

THE PACIFIC SALMON COMMISSION

**JOINT NORTHERN BOUNDARY TECHNICAL
COMMITTEE**

**U.S./CANADA NORTHERN BOUNDARY AREA
2018 SALMON FISHERIES MANAGEMENT REPORT
AND 2019 PRELIMINARY EXPECTATIONS**

REPORT TCNB (20)-1

February 2020

MEMBERSHIP OF THE NORTHERN BOUNDARY TECHNICAL COMMITTEE

Canadian Members

Mr. Steve Cox-Rogers, Co-Chair, DFO
Mr. Mark Cleveland, SFC, GFA
Mr. Jeffrey Radford, DFO
Ms. Charmaine Carr-Harris, DFO

United States Members

Mr. Bo Meredith, Co-Chair, ADF&G
Ms. Michele Masuda, NMFS
Mr. Kyle Shedd, ADF&G
Ms. Sara Miller, ADF&G
Mr. Chuck Guthrie, NMFS
Ms. Anne Reynolds, ADF&G
Mr. Grant Hagerman, ADF&G
Mr. Scott Walker, ADF&G
Ms. Malika Brunette, ADF&G
Mr. Andrew Piston, ADF&G

LIST OF ACRONYMS WITH DEFINITIONS

AAH	Annual Allowable Harvest
ADF&G	Alaska Department of Fish & Game
CPUE	Catch per unit effort
DFO	Canadian Department of Fisheries and Oceans
ESSR	Excess to Spawning Salmon Requirement
GWA	Gitksan Watershed Authorities
ITQ	Individual Transferable Quota
LBN	Lake Babine Nation
NCSFNSS	North Coast Skeena First Nation Stewardship Society
NMFS	National Marine Fisheries Service
PSC	Pacific Salmon Commission
PST	Pacific Salmon Treaty (Treaty)
SFC	Skeena Fisheries Commission
TRTC	Total Return to Canada

TABLE OF CONTENTS

	<u>Page</u>
MEMBERSHIP OF THE NORTHERN BOUNDARY TECHNICAL COMMITTEE.....	ii
LIST OF ACRONYMS WITH DEFINITIONS	iii
LIST OF TABLES	v
LIST OF FIGURES	vi
EXECUTIVE SUMMARY	vii
2018 FISHERIES.....	vii
MANAGEMENT PERFORMANCE	ix
2019 FORECASTS	xi
INTRODUCTION	1
SOUTHERN SOUTHEAST ALASKA.....	1
2018 Salmon Forecast.....	1
Review of the 2018 Fishing Season.....	1
Management Performance Relative to Pacific Salmon Treaty Requirements	6
2019 Southeast Alaska Pink Salmon Forecast	7
NORTHERN BRITISH COLUMBIA	8
2018 Salmon Forecast.....	8
Review of 2018 Fishing Season - Net and Troll Fisheries.....	9
Management Performance Relative to Treaty Requirements	16
2019 Salmon Forecast Northern British Columbia.....	16
TABLES	19
FIGURES	57

LIST OF TABLES

	<u>Page</u>
Table 1.—Weekly commercial catch and fishing effort by opening in the 2018 Alaska District 101 purse seine fishery (preliminary).	20
Table 2.—Weekly commercial catch and fishing effort by opening in the 2018 Alaska District 102 purse seine fishery (preliminary).	21
Table 3.—Weekly commercial catch and fishing effort by opening in the 2018 Alaska District 103 purse seine fishery (preliminary).	22
Table 4.—Weekly commercial catch and fishing effort by opening in the 2018 Alaska District 104 purse seine fishery (preliminary).	23
Table 5.—Weekly commercial catch and fishing effort by opening in the 2018 Alaska District 101 drift gillnet fishery (preliminary).	24
Table 6.—Weekly commercial catch and fishing effort by opening in the 2018 Alaska District 106 drift gillnet fishery (preliminary).	25
Table 7.—Weekly commercial catch and fishing effort by opening in the 2018 Annette Island Reserve purse seine fishery (preliminary).	26
Table 8.—Weekly commercial catch and fishing effort by opening in the 2018 Annette Island Reserve gillnet fishery (preliminary).	27
Table 9.—Southern Southeast Alaska pink salmon escapement indices by stock group and district for 2018 (in millions).	28
Table 10.—Preliminary annual allowable harvest (AAH) calculations for the Alaska District 104 Week 27-30 purse seine fishery, 1999-2018.	29
Table 11.—Preliminary annual allowable harvest (AAH) calculations for the Alaska District 101 gillnet fishery, 1999-2018.	30
Table 12.—Weekly commercial catch and fishing effort in the 2018 Canadian Area 1 gillnet fishery (preliminary).	31
Table 13.—Weekly commercial catch and fishing effort in the 2018 Canadian Area 1 seine fishery (preliminary).	32
Table 14.—Weekly commercial catch and fishing effort in the 2018 Canadian Area 1/101 troll fishery (preliminary).	33
Table 15.—Weekly commercial catch and fishing effort in the 2018 Canadian Area 3 Outside (subareas 1-4) gillnet fishery (preliminary).	34
Table 16.—Weekly commercial catch and fishing effort in the 2018 Canadian Area 3 Inside (subareas 7-17) gillnet fishery (preliminary).	35
Table 17.—Weekly commercial catch and fishing effort in the 2018 Canadian total Area 3 gillnet fishery (preliminary).	36
Table 18.—Weekly commercial catch and fishing effort in the 2018 Canadian Area 3 Outside (subareas 1-4) seine fishery (preliminary).	37
Table 19.—Weekly commercial catch and fishing effort in the 2018 Canadian Area 3 Inside (subareas 7-17) seine fishery (preliminary).	38
Table 20.—Weekly commercial catch and fishing effort in the 2018 Canadian Area 3 seine fishery (preliminary).	39
Table 21.—Weekly commercial catch and fishing effort in the 2018 Canadian Area 3***/103 troll fishery (preliminary).	40
Table 22.—Weekly commercial catch and fishing effort in the 2018 Canadian Area 4 gillnet fishery (preliminary).	41
Table 23.—Weekly commercial catch and fishing effort in the 2018 Canadian Area 4 seine fishery (preliminary).	42
Table 24.—Weekly commercial catch and fishing effort in the 2018 Canadian Area 4***/104 troll fishery (preliminary).	43

Table 25.—Weekly commercial catch and fishing effort in the 2018 Canadian Area 5 gillnet fishery (preliminary).....	44
Table 26.—Weekly commercial catch and fishing effort in the 2018 Canadian total Area 5 seine (preliminary).....	45
Table 27.—Weekly commercial catch and fishing effort in the 2018 Canadian Area 5***/105 troll fishery (preliminary).....	46
Table 28.—Annual allowable harvest (AAH) calculations for Canadian Area 3 Entrance (1-4) net fishery, 2009–2018.	47
Table 29.—Annual allowable harvest (AAH) calculations for Canadian Area 1/101 troll fishery, 2007–2018.	48
Table 30.—Escapements to Canadian Areas 3, 4, and 5 in 2018.	49
Table 31.—Pre-season salmon forecast, for Canadian Areas 1, 3, 4, and 5 in 2019.	50
Table 32.—Annual gillnet and seine effort for Canadian Areas 1, 3, 4, and 5, 1980-2018.	51
Table 33.—Annual salmon escapements for Canadian Area 1.	53
Table 34.—Annual escapements for Canadian Area 3.	54
Table 35.—Annual escapements for Canadian Area 4.	55
Table 36.—Annual escapements for Canadian Area 5.	56

LIST OF FIGURES

Figure 1.—Alaska Department of Fish and Game southern Southeast Alaska regulatory districts.	58
Figure 2.—Alaska District 101 drift gillnet and District 104 purse seine treaty fisheries.	59
Figure 3.—Canadian Statistical Areas 1-10, northern British Columbia.	60
Figure 4.—Canadian Statistical Area 1 management sub-areas.	61
Figure 5.—Canadian Statistical Area 3 management sub-areas.	62
Figure 6.—Canadian Area 4 management sub-areas.	63
Figure 7.—Canadian Statistical Area 5 management sub-areas.	64

EXECUTIVE SUMMARY

This report reviews:

- 1) catch, effort, and management actions in the 2018 Northern Boundary Area troll and net fisheries of southern Southeast Alaska Districts 101 to 108 and northern British Columbia Areas 1, 3, 4, and 5;
- 2) management performance relative to Pacific Salmon Treaty requirements for sockeye and pink salmon;
- 3) preliminary expectations and fishing plans for 2019.

2018 FISHERIES

Pink salmon returns were below average throughout Southeast Alaska and the southern Southeast Alaska pink salmon harvest was 5.4 million (Districts 101-108, all harvest codes, all gear), which was only 26% of the recent ten-year average. For all of Southeast Alaska, excluding the Yakutat area, the pink salmon harvest was 8.1 million fish, which was below the preseason forecast point estimate of 23 million, but within the 3-44 million 80% confidence interval range of the forecast.

The total 2018 Southeast Alaska pink salmon escapement index of 8.15 million index fish ranked 35th since 1960. Biological escapement goals are in place for three subregions in Southeast Alaska (Southern Southeast, Northern Southeast Inside, and Northern Southeast Outside) and goals were met in the Southern Southeast and Northern Southeast Outside subregions. On a finer scale, escapements were below management targets for 8 of 15 districts in the region and for 22 of the 46 pink salmon stock groups in Southeast Alaska. The Southern Southeast Subregion includes all of the area from Sumner Strait south to Dixon Entrance (Districts 101–108). The escapement index value of 4.87 million was within the escapement goal range of 3.0 to 8.0 million index fish.

Sockeye salmon harvests in the Alaska boundary area were well below the 1985–2017 average in the District 101–104 traditional purse seine fisheries, and in the District 101 drift gillnet fishery. The Hugh Smith Lake adult sockeye salmon escapement was 2,039, which was well below the optimal escapement goal range of 8,000 to 18,000 adult sockeye salmon. Based on the expanded peak foot survey count, the escapement of sockeye salmon into McDonald Lake was estimated to be 11,000 fish, which was also below the sustainable escapement goal range of 55,000 to 120,000 fish.

Summer chum salmon harvests in the Alaska boundary area were below the 1985–2017 average in the District 101–104 traditional purse seine fisheries and the District 101 drift gillnet fishery. The Southern Southeast chum salmon stock group is composed of an aggregate of 15 summer-run chum salmon streams on the inner islands and mainland of southern Southeast Alaska, from Sumner Strait south to Dixon entrance, with a sustainable escapement goal of 62,000 index spawners (based on the aggregate peak survey to all 15 streams). Summer chum salmon

escapements were above average at most index streams in southern Southeast Alaska, and the index of 127,000 in 2018 was above goal.

Coho salmon harvests in the Alaska boundary area were below average in the District 101–104 traditional purse seine fisheries and the District 101 drift gillnet fishery. Coho salmon escapement counts and estimates in southern Southeast Alaska were within or above goal ranges. The combined peak count of 13,764 coho salmon in the 14 surveyed streams in the Ketchikan survey index was above the escapement goal of 4,250–8,500 fish. The total escapement of 619 coho salmon to Hugh Smith Lake was within the biological escapement goal range of 500–1,600 fish.

In Canadian Area 1, there are no longer commercial net interception fisheries on passing salmon stocks. Area 1 pink salmon return on a two-year cycle, with dramatic differences in return strength between even and odd calendar years. Most streams have a strong return of Haida Gwaii pink salmon during even calendar years only. Directed harvests are only anticipated during even years. Returns in 2018 were very poor, leading to no harvestable surpluses being identified. In addition, no chum salmon surpluses were identified in-season. As such, no terminal chum-directed gillnet or seine fisheries occurred in 2018.

The Area 3 commercial net fishery anticipated a harvestable surplus of Nass sockeye salmon, along with potential seine opportunities to harvest surpluses associated with a below average even year pink salmon return. With the weaker trend in earlier timed Area 3/Nass coho salmon abundance, coho retention was not permitted in net or troll fisheries in Area 3. Specific measures continue to be in place to rebuild local wild chum and Chinook salmon populations, including time and area closures and retention restrictions. Due to the concerns over weak Nass Chinook, commercial fisheries were delayed to avoid these fish.

Sockeye salmon catches were weak at the beginning of the season in Area 3 and did not improve significantly as the season progressed. Catches of sockeye at the Nass fish wheels indicated that the Nass River sockeye salmon return was weaker than the pre-season prediction, and the gillnet fleet had their final opportunity on July 3. Gillnets last fished Area 3 on July 3, while seines continued fishing for pink salmon with a non-possession/non-retention restriction of sockeye. The gillnet fleet harvested 6,821 sockeye salmon in 2018, while seines were non-retention sockeye salmon for all but one day (where they retained 159 fish). Pink salmon catches below average in Area 3 for seines, with a total harvest of 101,287 pinks. Due to the early closure of gillnets to protect weak Nass sockeye salmon, the harvest pink salmon by gillnets was minimal at 818 fish.

Pre-season forecast suggested that there would be no harvestable surplus to Skeena River sockeye salmon, and as such, no commercial fisheries were expected for Area 4 and 5. It was clear by the last week of July that returns were coming back stronger than initially forecast, and a harvestable surplus was identified. Gill nets fished a total of 10 openings between July 24 and August 10, with a total of 626 boat days and retained 79,225 sockeye salmon and 10,917 pink salmon. The seine Individual Transferrable Quota fishery occurred between statistical weeks 31-34, with a total of 52 boat days and a catch of 24,370 sockeye salmon and 5,940 pink salmon.

The preliminary sockeye salmon net escapement estimate of 230,508 to the Nass exceeded the escapement target of 200,000 and is near the 2009–2018 average of 229,000. The preliminary

Skeena sockeye salmon net escapement estimate of 1,490,159 sockeye salmon was improved over the 2007 to 2018 average of 991,063. Pink salmon returns throughout the North Coast have been extremely variable. Area 1 escapements were stronger than the brood year, while Area 3 showed a decline over the brood year. Similar to previous years, some Areas 4 and 5 coastal and lower Skeena tributary systems experienced very weak pink and chum salmon escapements. Although chum salmon escapements in Area 4 had been improving with the added protection provided by management actions, 2018 escapements remain well below escapement targets. Chum salmon escapements to Area 3 improved over 2017; however, while stronger than many years in the past decade, fall short of historical escapement targets.

MANAGEMENT PERFORMANCE

Pacific Salmon Treaty based harvest sharing agreements were renewed in 2009 for the Northern Boundary area fisheries—Alaska District 104 purse seine, Alaska District 101 drift gillnet, Canadian Area 3 net, and Canadian Area 1 troll. The agreements are “abundance based” where the allowable harvest is a percentage of the Annual Allowable Harvest (AAH). The AAH is the total return of applicable stocks minus the lesser of: 1) the actual escapement, or 2) the escapement goal. Catches over or under the AAH are summed over the period of the agreement to allow for annual variation.

In Alaska’s District 104 purse seine fishery, the Nass and Skeena sockeye salmon run size determines the AAH of these stocks prior to statistical week 31. In Alaska’s District 101 gillnet fishery, the AAH is based solely on the run size of Nass River sockeye salmon. The run size of Alaskan pink salmon returning to Districts 101-103 determines the allowable harvests of these stocks in Canada’s Area 3 (1-4) net and Area 1 troll fisheries.

The agreement specifies a harvest in the District 104 purse seine fishery, from the beginning of the season through statistical week 30, of 2.45% of the combined AAH of both the Nass and Skeena River sockeye salmon runs. The District 104 purse seine fishery opens by regulation on the first Sunday in July. In 2018, the first potential opening was July 1 (week 27), but due to Skeena River sockeye salmon concerns ADF&G kept the fishery closed for the first two weeks of the season. The pre-week 31 fishing plan for District 104 was based on the preseason Canadian Department of Fisheries and Oceans forecast returns of approximately 1,030,000 Nass and Skeena sockeye salmon.

In the 2018 Treaty period (Alaska statistical weeks 27-30), 19,743 sockeye salmon were harvested during an 18-hour opening in statistical week 29 and a 30-hour opening in statistical week 30 (Table 1). A total of 55 purse seine vessels fished at some time in the district during the Treaty period. In past years 60% to 80% of Treaty-period sockeye salmon have been of Nass and Skeena origin, therefore we would anticipate between 11,800 and 15,800 Nass and Skeena sockeye may have been harvested in the District 104 purse seine fishery during the 2018 Treaty period. The final number of Nass and Skeena sockeye salmon harvested, and the actual harvest by stock, will not be available until harvest, escapement, and stock composition estimates are finalized for the year.

In the District 101 (Tree Point) drift gillnet fishery, the AAH is calculated as the total run of Nass sockeye salmon minus either the escapement requirement of 200,000 or the actual in-river escapement, whichever is less. The agreement specifies a harvest of 13.8 percent of the AAH of the Nass River sockeye salmon run. The return of Nass sockeye salmon was forecast at 377,000 in 2018 which, minus an escapement goal of 200,000, would result in an AAH of about 177,000 fish. Using this forecast, the 2018 allowable harvest in the District 101 drift gillnet fishery was approximately 24,426 Nass River sockeye salmon. A total of 19,920 sockeye salmon were harvested, which was only 17% of the 1985-2017 average of 114,656 fish and was the lowest harvest since the inception of the Pacific Salmon Treaty. The preliminary estimate of Nass River sockeye salmon harvested in the District 101 drift gillnet fishery in 2018 was 11,303 fish.

The District 101 drift gillnet fishery opens by regulation on the third Sunday in June, which was June 17 (week 25) in 2018. During the early weeks of the fishery, management is based on the run strength of Alaska wild stock chum and sockeye salmon and on the strength of the Nass River sockeye salmon. Beginning in the third week of July, when pink salmon stocks begin to enter the fishery in large numbers, management emphasis shifts by regulation to that species. By regulation, the District 101 Pink Salmon Management Plan sets gillnet fishing time in this district in relation to the District 101 purse seine fishing time when both fleets are concurrently harvesting the same pink salmon stocks.

For 2018, Canada was to manage the Area 3-1 to 3-4 net fisheries to achieve an annual catch share of 2.49% of the AAH of Alaskan Districts 101, 102 and 103 pink salmon. With a total return of approximately 13.43 million pinks, the Alaskan Districts 101, 102 and 103 AAH was approximately 3.86 million pinks. The resulting Area 3-1 to 3-4 Canadian commercial net total allowable catch of this AAH was approximately 96,212 pinks of Alaskan Districts 101, 102 and 103 origin.

In the Canadian northern boundary area, pink salmon returns were anticipated to be below average for Area 3 and Area 4, based on brood year return strength. Actual returns to Area 3 and 4 were below average. The 2018 preliminary Canadian pink salmon catch in Sub-areas 3-1 to 3-4 was 68,764, and the Alaska stock component of this catch is estimated to be 58,043, or 1.5 % of the AAH. This result is below the annex agreement of 2.49%.

Also in 2018, Canada was to manage the Area 1 troll fishery to achieve an annual catch share of 2.57% of the AAH of Alaskan Districts 101, 102 and 103 pink salmon. With a total return of 13.43 million pinks, the resulting Area 1 Canadian commercial troll total allowable catch of this AAH was approximately 69,132 pinks of Alaskan Districts 101, 102 and 103 origin.

