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Alaska Board of Fisheries Alaska Department of Fish and game C/O Boards Support Section PO Box 115526 Juneau, AK. 99811-5526

Re: Board of Fisheries Proposals No. 39, 40, and 41.

The Cook Inlet Aquaculture Association (CIAA) reviewed Board of Fisheries proposals No. 39, 40, and 41 at its November 19, 2016 Board of Directors meeting and voted unanimously to oppose all three proposals.

Proposal 39 – 5ACC 21.375. Bear Lake Management Plan.

Board of Fisheries Proposal No. 39 requests the Bear Lake Management Plan be reinstated with an equal allocation between cost recovery and common property fisheries. This proposal addresses the allocation of enhanced sockeye salmon returns to Bear Lake and Resurrection Bay. CIAA is opposed to this proposal because:

- 1. It addresses an issue that will change when other harvest opportunities come on line at Tutka Bay and Port Graham.
- 2. It was difficult to manage for an equal allocation when the plan was previously instated.
- 3. It is unclear if the proposed allocation is based on numbers of fish or the value of the harvest.
- 4. It will make it difficult for CIAA to implement the Common Property Fishery Assessment program¹ which could eliminate future cost recovery harvests in Resurrection Bay.

<u>Proposal 40 – 5ACC 21.373. Trail Lakes Hatchery Salmon Management Plan.</u>

Board of Fisheries Proposal No. 40 requests the Trail Lakes Hatchery Salmon Management Plan be amended by removing from the Special Harvest Area the freshwaters downstream from the Seward Highway and downstream from Nash Road to the ADF&G fresh/salt water boundary markers. This proposal addresses the cost recovery harvest of enhanced sockeye salmon returns to Bear Lake. CIAA is opposed to this proposal because:

- 1. Cost recovery harvest operations have traditionally been completed in the downstream portion of the freshwaters proposed for removal from the Special Harvest Area.
- 2. Additional fish will escape into the freshwater system and be allocated to other harvests:
 - a. The additional fish will be targeted by the freshwater sport fishery, and
 - b. Additional freshwater harvest will be needed at the Bear Creek weir where harvest operations are currently limited.

¹ AS 16.10.455. The Common Property Fishery Assessment established in 2006 allows hatcheries to recoup costs through an assessment on fishery resources taken in a Special Harvest Area. The program was first used at Hidden Falls Hatchery 2012 and may be applicable at Resurrection Bay, Tutka Bay and other LCI Special Harvest Areas.

Proposal 41 - 5ACC 21.373. Trail Lakes Hatchery Salmon Management Plan.

Board of Fisheries Proposal No. 41 requests the Trail Lakes Hatchery Salmon Management Plan be amended by removing the nearshore waters from the Special Harvest Area. This proposal addresses the cost recovery harvest of enhanced sockeye salmon returns to Resurrection Bay. CIAA is opposed to this proposal because:

- 1. Cost recovery harvest operations have traditionally been completed along the nearshore of the Special Harvest Area.
- 2. Sockeye salmon traditionally follow shorelines and cost recovery harvest operations need to target these areas to be successful.
- 3. CIAA will be prevented from completing "clean-up" harvests surrounding the netpen release site at the end of the season.
- 4. This will extend future cost recovery harvest operations and increase costs.
- 5. Additional fish will escape into the freshwater system and be allocated to other harvests:
 - a. The additional fish will be targeted by the freshwater sport fishery, and
 - b. Additional freshwater harvest will be needed at the Bear Creek weir where harvest operations are currently limited.
- 6. CIAA worked with ADF&G in 2016 to reduce conflicts between cost recovery harvest operations and other user groups by implementing a harvest schedule and informing the public of the schedule. The harvest scheduled allowed all user groups access to the nearshore area with temporal separation.

<u>Background:</u> The Cook Inlet Aquaculture Association (CIAA) conducts two sockeye salmon enhancement projects with returns to Resurrection Bay.

The first enhancement project is a fry stocking project at Bear Lake. Each year CIAA releases 2.4 million sockeye fry to Bear Lake where they rear before migrating to Resurrection Bay as smolts the following year. To support the fry release project, CIAA enhances the lake rearing environment through lake fertilization, monitors lake water quality, smolt migrations and adult returns. Returning adult sockeye salmon are harvested in Resurrection Bay and Salmon Creek. CIAA also harvests surplus Bear Lake returns at a permanent weir in Bear Creek about 0.4 mile below Bear Lake. The purpose of this project is to provide broodstock, common property, and cost recovery harvest.

CIAA estimates releasing 2.4 million sockeye fry will produce an average of 480,000 smolt and an adult return of 72,000 fish or a 15% smolt-to-adult survival rate. Over the last 10 years the smolt migration has ranged from 240,000 to 900,000 fish and averaged 490,000. For broodyears 2008, 2009, and 2010 smolt-to-adult survival has averaged 13.5%².

The second sockeye enhancement project with returns to Resurrection Bay is a smolt release project. Eggs are collected from Bear Lake, incubated at Trail Lakes Hatchery, and reared in the hatchery for a year before being transferred to netpens in Resurrection Bay to complete rearing and release. The purpose of this project is to provide additional returns to Resurrection Bay for cost recovery and common property harvest.

² Smolt-to-adult survival estimates under the current stocking projects are only available for broodyears 2008, 2009, and 2010. Returns from broodyears 2011 and later are not complete.

CIAA's targeted netpen release goal is 1.54 million smolt. Since 2008, the number of smolt released has averaged 1.48 million. In 2011, the fish being reared for release to Resurrection Bay were diagnosed with a virus. As per ADF&G pathology protocol these fish were destroyed. Coincident with the loss of these fish, CIAA embarked on several hatchery renovations to improve fish culture at the facility.

CIAA currently estimates 8% of the smolt released, or 118,000, will survive and return to Resurrection Bay as adults. Thus, the total projected adult return to Resurrection Bay from both enhancement programs is 180,000 sockeye of which 167,000 should be available for harvest. Estimated returns to Resurrection Bay for the last five years (2011 to 2015) have ranged from 77,200 to 240,500 adults and averaged 144,800 fish. The estimated returns do not include fish harvested in the sports fishery, but do include years (2012 and 2013) when no fish were expected to return from the loss of fish at the hatchery in 2011. Recent smolt releases from the netpens have improved due to the renovations made at the hatchery and CIAA anticipates future returns from the netpens will be more consistent.

