

# 2020 Post Season Review



## Salmon

### North Coast Areas 1-6



Fisheries and Oceans  
Canada

Pêches et Océans  
Canada

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# 2020 Expectations and Results

2020 EXPECTATIONS & RESULTS AREAS 1 TO 10						
<b>1. Preseason Expectations</b>						
Expected Return	<u>Area</u>	<u>Sockeye</u>	<u>Coho</u>	<u>Pink</u>	<u>Chum</u>	<u>Chinook</u>
	1-2W	Near avg	Below avg	Near avg	Below avg	Unk
	3 <sup>1</sup>	386,000	290,000	291,000	29,000	23,000
	4	1,333,232	Below/near avg	Near avg	Below avg	38,754
	5	Unk	Unk	Near avg	Below avg	Unk
	6	Unk	Unk	Below avg	Below avg	Unk
	7 <sup>6</sup>	Below avg	Below avg	Below avg	Below avg	Unk
	8	Below avg	Below avg	Below avg	Near avg	Avg/Above Avg
	9	Below avg	Below avg	Below avg	Unk	Average
	10	Below avg	Below avg	Below avg	Unk	Below Avg
Interim Target	1	100,000	unk	1,152,000	62,000	unk
Escapement <sup>2</sup>	2E	15,000	unk	728,075	468,000	unk
	2W	12,000	unk	411,550	180,000	unk
	3 <sup>3</sup>	200,000	60,000	225,000	67,000	15,000
	4 <sup>4</sup>	900,000	unk	2,097,800	20,000	unk
	5	50,500	unk	254,500	NA	unk
	6	63,850	unk	1,344,450	520,000	unk
	7	24,200	NA	440,720	311,950	NA
	8	138,750	NA	1,475,400	267,450	42,600
	9	200,000	NA	342,450	150,700	22,700
	10	100,000	NA	NA	NA	NA
<b>Total</b>		1,804,300	unk	8,471,945	2,047,100	unk
Food, Social and Ceremonial Alloc.	1-2W	20,000	5,000	2,500	2,500	3,000
	3-6 North	209,250	8,650	32,425	4,975	15,860
	6 South-10	50,000	8,470	13,270	12,520	7,970
<b>Total</b>		279,250	22,120	48,195	19,995	26,830
Treaty - Nisga'a (all catch)	3 <sup>5</sup>	33,000	11,000	68,000	9,000	5,100
<p>1 - Nisga'a Fisheries Sockeye and Chinook sibling forecasts</p> <p>2 - Target Escapements are based on subjective spawning capacity with some reference to historic esc. and subsequent returns</p> <p>3 - Skeena and Nass sockeye and Skeena pink escapement targets are the product of stock recruitment analysis.</p> <p>4 - Chinook targets for the Skeena and Nass Rivers are the PST stock rebuilding goals</p> <p>5 - Nisga'a Treaty + Harv. Agr. allocation based on pre-season forecast TRTC of "Nass Area" salmon stocks (overage/underage not included)</p> <p>6 - Area 7 &amp; 8 Chinook are based on the Bella Coola/Atnarko preseason outlook</p>						

**2020 EXPECTATIONS & RESULTS  
AREAS 1 TO 10**

**2. Post Season Catch (preliminary)**

<u>Commercial</u>	<u>Area</u>	<u>Sockeye</u>	<u>Coho</u>	<u>Pink</u>	<u>Chum</u>	<u>Chinook</u>			
Troll	1	closed	8,298	11,725	closed	2,531			
In-season Hail	2W	closed	1,207	32	closed	2,660			
	3	closed	closed	closed	closed	closed			
	6	closed	closed	closed	closed	closed			
	7	closed	closed	closed	closed	closed			
	8	closed	closed	closed	closed	closed			
	101	closed	68,759	121,305	closed	13,050			
	102	closed	0	0	closed	closed			
	103	closed	843	71	closed	closed			
	104	closed	4,851	3,435	closed	closed			
	105	closed	2,481	189	closed	closed			
	142	closed	2,943	134	closed	11,856			
<b>Total</b>		closed	89,381	136,890	closed	30,096			
	<u>Area</u>	<u>Sockeye</u>	<u>Coho</u>	<u>Pink</u>	<u>Chum</u>	<u>Chinook</u>			
Gillnet In-season Hail	1	closed	closed	closed	closed	closed			
	2E	closed	closed	closed	closed	closed			
	2W	closed	closed	closed	closed	closed			
	3	closed	closed	closed	closed	closed			
	4	22,807	closed	9,363	closed	closed			
	5	closed	closed	closed	closed	closed			
	6	closed	closed	closed	closed	closed			
	7	closed	closed	closed	closed	closed			
	8	199	closed	10,666	12,974	4,130			
	9	closed	closed	closed	closed	closed			
	10	closed	closed	closed	closed	closed			
<b>Total</b>		23,006	closed	20,029	12,974	4,130			
	<u>Area</u>	<u>Sockeye</u>	<u>Coho</u>	<u>Pink</u>	<u>Chum</u>	<u>Chinook</u>			
Seine In-season Hail	1	closed	closed	183,287	closed	closed			
	2E	closed	closed	closed	closed	closed			
	2W	closed	closed	closed	closed	closed			
	3	closed	closed	1,816	1,751	closed			
	4	closed	closed	closed	closed	closed			
	5	closed	closed	closed	closed	closed			
	6	closed	closed	1,563,002	closed	closed			
	7	closed	closed	closed	closed	closed			
	8	closed	closed	10,820	181	closed			
	9	closed	closed	closed	closed	closed			
	10	closed	closed	closed	closed	closed			
<b>Total</b>		closed	closed	1,758,925	1,932	closed			
	<u>Area</u>	<u>Sockeye</u>	<u>Coho</u>	<u>Pink</u>	<u>Chum</u>	<u>Chinook</u>			
CSAF Demonstration Fisheries (North Coast)	3	closed	closed	closed	closed	closed			
	4	3,474	closed	167	closed	closed			
	5	closed	closed	closed	closed	closed			
	6	closed	closed	closed	closed	closed			
	7,8	closed	closed	closed	closed	closed			
<b>Total</b>		3,474	closed	167	closed	closed			
	<u>Area</u>	<u>Sockeye</u>	<u>Coho</u>	<u>Pink</u>	<u>Chum</u>	<u>Chinook</u>	<u>Jacks</u>	<u>Steelhead</u>	
<b>Sport</b> Tidal	1	7	2,145	398	39	3,881			
	2E	NA	NA	NA	NA	NA			
	2W	0	1,053	389	134	2,206			
	3,4	8	25,599	2,998	7	8,247			
	5,6	NA	NA	NA	NA	NA			
	7,8,9	NA	3,056	110	10	1,387			
	10	NA	NA	NA	NA	NA			
	<b>Total</b>		15	31,853	3,895	190	15,721	UNK	UNK
Freshwater	Babine Lake	4	UNK	UNK	UNK	UNK	UNK	UNK	
	Babine River	4	UNK	UNK	UNK	UNK	UNK	UNK	
	Middle Skeena	4	UNK	UNK	UNK	UNK	UNK	UNK	
	Lower Skeena	4 <sup>9</sup>	1,737	583	167	0	534	538	0
	<b>Total</b>		1,737	583	167	0	534	538	0

9 - Skeena River from Terrace area downstream; data from LGL Limited Lower Skeena Creel Survey

**2020 EXPECTATIONS & RESULTS  
AREAS 1 TO 10**

**2. Post Season Catch (preliminary) cont'd**

<u>First Nations</u>	<u>Area</u>	<u>Sockeye</u>	<u>Coho</u>	<u>Pink</u>	<u>Chum</u>	<u>Chinook</u>	<u>Jacks</u>	<u>Steelhead</u>
FSC*	Terminal	1	20	NA	NA	NA	NA	NA
	Interception	1	NA	NA	NA	NA	NA	NA
	Terminal	2E	1,920	NA	NA	NA	NA	NA
	Interception	2E	NA	NA	NA	NA	NA	NA
	Terminal	2W	NA	NA	NA	NA	NA	NA
	Interception	2W	NA	NA	NA	NA	NA	NA
	Tidal	3	NA	NA	NA	NA	NA	NA
	Tidal	4,5,6	12,688	435	3,252	63	819	344
	Non-tidal	Skeena	110,685	3,081	2,148	56	4,482	2098
	Tidal	7	1,354	222	4	610	779	UNK
	Tidal	8	571	0	0	0	0	0
	Non-tidal	8	37	13	125	173	1,621	0
	Tidal	9	0	0	0	0	0	0
	Non-tidal	9	668	45	16	1	72	0
	Tidal	10	NA	NA	NA	NA	NA	NA
	<b>Total</b>		127,943	3,796	5,545	903	7,773	2,442
Treaty - Nisga'a (all catch)	3	39,390	897	6,606	80	5,577	0	137
<b>ESSR</b>	<u>Area</u>	<u>Sockeye</u>	<u>Coho</u>	<u>Pink</u>	<u>Chum</u>	<u>Chinook</u>	<u>Jacks</u>	<u>Steelhead</u>
	2E	closed	closed	closed	closed	closed	closed	closed
	3	closed	closed	closed	closed	closed	closed	closed
Babine Lake	4	closed	closed	closed	closed	closed	closed	closed
Moricetown Canyon	4	closed	closed	closed	closed	closed	closed	closed
	6	closed	closed	closed	closed	closed	closed	closed
	<b>Total</b>	closed	closed	closed	closed	closed	closed	closed

\*Data set is not complete

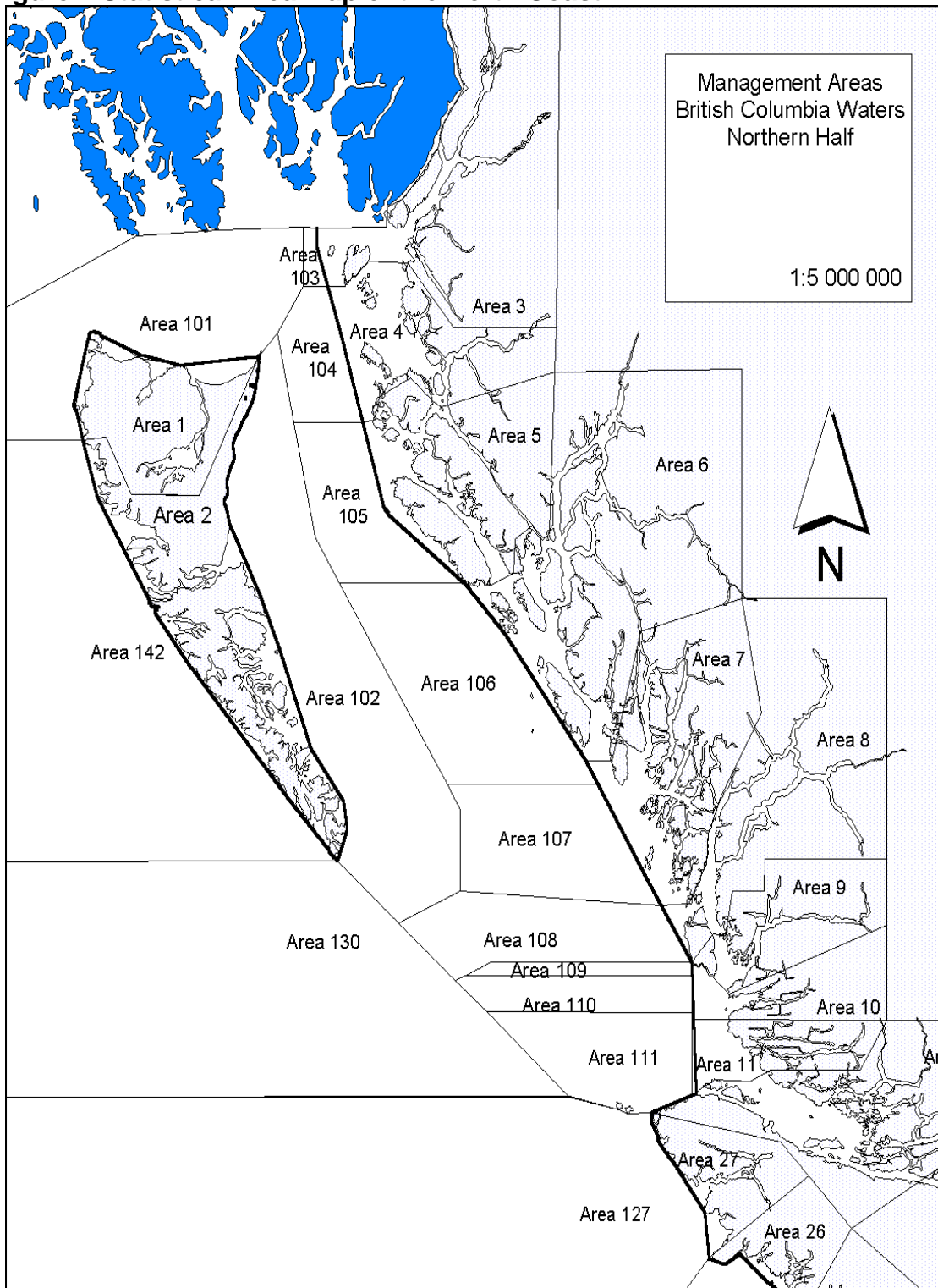
**2020 EXPECTATIONS & RESULTS  
AREAS 1 TO 10**

**3. Commercial Fishery Statistics**

	<u>Area</u>	<u>Date of First Fishery</u>	<u>Date of Last Fishery</u>	<u>Closed for Balance</u>	<u>Days Fishing</u>	<u>Total Boat Days</u>
Gillnet	1	closed	closed	closed	closed	closed
	2E	closed	closed	closed	closed	closed
	2W	closed	closed	closed	closed	closed
	3	closed	closed	closed	closed	closed
	4	August 6	August 6	August 17	2	201
	5	closed	closed	closed	closed	closed
	6	closed	closed	closed	closed	closed
	7	closed	closed	closed	closed	closed
	8	June 15	July 20	October 8	4	486
	9	closed	closed	closed	closed	closed
	10	closed	closed	closed	closed	closed
Seine	1	August 24	Sept 1	Sept 1	9	35
	2E	Closed	Closed	Closed	Closed	Closed
	2W	Closed	Closed	Closed	Closed	Closed
	3	July 6	July 6	July 22	1	13
	4	closed	closed	closed	closed	closed
	5	closed	closed	closed	closed	closed
	6	July 20	August 10	August 19	8	258
	7	closed	closed	closed	closed	closed
	8	July 20	July 20	October 8	1	3
	9	closed	closed	closed	closed	closed
	10	closed	closed	closed	closed	closed
Troll	Area F	July 1	August 15	Sept 30	92	2847

# Statistical Area Map of the North Coast

Figure 1 Statistical Area Map of the North Coast





# Commercial Troll Fishery Review

## 2020 SALMON LICENSE AREA F TROLL SUMMARY

### ITQ Chinook Troll Fishery

The Area F Troll Chinook ITQ fishery is a component of the Northern B.C. Aggregate Abundance Based Management (AABM) Chinook fishery, as defined in the Pacific Salmon Treaty (PST), which includes the Area F Troll fishery, in Areas 1 to 5, and the Area 1 and 2 recreational fishery. The preseason Area F Troll Chinook total allowable catch (TAC) is determined by subtracting the expected recreational harvest for Areas 1 and 2 from the total Northern BC AABM TAC, which equated to a starting TAC of 92,600 Chinook for Area F Troll in 2020. However, based on COVID 19 related travel restrictions for Haida Gwaii in 2020 a 55% reduction in the NBC AABM Chinook recreational catch forecast was implemented, increasing the Area F TAC by 22,200 to 114,800. This resulted in a vessel quota of 529 Chinook based on 217 licences.

In addition to the maximum 3.2% exploitation objective on WCVI Chinook, further precautionary fishery time restrictions designed to protect at-risk Fraser Spring 4<sub>2</sub>, Spring 5<sub>2</sub> and Summer 5<sub>2</sub> Chinook and to provide increased availability of not-at-risk Summer 4<sub>1</sub> for First Nations harvest opportunities were implemented again in 2020. These actions have resulted in delaying the start of the Area F Troll Chinook fishery until August 20<sup>th</sup> in 2019 and August 15<sup>th</sup> in 2020.

Time restrictions in July are aimed primarily at protecting at risk Fraser River stream type Chinook and to allow passage of Fraser River not at risk Chinook for FSC purposes. Time restrictions in the first half of August are also in place to limit exploitation of WCVI Chinook to a maximum 3.2% exploitation objective.

The Chinook fishery opened August 15<sup>th</sup> with approximately 118 vessels participating in the first week. The average CPUE in the first week of the fishery was 17 chinook / vessel / day and remained slightly above the decadal mean until the end of September. Effort declined significantly after the first week of September with less than 20 vessels participating after September 9<sup>th</sup>. The fishery closed for the balance of the season on September 30<sup>th</sup> with a total of 124 vessels having landed a validated catch of 30,096 Chinook. Although the 2020 Chinook opening started 5 days earlier than in 2019 when the catch was 42,800, lower CPUEs and prevailing inclement weather in late summer 2020 resulted in the Area F fleet catching less than 30% of the available TAC in 2020.

DNA samples were collected from 948 Chinook Salmon in 2020 and stock composition (GSI) data for the catch will be provided once the lab analysis results are made available to StAD. Post season estimates of WCVI exploitation will also be determined using DNA and CWTs and are expected to be available in early spring of 2021.

Table 1 Area F Troll Chinook ITQ and AABM Summary

<b>Area F Troll</b>			
Licence Summary		Allocation / Catch Summary	
No. Licences		No. Chinook	
Total Area F	217	Season Start:	<u>TAC</u> 114,800
			<u>ITQ</u> 529
DFO Inventory		Unavailable ITQ:	11,109
Total-	21		
Active Fishing	124	Available TAC:	103,691
		Troll Catch:	30,096
<b><u>AABM Review</u></b>		<b><u>Preseason</u></b>	<b><u>Catch</u></b>
	Area 1-2 Recreational:	18,200	6,087
	Area F Troll:	114,800	30,096
	<b>Total AABM:</b>	<b>133,000</b>	<b>36,183</b>

Notes:

Northern B.C. AABM Chinook Fishery includes the Area F Troll and Area 1-2 Recreational fisheries as defined in the Pacific Salmon Treaty.

Coho Troll Fishery

The A-B Line (Dixon Entrance) directed Pink and Coho fishery opened on July 1st with non-retention of Sockeye and Chum by-catch. In total there were 27 vessels that participated over the course of the 31 day opening with an average participation of 9 vessels per day and a maximum of 14. Approximately 16,100 Coho and 65,300 Pinks were retained during the A-B Line opening with Pink salmon CPUE and catches being considerably higher than those of the previous 10 years.

By-catch provisions of Sockeye within Dixon Entrance troll fisheries are contingent on the availability of commercial TAC of Skeena and Nass Sockeye. The 2020 pre-season forecast and early in-season estimates of Skeena Sockeye Total Return to Canada (TRTC) were below the commercial trigger of 1.05 M and therefore no retention was permitted.

Due to ongoing poor marine productivity and low returns observed for north coast Coho stocks in 2018 and 2019, the Area F directed Coho fishery was delayed until August 1st in 2020 with the objective of reducing harvest rates by approximately 50%. As an additional precautionary step the Central Coast limited effort Coho demonstration fishery was not permitted in 2020.

In-season management measures for northern boundary area Coho are also defined within the Canada US Pacific Salmon Treaty (Chapter 7, Schedule B). This agreement identifies CPUE thresholds within the south east Alaskan (SEAK)

Area 6 commercial troll fishery during stat weeks 27 to 29 that can trigger closures within boundary area commercial Coho fisheries in both countries. Late July in-season review by managers from both countries resulted in a consensus decision not to implement a treaty closure in 2020.

The directed Coho opening started on August 1<sup>st</sup> and excluded the west side of Haida Gwaii (South of Cape Knox) to minimize chinook bycatch. Fishing effort was concentrated in Dixon Entrance from Langara Island to Rose Spit. Average CPUE during the first week of the fishery was over 80 coho per day per vessel with approximately 86 vessels participating. The Coho CPUE declined steeply over the next two weeks and remained well below 10 for the balance of the season.

The total catch of Coho was 89,400 in 2020, which is approximately 50% of the 2019 catch and 39% of the average for the previous 10 years. Pink salmon CPUE in Dixon Entrance remained high through much of August resulting in a total catch of 136,900. DNA samples were collected from approximately 1000 Coho in 2020 and stock composition information will be provided some time after the lab analysis is complete.

The following table summarizes weekly catch and release by species. Effort values are expressed as vessel-days.

Table 2. Estimated Troll Total Catch and Releases by Species

WEEK	End Date	Effort	Chinook		Coho		Pink		Sockeye		Chum	
			Kept	Rel.	Kept	Rel.	Kept	Rel.	Kept	Rel.	Kept	Rel.
27	4-Jul	16	0	37	451	0	3,947	5	0	3	0	8
28	11-Jul	41	0	161	2,825	1	13,668	1	0	18	0	4
29	18-Jul	48	0	266	4,994	1	15,332	394	0	12	0	3
30	25-Jul	86	0	220	5,035	0	17,528	784	0	23	0	12
31	1-Aug	117	0	722	9,027	24	18,480	2,220	0	92	0	21
32	8-Aug	480	0	3,121	38,871	136	40,543	18,274	0	171	0	98
33	15-Aug	436	2,028	2,826	18,362	53	19,085	6,598	0	131	0	1,232
34	22-Aug	634	10,503	1,146	5,405	15	6,913	4,264	0	124	1	276
35	29-Aug	466	8,368	822	2,164	5	1,358	389	0	53	24	205
36	5-Sep	263	3,854	460	975	2	26	69	0	35	0	136
37	12-Sep	168	3,010	368	744	0	5	15	0	7	0	33
38	19-Sep	70	2,084	205	448	0	5	1	0	1	0	12
39	26-Sep	20	249	47	80	0	0	0	0	0	0	2
40	3-Oct	2	0	0	0	0	0	0	0	0	0	0
<b>Total</b>			<b>30,096</b>	<b>10,401</b>	<b>89,381</b>	<b>238</b>	<b>136,890</b>	<b>33,014</b>	<b>0</b>	<b>669</b>	<b>25</b>	<b>2,041</b>

## ***Highlights of the 2020 North Coast Troll Fishery***

- Jan. 21** Area F Harvest Committee – Post Season Review Meeting for 2019 and early planning for 2020.
- Mar. 3** DFO releases 2020 Fraser Chinook Management Approach letter outlining highly precautionary fishery restrictions designed to protect at-risk Fraser Spring 4<sub>2</sub>, Spring 5<sub>2</sub> and Summer 5<sub>2</sub> Chinook and to provide increased availability of not-at-risk Summer 4<sub>1</sub> for First Nations harvest opportunities. Interim Plan, effective April 1<sup>st</sup>, included adoption of 2019 measures, which included non-retention of Chinook salmon until August 20<sup>th</sup>.
- Mar. 31** The Pacific Salmon Commission's (PSC) Chinook Technical Committee (CTC) completed calibration CLB2002 to determine the Abundance Indices (AI's) for the three fisheries in the Aggregate Abundance Based Management (AABM) regime. The preseason NBC AABM Chinook AI was 1.08 with a TAC of 133,000 Chinook. The recreational forecast was 40,400 recreational leaving 92,600 for the Area F troll TAC.
- Apr. 7** Area F Harvest Committee Spring Planning Meeting:  
Due to ongoing low abundance and productivity for North Coast Coho stocks the 2020 Coho management plan included measures designed to reduce harvest rate by 50%. Measures included delaying the directed Coho opening until August 1<sup>st</sup> and foregoing the Central Coast limited effort Coho demonstration fishery in 2020.
- Apr. 13** Area F Harvest Committee submits proposal in response to the "Fraser Chinook Management Approach" letter. Proposal includes request for a limited 10 day Chinook opening in late July. Option 2 in the proposal requested that the Chinook ITQ opening be moved up from August 20<sup>th</sup> to August 15<sup>th</sup>.
- Apr. 23** Area F Harvest Committee Meeting - Teleconference check in with DFO Regional Salmon Manager (Jeff Grout). Decisions on Chinook opening were awaiting Ministerial approval in June timeframe.
- Jun. 16** FN0546 - Area F mandatory reporting requirements.