The Canadian commercial troll fishery targeting pink salmon was open in the northern portion of Area 1 (Dixon Entrance AB Line) from July 1 to September 30. Pink retention was also permitted during the Chinook-directed fishery in parts of Area 1, which was open from July 10 to August 6 and from August 20 to September 30. Effort directed at pink salmon in Area 1 was minimal in 2018, with pinks being harvested as by-catch in fisheries directed at coho and Chinook. The fishery harvested a total of 27,194 pink salmon, with an estimated 24,490 being of Alaskan origin. This equates to 0.63% of the Alaskan District 101, 102 and 103 pink AAH, well below the annex agreement of 2.57%.

2019 FORECASTS

The Southeast Alaska pink salmon harvest in 2019 is predicted to be in the *weak* range, with a point estimate of 18 million fish (80% confidence interval: 15–26 million fish). An actual harvest of 18 million pink salmon would be approximately half the recent 10-year average harvest of 36 million pink salmon. The harvest forecast was primarily based on juvenile pink salmon abundance indices collected by the NOAA/ADF&G Southeast Coastal Monitoring Project in northern Southeast Alaska inside waters during June and July. A linear multiple regression model was developed, using monthly peak juvenile CPUE (standardized catch based on 20-minute trawl sets) for the June and July surveys and an Icy Strait Temperature Index.

An average to below average Nass River sockeye salmon total return of 456,000 (with a 25% probability of the return exceeding 429,000 and a 75% probability the return will exceed 484,000) is expected. The sibling model forecast predicts a 50% probability of approximately 1.71 million sockeye salmon returning to the Skeena River in 2018 with a 10% probability of a return exceeding 3.27 million and a 90% probability the return would exceed 1.06 million fish. Below average pink salmon returns are anticipated to Areas 1, 3, 4, and 5, based on brood year escapements and recent escapement trends.

INTRODUCTION

This report reviews the 2018 Boundary Area pink, chum, coho, and sockeye salmon gillnet and purse seine fisheries of southern Southeast Alaska and northern British Columbia and outlines preliminary expectations and fishing plans for 2019. The document is submitted to the Pacific Salmon Commission as required in Article IV of the Pacific Salmon Treaty. Weekly catch and effort data are provided by opening, district or area, gear, and species (sockeye, pink, chum, coho, and Chinook salmon) for Northern Boundary Area fisheries for 2018. Sub-area catch data is also presented for all salmon species for Canadian Area 3. Maps showing the statistical fishing districts or areas for southern Southeast Alaska and northern British Columbia are provided in Figures 1 to 7.

SOUTHERN SOUTHEAST ALASKA

2018 Salmon Forecast

The 2018 pink salmon harvest in Southeast Alaska was expected to be *average*, with a point estimate of 23 million fish and a forecast range of 3–44 million fish. Formal forecasts were not made for subregions or for species other than pink salmon in Southeast Alaska.

Review of the 2018 Fishing Season

Commercial fisheries harvested 9.3 million salmon in southern Southeast Alaska in 2018. This total includes Traditional, Hatchery Terminal Harvest Area, and Annette Island Reserve fisheries; purse seine, drift gillnet, and troll gear; in Districts 101 through 108, 150, and 152. The salmon harvest was comprised of 5.4 million (58%) pink, 2.9 million (31%) chum, 0.6 million coho (7%), 0.3 million (3%) sockeye, and 72,444 (1%) Chinook salmon.

Districts 101 to 107 Purse Seine Fisheries

The management of the southern Southeast Alaska inside purse seine fishery was based on in-season pink salmon returns to Districts 101 through 107. Exceptions to this management scheme were: 1) early season openings in lower District 102 to target Southern Southeast Regional Aquaculture Association's (SSRAA) Kendrick Bay summer chum salmon; and 2) District 102 fisheries directed on fall chum salmon. (In the following sections "average" refers to the 1985–2017 average.)

District 101 Purse Seine Fishery

The District 101 purse seine fishery opened July 1, 2018 for the first of 11 fishing periods (Table 1). The fishery harvested 630,185 pink salmon, 22,993 sockeye salmon, 120,995 chum salmon, 8,513 coho salmon, and 0 Chinook salmon (Table 1). The number of days that the fishery was open was 37% of average, and the number of boats fishing was 51% of average. The pink salmon harvest of 630,185 was only 11% of average and catches were below average throughout the season. Sockeye salmon catches were also low throughout the season and the catch of 22,993 fish

was 25% the 1985–2017 average. The total chum salmon catch of 120,995 was 40% of average and the total coho salmon harvest of 8,513 fish was 23% of average.

District 102 Purse Seine

Limited portions of District 102 near Kendrick Bay were opened weeks 25–26 (June 17–June 30) to access returns of SSRAA enhanced summer chum salmon returning to Kendrick Bay. The fishery was open 87 hours in both weeks. A total of 47 purse seine vessels fished in week 25 and 54 purse seine vessels in week 26, harvesting 44,116 chum salmon (Table 2). The traditional seine fishery in District 102 targeting local stocks of pink salmon opened Sunday, July 1 (Week 27). During the traditional fishing period there were 16 openings that were from 12 to 15 hours in duration (Table 2).

The District 102 purse seine fishery harvested 474,439 pink salmon, 22,604 sockeye salmon, 418,049 chum salmon, 16,911 coho salmon, and 0 Chinook salmon (Table 2). The number of days that the fishery was open was above average in weeks 25 and 26, but below average in the remaining weeks of the fishery. There were minimal openings targeting fall chum salmon and the overall number of days open was 46% of the 1985–2017 average. The number of boats fishing the district was well above average through late July and then dropped below average in most remaining weeks (Table 2).

Pink salmon harvests were far below average throughout the season, and the total harvest of 474,439 fish was only 12% of the 1985–2017 average (Table 2). Sockeye salmon catches were also below average throughout the season, and the total sockeye salmon catch of 22,604 fish was 53% of average. Catches of summer-run chum salmon peaked in mid-July with a harvest of 120,456 fish in week 29. The total chum salmon catch of 418,049 fish was 87% of the 1985–2017 average. Catches of coho salmon were well below average in most weeks and the total harvest of 16,911 fish was 34% of the 1985–2017 average.

District 103 Purse Seine

The District 103 purse seine fishery opened July 22, 2018 for the first of 10 fishing periods (Table 3). The fishery harvested 1,465,716 pink salmon, 16,637 sockeye salmon, 86,132 chum salmon, 23,643 coho salmon, and 0 Chinook salmon (Table 3). The number of days that the fishery was open was well below average, but the number of boats fishing (sum of boats per week) was above average in weeks 31–33.

Pink salmon catches were below average in all weeks of the fishery, and the total pink salmon harvest of 1,465,716 was 36% of the 1985–2017 average. Sockeye salmon catches were generally below average and the total catch of 16,637 fish was 74% of average. Chum salmon harvests were above average in most weeks of the fishery, but due to a drop in harvest in the final week of the fishery and an early closure the total chum salmon harvest of 86,132 fish was only 81% of the long-term average. Catches of coho salmon were above average in early August, but the total coho salmon harvest of 23,643 fish was 79% of the 1985–2017 average.

District 104 Purse Seine Fishery

The District 104 purse seine fishery opens by regulation on the first Sunday in July. In 2018, the first potential opening was July 1 (week 27), but due to Skeena River sockeye salmon concerns ADF&G kept the fishery closed for the first two weeks of the season. The pre-week 31 fishing plan for District 104 was based on the preseason DFO forecast returns of approximately 1,030,000 Nass and Skeena sockeye salmon. In the 2018 Treaty period (Alaska statistical weeks 27-30), 19,743 sockeye salmon were harvested during an 18-hour opening in Week 29 and a 30-hour opening in week 30 (Table 4). A total of 55 purse seine vessels fished at some time in the district during the Treaty period. The preliminary estimates of Nass and Skeena sockeye salmon harvested prior to week 31 in the District 104 purse seine fishery was 9,999 fish in 2018. The final number of Nass and Skeena sockeye salmon harvested, and the actual catch by stock, will not be available until catch, escapement, and stock composition estimates are finalized for the year.

In 2018, a total of 789,552 pink salmon, 121,365 sockeye salmon, 114,796 chum salmon, 37,511 coho salmon, and 0 Chinook salmon were harvested in the District 104 purse seine fishery (Table 4). The number of days that the fishery was open and the number of boats fishing were both well below the 1985-2017 average. Purse seine fisheries were on non-retention for Chinook salmon throughout the season. Sockeye salmon harvests were below average until the final week of the season and the treaty period (week 28–30) harvest of 19,743 was only 20% of the 1985–2017 average. The total sockeye salmon harvest of 121,365 was 26% of the 1985–2017 average of 468,000 fish. Harvests of coho salmon were also well below average throughout the season and the overall harvest of 37,511 was only 33% of the long-term average. The overall pink salmon harvest of 789,552 was only 10% of the long-term average and the chum salmon harvest of 114,796 was 39% of the long-term average.

Districts 105, 106, and 107 Purse Seine Fisheries

For the 2018 season, the combined Districts 105, 106, and 107 traditional state managed purse seine fisheries harvested 1.21 million pink salmon, 309,599 chum salmon, 15,953 coho salmon, and 11,270 sockeye salmon.

District 101 Drift Gillnet Fishery

The 2009 PST agreement calls for abundance-based management of the District 101 drift gillnet fishery. The agreement specifies a harvest of 13.8 percent of the AAH of the Nass River sockeye run. For the 2018 season, DFO forecast a total return of 377,000 Nass River sockeye salmon. The AAH is calculated as the total run of Nass sockeye salmon minus either the escapement requirement of 200,000 or the actual in-river escapement, whichever is less. The District 101 drift gillnet fishery opens by regulation on the third Sunday in June, which was June 17 in 2018. During the early weeks of the fishery, management is based on the run strength of Alaska wild stock chum and sockeye salmon and on the run strength of Nass River sockeye salmon. Beginning in the third week of July, when pink salmon stocks begin to enter the fishery in large numbers, management emphasis shifts by regulation to that species. By regulation, the District 101 Pink Salmon Management Plan begins the third Sunday in July and sets gillnet fishing time in this district in relation to the District 101 purse seine fishing time. Beginning in statistical week 36 (September 3) management was based on the strength of wild stock fall chum and coho salmon.

The District 101 drift gillnet fishery opened Sunday June 17 (week 25) in 2018. The number of days the fishery was open was near average all season, but the number of boats fishing during weekly openings was below average throughout the season. The total number of individual boats fishing during the season was 64, which was approximately 60% of the 1985-2017 average of 106 boats. A total of 19,920 sockeye salmon were harvested, which was only 17% of the 1985–2018 average of 114,656 fish and the lowest harvest since the inception of the PST. Harvests of sockeye salmon were well below treaty period averages throughout the season. The cumulative sockeye salmon harvest prior to the initiation of the Purse Seine Management Plan in statistical week 30 was 18,540 fish, or about 93% of the season's total sockeye salmon harvest. The final number of Nass River sockeye salmon harvested at Tree Point will not be available until catch, escapement, and stock composition estimates are finalized for the 2018 season. The preliminary estimate of Nass River sockeye salmon harvested in the District 101 drift gillnet fishery in 2018 was 11,303 fish.

Pink salmon harvests were well below average all season and the total harvest of 113,346 fish was 23% of average and was the lowest harvest since the inception of the PST. Chum salmon harvests were near or below average in most weeks of the fishery and the total harvest of 187,661 fish was 62% of average. Coho salmon harvests were below average for most weeks of the season and the total harvest of 35,457 fish was 72% of the treaty-period average. The Chinook salmon harvest was near average throughout the season and the catch of 1,619 was 109% of the treaty-period average.

District 106 Drift Gillnet Fishery

The 2018 harvest in the District 106 commercial gillnet fishery included 348,277 pink salmon, 25,203 sockeye salmon, 176,392 chum salmon, 112,000 coho salmon, and 3,247 Chinook salmon (Table 6). The number of hours open to fishing and the number of boats participating in the fishery was near or above average in most weeks. Chinook salmon harvests were generally above average from late June through late August and were comprised of 47% Alaska hatchery origin fish.

Sockeye salmon harvests were below average all season, and the total sockeye salmon harvest of 25,203 fish was 30% of the recent 10-year average. The overall harvest of 112,000 coho salmon was 77% of the recent 10-year average of 145,700 fish. Pink salmon harvests were above average from late July through through August, and the overall harvest of 348,277 fish was 125% of the recent 10-year average. Chum salmon harvests were near or above average throughout the season and the overall harvest of 176,392 fish was 114% of average.

Annette Island Reserve Fisheries

In 2018, the Annette Island purse seine fishery harvested 170,021 pink salmon, 58,845 chum salmon, 4,496 sockeye salmon, 2,634 coho salmon, and 421 Chinook salmon. The 2018 Annette Island drift gillnet fishery harvested 126,356 pink salmon, 152,300 chum salmon, 1,803 sockeye salmon, 14,068 coho salmon, and 1,120 Chinook salmon (Tables 7-8).

Pink, Sockeye, and Chum Salmon Escapements

The total 2018 Southeast Alaska pink salmon escapement index of 8.15 million index fish ranked 35th since 1960. Biological escapement goals were met in the Southern Southeast and Northern Southeast Outside subregions, but escapement to the Northern Southeast Inside Subregion was below goal in 2018 (Table 9). On a finer scale, escapements were below management targets for 8 of 15 districts in the region and for 22 of the 46 pink salmon stock groups in Southeast Alaska. The Southern Southeast Subregion includes all of the area from Sumner Strait south to Dixon Entrance (Districts 101–108). The escapement index value of 4.87 million was within the escapement goal range of 3.0 to 8.0 million index fish. The pink salmon harvest of 5.4 million in the Southern Southeast Subregion was only 26% of the recent 10-year average. The overall Southeast Alaska pink salmon harvest of 8.1 million fish was approximately 21% of the 2008–2017 average of 38.0 million.

Sockeye salmon runs throughout Southeast Alaska were mixed in 2018, and escapement targets were met for at least 6 of the 12 sockeye salmon systems with formal escapement goals (escapement estimates not yet available for Stikine River mainstem and Tahltan-Stikine). The Hugh Smith Lake adult sockeye salmon escapement was 2,039, which was well below the optimal escapement goal range of 8,000 to 18,000 adult sockeye salmon. Based on the expanded peak foot survey count, the escapement of sockeye salmon into McDonald Lake was only 11,000 fish, which was far below the sustainable escapement goal range of 55,000 to 120,000.

For summer-run chum salmon, lower bound sustainable escapement goals were met for two of the three subregions in Southeast Alaska. Runs are divided into summer and fall stocks. The Southern Southeast summer-run chum salmon stock group is composed of an aggregate of 15 summer-run chum salmon streams on the inner islands and mainland of southern Southeast Alaska, from Sumner Strait south to Dixon entrance, with a sustainable escapement goal of 62,000 index spawners (based on the aggregate peak survey to all 15 streams). Summer chum salmon escapements were near or above average at most index streams in southern Southeast Alaska, and the index of 127,000 in 2018 was well above the escapement goal. Cholmondeley Sound is the only area in southern Southeast Alaska with a formal escapement goal for fall chum salmon. Fall chum salmon runs are monitored in Cholmondeley Sound through aerial surveys at Disappearance and Lagoon creeks. The escapement index of 70,000 was well above the upper bound of the

sustainable escapement goal range of 30,000 to 48,000 index spawners (based on the aggregate peak survey to both streams).

Management Performance Relative to Pacific Salmon Treaty Requirements

District 104 Purse Seine Fishery

The 2009 revision of the Pacific Salmon Treaty Agreement calls for the implementation of abundance-based management in the District 104 purse seine fishery. The agreement allows the District 104 purse seine fishery to harvest 2.45 percent of the AAH of Nass and Skeena sockeye salmon prior to Statistical Week 31. The AAH is calculated as the total run of Nass and Skeena sockeye salmon minus either the escapement requirement of 1.1 million or the actual in-river escapement, whichever is less. The 2.45% AAH value was based on the weighted-average percent of the Nass and Skeena sockeye salmon AAH that would have been harvested in this fishery, during the 1985–1996 period, if the annual pre-Week 31 harvest had been exactly 120,000 sockeye salmon. Catches from 1997 were not included in the baseline calculation due to unusually high levels of sockeye salmon abundance in the fishery. The Alaska Department of Fish and Game’s management intent is to harvest Nass and Skeena sockeye salmon at the allowable AAH percentage. The Treaty recognizes that overages and underages will occur and provides an overage/underage provision intended to hold the Parties accountable for their catch shares but permit a reasonable degree of management flexibility.

The preliminary total return of Nass and Skeena river sockeye in 2018 is currently estimated at 2.1 million fish. This return would have allowed a treaty-period harvest in the District 104 purse seine fishery of approximately 24,200 Nass and Skeena river sockeye salmon. The 2018 total catch of sockeye salmon during the District 104 treaty period was 19,743 fish. Annual AAH fishery performance in the District 104 fishery is presented in Table 10 with bilaterally accepted numbers through 2017 and preliminary run reconstruction estimates for 2018. The preliminary estimates of Nass and Skeena sockeye salmon harvested prior to week 31 in the District 104 purse seine fishery was 9,999 fish in 2018. The final number of Nass and Skeena sockeye salmon harvested in the 2018 District 104 treaty-period will not be available until catch, escapement, stock composition, and run reconstruction estimates are finalized for that year.

District 101 Drift Gillnet Fishery

The 2009 Pacific Salmon Treaty Agreement calls for abundance-based management of the District 101 drift gillnet fishery. The agreement allows the District 101 gillnet fishery to harvest 13.8 percent of the AAH of Nass River sockeye salmon run. The AAH is calculated as the total run of Nass River sockeye salmon minus either the escapement requirement of 200 thousand, or the actual in-river escapement, whichever is less. The 13.8% AAH value was based on the weighted-average percent of the Nass sockeye salmon run that was harvested in this fishery during years 1985–1997. The ADF&G management intent is to harvest Nass River sockeye salmon at the allowable AAH percentage. The Pacific Salmon Treaty recognizes that overages and underages will occur and provides an overage/underage provision intended to hold the Parties accountable for their harvest shares while permitting a reasonable degree of management flexibility.

The preliminary total return of Nass River sockeye salmon in 2018 is currently estimated at 315,985 sockeye salmon. This return allows a catch in the District 101 gillnet fishery of 16,006 Nass River sockeye salmon. The 2018 total catch of sockeye salmon in the District 101 gillnet fishery was 19,920 fish, which was only 17% of the 1985-2017 average of 115,000 fish and was the lowest harvest since the inception of the Pacific Salmon Treaty. Annual AAH fishery performance in the District 101 gillnet fishery is presented in Table 11 with bilaterally accepted numbers through 2017 and preliminary run reconstruction estimates for 2018. The preliminary estimate of Nass River sockeye salmon harvested in the District 101 drift gillnet fishery in 2018 was 11,303 fish. The final number of Nass River sockeye salmon harvested in the 2018 District 101 gillnet fishery will not be available until catch, escapement, and stock composition estimates are finalized for the year.