In 2004, CIAA operated one hatchery, Trail Lakes Hatchery, and identified cost recovery harvests in Resurrection Bay to fund hatchery operations. Targeting one area for cost recovery was more efficient and allowed CIAA to reduce cost recovery harvests in other areas.

In 2010, pink salmon prices improved and CIAA elected to reopen the Tutka Bay Lagoon Hatchery to pink salmon production. To reopen Tutka Bay Lagoon Hatchery, CIAA needs to develop the broodstock for the hatchery through several generations of returns. CIAA estimated this would require four to eight years of hatchery operations before a harvestable surplus was available to fund future operations and common property harvests. The first year of planned operations for Tutka Bay Lagoon Hatchery were delayed because pink salmon broodstock were not available to initiate broodstock development. CIAA currently has 65 million eggs in the facility and expects to reach full production in 2017 or 2018. At full production CIAA expects to release 100 million fry and generate an adult return of 3 million. CIAA estimates 40% of the return will be harvested for cost recovery.

In 2012, CIAA was approached by the Port Graham Hatchery Corporation to purchase the Port Graham Hatchery. CIAA reviewed the offer and purchased the facility in 2014. Again, CIAA estimated it would require four to eight years of hatchery operations before a harvestable surplus was available to fund future operations and common property harvests. The first year of operations to initiate broodstock development for the Port Graham Hatchery began in 2014. CIAA currently has 10 million eggs in the facility and expects to reach its interim goal³ of 84 million eggs in 2017 or 2018. At this interim production level, CIAA expects to release 70 million fry and generate an adult return of 2.1 million. CIAA estimates 40% of the return will be harvested for cost recovery.

To fund renovations at Trail Lakes Hatchery and start-up costs at Tutka Bay Lagoon Hatchery and Port Graham Hatchery CIAA secured several grants, loans, and attempted to maximize the funds available through cost recovery harvests⁴. The temporary emphasis on cost recovery harvests is evident in the

³ The interim goal is based on the amount of water currently available for hatchery operations. CIAA is investigating new water sources and plans to increase production to 125 million eggs if a suitable water source can be found

⁴ CIAA maximized cost recovery harvests to reduce the loans required for start-up operations at Tutka Bay Lagoon and Port Graham hatcheries.

attached table which summarizes returns to CIAA hatchery projects⁵. In 2018 or 2019 when greater pink salmon returns to Tutka Bay Lagoon and Port Graham hatcheries are projected, the number of fish harvested in the common property fishery will increase and the total number harvested should equal or exceed the number harvested for cost recovery.

Additional information about CIAA's operations is available on our website (www.ciaanet.org) and our Facebook page (www.Facebook.com/ciaa1976#).

Respectfully,

Gary Fandrei, Executive Director

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⁵ This table does not include estimated sport fish harvests nor returns associated with CIAA's habitat and other non-hatchery enhancement programs.