FN0547 - Area F Chinook and Coho Head retention and delivery requirements.

FN0548 - List of Area F licence holders exempt from retaining salmon heads for Salmon Head Recovery Program.

**Jun. 19** FN0556 - Area F Chinook and Coho Head retention and delivery requirements- Amendment to FN0547 (Excluding DFO offices from list of locations to obtain head bags due to COVID related office closures).  
FN0565 Final 2020 Fraser Chinook Conservation Measures including non-retention of Chinook in the Area F fishery until August 15, 2020.

**Jun. 30** FN0612 - Area F summary of planned full fleet openings in 2020

**Jul. 1** Dixon Entrance A-B Line Coho and Pink salmon opening with non-retention of Sockeye and Chum (FN00568 – released Jun. 22)  
Open areas:

- Subareas 101-4, 101-5, 101-8, 101-9 and that portion of Subarea 101-3 north of 54 degrees 24 minutes north latitude.

**Jul. 21** Teleconference between DFO and ADF&G:  
In-season Review of Northern Boundary Coho management resulting in decision to not issue management actions in 2020. In-season management measures for northern boundary area Coho are defined within the Pacific Salmon Treaty (Chapter 7, Attachment B).

**Aug. 1** Directed Coho and Pink troll fishery opening. (FN0708 released July 22)  
Open Areas:

- Those portions of Subareas 1-2, 1-3, 1-7 and that portion of Subarea 1-5 west of a line drawn true north from Skonun Point, outside and seaward of a line drawn one nautical mile parallel to the shorelines of Graham Island and Langara Island (defined at the mean high water mark).
- That portion of Subarea 1-5 east of a line running true north from Skonun Point.
- That portion of Subarea 101-2 north of 54 degrees 10.550 minutes north latitude.
- Subareas 101-4, 101-5, 101-8 to 101-10
- Those portions of Subareas 101-3, 101-6 and 101-7 outside and seaward of a line drawn one nautical mile parallel to the

shorelines of Graham Island and Langara Island (defined at the mean high water mark).

- Those portions of Area 102 outside the Strict Protection Areas within the marine strict protection zones identified in the Gwaii Haanas Gina 'Waadluxan KilGuhlGa Land-Sea-People Management Plan.
- Those portions of Subarea 3-1 and Areas 103 and 104 north of 54 degrees 12 minutes north latitude and west of 131 degrees 10 minutes west longitude
- Subarea 105-1
- That portion of subarea 105-2 that lies outside the West Banks Island Rockfish Conservation Area
- That portion of subarea 105-2 that lies outside the North Danger Rocks Rockfish Conservation Area.
- That portion of Subarea 106-1 west of 130 degrees 30 minutes west longitude

**Aug. 15** Chinook ITQ fishery opening (FN0754 released July 31) with non-retention of Sockeye and Chum.

Area F Area 1, 101, 2 and 142 – ITQ Fishery – Opening, August 15, 2020

Open Areas:

- Those portions of Subareas 1-2, 1-3, 1-7 and that portion of Subarea 1-5 west of a line drawn true north from Skonun Point, outside and seaward of a line drawn one nautical mile parallel to the shorelines of Graham Island and Langara Island (defined at the mean high water mark).
- That portion of Subarea 1-5 east of a line running true North from Skonun Point.
- Subareas 101-4, 101-5, 101-8 to 101-10.
- Those portions of Subareas 101-2, 101-3, 101-6 and 101-7 outside and seaward of a line drawn one nautical mile parallel to the shorelines of Graham Island and Langara Island (defined at the mean high water mark).
- Those portions of Subareas 1-1, 101-1, 101-2 and 142-2 that lie outside the Frederick Island Rockfish Conservation Area.
- Subareas 2-48, 2-49, 2-63, 2-68, 2-69, 2-78, 2-79, 2-86, 2-88, 2-92, 2-97 and 2-98
- Those portions of Subareas 2-31, 2-35, 2-38 and 142-1 outside the Strict Protection Areas identified in the Gwaii Haanas Gina 'Waadluxan KilGuhlGa LandSea-People Management Plan and north of 51 degrees 57.7 minutes north latitude. That portion of Subarea 142-2 north of 53 degrees 37 minutes North latitude.

**Sep. 1** Boundary adjustment for Chinook, Coho, Pink salmon fishery (FN0898 released August 28) – Removal of the entire North Graham Island ribbon boundary.

**Sept. 30** Area F Troll closed for the balance of the season. (FN1001 released Sept. 22)

# Area 1

## Area 1 Map

Figure 2 Area 1 Map





## ***First Nations Fishery Review***

### Haida FSC

#### *Terminal Fisheries*

Sockeye - Haida traditional river fisheries in Area 1 focus on small terminal sockeye stocks such as the Yakoun, Awun and Naden Rivers. Sockeye fishery openings are managed under the direction of a Public Management Committee in Old Massett. The Haida Fisheries Program provides technical advice to the committee and Haida Fisheries Guardians monitor the fisheries and provide onsite management and catch data. In 2020 the developing ARIS sonar program also generated in-season sockeye stock assessment information for the Yakoun River which helps to inform management decisions. Unfortunately low sockeye returns combined with ongoing COVID related health and safety considerations resulted in a decision by Haida Fisheries Committee to close the Area 1 traditional sockeye fisheries in 2020.

Fall net fisheries for Coho did occur in the Yakoun River but no effort or catch estimates are available. There were no reports of terminal gillnetting activities to harvest Chum salmon in the fall of 2020.

#### *Interception Hook and Line Fisheries*

FSC effort targeting Chinook and Coho using hook and line gear occurs off of Massett on an annual basis. This fishery occurs during the summer months and targets mixed passing stocks.

#### *Interception Net Fisheries*

The majority of FSC Sockeye salmon have traditionally been harvested within Dixon Entrance by seine and gillnet gear targeting Sockeye in the Langara Island area. Due in part to COVID considerations the Council of the Haida Nation did not sponsor a seine vessel to harvest FSC Sockeye in 2020.

## ***ESSR Review***

There were no ESSR licences issued in Area 1 during the 2020 season.

## ***Recreational Review***

### Recreational (Tidal)

Normally the majority of Haida Gwaii based recreational effort occurs between Massett and Langara Island along the north shore of Graham Island. The majority of fishing occurs from mid-May to the mid-September with little to no effort in the winter months. In addition to a fleet made up of independent anglers and charter operators working out of Massett there are 5 fly in lodge operations (floating and land based) within Area 1, including 3 at Langara Island and 2 in Naden Harbour.

As a result of COVID related travel restrictions in 2020 the level and distribution of recreational effort was dramatically altered in Areas 1 and 2. Effort and activity patterns for local resident independent anglers were similar to most years but community based lodge operations were not able to operate and only 3 of the 5 major fly in lodges operated at much reduced capacity and timeframes, which included portions of July and early September.

The recreational fishery maintained full bag limits in 2020 with the exception of the annual Chinook limit, which was reduced to 10 across the region as a precautionary measure towards protection of Southern at-risk Chinook stocks. The estimated Area 1 recreational harvest in 2020 was 3,881 Chinook and 2,145 Coho. Refer to Table 1 for detailed catch information. Catch estimates were generated using data from two sources including the Haida Fisheries Creel Program, which estimated catch and releases by local independent anglers and the Logbook catch reporting program, which records catch at the major lodges.

Table 3 2020 Season Estimates of Area 1 and 2 Recreational Catch

2020			Catch By Species							
Month	Area	Effort	Coho	Chinook	Pink	Sockeye	Chum	Halibut	Lingcod	Rockfish
June	1		2	319	15	0	0	78	115	57
	2E		-	-	-	-	-	-	-	-
	2W		7	498	0	0	0	220	162	31
June Total			9	817	15	0	0	298	277	88
July	1		1990	3397	304	6	26	1317	658	963
	2E		-	-	-	-	-	-	-	-
	2W		274	1024	3	0	9	108	106	32
July Total			2264	4421	307	6	35	1425	764	995
August	1		24	112	62	0	1	51	23	24
	2E		-	-	-	-	-	-	-	-
	2W		354	496	286	0	20	17	157	3
August Total			378	608	348	0	21	68	180	27
September	1		129	53	17	1	12	78	88	26
	2E		-	-	-	-	-	-	-	-
	2W		418	188	100	0	105	5	145	0
September Total			547	241	117	1	117	83	233	26
June-September	1		2145	3881	398	7	39	1524	884	1070
	2E		-	-	-	-	-	-	-	-
	2W		1053	2206	389	0	134	350	570	66
<b>All Areas</b>			<b>3198</b>	<b>6087</b>	<b>787</b>	<b>7</b>	<b>173</b>	<b>1874</b>	<b>1454</b>	<b>1136</b>
% of total catch by source	Logbook		57%	48%	22%	86%	23%	68%	46%	83%
	Creel		43%	52%	78%	14%	77%	32%	54%	17%

Notes: Catch estimates are preliminary and subject to change.  
Data sources include Logbook program from fishing lodges and Haida Fisheries Program Creel.

## Commercial Net Fishery

Pink salmon - Haida Gwaii stocks are primarily even year stocks with little to no returns in odd years.

Pink salmon returns to Masset Inlet were well above management targets in 2020 with an obvious surplus identified in at the Yakoun River. A commercial net fishery was opened to seines for 12 hours in the eastern portion of management sub area 1-6 on Monday August 24, targeting Yakoun River pink salmon. A total

of ten seines attended the fishery, which was extended and remained open until interest waned on September 1<sup>st</sup>. Total catch was approximately 183,000 pink salmon.

**Table 4 Area 1 Pink Salmon Seine Opening Catch**

**Management Area 1 (Yakoun River)**

Area A Pink salmon seine fishery

Date	Effort	Sockeye Salmon		Coho Salmon		Pink Salmon		Chum Salmon		Chinook Salmon		Steelhead
		Kept	Rel	Kept	Rel	Kept	Rel	Kept	Rel	Kept	Rel	Rel
Aug. 24-26	25	0	0	0	15	101735	0	0	0	0	5	0
Aug. 27-28	5	0	0	0	43	67562	0	0	0	0	2	0
Aug. 29-31	5	0	0	0	45	14000	0	0	0	0	0	0
<b>Total</b>	<b>35</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>103</b>	<b>183297</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>0</b>

In contrast, Pink salmon returns to Naden Harbour in Area 1 were very poor in 2020 and there were no additional harvest opportunities in Area 1. Follow up escapement surveys by Haida Fisheries indicated very low abundance of Pink Salmon in Naden Harbour watersheds in 2020.

Chum salmon – returns to Area 1 have been consistently at or below management targets over the past few years. Although COVID health and safety considerations limited the assessment efforts in Area 1 escapement surveys conducted by the Haida Fisheries Guardians clearly indicated that the 2020 abundance was very low. No commercial fishing opportunities were identified in 2020.

## Area 1 Stream Escapements

Table 5 Area 1 Stream Escapements

**AREA 1 (preliminary) STREAM ESCAPEMENTS 2020**

STREAM	SOCKEYE		COHO		PINK		CHUM	
	Esc.	Target*	Esc.	Target*	Esc.	Target*	Esc.	Target*
<b>MASSET SUBAREA</b>								
Ain River		(15,000)		(20,000)			A/P	<b>(25,000)</b>
Awun River	4,400	<b>(20,000)</b>		(8,000)			A/P	<b>(15,000)</b>
Datlamen Creek				<b>(5,000)</b>	30,000	<b>(30,000)</b>		
Mamin River				(15,000)	50,000	<b>(50,000)</b>		
McClinton Creek				(*)				
Yakoun River <sup>1</sup>	3,100	<b>(45,000)</b>		(45,000)	750,000	<b>(650,000)</b>		
<b>NADEN SUBAREA</b>								
Davidson Creek					N/O	(100,000)		
Lignite Creek					1,500	(50,000)		
Naden River	400	<b>(20,000)</b>			N/O	<b>(100,000)</b>	A/P	<b>(20,000)</b>
Stanley Creek								<b>(2,000)</b>

<sup>1</sup> Yakoun River - was not inspected (N/I) for chinook escapement. Anecdotal information from the Marie Lake Hatchery Crew was that chinook escapement was above average.  
Yakoun River Pink Salmon escapement estimate was generated using ARIS sonar stream survey data.

- \* **-Targets** are not a biological escapement goals. They are used as a surrogate to assist management identify harvest opportunities.
  - Targets that are in bold and underlined are identified as indicators and priority for assessment.
- N/O: None observed.                      A/P: Adults present.

## Area 2 East

### Area 2 East Map

Figure 3 Area 2 East Map



## ***First Nations Fishery Review***

### Haida FSC

#### *Terminal Fisheries*

Sockeye - Haida traditional fisheries focus primarily on sockeye returning to Copper Creek during the month of May. Sockeye fishery openings were managed with input from a Community Management Committee in Skidegate. Typically, the Haida Fisheries Program provides technical advice to the committee and Haida Fisheries Guardians monitor the fisheries and provide onsite management at Copper Bay. Copper returns are normally assessed in-season using the Copper River counting fence and data is used to inform fishery management decisions. Due to COVID concerns in 2020 the counting fence was not operated and community based FSC harvest was carried out by several designated individuals that caught and distributed sockeye within the community.

#### *Interception Net Fisheries*

Terminal Sockeye returns normally support only a proportion of the community requirements and in many years additional FSC Sockeye salmon have been harvested by seine but these activities occur outside of Area 2E in Dixon Entrance or Area 2W. As mentioned above, due in part to COVID considerations the Council of the Haida Nation did not sponsor a seine vessel to harvest FSC Sockeye in 2020.

#### *Interception Hook and Line Fisheries*

Small amounts of FSC effort occurred in Area 2E using hook and line gear to target Chinook in late winter and spring as well as Coho in late summer and fall.

### ***ESSR Review***

There were no ESSR licences issued in Area 2 East during the 2020 season.

### ***Recreational Review***

The early Chinook salmon fishery in east Skidegate during late winter and early spring was reported to be average in 2020. While the harvest of Chinook in Area 2 East is unknown, it is assumed to be less than 300 pieces and typically represents only a very small proportion of the overall recreational salmon catch around Haida Gwaii. In most years the vast majority of recreational effort (>99%) occurs in Area 1 and 2W.

Area 2 East is most recognised for its fall Coho fisheries, which occur along the shores and in key producing streams of east Skidegate Inlet, Cumshewa Inlet, Copper Bay and Tlell. Coho abundance in 2020 was reported to be below average by most recreational anglers.

### ***Commercial Net Fishery***

Pink Salmon returns to Skidegate and Cumshewa Inlets were strong in 2020. Returns South of Cumshewa Inlet were moderate and were generally less than or in some cases approaching management targets. Escapement to Pallant Creek was well over the management target but these fish did not show at all in Cumshewa Inlet and prevailing high creek flows hampered efforts to assess early run strength instream. Unfortunately this potential Pink salmon harvest opportunity was not identified in time to call an opening. Therefore no commercial fishing opportunities for Pink salmon were identified in Area 2E during 2020.

Chum salmon – returns over the past decade have been consistently below management targets and overall returns to Area 2E in 2020 were extremely poor. Escapements from Cumshewa Inlet South were less than 15% of the brood year and escapements in Skidegate Inlet, which had shown improving abundances in 2018 in 2019, were well below management targets. No commercial fishing opportunities for Chum Salmon were identified.

## Area 2 East Stream Escapements

Table 6 Area 2 East Stream Escapements

AREA 2E (preliminary) STREAM ESCAPEMENTS 2020

STREAM	SOCKEYE		COHO		PINK		CHUM	
	Esc.	Target*	Esc.	Target*	Esc.	Target*	Esc.	Target*
<b>TLELL SUBAREA</b>								
Tlell River				<b>(25,000)</b>		<b>(25,000)</b>		
<b>SKIDEGATE SUBAREA</b>								
Deena River			5,100	<b>(12,000)</b>	< 80,000	<b>(100,000)</b>	5,500	<b>(30,000)</b>
Haans Creek				(2,500)		<b>(5,000)</b>		(2,000)
Honna River				(2,000)		(25,000)	A/P	<b>(10,000)</b>
Indian Cabin Creek							A/P	<b>(8,000)</b>
Lagins Creek				(3,000)	20,000	(3,500)	9,500	<b>(25,000)</b>
Slatechuck Creek				(2,000)	56,000		650	<b>(18,000)</b>
Tarundl Creek				(1,500)		<b>(N/A)</b>	650	<b>(5,000)</b>
<b>COPPER SUBAREA</b>								
Copper River	7,500	<b>(10,000)</b>		(15,000)	66,000	<b>(75,000)</b>		
<b>CUMSHEWA SUBAREA</b>								
Chadsey Creek					8,100		20	<b>(3,500)</b>
Mathers Creek	N/I					(75,000)		(20,000)
Pallant Creek					195,000	<b>(75,000)</b>	75	<b>(30,000)</b>
<b>SELWYN SUBAREA</b>								
Big Goose Creek			50	(200)	2,600	<b>(20,000)</b>	205	<b>(7,000)</b>
Clint Creek (Sewell L/H#3)							65	(500)
Dana #1 Creek			2		700		190	(2,500)
Dana #2 Creek							20	(500)
Dana #3 Creek							25	(1000)
Dass Creek							1	
Lagoon Creek			200	(1,500)	110		1,400	<b>(25,000)</b>
Little Goose Creek			0	(150)	140	(5,000)	50	(4,000)
Pacofi Creek			50		70		120	<b>(3,500)</b>
Sewell Inlet Head Creek			40	(1,500)	N/O		560	(6,500)
Sewell Point Creek							N/O	(500)
Thorsen Creek (Sewell L/H#1)			10	(200)	130		325	(2,000)
Thurston Creek							80	(2,000)
Waterfall Creek					50		65	(2,000)
<b>ATLI SUBAREA</b>								
Beljay Bay Creeks (2)							8	
Moore Creek							N/O	
Powrivco Creek							18	<b>(5,000)</b>
Richardson Creek							4	
Sandy Creek							300	<b>(4,500)</b>
Takelley Creek							N/O	
<b>DARWIN SUBAREA</b>								
Anna Inlet Creek					50	(10,000)		<b>(1,500)</b>
Crescent Creek			50	(1,000)	950	<b>(30,000)</b>	125	<b>(6,500)</b>
Echo Harbour Creek					8,500	<b>(15,000)</b>		
Kostan Creek							230	(1,500)
Salmon River				(750)	55,000	<b>(100,000)</b>	25	(25,000)
<b>JUAN PEREZ SUBAREA</b>								
Gate Creek					4,400	<b>(20,000)</b>		
Hutton Head Creek			20		210	(15,000)	70	<b>(5,000)</b>
Hutton L/H Creek							15	<b>(3,000)</b>
Marshall Creeks (3)						(7,000)	2	<b>(3,000)</b>
Matheson L/H Creek					17,750	<b>(30,000)</b>	90	<b>(6,000)</b>
Matheson R/H Creek			40		10,150	<b>(5,000)</b>	180	<b>(3,000)</b>
Sedgwick Creek				(250)			150	<b>(7,000)</b>
Windy Bay Creek				(500)	3,700	<b>(70,000)</b>		
<b>SKINCUTTLE SUBAREA</b>								
Bag Harbour Creek			50	(1,000)	5,500	(1,500)	1,350	<b>(12,000)</b>
George Bay Creek			50	(500)	9,150	<b>(1,000)</b>	130	(12,000)
Harriet Harbour Creek					35		190	<b>(6,000)</b>
Slim Inlet Creek			10		1,800		230	<b>(1,500)</b>
Tangle Creek					100		50	<b>(4,000)</b>

\* -Targets are not a biological escapement goals. They are used as a surrogate to assist management identify harvest opportunities.

- **Targets** that are in bold and underlined are identified as indicators and priority for assessment.

-Deena Creek Pink salmon escapement estimate is based on anecdotal observations during SEP enhancement operations

- The Deena Creek Coho estimate is from an AUC estimate but all other coho numbers are single count observations and represent only a portion of total escapement.

N/O: None observed.

A/P: Adults present.



# Area 2 West

## Area 2 West Map

Figure 4 Area 2 West Map



## ***First Nations Fishery Review***

### Haida FSC Review

#### *Area 2W*

##### Interception Hook and Line Fisheries

Haida FSC activities in Area 2W primarily target passing stocks of Chinook and Coho by hook and line from West Skidegate and Rennell Sound.

#### *Interception Net Fisheries*

FSC sockeye salmon have traditionally been harvested within Rennell Sound with seine gear targeting passing sockeye stocks. There was no effort in Area 2W to harvest FSC by commercial seine in 2020.

### ***ESSR Review***

There were no ESSR licences issues for Area 2 West during 2020.

### ***Recreational Review***

Most years the Area 2W recreational salmon fishery occurs between Englefield Bay and Port Louis. The majority of the fishery occurs between the middle of May to the middle of September with little to no effort in the winter months. The fleet is made up of independent anglers and charter operators based out of the Village of Queen Charlotte and Sandspit as well as 2 fly in lodge operations on the West Coast. These area 2W lodges include one floating operation in Englefield Bay, and one land based operation in Port Louis. Due to COVID related travel restrictions there were no lodges operating in area 2W during 2020.

The total Area 2W recreational harvest was 2,206 Chinook and 1,053 Coho. Refer to Table 1 for detailed catch information.

### ***Commercial Net Fishery***

Pink salmon - Pink Salmon returns to Area 2W have been well below management targets for many years and were extremely poor in 2020 with no fish being observed instream during the majority of stream inspections. No commercial fishing opportunities for Pink salmon were identified.

Chum salmon – While chum returns to Area 2W have been stable and approaching management targets the last several years, returns in 2020 were very poor and less than 20% of the 2016 brood year. No commercial fishing opportunities for Chum salmon were identified.