2019 Southeast Alaska Pink Salmon Forecast

The Southeast Alaska pink salmon harvest in 2019 is predicted to be in the *weak* range, with a point estimate of 18 million fish (80% confidence interval: 15–26 million fish). An actual harvest of 18 million pink salmon would be approximately half the recent 10-year average of 36 million pink salmon. The harvest forecast was primarily based on juvenile pink salmon abundance indices collected by the NOAA/ADF&G Southeast Coastal Monitoring Project in northern Southeast Alaska inside waters during June and July. A linear multiple regression model was developed, using monthly peak juvenile CPUE (standardized catch based on 20-minute trawl sets) for the June and July surveys and an Icy Strait Temperature Index. Formal forecasts are not made for species other than pink salmon in Southeast Alaska.

NORTHERN BRITISH COLUMBIA

2018 Salmon Forecast

Area 1 Expectations

Sockeye There are no significant local sockeye stocks in Area 1 and no directed commercial fisheries on passing stocks.

Pink This was an on-year for Haida Gwaii pink salmon; however, due to a poor brood year in 2016, no surpluses were expected for harvest in inside waters.

Chum Fishing opportunities are dependent on surpluses identified in-season.

Area 3 Expectations

Sockeye An average to below average Nass River sockeye salmon total return of 377,000 (with a 25% probability of the return exceeding 343,000 and a 75% probability the return would exceed 415,000) was expected to provide modest commercial fishing opportunities.

Pink The 2018 Salmon Outlook prediction for Skeena-Nass pink salmon is abundant based on the strength of the brood year. However, returns are known to be highly variable. Fishing opportunities in Areas 3 will be based on in-season indications of abundance.

Chum The qualitative Salmon Outlook for Area 3 chum salmon was “very poor” based on very poor brood year escapements. Chum salmon surpluses were not expected in 2018.

Area 4 Expectations

Sockeye The sibling model forecast predicted a 50% probability of approximately 645,000 sockeye salmon returning to the Skeena River in 2018 with a 10% probability of the return exceeding 1.47 million and a 75% probability the return would exceed 280,000. No Skeena River sockeye salmon directed commercial fishery was anticipated in Area 4.

Pink The 2018 Salmon Outlook prediction for Skeena-Nass pink salmon is abundant based on the strength of the brood year. However, returns are known to be highly variable. Fishing opportunities in Areas 4 will be based on in-season indications of abundance.

Chum The qualitative Salmon Outlook for Area 4 chum salmon was “very poor” based on very poor brood year escapements. Chum salmon surpluses were not expected in 2018.

Area 5 Expectations

Sockeye The sibling model forecast predicted a 50% probability of approximately 645,000 sockeye salmon returning to the Skeena River in 2018 with a 10% probability of the return exceeding 1.47 million and a 75% probability the return would exceed 280,000. No Skeena River sockeye salmon directed commercial fishery was anticipated in Area 5.

Pink The 2018 Salmon Outlook prediction for Skeena-Nass pink salmon is abundant based on the strength of the brood year. However, returns are known to be highly variable. Fishing opportunities in Areas 5 will be based on in-season indications of abundance.

Chum The qualitative Salmon Outlook for Area 5 chum salmon was “modest” and dependant on ocean survival. Chum salmon surpluses were not expected in 2018.

Review of 2018 Fishing Season - Net and Troll Fisheries

Commercial net interception fisheries on passing salmon stocks no longer occur in Area 1, focussing instead on local pink and chum salmon stocks (Figure 3). Pink salmon returns to Area 1 streams were a failure. As such, there were no fisheries directed at pink salmon in 2018. In addition, no chum salmon surpluses were identified in-season in Area 1 (Tables 12 and 13).

The Area 1 troll fishery was managed considering domestic Chinook, sockeye and chum salmon stocks of concern, and the PST Aggregate Abundance-Based Management Chinook salmon ceiling. An Individual Transferable Quota system governed the harvest of all Chinook salmon. Escapements of northern Chinook salmon have declined dramatically in recent years. Reduced survival rates and productivity have been observed from Southeast Alaska, British Columbia and Washington State. This has led to the need for significant conservation measures to be implemented across all northern fisheries in 2018 that reduced exploitation rates in the range of 25% to 35%. To achieve the required fishery reductions, fishery reductions were implemented in commercial troll and recreational fisheries in northern British Columbia. The directed Chinook salmon fishery in portions of Area 1 was opened from July 10 to August 6, and again from August 20 to September 30. The coho directed troll fishery in Dixon Entrance was opened from July 1 to September 30. Pink salmon retention was allowed from July 1. Sockeye salmon retention was restricted throughout the season, while chum salmon bycatch retention was permitted in portions of Area 1 and 101.

The preliminary catch estimate for the Area 1 portion (includes Area 101) of the 2018 troll fishery is 136,935 coho, 27,194 pink, and 63,208 Chinook salmon (Table 14).

See Table 33 for Area 1 escapements.

Area 3

Management units (sub-areas) of Statistical Area 3 are outlined in Figure 5. In recent years, the Area 3 sockeye salmon gillnet fishery has started in early to mid-June to assess stock strength of returning Nass-bound sockeye salmon; however, in 2018 these fisheries were delayed to address concerns regarding northern British Columbia Chinook salmon stocks. Subsequently, the first exploratory fisheries of 2018 took place on June 25 and 26. Since 1994, in-season escapement estimates have been provided by the Nisga'a fish wheel operations conducted in the lower Nass River approximately five miles upstream from the old Nass gillnet test fishery site. In 2018, fish wheel operations commenced June 1 and closed for the season on September 15. The fishwheels operated at very low water levels during the season, averaging 1.2 m over season compared to 2.3 m historical average from 1994 to 2017. The Nass River fish wheel operation, along with the Nisga'a Fisheries Program, continues to be an example of quality stock assessment and effective fisheries co-management.

In general, the Area 3 net fishery is managed for Nass River sockeye salmon until mid-July after which the outer Area 3 fishery is managed based on Nass and Skeena pink and Skeena sockeye salmon stock abundance. The inside Area 3 (Sub-areas 3-7 to 3-17) net fishery is managed for Nass sockeye and local pink salmon abundance from mid-July to late August or early September. In 2018, all Area 3 net fisheries operated with a non-retention/non-possession restriction for Chinook and steelhead. Sockeye salmon gillnet catches were poor over the course of the four openings prior to the closure to protect Kwinageese sockeye salmon (July 9 – July 22). Chum salmon retention was allowed from the start of the season until the Kwinageese closure. Chum salmon numbers showed improvement during the first week of July. Coho salmon retention was allowed across the four gill net openings in Area 3. Due to in-season concerns for the Nass River sockeye salmon aggregate, the gillnet fishery did not re-open after the Kwinageese closure period.

The pink salmon targeted seine fishery had chum salmon retention from the first opening on July 5, and for all five openings until July 20. In addition, all seine fisheries were also conducted with an additional non-retention/non-possession restriction for Chinook salmon. The seine fishery was operated under a required mandatory release restriction (non-retention/non-possession) for sockeye salmon starting on the second opening, on June 11. Seine opportunities ceased on July 20 until escapement into the main pink rivers showed improvement. Unfortunately, pink salmon escapements did not improve, and no further opportunities were granted.

The 2018 Area 3 gillnet fishery began with two consecutive 16-hour openings on June 25 and 26 (Week 26) in portions of 3-3, 3-4, 3-7 and 3-12 to assess Nass River sockeye salmon run strength. This first opening was delayed by several weeks to minimise impacts on Area 3 Chinook. Effort was 120 boats on the first day, but declined to 57 on the second. Total catch for the week was 4,806 sockeye salmon and 1,618 chum salmon. The sockeye salmon CPUE was well below average for this week resulting in no further opportunities this week.

In Week 27, two consecutive 16-hour openings on July 2 and 3 were permitted in Area 3 targeting

Nass River sockeye salmon. Mean effort remained relatively low at 101 boats per day. While still poor, sockeye salmon CPUEs increased from the previous week with total catches of 6,821 sockeye salmon and 6,888 chum salmon. There were no sockeye salmon gillnet fisheries in the following two weeks to protect anticipated poor returns of Kwinageese sockeye salmon.

Area 3 was limited to a total of four targeted sockeye salmon gillnet openings with chum salmon retention resulting in a total catch of 11,627 sockeye and 8,506 chum salmon, both of which fell well short to the previous ten-year average of 87,644 sockeye and 17,314 chum salmon.

As in previous years, a proportion of the chum salmon catch was otolith sampled for postseason analysis to determine the hatchery contribution to the total catch. Previous otolith thermal mark analysis indicated relatively high proportions of passing U.S. hatchery chum salmon compared to wild chum salmon.

Week 27 was the first week the seine fleet was permitted to fish Area 3, with a single opening around Wales Island targeting pink salmon, with retention of sockeye, coho, and chum salmon permitted. Minimal seine effort occurred during this week (21 vessels operating); and fishing was very slow with 13 coho, 234 pink, and 1,654 chum salmon retained (Tables 18 to 20).

Week 28 saw another one-day seine opening limited to the area around Wales Island targeting pink salmon, with coho and chum salmon retention permitted. Due to the closure for Kwinageese sockeye salmon, this opening was operated with non-retention of sockeye salmon. This opening had an effort of 27 vessels participating, and retained 81 coho, 6,669 pink, and 7,814 chum salmon.

Week 29 had three fishing days, with openings on July 16, 19, and 20 with an average effort of 21 boats per day. Over the 63 vessels days, the fleet retained 541 coho, 93,364 pink, and 28,900 chum salmon. Seine pink fishing started slow and despite showing improvement as the season progressed, continued to track below historic catch. Seine opportunities ceased on July 20 until escapement into the main pink salmon rivers showed improvement. Unfortunately, pink escapements did not improve and no further opportunities were granted.

There were four additional Nisga'a marine fisheries in June and July. The openings were held between June 28 and July 6 for 16 hours per day. These fisheries had an average of 18 boats participating and harvested a total of 5,348 sockeye salmon and 284 pink salmon. There were also two in-river commercial fisheries conducted by the Nisga'a on July 9 and 10, which harvested a total of 4,951 sockeye salmon.

By the end of the season, the total return to Canada estimate was 298,000 sockeye salmon, falling short of pre-season expectations. The total commercial gill net effort was 419 boat days, which is well below the 1990–1999 average effort of 2,845 boat days, and the decadal average effort of 1,212 boat days. The total Area 3 seine effort of 111 boat days is also well below the 1990–1999 average of 1,271 boat days, and the previous decadal average of 154 boat days. For gillnets there was a total of 4 openings, while seines fished 5 openings, well below the 1990–1999 averages of 28 and 15 days fishing, respectively, and below the decadal averages of 10 and 8 days, respectively (Table 32). The delivered gill net catch of 11,627 sockeye salmon was well below the pre-season expected harvest levels, and the decadal averages of 87,645. The seine final catch of 101,267 pink

salmon fell well short when compared to the last even year average of 426,422 pinks.

Inseason coho salmon returns to the Nass River fish wheels indicated low returns in 2018; subsequently, Troll fisheries were limited to offshore portions of Area 103 that is part of the normal fishing area. Area 3 did not open for a troll fishery. Total catch from Area 3/103 was 6,818 coho and 397 pink salmon. (Table 21).

Total Nisga'a Treaty and harvest agreement catches in both the Nass River and the marine approach areas included 46,615 sockeye, 2,691 coho, 1,002 pink, 89 chum and 4,735 Chinook salmon. Due to the poor return of Nass sockeye, no Nisga'a In-land Economic Demonstration Fishery occurred in 2018. Due to the poor escapement to the Meziadin system, which is the main harvesting area for the Gitanyow First Nation, no In-land Economic Demonstration Fishery took place there, with harvests being restricted to constitutionally protected Food, Social and Ceremonial fisheries.

The end of season preliminary Total Return to Canada (TRTC) estimates for Nisga'a Treaty accounting are 298,000 sockeye, 101,000 coho, 237,000 pink, 49,000 chum and 20,000 Chinook salmon. Chum TRTC estimates were above the 2000–2017 mean TRTC values, while sockeye, Chinook, coho, and pink TRTC estimates were below the 2000–2017 mean values.

The preliminary post-season sockeye salmon escapement estimate to the upper Nass River of 254,600 met the escapement target of 250,000. The Meziadin River escapement of 96,827 was well below both the 2000-2017 average (157,700) and the desired escapement target (160,000). The Kwinageese River sockeye salmon escapement of 290 is below the 2002–2017 average (5,100).

Area 4

The well below average pre-season sibling model forecasted total return of 645,000 (90% probability range 280,000 – 1.47 million) Skeena River sockeye salmon was expected to provide minimal opportunities for commercial harvesters. Due to the poor brood return for Skeena River pink salmon, the anticipated return was expected to be poor with no directed fisheries. Inseason abundance indicators include the Tyee test fishery, various inriver fish counting facilities, harvest rate and CPUE models, First Nation's Food, Social, and Ceremonial fish catches and commercial catches in Area 4 and other fishing areas in northern British Columbia and southern Southeast Alaska. The Tyee test fishery operated from June 10 to September 21.

With the concerns surrounding Chinook salmon returning to Area 4 no targeted Chinook gillnet openings were planned for 2018. Early in the season sockeye salmon escapement was trending at low levels which was consistent with the 2018 preseason forecast for the Skeena River. However, sockeye escapement past the Tyee test fishery started to show improvement during Week 27 and continued to build throughout Week 28. It was decided by the third week of July that sockeye escapement figures past the Tyee test fishery and projected Total Return to Canada were strong enough to open a gillnet fishery.

In week 30, there were two sockeye salmon targeted gillnet fisheries in Area 4 and 5 on July 24 and 25, both of which were 16-hour openings. Effort was an average of 74 vessels participating each day, with a total catch of 18,286 sockeye and 4,569 pink salmon retained. All Area 4 gillnet fisheries were conducted with non-retention non-possession of coho, chum, Chinook, and steelhead.

In week 31, estimated TRTC remained strong, and four fishing days were provided, July 29 and 30, followed by August 2 and 3. All four of these were 16-hour openings. Starting in August, these fisheries operated under the Selective Gillnet program, with half-length nets and 20-minute soak times, in order to address concerns of Coho and Steelhead bycatch. The average effort over these four fishing days increased to 78 vessels participating. Total catch for the week was 48,107 sockeye and 4,449 pink salmon.

Week 32 had the final Area 4 gill net fisheries of 2018. A total of four openings on August 6, 7, 9, and 10 saw a drop in effort from the previous week, with an average effort of 41 boats per opening. This final week of fishing caught 12,832 sockeye and 1,899 pink salmon.

Gillnets finished the season with a total of 10 sockeye openings with 625 vessel operating days compared to ten-year average of 7.1 openings and 1,719 vessel operating days. The six gillnet openings that occurred in August (2, 3, 6, 7, 9 & 10) operated under the rules outlined in the Selective Gillnet program.

The Area 4 seine fishery operates as an Individual Transferrable Quota (ITQ) fishery and operated during Week 31 and into the first day of Week 34. For the first opening, the fishery was open August 1 to 5 (weeks 31-32), the second seine ITQ opportunity was from August 8 to 12 (week 32/33), and the third and final seine ITQ fishery in Area 4 was from August 15 to 19 (weeks 33/34)

Week 31 had a total of four fishing days, with a total of 34 boat days. They retained 19,254 sockeye and 4,064 pink salmon.

Week 32 had a total of five fishing days, with a total of 11 boat days and retained catch of 3,024 sockeye and 1,497 pink salmon.

Week 33 had a total of five fishing days, with a total of 6 boat days and catch of 1,789 sockeye and 308 pink salmon. The final day of the third seine ITQ fishery was in Week 34 and retained 303 sockeye and 71 pink salmon.

Coho retention was not allowed by seines in area 4 throughout the season for 2018. Final verified sockeye salmon catch of 24,370 compared to the last ten-year average of 58,252. Area 4 seine pink salmon catch was 5,940 compared to the last ten-year average of 114,584.

The Skeena sockeye Total Return estimate for 2018 was ~1.78m, close to the 5% probability level associated with the pre-season forecast of 645k. The Skeena sockeye Total Return to Canada estimate is currently ~1.70m, assuming ~72,000 (~4% exploitation rate) were caught in 2018 Alaskan Fisheries in 2018 (subject to PSC review). The Skeena River sockeye salmon return in

2018 continues the pattern of below average returns seen in more recent years, but was an improvement over 2016 and 2017.

The forecast age distribution for Skeena age 4 and age 5 sockeye salmon in 2018 was 82% and 18% respectively. Lower numbers of age 4's in 2018 were forecasted given the low numbers of age 3 jacks (BY 2014) seen in 2017; these fish entered the ocean as juveniles in 2016 (the last ocean "blob" year¹). In addition, very low numbers of age 5's in 2018 were forecasted given the very low numbers of age 4 sockeye (BY 2013) seen in 2017; these fish entered the ocean as juveniles in 2015 (the "second " blob year). A high proportion of returns during the blob years exhibited smaller size-at-age, reduced body condition, and later-run timing. The actual age distribution for Skeena age 4 and age 5 sockeye salmon in 2018 was 87% and 10%, respectively, based on scales read from the Tyee test fishery. The age 4's in 2018 were in good condition and of "average" size at age, apparently reflective of better growing conditions overwinter in 2017 and into the summer of 2018.

The Skeena Total Return to Canada is estimated at various points during the season using escapement estimates from Tyee, marine catch in Area 3/4/5, and reconstructed (historic) run-timing proportions for Skeena River sockeye salmon as they enter Area 3/4/5, but forward-lagged to Tyee for calculation purposes. Two versions of the TRTC estimate are provided inseason: a simple p50 probability (50% value of forecast probability distribution) estimate based on several "average" run-timing scenarios with no consideration of escapement estimate variability, and a stochastic p50 version incorporating both run-timing and escapement variability.

The actual 2018 TRTC was consistently underestimated in-season by the estimator equation above (peak p50, ~1.5 million, -11% error) primarily because of a consistent underestimate of the p50 escapement estimate at Tyee. The inseason p50 TRTC estimate never did reach the actual TRTC of 1.7 million, but kept climbing throughout July into early August before dropping slightly; however, the actual TRTC of 1.7 million did fall within the 90% confidence interval bounds of the inseason estimate for most of the season.

The Tyee sockeye p50 escapement estimate was 1.3 million thru to the end of test fishing operations. The post-season evaluation of actual escapement past Tyee was 1.59 million (-18% error). Inseason sockeye escapement past Tyee (cumulative) is calculated using a previous 3-year average "catchability" multiplier to convert daily CPUE indices into estimated numbers of fish passing into the river (Figure 6). For 2018, the p50 in-season cumulative escapement estimates were all below those calculated post-season, indicating the multiplier being used was too low (797 per index point). The actual multiplier, calculated post-season, was 941 per index point, indicating that sockeye catchability was actually lower than was being assumed inseason.

Portions of Area 104 were open to troll for coho and pink salmon retention from July 10 to September 30. The Area 104 total hauled catch for the 2018 troll season was 27,516 coho and 2,518 pink (Table 24).

¹ McKinnel, S.. 2017. Atmospheric and oceanic extrema in 2015 and 2016 and their effect on North American salmon. Pacific Salmon Commission, Technical Report No. 37.