			2008					2009					2010		
	CR	CPF	Broodstock	Escapement	Total	CR	CPF	Broodstock	Escapement	Total	CR	CPF		Escapement	Total
Bear Lk /Res. Bay Sockeye	31,384	109,091	4.444	8,550	153,469	136,128	11.338	3.341	9,478	160,285	21.881	8,300	4,320	8.564	43,065
Leisure/Hazel Lakes Sockeye	1.907	68,414	- 4,444	9,350	70,321	205	5,630	3,541	7,976	5,835	1,007	5,595	4,320	8,304	6,602
Kirschner Lake Sockeye	11,588	3,174	+		14,762	18,771	350			19,121	8,858	3,393			8,858
	11,266		3,064	7,500		18,//1		3,755	(200		8,838	50,648	1.000	21.402	
Hidden Lake Sockeye		14,600	5,064		25,164		10,890	3,755	5,298	19,943			1,000	21,493	73,141
Big Lake Sockeye		5,179		12,900	18,079		13,177	ļi	30,100	43,277		50,700		78,326	129,026
Tustumena Lake Sockeye	end of project				0					0					0
Tutka Bay Sockeye	14,604	5,350	150		20,104	11,584	503	3,067		15,154	38,087		4,894	1,000	43,981
Upper Paint Lakes Sockeye					. 0					0					0
English Bay Lakes Sockeye					0					0					0
Port Graham Sockeye					0					0	_				0
													1		
Bear Lake Coho	350	3,828	643	320	5,141		3,267	529	646	4,442		3,567	674	463	4,704
isear Dake Conto	330	,7,626	04.5	.120	7,171		3,207	- 327	<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>	7,772		3,307	074	40.5	3,774
P - C - L - P' - L					0		-			0					0
Port Graham Pink															
Tutka Pinks					0					0					•
Halibut Cove Pinks					0					0				L	0
Total Sockeye	59,483	205,808	7,658	28,950	361,899	166,688	41,888	10,163	44,876	263,615	69,833	115,243	10,214	109,383	384,673
Total Coho	350	3,828	643	320	5,141	0	3,267	529	646	4,442	0	3,567	674	463	4,704
Total Pink	0	0		0	•	0	0	0	0	•	•		8	•	•
Grand Total	59.833	209,636	8,301	29,270	307,040	166,688	45,155	10,692	45,522	268,957	69,833	118,810	10,888	109.846	309,377
Olera total	07 000	207,000	1 0,001			100,-00	10,100	10,072	40,022		07,020	170,010	10,000	100,040	
			2011					2012			·		2013		
	CR	CPF		Escapement	Total	CR	CPF	Broodstock	Escapement	Total	CR	CPF		Escapement	Total
David I h Para Davi Caraltana	150,853		3,831	9.689	240,484	83,453	19,576	4,431	8,008	115,468	43,369	21,255	3,606	8,999	77,229
Bear Lk./Res. Bay Sockeye	150,853	76,111	2,831	9,089				4,431	8,00				3,000	8,999	
Leisure/Hazel Lakes Sockeye		15,118			15,118	16,817	11,017			27,834	8,755	17,554			26,309
Kirschner Lake Sockeye		12,942			12,942	1,260	1,300			2,560	8,288				8,288
Hidden Lake Sockeye	610	19,098	904	17,771	38,383		26,135	407	15,367	41,909		22,563	1,157	16,108	39,828
Big Lake Sockeye					0					0					0
Tustamena Lake Sockeye					0					0					0
Tutka Bay Sockeye	8,496	10.516	1.563	2 000	22.575	13,167	6,989	2.590		22,746	13,137	23.642	2,558		39,337
Upper Paint Lakes Sockeye	,		115.55		0	15,755	.,			0					0
English Bay Lakes Sockeye		4,497	1.055	6.018	11,570					ŏ		273	117	731	1.121
	200	717	219	0,018	1,136		700	503		1,203		2/3	117	/31	0
Port Graham Sockeye	200	/1/	219		1,130		/00	303		1,203					,
Bear Lake Coho			442	352	794		1,234	387	309	1,930		5,400	732	300	6,432
			<u> </u>												
Port Graham Pink			L		0					0			L		0
Tutka Pinks					. 0		L			0	46,238	5,866	143,884	20,000	215,988
Halibut Cove Pinks					0					0		19,477			19,477
Total Sockeye	1/0.450		1	l .				i	1				·		32577
Total Coho		138,999	7,572	35,478	342,206	114.697	65,717	7.931	23,375	211.720	73,549	85,287	7.438	25,838	
Total Pink	160,159	138,999	7,572	35,478 352	342,206 794	114,697	65,717	7,931	23,375	211,720	73,549		7,438	25,838	192,112
	0	138,999	442	352	794	0	1,234	387	309	211,720 1,930	0	5,400	732	300	192,112 6,432
	0	0	442	352 0	794	0	1,234	387	309 0	1,930	0 46,238	5,400 25,343	732 143,884	399 20,000	192,112 6,432 238,445
Grand Total	0		442	352	794	0	1,234	387	309		0	5,400	732	300	192,112 6,432
	0	0	442 0 8,014	352 0	794	0	1,234	387 6 8,318	309 0	1,930	0 46,238	5,400 25,343 116,030	732 143,884 152,054	300 29,000 46,138	192,112 6,432 238,465
	0 8 160,159	0 6 138,999	442 9 8,014 2014	352 0 35,830	794 343,002	0 0 114,697	1,234 0 66,951	387 8 8,318 2015	309 0 23,684	1,936 213,650	0 46,238 119,787	5,400 25,343 116,030	732 143,884 152,054 otals 2008 to 20	300 20,000 46,138	192,112 6,432 238,465 434,009
Grand Total	0 9 160,159 CR	0 0 138,999	442 9 8,014 2014 Broodstock	352 8 35,830 Escapement	794 8 343,862 Total	0 0 114,697	1,234 0 66,951 CPF	387 6 8,318 2015 Broodstock	309 0 23,684 Escapement	1,930 0 213,650 Total	0 46,238 119,787	5,400 25,343 116,030 T-	732 143,884 152,054 otals 2008 to 20 Broodstock	300 20,000 46,138 115 Escapement	192,112 6,432 238,465 434,669