## Area 2 West Stream Escapements

Table 7 Area 2 West Stream Escapements

AREA 2 WEST (preliminary) STREAM ESCAPEMENTS 2020

STREAM	SOCKEYE		COHO		PINK		CHUM	
	Esc.	Target*	Esc.	Target*	Esc.	Target*	Esc.	Target*
<b>ATHLOW/OTARD SUBAREA</b>								
Mace Creek				(1,500)				<b>(5,000)</b>
Mercer Creek		(10,000)		<b>(2,000)</b>		(10,000)		(5,000)
<b>RENNELL SUBAREA</b>								
Bonanza Creek				(1,500)	N/O	<b>(25,000)</b>		(1,000)
Clapp Basin Creek							N/O	<b>(N/A)</b>
Gregory Creek				(500)	N/O	(25,000)		<b>(1,000)</b>
Kano Creek (head)						<b>(20,000)</b>		<b>(4,000)</b>
Mountain Creek							300	<b>(2,000)</b>
Rennell Creek							N/O	<b>(1,500)</b>
Riley Creek				<b>(2,000)</b>	N/O	<b>(20,000)</b>		(4,000)
<b>W. SKIDEGATE SUBAREA</b>								
Buck Channel Creek #8								
Buck Channel Creek #6-7								
Buck Channel Creek #3					N/O		92	
Buck Channel Creek #2					N/O		76	(500)
Canoe Pass Creek					N/O		159	<b>(2,000)</b>
Dawson Harbour Creek				(300)	N/O		284	<b>(3,000)</b>
Dawson Inlet Creek				(200)	N/O		183	<b>(1,000)</b>
Government Creek			68	(2,000)	2,865	(60,000)	532	(7,500)
Trounce Creek (head)				(300)	N/O		280	<b>(4,000)</b>
Trounce R/H Creek					N/O		468	<b>(3,500)</b>
West Narrows Creek							59	(3000)
<b>ENGLEFIELD SUBAREA</b>								
Boomchain Bay Creek						<b>(N/A)</b>		
Inskip Creek						(10,000)		(1,500)
Kaisun Creek				(500)	368	(30,000)	33	(1,500)
Kootenay Inlet Creek (north)				(500)	N/O		29	(5,000)
Kootenay Inlet Creek (south)				(500)	N/O		43	(5,000)
MacKenzie Cove Creek				(500)	97	(20,000)	29	(2,000)
Mitchell Inlet spillway (Gold Hbr.)					N/O		292	<b>(4,000)</b>
Mudge Creeks (3)					N/O		140	(1,000)
Peel Inlet Creek (head)			32	(200)	301		426	(3,500)
Peel Inlet L/H #1 Creek					N/O		85	<b>(1,500)</b>
Peel Inlet L/H #2 Creek			2	(200)	N/O		333	<b>(3,500)</b>
Security Inlet L/H Creek			75	(2,000)	340	<b>(40,000)</b>	522	<b>(15,000)</b>
Security Inlet R/H Creek			29	(1,000)	645	(20,000)	630	(5,000)
<b>TASU SUBAREA</b>								
Botany Inlet Creek (head)				(300)	N/O		177	<b>(5,000)</b>
Botany Inlet Creek (outer)			46		N/O		650	<b>(4,000)</b>
Edwards Creek								
Fairfax Inlet Creek		(2000)	35	(1,000)	N/O		658	(3,000)
Fairfax Outer Creek				(1,000)	N/O		39	(3,000)
Flat Creek			93		83		141	(2,000)
Lomgon Creek					N/O			
Tasu Creek			113	<b>(1,000)</b>	147	(25,000)	263	<b>(7,000)</b>
Wilson Bay Creek					N/O		37	(2,000)
<b>SOUTH SUBAREA</b>								
Goski Bay Creek					70		115	<b>(N/A)</b>
Louscoone Inlet Creek					550		40	<b>(N/A)</b>

\* -Targets are not a biological escapement goals. They are used as a surrogate to assist management identify harvest opportunities.

- **Targets** that are in bold and underlined are identified as indicators and priority for assessment.

N/O: None observed.

A/P: Adults present.

# Area 3

## Area 3 Map

Figure 5 Area 3 Map



## ***First Nations Fishery Review***

There are 6 First Nations groups that include Area 3 and Nass watershed Food, Social and Ceremonial salmon fisheries in their communal licence:

Nisga'a Lisims Government  
Gitanyow First Nation  
Lax Kw'alaams First Nation  
Metlakatla First Nation  
Kitselas First Nation  
Kitsumkalum First Nation

FSC fisheries occur throughout Area 3 in both marine and freshwater locations using a variety of gear types. The Nisga'a salmon fishery is authorized by the Nisga'a Treaty and Harvest Agreement.



Nisga'a Lisims Government

**NISGA'A FISHERIES & WILDLIFE**  
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## ***2020 Nass River Salmon Stock Assessment – Post-Season Summary***

### **Nass River Fishwheel Operational Summary**

The Nass River test fishery fishwheels operated from 31 May to 12 September for tagging and historical catch index assessments of salmon and summer-run steelhead. Fishwheels 1 and 2 operated on the Lower Nass River at just above average water levels (2.71 m vs. 2.27 mean) based on 1994 to 2019 operations (Table 8). The fishwheels operated at ideal fish catching capability with sufficient water levels during the season; 2020 was the 23rd lowest water levels in the 27 years of operation. High-water events occurred on June 20-22, July 3, July 17, and from August 15 to 25 that shutdown one or both fishwheels during these periods. The prolonged August high-water event peaked at 6.5 m (~3,500 m<sup>3</sup>/s) on August 18. During these high-water events, the estimated discharge of the Nass River exceeds 2,000 m<sup>3</sup>/s and few fish can migrate upstream of the fishwheels through the GW canyon. The range of water levels was 1.14 m (12 September) to 6.5 m (18 August).

The fishwheels operated at cooler water temperatures than average throughout the year (8.3 °C vs. 9.2 °C mean) based on 1994 to 2019 operations (Table 9). The 2020 fishwheel operations represented only the 23rd warmest year in the 27 years of operation. Water temperatures recorded at the Gitwinksihlkw fishwheels ranged from 6.1°C (1 June) to 10.6°C (1 August).

Table 8 Mean Water Levels (m) on the Nass River at Gitwinksihlkw by period, 2000-2020

Mean WL	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Mean
June	3.37	3.51	3.97	2.98	3.18	2.93	3.61	4.76	2.81	4.05	2.56	3.50	3.79	3.10	2.62	2.63	2.13	2.86	1.80	2.03	3.12	3.16
July	3.23	3.03	2.62	2.45	2.30	2.17	2.58	4.00	2.64	2.81	1.80	2.08	3.54	1.69	2.03	1.71	1.62	1.74	1.37	1.54	2.70	2.44
Aug	2.40	1.94	2.02	1.23	1.68	1.66	1.37	1.84	2.30	1.56	1.35	1.79	1.75	1.24	1.12	1.45	1.10	1.59	1.00	1.81	3.05	1.78
Sep	2.28	1.12	1.73	1.29	0.89	1.32	1.32	1.32	1.03	1.16	0.89	3.95	0.94	0.74	0.68	0.84	1.10	1.15	0.26	1.03	1.37	1.29
Season	2.83	2.47	2.73	2.15	2.23	2.07	2.33	3.13	2.49	2.61	1.70	2.69	2.74	1.86	1.77	1.82	1.57	1.98	1.28	1.72	2.71	2.27
Rank (Lowest)	26	15	24	11	12	10	14	27	16	20	3	22	25	7	5	6	2	9	1	4	23	

Table 9 Mean Water Temperatures (°C) on the Nass River at Gitwinksihlkw by period (2000-2020)

Mean Temp	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Mean
June	9.4	3.9	6.4	8.6	11.3	9.1	8.8	8.1	7.0	7.4	8.4	7.5	6.7	8.4	8.1	8.9	9.5	8.6	10.1	9.3	7.2	8.4
July	10.5	5.8	9.1	10.2	12.1	9.5	10.1	8.6	8.0	9.0	10.2	8.7	8.1	10.1	9.6	10.5	10.8	10.3	11.0	10.3	8.7	9.6
Aug	10.9	7.6	9.5	10.8	10.5	10.0	10.1	9.6	9.3	10.2	9.7	9.0	8.9	10.1	10.2	9.9	9.4	10.1	9.7	9.4	8.7	9.7
Sep	9.4	5.6	8.7	8.8	8.9	8.8	9.0	8.9	8.2	9.5	8.0	8.1	8.3	10.1	8.6	8.3	8.6	9.6	8.2	9.2	8.5	8.7
Season	10.3	5.8	8.9	10.0	11.0	9.4	9.8	8.9	8.2	8.9	9.2	8.4	8.0	9.6	9.3	9.7	9.8	9.7	10.1	9.7	8.3	9.2
Rank (Highest)	2	27	21	7	1	15	8	19	24	20	17	22	25	14	16	12	9	10	5	13	23	

*Gitwinksihlkw (GW) Fishwheels: Nass River Test Fishery (started in 1994 [27th year])*

All fish caught in the GW fishwheels were released alive after tagging and/or counting. Of the 32,761 salmon (30,948 adults and 1,813 jacks), steelhead (201), Pacific Lamprey (124), and Dolly Varden (107) caught at the GW fishwheels in 2020, 14,161 were tagged or adipose fin marked.

*Grease Harbour (GH) Fishwheels*

Three fishwheels were operated at Grease Harbour (upstream of Ts'im Anwiihlist) in 2020 for in-season mark-recapture tag recoveries, abundance estimates passing upstream, additional tagging (adult Chinook and Chum salmon and Pacific Lamprey), and for selective harvesting when permitted by Nisga'a Lisims Government (which did not occur in 2020). Operational dates were from 6 June (FW3, FW5, and FW6) to 12 September.

A total of 48,475 salmon (45,366 adults and 3,109 jacks), steelhead (386), and Pacific Lamprey (667) were caught and released from the GH fishwheels in 2020, including 2,656 that were tagged or fin marked.

2020 Nass Fishwheel Catch Summary

A total of the 81,236 salmon (76,314 adults and 4,922 jacks), steelhead (587), Dolly Varden (138), Pacific Lamprey (791) were caught by the Nisga'a Lisims Government's fishwheels operated in the Nass River. All were released with 16,817 tagged or fin marked.

The total Nass fishwheel catches this year were above average for Sockeye and Pink salmon, and Pacific Lamprey; catches were below average for Chinook, Coho and Chum salmon and steelhead (**Error! Reference source not found.** 10). The fishwheel catches of small (jacks) salmon (<50 cm NFL for Chinook, <45 cm NFL for Sockeye, and <40 cm NFL for Coho) were well above average for Chinook (2,442 vs. 755) and below average for Coho (158 vs. 445) and Sockeye (2,322 vs. 3,507) when compared to the mean catches from 1994–2019.

Other adult species and juvenile salmon catches at the fishwheels from 31 May to 12 September included: 159 Rainbow Trout, 138 Dolly Varden (45 tagged), 118 Peamouth Chub, 41 Whitefish, 22 Cutthroat Trout, 15 Redside Shiner, 15 sculpins, 13 suckers, 8 Northern pikeminnow, 119 salmon smolts (39 Coho, 1 Chinook, 79 Sockeye), 2 frogs, 1 seal, and 1 baby duck (Table 10)).

### Meziadin Fishway Operation and Count Summary 2020

The Meziadin fishway was operated from 1 July to 8 October 2020. The fishway water levels and temperatures averaged 1.30 m (range: 1.08 m to 1.55 m) and 13.7 °C (range: 10 °C to 18.0 °C), respectively. Water levels at the fishway were 0.1 m above average (1.25 m) when compared to historical levels from 1999 to 2019. Large fish (primarily Chinook Salmon) were observed jumping the falls in 2020. Water temperatures in 2020 were on average 0.7 °C lower than average (13.8 °C vs. 14.5 °C).

Counts at the Meziadin Fishway in 2020 were below average for Chinook (156 vs. 341), Sockeye (126,468 vs. 156,591), Coho (2,047 vs. 3,970), and steelhead (7 vs. 25) when compared to mean counts from 2000 to 2019 (Table 11). Counts of small salmon (jacks) at the fishway were above average for Chinook (110 vs. 73) and below average for Sockeye (2,493 vs. 5,672) and Coho (3 vs. 78) salmon when compared with mean counts from 1994 to 2019. A total of 22 adult Bull Trout (>20 cm NFL) were also counted at the fishway in 2020, with 17 being anchor tagged during operations. This included two Bull Trout recaptures from previous tagging. No Pink or Chum salmon were counted at the fishway.

Escapement targets for adult large salmon at Meziadin Fishway are approximately: 160,000 Sockeye, 500 Chinook, and 3,500 Coho. Escapement targets were not reached for Sockeye, Chinook, or Coho salmon. Harvests in the Gitanyow fishery occurred below the Meziadin fishway in 2020 that were monitored and reported separately by the Gitanyow Fisheries Authority.

Table 10 Nass Fishwheel Catches of Salmon, Summer-run Steelhead, and non-Salmon Species from 1994-2020

Year	# of FW	Start date	End date	Total Effort (days)	Total Effort (hrs)	Salmon <sup>1</sup>					Trout, Char, and Whitefish <sup>1</sup>					Non-Salmonid					
						Chinook	Sockeye	Coho	Pink	Chum	Summer-run steelhead	Dolly Varden	Coastal			Pacific Lamprey	Northern Pikeminnow	Peamouth		Redside Shiner	
													Trout	Trout	Whitefish			Chub	Sucker		Sculpin
1994	4	7-Jun	7-Sep	92	5,859	2,667	24,746	6,990	12,436	250	211	42	5	2	11	47					
1995	4	8-Jun	4-Sep	88	6,670	920	21,090	1,837	8,881	224	111	101	8	6	42	81					
1996	4	29-May	22-Sep	116	7,705	2,191	23,063	4,029	23,601	371	485	177	29	21	108	384					
1997	4	21-May	2-Sep	104	7,974	3,736	27,762	1,438	13,167	130	485	294	27	23	145	388			7		
1998	4	12-Jun	20-Sep	100	9,875	3,071	17,185	3,760	10,624	272	701	388	61	9	140	194	84		38	69	
1999	4	7-Jun	30-Sep	115	9,073	3,476	41,545	6,393	22,019	127	641	1,189	97	17	155	185	65		24	24	
2000	6	11-Jun	18-Sep	99	11,196	5,003	33,879	8,529	10,206	241	1,404	558	97	5	75	251	53		34	14	
2001	6	7-Jun	14-Sep	99	10,783	12,106	32,821	22,705	42,508	162	1,435	347	69		67	238	75		42	13	
2002	6	20-Jun	9-Sep	81	9,691	6,785	58,728	14,556	15,893	54	1,100	429	72	22	51	187	93		8	17	
2003	6	14-Jun	5-Sep	83	10,299	5,802	47,556	9,460	33,560	175	583	524	94	26	99	936	105	9	29	25	
2004	6	11-Jun	10-Sep	91	11,250	3,314	43,782	11,788	35,605	242	655	276	71	54	55	1,132	137	29	44	11	
2005	6	6-Jun	16-Sep	102	11,960	4,111	40,320	14,508	19,788	141	726	150	26	48	55	615	100	73	33	16	
2006	6	8-Jun	3-Sep	87	10,477	9,089	50,769	9,671	2,817	158	466	286	62	66	91	363	145	36	33	9	
2007	6	14-Jun	20-Sep	98	8,928	9,440	38,942	11,874	12	0	783	254	47	69	70	315	140	22	20	31	
2008	5	5-Jun	6-Sep	93	9,898	4,331	34,702	14,640	1,932	52	851	193	88	55	55	198	72	9	18	14	6
2009	6	1-Jun	12-Sep	103	11,097	7,136	43,426	20,270	42,120	108	1,688	328	93	117	119	483	93	46	27	56	0
2010	6	1-Jun	22-Sep	113	13,520	1,140	25,703	12,938	4,614	78	1,191	161	9	155	557	21	132	21	388	46	7
2011	5	1-Jun	17-Sep	108	10,280	1,795	38,083	5,752	10,719	166	988	481	156	86	353	632	181	35	45	17	10
2012	5	1-Jun	15-Sep	106	9,197	4,059	62,385	15,608	7,694	106	1,525	424	59	45	108	674	180	129	27	22	4
2013	5	2-Jun	13-Sep	103	11,031	1,981	39,184	14,555	24,801	52	612	169	67	46	79	567	137	111	21	12	9
2014	6	1-Jun	13-Sep	104	12,298	1,693	38,345	17,137	24,038	83	1,472	213	72	72	68	629	97	42	12	33	9
2015	6	4-Jun	11-Sep	99	11,881	3,397	70,737	6,616	6,476	141	778	256	68	111	108	746	136	73	14	21	17
2016	6	31-May	9-Sep	101	12,916	1,389	38,677	15,690	13,197	228	1,070	332	72	134	139	860	63	69	28	28	15
2017	6	31-May	9-Sep	101	12,992	695	44,152	22,908	37,748	68	982	147	40	154	183	1,188	95	65	23	48	8
2018	6	1-Jun	15-Sep	106	13,252	859	27,709	5,525	7,718	92	1,078	112	37	121	127	1,255	48	70	14	27	31
2019	6	2-Jun	13-Sep	103	12,568	1,631	35,894	15,724	19,230	166	710	174	39	228	138	2,330	28	158	25	53	43
<b>2020</b>	<b>5</b>	<b>31-May</b>	<b>12-Sep</b>	<b>104</b>	<b>10,535</b>	<b>2,838</b>	<b>48,369</b>	<b>10,535</b>	<b>14,541</b>	<b>31</b>	<b>587</b>	<b>138</b>	<b>22</b>	<b>159</b>	<b>41</b>	<b>791</b>	<b>8</b>	<b>118</b>	<b>13</b>	<b>15</b>	<b>15</b>
<b>2000 to 2020:</b>																					
Mean	6	04-Jun	12-Sep	99	11,240	4,219	42,579	13,380	17,867	121	1,020	297	68	77	129	594	110	52	45	24	11
Min	5	31-May	03-Sep	81	8,928	695	25,703	5,525	12	0	466	112	9	5	51	21	48	9	8	9	0
Max	6	20-Jun	22-Sep	13,520	13,520	70,737	70,737	42,508	42,508	242	1,688	558	156	557	557	1,255	181	388	388	56	31

<sup>1</sup> Counts are for adult fish, defined as: Chinook ≥ 50cm nose-fork length (NFL); Sockeye ≥ 45cm NFL; Coho ≥ 40 cm NFL; steelhead ≥ 50cm NFL; and trout, char, and whitefish ≥ 20cm NFL



Table 11 Counts of Large Salmon and Summer-run Steelhead at the Meziadin Fishway (2000-2020)

Meziadin Fishway (~149 km from tagging site):		Adult salmon and steelhead counted (net upstream)				Tags counted (net upstream) - not including tags missing				Mark rates (%) observed			
Year	Period of Operation	Chinook	Sockeye	Coho	Steel	Chinook	Sockeye	Coho	Steel	Chinook	Sockeye	Coho	Steel
2000	29 June to 13 October	416	137,042	1,423	46	30	2,964	35	2	7.2%	2.2%	2.5%	4.3%
2001	4 July to 15 October	613	116,192	5,942	72	66	2,982	173	9	10.8%	2.6%	2.9%	12.5%
2002	1 July to 15 October	464	332,442	5,082	41	21	6,027	99	2	4.5%	1.8%	1.9%	4.9%
2003	2 July to 10 October	479	196,852	3,907	30	18	4,650	91	1	3.8%	2.4%	2.3%	3.3%
2004	3 July to 3 October	490	140,923	4,172	58	20	4,417	154	12	4.1%	3.1%	3.7%	20.7%
2005	1 July to 15 October	638	142,751	7,189	85	33	3,819	259	9	5.2%	2.7%	3.6%	10.6%
2006	1 July to 12 October	721	146,954	5,466	39	37	4,694	251	1	5.1%	3.2%	4.6%	2.6%
2007	1 July to 11 October	754	104,308	2,504	27	34	4,082	67	2	4.5%	3.9%	2.7%	7.4%
2008	1 July to 9 October	518	150,396	3,861	29	17	5,016	162	2	3.3%	3.3%	4.2%	6.9%
2009	1 July to 6 October	336	168,392	5,423	18	15	4,887	96	2	4.5%	2.9%	1.8%	11.1%
2010	1 July to 23 October	315	159,120	4,138	81	3	2,670	163	7	1.0%	1.7%	3.9%	8.6%
2011	1 July to 6 October	330	167,524	2,336	12	28	4,213	44	1	8.5%	2.5%	1.9%	8.3%
2012	1 July to 4 October	255	144,923	4,980	34	42	6,112	246	5	16.5%	4.2%	4.9%	14.7%
2013	1 July to 4 October	126	170,376	5,934	23	19	3,726	128	0	15.1%	2.2%	2.2%	NA
2014	1 July to 7 October	51	144,920	7,223	28	5	2,875	268	1	9.8%	2.0%	3.7%	3.6%
2015	1 July to 8 October	95	185,917	2,713	3	14	3,859	89	0	14.7%	2.1%	3.3%	NA
2016	30 June to 5 October	36	109,868	5,051	9	2	2,015	130	0	5.6%	1.8%	2.6%	NA
2017	1 July to 5 October	38	119,088	7,556	5	2	2,482	279	0	5.3%	2.1%	3.7%	NA
2018	30 June to 5 October	36	96,827	2,145	9	1	1,676	39	0	2.8%	1.7%	1.8%	NA
2019	30 June to 10 October	111	88,128	4,334	6	5	2,021	148	0	4.5%	2.3%	3.4%	NA
<b>2020</b>	<b>1 July to 8 October</b>	<b>156</b>	<b>126,468</b>	<b>2,047</b>	<b>7</b>	<b>14</b>	<b>4,011</b>	<b>93</b>	<b>3</b>	<b>9.0%</b>	<b>3.2%</b>	<b>4.5%</b>	<b>42.9%</b>
<b>Average (2000-19)</b>		<b>400</b>	<b>154,500</b>	<b>4,600</b>	<b>30</b>	<b>20</b>	<b>3,900</b>	<b>100</b>	<b>3</b>	<b>6.9%</b>	<b>2.5%</b>	<b>3.1%</b>	<b>8.5%</b>

### Kwinageese Weir Net Upstream Counts and Operation Summary 2020

Kwinageese video-counting weir operations were conducted from 8 July to 8 October 2020. The water levels and temperatures at the weir averaged 0.54 m (ranged from 0.28 m to 1.20 m) and 12.5 °C (ranged from 6 °C to 19 °C), respectively. Mean water level was 22 cm above average while mean temperature was 1.4 °C below average. The weir was functional for the entire period of monitoring in 2020 despite water levels exceeding 0.90 m when the weir can be topped.

Total adult salmon net upstream counts of large fish were 600 Chinook, 3,256 Sockeye, and 730 Coho salmon through the Kwinageese River video weir (Table 12). Other net upstream counts included: 112 summer-run steelhead, 110 adult Bull Trout (>20 cm NFL), 16 Chinook jacks, and 1 Coho jack. It is uncertain how many more Coho Salmon or steelhead would subsequently pass the weir after operation and these counts should be considered minimum escapement estimates to the Upper Kwinageese River for 2020. In addition, reported video counts are preliminary until final video reviews are completed. Net upstream counts through the Kwinageese weir were below average for Chinook, Sockeye, Coho and steelhead when compared to the average counts from monitored years up to 2020 (Table 12).