Due to predicted low returns of Northern Chinook salmon, specific recreational conservation measures were implemented in Area 4 in 2018. These involved a reduction in bag limit from two to one per day from June 1 to 15, and July 10 to 31, as well as a non-retention period from June 16 to July 9. A full recreational closure of all salmon species in the Skeena River was implemented from May 9, 2018 to Aug 6, 2018 due to predicted low returns of Skeena River Chinook salmon in 2018. The sockeye salmon estimate past the Tyee Test fishery reached 800,000 and 1.05 million sockeye salmon around July 28 and Aug 1, 2018, respectively. However, to protect Skeena River Chinook salmon, recreational fishing for sockeye opened in portions of the river only. Due to the closures identified pre-season, neither the Lower Skeena Creel Survey or Babine Lake Creel Survey took place in 2018.

Excess to Salmon Spawning Requirements (ESSR) opportunities for sockeye salmon in the Skeena River occurred in 2018 with a directed harvest by the Lake Babine First Nation in Babine Lake at the mouth of Fulton River. They caught 192,712 sockeye salmon. The Wet'suwet'en First Nation selectively harvested pink salmon under an ESSR licence at Moricetown Canyon on the Bulkley River using dip nets. A total of 110 pink salmon were harvested in the 2018 ESSR fishery.

The North Coast Skeena First Nation Stewardship Society (NCSFNSS), the Gitksan Watershed Authorities (GWA) and Lake Babine Nation (LBN) all participated in the Skeena River Inland Demonstration Fishery for 2018. The NCSFNSS selectively harvest sockeye salmon in Areas 4-12 and 4-15 by using gillnets, the GWA selectively harvested sockeye salmon by beach seine in the Kitwanga area, and LBN selectively harvested sockeye using dip nets at the Babine Fence. Combined, these fisheries harvested 19,530 Skeena sockeye.

First Nation's Food, Social and Ceremonial fisheries throughout the Skeena River mainstem and marine approach waters reported a harvest of 90,246 Skeena sockeye, as well as 2,854 coho, 3,104 pink, 776 chum, and 6,135 large Chinook salmon.

Adult loading targets for Pinkut Creek and the spawning channel were achieved in 2018. 77,633 adults were loaded into the spawning channel and 25,000 were loaded into the creek. An estimated (visual) 60,000 adults were locked out below the counting fence, where 5,000 would be considered successful spawners. Adult loading targets were also achieved for Fulton Channel #1, Fulton Channel #2, and the main Fulton River. Channel #1 was operated for the third time in several years, loading 18,874 adults. 134,987 adults were loaded into Channel #2 and 200,802 into the river. An estimated (visual) 100,000 adults were locked out below the counting fence, where 45,000 would be considered successful spawners.

Area 5

Management of the Area 5 fishery during July is based on Skeena River sockeye salmon abundance, and fisheries up to mid-August are opened alongside fisheries in Area 4. From late July to early August, the fishery targets Skeena River pink salmon stocks which use Area 5 as a migration route. In mid to late August, fisheries are managed for harvest of local pink salmon stocks. In 2018, minimal effort occurred across the three weeks of openings (totalling 161 hours of fishing time). There were only two boat days, and 41 Sockeye and 44 Pink salmon were retained.

There were no additional pink-salmon targeted openings in Area 5 in 2018.

For the troll fleet, portions of Area 105 were opened from July 10 to September 30 to target coho and pink salmon. A total effort of 2 boat days was reported in Area 105, with a minimal harvest of 20 coho salmon (Table 27).

Management Performance Relative to Treaty Requirements

Areas 3 (1-4) Pink Net Catch (Preliminary)

For 2018, Canada was to manage the Area 3-1 to 3-4 net fisheries to achieve an annual catch share of 2.49% of the AAH of Alaskan Districts 101, 102 and 103 pink salmon. With a total return of approximately 13.43 million pink salmon, the Alaskan Districts 101, 102 and 103 AAH was approximately 3.86 million pinks. The resulting Area 3-1 to 3-4 Canadian commercial net total allowable catch of this AAH was approximately 68,764 pink salmon of Alaskan Districts 101, 102 and 103 origin.

In the Canadian northern boundary area, pink salmon returns were anticipated to be average to Area 3 and Area 4, based on brood year return strength. Actual returns to Area 3 and 4 were below average. The 2018 preliminary Canadian pink salmon catch in Sub-areas 3-1 to 3-4 was 68,737, and the Alaska stock component of this catch is estimated to be 58,043, or 1.50 % of the AAH. This result is below the annex agreement of 2.49%.

Area 1 Pink Troll Fishery (Preliminary)

For 2018, Canada was to manage the Area 1 troll fishery to achieve an annual catch share of 2.57% of the AAH of Alaskan Districts 101, 102 and 103 pink salmon. With a Total Return of 13.44 million pink salmon, the resulting Area 1 Canadian commercial troll total allowable catch of this AAH was approximately 99,303 pinks of Alaskan Districts 101, 102 and 103 origin.

The Canadian commercial troll fishery targeting pink salmon was open in the northern portion of Area 1 (Dixon Entrance AB Line) from July 1 to September 30. Pink retention was also permitted during the Chinook-directed fishery in parts of Area 1, which was open from July 10 to August 6 and from August 20 to September 30. Effort directed at pink salmon in Area 1 was minimal in 2018, with pinks being harvested as by-catch in fisheries directed at Coho and Chinook. The fishery harvested a total of 27,194 pink salmon, with an estimated 24,490 being of Alaskan origin. This equates to 0.63% of the Alaskan District 101, 102 and 103 pink AAH, well below the annex agreement of 2.57%.

The pattern of total Area 1 weekly pink salmon troll catch in 2018 is illustrated in Table 14.

2019 Salmon Forecast Northern British Columbia

Specific opening dates and fishing patterns are determined through consultations with industry and since this process has not yet been completed it is too early to provide details. A summary of the forecasts for Areas 1, 3, 4 and 5 is provided in Table 31.

Area 1 Expectations

- Sockeye** There are no significant local sockeye salmon stocks in Area 1 and no directed commercial fisheries on passing stocks.
- Pink** The odd-year cycle on Haida Gwaii generally means that opportunities are determined in season; however, escapements have been poor in recent cycles, and opportunities are not anticipated.
- Chum** Returns have been variable and trending downward in recent years. Fisheries will only occur on terminal surpluses identified in-season.

Area 3 Expectations

- Sockeye** Nass River sockeye salmon returns are forecast pre-season to be average to below average with an expected total return to Canada from 429,000 (75% probability) to 484,000 (25% probability) and a point estimate of 456,000(50% probability) based on a sibling-regression model. Nass sockeye returns will be carefully monitored to take into account increasing uncertainty and recent trends towards lower survival.
- Pink** Area 4 pink salmon returns are generally stronger in odd years, but have been poor in recent odd-years. Subsequently, fishing opportunities in Area 4 will be based on in-season indications of abundance, but are not anticipated.
- Chum** Area 3 chum salmon stocks remain below target escapement levels, though recent improvements in aggregate return are encouraging. Fishing opportunities will be constrained to reduce impacts to wild chum salmon returning to Area 3 streams.

Area 4 Expectations

- Sockeye** The sibling model forecast predicts a 50% probability of approximately 1.71 million sockeye salmon returning to the Skeena River in 2018 with a 10% probability of the return exceeding 3.27 million and a 90% probability the return will exceed 1.06 million fish. Modest surpluses are anticipated, and commercial opportunities will be based on in-season estimates.
- Pink** Area 4 pink salmon returns are generally stronger in odd years, but have been poor in recent odd years. Subsequently, fishing opportunities in Area 4 will be based on in-season indications of abundance, but are not anticipated.
- Chum** Area 4 chum salmon stocks remain below target escapement levels, and no harvestable surpluses are expected.

Area 5 Expectations

Sockeye Commercial fisheries targeting sockeye salmon are concurrent with fisheries targeting Skeena River stocks. The sibling model forecast predicts a 50% probability of approximately 1.71 million sockeye salmon returning to the Skeena River in 2018 with a 10% probability of the return exceeding 3.27 million and a 90% probability the return will exceed 1.06 million fish. Modest surpluses are anticipated, and commercial opportunities will be based on in-season estimates.

Pink Area 5 pink salmon returns are generally stronger in odd years, but have been poor in recent odd-years. Subsequently, fishing opportunities in Area 5 will be based on in-season indications of abundance, but are not anticipated.

Chum Area 5 chum salmon returns are expected to be modest, but dependant on ocean survival. Surpluses are not expected in 2019.

TABLES

Table 1.—Weekly commercial catch and fishing effort by opening in the 2018 Alaska District 101 purse seine fishery (preliminary).

Week	Openings	Closures	Effort			Catch					
			Boats	Hours	Boat Hours	Chinook	Sockeye	Coho	Pink	Chum	Total
27	July 1, 2018	July 1, 2018	19	15	285	0	259	161	1,212	8,898	10,530
28	July 8, 2018	July 8, 2018	29	15	435	0	394	265	14,724	7,141	22,524
29	July 15, 2018	July 15, 2018	22	15	330	0	673	514	53,441	12,687	67,315
30	July 22, 2018	July 22, 2018	33	15	495	0	678	491	75,498	18,028	94,695
30B	July 26, 2018	July 26, 2018	29	15	435	0	1,389	514	46,897	13,507	62,307
31	July 29, 2018	July 29, 2018	50	15	750	0	1,138	927	95,793	17,681	115,539
31B	August 2, 2018	August 2, 2018	43	15	645	0	2,745	1,131	116,937	9,994	130,807
32	August 5, 2018	August 5, 2018	39	15	585	0	8,627	1,815	109,789	19,770	140,001
32B	August 9, 2018	August 9, 2018	19	15	285	0	3,312	1,136	57,109	5,945	67,502
33	August 12, 2018	August 12, 2018	13	15	195	0	1,827	784	36,133	4,490	43,234
33B	August 16, 2018	August 16, 2018	18	15	270	0	1,951	775	22,652	2,854	28,232
Season Total			80	165	4,710	0	22,993	8,513	630,185	120,995	782,686

Table 2.–Weekly commercial catch and fishing effort by opening in the 2018 Alaska District 102 purse seine fishery (preliminary).

Week	Openings	Closures	Effort			Catch					
			Boats	Hours	Boat Hours	Chinook	Sockeye	Coho	Pink	Chum	Total
25	June 17, 2018	June 20, 2018	47	87	4,089	0	65	246	451	8,680	9,442
26	June 24, 2018	June 27, 2018	53	87	4,611	0	409	846	737	34,178	36,170
27	July 1, 2018	July 1, 2018	52	15	780	0	581	767	1,799	35,055	38,202
27B	July 2, 2018	July 2, 2018	22	15	330	0	118	104	270	6,945	7,437
27C	July 5, 2018	July 5, 2018	35	15	525	0	332	528	3,579	19,292	23,731
28	July 8, 2018	July 8, 2018	31	15	465	0	542	585	3,192	31,072	35,391
29	July 15, 2018	July 15, 2018	60	15	900	0	1,539	1,669	43,990	68,732	115,930
29B	July 19, 2018	July 19, 2018	65	15	975	0	2,171	2,181	37,649	51,724	93,725
30	July 22, 2018	July 22, 2018	34	15	510	0	2,028	1,222	47,144	40,463	90,857
30B	July 26, 2018	July 26, 2018	31	15	465	0	2,663	664	47,048	21,692	72,067
31	July 29, 2018	July 29, 2018	26	15	390	0	1,558	589	32,577	9,175	43,899
31B	August 2, 2018	August 2, 2018	17	15	255	0	1,581	1,075	53,390	9,947	65,993
32	August 5, 2018	August 5, 2018	17	15	255	0	2,377	1,097	46,853	16,036	66,363
32B	August 9, 2018	August 9, 2018	15	15	225	0	1,094	1,757	49,931	9,570	62,352
33	August 12, 2018	August 12, 2018	14	15	210	0	2,218	1,080	44,801	7,239	55,338
33B	August 16, 2018	August 16, 2018	27	15	405	0	3,252	2,029	57,996	8,578	71,855
36	September 6, 2018	September 6, 2018	7	12	84	0	49	104	2,689	26,302	29,144
37	September 13, 2018	September 13, 2018	30	12	360	0	27	368	343	13,369	14,107
Season Total			135	408	15,834	0	22,604	16,911	474,439	418,049	932,003

Table 3.–Weekly commercial catch and fishing effort by opening in the 2018 Alaska District 103 purse seine fishery (preliminary).

Week	Openings	Closures	Effort			Catch					
			Boats	Hours	Boat Hours	Chinook	Sockeye	Coho	Pink	Chum	Total
30	July 22, 2018	July 22, 2018	7	15	105	0	985	787	15,467	2,274	19,513
30B	July 26, 2018	July 26, 2018	2	15	30	0	135	507	5,303	774	6,719
31	July 29, 2018	July 29, 2018	7	15	105	0	575	1,475	33,173	2,201	37,424
31B	August 2, 2018	August 2, 2018	27	15	405	0	2,285	2,519	159,258	5,851	169,913
32	August 5, 2018	August 5, 2018	34	15	510	0	2,083	4,081	161,418	11,445	179,027
32B	August 9, 2018	August 9, 2018	50	15	750	0	2,793	6,202	364,851	17,657	391,503
33	August 12, 2018	August 12, 2018	61	15	915	0	1,953	3,816	344,403	19,164	369,336
33B	August 16, 2018	August 16, 2018	39	15	585	0	1,135	2,377	219,067	13,658	236,237
34	August 19, 2018	August 19, 2018	28	15	420	0	4,228	1,361	110,147	9,911	125,647
34B	August 23, 2018	August 23, 2018	13	15	195	0	465	518	52,629	3,197	56,809
Season Total			110	150	4,020	0	16,637	23,643	1,465,716	86,132	1,592,128

Table 4.—Weekly commercial catch and fishing effort by opening in the 2018 Alaska District 104 purse seine fishery (preliminary).

Week	Openings	Closures	Effort			Catch					
			Boats	Hours	Boat Hours	Chinook	Sockeye	Coho	Pink	Chum	Total
29	July 15, 2017	July 15, 2018	31	8	248	0	2,860	1,661	25,777	6,615	36,913
30	July 19, 2018	July 19, 2018	10	10	100	0	4,698	2,047	31,085	6,272	44,102
31	July 22, 2018	July 22, 2018	22	15	330	0	6,833	2,253	74,338	11,411	94,835
31B	July 26, 2018	July 26, 2018	36	15	540	0	5,352	7,817	127,090	15,322	155,581
32	July 29, 2018	July 29, 2018	20	15	300	0	1,252	1,532	38,504	3,124	44,412
32B	August 2, 2018	August 2, 2018	33	15	495	0	2,506	2,887	96,272	9,634	111,299
33	August 5, 2018	August 5, 2018	27	15	405	0	7,119	5,344	137,126	14,931	164,520
34	August 9, 2018	August 9, 2018	23	15	345	0	3,651	2,566	109,448	9,567	125,232
34B	August 12, 2018	August 12, 2018	9	15	135	0	1,949	614	32,483	3,930	38,976
35	August 16, 2018	August 16, 2018	12	15	180	0	8,608	1,744	43,340	8,864	62,556
35B	August 19, 2018	August 19, 2018	27	15	405	0	43,329	4,868	47,303	12,187	107,687
36	August 23, 2018	August 23, 2018	45	15	675	0	33,208	4,178	26,786	12,939	77,111
Season Total			62	168	4,158	0	121,365	37,511	789,552	114,796	1,063,224

Table 5.—Weekly commercial catch and fishing effort by opening in the 2018 Alaska District 101 drift gillnet fishery (preliminary).

Week	Openings	Closures	Effort			Catch					
			Boats	Hours	Boat Hours	Chinook	Sockeye	Coho	Pink	Chum	Total
25	June 17, 2018	June 21, 2018	39	96	3,743	483	905	49	20	5,742	7,199
26	June 24, 2018	June 28, 2018	33	96	3,167	432	1,195	63	67	16,368	18,125
27	July 1, 2018	July 5, 2018	37	96	3,551	297	2,163	141	3,069	26,822	32,492
28	July 8, 2018	July 12, 2018	36	96	3,455	211	1,442	214	11,856	18,559	32,282
29	July 15, 2018	July 17, 2018	30	48	1,439	32	534	92	10,640	13,042	24,340
30	July 22, 2018	July 26, 2018	43	96	4,127	59	1,996	494	25,657	31,930	60,136
31	July 29, 2018	August 2, 2018	44	96	4,223	30	2,545	708	23,393	19,765	46,441
32	August 5, 2018	August 9, 2018	40	96	3,839	47	5,142	1,143	9,929	13,053	29,314
33	August 12, 2018	August 16, 2018	31	96	2,975	14	1,943	1,849	16,414	11,529	31,749
34	August 19, 2018	August 21, 2018	25	48	1,200	1	446	1,524	6,949	5,746	14,666
35	August 26, 2018	August 30, 2018	31	96	2,975	5	1,144	6,746	4,899	11,602	24,396
36	September 2, 2018	September 6, 2018	38	96	3,647	4	316	10,232	416	9,949	20,917
37	September 9, 2018	September 13, 2018	35	96	3,359	2	109	7,918	27	2,711	10,767
38	September 16, 2018	September 20, 2018	28	96	2,688	1	36	3,864	9	739	4,649
39	September 23, 2018	September 25, 2018	7	48	336	1	4	420	1	104	530
Season Total			73	1,296	44,728	1,619	19,920	35,457	113,346	187,661	358,003

Table 6.—Weekly commercial catch and fishing effort by opening in the 2018 Alaska District 106 drift gillnet fishery (preliminary).

Week	Openings	Closures	Effort			Catch					
			Boats	Hours	Boat Hours	Chinook	Sockeye	Coho	Pink	Chum	Total
25	June 17, 2018	June 19, 2018	52	48	2,494	206	447	280	65	714	1,712
26	June 24, 2018	June 27, 2018	44	72	3,167	573	1,946	1,907	705	10,420	15,551
27	July 1, 2018	July 4, 2018	37	72	2,663	422	2,097	2,382	1,932	9,327	16,160
28	July 8, 2018	July 11, 2018	38	72	2,735	308	2,937	3,632	6,182	19,220	32,279
29	July 15, 2018	July 17, 2018	42	48	2,015	178	2,647	2,035	12,576	14,987	32,423
30	July 22, 2018	July 24, 2018	68	48	3,262	266	3,817	2,519	42,214	29,176	77,992
31	July 29, 2018	July 31, 2018	87	48	4,173	511	3,569	5,110	60,986	13,721	83,897
32	August 5, 2018	August 8, 2018	74	72	5,326	89	3,002	9,440	85,749	11,890	110,170
33	August 12, 2018	August 15, 2018	72	72	5,182	142	2,367	8,790	57,553	11,684	80,536
34	August 19, 2018	August 22, 2018	72	72	5,182	111	1,423	8,782	43,907	15,856	70,079
35	August 26, 2018	August 29, 2018	81	72	5,830	311	733	13,598	29,207	16,033	59,882
36	September 2, 2018	September 5, 2018	95	72	6,837	82	152	26,459	6,883	13,078	46,654
37	September 9, 2018	September 13, 2018	99	96	9,501	38	56	20,360	310	7,694	28,458
38	September 16, 2018	September 19, 2018	63	72	4,534	4	5	5,800	6	2,099	7,914
39	September 23, 2018	September 25, 2018	18	48	863	6	5	906	2	493	1,412
Season Total			149	984	63,764	3,247	25,203	112,000	348,277	176,392	665,119

Table 7.—Weekly commercial catch and fishing effort by opening in the 2018 Annette Island Reserve purse seine fishery (preliminary).