Grand Total Bear Lk /Res. Bay Sockeye	0 8 160,159	0 6 138,999	442 9 8,014 2014	352 0 35,830	794 8 343,862 Total 166,123	0 0 114,697	1,234 0 66,951 CPF 18,758	387 8 8,318 2015	309 0 23,684	1,930 0 213,650 Total 124,859	0 46,238 119,787 CR 685,635	5,400 25,343 116,030 Tr CPF 291,491	732 143,884 152,054 otals 2008 to 20 Broodstock 31,775	300 20,000 46,138 115 Escapement 72,081	192,112 6,432 235,465 434,009 Total 1,000,982
Grand Total Bear Lk./Res. Bay Sockeye Leisure/Hazel Lakes Sockeye	0 9 160,159 CR 125,971	0 0 138,999 CPF 27,062	442 9 8,014 2014 Broodstock	352 8 35,830 Escapement	794 0 343,002 Total 166,123 0	0 0 114,697 CR 92,596	1,234 0 66,951 CPF	387 6 8,318 2015 Broodstock 3,945	309 0 23,684 Escapement	1,930 0 213,650 Total 124,859 5,016	0 46,238 119,787 CR 685,635 28,691	5,400 25,343 116,030 Tr CPF 291,491 128,344	732 143,884 152,054 otals 2008 to 20 Broodstock 31,775 0	300 20,000 46,138 115 Escapement 72,081 0	192,112 6,432 235,465 434,009 Total 1,080,982 157,035
Grand Total Bear Lk /Res. Bay Sockeye Leisure/Hazel Lakes Sockeye Kirschner Lake Sockeye	0 9 160,159 CR 125,971	0 0 138,999 CPF 27,062	442 9 8,014 2014 Broodstock 3,857	352 0 35,830 Escapement 9,233	794 0 343,002 Total 166,123 0 20,163	0 0 114,697 CR 92,596	1,234 0 66,951 CPF 18,758 5,016	387 8 8,318 2015 Broodstock 3,945 3,666	309 0 23,684 Escapement 9,560	1,930 0 213,650 Total 124,859 5,016 27,237	0 46,238 119,787 CR 685,635 28,691 88,891	5,400 25,343 116,030 T. CPF 291,491 128,344 21,374	732 143,884 152,054 otals 2008 to 20 Broodstock 31,775 0 3,666	300 28,000 46,138 0 Escapement 72,081 0	192,112 6,432 235,445 434,049 Total 1,080,982 157,035 113,931
Grand Total Bear Lk /Res. Bay Sockeye Leisure/Hazel Lakes Sockeye Kirschner Lake Sockeye Hidden Lake Sockeye	0 9 160,159 CR 125,971	0 0 138,999 CPF 27,062	442 9 8,014 2014 Broodstock	352 8 35,830 Escapement	794 8 343,862 Total 166,123 0 20,163 35,890	0 0 114,697 CR 92,596	1,234 0 66,951 CPF 18,758	387 6 8,318 2015 Broodstock 3,945	309 0 23,684 Escapement	1,936 0 213,650 Total 124,859 5,016 27,237 21,076	0 46,238 119,787 CR 685,635 28,691 88,891 1,456	5,400 25,343 116,030 T. CPF 291,491 128,344 21,374 170,504	732 143,884 152,054 otals 2008 to 20 Broodstock 31,775 0 3,666 12,220	300 20,000 46,138 0 115 Escapement 72,081 0 0 0 111,154	192,112 6,432 235,445 434,049 Total 1,080,982 157,035 113,931 295,334
Grand Total Bear Lk /Res. Bay Sockeye Leisure/Haze! Lakes Sockeye Kinschner Lake Sockeye Hidden Lake Sockeye Big Lake Sockeye	0 9 160,159 CR 125,971	0 0 138,999 CPF 27,062	442 9 8,014 2014 Broodstock 3,857	352 0 35,830 Escapement 9,233	794 6 343,862 Total 166,123 0 20,163 35,890 0	0 0 114,697 CR 92,596	1,234 0 66,951 CPF 18,758 5,016	387 8 8,318 2015 Broodstock 3,945 3,666	309 0 23,684 Escapement 9,560	1,930 0 213,650 Total 124,859 5,016 27,237 21,076 0	0 46,238 119,787 CR 685,635 28,691 88,891 1,456 0	5,400 25,343 116,030 T CPF 291,491 128,344 21,374 170,504 69,056	732 143,884 152,054 otals 2008 to 20 Broodstock 31,775 0 3,666 12,220 0	300 26,000 46,138 015 Escapement 72,081 0 0 111,154 121,326	192,112 6,432 235,465 434,869 Total 1,080,982 157,035 113,931 295,334 190,382
Grand Total Bear Lk /Res. Bay Sockeye Leisure/Hazel Lakes Sockeye Kirschner Lake Sockeye Hidden Lake Sockeye	0 6 160,159 CR 125,971 16,555 439	0 9 138,999 CPF 27,062 3,608 18,637	442 9 8,014 2014 Broodstock 3,857	352 0 35,830 Escapement 9,233	794 9 343,842 Total 166,123 0 20,163 35,890 0	0 0 114,697 CR 92,596 23,571 407	1,234 66,951 CPF 18,758 5,016 7,933	387 8 8,318 2015 Broodstock 3,945 3,666 890	309 0 23,684 Escapement 9,560	1,930 0 213,650 Total 124,859 5,016 27,237 21,076 0	0 46,238 119,787 CR 685,635 28,691 88,891 1,456 0	5,400 25,343 116,030 TCPF 291,491 128,344 21,374 170,504 69,056 0	732 143,884 152,054 otals 2008 to 20 Broodstock 31,775 0 3,666 12,220 0	300 28,000 46,138 115 Escapement 72,081 0 0 111,154 121,326 0	192,112 6,432 235,465 434,009 Total 1,080,982 157,035 113,931 295,334 0
Grand Total Bear Lk /Res. Bay Sockeye Leisure/Haze! Lakes Sockeye Kinschner Lake Sockeye Hidden Lake Sockeye Big Lake Sockeye	0 9 160,159 CR 125,971	0 0 138,999 CPF 27,062	442 9 8,014 2014 Broodstock 3,857	352 0 35,830 Escapement 9,233	794 6 343,862 Total 166,123 0 20,163 35,890 0	0 0 114,697 CR 92,596	1,234 0 66,951 CPF 18,758 5,016	387 8 8,318 2015 Broodstock 3,945 3,666	309 0 23,684 Escapement 9,560	1,930 0 213,650 Total 124,859 5,016 27,237 21,076 0	0 46,238 119,787 CR 685,635 28,691 88,891 1,456 0	5,400 25,343 116,030 T CPF 291,491 128,344 21,374 170,504 69,056	732 143,884 152,054 otals 2008 to 20 Broodstock 31,775 0 3,666 12,220 0	300 26,000 46,138 015 Escapement 72,081 0 0 111,154 121,326	192,112 6,432 235,465 434,869 Total 1,080,982 157,035 113,931 295,334 190,382