Table 12 Counts of Medium/Large Salmon and Steelhead at the Kwinageese Weir (2000-2020)

Kwinageese Weir (~208 km from tagging site):		Adult salmon and steelhead counted (net upstream)				Tags counted (net upstream) - not including TL				Mark rates (%) observed			
Year	Period of Operation	Chinook	Sockeye	Coho	Steel	Chinook	Sockeye	Coho	Steel	Chinook	Sockeye	Coho	Steel
2002	17 July to 17 October	1,893	5,891	1,283	267	114	86	8	8	6.0%	1.5%	0.6%	3.0%
2005	12 August to 22 October	538	3,186	2,663	304	19	37	59	25	3.5%	1.2%	2.2%	8.2%
2006	25 August to 5 October	410	2,700	1,582	129	27	123	51	6	6.6%	4.6%	3.2%	4.7%
2009	12 July to 15 October	895	107	60	33	28	0	0	4	3.1%	0.0%	0.0%	12.1%
2010	9 July to 19 October	131	48	191	110	2	0	8	7	1.5%	0.0%	4.2%	6.4%
2011	10 July to 5 October	740	10,273	226	50	87	240	10	0	11.8%	2.3%	4.4%	0.0%
2012	19 July to 11 October	715	3,688	155	296	224	141	5	28	31.3%	3.8%	3.2%	9.5%
2013	13 July to 11 October	813	397	763	208	109	4	13	7	13.4%	1.0%	1.7%	3.4%
2014	10 July to 14 October	560	438	1,229	459	41	3	22	29	7.3%	0.7%	1.8%	6.3%
2015	3 July to 9 October	1,093	7,044	301	163	108	60	6	7	9.9%	0.9%	2.0%	4.3%
2016	11 July to 13 October	853	19,797	2,633	380	83	244	25	4	9.7%	1.2%	0.9%	1.1%
2017	9 July to 14 October	241	7,240	2,649	217	27	71	58	17	11.2%	1.0%	2.2%	7.8%
2018	6 July to 15 October	456	290	247	21	18	2	6	0	3.9%	0.7%	2.4%	0.0%
2019	6 July to 8 October	518	6,007	1,690	196	64	69	64	7	12.4%	1.1%	3.8%	3.6%
2020	8 July to 8 October	584	3,256	730	112	141	57	26	13	24.1%	1.8%	3.6%	11.6%
Average (2002-2019)		700	4,800	1,100	200	70	80	20	10	9.4%	1.4%	2.3%	5.0%

### 2020 Ground Survey Counts Conducted by NFWD

NFWD conducted salmon escapement surveys in the Nass watershed on the following systems in 2020 (Table 13, Table 14):

**Chinook** (n = 4) – Ksi Hlginx (Ishkeenickh River), Damdochax Creek, and Cranberry River (mainstem and Kiteen river (aerial)) plus Kwinageese weir project;

**Sockeye** (n = 3) – Gingit, Wiminasik (Damdochax), and Ksi Ts’oohl Ts’ap (Zolzap Creek);

**Chum** (n = 5) – Coastal Nass: Illiance, Kshwan, Stagoo, and Wilauks; Lower Nass: Ksi Ts’oohl Ts’ap (Zolzap Creek);

**Pink** (n = 8) – Coastal Nass: Illiance, Kshwan, Stagoo, Wilauks, Chambers, Ksi Gingolx (Kincolith), and Dogfish Bay; Lower Nass: Ksi Ts’oohl Ts’ap (Zolzap Creek); and

**Coho** (n = 9) – Coastal Nass: Salmon Cove and Dogfish Bay; Lower Nass: Ansedagan, Diskangieq, and Ksi Ts’oohl Ts’ap (Zolzap Creek); Upper Nass: Meziadin fishway and Kwinageese weir.

Typically, three to five surveys were conducted on each system to generate an AUC or peak count escapement estimate. A total of 18 Nass Area streams were monitored by NFWD.

Table 13 Salmon Spawning Ground Survey Dates and Methods Conducted in Nass Area by NFWD

System	DATES
ANSEDAGAN	Oct 2, 14, 23, Nov 8, 14
CHAMBERS	Jul 28; Aug 11
CRANBERRY (mainstem)	Sep 22
DAMDOCHAX	Sep 15, 19, 22
DISKANGEIQ	Sep 21, Oct 1, 13, 24, Nov 5, 13
DOGFISH BAY	Jul 29; Aug 12, 24; Sep 1; Oct 15, 26; Nov 6
GINGIT	Jul 24; Aug 11, 26, 31; Sep 7
ILLIANCE	Jul 25; Aug 13
KSI HLGINX (ISHKEENICKH)	Jul 31; Aug 14; Sep 2, 16
KITEEN	Sep 22
KSHWAN	Sep 8, 18, Oct 22
KWINAGEESE	Weir operational July 12 to October 8
MEZIADIN	Fishway operational: June 30 - October 8
SALMON COVE	Oct 3, 16, 25; Nov 7, 16
STAGOO	Jul 25; Aug 13
WILAUKS	Jul 25; Aug 13
WIMINASI	Sep 19, 22
KSI TS'OOHL T'SAP (ZOLZAP CREEK)	Oct 20, 30; Nov 4, 10, 19, 26
KSI TS'OOHL T'SAP FENCE	Sep 9 - Nov 11 (high water breached Sep 27-29/Nov 3-4)

Table 14 Preliminary Ground Survey Count Data in the Nass Watershed by NFWD (2020)

System	Agency	Sockeye	Chinook	Coho	Chum	Pink	Steelhead	Estimation Method
ANSEDAGAN	NFWD	N/I	N/I	122	N/I	N/I	N/I	Coho = Peak x 2
CHAMBERS	NFWD	N/I	N/O	N/O	A/P	A/P	DNS	OE too low for estimate
CRANBERRY (mainstem)	NFWD	N/I	A/P	N/I	N/I	N/I	N/I	Aerial count
DAMDOCHAX	NFWD	N/I	3,334	N/I	N/I	N/I	N/I	Chinook = peak x 2
DISKANGEIQ	NFWD	N/I	N/I	1,102	N/I	N/I	N/I	Coho = Peak x 2
DOGFISH BAY	NFWD	N/I	N/I	94	A/P	20,282	N/I	Pink = AUC (rt=12.6d); Coho = peak x 2
GINGIT	NFWD	7,648	N/O	N/I	N/O	N/O	N/O	Sockeye = AUC
ILLIANCE	NFWD	N/O	N/O	N/O	81	60,763	N/O	Chum and Pink = peak x 2
KSI HLGINX (ISHKEENICKH)	NFWD	N/O	972	A/P	N/O	17,000	N/O	Chinook & Pink = peak x 2
KHUTZEMATEEN	DFO/LGL	N/O	A/P	N/O	550	63,500	N/O	Chum & Pink = peak x 2
KSI GINGOLX (KINCOLITH)	DFO/LGL	N/O	A/P	N/O	N/O	40,000	N/O	Pink = peak x 2
KITEEN	NFWD	N/O	A/P	N/O	N/O	N/O	N/O	Aerial count
KSHWAN	NFWD	N/O	N/O	1,300	56,347	13,918	N/O	Chum, Pink, Coho = Peak x 2
KWINAGEESE	NFWD	3,256	584	730	DNS	DNS	112	Video weir - adults only
KSI X'ANMAS (KWINAMASS)	DFO/LGL	N/I	A/P	N/I	A/P	100,000	DNS	Pink = peak x 2
MEZIADIN	NFWD	126,468	156	2,095	0	0	7	Weir counts - adults only; Coho count expanded
SALMON COVE	NFWD	0	0	1,567	0	0	0	Coho = AUC
STAGOO	NFWD	N/O	N/O	N/I	3,557	152,080	N/O	Chum & Pink = Peak x 2
TOON	DFO/LGL	N/O	A/P	N/I	A/P	37,800	DNS	Pink = peak x 2
WILAUKS	NFWD	N/O	N/O	N/I	A/P	2,433	N/O	Pink = peak x 2
WIMINASI	NFWD	4,883	N/O	N/I	DNS	DNS	N/I	Sockeye = peak x 2
KSI TS'OOHL TS'AP (ZOLZAP CREEK)	NFWD	A/P	N/O	780	N/O	A/P	DNS	Lower aggregate regression (r2=0.74)
KSI TS'OOHL TS'AP FENCE	NFWD	1	0	16	0	86	1	Fence - high water breached Sep 27-29 & Nov 3-4

Preliminary Nass Salmon and Summer-Run Steelhead Run Size Estimates to Gitwinksihlkw and Net Escapement Estimates for 2020

*Upper Nass Salmon and Summer-Run Steelhead Estimates*

Preliminary post-season aggregate estimates for Upper Nass salmon and summer-run steelhead returns in 2020 (Table 15) were calculated from current mark-recapture data (Table 16).

Table 15 Preliminary Estimated of GW Run Size and Net Escapement for Nass Salmon and Summer-run Steelhead, 2020

Post-season Estimate	Sockeye	Chinook	Coho	Steelhead
<b>Run size estimate to GW fishwheels</b>	<b>241,270</b>	<b>15,475</b>	<b>53,915</b>	<b>3,724</b>
<i>In-season estimate to GW fishwheels</i>	280,211	12,509	80,406	5,928
<i>% difference of in-season to post-season</i>	16%	-19%	49%	59%
<b>Net Escapement estimate above Gitwinksihlkw</b>	<b>215,693</b>	<b>12,815</b>	<b>53,163</b>	<b>3,663</b>
<i>Net Escapement goal (min for steelhead)</i>	200,000	12,000	60,000	4,000

The preliminary Upper Nass escapement estimates for salmon and summer-run steelhead to Gitwinksihlkw in 2020 were based on mark-recapture results presented in Table 9 . Upper Nass net escapement goals were met for all salmon species in 2020 (Table 15). The in-season population estimates were close to final estimates (with  $\pm 20\%$ ) for Sockeye and Chinook during migrations in 2020; but over estimated for Coho and steelhead with well above average water levels during August (Table 15). The in-season population information uses mark-recapture information from Grease Harbour fishwheels only whereas as post-season estimates are based on spawning ground mark rates. The mean absolute percent accuracy performance of the in-season to actual run size estimates in 2020 performed poorer than average for Nass Sockeye (84% vs. 91%) and Nass Coho (51% vs. 80%), and better for Nass Chinook (81% vs. 71%) based on returns from 1994 to 2019. The in-season tracking of these species, particularly for Nass Sockeye and Chinook, tracked well enough to guide fisheries in 2020 to reach net aggregate escapement goals.

Table 16 Mark-recapture Estimates for Nass Salmon (Chinook, Sockeye, and Coho) and Summer-run Steelhead Returns to Gitwinksihlkw and Spawning Grounds, 2020

Species	Marked (M)	Censored	% marks removed	Net marks available (M*)	Examined (C)	Marks recovered (R)	GH estimate (N)	Catch between GH and GW	Esc between GH and GW	Population Estimate to GW (N)	SE	CV%	Catch above GH	Net escapement estimate
<b>Chinook-stratified by size</b>	<b>2,554</b>	<b>328</b>	<b>13%</b>	<b>2,226</b>	<b>800</b>	<b>170</b>	<b>10,222</b>	<b>2,189</b>	<b>3,064</b>	<b>15,475</b>	<b>692</b>	<b>7.6%</b>	<b>471</b>	<b>12,815</b>
<i>Chinook-pooled</i>	2,554	328	13%	2,226	801	171	10,383	2,189	3,104	15,676	700	7.6%	471	13,016
<i>Chinook-stratified by site (GW)</i>	790	132	17%	658	801	35	14,680	2,189	no adj	16,869	2,359	16.7%	471	14,210
<i>Chinook-stratified by site (GH)</i>	1,764	196	11%	1,568	801	132	9,460	2,189	2,824	14,473	746	8.7%	471	11,813
<b>Sockeye-size stratified</b>	<b>9,812</b>	<b>2,697</b>	<b>27%</b>	<b>7,115</b>	<b>129,724</b>	<b>4,068</b>	<b>223,198</b>	<b>18,072</b>		<b>241,270</b>	<b>3,445</b>	<b>1.6%</b>	<b>7,505</b>	<b>215,693</b>
<i>Sockeye-pooled</i>	9,812	2,697	27%	7,115	129,724	4,068	226,866	18,072		244,938	3,500	1.6%	7,505	219,361
<b>Coho-pooled</b>	<b>2,670</b>	<b>360</b>	<b>13%</b>	<b>2,310</b>	<b>2,777</b>	<b>119</b>	<b>53,499</b>	<b>416</b>		<b>53,915</b>	<b>4,757</b>	<b>9.1%</b>	<b>336</b>	<b>53,163</b>
<i>Coho-stratified by size</i>	2,670	360	13%	2,310	2,047	93	49,133	416		49,550	4,896	10.2%	336	48,798
<i>Steelhead (Coho MR index)</i>	NA	NA	NA	NA	NA	NA	3,969	35	181	4,185	607	33.3%	26	4,124
<b>Steelhead (fin marks)</b>	<b>538</b>	<b>42</b>	<b>8%</b>	<b>496</b>	<b>119</b>	<b>16</b>	<b>3,507</b>	<b>35</b>	<b>181</b>	<b>3,724</b>	<b>766</b>	<b>24.4%</b>	<b>26</b>	<b>3,663</b>

% marks removed are associated with initial handling/capture induced mortality, primary tag loss if applicable, and selective removal in fisheries below Grease Harbour.

Post-season aggregate population estimates for Upper Nass Chinook, Sockeye and Coho salmon returns in 2020 (Table 16) were quite precise (<15% CV) from mark-recapture surveys with high number of marks released from the fishwheels and recovered (or estimated) on the spawning grounds for Chinook (R=170; CV=7.6%), Sockeye (R=4,068; CV=1.6%), and Coho (R=119; CV=9.1%). Genetic analyses of Upper Nass Chinook and Sockeye samples collected from the fishwheels will be conducted to determine overall stock contributions in 2020 to further evaluate run size estimates. The Upper Nass summer-run steelhead aggregate population estimate was based on mark-recapture (R=16; CV=24.4%) with recoveries from Meziadin fishway and Kwinageese weir; but was close to the coho index method used when R < 12 (Table 16).

### Nass Area Salmon and Summer-Run Steelhead Net Escapement Estimates 2020

The 2020 preliminary post-season estimates of net escapement for Nass salmon and summer-run steelhead were calculated according to methods developed by the Nisga'a-Canada-BC Joint technical committee (NCB-JTC) and preliminary results are presented in Table 17 for the Nass watershed including Coastal, Lower, and Upper Nass areas. Lower and Coastal Nass Coho escapement estimates were calculated by prorating stream specific ground survey results (Table 14) to habitat-capacity model (Bocking and Peacock 2004) aggregate area estimates. Nass Area salmon and summer-run steelhead run sizes in 2020 were below average (Table 17). However, based on preliminary results, escapement goals were reached for all Nass Area salmon species in 2020; and steelhead was near the initial goal when fishwheels were shutdown on 12 September.

Table 17 Estimates of Run Size to Gitwinksihlkw Fishwheels and Net Escapement for Nass Salmon and Summer-run Steelhead, 2000-2020 (NCB-JTC 2020 [draft])

Year	RUN SIZE TO GITWINKSIHLKW FISHWHEELS						NET ESCAPEMENT (COASTAL, LOWER, MIDDLE AND UPPER NASS)					
	Sockeye	Pink	Chinook	Coho	Chum	Steelhead	Sockeye	Pink	Chinook	Coho	Chum	Steelhead
2000	243,584	119,000	21,617	72,175	3,200	13,431	204,407	350,455	19,348	106,136	18,561	13,317
2001	206,033	314,000	34,703	89,536	1,600	11,325	168,753	839,628	32,340	194,761	30,383	11,126
2002	470,083	191,000	16,081	167,829	700	15,213	405,498	408,969	14,804	292,323	14,753	14,948
2003	328,916	525,000	29,462	77,574	1,800	14,635	263,688	854,007	28,274	140,901	64,545	14,391
2004	283,712	197,000	17,984	60,106	2,300	4,045	215,857	493,155	16,875	98,998	49,276	3,782
2005	285,916	136,000	16,764	99,906	1,300	7,008	224,559	1,063,691	15,571	159,861	30,041	6,926
2006	296,338	20,000	28,609	54,730	1,400	4,181	250,642	118,016	28,061	101,693	51,382	4,097
2007	195,238	147,000	27,165	55,944	800	5,823	164,747	647,378	24,964	141,930	11,005	5,782
2008	235,222	17,000	21,681	84,817	700	11,732	218,105	45,476	22,138	115,477	3,055	11,660
2009	281,235	564,000	30,253	201,683	1,400	22,959	244,900	722,772	29,576	311,688	20,195	22,822
2010	261,722	31,000	20,720	92,134	1,400	19,191	229,010	179,592	20,729	148,263	8,515	18,975
2011	308,636	143,000	11,573	74,108	2,700	19,216	276,700	115,830	10,826	98,006	6,338	19,130
2012	239,400	35,000	10,785	69,383	700	12,538	203,028	231,088	9,797	114,962	15,676	12,245
2013	248,650	322,000	10,240	129,882	700	6,790	210,126	848,048	9,034	354,229	14,426	6,565
2014	301,072	222,000	14,354	123,223	1,900	19,220	260,102	346,777	12,979	231,710	20,396	19,071
2015	469,466	66,000	22,262	44,262	2,400	13,602	389,503	353,574	20,595	55,954	42,649	13,436
2016	304,135	182,000	11,009	137,214	5,100	21,395	276,413	293,507	10,192	183,234	20,762	21,238
2017	260,585	341,000	5,677	116,419	1,100	8,962	226,758	840,119	4,984	190,136	22,902	8,894
2018	248,224	127,000	16,289	58,979	1,600	25,238	224,132	222,716	16,319	72,548	48,487	25,031
2019	268,000	117,000	13,211	86,452	2,500	9,019	243,659	159,782	11,833	136,987	24,312	9,001
<b>2020</b>	<b>241,270</b>	<b>104,000</b>	<b>15,475</b>	<b>53,915</b>	<b>300</b>	<b>3,724</b>	<b>215,693</b>	<b>640,694</b>	<b>17,615</b>	<b>96,188</b>	<b>111,940</b>	<b>3,663</b>
Mean 00-19	287,000	191,000	19,000	95,000	2,000	13,000	245,000	457,000	18,000	162,000	26,000	13,000
Goal-target	250,000		13,000	60,000		11,000	200,000	225,000	15,000	60,000	45,000	10,500
Goal-min							100,000	150,000	10,000	40,000	30,000	4,200

**Preliminary Harvest Estimates for Adult Nass Salmon and Steelhead**

2020 Alaskan Fisheries in SE Alaska (courtesy of ADFG's website)

Alaskan Southeast gillnet fisheries started on 21 June in District 101 (Tree Point) and District 106 (Sumner and Upper Clarence). Alaskan seine fisheries started on 21 June 2020 in District 102 (Middle Clarence), 5 July in District 101 (Lower Clarence/Revilla), 19 July in District 104 (Noyes/Dall), and 23 July in District 103 (Cordova). Closure of the District 101-104 seine fisheries occurred on 16 August.

The preliminary estimates of salmon caught in Alaskan net fisheries in Districts 101-106 were 5,434,000 fish which was below average (18,685,000) based on salmon catches estimated from 2000 to 2019 for the same areas (Table 18). The preliminary 2020 catch breakout by species for the two gillnet and four seine fisheries was: 229,000 Sockeye; 7,000 Chinook; 4,538,000 Pink; 560,000 Chum, and 100,000 Coho (Table 11).

Table 18 In-season Commercial Gillnet and Seine Catch Estimates of Salmon in Alaskan Fisheries in Districts 101-106, 2020 (ADFG 2020)

IN-SEASON SE ALASKAN CUMULATIVE SALMON CATCH ESTIMATES (ADFG WEBSITE) - 2020										WEEK END: 3-Oct-20	
DISTRICTS	AREA	SOCKEYE CATCH	Average (00-19)	CHINOOK CATCH	Average (00-19)	PINK CATCH	Average Even (00-18)	CHUM CATCH	Average (00-19)	COHO CATCH	Average (00-19)
DIST 101 GN	TREE PT	9,500	63,000	1,800	1,400	152,000	392,200	132,700	256,000	18,300	48,700
DIST 106 GN	UPP. CLAR	8,700	82,000	900	1,600	95,500	211,000	104,400	177,000	27,000	126,000
DIST 101 SN	LOW CLAR	39,800	54,800	200	700	1,215,000	4,210,000	62,000	260,000	10,000	35,000
DIST 102 SN	MID CLAR.	12,900	35,000	100	800	919,500	2,911,800	108,300	500,000	12,400	48,800
DIST 103 SN	CORDOVA	12,200	24,000	70	380	846,000	5,601,000	72,400	127,000	12,500	29,000
DIST 104 SN	NOYES/DALL	146,000	269,000	4,070	6,000	1,310,000	2,966,000	80,000	176,000	20,000	70,000
<b>CUMULATIVE TOTAL</b>		<b>229,000</b>	<b>528,000</b>	<b>7,000</b>	<b>11,000</b>	<b>4,538,000</b>	<b>16,292,000</b>	<b>560,000</b>	<b>1,496,000</b>	<b>100,000</b>	<b>358,000</b>

Of the total in-season Sockeye catch reported in the SE Alaskan fisheries in 2020 (229,000), approximately 16% (37,000) were estimated as Nass origin based on mean stock composition estimates from 1982 to 2019 and were below average (101,000). The average total mean harvest of Nass salmon in Alaskan net fisheries from 2000 to 2019 is 112,000 Sockeye (range: 22,000–300,000), 64,000 Pink (range: 4,000–192,000), 147,000 Coho (range: 59,000–530,000), and 6,000 Chum (<1,000–24,000) (Table 19).

On average, harvests in Alaskan fisheries of all Nass salmon are approximately 331,000 based on preliminary total harvest and runs from 2000 to 2019 (NCB-JTC 2020) and represents approximately 20% of the average total returns. On average for total Nass salmon runs, Alaskan exploitation rates represent approximately 12% for Sockeye, 9% for Pink, 4% for Chinook, 39% for Coho, and 15% for Chum (Table 19).