Week	Openings	Closures	Effort		Catch					
			Boats ¹	Hours	Chinook	Sockeye	Coho	Pink	Chum	Total
26	June 24, 2018	June 24, 2018	1	15	99	8	14	29	411	561
27	July 2, 2018	July 2, 2018	1	15	56	46	18	126	505	751
27B	July 5, 2018	July 5, 2018	1	15	8	14	11	382	327	742
28	July 8, 2018	July 8, 2018	1	15	20	50	53	1,720	783	2,626
28B	July 13, 2018	July 13, 2018	1	15	38	114	90	9,405	5,895	15,542
29	July 16, 2018	July 16, 2018	1	15	48	119	113	6,438	5,815	12,533
29B	July 20, 2018	July 20, 2018	1	15	25	369	387	13,927	9,035	23,743
30	July 22, 2018	July 22, 2018	1	15	22	60	87	5,406	3,918	9,493
30B	July 26, 2018	July 26, 2018	1	15	0	83	103	9,561	20,536	30,283
31	July 30, 2018	July 30, 2018	1	15	29	65	116	11,165	1,988	13,363
31B	August 3, 2018	August 3, 2018	1	15	30	166	215	26,285	2,356	29,052
32	August 5, 2018	August 5, 2018	1	15	25	562	273	19,247	3,064	23,171
32B	August 8, 2018	August 8, 2018	1	15	9	1,357	181	17,635	893	20,075
32C	August 10, 2018	August 10, 2018	1	15	2	232	270	13,932	1,140	15,576
33	August 12, 2018	August 12, 2018	1	15	9	845	444	18,351	1,317	20,966
33B	August 15, 2017	August 15, 2018	1	15	1	381	139	7,104	397	8,022
34	August 19, 2018	August 19, 2018	1	15	0	19	38	9,307	431	9,795
38	September 16, 2018	September 16, 2018	1	15	0	0	0	0	0	0
39	September 23, 2018	September 23, 2018	1	15	0	6	82	1	34	123
Season Total				285	421	4,496	2,634	170,021	58,845	236,417

¹All landing under Annette Island fisheries are placed under one Commercial Fisheries Entry Commission license, therefore it is shown as one boat. Information is based solely on data given to the department by Annette Island salmon processors and is not confirmed by ADFG managers as complete.

Table 8.—Weekly commercial catch and fishing effort by opening in the 2018 Annette Island Reserve gillnet fishery (preliminary).

Week	Openings	Closures	Effort		Catch					
			Boats ¹	Hours	Chinook	Sockeye	Coho	Pink	Chum	Total
24	June 10, 2018	June 12, 2018	1	48	41	7	0	1	116	165
25	June 17, 2018	June 20, 2018	1	72	120	4	1	10	718	853
26	June 24, 2018	June 27, 2018	1	72	341	47	142	67	4,543	5,140
27	July 1, 2018	July 5, 2018	1	96	253	157	231	1,776	14,566	16,983
28	July 8, 2018	July 12, 2018	1	96	165	289	249	10,004	16,453	27,160
29	July 15, 2018	July 19, 2018	1	96	77	344	380	9,655	43,744	54,200
30	July 22, 2018	July 26, 2018	1	96	56	193	163	9,723	16,107	26,242
31	July 29, 2018	August 2, 2018	1	96	40	125	218	33,980	16,437	50,800
32	August 5, 2018	August 10, 2018	1	120	15	434	397	30,392	13,063	44,301
32B	August 11, 2018	August 11, 2018	1	17	2	3	29	215	10,899	11,148
33	August 12, 2018	August 16, 2018	1	96	6	94	319	17,457	5,324	23,200
34	August 19, 2018	August 22, 2018	1	72	1	48	392	8,479	1,925	10,845
35	August 26, 2018	August 29, 2018	1	72	3	23	747	2,882	2,260	5,915
36	September 2, 2018	September 5, 2018	1	72	0	13	2,600	1,617	3,546	7,776
37	September 9, 2018	September 12, 2018	1	72	0	16	3,599	94	1,841	5,550
38	September 16, 2018	September 19, 2018	1	72	0	0	2,642	3	485	3,130
39	September 23, 2018	September 26, 2018	1	72	0	6	1,750	1	249	2,006
40	September 30, 2018	October 2, 2018	1	48	0	0	209	0	24	233
Season Total				1,385	1,120	1,803	14,068	126,356	152,300	295,647

¹All landing under Annette Island fisheries are placed under one Commercial Fisheries Entry Commission license, therefore it is shown as one boat. Information is based solely on data given to the department by Annette Island salmon processors and is not confirmed by ADFG managers as complete.

Table 9.—Southern Southeast Alaska pink salmon escapement indices by stock group and district for 2018 (in millions).

Stock group	District	Pink salmon index 2018	Management target lower	upper	Met minimum escapement	Recent 10-year average
E Behm	101	1.07	0.67	1.77		1.78
Portland	101	0.53	0.1	0.28	+	0.43
W Behm	101	0.44	0.25	0.66		0.60
Kasaan	102	0.20	0.24	0.64	–	0.89
Moirá	102	0.05	0.05	0.13	–	0.18
E Dall	103	0.24	0.13	0.36		0.29
Hetta	103	0.28	0.30	0.79	+	0.78
Klawock	103	0.74	0.42	1.11		0.89
Sea Otter Sound	103	0.15	0.10	0.28		0.18
Affleck Canal	105	0.11	0.14	0.38	–	0.25
Shipley Bay	105	0.17	0.11	0.28		0.17
Burnett	106	0.08	0.05	0.14		0.10
Ratz Harbor	106	0.06	0.04	0.12		0.11
Totem Bay	106	0.06	0.05	0.13		0.07
Whale Pass	106	0.14	0.07	0.18		0.09
Anan	107	0.47	0.21	0.57		0.32
Union Bay	107	0.06	0.05	0.12		0.10
Stikine	108	0.02	0.02	0.06		0.04
District Total	101	2.04	1.02	2.71		2.81
District Total	102	0.25	0.29	0.77	–	1.07
District Total	103	1.42	0.95	2.54		2.15
District Total	105	0.28	0.25	0.66		0.42
District Total	106	0.33	0.21	0.57		0.37
District Total	107	0.53	0.26	0.69		0.42
District Total	108	0.02	0.02	0.06		0.04
Southern Southeast Alaska Total		4.87	3.00	8.00		7.28

Table 10.—Preliminary annual allowable harvest (AAH) calculations for the Alaska District 104 Week 27-30 purse seine fishery, 1999-2018.

Year	Nass/Skeena Total Return	Nass/Skeena Escapement	Allowable Nass/ Skeena AAH	Allowable Dist. 104 Nass/Skeena Harvest (2.45%)	Total Pre-Week 31 Sockeye Harvest	Actual Nass/Skeena Harvest	Overage/ Underage Per Year	Cumulative: +overage / (- underage)
1999	1,771,048	936,705	834,343	20,441	7,664	3,232	-17,209	-17,209
2000	5,318,228	1,100,000	4,218,228	103,347	48,969	29,221	-74,126	-91,335
2001	4,965,291	1,100,000	3,865,291	94,700	203,090	167,854	73,154	-18,181
2002	2,776,502	1,051,333	1,725,169	42,267	26,554	18,627	-23,640	-41,820
2003	3,306,520	1,100,000	2,206,520	54,060	84,742	44,258	-9,802	-51,622
2004	2,621,000	1,100,000	1,521,000	37,265	30,758	19,233	-18,032	-69,653
2005	1,770,474	1,000,144	770,330	18,873	35,690	19,442	569	-69,085
2006	3,650,525	1,100,000	2,550,525	62,488	89,615	68,940	6,452	-62,632
2007	2,752,074	1,100,000	1,652,074	40,476	112,135	75,615	35,139	-27,493
2008	2,531,701	1,100,000	1,431,701	35,077	6,262	4,880	-30,197	-57,690
2009	1,602,959	1,053,858	549,101	13,453	15,971	10,128	-3,325	-61,015
2010	1,395,616	956,954	438,662	10,747	4,617	1,091	-9,656	-70,671
2011	2,487,985	1,100,000	1,387,985	34,006	25,280	16,599	-17,407	-88,078
2012	2,737,173	1,100,000	1,637,173	40,111	18,300	9,598	-30,513	-118,590
2013	981,476	642,461	339,015	8,306	13,102	4,228	-4,078	-122,668
2014	3,824,535	1,100,000	2,724,535	66,751	114,375	74,005	7,254	-115,414
2015	3,015,042	1,100,000	1,915,042	46,919	43,873	21,433	-25,486	-140,900
2016	2,140,259	1,100,000	1,040,259	25,486	110,346	65,039	39,553	-101,347
2017	1,422,783	1,100,000	322,783	7,908	12,036	6,916	-992	-102,339
2018 ^a	2,086,491	1,100,000	986,491	24,169	19,743	9,999	-14,170	-116,509

^a Preliminary information pending completion of run reconstruction analyses.

Table 11.—Preliminary annual allowable harvest (AAH) calculations for the Alaska District 101 gillnet fishery, 1999-2018.

Year	Nass River Total Return	Nass River Escapement	Allowable Nass River AAH	Allowable Alaska Harvest (13.8%)	Total District 101 Gillnet Seasonal Sockeye Harvest	Actual Nass River Alaska Harvest	Overage/ Underage Per Year	Cumulative: +overage / (- underage)
1999	842,806	200,000	642,806	88,707	160,028	129,794	41,087	41,087
2000	625,983	200,000	425,983	58,786	94,651	46,305	-12,481	28,606
2001	580,616	167,258	413,358	57,043	80,041	55,096	-1,947	26,659
2002	1,403,976	200,000	1,203,976	166,149	120,353	90,553	-75,596	-48,937
2003	1,177,472	200,000	977,472	134,891	105,263	72,942	-61,949	-110,886
2004	986,098	200,000	786,098	108,482	142,357	110,340	1,858	-109,028
2005	666,880	200,000	466,880	64,429	79,725	55,319	-9,110	-118,138
2006	775,110	200,000	575,110	79,365	62,770	47,948	-31,417	-149,555
2007	602,208	164,745	437,463	60,370	66,822	46,369	-14,001	-163,556
2008	380,397	200,000	180,397	24,895	34,113	24,359	-536	-164,092
2009	575,336	200,000	375,336	51,796	69,859	55,270	3,474	-160,618
2010	438,941	200,000	238,941	32,974	62,680	26,613	-6,361	-166,979
2011	556,710	200,000	356,710	49,226	88,618	55,122	5,896	-161,083
2012 ^a	476,818	200,000	276,818	38,201	62,342	38,983	782	-160,301
2013	501,428	200,000	301,428	41,597	54,578	35,471	-6,126	-166,427
2014	549,685	200,000	349,685	48,257	55,828	29,022	-19,235	-185,662
2015	868,749	200,000	668,749	92,287	28,155	14,867	-77,420	-263,081
2016	442,420	200,000	242,420	33,454	39,913	14,389	-19,065	-282,146
2017	368,653	200,000	168,653	22,274	25,073	12,445	-10,829	-292,975
2018 ^a	315,985	200,000	115,985	16,006	19,920	11,303	-4,703	-297,678

^a Preliminary information pending completion of run reconstruction analyses.

Table 12.—Weekly commercial catch and fishing effort in the 2018 Canadian Area 1 gillnet fishery (preliminary).

Julian Week	Stat Week	Ending Date	Sockeye	Coho	Pink	Chum	Chinook	Total	Boat Days*	Hours Open	Days Fishing**
FISHERY DID NOT OPEN			-	-	-	-	-	-	-	-	-
TOTAL			-	-	-	-	-	-	-	-	-

2018 catch figures are based on Phone-in (FOS) estimates.

* Boat Days are represented in 24-hour format.

**Days Fishing are the sum of the daily fishery openings independent of hours open.

Table 13.—Weekly commercial catch and fishing effort in the 2018 Canadian Area 1 seine fishery (preliminary).

Julian Week	Stat Week	Ending Date	Sockeye	Coho	Pink	Chum	Chinook	Total	Boat Days*	Hours Open	Days Fishing**
FISHERY DID NOT OPEN			-	-	-	-	-	-	-	-	-
Total			-	-	-	-	-	-	-	-	-

2018 catch figures are based on Phone-in (FOS) estimates.

* Boat Days are represented in 24-hour format.

**Days Fishing are the sum of the daily fishery openings independent of hours open.

Table 14.–Weekly commercial catch and fishing effort in the 2018 Canadian Area 1/101 troll fishery (preliminary).

Julian Week	Stat Week	Ending Date	Sockeye	Coho	Pink	Chum	Chinook***	Total	Boat Days*	Hours Open	Days Fishing**
23	61	Jun.09	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0	0
24	62	Jun. 16	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0	0
25	63	Jun. 23	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0	0
26	64	Jun.30	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0	0
27	71	Jul. 07	0	714	266	CLOSED	CLOSED	980	36	168	7
28	72	Jul. 14	0	17,284	1,797	0	19,678	38,759	552	168	7
29	73	Jul. 21	0	25,965	5,176	1	7,017	38,159	565	168	7
30	74	Jul. 28	0	26,973	6,041	0	7,105	40,119	475	168	7
31	75	Aug. 04	0	14,141	3,779	0	5,540	23,460	340	168	7
32	81	Aug. 11	0	12,110	4,500	0	3,279	19,889	251	168	7
33	82	Aug. 18	0	17,472	3,571	0	CLOSED	21,043	268	168	7
34	83	Aug. 25	0	13,320	1,817	430	9,769	25,336	473	168	7
35	84	Sept. 01	0	5,541	227	736	6,443	12,947	355	168	7
36	91	Sept.08	3	2,669	18	1,274	2,635	6,599	203	168	7
37	92	Sept. 15	0	355	2	380	1,394	2,131	79	168	7
38	93	Sept. 22	0	296	0	110	316	722	56	168	7
39	94	Sep. 29	0	95	0	3	32	130	13	168	7
40	101	Oct.06	0	0	0	0	0	0	0	24	1
Totals			3	136,935	27,194	2,934	63,208	230,274	3,666	2,208	92

2018 catch figures are based on Phone-in (FOS) estimates

* Boat Days are represented in 24-hour format.

** Days Fishing are the sum of the daily fishery openings independent of hours open.

*** Chinook Area hail catch pro-rated with validated Chinook landings.

Table 15.—Weekly commercial catch and fishing effort in the 2018 Canadian Area 3 Outside (subareas 1-4) gillnet fishery (preliminary).

Julian Week	Stat Week	Ending Date	Sockeye	Coho	Pink	Chum	Chinook	Total	Boat Days*	Hours Open	Days Fishing**
23	61	Jun.09	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	CLOSED	0	0
24	62	Jun. 16	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	CLOSED	0	0
25	63	Jun. 23	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	CLOSED	0	0
26	64	Jun.30	251	4	0	290	CLOSED	545	9	32	2
27	71	Jul. 07	162	3	27	654	CLOSED	846	6	32	2
28	72	Jul. 14	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	CLOSED	0	0
29	73	Jul. 21	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	CLOSED	0	0
30	74	Jul. 28	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	CLOSED	0	0
Totals			413	7	27	944	0	1,391	15	64	4

2018 catch figures are based on Phone-in (FOS) estimates

* Boat Days are represented in 24-hour format.

** Days Fishing are the sum of the daily fishery openings independent of hours open.

Table 16.—Weekly commercial catch and fishing effort in the 2018 Canadian Area 3 Inside (subareas 7-17) gillnet fishery (preliminary).

Julian Week	Stat Week	Ending Date	Sockeye	Coho	Pink	Chum	Chinook	Total	Boat Days*	Hours Open	Days Fishing**
23	61	Jun.09	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0
24	62	Jun. 16	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0
25	63	Jun. 23	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0
26	64	Jun.30	4555	4	9	1328	CLOSED	5896	265	32	2
27	71	Jul. 07	6659	82	782	6234	CLOSED	13757	113	32	2
28	72	Jul. 14	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0
29	73	Jul. 21	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0
30	74	Jul. 28	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0
Totals			11,214	86	791	7,562	0	19,653	378	64	4

2018 catch figures are based on Phone-in (FOS) estimates

* Boat Days are represented in 24-hour format.

** Days Fishing are the sum of the daily fishery openings independent of hours open.

Table 17.–Weekly commercial catch and fishing effort in the 2018 Canadian total Area 3 gillnet fishery (preliminary).

Julian Week	Stat Week	Ending Date	Sockeye	Coho	Pink	Chum	Chinook	Total	Boat Days*	Hours Open	Days Fishing**
23	61	Jun.09	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0
24	62	Jun. 16	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0
25	63	Jun. 23	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0
26	64	Jun.30	4,806	8	9	1,618	CLOSED	6,441	274	32	2
27	71	Jul. 07	6,821	85	809	6,888	CLOSED	14,603	145	32	2
28	72	Jul. 14	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0
29	73	Jul. 21	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0
30	74	Jul. 28	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0
Totals			11,627	93	818	8,506	0	21,044	419	64	4

2018 catch figures are based on Phone-in (FOS) estimates

* Boat Days are represented in 24-hour format.

** Days Fishing are the sum of the daily fishery openings independent of hours open.

Table 18.—Weekly commercial catch and fishing effort in the 2018 Canadian Area 3 Outside (subareas 1-4) seine fishery (preliminary).

Julian Week	Stat Week	Ending Date	Sockeye	Coho	Pink	Chum	Chinook	Total	Boat Days*	Hours Open	Days Fishing**
27	71	Jul. 08	44	10	166	1,063	CLOSED	1,283	16	16	1
28	72	Jul. 15	CLOSED	58	5,089	5,437	CLOSED	10,584	20	16	1
29	73	Jul. 22	CLOSED	366	63,482	23,384	CLOSED	87,232	47	48	3
30	74	Jul. 29	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
31	75	Aug. 05	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
32	81	Aug. 12	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
Totals			44	434	68,737	29,884	0	99,099	83	80	5

2018 catch figures are based on Phone-in (FOS) estimates

* Boat Days are represented in 24-hour format.

** Days Fishing are the sum of the daily fishery openings independent of hours open.

Table 19.—Weekly commercial catch and fishing effort in the 2018 Canadian Area 3 Inside (subareas 7-17) seine fishery (preliminary).

Julian Week	Stat Week	Ending Date	Sockeye	Coho	Pink	Chum	Chinook	Total	Boat Days*	Hours Open	Days Fishing**
27	71	Jul. 07	115	3	68	591	CLOSED	662	5	16	1
28	72	Jul. 14	CLOSED	23	1,580	2,377	CLOSED	3,980	7	16	1
29	73	Jul. 21	CLOSED	175	30,882	5,516	CLOSED	36,573	16	48	3
30	74	Jul. 28	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0	0
31	75	Aug. 04	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0	0
32	81	Aug. 11	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0	0
Totals			115	201	32,530	8,484	0	41,215	28	80	5

2018 catch figures are based on Phone-in (FOS) estimates

* Boat Days are represented in 24-hour format.

