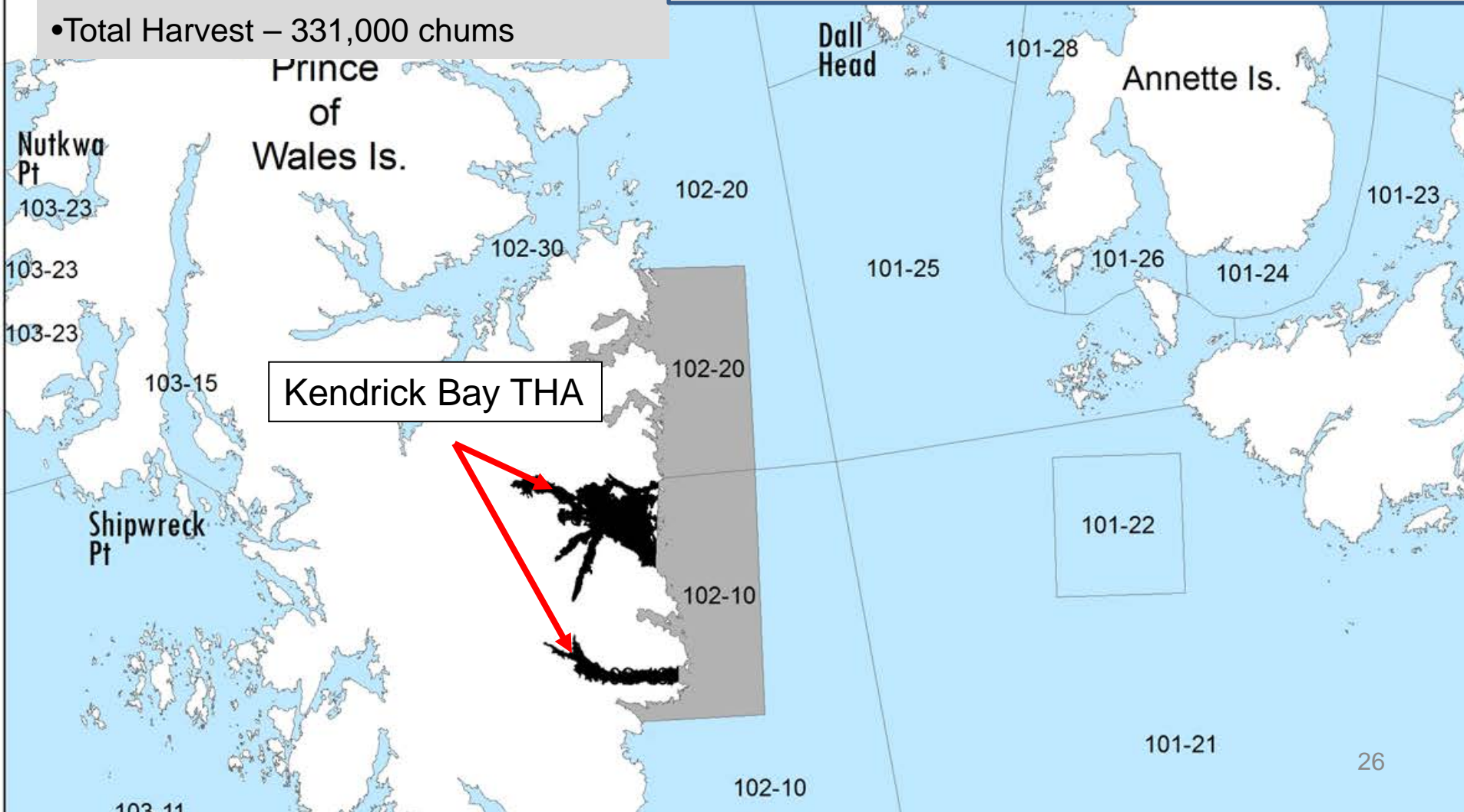


Kendrick Bay 2019

- Projected return – 1,031,700 chums
- THA Harvest – 82,627 chums
- Traditional PS Harvest – 248,000 chums
- Total Harvest – 331,000 chums

Outside Kendrick Bay Fishery

Opening	Chinook	Sockeye	Coho	Pink	Chum	Boats	Hours
25	0	50	182	270	470	17	87
26	0	327	965	1,946	7,495	47	87
27	0	327	448	3,605	7,914	41	15
27B	0	155	162	2,459	4,869	21	15





District 102 Fall Fishing

- Two limited openings to target fall chum in 2019 in the Ketchikan Area.