Table 19 Preliminary Estimates of Nass Salmon Harvests in Alaskan Fisheries, Total Nass Salmon Returns, and US Exploitation Rates, 2000-2020 (NCB-JTC 2020 [draft])

Year	ALASKAN HARVEST					TOTAL RUN					ALASKA EXPLOITATION RATE				
	Sock.	Pink	Chin.	Coho	Chum	Sockeye	Pink	Chinook	Coho	Chum	Sockeye	Pink	Chinook	Coho	Chum
2000	86,000	32,000	1,700	92,000	4,000	625,000	594,000	34,700	208,000	40,000	14%	5%	5%	44%	10%
2001	202,000	192,000	2,400	176,000	18,000	582,000	2,093,000	52,400	374,000	90,000	35%	9%	5%	47%	20%
2002	125,000	41,000	1,400	63,000	2,000	1,404,000	691,000	31,400	378,000	32,000	9%	6%	4%	17%	6%
2003	153,000	136,000	2,200	89,000	11,000	1,177,000	1,155,000	46,200	265,000	87,000	13%	12%	5%	34%	13%
2004	304,000	86,000	600	91,000	24,000	985,000	782,000	33,600	227,000	82,000	31%	11%	2%	40%	29%
2005	145,000	175,000	300	163,000	9,000	667,000	1,523,000	28,300	379,000	42,000	22%	11%	1%	43%	21%
2006	138,000	5,000	1,800	69,000	12,000	775,000	141,000	45,800	199,000	72,000	18%	4%	4%	35%	17%
2007	251,000	119,000	1,300	107,000	8,000	602,000	1,015,000	41,300	286,000	21,000	42%	12%	3%	37%	38%
2008	47,000	4,000	400	61,000	400	380,000	55,000	30,400	200,000	4,400	12%	7%	1%	31%	9%
2009	150,000	102,000	1,200	125,000	7,000	575,000	912,000	40,200	487,000	29,000	26%	11%	3%	26%	24%
2010	47,000	18,000	800	97,000	1,000	439,000	203,000	27,800	281,000	10,000	11%	9%	3%	35%	10%
2011	99,000	6,000	1,500	86,000	1,000	557,000	180,000	19,500	207,000	8,000	18%	3%	8%	42%	13%
2012	58,000	32,000	1,200	100,000	2,000	477,000	302,000	17,200	261,000	18,000	12%	11%	7%	38%	11%
2013	67,000	140,000	200	531,000	2,000	504,000	1,116,000	16,200	1,042,000	17,000	13%	13%	1%	51%	12%
2014	66,000	62,000	1,600	138,000	3,000	553,000	461,000	24,600	405,000	25,000	12%	13%	7%	34%	12%
2015	117,000	35,000	2,200	281,000	7,000	870,000	457,000	35,200	462,000	55,000	13%	8%	6%	61%	13%
2016	80,000	38,000	1,700	341,000	5,000	442,000	387,000	19,700	618,000	29,000	18%	10%	9%	55%	17%
2017	28,000	38,000	700	166,000	2,000	369,000	964,000	11,700	454,000	26,000	8%	4%	6%	37%	8%
2018	22,000	10,000	1,100	56,000	3,000	316,000	266,000	23,100	144,000	53,000	7%	4%	5%	39%	6%
2019	51,000	15,000	1,000	87,000	4,000	377,000	190,000	21,000	290,000	30,000	14%	8%	5%	30%	13%
<b>2020</b>	<b>37,000</b>	<b>19,000</b>	<b>1,200</b>	<b>89,000</b>	<b>7,000</b>	<b>303,000</b>	<b>673,000</b>	<b>25,200</b>	<b>222,000</b>	<b>119,000</b>	<b>12%</b>	<b>3%</b>	<b>5%</b>	<b>40%</b>	<b>6%</b>
Mean 00-19	112,000	64,000	1,000	146,000	6,000	634,000	674,000	30,000	358,000	39,000	17%	9%	4%	39%	15%

**Preliminary 2020 Post-Season Net, Troll, and Recreational Catch Estimates for Nass Salmon**

**Commercial Catch Estimates of Nass Salmon**

Area 3 commercial net fisheries were limited to one seine fishery in 2020 due to poor returns of Nass Sockeye Salmon. The one-day fishery targeted Pink and Chum salmon (Table 20). Preliminary total harvest estimates of Nass salmon in commercial net and troll fisheries for 2020 were approximately: 500 Sockeye, 6,500 Pink, <500 Chinook, 32,500 Coho, and < 500 Chum based on preliminary data from DFO Prince Rupert and methods developed by the NCB-JTC (Table 21). Preliminary post-season commercial catch estimates in 2020 are near average for Nass Coho but below average for other Nass salmon species.

Table 20 In-season Salmon and Steelhead Seine Catch Estimates by Day in DFO Area 3 Commercial Net Fisheries, 2020 (DFO 2020)

GEAR	DATE	Vessel												
		days	SO-harv	SO-Rel	CO-HARV	CO-Rel	PK-HARV	PK-Rel	Chum-harv	Chum-Rel	CH-harv	CH-Rel	STEEL-Rel	
SN	2020-07-06	13	0	212	0	94	2,753	0	2,728	0	0	161	0	
<b>SN Total</b>		<b>13</b>	<b>0</b>	<b>212</b>	<b>0</b>	<b>94</b>	<b>2,753</b>	<b>0</b>	<b>2,728</b>	<b>0</b>	<b>0</b>	<b>161</b>	<b>0</b>	

SN=seine; SO=sockeye; PK=pink, CO=coho, CH=Chinook; STEEL=steelhead; harv=harvested, Rel=released; Vessel days=Boat days.



Table 21 Preliminary Post-season Commercial Net and Troll Catch Estimates of Nass Salmon in DFO Commercial Fisheries in Areas 1-5, 2020 (NCB-JTC 2020 [draft])

Year	COMMERCIAL (GILLNET & SEINE)					COMMERCIAL (TROLL)					TOTAL COMMERCIAL CATCH ESTIMATES				
	Sockeye	Pink	Chinook	Coho	Chum	Sockeye	Pink	Chinook	Coho	Chum	Sockeye	Pink	Chinook	Coho	Chum
2000	239,000	205,000	1,800	24,000	11,500	UNK	UNK	NA	NA	UNK	239,000	205,000	1,800	24,000	11,500
2001	132,000	982,000	900	11,000	31,200	UNK	UNK	NA	18,000	UNK	132,000	982,000	900	29,000	31,200
2002	725,000	239,000	3,800	2,000	9,800	UNK	UNK	2,100	6,000	UNK	725,000	239,000	5,900	8,000	9,800
2003	616,000	146,000	3,600	2,000	11,100	UNK	UNK	2,500	9,000	UNK	616,000	146,000	6,100	11,000	11,100
2004	318,000	192,000	6,300	3,000	7,300	UNK	UNK	400	5,000	UNK	318,000	192,000	6,700	8,000	7,300
2005	174,000	279,000	2,700	11,000	2,400	UNK	UNK	400	19,000	UNK	174,000	279,000	3,100	30,000	2,400
2006	292,000	13,000	3,200	2,000	7,900	UNK	UNK	1,300	9,000	UNK	292,000	13,000	4,500	11,000	7,900
2007	131,000	241,000	3,400	10,000	1,000	UNK	UNK	600	9,000	UNK	131,000	241,000	4,000	19,000	1,000
2008	60,000	1,000	300	2,000	200	UNK	UNK	50	5,000	UNK	60,000	1,000	350	7,000	200
2009	103,000	55,000	800	3,000	1,100	UNK	UNK	300	17,000	UNK	103,000	55,000	1,100	20,000	1,100
2010	86,000	2,000	600	2,000	200	UNK	UNK	300	14,000	UNK	86,000	2,000	900	16,000	200
2011	108,000	11,000	800	1,000	400	UNK	UNK	400	7,000	UNK	108,000	11,000	1,200	8,000	400
2012	133,000	18,000	400	3,000	400	UNK	UNK	400	25,000	UNK	133,000	18,000	800	28,000	400
2013	140,000	89,000	900	23,000	600	UNK	UNK	200	101,000	UNK	140,000	89,000	1,100	124,000	600
2014	127,000	43,000	1,600	3,000	400	UNK	UNK	100	18,000	UNK	127,000	43,000	1,700	21,000	400
2015	187,000	38,000	1,400	45,000	4,100	UNK	UNK	400	61,000	UNK	187,000	38,000	1,800	106,000	4,100
2016	17,000	35,000	700	31,000	200	UNK	UNK	100	44,000	UNK	17,000	35,000	800	75,000	200
2017	34,000	65,000	1,000	18,000	100	UNK	UNK	50	60,000	UNK	34,000	65,000	1,050	78,000	100
2018	13,000	17,000	0	2,000	600	UNK	UNK	100	7,000	UNK	13,000	17,000	100	9,000	600
2019	19,000	4,000	0	8,000	1,800	UNK	UNK	0	47,000	UNK	19,000	4,000	0	55,000	1,800
2020	500	6,000	0	0	300	UNK	UNK	0	32,500	UNK	500	6,000	0	32,500	300
Mean 00-19	183,000	134,000	2,000	10,000	5,000	UNK	UNK	1,000	25,000	UNK	183,000	134,000	2,000	34,000	5,000

### Recreational Catch Estimates of Nass Salmon

Limited data were available for the preliminary sport catch estimates shown here, but minimum harvest estimates of Nass salmon in recreational fisheries for 2020 are approximately: < 100 Sockeye, 760 Chinook, 3,000 Coho, and < 100 Pink based on preliminary data from NFWD, DFO Prince Rupert, and methods developed by the NCB-JTC (Table 22). The recreational catch estimates of Nass salmon that are shown in **Error! Reference source not found.** are based on many assumptions (e.g., relative stock composition of Nass salmon in total recreational catches in Areas 1 to Area 4 (tidal only)). The preliminary recreational harvest estimates for Nass salmon in 2020 were below average for Nass Chinook and Coho salmon when compared to mean estimates from 2000 to 2019 (Table 22).

Table 22 Preliminary Post-Season Nass Salmon Harvest Estimates in Recreational Fisheries, 2000-2020 (NBC-JTC 2020 [draft])

Year	IN-RIVER RECREATIONAL CATCH					MARINE (TIDAL) RECREATIONAL CATCH					TOTAL RECREATIONAL CATCH				
	Sock.	Pink	Chin.	Coho	Chum	Sock.	Pink	Chin.	Coho	Chum	Sock.	Pink	Chin.	Coho	Chum
2000	20	UNK	1,200	300	UNK	UNK	UNK	1,000	600	UNK	20	UNK	2,200	900	UNK
2001	280	UNK	1,100	600	UNK	UNK	UNK	1,700	3,600	UNK	280	UNK	2,800	4,200	UNK
2002	30	UNK	900	400	UNK	UNK	UNK	1,100	4,800	UNK	30	UNK	2,000	5,200	UNK
2003	UNK	UNK	1,200	200	UNK	UNK	UNK	1,200	4,500	UNK	UNK	UNK	2,400	4,700	UNK
2004	UNK	UNK	900	200	UNK	UNK	UNK	1,900	4,400	UNK	UNK	UNK	2,800	4,600	UNK
2005	UNK	UNK	800	500	UNK	UNK	UNK	1,500	4,800	UNK	UNK	UNK	2,300	5,300	UNK
2006	UNK	UNK	1,300	100	UNK	UNK	UNK	1,000	4,700	UNK	UNK	UNK	2,300	4,800	UNK
2007	UNK	UNK	1,500	600	UNK	UNK	UNK	1,800	3,900	UNK	UNK	UNK	3,300	4,500	UNK
2008	UNK	UNK	1,300	100	UNK	UNK	UNK	1,600	6,200	UNK	UNK	UNK	2,900	6,300	UNK
2009	UNK	UNK	1,300	1,700	UNK	UNK	UNK	1,300	7,300	UNK	UNK	UNK	2,600	9,000	UNK
2010	120	UNK	500	300	UNK	UNK	UNK	400	4,700	UNK	120	UNK	900	5,000	UNK
2011	10	0	600	300	UNK	UNK	UNK	900	5,800	UNK	10	UNK	1,500	6,100	UNK
2012	UNK	10	600	200	UNK	UNK	UNK	500	2,600	UNK	UNK	10	1,100	2,800	UNK
2013	30	20	500	300	UNK	UNK	UNK	500	6,400	UNK	30	20	1,000	6,700	UNK
2014	120	UNK	900	300	UNK	UNK	UNK	700	2,700	UNK	120	UNK	1,600	3,000	UNK
2015	20	50	600	400	UNK	UNK	UNK	700	5,200	UNK	20	50	1,300	5,600	UNK
2016	UNK	UNK	300	100	UNK	UNK	UNK	800	4,600	UNK	UNK	UNK	1,100	4,700	UNK
2017	UNK	10	200	1,500	UNK	UNK	UNK	800	3,700	UNK	UNK	10	1,000	5,200	UNK
2018	UNK	UNK	0	400	UNK	UNK	UNK	200	2,100	UNK	UNK	UNK	200	2,500	UNK
2019	UNK	UNK	390	700	UNK	UNK	UNK	900	3,800	UNK	UNK	UNK	1,290	4,500	UNK
<b>2020</b>	<b>UNK</b>	<b>UNK</b>	<b>460</b>	<b>500</b>	<b>UNK</b>	<b>UNK</b>	<b>UNK</b>	<b>300</b>	<b>2,500</b>	<b>UNK</b>	<b>UNK</b>	<b>UNK</b>	<b>760</b>	<b>3,000</b>	<b>UNK</b>
<b>Mean 00-19</b>	<b>100</b>	<b>20</b>	<b>1,000</b>	<b>500</b>	<b>UNK</b>	<b>UNK</b>	<b>UNK</b>	<b>1,000</b>	<b>4,000</b>	<b>UNK</b>	<b>100</b>	<b>20</b>	<b>2,000</b>	<b>4,800</b>	<b>UNK</b>

### Nisga'a Nation Catch Estimates of Nass Salmon and Steelhead

The 2020 Nisga'a salmon and steelhead fisheries were monitored from 13 May to 31 August as part of the NFWD's annual salmon catch monitoring program. Incidental salmon and steelhead catches before 13 May and after 31 August were also accounted for in NFWD's annual non-salmon catch monitoring program. During the salmon catch-monitoring period, estimates were expanded each week for non-reporting based on catch and fishing effort analyses. No individual sale fisheries were conducted in 2020 and the Nisga'a food, social, and ceremonial fishery was closed for 17 days from 13-29 July due to very low returns of Nass Sockeye (15,000 vs. 80,000) and Chinook (3,200 vs. 14,000) salmon that were passing to the Upper Nass prior to the closure.

shows the preliminary post-season Nisga'a Treaty catch potential of Nass salmon and harvest estimates of Nass salmon and steelhead in Nisga'a fisheries in 2020. Preliminary total salmon harvests in the Nisga'a fisheries include angling gear catches and preliminary estimates of release mortalities (60% from gillnets). Estimated harvests in the Nisga'a fisheries for 2020 were: 39,388 Sockeye (plus 2 release morts), 5,245 Chinook (plus 332 release morts), 844 Coho (plus 53 release morts), 6,419 Pink (plus 1,429 release morts), 73 Chum (plus 7 release morts), and 97 steelhead (plus 40 release morts). Steelhead harvests included 19 winter run and 78 summer run fish. Preliminary post-season Nisga'a harvest estimates for all Nass salmon and steelhead were below average based on mean harvests from 2000 to 2019 ( ). There is currently no defined Nisga'a entitlement for steelhead (winter or summer-run), other than a maximum allocation for summer-run steelhead (1,000) defined in the Nisga'a Treaty; domestic harvests are permitted each year.

**Preliminary Nass Salmon Total Return to Canada (TRTC) and Total Run (TR) Estimates for 2020**

The preliminary post-season TRTC estimates for determining the Nisga'a Treaty entitlements for Nass salmon in 2020 are approximately: 266,000 Sockeye, 654,000 Pink, 24,000 Chinook, 133,000 Coho, and 112,000 Chum (

). These estimates were lower than the pre-season estimates for Sockeye (266,000 vs. 386,000) and Coho (133,000 vs. 302,000) and higher for Pink (654,000 vs. 291,000), Chinook (24,000 vs. 23,000), and Chum (112,000 vs. 29,000).

Preliminary Canadian exploitation rates for 2020 were below average for Nass Sockeye (17% vs. 39%), Pink (2% vs. 18%), Chinook (26% vs. 37%), Chum (0.3% vs. 9%), and about average for Coho (16% vs 15%) when compared to the means from 2000 to 2019 (

). Total run exploitation rate estimates for Nass salmon in all fisheries in 2020 were 29% Sockeye, 5% Pink, 31% Chinook, 56% Coho, and 6% Chum when combining harvests from Alaskan (Table 19) and Canadian (Table 25) fisheries.

Table 23 Nisga'a Treaty TRTC Entitlement and Harvest Estimates for Nass Salmon and Steelhead (including estimated release mortalities), 2000-2020 (NCB-JTC 2020 [draft])

Year	NISGA'A CATCH POTENTIAL TARGETS (TREATY, DEMO, UNDERAGES, SE)					NISGA'A TOTAL CATCHES (TREATY, DEMO, UNDERAGES, REL. MORT)					
	Sockeye	Pink	Chinook	Coho	Chum	Sockeye	Pink	Chinook	Coho	Chum	Steel
2000	93,855	42,118	6,935	9,241	2,905	93,179	6,086	9,326	1,950	1,067	495
2001	63,199	257,071	8,056	23,170	17,259	77,183	79,378	11,764	14,706	1,617	403
2002	185,562	67,129	2,607	27,664	16,988	140,666	2,043	5,431	9,016	132	557
2003	171,681	124,282	6,332	26,418	32,832	140,861	18,949	6,709	14,882	318	445
2004	143,379	74,242	6,580	22,399	32,588	145,248	10,755	5,985	20,363	1,115	512
2005	87,589	174,082	6,500	19,306	30,626	113,360	4,780	6,601	14,988	728	244
2006	85,827	103	9,046	14,744	35,237	88,079	4,699	7,810	8,512	1,214	253
2007	48,309	105,229	9,130	20,541	30,399	53,886	7,438	6,814	9,520	932	116
2008	46,780	32	7,985	20,174	30,027	45,805	4,475	4,475	3,466	511	179
2009	69,139	91,835	10,515	28,294	29,720	69,449	31,759	5,518	14,104	447	266
2010	60,458	2,179	8,852	23,852	29,739	67,849	3,184	4,643	10,395	386	709
2011	68,083	343	7,536	18,771	29,537	60,445	47,331	4,605	2,655	245	193
2012	74,478	7,904	9,192	21,962	29,496	68,766	21,035	3,614	12,182	394	542
2013	81,553	117,557	11,421	28,980	29,339	73,475	38,528	4,459	19,510	243	433
2014	94,655	28,177	14,652	28,670	29,345	79,837	9,567	6,029	8,573	711	468
2015	163,756	31,660	16,793	23,966	32,813	154,206	30,189	8,335	8,002	1,382	424
2016	63,695	20,371	12,172	35,647	4,050	46,875	20,323	5,418	8,258	2,923	542
2017	66,200	109,847	8,830	35,647	2,044	58,180	20,376	3,688	10,362	744	233
2018	47,177	5,888	12,351	23,525	5,503	46,776	15,795	5,504	2,855	535	409
2019	46,637	4,261	11,100	34,101	2,330	50,281	11,590	6,682	2,374	206	95
<b>2020</b>	<b>33,000</b>	<b>68,000</b>	<b>5,100</b>	<b>11,000</b>	<b>9,000</b>	<b>39,390</b>	<b>6,606</b>	<b>5,577</b>	<b>897</b>	<b>80</b>	<b>137</b>
<b>Mean 00-19</b>	<b>88,000</b>	<b>63,000</b>	<b>9,000</b>	<b>24,000</b>	<b>23,000</b>	<b>84,000</b>	<b>19,000</b>	<b>6,000</b>	<b>10,000</b>	<b>1,000</b>	<b>400</b>

Table 24 Preliminary estimates of Total Return to Canada, Total Harvests in all Canadian Fisheries, and Associated Exploitation Rates for Nass Salmon Returns, 2000-2020 (NCB-JTC 2020 [draft])

Year	TOTAL RETURN TO CANADA (TRTC)					HARVEST TOTALS (ALL CAN FISHERIES)					EXPLOITATION RATE (ALL CAN FISHERIES)				
	Sockeye	Pink	Chinook	Coho	Chum	Sockeye	Pink	Chinook	Coho	Chum	Sockeye	Pink	Chinook	Coho	Chum
2000	539,000	562,000	33,000	116,000	36,000	335,000	211,000	13,400	28,000	8,000	54%	36%	39%	13%	20%
2001	380,000	1,901,000	50,000	198,000	72,000	212,000	1,062,000	15,600	52,000	6,000	36%	51%	30%	14%	7%
2002	1,279,000	650,000	30,000	315,000	30,000	873,000	241,000	13,500	27,000	3,000	62%	35%	43%	7%	9%
2003	1,024,000	1,019,000	44,000	176,000	76,000	760,000	165,000	15,300	36,000	11,000	65%	14%	33%	14%	13%
2004	681,000	696,000	33,000	136,000	58,000	466,000	203,000	16,300	37,000	8,000	47%	26%	49%	16%	10%
2005	522,000	1,348,000	28,000	216,000	33,000	297,000	284,000	12,500	56,000	3,000	45%	19%	44%	15%	7%
2006	637,000	136,000	44,000	130,000	60,000	386,000	18,000	15,500	29,000	9,000	50%	13%	34%	15%	13%
2007	351,000	896,000	40,000	179,000	13,000	187,000	249,000	14,600	37,000	2,000	31%	25%	35%	13%	10%
2008	333,000	51,000	30,000	139,000	4,000	115,000	6,000	8,100	23,000	1,000	30%	11%	27%	12%	23%
2009	425,000	810,000	39,000	362,000	22,000	181,000	87,000	9,600	50,000	2,000	31%	10%	24%	10%	7%
2010	392,000	185,000	27,000	184,000	9,000	163,000	5,000	6,700	36,000	600	37%	2%	24%	13%	6%
2011	458,000	174,000	18,000	121,000	7,000	182,000	58,000	7,500	23,000	1,000	33%	32%	38%	11%	13%
2012	419,000	270,000	16,000	161,000	16,000	216,000	39,000	6,000	46,000	1,000	45%	13%	35%	18%	6%
2013	437,000	976,000	16,000	511,000	15,000	227,000	127,000	7,400	156,000	1,000	45%	11%	46%	15%	6%
2014	487,000	399,000	23,000	267,000	22,000	227,000	52,000	9,700	35,000	1,000	41%	11%	39%	9%	4%
2015	753,000	422,000	33,000	181,000	48,000	363,000	68,000	12,400	125,000	5,000	42%	15%	35%	27%	9%
2016	362,000	349,000	18,000	277,000	24,000	86,000	55,000	7,500	93,000	3,000	19%	14%	38%	15%	10%
2017	341,000	926,000	11,000	288,000	24,000	114,000	86,000	6,100	98,000	800	31%	9%	52%	22%	3%
2018	294,000	256,000	22,000	88,000	50,000	70,000	33,000	6,100	16,000	1,100	22%	12%	26%	11%	2%
2019	326,000	175,000	20,000	203,000	26,000	83,000	16,000	8,400	66,000	2,000	22%	8%	40%	23%	7%
<b>2020</b>	<b>266,000</b>	<b>654,000</b>	<b>24,000</b>	<b>133,000</b>	<b>112,000</b>	<b>51,000</b>	<b>13,000</b>	<b>6,600</b>	<b>36,000</b>	<b>400</b>	<b>17%</b>	<b>2%</b>	<b>26%</b>	<b>16%</b>	<b>0.3%</b>
<b>Mean 00-19</b>	<b>522,000</b>	<b>610,000</b>	<b>29,000</b>	<b>212,000</b>	<b>32,000</b>	<b>277,000</b>	<b>153,000</b>	<b>11,000</b>	<b>53,000</b>	<b>3,000</b>	<b>39%</b>	<b>18%</b>	<b>37%</b>	<b>15%</b>	<b>9%</b>

Table 25 Preliminary Estimates of Total Run Size, Total Harvests in all Fisheries, and Total Run Exploitation Rates for Nass Salmon Returns, 2000-2020 (NCB-JTC 2020 [draft])