Grand Total Bear Lk/Res. Bay Sockeye Leisure/Hazel Lakes Sockeye Kirischner Lake Sockeye Hidden Lake Sockeye Big Lake Sockeye Tustumena Lake Sockeye	0 6 160,159 CR 125,971 16,555 439	0 9 138,999 CPF 27,062 3,608 18,637	442 9 8,014 2014 Broodstock 3,857	352 0 35,830 Escapement 9,233	794 9 343,842 Total 166,123 0 20,163 35,890 0	0 0 114,697 CR 92,596 23,571 407	1,234 66,951 CPF 18,758 5,016 7,933	387 8 8,318 2015 Broodstock 3,945 3,666 890	309 0 23,684 Escapement 9,560	1,930 0 213,650 Total 124,859 5,016 27,237 21,076 0	0 46,238 119,787 CR 685,635 28,691 88,891 1,456 0	5,400 25,343 116,030 TCPF 291,491 128,344 21,374 170,504 69,056 0	732 143,884 152,054 otals 2008 to 20 Broodstock 31,775 0 3,666 12,220 0	300 28,000 46,138 115 Escapement 72,081 0 0 111,154 121,326 0 3,000 0	192,112 6,432 238,445 434,009 Total 1,080,982 157,035 113,931 295,334 190,382 0
Grand Total Bear Lk /Res Bay Sockeye Leisure/Hazel Lakes Sockeye Kirnehner Lake Sockeye Hidden Lake Sockeye Hidden Lake Sockeye Hidden Lake Sockeye Tustumena Lake Sockeye Tutta Bay Sockeye Tutta Bay Sockeye Upper Pant Lakes Sockeye	0 6 160,159 CR 125,971 16,555 439	0 9 138,999 CPF 27,062 3,608 18,637	442 9 8,014 2014 Broodstock 3,857	352 0 35,830 Escapement 9,233	794 9 343,892 Total 166,123 0 20,163 35,890 0 0 68,073	0 0 114,697 CR 92,596 23,571 407	1,234 66,951 CPF 18,758 5,016 7,933	387 8 8,318 2015 Broodstock 3,945 3,666 890	309 0 23,684 Escapement 9,560	1,539 0 213,650 Total 124,859 5,016 27,237 21,076 0 0 83,809	0 46,238 119,787 CR 685,635 28,691 88,891 1,456 0 0 159,733	5,400 25,343 116,030 Tr. CPF 291,491 128,344 21,374 170,504 69,056 0	732 143,884 152,054 otnis 2008 to 20 Broodstock 31,775 0 3,666 12,220 0 0 25,678	300 28,080 46,138 115 Escapement 72,081 0 0 111,154 121,326 0 3,000	Total 1,080,982 157,035 113,931 295,334 190,382 0 315,779
Grand Total Bear Lk/Res Bay Sockeye Leisure/Hazel Lakes Sockeye Kurchner Lake Sockeye Hidden Lake Sockeye Big Lake Sockeye Tustamena Lake Sockeye Tustamena Lake Sockeye Tutka Bay Sockeye Upper Pant Lakes Sockeye	0 6 160,159 CR 125,971 16,555 439	0 0 138,999 CPF 27,062 3,608 18,637	442 9 8,914 2014 Broodstock 3,857 1,043	352 0 35,830 Escapement 9,233 15,771	794 9 343,862 Total 166,123 0 20,163 35,890 0 0 68,073 0 1,212	0 0 114,697 CR 92,596 23,571 407	1,234 66,951 CPF 18,758 5,016 7,933	387 8 8,318 2015 Broodstock 3,945 3,666 890	309 0 23,684 Escapement 9,560	1,939 0 213,650 Total 124,859 5,016 27,237 21,076 0 0 83,809 0 864	0 46,238 119,787 CR 685,635 28,691 88,891 1,456 0 0 159,733	5,400 25,343 116,030 Tr. CPF 291,491 128,344 21,374 170,504 69,056 0 127,368 0	732 143,884 152,054 otals 2008 to 20 Broodstock 31,75 0 3,666 12,220 0 0 25,678	300 28,000 46,138 115 Escapement 72,081 0 0 111,154 121,326 0 3,000 0	192,112 6,432 235,465 634,989 Tenn 1,080,982 157,035 113,931 295,334 190,382 0 315,779 0 14,767
Grand Total Bear Lk /Res Bay Sockeye Leisure/Hazel Lakes Sockeye Kirnehner Lake Sockeye Hidden Lake Sockeye Hidden Lake Sockeye Hidden Lake Sockeye Tustumena Lake Sockeye Tutta Bay Sockeye Tutta Bay Sockeye Upper Pant Lakes Sockeye	0 6 160,159 CR 125,971 16,555 439	0 0 138,999 CPF 27,062 3,608 18,637	442 9 8,914 2014 Broodstock 3,857 1,043	352 0 35,830 Escapement 9,233 15,771	794 9 343,862 Total 166,123 0 20,163 35,890 0 0 68,073 0	0 0 114,697 CR 92,596 23,571 407	1,234 66,951 CPF 18,758 5,016 7,933	387 8 8,318 2015 Broodstock 3,945 3,666 890	309 0 23,684 Escapement 9,560	1,539 0 213,650 Total 124,859 5,016 27,237 21,076 0 0 83,809 0	0 46,238 119,787 CR 685,635 28,691 88,891 1,456 0 0 0 159,733 0	5,400 25,343 116,030 T CPF 291,491 128,344 21,374 170,504 69,056 0 127,368 0 4,921	732 143,884 152,054 otals 2008 to 20 Broodstock 31,775 0 3,666 12,220 0 0 25,678	300 28,000 46,138 115 Escapement 72,081 0 0 111,154 121,326 0 3,000 0 8,545	192,112 6,432 235,465 434,069 Tetal 1,080,982 157,035 157,035 157,035 0 0 315,779 0