** Days Fishing are the sum of the daily fishery openings independent of hours open.

Table 20.—Weekly commercial catch and fishing effort in the 2018 Canadian Area 3 seine fishery (preliminary).

Julian Week	Stat Week	Ending Date	Sockeye	Coho	Pink	Chum	Chinook	Total	Boat Days*	Hours Open	Days Fishing**
27	71	Jul. 07	159	13	234	1,654	CLOSED	2,060	21	16	1
28	72	Jul. 14	CLOSED	81	6,669	7,814	CLOSED	14,564	27	16	1
29	73	Jul. 21	CLOSED	541	94,364	28,900	CLOSED	123,805	63	48	3
30	74	Jul. 28	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
31	75	Aug. 04	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
32	81	Aug. 11	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
Totals			159	635	101,267	38,368	0	140,429	111	80	5

2018 catch figures are based on Phone-in (FOS) estimates

* Boat Days are represented in 24-hour format.

** Days Fishing are the sum of the daily fishery openings independent of hours open.

Table 21.—Weekly commercial catch and fishing effort in the 2018 Canadian Area 3***/103 troll fishery (preliminary).

Julian Week	Stat Week	Ending Date	Sockeye	Coho	Pink	Chum	Chinook	Total	Boat Days*	Hours Open	Days Fishing**
23	61	Jun.09	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
24	62	Jun. 16	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
25	63	Jun. 23	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
26	64	Jun.30	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
27	71	Jul. 07	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
28	72	Jul. 14	CLOSED	0	0	CLOSED	CLOSED	0	0	120	5
29	73	Jul. 21	CLOSED	3,767	184	CLOSED	CLOSED	3,951	13	168	7
30	74	Jul. 28	CLOSED	3,002	203	CLOSED	CLOSED	3,205	17	168	7
31	75	Aug. 04	CLOSED	18	6	CLOSED	CLOSED	24	1	168	7
32	81	Aug. 11	CLOSED	31	4	CLOSED	CLOSED	35	1	168	7
33	82	Aug. 18	CLOSED	0	0	CLOSED	CLOSED	0	0	168	7
34	83	Aug. 25	CLOSED	0	0	CLOSED	CLOSED	0	0	168	7
35	84	Sept. 01	CLOSED	0	0	CLOSED	CLOSED	0	0	168	7
36	91	Sept.08	CLOSED	0	0	CLOSED	CLOSED	0	0	168	7
37	92	Sept. 15	CLOSED	0	0	CLOSED	CLOSED	0	0	168	7
38	93	Sept. 22	CLOSED	0	0	CLOSED	CLOSED	0	0	168	7
39	94	Sep. 29	CLOSED	0	0	CLOSED	CLOSED	0	0	168	7
40	101	Oct.06	CLOSED	0	0	CLOSED	CLOSED	0	0	24	1
Totals			0	6,818	397	0	0	7,215	32	1,992	83

2018 catch figures are based on Phone-in (FOS) estimates

* Boat Days are represented in 24-hour format.

** Days Fishing are the sum of the daily fishery openings independent of hours open.

*** Area 3 did not open, only portion of Area 103

Table 22.—Weekly commercial catch and fishing effort in the 2018 Canadian Area 4 gillnet fishery (preliminary).

Julian Week	Stat Week	Ending Date	Sockeye	Coho	Pink	Chum	Chinook	Total	Boat Days*	Hours Open	Days Fishing**
27	71	Jul. 07	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0	0
28	72	Jul. 14	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0	0
29	73	Jul. 21	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0	0
30	74	Jul. 28	18286	CLOSED	4569	CLOSED	CLOSED	22855	148	33	2
31	75	Aug. 04	48107	CLOSED	4449	CLOSED	CLOSED	52556	312	64	4
32	81	Aug. 11	12832	CLOSED	1899	CLOSED	CLOSED	14731	165	64	4
33	82	Aug. 18	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0	0
Totals			79,225	0	10,917	0	0	90,142	625	161	10

2018 catch figures are based on Phone-in (FOS) estimates

* Boat Days are represented in 24-hour format.

** Days Fishing are the sum of the daily fishery openings independent of hours open.

Table 23.—Weekly commercial catch and fishing effort in the 2018 Canadian Area 4 seine fishery (preliminary).

Julian Week	Stat Week	Ending Date	Sockeye***	Coho	Pink	Chum	Chinook	Total	Boat Days*	Hours Open	Days Fishing**
27	71	Jul. 07	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0	0
28	72	Jul. 14	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0	0
29	73	Jul. 21	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0	0
30	74	Jul. 28	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0	0
31	75	Aug. 04	19,254	CLOSED	4,064	CLOSED	CLOSED	0	34	64	4
32	81	Aug. 11	3,024	CLOSED	1,497	CLOSED	CLOSED	0	11	80	5
33	82	Aug. 18	1,789	CLOSED	308	CLOSED	CLOSED	0	6	80	5
34	83	Aug. 25	303	CLOSED	71	CLOSED	CLOSED	0	1	16	1
Totals			24,370	0	5,940	0	0	0	52	240	15

2018 catch figures are based on Phone-in (FOS) estimates

* Boat Days are represented in 24-hour format.

** Days Fishing are the sum of the daily fishery openings independent of hours open.

*** Sockeye catches were from validated landings as part of the ITQ fishery

Table 24.–Weekly commercial catch and fishing effort in the 2018 Canadian Area 4***/104 troll fishery (preliminary).

Julian Week	Stat Week	Ending Date	Sockeye	Coho	Pink	Chum	Chinook	Total	Boat Days*	Hours Open	Days Fishing**
23	61	Jun.09	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
24	62	Jun. 16	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
25	63	Jun. 23	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
26	64	Jun.30	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
27	71	Jul. 07	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
28	72	Jul. 14	CLOSED	231	5	CLOSED	CLOSED	CLOSED	1	120	5
29	73	Jul. 21	CLOSED	9,654	392	CLOSED	CLOSED	CLOSED	37	168	7
30	74	Jul. 28	CLOSED	15,003	1,590	CLOSED	CLOSED	CLOSED	74	168	7
31	75	Aug. 04	CLOSED	2,523	522	CLOSED	CLOSED	CLOSED	22	168	7
32	81	Aug. 11	CLOSED	56	3	CLOSED	CLOSED	CLOSED	5	168	7
33	82	Aug. 18	CLOSED	49	6	CLOSED	CLOSED	CLOSED	3	168	7
34	83	Aug. 25	CLOSED	0	0	CLOSED	CLOSED	CLOSED	0	168	7
35	84	Sept. 01	CLOSED	0	0	CLOSED	CLOSED	CLOSED	0	168	7
36	91	Sept.08	CLOSED	0	0	CLOSED	CLOSED	CLOSED	0	168	7
37	92	Sept. 15	CLOSED	0	0	CLOSED	CLOSED	CLOSED	0	168	7
38	93	Sept. 22	CLOSED	0	0	CLOSED	CLOSED	CLOSED	0	168	7
39	94	Sep. 29	CLOSED	0	0	CLOSED	CLOSED	CLOSED	0	168	7
40	101	Oct.06	CLOSED	0	0	CLOSED	CLOSED	CLOSED	0	24	1
Totals			0	27,516	2,518	0	0	0	142	1,992	83

2018 catch figures are based on Phone-in (FOS) estimates

* Boat Days are represented in 24-hour format.

** Days Fishing are the sum of the daily fishery openings independent of hours open.

*** Area 4 did not open, only Area 104

Table 25.—Weekly commercial catch and fishing effort in the 2018 Canadian Area 5 gillnet fishery (preliminary).

Julian Week	Stat Week	Ending Date	Sockeye	Coho	Pink	Chum	Chinook	Total	Boat Days*	Hours Open	Days Fishing**
27	71	Jul. 07	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0	0
28	72	Jul. 14	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0	0
29	73	Jul. 21	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0	0
30	74	Jul. 28	0	CLOSED	0	CLOSED	CLOSED	0	0	33	2
31	75	Aug. 04	41	CLOSED	44	CLOSED	CLOSED	85	2	64	4
32	81	Aug. 11	0	CLOSED	0	CLOSED	CLOSED	0	0	64	4
33	82	Aug. 18	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0	0
Totals			41	0	44	0	0	85	2	161	10

2018 catch figures are based on Phone-in (FOS) estimates

* Boat Days are represented in 24-hour format.

** Days Fishing are the sum of the daily fishery openings independent of hours open.

Table 26.—Weekly commercial catch and fishing effort in the 2018 Canadian total Area 5 seine (preliminary).

Julian Week	Stat Week	Ending Date	Sockeye	Coho	Pink	Chum	Chinook	Total	Boat Days*	Hours Open	Days Fishing**
FISHERY DID NOT OPEN IN AREA 5			-	-	-	-	-	-	-	-	-
Total			-	-	-	-	-	-	-	-	-

2018 catch figures are based on Phone-in (FOS) estimates

* Boat Days are represented in 24-hour format.

** Days Fishing are the sum of the daily fishery openings independent of hours open.

Table 27.—Weekly commercial catch and fishing effort in the 2018 Canadian Area 5***/105 troll fishery (preliminary).

Julian Week	Stat Week	Ending Date	Sockeye	Coho	Pink	Chum	Chinook	Total	Boat Days*	Hours Open	Days Fishing**
23	61	Jun.09	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
24	62	Jun. 16	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
25	63	Jun. 23	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
26	64	Jun.30	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
27	71	Jul. 07	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0
28	72	Jul. 14	CLOSED	0	0	CLOSED	CLOSED	CLOSED	0	120	5
29	73	Jul. 21	CLOSED	0	0	CLOSED	CLOSED	CLOSED	0	168	7
30	74	Jul. 28	CLOSED	0	0	CLOSED	CLOSED	CLOSED	0	168	7
31	75	Aug. 04	CLOSED	18	0	CLOSED	CLOSED	CLOSED	1	168	7
32	81	Aug. 11	CLOSED	0	0	CLOSED	CLOSED	CLOSED	0	168	7
33	82	Aug. 18	CLOSED	2	0	CLOSED	CLOSED	CLOSED	1	168	7
34	83	Aug. 25	CLOSED	0	0	CLOSED	CLOSED	CLOSED	0	168	7
35	84	Sept. 01	CLOSED	0	0	CLOSED	CLOSED	CLOSED	0	168	7
36	91	Sept.08	CLOSED	0	0	CLOSED	CLOSED	CLOSED	0	168	7
37	92	Sept. 15	CLOSED	0	0	CLOSED	CLOSED	CLOSED	0	168	7
38	93	Sept. 22	CLOSED	0	0	CLOSED	CLOSED	CLOSED	0	168	7
39	94	Sep. 29	CLOSED	0	0	CLOSED	CLOSED	CLOSED	0	168	7
40	101	Oct.06	CLOSED	0	0	CLOSED	CLOSED	CLOSED	0	24	1
Totals			0	20	0	0	0	0	2	1,992	83

2018 catch figures are based on Phone-in (FOS) estimates

* Boat Days are represented in 24-hour format.

** Days Fishing are the sum of the daily fishery openings independent of hours open.

*** Fishery did not open in Area 5, only in Area 105

Table 28.—Annual allowable harvest (AAH) calculations for Canadian Area 3 Entrance (1-4) net fishery, 2009–2018.

	Year									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Annual Allowable Harvest (AAH) of Alaska District 101, 102, and 103 Pink Salmon:										
Total Run	38,891,939	23,621,861	20,770,059	31,674,423	80,810,736	50,784,488	20,541,455	30,447,094	21,573,460	13,437,220
Actual Escapement	16,095,463	12,113,776	11,519,923	14,216,273	32,020,713	22,042,385	8,508,770	15,081,340	13,215,600	9,573,382
Escapement Requirement [Dist 101-103 escapement goal]	10,750,000	10,750,000	10,750,000	10,750,000	10,750,000	10,750,000	10,750,000	10,750,000	10,750,000	10,750,000
Annual Allowable Harvest (AAH)	28,141,939	12,871,861	10,020,059	20,924,423	70,060,736	40,034,488	12,032,685	19,697,094	10,823,460	3,863,838
Actual Number and %AAH of Alaska Pink Salmon Harvested in Canadian Area 3(1-4) Net Fishery:										
Total Pink Harvest in Area 3(1-4) Net	432,861	36,334	201,754	150,740	1,249,570	450,671	80,266	430,435	231,197	68,764
Actual Number of Alaskan Pink Harvested	276,270	21,353	180,930	127,120	1,149,166	347,104	77,323	393,012	207,268	58,001
Actual %AAH	0.98%	0.17%	1.81%	0.61%	1.64%	0.87%	0.64%	2.00%	1.91%	1.50%
Overage/Underage Based on the 2.49% AAH Stipulated in the Treaty:										
Allowable % AAH	2.49%	2.49%	2.49%	2.49%	2.49%	2.49%	2.49%	2.49%	2.49%	2.49%
Allowable Harvest	372,955	700,734	320,509	521,018	1,744,512	996,859	299,614	490,458	269,504	96,210
Overage [Positive]/Underage (Negative)	-362,375	-424,464	-299,156	-393,898	-595,346	-649,755	-222,290	-97,445	-62,236	-38,208
Cumulative Overage/Underage	-768,912	-1,193,376	-1,492,532	-1,954,999	-2,550,345	-3,200,100	-3,422,390	-3,519,836	-3,582,072	-3,620,280

Table 29.—Annual allowable harvest (AAH) calculations for Canadian Area 1/101 troll fishery, 2007–2018.

	Year									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
<u>Annual Allowable Harvest (AAH) of Alaska District 101, 102, and 103 Pink Salmon:</u>										
Total Run	38,891,939	23,621,861	20,770,059	31,674,423	80,810,736	50,784,488	20,541,455	30,447,094	21,573,460	13,437,220
Actual Escapement	16,095,463	12,113,776	11,519,923	14,216,273	32,020,713	22,042,385	8,508,770	15,081,340	13,215,600	9,573,382
Escapement Requirement	10,750,000	10,750,000	10,750,000	10,750,000	10,750,000	10,750,000	10,750,000	10,750,000	10,750,000	10,750,000
Annual Allowable Harvest (AAH)	28,141,939	12,871,861	10,020,059	20,924,423	70,060,736	40,034,488	12,032,685	19,697,094	10,823,460	3,863,838
<u>Actual Number and % AAH of Alaska Pink Salmon Harvested in Canadian Area 1 Troll Fishery</u>										
Total Pink Harvest in Area 1 Troll	61,522	17,950	44,193	48,223	84,216	31,775	41,551	32,343	33,299	27,194
Actual Number of Alaskan Pink Harvested	50,392	12,708	41,631	44,739	80,590	26,798	39,462	30,949	31,471	24,478
Actual %AAH	0.18%	0.10%	0.42%	0.21%	0.12%	0.07%	0.33%	0.16%	0.29%	0.63%
<u>Overage/Underage Based on the 2.57% AAH Stipulated in the Treaty:</u>										
Allowable %AAH	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%
Allowable Harvest	723,248	330,807	257,516	537,758	1,800,561	1,028,886	309,240	506,215	278,163	99,301
Overage (Positive)/Underage (Negative)	-672,855	-318,099	-215,885	-493,019	-1,719,971	-1,002,089	-269,784	-477,267	-246,692	-74,822
Cumulative Overage/Underage	-7,619,300	-7,937,399	-8,153,284	-8,646,302	-10,366,273	-11,368,362	-11,638,146	-12,113,413	-12,360,104	-12,434,926

Table 30.—Escapements to Canadian Areas 3, 4, and 5 in 2018.

Area	Sockeye	Coho	Pink	Chum	Chinook
3	230,508	73,000	218,684	48,487	14,956
4	1,490,159	23,372	17,652	856	29,408
5	1,051	398	1,410	1,136	UKN
Totals	1,721,718	96,770	237,746	50,479	44,364

Table 31.—Pre-season salmon forecast, for Canadian Areas 1, 3, 4, and 5 in 2019.

Area	Species	Forecasted Return to Canada
Area 1	Sockeye Pink	UNK Below Average/Poor
Area 3	Sockeye Pink	456,000 Below Average
Area 4	Sockeye Pink	1,710,000 Below Average
Area 5	Sockeye Pink	UNK Below Average

Table 32.—Annual gillnet and seine effort for Canadian Areas 1, 3, 4, and 5, 1980-2018.

YEAR	GEAR	AREA 1		AREA 3		AREA 4		AREA 5	
		BOAT	DAYS*	BOAT	DAYS	BOAT	DAYS	BOAT	DAYS
		DAYS	FISHING	DAYS	FISHING	DAYS	FISHING	DAYS	FISHING
1980	GN	0	0	2,980	20	5,726	13	852	15
	SN	0	0	912	20	6	2	158	15
1981	GN	0	0	2,127	26	13,170	26	552	11
	SN	0	0	1,189	26	401	8	49	11
1982	GN	0	0	3,155	34	8,799	18	548	17
	SN	0	0	1,649	34	827	6	197	17
1983	GN	6	12	2,377	22	4,699	15	501	14
	SN	108	12	2,157	22	0	0	55	14
1984	GN	18	27	2,929	23	7,705	22	435	15
	SN	543	27	1,580	20	761	6	355	14
1985	GN	74	24	813	21	12,504	26	169	16
	SN	241	24	1,099	17	819	9	241	12
1986	GN	345	27	1,125	25	6,095	21	529	23
	SN	328	35	1,221	24	94	8	389	22
1987	GN	39	13	1,015	19	5,803	17	192	13
	SN	156	13	1,780	18	215	7	269	12
1988	GN	56	18	727	18	14,141	23	305	17
	SN	190	16	888	15	273	4	229	15
1989	GN	20	11	1,525	26	8,638	28	428	22
	SN	78	11	1,059	18	70	18	87	17
1990	GN	12	17	977	26	8,583	32	282	21
	SN	215	17	556	15	60	20	296	15
1991	GN	16	13	1,813	36	10,931	25	375	24
	SN	64	5	2,958	18	178	7	228	18
1992	GN	68	21	2,527	31	12,110	25	368	24
	SN	239	16	1,016	18	197	10	128	17
1993	GN	26	15	3,692	43	10,909	22	183	22
	SN	15	15	1,816	16	329	12	71	13
1994	GN	82	16	3,443	23	8,130	20	430	12
	SN	164	7	698	9	0	0	5	1
1995	GN	270	29	4,305	31	12,062	19	434	22
	SN	322	7	2,536	15	484	9	154	13
1996	GN	19	18	4,433	36	13,487	25	507	26
	SN	79	15	1,117	20	975	14	347	19
1997	GN	536	23	2,759	23	9,558	21	269	20
	SN	313	8	809	15	172	11	25	13
1998	GN	5	11	1,197	16	1,041	6	47	3
	SN	12	2	204	9	0	0	4	0
1999	GN	1	5	3,300	17	238	3	0	0
	SN	0	0	1,001	15	26	2	6	2
2000	GN	15	4	2,321	17	5,150	19	164	3
	SN	0	0	282	12	544	9	54	11
2001	GN	2	1	1,031	11	5,380	19	86	12
	SN	0	0	244	13	393	9	57	11
2002	GN	2	2	2,882	19	3,559	13	43	11
	SN	7	2	294	15	218	15	64	15

YEAR	GEAR	AREA 1		AREA 3		AREA 4		AREA 5	
		BOAT	DAYS*	BOAT	DAYS	BOAT	DAYS	BOAT	DAYS
		DAYS	FISHING	DAYS	FISHING	DAYS	FISHING	DAYS	FISHING
2003	GN	0	0	3417	17	2484	8	27	5
	SN	0	0	210	15	118	9	32	11
2004	GN	0	3	3241	13	1581	6	78	5
	SN	0	0	448	13	218	13	28	7
2005	GN	0	0	2645	16	198	2	0	0
	SN	0	0	291	18	0	0	19	6
2006	GN	7	5	3487	15	6376	17	71	13
	SN	0	0	236	7	682	16	3	6
2007	GN	0	0	1694	9	1796	7	11	2
	SN	0	0	478	15	85	9	82	15
2008	GN	0	0	595	7	2213	9	18	7
	SN	0	0	61	3	274	14	10	1
2009	GN	0	0	1517	8	187	2	0	0
	SN	0	0	115	10	33	4	15	5
2010	GN	0	0	929	6	466	3	14	1
	SN	8	4	17	2	0	0	1	1
2011	GN	0	0	675	7	1070	6	7	5
	SN	0	0	109	4	117	9	0	0
2012	GN	0	0	831	6	992	5	9	3
	SN	0	0	110	5	79	5	0	0
2013	GN	0	0	1457	9	199	2	0	0
	SN	0	0	179	12	0	0	0	0
2014	GN	0	0	1357	10	1831	8	9	7
	SN	9	7	146	9	132	7	5	1
2015	GN	0	0	1778	28	303	5	0	0
	SN	0	0	365	10	10	2	0	0
2016	GN	0	0	574	9	853	10	5	4
	SN	0	0	141	13	20	5	0	0
2017	GN	0	0	1078	9	0	0	0	0
	SN	0	0	249	14	0	0	0	0
2018	GN	0	0	379	4	625	10	2	2
	SN	0	0	111	5	52	15	0	0
AVG 09-18	GN	0	0	1057	10	653	5	5	2
	SN	2	1	154	8	44	5	2	1
	TOTAL	2	1	1212	18	697	10	7	3
AVG 00-09	GN	3	3	2522	15	2780	10	53	5
	SN	2	0	369	13	228	8	35	8
	TOTAL	5	4	2890	28	3009	18	88	14
AVG 90-99	GN	104	17	2845	28	8705	20	290	17
	SN	142	9	1271	15	242	8	126	11
	TOTAL	246	26	4116	43	8947	28	416	28
AVG 80-89	GN	56	13	1877	23	8728	21	451	16
	SN	164	14	1353	21	347	7	203	15
	TOTAL	220	27	3231	45	9075	28	654	31

* BOAT DAYS are represented in 24-hour format.