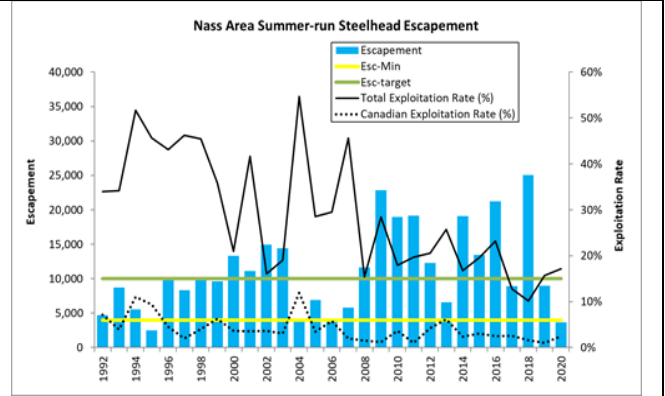
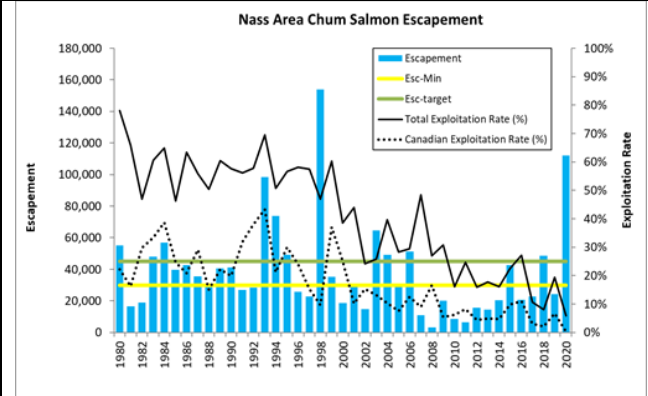
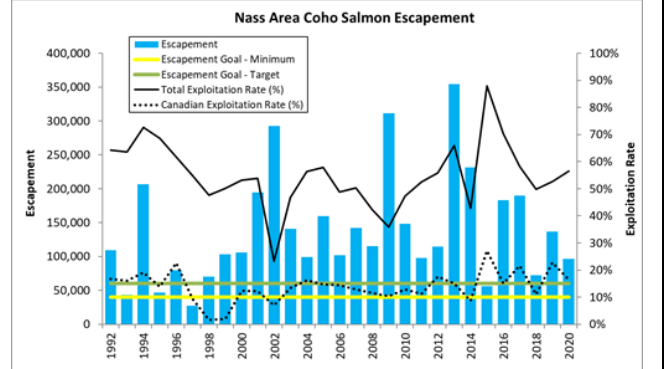
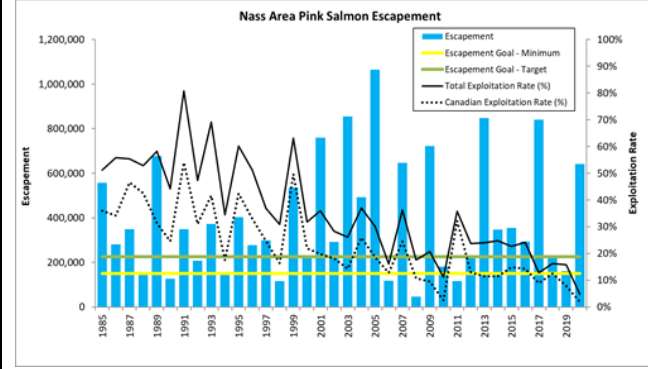
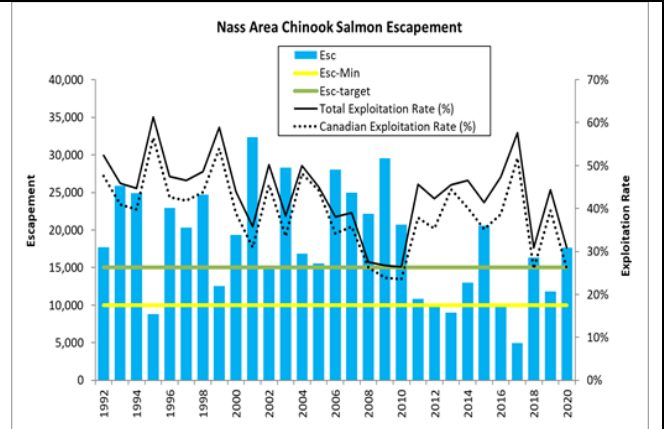
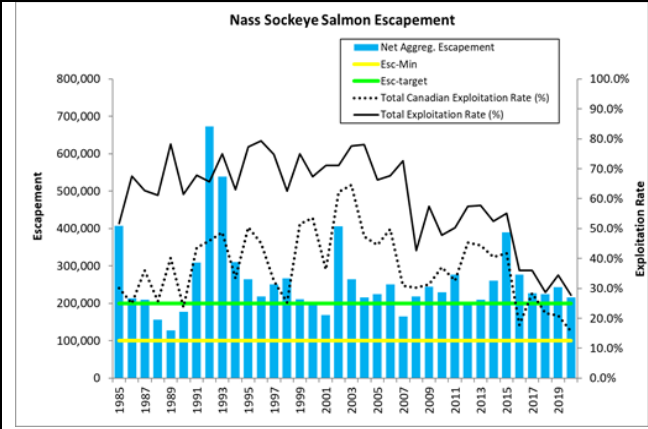
Year	TOTAL RUN					HARVEST TOTALS (ALL FISHERIES)					TOTAL RUN EXPLOITATION RATES				
	Sockeye	Pink	Chinook	Coho	Chum	Sockeye	Pink	Chinook	Coho	Chum	Sockeye	Pink	Chinook	Coho	Chum
2000	625,000	594,000	34,700	208,000	40,000	421,000	243,000	15,100	120,000	12,000	67%	41%	44%	58%	30%
2001	582,000	2,093,000	52,400	374,000	90,000	414,000	1,254,000	18,000	228,000	24,000	71%	60%	34%	61%	27%
2002	1,404,000	691,000	31,400	378,000	32,000	998,000	282,000	14,900	90,000	5,000	71%	41%	47%	24%	16%
2003	1,177,000	1,155,000	46,200	265,000	87,000	913,000	301,000	17,500	125,000	22,000	78%	26%	38%	47%	25%
2004	985,000	782,000	33,600	227,000	82,000	770,000	289,000	16,900	128,000	32,000	78%	37%	50%	56%	39%
2005	667,000	1,523,000	28,300	379,000	42,000	442,000	459,000	12,800	219,000	12,000	66%	30%	45%	58%	29%
2006	775,000	141,000	45,800	199,000	72,000	524,000	23,000	17,300	98,000	21,000	68%	16%	38%	49%	29%
2007	602,000	1,015,000	41,300	286,000	21,000	438,000	368,000	15,900	144,000	10,000	73%	36%	38%	50%	48%
2008	380,000	55,000	30,400	200,000	4,400	162,000	10,000	8,500	84,000	1,400	43%	18%	28%	42%	32%
2009	575,000	912,000	40,200	487,000	29,000	331,000	189,000	10,800	175,000	9,000	58%	21%	27%	36%	31%
2010	439,000	203,000	27,800	281,000	10,000	210,000	23,000	7,500	133,000	1,600	48%	11%	27%	47%	16%
2011	557,000	180,000	19,500	207,000	8,000	281,000	64,000	9,000	109,000	2,000	50%	36%	46%	53%	25%
2012	477,000	302,000	17,200	261,000	18,000	274,000	71,000	7,200	146,000	3,000	57%	24%	42%	56%	17%
2013	504,000	1,116,000	16,200	1,042,000	17,000	294,000	267,000	7,600	687,000	3,000	58%	24%	47%	66%	18%
2014	553,000	461,000	24,600	405,000	25,000	293,000	114,000	11,300	173,000	4,000	53%	25%	46%	43%	16%
2015	870,000	457,000	35,200	462,000	55,000	480,000	103,000	14,600	406,000	12,000	55%	23%	41%	88%	22%
2016	442,000	387,000	19,700	618,000	29,000	166,000	93,000	9,200	434,000	8,000	38%	24%	47%	70%	28%
2017	369,000	964,000	11,700	454,000	26,000	142,000	124,000	6,800	264,000	2,800	38%	13%	58%	58%	11%
2018	316,000	266,000	23,100	144,000	53,000	92,000	43,000	7,200	72,000	4,100	29%	16%	31%	50%	8%
2019	377,000	190,000	21,000	290,000	30,000	134,000	31,000	9,400	153,000	6,000	36%	16%	45%	53%	20%
<b>2020</b>	<b>303,000</b>	<b>673,000</b>	<b>25,200</b>	<b>222,000</b>	<b>119,000</b>	<b>88,000</b>	<b>32,000</b>	<b>7,800</b>	<b>125,000</b>	<b>7,400</b>	<b>29%</b>	<b>5%</b>	<b>31%</b>	<b>56%</b>	<b>6%</b>
<b>Mean 00-19</b>	<b>634,000</b>	<b>674,000</b>	<b>30,000</b>	<b>358,000</b>	<b>39,000</b>	<b>389,000</b>	<b>218,000</b>	<b>12,000</b>	<b>199,000</b>	<b>10,000</b>	<b>57%</b>	<b>27%</b>	<b>41%</b>	<b>53%</b>	<b>24%</b>

Ranking the TRTC returns ( ) for Nass salmon in 2020 over a 36-year return period (1985–2020), the returns in 2020 were poor for Sockeye (2nd worst) and Chinook (11th worst); average for Pink (16th best) and Coho (23rd best); and good for Chum (3rd best).

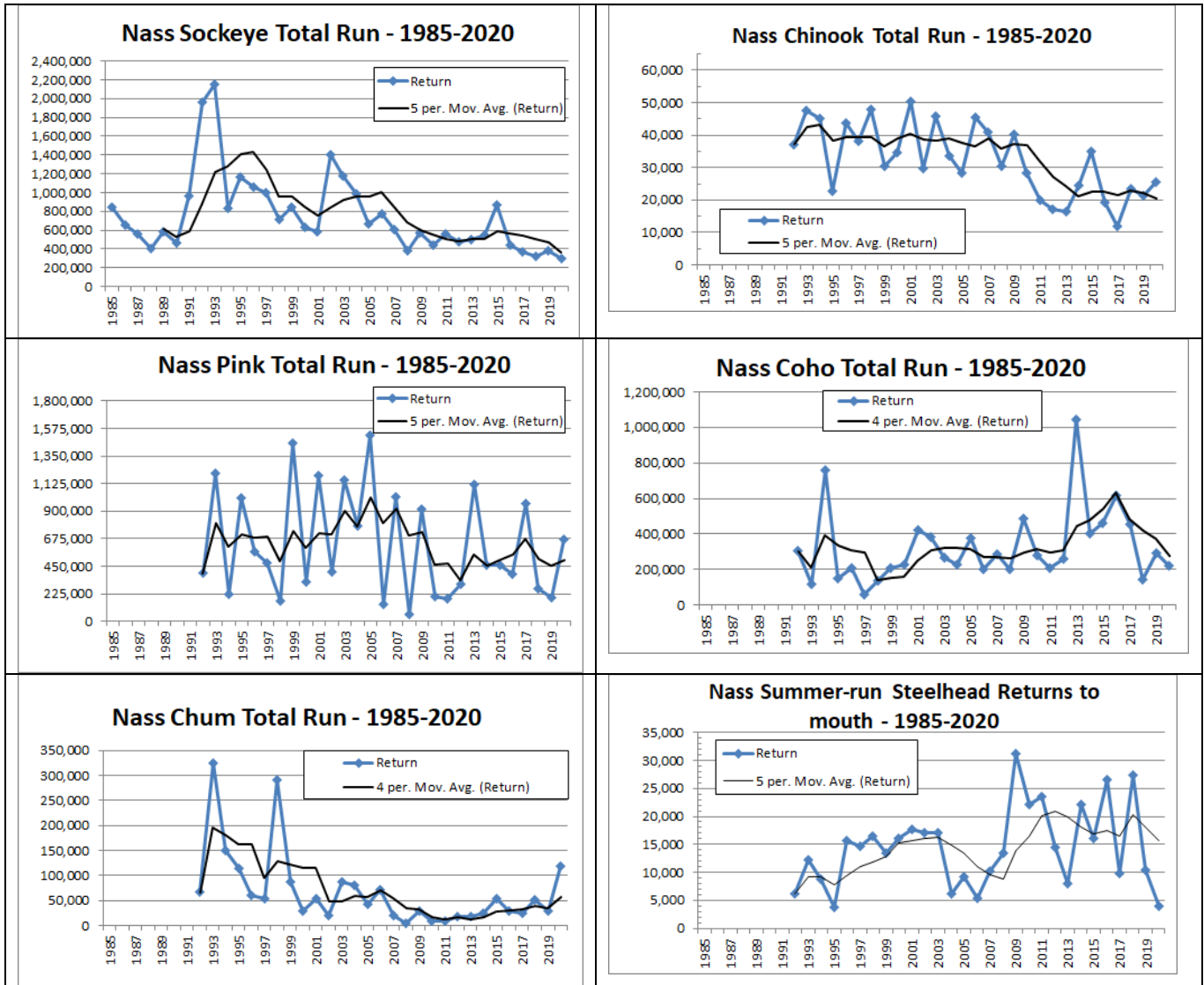
Table 26 Preliminary Total Return to Canada and Rankings by Year for Nass Salmon from 1985 to 2020

NASS SALMON TOTAL RETURN TO CANADA ESTIMATES, 1985-2020						NASS TRTC RANKINGS BY YEAR FOR SALMON, 1985-2020					
Year	Sockeye	Pink	Chinook	Coho	Chum	Year	Sockeye	Pink	Chinook	Coho	Chum
1985	660,000	1,230,000	32,500	190,000	73,000	1985	10	5	19	13	11
1986	378,000	580,000	64,400	205,000	84,000	1986	26	17	1	11	5
1987	413,000	911,000	35,800	128,000	75,000	1987	23	10	14	26	10
1988	259,000	335,000	28,100	43,000	47,000	1988	36	24	23	35	19
1989	363,000	1,501,000	48,700	130,000	79,000	1989	27	2	2	24	7
1990	286,000	304,000	44,200	242,000	76,000	1990	34	26	6	9	8
1991	727,000	1,680,000	16,300	46,000	58,000	1991	7	1	34	34	14
1992	1,572,000	328,000	35,400	160,000	54,000	1992	2	25	15	19	16
1993	1,586,000	874,000	45,400	62,000	239,000	1993	1	12	5	33	1
1994	590,000	184,000	42,800	351,000	105,000	1994	13	31	9	3	4
1995	855,000	829,000	21,700	68,000	83,000	1995	5	13	29	32	6
1996	694,000	465,000	41,600	126,000	40,000	1996	8	18	10	27	20
1997	574,000	416,000	36,300	33,000	31,000	1997	14	20	13	36	23
1998	446,000	143,000	45,700	72,000	182,000	1998	19	34	4	31	2
1999	645,000	1,259,000	29,000	107,000	68,000	1999	11	4	21	29	12
2000	539,000	292,000	32,800	134,000	26,000	2000	15	27	18	22	24
2001	380,000	995,000	48,000	247,000	36,000	2001	25	7	3	8	21
2002	1,279,000	365,000	28,400	319,000	18,000	2002	3	22	22	4	30
2003	1,024,000	1,019,000	43,600	176,000	76,000	2003	4	6	7	17	8
2004	681,000	696,000	33,100	136,000	58,000	2004	9	15	16	21	14
2005	522,000	1,348,000	28,100	216,000	33,000	2005	16	3	23	10	22
2006	637,000	136,000	43,600	130,000	60,000	2006	12	35	7	24	13
2007	351,000	896,000	39,600	179,000	13,000	2007	29	11	11	16	33
2008	333,000	51,000	30,200	139,000	4,000	2008	31	36	20	20	36
2009	425,000	810,000	39,200	362,000	22,000	2009	21	14	12	2	28
2010	392,000	185,000	27,400	184,000	9,000	2010	24	30	25	14	34
2011	458,000	174,000	18,400	121,000	7,000	2011	18	33	31	28	35
2012	419,000	270,000	15,800	161,000	16,000	2012	22	28	35	18	31
2013	437,000	976,000	16,400	511,000	15,000	2013	20	8	33	1	32
2014	487,000	399,000	22,700	267,000	22,000	2014	17	21	27	7	28
2015	753,000	422,000	33,000	181,000	48,000	2015	6	19	17	15	18
2016	362,000	349,000	17,700	277,000	24,000	2016	28	23	32	6	26
2017	341,000	926,000	11,100	288,000	24,000	2017	30	9	36	5	26
2018	294,000	256,000	22,500	88,000	50,000	2018	33	29	28	30	17
2019	326,000	175,000	20,300	203,000	26,000	2019	32	32	30	12	24
2020	266,000	654,000	24,000	133,000	112,000	2020	35	16	26	23	3
<b>MEANS:</b>						<b>36 years:</b>					
00-19	522,000	537,000	29,000	216,000	29,000	Year colors:	Best:	1-12			
85-19	585,000	622,000	33,000	179,000	54,000		Average:	13-24			
94-19	548,000	540,000	30,000	195,000	42,000		Poor:	25-36			

## Preliminary Nass Salmon & Steelhead Escapement Charts for 2020



## Preliminary Nass Salmon & Steelhead Total Run Charts for 2020





## ***Nass River Demonstration Fishery***

There were no Nass River or Area 3 demonstration fisheries implemented in 2020.

## ***Recreational Fishery Review***

The tidal waters salmon sport fishery in Area 3 begins with low effort in late April, with initial participation by local area residents launching from Prince Rupert or Port Edward. Independent and guided day charter effort increases significantly in late May, remaining high throughout the peak season in June, July and August, and with primarily local participants again by the end of September. There was one recreational fishing lodge that operated in Area 3 in 2020, and the catch and effort numbers are included in the Area 3 & 4 Creel Program summary.

Chinook started at 2 per day, but due to a low preseason forecast for Skeena Chinook the Department identified pre-season conservation measures to address Chinook concerns. One of the measures was to reduce the daily Chinook limit in Area 3 to 1 (one) Chinook per day from June 1, 2020 to July 14, 2020. Chinook daily limits returned to 2 per day on July 15, 2020. There was non-retention of sockeye for the 2020 season in the tidal waters of Area 3. Other salmon species daily limits were 4 pink and 4 coho, with a combined daily limit of 4 salmon.

Area 3 & 4 Creel Program collects catch information from the recreational fishery surrounding Prince Rupert and Port Edward on the North Coast of B.C. It is focused in Areas 3 and 4, comprising the waters of Chatham Sound between the mouths of the Nass and Skeena Rivers. Chatham Sound is bordered by the Alaska/BC border to the north, Dundas and Stephens Island groups to the west and Porcher Island to the south, covering an area of approximately 4,200 km<sup>2</sup>. The North Coast Skeena First Nations Stewardship Society (NCSFNSS), an aggregate of four North Coast B.C. First Nations, was granted resources from the Pacific Salmon Commission to operate the Area 3 & 4 Creel Program and has done so using the same study design as was used by DFO during 2008-2014.

The Area 3 & 4 Creel Program operated from May 1<sup>st</sup>, 2020 to August 31<sup>st</sup>, 2020. From May 1<sup>st</sup>, 2020 to August 31<sup>st</sup>, 2020 there were approximately 9,665 vessel trips made by recreational vessels and an estimated retained catch of 8,247 chinook, 25,599 coho, 2,998 pink, 7 chum, and 8 sockeye.

There was an observed decrease in vessel trips compared to May 1 to August 31, 2019 where there were approximately 14,163 vessel trips and an estimated retained catch of 15,152 chinook, 23,820 coho, 3,471 pink, 62 chum and 28 sockeye.

### Nass River

The Nass River watershed started with normal daily limits and opening times for Chinook, Coho, Pink and Sockeye.

On May 27<sup>th</sup>, 2020 the Department implemented management measures for Coho as follows:

Reduced daily limit to two (2) Coho salmon, only one of which can be over 50cm, in the Nass River watershed.

In addition to the above, the Department closed the Nass River main stem waters near the Meziadin River confluence, from white triangular fishing boundary signs located downstream of the Meziadin River confluence and upstream to the Hwy 37 Bridge to fishing for all salmon. This closure was in place from May 27, 2020 to September 15, 2020.

Due to low Sockeye returning to the Nass River watershed, the Department closed the Nass River to fishing for Sockeye salmon on July 1, 2020 for the remainder of the season. Similarly, due to low Chinook returning to the Nass River watershed, the Department closed the Nass River to fishing for Chinook salmon on July 15, 2020 for the remainder of the season.

### ***Commercial Net Fishery Review***

The Area 3 commercial net fishery was planned with a point estimate forecast of approximately 386,000 Nass sockeye with a below even year average pink return while meeting a number of pre-season commitments. These commitments included managing in accordance to the Nisga'a Treaty, the Pacific Salmon Treaty, allocation policy, chum and Chinook rebuilding, and limiting impacts on steelhead. Some of the restrictions put into place to deal with these commitments were, closed areas, daylight only fisheries, non-retention steelhead for both gear types, mandatory brailing for seines, non-retention Chinook for seines and gill nets.

The Kwinageese sockeye brood year returns for 2020 have shown improvement however a conservative approach continues going into the 2020 season. An anticipated closure was to be in effect from July 9 to July 15 (peak migration timing of Kwinageese sockeye through the commercial fishery based on DNA analysis) to minimize impacts on Kwinageese sockeye.

### Gill Net

Due to below average levels of sockeye escapement past the Gitwinksihlkw fish-wheels throughout the season no gill net fisheries were implemented in area 3 for the 2020 season.

Area 3 gill net ten year average of 11.9 openings and 1390.6 vessel operating days.

Area 3 sockeye catch compared to the last ten year average of 76,772.3.

Seine

Going into the 2020 season pink escapement was a concern coming off two poor brood years into the Khutzeymateen and Kwinamass Rivers. Without the support of pink escapement from the Iknouk river during an even year the department was looking at taking a conservative approach for 2020 seine season.

A seine assessment fishery was opened July 6 on the outside of area 3 around the south end of Wales Island and Sommerville Island. Thirteen seines participated with a final catch of 1,816 pinks. Unfortunately pink escapement did not show improvement throughout the season and there were no further openings for seines in area 3.

Final catch of 1,816 pinks compared to the last five even year average of 444,439 pinks.

For the season a total of 1 seine opening with 13 vessel operating days compared to the last five even year average of 8.6 openings and 162.4 vessel operating days.

Nisga’a Fisheries continue to do an excellent job managing the Nass River fishwheel program which is critical for the management of the Area 3 net fishery.