Grand Total Bear Lk/Res Bay Sockeye Leisure/Hazel Lakes Sockeye Kirichner Lake Sockeye Hidden Lake Sockeye Big Lake Sockeye Tustumena Lake Sockeye Tusta Bay Sockeye Tusta Bay Sockeye English Bay Lakes Sockeye Port Graham Sockeye Port Graham Sockeye	0 6 160,159 CR 125,971 16,555 439	0 0 138,999 CPF 27,062 3,608 18,637 34,433 61	442 9 8,014 2014 Broodstock 3,857 1,043 4,087	352 0 35,830 Escapement 9,233 15,771	794 9 343,862 Total 166,123 0 20,163 35,890 0 0 68,073 0 1,212 0	0 0 114,697 CR 92,596 23,571 407	1,234 6 66,951 CPF 18,758 5,016 7,933 45,935	387 6 8,318 2015 Broodstock 3,945 3,666 890 6,769	309 0 23,684 Escapement 9,560	1,939 0 213,650 Total 124,859 5,016 27,237 21,076 0 0 0 83,809 0 0	0 46,238 119,787 CR 685,635 28,691 88,891 1,456 0 0 159,733 0 0	5,400 25,343 116,030 T. CPF 291,491 128,344 21,374 170,504 69,056 0 127,368 0 4,921 1,417	732 143,884 152,054 otnis 2008 to 20 Broodstock 31,775 0 3,666 12,220 0 0 25,678 0 1,301 722	300 28,000 146,138 115 Escapement 72,081 0 0 111,154 121,326 0 3,000 0 8,545 0	192,112 6,432 236,465 434,009 Tental 1,090,982 157,935 113,931 295,334 190,382 0 315,779 0 14,767 2,339
Grand Total Bear Lk/Res Bay Sockeye Leisure/Hazel Lakes Sockeye Kurchner Lake Sockeye Hidden Lake Sockeye Big Lake Sockeye Tustamena Lake Sockeye Tustamena Lake Sockeye Tutka Bay Sockeye Upper Pant Lakes Sockeye	0 6 160,159 CR 125,971 16,555 439	0 0 138,999 CPF 27,062 3,608 18,637	442 9 8,914 2014 Broodstock 3,857 1,043	352 0 35,830 Escapement 9,233 15,771	794 9 343,862 Total 166,123 0 20,163 35,890 0 0 68,073 0 1,212	0 0 114,697 CR 92,596 23,571 407	1,234 66,951 CPF 18,758 5,016 7,933	387 8 8,318 2015 Broodstock 3,945 3,666 890	309 0 23,684 Escapement 9,560	1,939 0 213,650 Total 124,859 5,016 27,237 21,076 0 0 83,809 0 864	0 46,238 119,787 CR 685,635 28,691 88,891 1,456 0 0 0 159,733 0 0 0 350	5,400 25,343 116,030 T. CPF 291,491 128,344 21,374 170,504 69,056 0 127,368 0 4,921 1,417	732 143,884 152,054 octals 2008 to 20 Broodstock 31,775 0 3,666 12,220 0 0 25,678 0 1,301 722	300 28,000 146,138 015 Escapement 72,081 0 0 111,154 121,326 0 3,000 0 8,545 0 0 3,177	192,112 6,432 235,465 634,989 Tenn 1,080,982 157,035 113,931 295,334 190,382 0 315,779 0 14,767
Grand Total Bear Lk/Res Bay Sockeye Leisuro/Hazel Lakes Sockeye Kirschner Lake Sockeye Kirschner Lake Sockeye Hidden Lake Sockeye Hyden Lake Sockeye Tutta Bay Sockeye Tutta Bay Sockeye Tutta Bay Lake Sockeye English Bay Lakes Sockeye Port Graham Sockeye Bear Lake Coho	0 6 160,159 CR 125,971 16,555 439	0 138,999 138,999 CPF 27,062 3,608 18,637 34,433 61	442 9 8,014 2014 Broodstock 3,857 1,043 4,087 129	352 0 35,830 Escapement 9,233 15,771 1,022	794 343,002 Total 166,123 6,00 20,163 35,850 0 0 68,073 0 1,212 0	0 0 114,697 CR 92,596 23,571 407	1,234 6 66,951 CPF 18,758 5,016 7,933 45,935	387 6 8,318 2015 Broodstock 3,945 3,666 890 6,769	309 0 23,684 Escapement 9,560	1,930 213,650 Total 124,859 5,016 27,237 21,076 0 0 83,309 0 0 864 0	0 46,238 1119,787 CR 685,635 28,691 88,891 1,456 0 0 159,733 0 0 200 200	5,400 25,343 116,030 T. CPF 291,491 128,344 21,374 170,504 69,056 0 127,368 0 4,921 1,417 29,588 0	732 143,884 152,054 otnis 2008 to 20 Broodstock 31,775 0 3,666 12,220 0 0 25,678 0 1,301 722 4,657	300 28,080 46,138 115 Escapement 72,081 0 0 111,154 121,326 0 3,000 0 8,545 0 3,177 0	192,112 6,432 238,445 434,009 Total 1,000,902 157,035 113,931 295,334 190,382 0 0 14,767 2,339 37,772
Bear Lk Res Bay Sockeye Leisure/Hazel Lakes Sockeye Kirichner Lake Sockeye Hidden Lake Sockeye Big Lake Sockeye Tustumena Lake Sockeye Tustumena Lake Sockeye Tustumena Lake Sockeye Tustumena Lake Sockeye Pont Graham Sockeye Bear Lake Coho Port Graham Pink	0 0 160,159 CR 125,971 16,555 439 29,553	CPF 27,062 3,608 18,637 61 6,071 19,896	442 8,014 2014 Broodstock 3,857 1,043 4,087 129 567	352 8 35,830 Escapement 9,233 15,771 1,022 534 14,791	794 9 343,002 Total 166,123 0 20,163 35,890 0 0 68,073 0 1,212 0 7,172 36,427	0 0 114,697 CR 92,596 23,571 407 31,105	1,234 0 66,951 CPP 18,758 5,016 7,933 45,935 90	387 6 8,318 2015 Broodstock 3,945 3,666 890 6,769	309 0 23,684 Escapement 9,560 11,846	1,939 e 213,659 Total 124,859 5,016 27,237 21,076 0 0 83,809 0 864 0 7,157	0 46,238 119,787 CR 685,635 28,691 1,456 0 0 159,733 0 0 0 0 0 0 0 0	5,400 25,243 116,030 T. CPF 291,491 128,344 170,504 69,056 0 127,368 0 4,921 1,417 29,588 0 19,896	732 143,884 152,054 otah 2008 to 20 Broodstock 31,775 0 3,666 12,220 0 0 25,678 0 1,301 722	300 28,000 46,138 115 Escapement 72,081 0 0 111,154 121,326 0 3,000 0 8,545 0 3,177 0 14,791	192,112 6,432 238,446 434,869 1,080,982 157,035 157,035 190,382 0 315,779 0 14,767 2,339 37,772