*DAYS FISHING are represented in 24-hour format.

Table 33.—Annual salmon escapements for Canadian Area 1.

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK
1970	26,500	24,050	432,650	24,800	800
1971	16,500	14,335	6,050	44,500	500
1972	17,500	26,150	329,900	8,600	1,000
1973	38,000	58,350	4,000	50,000	900
1974	39,000	97,100	201,400	41,800	1,000
1975	16,500	47,000	3,950	53,050	1,500
1976	40,900	153,500	285,050	53,500	700
1977	36,750	55,400	4,900	60,300	800
1978	20,300	61,250	217,500	56,200	600
1979	20,650	34,750	3,250	32,450	400
1980	33,200	17,140	290,795	14,768	600
1981	23,000	18,000	3,650	26,100	750
1982	28,500	35,250	362,000	70,800	1,400
1983	19,500	20,600	2,130	35,225	600
1984	18,500	28,850	1,213,900	52,775	300
1985	43,200	23,700	1,875	63,800	1,500
1986	13,500	32,900	838,500	82,500	500
1987	9,100	32,650	4,500	51,100	2,000
1988	23,600	28,900	566,100	29,950	2,200
1989	11,200	16,550	1,300	18,975	2,800
1990	200	10,270	1,389,560	4,700	2,000
1991	4,400	11,350	600	1,000	1,900
1992	12,100	8,200	994,800	6,300	2,000
1993	500	2,500	350	50,060	1,000
1994	8,700	UNK	647,000	32,150	2,000
1995	7,100	UNK	1,000	19,855	1,500
1996	19,300	UNK	2,924,000	6,725	3,000
1997	12,000	UNK	UNK	31,050	2,500
1998	14,000	38,400	747,200	32,100	3,000
1999	15,550	28,000	2,700	33,000	3,200
2000	19,200	22,600	465,000	13,520	3,600
2001	3,900	6,674	1	3,804	UNK
2002	9,850	13,474	939,003	7,000	3,500
2003	7,500	2,538	UNK	34,081	4,000
2004	10,000	719	177,500	4,000	UNK
2005	5,000	1,500	UNK	1,650	UNK
2006	27,200	UNK	250,250	18,300	UNK
2007	8,500	UNK	UNK	1,950	UNK
2008	9,100	UNK	607,750	600	UNK
2009	7,500	UNK	UNK	35,520	UNK
2010	18,025	UNK	1,135,000	200	UNK
2011	7,000	UNK	UNK	25,400	UNK
2012	19,050	UNK	207,200	4,000	UNK
2013	9,000	UNK	35,000	1,000	UNK
2014	19,800	UNK	1,030,000	UNK	UNK
2015	UNK	UNK	UNK	UNK	UNK
2016	10,600	UNK	250,000	8,500	UNK
2017	12,500	UNK	UNK	2,500	UNK
2018	6,800	UNK	553,200	5,000	UNK
AVG 70-79	27,260	57,189	148,865	42,520	820
AVG 80-89	22,330	25,454	328,475	44,599	1,265
AVG 90-99	9,385	16,453	745,246	21,694	2,210
AVG 00-09	10,775	7,918	406,584	12,043	3,700
AVG 10-18	12,847	UNK	535,067	6,657	UNK

Table 34.—Annual escapements for Canadian Area 3.

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK
1970	115,503	43,300	224,750	35,400	18,250
1971	247,524	44,325	136,525	28,825	17,000
1972	178,716	20,850	244,250	81,125	19,800
1973	284,682	9,400	70,786	66,025	3,550
1974	193,703	16,435	84,915	121,570	3,775
1975	70,874	15,410	141,758	30,550	6,025
1976	143,405	32,700	158,175	64,650	5,590
1977	400,371	35,605	229,155	57,775	9,060
1978	147,718	33,100	401,445	75,970	10,190
1979	212,944	18,655	50,625	42,313	8,180
1980	155,515	22,405	130,777	54,794	9,072
1981	255,818	34,429	204,425	16,508	7,925
1982	306,070	31,055	427,135	29,476	6,575
1983	185,150	36,360	738,205	45,115	8,055
1984	182,450	67,650	531,035	67,425	12,620
1985	361,208	44,539	508,855	48,971	7,999
1986	187,261	34,910	375,245	34,900	17,375
1987	184,242	31,652	371,866	31,387	8,695
1988	136,760	10,551	185,065	47,050	7,370
1989	112,609	20,690	641,270	33,770	12,525
1990	155,472	38,510	154,968	30,980	12,103
1991	269,850	16,777	388,100	23,835	3,967
1992	645,964	16,118	196,808	15,684	16,415
1993	440,740	7,510	314,102	79,951	24,126
1994	179,262	15,329	155,356	33,199	2,440
1995	237,991	13,967	349,017	40,451	1,256
1996	219,825	11,613	344,860	22,990	2,619
1997	237,312	3,989	216,527	20,302	957
1998	193,810	9,781	151,940	138,490	1,268
1999	197,550	13,216	464,775	33,467	724
2000	138,042	17,339	322,990	20,718	19,348
2001	117,692	26,366	826,632	30,472	32,340
2002	338,879	30,224	598,264	17,813	14,804
2003	199,458	18,254	841,856	40,002	28,274
2004	141,913	15,062	542,500	54,033	16,875
2005	146,813	19,418	944,415	30,855	15,571
2006	149,598	15,644	129,050	43,975	28,061
2007	113,637	9,181	589,059	17,225	24,964
2008	155,860	12,383	58,676	14,593	22,138
2009	179,652	17,262	640,955	20,680	29,576
2010	163,317	168,914	256,789	10,885	20,729
2011	192,584	85,910	160,418	9,879	10,826
2012	159,112	125,756	282,396	19,446	9,797
2013	210,263	518,485	543,757	16,635	9,034
2014	260,102	307,428	438,618	20,347	13,108
2015	389,503	42,517	390,255	51,800	19,465
2016	277,484	191,096	275,997	63,857	10,192
2017*	229,000	180,000	322,000	25,000	4,984
2018*	230,508	73,000	218,684	48,487	14,956
AVG 70-79	199,544	26,978	174,238	60,420	10,142
AVG 80-89	206,708	33,424	411,388	40,940	9,821
AVG 90-99	277,778	14,681	273,645	43,935	6,588
AVG 00-09	168,154	18,113	549,440	29,037	23,195
AVG 09-18	229,153	171,037	352,987	28,702	14,267

Table 35.—Annual escapements for Canadian Area 4.

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK
1970	678,652	84,725	971,800	10,890	21,150
1971	821,850	75,795	1,173,381	5,232	18,500
1972	697,237	57,514	1,765,154	36,920	20,651
1973	820,196	41,292	1,260,186	25,476	40,341
1974	723,898	38,798	367,605	14,102	31,576
1975	822,633	22,119	1,767,907	10,375	20,319
1976	575,590	32,891	693,850	11,071	13,053
1977	951,805	37,634	976,527	10,927	29,018
1978	424,075	49,963	724,597	8,153	22,676
1979	1,166,236	24,494	515,563	5,705	18,488
1980	542,164	31,587	745,367	25,007	23,400
1981	1,424,509	26,692	1,187,835	9,385	24,524
1982	1,140,737	24,521	739,247	4,626	16,990
1983	893,724	24,978	2,610,074	1,667	23,602
1984	1,055,215	50,409	1,037,698	29,764	35,864
1985	2,174,806	19,974	2,042,150	12,198	52,407
1986	716,312	54,587	2,323,944	12,780	59,719
1987	1,324,128	32,739	3,180,414	7,652	60,948
1988	1,417,543	11,293	828,090	108,921	68,307
1989	1,137,994	44,126	4,675,527	20,331	57,192
1990	989,566	76,662	2,611,520	6,343	55,541
1991	1,232,568	52,544	4,797,937	4,680	52,792
1992	1,550,109	34,703	821,950	11,290	67,118
1993	1,629,426	23,192	663,888	10,052	68,286
1994	1,026,816	33,830	242,285	7,967	22,611
1995	1,720,292	16,293	1,641,489	7,928	34,390
1996	1,727,147	14,759	2,025,648	8,404	73,684
1997	985,097	6,333	484,476	22,250	42,539
1998	521,417	39,044	272,871	14,664	46,774
1999	624,366	71,787	1,095,352	2,650	43,775
2000	1,394,177	29,922	260,481	4,650	51,804
2001	1,508,045	74,254	1,017,612	8,620	81,504
2002	610,851	46,129	232,451	3,060	44,771
2003	1,211,762	50,484	1,517,355	1,782	56,758
2004	923,187	32,303	653,350	2,020	39,552
2005	704,559	77,732	1,213,770	2,335	29,496
2006	1,172,699	50,332	116,367	685	36,682
2007	1,042,717	26,792	632,243	474	37,054
2008	867,676	33,145	69,898	510	34,615
2009	667,603	88,215	2,515,312	1,330	36,476
2010	662,755	44,956	325,404	1,117	42,339
2011	890,829	34,338	268,774	3,705	34,190
2012	1,100,573	29,771	241,029	2,254	34,213
2013	411,373	53,671	960,000	1,347	26,757
2014	1,646,038	55,626	1,480,946	1,028	28,496
2015	1,271,427	UNK	240,101	UKN	41,658
2016	882,225	24,224	49,932	UKN	31,297
2017*	887,647	16,753	465,109	700	17,413
2018*	1,490,159	23,372	17,652	856	29,408
AVG 70-79	768,217	46,523	1,021,657	13,885	23,577
AVG 80-89	1,182,713	32,091	1,937,035	23,233	42,295
AVG 90-99	1,200,680	36,915	1,465,742	9,623	50,751
AVG 00-09	1,010,328	50,931	822,884	2,547	44,871
AVG 09-18	991,063	41,214	656,426	1,542	32,225

Table 36.—Annual escapements for Canadian Area 5.

YEAR	SOCKEYE	COHO	PINK	CHUM
1970	23,750	10,600	139,850	12,250
1971	55,225	9,975	80,761	25,625
1972	24,400	21,820	280,725	17,725
1973	32,425	18,000	56,375	18,975
1974	43,925	18,450	337,075	34,025
1975	50,000	33,000	170,375	10,075
1976	19,050	21,475	348,450	19,625
1977	11,400	25,410	110,275	32,170
1978	28,650	18,650	264,850	13,775
1979	16,000	17,275	43,000	13,950
1980	16,800	11,525	225,825	9,350
1981	16,000	18,025	121,850	3,120
1982	19,450	2,620	70,300	7,370
1983	12,450	4,300	81,025	4,596
1984	17,150	8,175	162,450	6,830
1985	37,250	4,350	177,075	11,765
1986	25,000	22,289	313,900	16,450
1987	26,550	6,000	127,950	10,175
1988	33,400	7,775	162,000	12,750
1989	21,900	1,000	178,500	4,750
1990	5,676	5,006	202,244	3,607
1991	32,035	2,981	70,160	4,113
1992	22,895	3,982	41,161	731
1993	33,150	1,925	39,475	1,795
1994	6,800	800	44,725	870
1995	8,700	UNK	90,900	3,880
1996	24,100	UNK	270,100	3,200
1997	28,400	500	68,750	2,260
1998	10,450	900	161,250	9,250
1999	23,500	1,150	313,450	900
2000	22,600	800	278,150	1,070
2001	21,500	323	395,650	3,080
2002	9,700	1,400	409,810	4,965
2003	42,850	1,010	233,825	4,110
2004	18,200	355	88,330	2,670
2005	14,000	770	277,400	2,600
2006	22,600	285	31,880	2,575
2007	14,150	215	114,700	1,125
2008	2,900	650	29,080	2,226
2009	35	544	164,350	3,998
2010	5,232	1,179	40,704	1,273
2011	1,760	1,330	41,975	732
2012	3,590	740	81,708	649
2013	28,592	946	17,174	912
2014	21,274	1,664	205,862	1,846
2015	15,198	UKN	8,635	1,052
2016	7,048	UKN	5,943	UKN
2017	11,550	UNK	4,958	UNK
2018	1,051	398	1,410	1,136
AVG 70-79	30,483	19,466	183,174	19,820
AVG 80-89	22,595	8,606	162,088	8,716
AVG 90-99	19,571	2,156	130,222	3,061
AVG 00-09	16,854	635	202,318	2,842
AVG 09-18	9,533	972	57,272	1,450

FIGURES

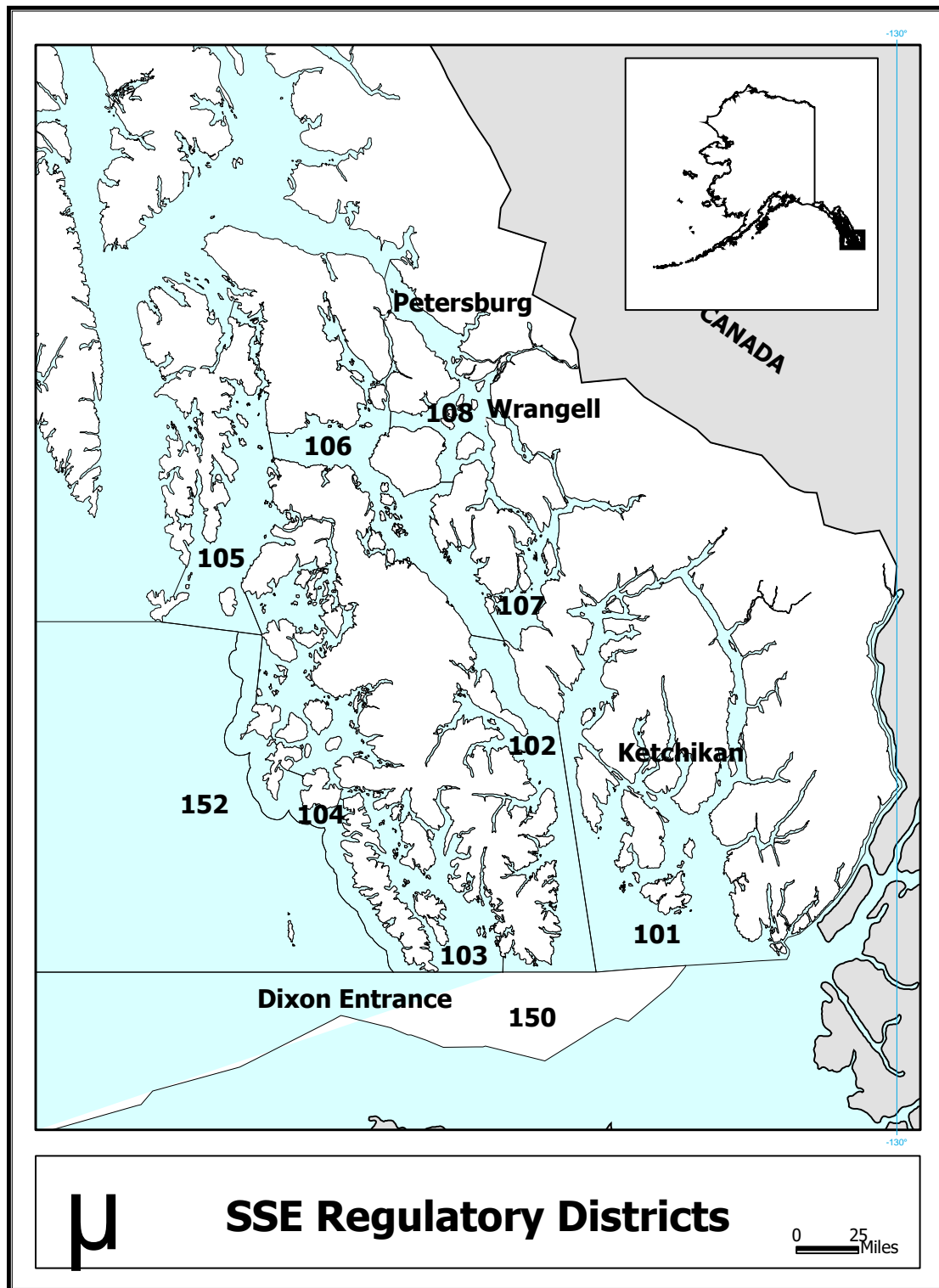


Figure 1.—Alaska Department of Fish and Game southern Southeast Alaska regulatory districts.



Figure 2.—Alaska District 101 drift gillnet and District 104 purse seine treaty fisheries.