2019 District 2 Purse Seine

Opening	Chinook	Sockeye	Coho	Pink	Chum	Boats	Hours
36	0	196	1,317	32,802	6,854	21	12
37	0	36	855	9,337	2,011	13	12
Total	0	232	2,172	42,139	8,865	34	24

10 year avg. = 37,223

Peak Cholmondeley Sound Chum Index counts

Total = 21,000

Disappearance – 13,000

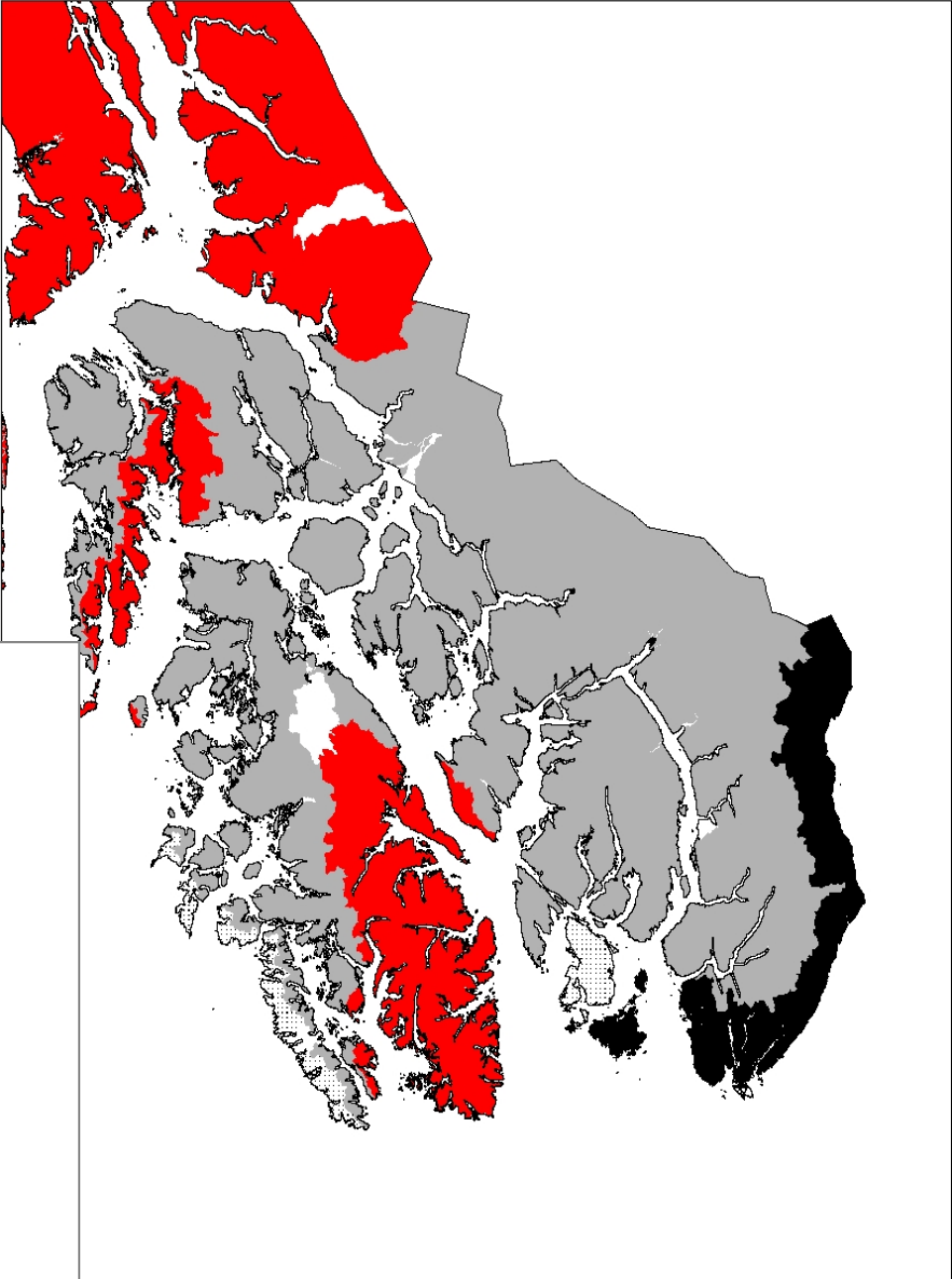
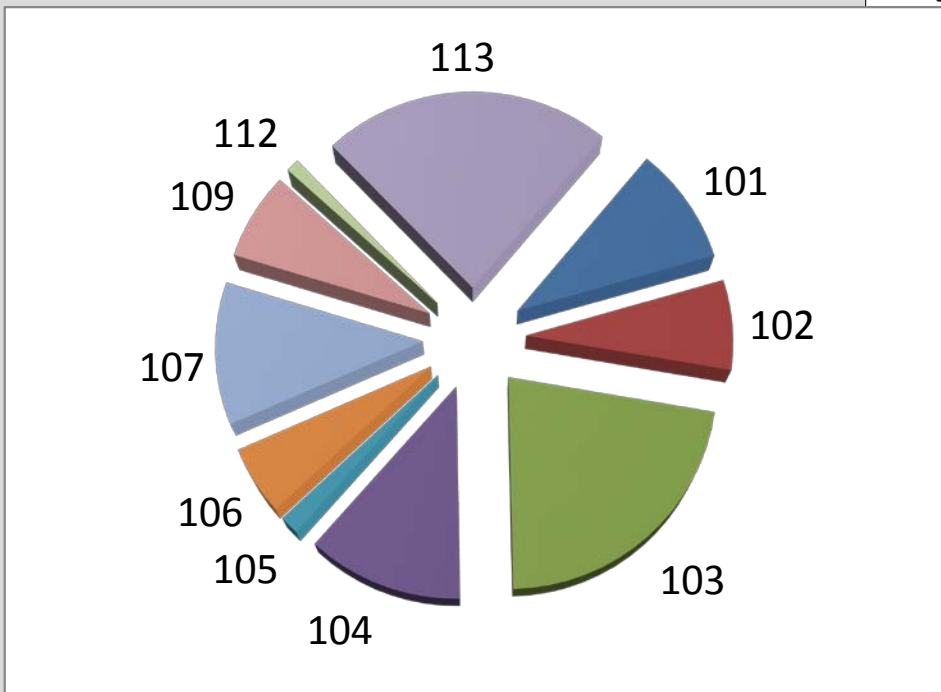
Lagoon – 7,000