Bear Lk/Res Bay Sockeye Leisure/Hazel Lakes Sockeye Kirnchner Lake Sockeye Hidden Lake Sockeye Hidden Lake Sockeye Big Lake Sockeye Tutka Bay Sockeye Tutka Bay Sockeye Tutka Bay Sockeye Finghish Bay Lakes Sockeye Port Graham Sockeye Bear Lake Lokeye Port Graham Pink Tutka Pinks	0 6 160,159 CR 125,971 16,555 439	0 138,999 138,999 CPF 27,062 3,608 18,637 34,433 61	442 9 8,014 2014 Broodstock 3,857 1,043 4,087 129	352 0 35,830 Escapement 9,233 15,771 1,022	794 8 343,092 Total 166,123 0 20,163 35,890 0 68,073 0 1,212 0 7,172 36,427 66,388	0 0 114,697 CR 92,596 23,571 407	1,234 6 66,951 CPF 18,758 5,016 7,933 45,935	387 6 8,318 2015 Broodstock 3,945 3,666 890 6,769	309 0 23,684 Escapement 9,560	1,339 0 213,659 Total 124,859 5,016 27,237 21,076 0 0 83,309 0 864 0 0 0 2,157 0 0 0 0 0 0 0 0 0 0 0 0 0	9 46,238 119,787 CR 695,635 28,691 88,891 1,456 0 0 0 159,733 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5,400 25,243 116,030 116,030 T CPF 291,491 128,344 21,374 21,374 69,056 0 127,368 0 4,921 1,417 29,588 0 19,896 123,454	732 143,884 152,084 152,084 152,085 10 13,775 0 3,666 12,220 0 0 1,301 722 4,657 0 1,740 1,740 331,293	3,000 20,000 46,138 115 Escapement 72,081 0 0 111,154 121,326 0 0,545 121,326 0 0,545 121,326 0 1,14,791 14,791 112,552	192,112 6,432 238,465 434,869 1,080,982 157,035 157,035 190,382 0 0 315,779 0 14,767 2,339 37,772
Bear Lk Res Bay Sockeye Leisure/Hazel Lakes Sockeye Kirichner Lake Sockeye Hidden Lake Sockeye Big Lake Sockeye Tustumena Lake Sockeye Tustumena Lake Sockeye Tustumena Lake Sockeye Tustumena Lake Sockeye Pont Graham Sockeye Bear Lake Coho Port Graham Pink	0 0 160,159 CR 125,971 16,555 439 29,553	CPF 27,062 3,608 18,637 61 6,071 19,896	442 8,014 2014 Broodstock 3,857 1,043 4,087 129 567	352 8 35,830 Escapement 9,233 15,771 1,022 534 14,791	794 9 343,002 Total 166,123 0 20,163 35,890 0 0 68,073 0 1,212 0 7,172 36,427	0 0 114,697 CR 92,596 23,571 407 31,105	1,234 0 66,951 CPP 18,758 5,016 7,933 45,935 90	387 6 8,318 2015 Broodstock 3,945 3,666 890 6,769	309 0 23,684 Escapement 9,560 11,846	1,939 e 213,659 Total 124,859 5,016 27,237 21,076 0 0 83,809 0 864 0 7,157	0 46,238 1119,787 CR 685,635 28,691 88,891 1,456 0 0 159,733 0 0 0 200 2,187,471	5,400 25,343 116,030 T. CPF 291,491 128,344 21,374 170,504 69,056 0 127,368 0 4,921 1,417 29,588 0 19,896 123,454 19,477	732 143,884 152,054 152,054 152,054 152,055 10 12,220 0 0 0 25,678 0 1,301 722 4,657 0 1,740 331,293 0	300 28,086 46,138 115 Escapement 72,081 0 0 111,154 121,326 0 3,000 0 8,545 0 14,791 112,552	192,112 6,432 238,445 434,009 Testal 1,000,902 157,035 113,931 295,334 190,382 0 0 14,767 2,339 37,772
Grand Total Bear Lk/Res Bay Sockeye Leisure/Hazel Lakes Sockeye Kirnchner Lake Sockeye Hidden Lake Sockeye Hidden Lake Sockeye Hidden Lake Sockeye Tutta Bay Sockeye Tutta Bay Sockeye Tutta Bay Sockeye Finginh Bay Lakes Sockeye Pont Graham Sockeye Bear Lake Coho Port Graham Pink Tutta Pinks Halibut Cove Pinks	0 0 160,159 CR 125,971 16,555 439 29,553	0 0 138,999 CPF 27,062 3,608 18,637 34,433 61 6,071 19,896 33,803	4412 9 8,014 2014 Broodstock 3,857 1,043 4,087 129 567 1,740 22,401	352 0 35,830 Escapement 9,233 15,771 1,022 1,022 10,152 10,152	794 8 343,892 Total 166,120 0 20,163 0 0 0 0 0 1,212 0 1,7,172 36,427 66,388 0	0 0 114,697 CR 92,596 23,571 407 31,105	1,234 9 66,951 CPP 18,758 5,016 7,933 45,935 90 6,221	387 6 8,318 2015 Broodstock 3,0545 890 6,769 683	309 0 23,684 Escapement 9,560 11,846 774 253	1,339 0 213,659 Total 124,859 5,016 7,126 0 0 83,309 0 0 864 0 0 7,157 0 2,472,394 0	0 46,238 119,787 CR 685,635 28,691 88,891 1,456 0 0 0 159,733 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5,400 25,243 116,030 T. CPF 291,491 128,344 21,374 170,504 69,056 0 127,368 0 4,921 1,417 29,588 0 19,896 123,454 19,477 0	732 143,884 152,054 otals 2008 to 20 Broodstock 3,056 12,220 0 0 25,678 0 1,301 722 2,678 0 1,301 722 0 3,122 0 0 3,122 0 0 1,301 0 3,056 0 1,301 0 0 1,301 0 0 0 1,301 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	300 28,089 46,138 115 Excapement 72,081 0 0 111,154 121,326 0 0 3,000 0 0 8,545 0 14,791 112,552 0 0	192,112 6,432 235,445 324,469 Testal 1,080,982 157,095 113,931 295,342 0 0 14,767 2,359 37,772 2,754,770 19,477