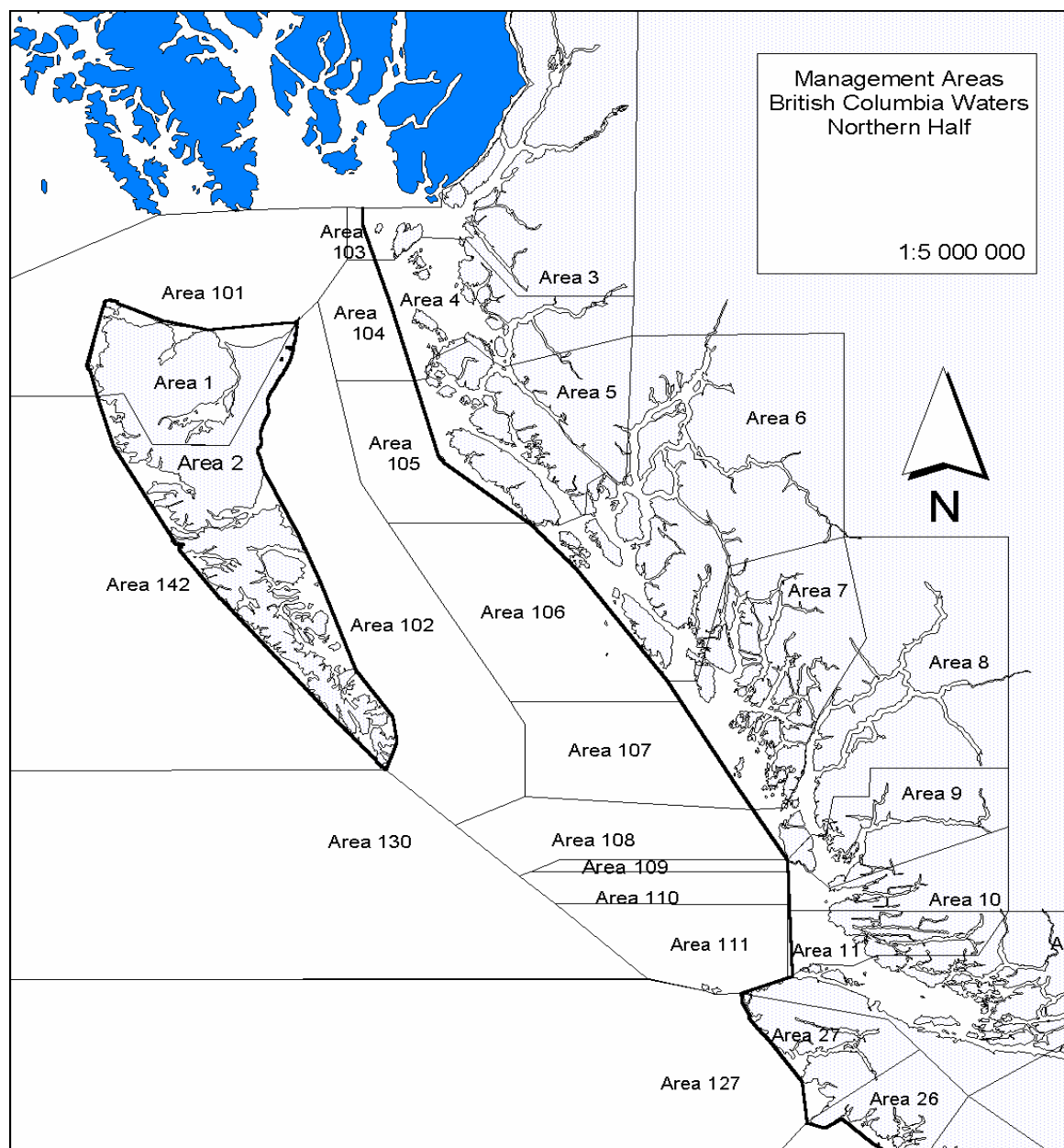


Figure 3.—Canadian Statistical Areas 1-10, northern British Columbia.

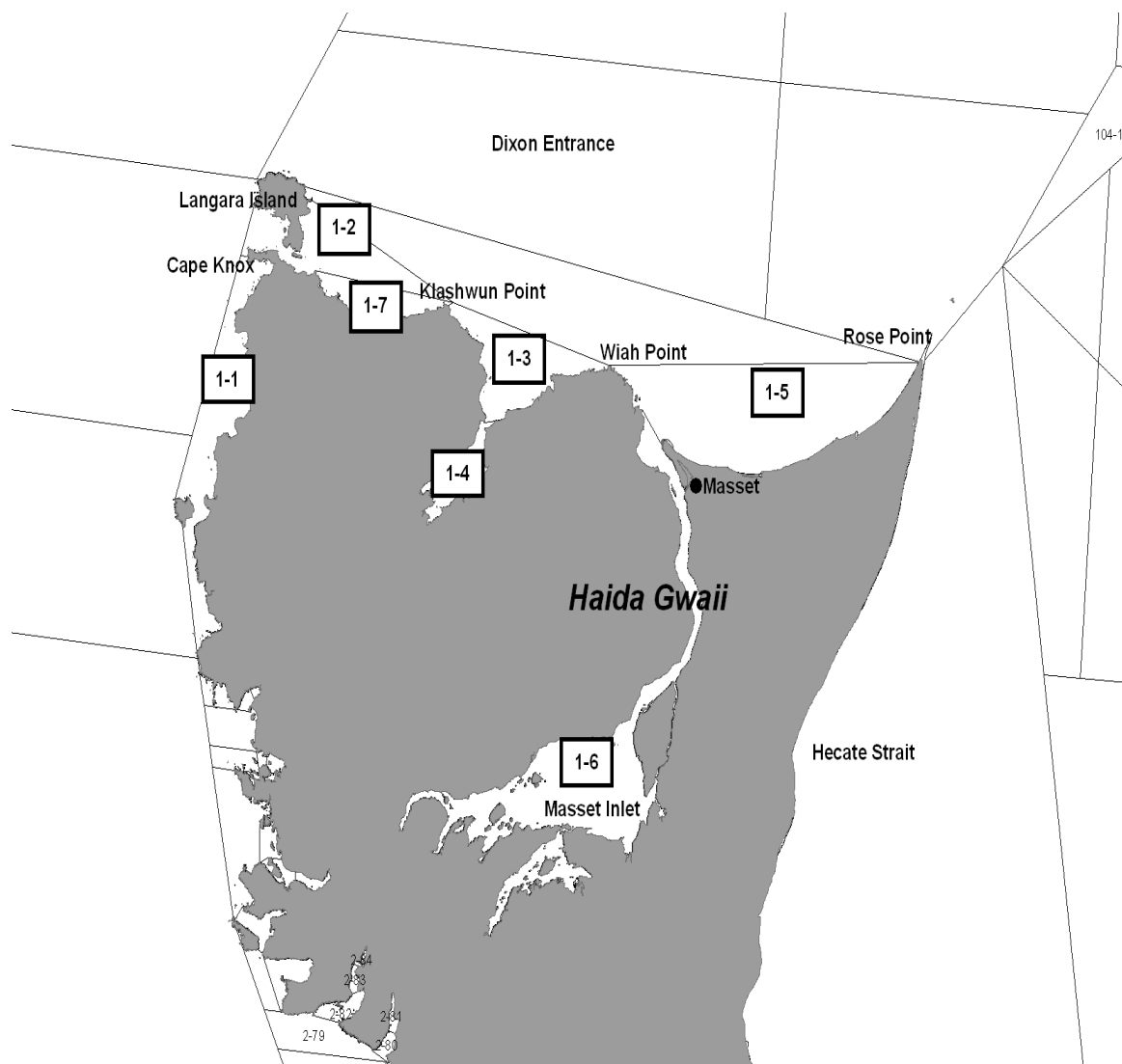


Figure 4.—Canadian Statistical Area 1 management sub-areas.

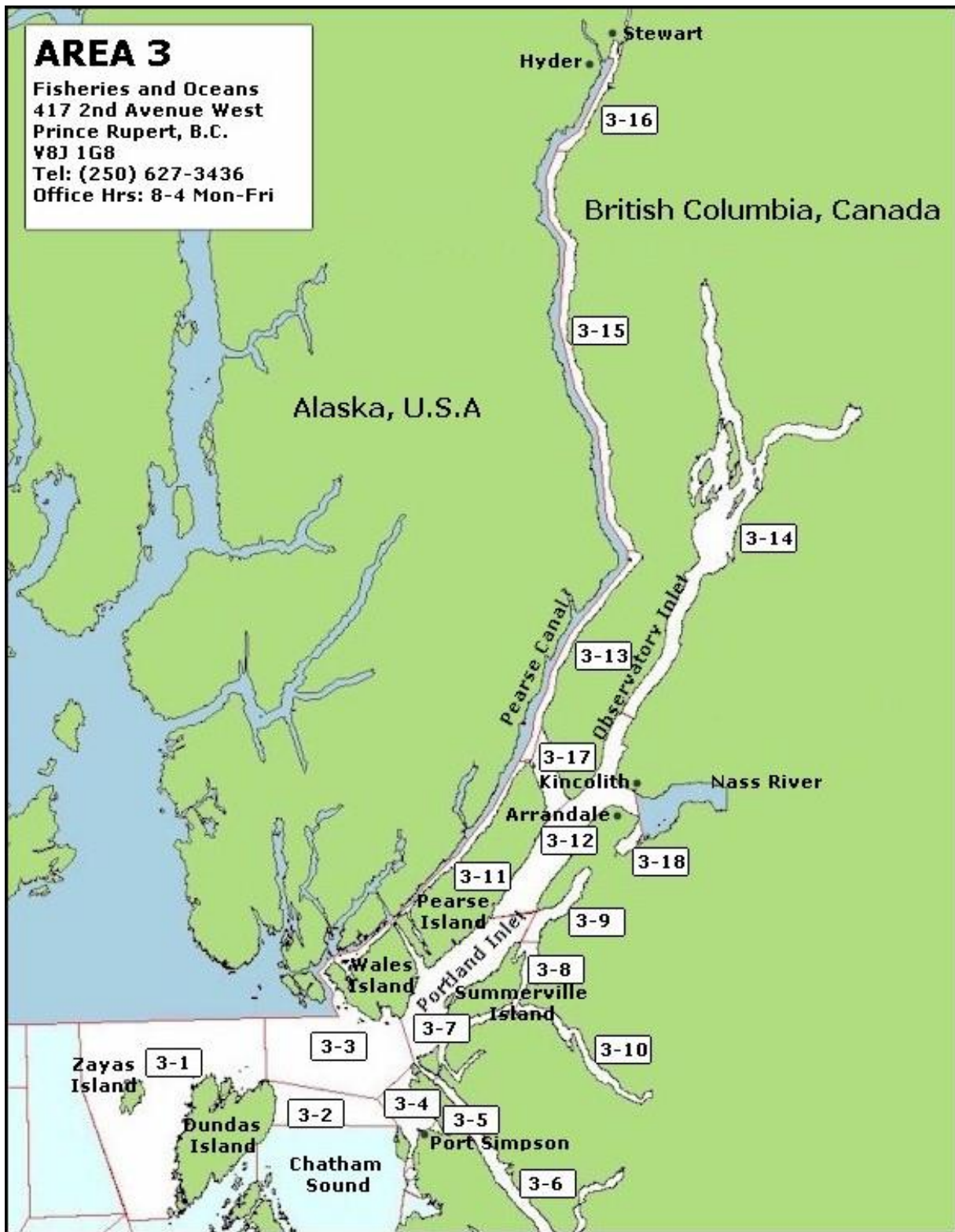


Figure 5.—Canadian Statistical Area 3 management sub-areas.

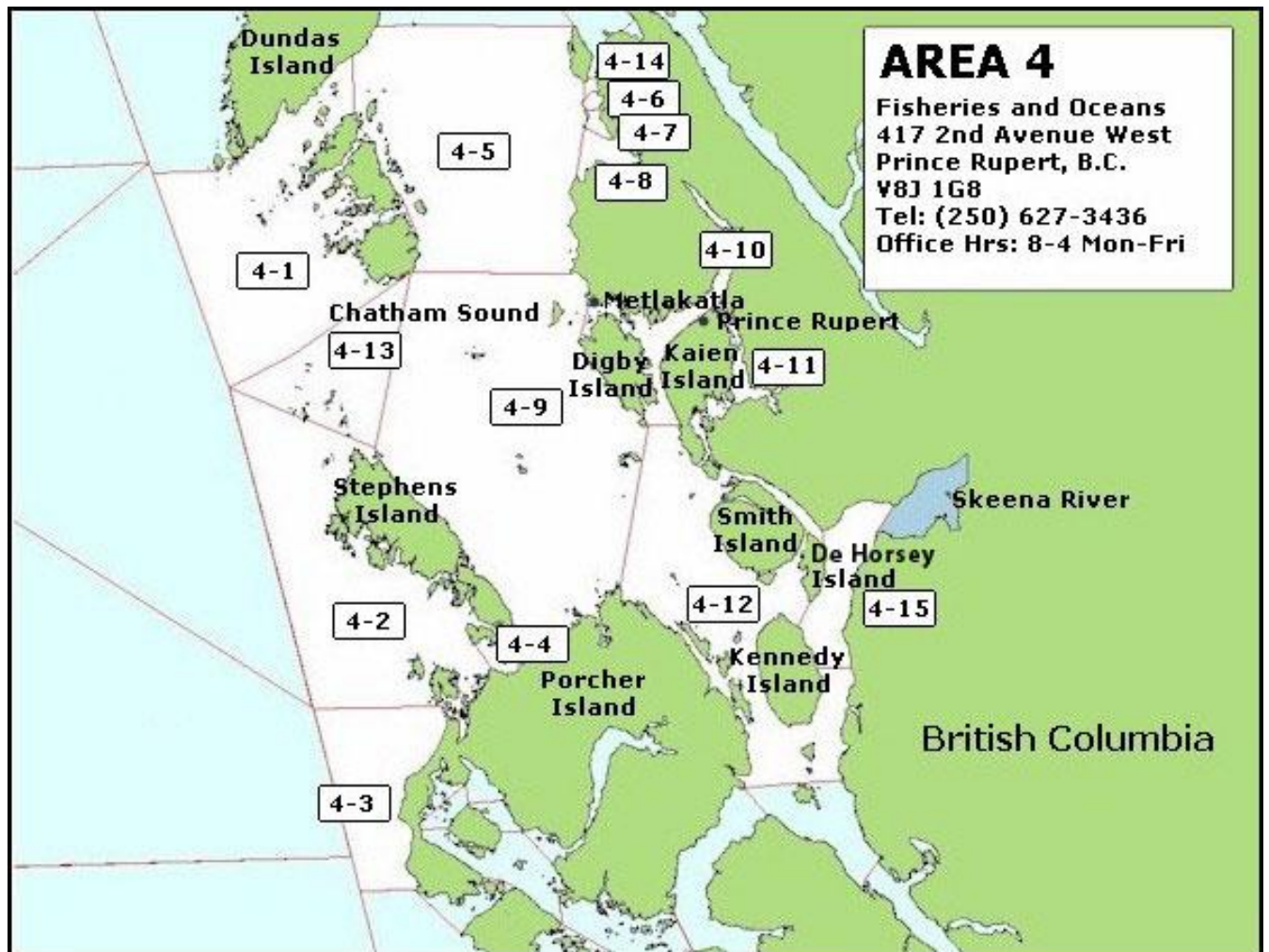


Figure 6.—Canadian Area 4 management sub-areas.

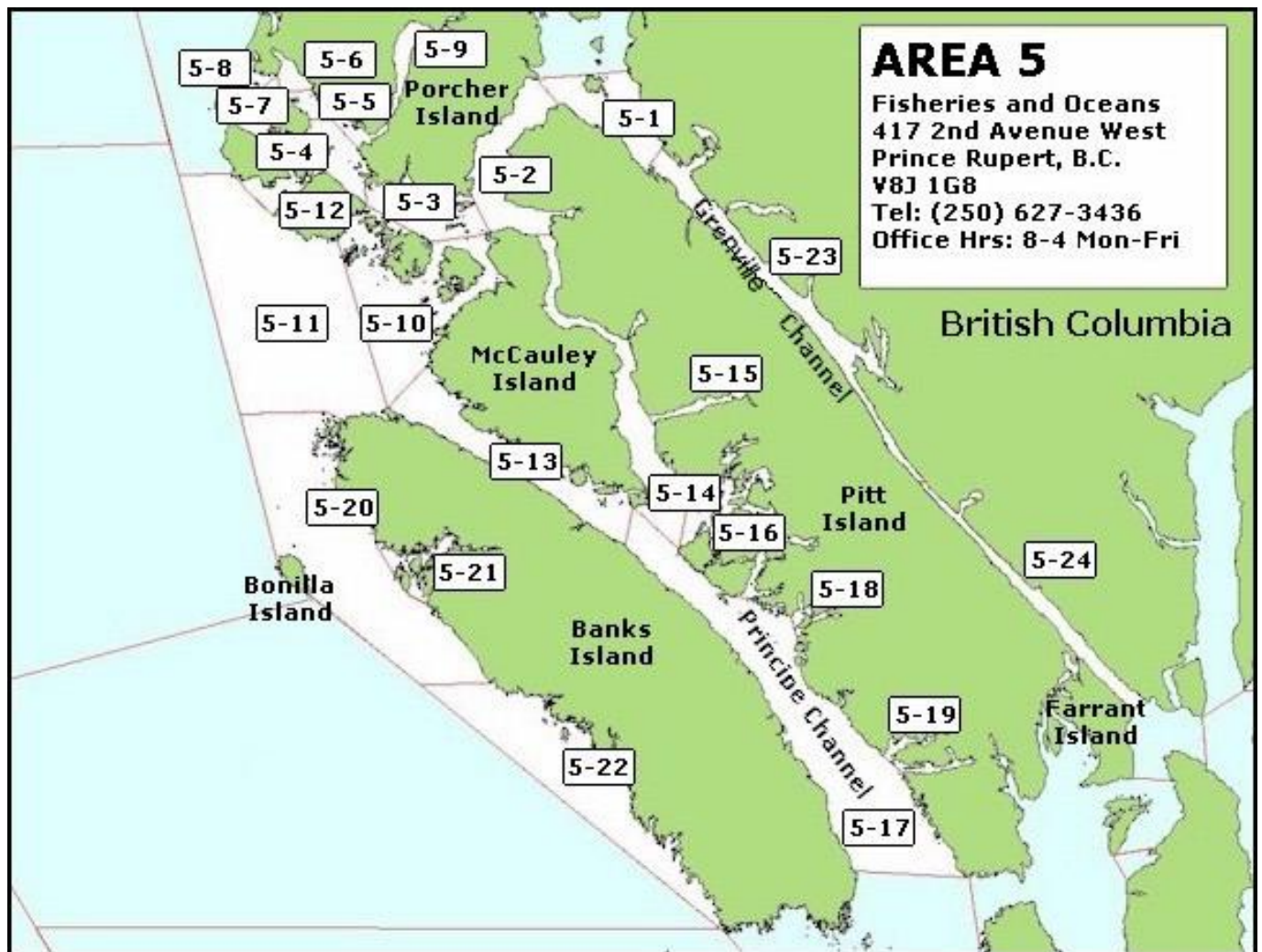


Figure 7.—Canadian Statistical Area 5 management sub-areas.