2020

Expectations?

- Drought conditions persisted into October 2018.
- Then clear and cold from mid January – February in Ktn.

2018 Pink Harvest



An aerial photograph of a large school of fish, likely a sardine run, in the ocean. The fish are densely packed in a circular pattern, creating a brownish-gold ring against the blue water. In the center of the ring, a diver is visible, surrounded by a splash of white water. The text "Questions?" is overlaid in the upper center of the image.

Questions?

New Northern Boundary Treaty Language for 2019 Pertinent to D4 seine:

- Federal Funding. Previous versions failed to identify funding.
- Treaty extended through 2028, unless both parties agree that modifications are required, then a five year review.
- Establishes in treaty language what is already being done with regards to Canada providing the pre-season run forecast for both the Nass and Skeena rivers.
- Review of D4 pink salmon fishery.
 - New agreement stipulates the U.S. will complete a review that evaluates long-term changes in abundance of pink salmon stocks; changes in timing, location of harvest, impacts of pink harvest on Nass/Skeena sockeye, and efficacy (if any) of assessing pink salmon run timing through D4 using available data.
- Establishes in the treaty what was done in 2017 and 2018 with regards to low pre-season forecasts, specifically:
 - Expected total run is below 900,000 sockeye salmon. At this level, there are no Canadian commercial marine harvests. The United States shall undertake measures to reduce the impact of the D104 purse seine fishery, which may include delaying the start date and duration of the fishery.
 - Expected total run is below 600,000 sockeye salmon. At this level, there are no Canadian marine or in-river commercial harvests with the exception of terminal fisheries adjacent to enhancement spawning channels. The United States shall undertake additional measures to reduce the impact of the D104 purse seine fishery, which may include delaying the start date and duration of the fishery, and/or reducing the fishing area.
- Review of current run reconstruction model. Less complex model with the accuracy of genetic stock id.