Grand Total Bear Lk/Res. Bay Sockeye Leisuro/Hazel Lakes Sockeye Kirischner Lake Sockeye Hidden Lake Sockeye Hidden Lake Sockeye Tutta Bay Sockeye Tutta Bay Sockeye Tutta Bay Sockeye Tutta Bay Lake Sockeye Upper Paint Lake Sockeye Port Graham Sockeye Bear Lake Coho Port Graham Pink Tutta Pinks Hailbut Cove Pinks Total Sockeye	0 0 160,159 CR 125,971 16,555 439 29,553	0 0 138,999 CPF 27,062 3,608 18,637 34,433 61 6,071 19,896 33,803	412 9,8014 2914 Broodstock 3,857 1,043 4,087 129 567 1,740 22,401 9,116	362 35,830 35,830 Escapement 9,233 15,771 1,022 14,791 10,152 26,026	794 9 343,092 Total 166,123 0 20,163 35,890 0 0 0 1,212 0 7,172 36,427 66,388 0	0 0 114,697 CR 92,596 23,571 407 31,105	1,234 6 65,951 CPP 18,758 5,016 7,933 45,935 90 6,221 83,785	387 8,318 2015 Broodstock 3,945 3,666 890 6,769 165,008	309 0 23,684 23,684 11,846 11,846 774 253 82,400	1,339 0 213,650 213,650 Total 124,859 5,016 27,237 21,076 0 0 83,309 0 0 2,472,394 0 2,472,394 0 %\$2,841	0 46,238 1119,787 1119,787 1119,787 28,691 88,891 1,456 0 0 159,733 0 0 0 2,000 2,187,471 0 0	5,400 25,341 116,030 T. CPF 291,491 128,344 21,374 170,506 0 127,368 0 127,368 0 14,921 1,417 29,588 0 19,896 123,454 19,477 0 814,475	732 143,884 152,054 152,054 152,054 1018 152,054 1018 1018 1018 1018 1018 1018 1018 101	300 28,006 46,138 15 Escapement 72,081 0 0 111,154 121,326 0 3,000 0 8,545 0 14,791 14,791 112,552 0 0 316,106	192,112 6,432 235,465 434,869 1,080,982 157,935 113,931 295,334 190,382 0 315,779 0 315,779 37,772 2,339 37,772 3,542,770 19,477 2,754,770
Grand Total Bear Lk/Res Bay Sockeye Leisure/Hazel Lakes Sockeye Kirnchner Lake Sockeye Hidden Lake Sockeye Hidden Lake Sockeye Hidden Lake Sockeye Tutta Bay Sockeye Tutta Bay Sockeye Tutta Bay Sockeye Finginh Bay Lakes Sockeye Pont Graham Sockeye Bear Lake Coho Port Graham Pink Tutta Pinks Halibut Cove Pinks	0 0 160,159 CR 125,971 16,555 439 29,553	0 0 138,999 CPF 27,062 3,608 18,637 34,433 61 6,071 19,896 33,803	4412 9 8,014 2014 Broodstock 3,857 1,043 4,087 129 567 1,740 22,401 9,116 567	352 0 35,830 Escapement 9,233 15,771 1,022 14,791 10,152 26,026 534	794 9 343,962 Total 166,123 0 20,163 35,890 0 0 0,8073 0 1,212 0 7,172 36,427 66,388 0 291,461 7,172	0 0 114,697 CR 92,596 23,571 407 31,105	1,24 9 66,951 CPP 18,758 5,016 7,933 45,935 90 6,221 83,785 77,732 6,221	387 6 8,318 2015 Broodstock 3,945 3,945 6,769 683	309 0 23,684 Escapement 9,560 11,846 774 253 82,400 22,180 233	1,339 213,659 213,659 Total 124,859 5,016 27,237 21,076 0 0 83,309 0 0 7,157 0 2,472,394 0 362,472,394 0 363,264	0 46,238 119,787 CR 685,635 28,691 88,891 1,456 0 0 0 0 200 0 0 0 2,187,471 0 944,606	5,400 25,343 116,030 T. CPF 291,491 128,344 170,504 69,056 0 127,368 0 4,021 1,0417 29,588 10 19,896 123,454 19,477 19,477 29,588	732 143,884 152,854 otals 2008 to 20 Broodstock 3,056 12,220 0 0 25,678 0 1,301 722 	300 28,000 46,138 115 Excapement 72,081 0 0 111,154 121,326 0 0 3,000 0 8,545 0 14,791 112,552 0 0 316,106	792,112 6,432 235,446 434,869 700,982 119,935 119,935 119,9382 0 0 14,767 2,339 37,772 2,754,770 19,477 2,176,549
Grand Total Bear Lk/Res Bay Sockeye Leisuro/Hazel Lakes Sockeye Kirischner Lake Sockeye Hidden Lake Sockeye Hidden Lake Sockeye Tutta Bay Sockeye Tutta Bay Sockeye Tutta Bay Sockeye Tutta Bay Lakes Sockeye Port Graham Sockeye Port Graham Sockeye Bear Lake Coho Port Graham Pink Tutka Pinks Hairbat Cove Pinks Total Sockeye	0 0 160,159 CR 125,971 16,555 439 29,553	0 0 138,999 CPF 27,062 3,608 18,637 34,433 61 6,071 19,896 33,803	412 9,8014 2914 Broodstock 3,857 1,043 4,087 129 567 1,740 22,401 9,116	362 35,830 35,830 Escapement 9,233 15,771 1,022 14,791 10,152 26,026	794 9 343,092 Total 166,123 0 20,163 35,890 0 0 0 1,212 0 7,172 36,427 66,388 0	0 0 114,697 CR 92,596 23,571 407 31,105	1,234 6 65,951 CPP 18,758 5,016 7,933 45,935 90 6,221 83,785	387 8,318 2015 Broodstock 3,945 3,666 890 6,769 165,008	309 0 23,684 23,684 11,846 11,846 774 253 82,400	1,339 0 213,650 213,650 Total 124,859 5,016 27,237 21,076 0 0 83,309 0 0 2,472,394 0 2,472,394 0 %\$2,841	0 46,238 1119,787 1119,787 1119,787 28,691 88,891 1,456 0 0 159,733 0 0 0 2,000 2,187,471 0 0	5,400 25,341 116,030 T. CPF 291,491 128,344 21,374 170,506 0 127,368 0 127,368 0 14,921 1,417 29,588 0 19,896 123,454 19,477 0 814,475	732 143,884 152,054 152,054 152,054 1018 152,054 1018 1018 1018 1018 1018 1018 1018 101	300 28,006 46,138 15 Escapement 72,081 0 0 111,154 121,326 0 3,000 0 8,545 0 14,791 14,791 112,552 0 0 316,106	192,112 6,432 235,445 434,669 1,060,482 157,935 113,931 295,334 190,382 0 0 315,779 0 14,767 2,339 37,772 35,427 2,784,770