Table 27 Area 3 Seine Catches

**Commercial SALMON SEINE In-Season Estimated Catch-by-Area (Pieces)  
for Period 01-Apr-2020 to 20-Nov-2020**

			<a href="#">Report Details by Subarea or Portion</a>															
<b>Management Area 3</b>			<b>Sockeye Salmon</b>		<b>Coho Salmon</b>		<b>Pink Salmon</b>		<b>Chum Salmon</b>		<b>Chinook Salmon</b>		<b>Steelhead</b>					
Stat Week	Week of Year	Date	Effort	Kept	Rel	Kept	Rel	Kept	Rel	Kept	Rel	Kept	Rel	Kept	Rel	Status	Last Updated	
		06-Jul	13	0	212	0	94	1816	0	1751	0	0	161	0	0	Reviewed	19-Nov-2020	
Total for Week			13	0	212	0	94	1816	0	1751	0	0	161	0	0			
Total for Management Area 3 in Period			13	0	212	0	94	1816	0	1751	0	0	161	0	0			

Notes:

1. Consult the applicable Fishery Manager or Biologist as to the status of particular catch estimates.

## Area 3 Stream Escapements

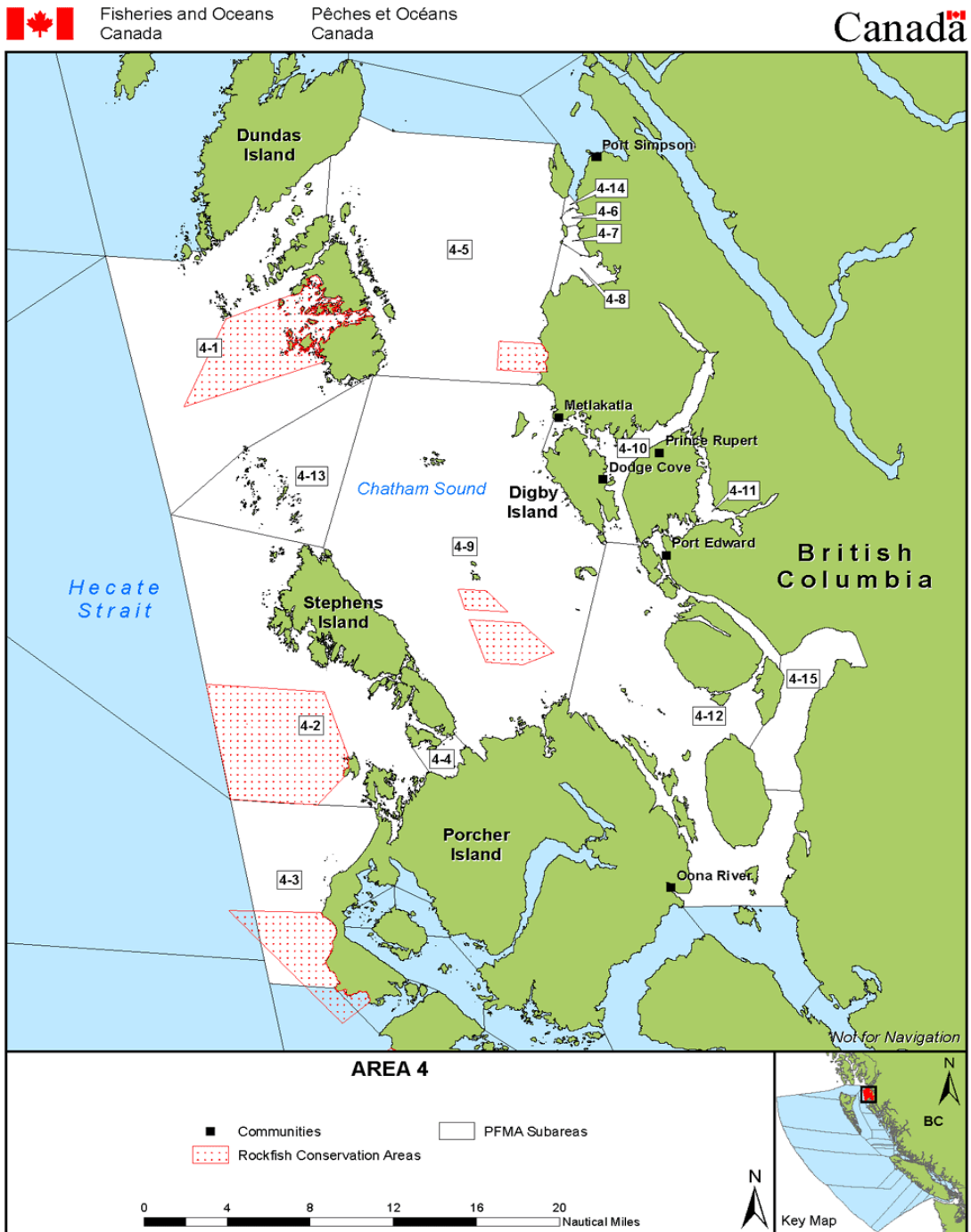
Table 28 Area 3 Stream Escapements

AREA 3 2020 PRELIMINARY ESCAPEMENT ESTIMATES							
N/O - NONE OBSERVED, N/I - NOT INSPECTED, DNS - DOES NOT SPAWN IN THIS CREEK, A/P - ADULTS PRESENT, INADEQUATE INFORMATION TO MAKE ESTIM.							
Location	Stream Name	Sockeye	Coho	Pink	Chum	Chinook	Comments
<b>COASTAL</b>							
	BOAT HARBOUR CREEK	N/I	N/I	N/I	N/I	N/I	
	BRUNDIGE CREEK WEST	N/I	N/I	N/I	N/I	N/I	
	BRUNDIGE CREEK	N/I	N/I	N/I	N/I	N/I	
	SANDY BAY CREEK	N/I	N/I	N/I	N/I	N/I	
	STUMAUN CREEK	DNS	N/I	1248	N/I	DNS	J. Leakey, CP
	TRACY BAY #2 CREEK	DNS	N/I	50	DNS	DNS	J. Leakey, CP
	TRACY CREEK	DNS	N/I	54	N/I	DNS	J. Leakey, CP
	WHITLY POINT CREEK	N/I	N/I	N/I	N/I	N/I	
<b>NASS RIVER</b>							
	ANSEDAGAN CREEK	N/I	122	N/I	N/I	N/I	I. Beveridge, NFWD
	BROWN BEAR CREEK	351	N/I	N/I	N/I	N/I	M. Cleveland, Gitanyow Fisheries
	CHAMBERS CREEK	N/I	N/O	A/P	A/P	N/O	I. Beveridge, NFWD
	DAMDOCHAX RIVER AND LAKE	N/I	N/I	N/I	N/I	3334	I. Beveridge, NFWD
	DISKANGIEG CREEK	N/I	1102	N/I	N/I	N/I	I. Beveridge, NFWD
	GINGIT CREEK	7648	N/I	N/O	N/O	N/O	I. Beveridge, NFWD
	GITZYON CREEK	N/I	N/I	N/I	N/I	N/I	
	IKNOUK RIVER	N/I	N/I	N/I	N/I	N/I	
	KINCOLITH RIVER	N/O	N/O	40000	N/O	A/P	I. Beveridge, NFWD
	KSEMAMAITH CREEK (Kseaden Creek)	N/I	N/I	N/I	N/I	N/I	
	KWINAGEESE RIVER (weir count)	3256	730	DNS	DNS	584	I. Beveridge, NFWD
	MEZIADIN RIVER AND LAKE	126468	2095	N/O	N/O	156	I. Beveridge, NFWD
	NASS MAIN	N/I	N/I	N/I	N/I	N/I	
	SEASKINNISH CREEK	N/I	N/I	N/I	N/I	N/I	
	TEIGEN CREEK	N/I	N/I	N/I	N/I	N/I	
	TSEAX RIVER	N/I	N/I	N/I	N/I	N/I	
	ZOLZAP CREEK	A/P	780	A/P	N/O	N/O	I. Beveridge, NFWD
<b>OBSERVATORY INLET</b>							
	ILLIANCE RIVER	N/O	N/O	60763	81	N/O	I. Beveridge, NFWD
	KITSAULT RIVER	N/I	N/I	N/I	N/I	N/I	
	KSHWAN RIVER	N/O	1300	13918	56347	N/O	I. Beveridge, NFWD
	SALMON COVE CREEK	N/O	1567	N/O	N/O	N/O	I. Beveridge, NFWD
	STAGOO CREEK	N/O	N/I	152080	3557	N/O	I. Beveridge, NFWD
	WILAUKS CREEK	N/O	N/I	2433	A/P	N/O	I. Beveridge, NFWD
<b>PORTLAND CANAL</b>							
	DOGFISH BAY CREEK	N/I	94	20282	A/P	N/I	I. Beveridge, NFWD
<b>PORTLAND INLET</b>							
	CEDAR CREEK	N/I	N/I	N/I	N/I	N/I	
	CRAG CREEK	DNS	DNS	370	DNS	DNS	J. Leakey, CP
	CROW LAGOON CREEK	DNS	N/I	50	DNS	DNS	J. Leakey, CP
	KHUTZYMATEEN RIVER	N/O	N/O	123342	550	A/P	I. Beveridge, NFWD
	KWINAMASS RIVER	N/I	N/I	100000	A/P	A/P	I. Beveridge, NFWD
	LARCH CREEK	N/I	N/I	N/I	N/I	N/I	
	LIZARD CREEK	N/I	N/I	N/I	N/I	N/I	
	MANZANITA COVE CREEK	DNS	N/I	74	DNS	DNS	J. Leakey, CP
	MOUSE CREEK	N/I	N/I	N/I	N/I	N/I	
	PIRATE COVE CREEK	DNS	DNS	44	DNS	N/I	J. Leakey, CP
	TSAMSPANAKNOK BAY CREEK	N/I	N/I	N/I	N/I	N/I	
<b>WORK CHANNEL</b>							
	ENSHESHESE RIVER	N/I	N/I	N/I	N/I	N/I	
	LACHMACH RIVER	N/I	N/I	N/I	N/I	N/I	
	TOON RIVER	N/O	N/I	37800	A/P	A/P	I. Beveridge, NFWD
	<b>TOTALS</b>	<b>137723</b>	<b>7790</b>	<b>552508</b>	<b>60535</b>	<b>4074</b>	

# Area 4

## Area 4 Map

Figure 6 Area 4 Map



## ***First Nations Fishery Review***

There are 11 First Nations groups that include Area 4 and Skeena watershed Food, Social and Ceremonial salmon fisheries in their communal licence:

Lax Kw'alaams First Nation  
Metlakatla First Nation  
Gitxaala First Nation  
Kitsumkalum First Nation  
Kitselas First Nation  
Gitksan First Nation  
Gitanyow First Nation  
Wet'suwet'en First Nation  
Babine Lake First Nation  
Takla Lake First Nation  
Yekooche First Nation

FSC fisheries occur throughout Area 4 in both marine and freshwater locations using a variety of gear types.

## ***Skeena CSAF Demonstration Fisheries***

The North Coast Skeena First Nation Stewardship Society (NCSFNSS), Metlakatla First Nation and Lake Babine Nation all participated in the Skeena Sockeye directed Demonstration Fisheries in 2020. Marine demonstration fishery opportunities for NCSFNSS and Metlakatla First Nation occurred in Areas 4-9, 4-12, and 4-15, and Lake Babine Nation harvested at the Babine Counting Fence. Shares to generate allocations for these fisheries were generated by licences held in inventory by DFO (88 Area C and 19 Area A) and based off a proportion of marine commercial catches. Uncaught allocations in the marine demonstration fisheries were transferred to upriver fisheries, after accounting for stock composition adjustments.

Table 29 Skeena Sockeye Demonstration Fishery Harvest

		NCSFNSS	Metlakatla First Nation	Lake Babine Nation
Sockeye	Allocation	990	247	3,096*
	Catch	384	0	3,090
<b>Skeena Sockeye Catch Total</b>		<b>3,474</b>		

\*includes uncaught allocation transferred from downstream demonstration fisheries.

## ***ESSR Review***

There were no ESSR fisheries in the Skeena River Watershed in 2020.

## ***Recreational Fishery Review***

The tidal waters salmon sport fishery in Area 4 begins with low effort in April, with initial participation by local area residents launching from Prince Rupert or Port Edward. Independent and guided day charter effort increases significantly in May, remaining high throughout the peak season in June, July and August, and with primarily local participants again by the end of September.

Chinook started at 2 per day, but due to a low pre-season forecast of Skeena Chinook the Department identified pre-season conservation measures to address Chinook concerns. One of the measures was to reduce the daily Chinook limit in Area 4 to 1 (one) Chinook per day from June 1, 2020 to July 14, 2020. Chinook daily limits returned to 2 per day on July 15, 2020. Chum remained closed for the 2020 fishing season in Area 4. Sockeye started closed, but went to 4 per day on August 6, 2020 in Area 4. Other salmon species' daily limits were 4 Pink and 4 Coho with a combined daily limit of 4 salmon.

Area 3 & 4 Creel Program collects catch information from the recreational fishery surrounding Prince Rupert and Port Edward on the North Coast of B.C. It is focused in Areas 3 and 4, comprising the waters of Chatham Sound between the mouths of the Nass and Skeena Rivers. Chatham Sound is bordered by the Alaska/BC border to the north, Dundas and Stephens Island groups to the west and Porcher Island to the south, covering an area of approximately 4,200 km<sup>2</sup>. The North Coast Skeena First Nations Stewardship Society (NCSFNSS), an aggregate of four North Coast B.C. First Nations, was granted resources from the Pacific Salmon Commission to operate the Area 3 and 4 Creel Program and has done so using the same study design as was used by DFO during 2008-2014.

The Area 3 & 4 Creel Program operated from May 1<sup>st</sup>, 2020 to August 31<sup>st</sup>, 2020. From May 1<sup>st</sup>, 2020 to August 31<sup>st</sup>, 2020 there were approximately 9,665 vessel trips made by recreational vessels and an estimated retained catch of 8,247 Chinook, 25,599 Coho, 2,998 Pink, 7 Chum, and 8 Sockeye.

There was an observed decrease in vessel trips compared to May 1 to August 31, 2019 where there were approximately 14,163 vessel trips and an estimated retained catch of 15,152 Chinook, 23,820 Coho, 3,471 Pink, 62 Chum and 28 Sockeye.

### Skeena River

The Skeena River watershed started with normal daily limits and opening times for Chinook, Coho and Pink salmon in 2020.

On May 19, 2020 the Department closed the entire Skeena River watershed to fishing for Chinook salmon until July 15, 2020. Chinook fishing reopened on July 15, 2020 to August 14, 2020 in Skeena River watershed with a daily limit of 2 per day, only (1) of which could be over 65 cm in sections of the Skeena River

watershed. Chinook fishing closed in the entire Skeena River watershed on August 15, 2020 for the remainder of the season.

On May 27, 2020 the Department implemented the following additional management actions for Skeena Chinook and Coho.

#### *Chinook*

Closed all rivers and lakes flowing into PFMA's 3, 4, 5 and 6 to Chinook fishing, excluding the Kitimat, and sections of the Nass Rivers (the Nass eventually closed to Chinook fishing on July 15, 2020, see Area 3 Summary).

#### *Coho*

Reduced daily limit to two (2) Coho salmon, only one of which can be over 50cm, in the Skeena River watershed.

Reduced Coho daily limit in all rivers and lakes that flow into PFMA's 3, 4, 5 and 6 to two (2) Coho per day, only one of which can be over 50cm. Excluding the Kitimat River.

In addition to the above, the following areas were closed to fishing for all salmon:

Skeena River main stem waters near the Kitsumkalum River mouth, from the confluence with the Zymagotitz River (also known as Zymacord River) upstream to the Classified Waters boundary at the top of Hell's Gate - July 1, 2020 to Aug 31, 2020.

Kitsumkalum River (including lakes and tributaries) - July 1, 2020 to Aug 31, 2020.

Skeena River main stem waters near the Kitwanga River mouth, from Mill Creek upstream to the Highway 37 Bridge – May 27, 2020 to March 31, 2021.

Skeena River main stem waters within the three white triangular fishing boundary signs located at the confluence of the Skeena River and Kispiox River – May 27, 2020 to March 31, 2021.

The Bulkley River and Morice River waters within the four white triangular fishing boundary signs located at the confluence of the Bulkley River and Morice River (locally known as "the Forks"). The closure starts 100 meters upstream of the confluence and ends approximately 1 kilometre downstream - June 16, 2020 to Aug 15, 2020.

Sockeye salmon started closed in 2020 as identified in the 2020-2021 NC Salmon IFMP. On August 5, 2020 the identified trigger of 180,000 adult Sockeye passed the Tyee Test Site was reached and the recreational Sockeye fishery opened to one (1) per day on the Skeena River watershed. On August 12, 2020



the Sockeye daily limit was increased to two (2) per day on the Skeena River watershed.

#### Lower Skeena River Angling Creel Survey 2020

This Project commenced on July 7, 2020 with interviews starting on July 15, and ended on September 18, 2020. The focus of the project was to monitor fishing activities in three zones of the Skeena River (Terrace to the Lakelse Confluence; Lakelse to the Exstew Confluence; and Exstew to the Kwinitza boat launch). From July 14 to September 18, 2020 there were approximately 49,363 angler-hours with an estimated retained catch of 534 Large Chinook, 538 Jack Chinook, 583 Coho, 1,737 Sockeye, and 167 Pink.

In 2019, the program ran from June 15 to August 16, 2019. During this time there were approximately 40,387 angler-hours with an estimated retained catch of 542 Large Chinook, 244 Jack Chinook, 12 Coho, 12 Sockeye, and 23 Pink.

#### Babine Lake Recreational Creel Survey

The Recreational Creel survey for Babine Lake did not take place in 2020.

### ***Commercial Net Fishery Summary***

The total Skeena Sockeye return was expected to be poor with a pre-season return forecast from 0.41 million (90% probability) to 1.9 million (10% probability) and a point estimate of 0.88 million (50% probability) based on the sibling model.

Gill net:

With the concerns surrounding chinook returning to Area 4 no targeted Chinook gill net openings were planned for 2020. Early in the season Sockeye escapement was trending at low levels which was consistent with the 2020 pre-season forecast for the Skeena River. However Sockeye escapement past the Skeena River Tyee Test fishery started to show improvement during the first week of August and continued to build throughout the following week. It was decided by the first week of August that Sockeye escapement figures past the Skeena Tyee Test fishery were strong enough to open to gillnets (August 6). The Area 4 gill net fleet was relatively small and remained so throughout the two days of fishing. Gill net fishing in August followed the selective gill net restrictions (half nets/20 min soak times/restricted fishing area) in place to address steelhead concerns.

Gillnets finished the season with a total of 2 sockeye openings with 201 vessel operating days compared to ten year average of 6 openings and 1259 vessel operating days.

Coho retention was not allowed by gillnets in Area 4 throughout the season for 2020.

Area 4 final gill net catch of 22,807 sockeye compared to the last ten year average 187,840.

Seine:

No opportunities occurred for seines in area 4 for 2020.

Compared to the last ten year average sockeye catch of 35,269.

Compared to the last ten year average pink catch of 60,402.

Table 30 Area 4 Gillnet Catches

**Commercial SALMON GILL NET In-Season Estimated Catch-by-Area (Pieces)  
for Period 01-Apr-2020 to 23-Nov-2020**

**Management Area 4**

[Report Details by Subarea or Portion](#)

	Effort	Sockeye Salmon		Coho Salmon		Pink Salmon		Chum Salmon		Chinook Salmon		Steelhead	
		Kept	Rel	Kept	Rel	Kept	Rel	Kept	Rel	Kept	Rel	Kept	Rel
Total for Management Area 4 in Period	201	22807	0	0	769	9363	0	0	71	0	34	0	108

Notes:

1. Consult the applicable Fishery Manager or Biologist as to the status of particular catch estimates.

## Area 4 Stream Escapements

Table 31 Area 4 Stream Escapements

AREA 4 2020 PRELIMINARY ESCAPEMENT ESTIMATES							
N/O - NONE OBSERVED, NI - NOT INSPECTED, DNS - DOES NOT SPAWN IN THIS CREEK, A/P - ADULTS PRESENT, INADEQUATE INFORMATION TO MAKE ESTIMATE, ? = INFORMATION EXPECTED							
Location	Stream Name	Sockeye	Coho	Pink	Chum	Chinook	Comments
<b>BABINE</b>							
	BABINE FENCE COUNT	1287423	6277	6404	0	1059	
	BABINE RIVER - SECTIONS 1, 2 AND 3	36582					B. Finnegan, DFO
	BABINE RIVER - SECTION 4	700				1000	B. Finnegan, DFO
	BABINE RIVER - SECTION 5					592	B. Finnegan, DFO
	BABINE UNACCOUNTED *						
	BERNANN CREEK (DEEP CR.)						
	BOUCHER CREEK						
	FIVE MILE CREEK						
	FOUR MILE CREEK						
	FULTON RIVER						
	MORRISON RIVER	35872					B. Finnegan, DFO
	NICHYESKWA RIVER						
	NILKITKWA RIVER						
	NINE MILE CREEK						
	PENDELTON CREEK (CROSS CREEK)						
	PIERRE CREEK						
	PINKUT CREEK						
	SHASS CREEK	6485					B. Finnegan, DFO
	SIX MILE CREEK (GULLWING CR.)						
	SOCKEYE CREEK						
	SUTHERLAND RIVER	2483					B. Finnegan, DFO
	TACHEK CREEK						
	TAHLO CREEK - (LOWER)	12271					B. Finnegan, DFO
	TAHLO CREEK - UPPER (SALMON CR.)	A/P					B. Finnegan, DFO
	TSEZAKWA CREEK						
	TWAIN CREEK						
	WRIGHT CREEK (BIG LOON CR.)						
	*Sockeye estimate is fence count minus estimates for specific systems above fence						
<b>BEAR</b>							
	ASITKA LAKE						
	AZUKLOTZ CREEK	3055					B. Finnegan, DFO
	BEAR LAKE	2053					B. Finnegan, DFO
	BEAR RIVER					1944	B. Finnegan, DFO
	DAMSHILGWIT CREEK						
	MOTASE LAKE	25					
	SHILAHOU CREEK						
	SUSTUT RIVER AND LAKE*						
<b>BULKLEY / MORICE</b>							
	ATNA RIVER AND LAKE	A/P					B. Finnegan, DFO
	BULKLEY RIVER - LOWER						
	BULKLEY RIVER - UPPER						
	GOSNELL CREEK						
	MORICE LAKE	2238					
	MORICE RIVER					4638	B. Finnegan, DFO
	NANKA RIVER	21446					B. Finnegan, DFO
	OWEN CREEK						
	STATION CREEK						
	TELKWA RIVER						
	TOBOGGAN CREEK						
	TOUHY CREEK						

Location	Stream Name	Sockeye	Coho	Pink	Chum	Chinook	Comments
<b>COASTAL</b>							
	DENISE CREEK						
	DIANA CREEK						
	ECSTALL RIVER	N/O	N/I	15	10	300	S. Hutchings/STAD
	HAYS CREEK						
	KHYEX RIVER	DNS	N/I	230	N/O	A/P	S. Hutchings/STAD
	KLOYA RIVER						
	LA HOU CREEK	DNS	N/I	870	DNS	DNS	J. Leakey, CP
	MCNICHOL CREEK	DNS	N/I	60	N/I	DNS	J. Leakey, CP
	OLDFIELD CREEK						
	OONA RIVER						
	PRUDHOMME CREEK						
	SHAWATLAN RIVER						
	SILVER CREEK	DNS	8	1182	N/I	N/I	J. Leakey, CP
	SPILLER RIVER	DNS	N/I	N/O	DNS	DNS	Joe Trainor, CP
<b>KISPIOX</b>							
	BARNES CREEK						
	BEAVERLODGE CREEK						
	CLIFFORD CREEK						
	CLUB CREEK (LOWER)						
	CLUB CREEK (UPPER)						
	CULLON CREEK						
	DATE CREEK						
	FALLS CREEK						
	FOOTSORE CREEK						
	FOOTSORE CREEK UPPER						
	HODDER CREEK						
	IRONSIDE CREEK						
	JACKSON CREEK						
	KISPIOX RIVER						
	MCCULLY CREEK						
	MURDER CREEK						
	NANGEESE RIVER						
	SLAMGEESH						
	SKUNSNAT CREEK						
	STEEP CANYON CREEK						
	UNNAMED SWAN LAKE CREEK						
<b>KITSUMKALUM</b>							
	CEDAR RIVER						
	CLEAR CREEK	N/O	N/O	N/O	A/P	N/O	Kitsumkalum Fish & Wildlife
	DRY CREEK		5				M. Drewes
	KITSUMKALUM LAKE	3505	N/O	N/O	N/O	N/O	Kitsumkalum Fish & Wildlife
	KITSUMKALUM RIVER - LOWER						
	KITSUMKALUM RIVER - UPPER						
<b>LAKELSE</b>							
	CLEARWATER CREEK						
	DASQUE CREEK						
	GAINEY CREEK						
	HATCHERY CREEK (GRANITE CREEK)						
	LAKELSE RIVER	DNS	A/P	20225	A/P	A/P	S. Hutchings/STAD
	SALMON CREEK (N. GRANITE CREEK)						
	SCHULBUCKHAND CREEK		120				M. Drewes
	SOCKEYE CREEK						
	WILLIAMS CREEK						
<b>OTHER LOWER SKEENA</b>							
	ALASTAIR LAKE	80	A/P	DNS	DNS	DNS	S. Hutchings/STAD
	ANDESITE CREEK						
	DOG TAG CREEK						
	ERLANDSEN CREEK	DNS	A/P	N/O	A/P	N/O	S. Hutchings/STAD
	EXCHAMSIKS RIVER	DNS	675	N/O	A/P	N/O	S. Hutchings/STAD/Deep Creek Hatchery
	EXSTEW RIVER AND SLOUGH	DNS	1950	N/O	N/O	N/O	S. Hutchings/STAD/Deep Creek Hatchery
	GITNADOIX RIVER	DNS	A/P	N/O	A/P	N/O	S. Hutchings/STAD
	KADEEN CREEK						
	KASIKS RIVER	DNS	1100	100	20	8	S. Hutchings/STAD/Deep Creek Hatchery
	MAGAR CREEK						
	MIDDLE CREEK						
	MOLYBDENUM CREEK						
	SHAMES RIVER						
	SOUTHEND CREEK	N/O	N/I	DNS	DNS	DNS	S. Hutchings/STAD
	ZYMAGOTITZ RIVER	DNS	390	N/O	6	N/O	S. Hutchings/STAD/Deep Creek Hatchery

Location	Stream Name	Sockeye	Coho	Pink	Chum	Chinook	Comments
<b>OTHER MIDDLE SKEENA</b>							
	KITSEGUECLA RIVER						
	KITWANGA RIVER (fence count)	413	210	1939	35	119	Gitanyow Fisheries Authority
	KLEANZA CREEK						
	SALMON RUN CREEK						
	SIMPSON CREEK						
	SINGLEHURST CREEK		f80				M. Drewes
	THOMAS CREEK						
	ZYMOETZ RIVER - LOWER						
	ZYMOETZ RIVER - UPPER						
	<b>TOTAL ALL AREAS</b>	<b>1414631</b>	<b>10735</b>	<b>31025</b>	<b>71</b>	<b>9660</b>	

# Area 5

## Area 5 Map

Figure 7 Area 5 Map



## ***First Nations Fisheries Review***

There are 5 First Nations groups that include Area 5 Food, Social and Ceremonial salmon fisheries in their communal licence:

Lax Kw'alaams First Nation  
Metlakatla First Nation  
Gitxaala First Nation  
Kitsumkalum First Nation  
Kitselas First Nation

FSC fisheries occur throughout Area 5 in both marine and freshwater locations using a variety of gear types.

## ***Recreational Fishery Review***

The tidal water interception salmon sport fishery begins in late April, with effort increasing significantly in late May and continuing to mid-September. Initial effort is mostly by local anglers out of Prince Rupert and Port Edward, and then with a significant fleet made up of independent anglers and charter operators.

Chinook started at 2 per day, but due to a low preseason forecast for Skeena Chinook the Department identified conservation measures to address Chinook concerns. One of the measures was to reduce the daily Chinook limit in Area 5 to 1 (one) Chinook per day from June 1, 2020 to July 14, 2020.

Chum remained closed for the 2020 fishing season in Area 5. Sockeye started closed, but went to 4 per day on August 6, 2020 in Area 5. Other salmon species' daily limits were 4 pink and 4 coho with a combined daily limit of 4 salmon. Recreational catch data is not provided for Area 5 at this time, but the internet recreational fishing effort and catch survey (iREC) could provide catch estimates in future years.

## ***Commercial Net Fishery Summary***

Area 5 was not opened to gill nets for 2020.

Charter patrol observations throughout the season suggested low returns of pinks to area 5 indicator systems, therefore no seine fisheries were opened in area 5 for 2020.

## Area 5 Stream Escapements

Table 32 Area 5 Stream Escapements

AREA 5 2020 PRELIMINARY ESCAPEMENT ESTIMATES							
N/O - NONE OBSERVED, N/I - NOT INSPECTED, DNS - DOES NOT SPAWN IN THIS CREEK, A/P - ADULTS PRESENT, INADEQUATE INFORMATION TO MAKE ESTIMATE							
Location	Stream Name	Sockeye	Coho	Pink	Chum	Chinook	Comments
<b>LOWER GRENVILLE</b>							
	BELOWE CREEK	DNS	9	920	10	DNS	S.Hutchings, CP
	DEER CREEK	75	N/O	DNS	DNS	DNS	S. Hutchings/Gitga'at
	LOWE INLET SYSTEM	130	A/P	DNS	DNS	DNS	S. Hutchings/Gitga'at
	RED BLUFF CREEK	DNS	N/O	N/O	N/O	DNS	S. Hutchings, CP
	STEWART CREEK	N/I	N/I	N/I	N/I	N/I	
	SYLVIA CREEK	DNS	35	DNS	DNS	DNS	S. Hutchings, CP
	TSIM CREEK	N/I	N/I	N/I	N/I	N/I	
	TSIMTACK LAKE SYSTEM	300	N/I	N/I	N/I	N/i	S. Hutchings/Gitga'at
<b>LOWER PRINCIPE</b>							
	BOLTON CREEK	N/I	N/I	N/I	N/I	N/I	
	CURTIS CREEK	N/I	N/I	N/I	N/I	N/I	
	DEVON LAKE SYSTEM	N/I	N/I	N/I	N/I	N/I	
	KOORYET CREEK	20	A/P	N/O	N/I	DNS	Joe Trainor, CP
	MIKADO LAKE SYSTEM	N/I	N/I	N/I	N/I	N/I	
	SHENEENZA CREEK	N/I	N/I	N/I	N/I	N/I	
	KEECHA CREEK	N/I	N/I	N/I	N/I	N/I	
<b>UPPER PRINCIPE</b>							
	HANKIN CREEK	N/I	N/I	N/I	N/I	N/I	
<b>OGDEN / KITKATLA</b>							
	ALPHA CREEK	DNS	N/I	220	N/I	DNS	Joe Trainor, CP
	CAPTAIN COVE CREEK	N/I	N/I	140	N/I	DNS	Joe Trainor, CP
<b>PETREL CHANNEL / ALA PASS</b>							
	HEVENOR INLET CREEKS	N/I	N/I	N/I	2	DNS	Joe Trainor, CP
	MARKLE INLET CREEK	N/I	A/P	10	20	DNS	Joe Trainor, CP
	NEWCOMBE HARBOUR CREEKS (3)	N/I	N/I	N/I	N/I	N/I	
	RYAN CREEK	N/I	N/I	N/I	N/I	N/I	
	SHAW CREEK	DNS	A/P	12	N/I	DNS	Joe Trainor, CP
	WILSON INLET CREEK	DNS	N/I	N/I	25	DNS	Joe Trainor, CP
<b>PORCHER INLET</b>							
	HEAD CREEK	N/I	N/I	N/O	N/I	DNS	Joe Trainor, CP
	SALT LAGOON CREEK	N/I	N/I	N/I	N/I	N/I	
	WOLF CREEK	N/I	N/I	N/I	N/I	N/I	
	KITKATLA CREEK	N/I	N/I	N/I	N/I	N/I	
	PORCHER CREEK	N/I	N/I	N/I	N/I	N/I	
<b>UPPER GRENVILLE</b>							
	FALSE STEWART CREEK	N/I	N/I	20	N/I	DNS	Joe Trainor, CP
	KLEWNUGGIT INLET CREEKS	300	A/P	N/I	A/P	DNS	Joe Trainor, CP
	KUBAS CREEK	N/I	N/I	N/I	N/I	N/I	
	KUMEALON CREEK	N/I	90	230	9	112	Joe Trainor, CP
	KXNGEAL CREEK	DNS	DNS	N/O	N/O	DNS	Joe Trainor, CP
	PA-AAT RIVER	DNS	100	190	N/O	DNS	Joe Trainor, CP
	<b>AREA 5 TOTAL</b>	<b>825</b>	<b>234</b>	<b>1,742</b>	<b>66</b>	<b>112</b>	



# Area 6

## Area 6 Map

Figure 8 Area 6 Map



## ***First Nations Fishery Review***

There are 4 First Nations groups that include Area 6 Food, Social and Ceremonial salmon fisheries in their communal licence:

Gitxaala First Nation  
Gitga'at First Nation  
Haisla First Nation  
Kitasoo First Nation

FSC fisheries occur throughout Area 6 in both marine and freshwater locations using a variety of gear types.

## ***Recreational Fishery Review***

The tidal water interception salmon sport fishery begins in late April, with effort increasing significantly in late May and continuing to mid-September. Initial effort is mostly by local anglers out of Kitimat, and then with a significant fleet made up of independent anglers and charter operators.

Salmon species daily limits in Area 6 were 2 Chinook, 4 Pink, 4 Coho, 4 Chum and 4 Sockeye, with a combined daily limit of 4 salmon.

Recreational catch data is not provided for Area 6 at this time, but the internet recreational fishing effort and catch survey (iREC) and lodge data could provide catch estimates in future years.

## ***Commercial Net Fishery Review***

Early hatchery and charter patrol inspections of the Kitimat river suggested decent Pink returns and low Chum returns. As the season progressed Pink numbers increased however Chum escapement continued to track poorly.

Due to poor Kitimat hatchery Chum returns the inside of Area 6 did not open to gill nets for 2020.

On July 20 pink escapement observations by DFO charter patrolman was deemed strong enough to permit a seine assessment fishery on the outside of Area 6 around Gil Island. Effort was modest throughout the season with a peak fleet of 37 seines observed on July 29. Pink catches were modest throughout the season with the majority of the catch caught on the outside of Gil Island. An interaction between a seine vessel and a whale was reported during the July 30 opening. To alleviate the problem sub area (6-26) where the incident occurred was closed for the rest of the season. Caution was taken during the later part of August due to low charter patrol Pink escapement observations on later timing coastal stocks. Chum non-retention was in affect throughout the season.

The commercial seine fishery in area 6 finished the season with a total of 8 openings, 258 vessel operating days and a final catch of 1,563,002 pinks compared to the last 10 yr. average of 5.4 openings, 103.8 vessel operating days and 884,182 pinks.

**Table 33 Area 6 Seine Catches**  
**Commercial SALMON SEINE In-Season Estimated Catch-by-Area (Pieces)**  
**for Period 01-Apr-2020 to 30-Nov-2020**

	Effort	Sockeye Salmon		Coho Salmon		Pink Salmon		Chum Salmon		Chinook Salmon		Steelhead	
		Kept	Rel	Kept	Rel	Kept	Rel	Kept	Rel	Kept	Rel	Kept	Rel
Total for Management Area 6 in Period	258	0	5543	0	9417	1563002	0	0	9457	0	229	0	16

[Report Details by Subarea or Portion](#)

**Notes:**

1. Consult the applicable Fishery Manager or Biologist as to the status of particular catch estimates.

## Area 6 Stream Escapements

Table 34 Area 6 Stream Escapements

AREA 6 2020 PRELIMINARY ESCAPEMENT ESTIMATES							
NO - NONE OBSERVED, NI - NOT INSPECTED, DNS - DOES NOT SPAWN IN THIS CREEK, A/P - ADULTS PRESENT, INADEQUATE INFORMATION TO MAKE ESTIMATE							
Location	Stream Name	Sockeye	Coho	Pink	Chum	Chinook	Comments
<b>ARISTAZABAL ISLAND WEST</b>							
	BORROWMAN CREEK	NI	NI	NI	NI	NI	
	CLIFFORD CREEK	NI	NI	NI	NI	NI	
	DEVIL CREEK	NI	NI	NI	NI	NI	
	DON CREEK	NI	NI	NI	NI	NI	
	DUFFEY CREEK	NI	NI	NI	NI	NI	
	EAGLE CREEK	NI	NI	NI	NI	NI	
	FLUX CREEK	NI	NI	20	450	NI	Kitasoo Band
	KDELMASHAN CREEK	NI	NI	NI	NI	NI	
	LINNEA CREEK	NI	NI	NI	NI	NI	
	LITTLE KETTLE CREEK	NI	NI	16	136	NI	Kitasoo Band
	MCDONALD CREEK	NI	NI	NI	NI	NI	
	NOBLE CREEK	NI	NI	NI	NI	NI	
	SALMON CREEK	NI	NI	NI	NI	NI	
	SENTINEL CREEK	NI	NI	NI	NI	NI	
	STANNARD CREEK	NI	NI	NI	NI	NI	
	TRENAMAN CREEK	NI	NI	NI	NI	NI	
	WEST CREEK	NI	NI	NI	NI	NI	
	WEST CREEK AND LAKE	NI	NI	NI	NI	NI	
<b>DOUGLAS-URSULA-DEVASTATION CHANNELS</b>							
	ANGLER COVE CREEK	DNS	NI	AP	NO	DNS	STAN
	BIG TILLHORNE RIVER	DNS	NI	1,490	4	DNS	STAN
	EVELYN CREEK	340	135	6,150	40	DNS	STAN/HAISLA FISHERIS
	FISHTRAP BAY CREEK	DNS	NI	NO	NO	DNS	STAN
	FOCH RIVER	NO	765	26,850	1,800	DNS	STAN/HAISLA FISHERIS
	GILTTOYES CREEK	DNS	AP	AP	AP	NI	STAN
	GOAT RIVER	DNS	NI	AP	NO	DNS	STAN
	GRIBBLE ISLAND CREEK	DNS	NI	220	NO	DNS	STAN
	HARTLEY BAY CREEK	375	NI	560	NO	DNS	STAN
	HAWKS BURY ISLAND CREEK	DNS	NI	1,980	2	DNS	STAN
	HUGH CREEK	NO	330	4,300	8	DNS	STAN
	KEESIL CREEK	NI	NI	NI	NI	DNS	
	KIHESS CREEK	DNS	NI	75	NO	DNS	STAN
	KISKOSH CREEK	NO	115	1,840	10	DNS	STAN
	KITKIATA CREEK	1,210	AP	12,000	NO	DNS	STAN/GITGAAT
	LITTLE TILLHORNE RIVER	DNS	NI	5	NO	DNS	STAN
	MISSSED CREEK	NI	NI	NI	NI	DNS	STAN
	PIKE CREEK	DNS	NI	NI	NI	DNS	
	QUAAL RIVER	5	1,500	75,000	375	NO	STAN/GITGAAT
	RIORDAN RIVER	DNS	80	260	NO	DNS	STAN
	VERNEY PASSAGE CREEK	NO	NI	70	NO	DNS	STAN/HAISLA FISHERIS
	WEEWANIE CREEK	DNS	NI	2,560	8	DNS	STAN
<b>FRASER - GRAHAM REACH</b>							
	AALTANHASH RIVER	NO	NI	1,200	NO	NI	STAN
	CANOONA RIVER	1,700	AP	500	NO	DNS	STAN
	DOME CREEK (HEAD CR.)	DNS	NI	40	NO	DNS	STAN
	GREEN RIVER	NO	AP	30,000	150	DNS	STAN
	KHUTZE RIVER	NO	1,560	161,500	110	NO	STAN
	KLEKANE RIVER	NO	NI	1,475	68	NO	Kitasoo Band
	MARMOT COVE CREEK	NI	NI	NI	NI	NI	
	MARSHALL CREEK	DNS	NI	AP	AP	DNS	STAN
	MCKAY CREEK	NI	NI	NI	NI	NI	
	MEYERS PASS CREEK	NI	NI	NI	NI	NI	
	SCOW BAY CREEK	DNS	NI	6,633	183	DNS	Kitasoo Band
	SODA CREEK	NI	NI	9,152	712	NI	Kitasoo Band
	TAYLOR CREEK	NI	NI	NI	NI	NI	

Location	Stream Name	Sockeye	Coho	Pink	Chum	Chinook	Comments
<b>GARDNER CHANNEL</b>							
	BRIM RIVER	DNS	1,070	34,960	55		STAN/HAISLA FISHERIS
	CRAB RIVER	DNS	NI	1,030	NO	DNS	STAN
	HOTSPRING CREEK	DNS	17	335	20	DNS	STAN
	KEMANO RIVER	AP	6,000	883,000	AP	AP	STAN/HAISLA FISHERIS
	KILTUIH RIVER	NO	350	9,100	430		STAN
	KITLOPE RIVER	5,220	AP	AP	AP	AP	STAN/HAISLA FISHERIS
	KOWESAS RIVER	DNS	NI	NI	NI	AP	STAN/HAISLA FISHERIS
	PARIL RIVER	DNS	170	60	NO	DNS	STAN/HAISLA FISHERIS
	TSAYTIS RIVER	DNS	NI	NI	NI	NI	
	WAHOO CREEK	DNS	1,540	8,050	NO	125	STAN/HAISLA FISHERIS
<b>KITIMAT ARM</b>							
	BEAVER CREEK	NI	NI	NI	NI	NI	
	BISH CREEK	N/I	AP	24,025	AP	DNS	STAN/HAISLA FISHERIS
	BOLTON CREEK	NI	NI	NI	NI	NI	
	BOWBEYES CREEK	NI	NI	NI	NI	NI	
	CORDELLA CREEK	NI	NI	NI	NI	NI	
	DALA RIVER	NO	2,350	324,340	310	10	STAN/HAISLA FISHERIS
	EAGLE BAY RIVER	DNS	N/I	2,525	8	DNS	STAN
	EMSLEY CREEK	DNS	NI	NI	NI	DNS	
	FALLS RIVER	DNS	NI	NI	NI	DNS	
	GOBEL BAY CREEK	DNS	NI	130	NO	DNS	
	KILDALA RIVER	DNS	2,310	124,200	75	35	STAN/HAISLA FISHERIS
	KITIMAT RIVER (Estimates include the tr	500	N/I	520,000	N/I	N/I	STAN/HAISLA FISHERIS
	ANDERSON CREEK	DNS	405	100	NO	3	STAN/HAISLA FISHERIS
	CECIL CREEK	DNS	NI	NI	NI	NI	
	CHIST CREEK	NO	240	26,900	26	36	STAN/HAISLA FISHERIS
	HUMPHRYS CREEK	DNS	NI	14,600	40	80	STAN
	HIRSCH CREEK	DNS	N/I	4,825	33	126	STAN
	LITTLE WEDEENE RIVER	1,845	AP	15,900	65	14	STAN/HAISLA FISHERIS
	HUNTER CREEK	NO	610	10,500	25	40	STAN/HAISLA FISHERIS
	TETLOCK CREEK	NI	NI	NI	NI	NI	
	M.E.S.S. CREEK	NI	NI	NI	NI	NI	
	MOORE CREEK	NI	NI	NI	NI	NI	
	PINE CREEK	NI	NI	NI	NI	NI	
	WATHL CREEK	DNS	25	210	AP	DNS	STAN/HAISLA FISHERIS
	WATHLSTO CREEK	DNS	NI	35	2	DNS	STAN/HAISLA FISHERIS
<b>LAREDO CHANNEL - CAMPANIA SOUND</b>							
	ARGYH CREEK	NI	NI	NI	NI	NI	
	BARNARD CREEK	1	AP	675	2	DNS	STAN
	BLACKROCK CREEK	NI	NI	NI	NI	NI	
	CAMPANIA ISLAND CREEK	NI	NI	NI	NI	NI	
	CARTWRIGHT CREEK	NI	NI	NI	NI	NI	
	CHAPPLE CREEK	NI	NI	NI	NI	NI	
	CHERRY CREEK	NI	NI	NI	NI	NI	
	CRANE BAY CREEK	DNS	NI	5	NO	DNS	STAN
	CRIDGE INLET CREEK	NI	NI	NI	NI	NI	
	DOUGLAS CREEK	NI	NI	NI	NI	NI	
	EAST ARM CREEK	N/I	NI	120	2	DNS	STAN
	EVINRUDE CREEK	NI	NI	NI	NI	NI	
	FURY CREEK	NI	NI	NI	NI	NI	
	GIL CREEK	DNS	AP	5,610	NO	DNS	STAN
	HOME BAY CREEKS	DNS	NI	NI	NI	DNS	
	KENT INLET LAGOON CREEK	NI	NI	NI	NI	NI	
	LAEDKIN CREEK/RIVERS BIGHT CR	DNS	NI	NO	NO	DNS	STAN
	LIMESTONE CREEK	NI	NI	NI	NI	NI	
	MCMICKLING CREEK	NI	NI	NI	NI	NI	
	PENN CREEK	N/I	N/I	N/I	N/I	N/I	
	RIVERS BIGHT CREEK	N/I	N/I	N/I	N/I	N/I	
	ROLAND CREEK	N/I	N/I	N/I	N/I	N/I	
	TALAMOOSA CREEK	N/I	N/I	N/I	N/I	N/I	
	TURN CREEK	DNS	AP	330	NO	DNS	STAN
	TURTLE CREEK	DNS	NI	2,230	NO	DNS	STAN
	TUWARTZ CREEK	NI	NI	NI	NI	NI	
	WALE CREEK	NI	NI	NI	NI	NI	
	WEST ARM CREEK	15	310	460	235	DNS	STAN
	WHALEN LAKE CREEK	5	4	8	1	DNS	STAN
	WINDY ISLAND CREEK	NI	NI	NI	NI	NI	

Location	Stream Name	Sockeye	Coho	Pink	Chum	Chinook	Comments
LAREDO SOUND							
	ARNOUP CREEK	N/I	N/I	3600	159	N/I	Kitasoo Band
	BLEE CREEK	N/I	N/I	117	29	N/I	Kitasoo Band
	BLOOMFIELD CREEK	N/I	N/I	N/I	N/I	N/I	
	BUSEY CREEK	N/I	N/I	N/I	N/I	N/I	
	DALLAIN CREEK	N/I	N/I	N/I	N/I	N/I	
	DALLY CREEK	N/I	N/I	N/I	N/I	N/I	
	FIFER CREEK	N/I	N/I	N/I	N/I	N/I	
	GOIN CREEK	N/I	N/I	N/I	N/I	N/I	
	KAMIN CREEK	N/I	N/I	N/I	N/I	N/I	
	KWAKWA CREEK	N/I	N/I	N/I	N/I	N/I	
	NIAS CREEK	N/I	N/I	1473	928	N/I	Kitasoo Band
	OSMENT CREEK	N/I	N/I	N/I	N/I	N/I	
	PACKE CREEK	N/I	N/I	N/I	N/I	N/I	
	POWLES CREEK	N/I	N/I	N/I	N/I	N/I	
	PRICE CREEK	N/I	N/I	256	31	N/I	Kitasoo Band
	PYNE CREEK	N/I	N/I	N/I	N/I	N/I	
	QUIGLEY CREEK	N/I	N/I	N/I	N/I	N/I	
	RONALD CREEK	N/I	N/I	N/I	N/I	N/I	
	STEEP CREEK	N/I	N/I	N/I	N/I	N/I	
	TRAHEY CREEK	N/I	N/I	N/I	N/I	N/I	
	TYLER CREEK	N/I	N/I	1061	958	N/I	Kitasoo Band
	<b>AREA 6 TOTAL</b>	<b>11,216</b>	<b>19,886</b>	<b>2,364,666</b>	<b>7,490</b>	<b>469</b>	