

THE PACIFIC SALMON COMMISSION

**JOINT NORTHERN BOUNDARY TECHNICAL
COMMITTEE**

**U.S./CANADA NORTHERN BOUNDARY AREA
2021 SALMON FISHERIES MANAGEMENT REPORT
AND 2022 PRELIMINARY EXPECTATIONS**

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LIST OF ACRONYMS WITH DEFINITIONS

AABM	Aggregate Abundance Based Management
AAH	Annual Allowable Harvest
ADF&G	Alaska Department of Fish & Game
AUC	Area-under-the-curve
DFO	Canadian Department of Fisheries and Oceans
ESSR	Excess to Spawning Salmon Requirement
FSC	Food, Social, and Ceremonial
ITQ	Individual Transferable Quota
MFLNRO	Ministry of Forest, Lands, and Natural Resource Operations
NBC	Northern British Columbia Dixon Entrance to Kitimat including Queen Charlotte Islands.
NBTC	Northern Boundary Technical Committee
NMFS	National Marine Fisheries Service
PSC	Pacific Salmon Commission
PST	Pacific Salmon Treaty
PSSI	Pacific Salmon Strategy Initiative
SFC	Skeena Fisheries Commission
TAC	Total Allowable Catch
TRTC	Total Return to Canada

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EXECUTIVE SUMMARY

This report reviews:

- 1) catch, effort, and management actions in the 2021 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 2022.

2021 FISHERIES

Pink salmon returns were above average throughout Southeast Alaska and the southern Southeast Alaska pink salmon harvest was 38.1 million (Districts 101-108, all harvest codes, all gear), which was 207% of the recent ten-year average. For all of Southeast Alaska, excluding the Yakutat area, the pink salmon harvest was 48.5 million fish, which was above the preseason forecast point estimate of 28 million, and the 19-42 million 80% confidence interval range of the forecast.

The total 2021 Southeast Alaska pink salmon escapement index of 15.67 million index fish ranked 10th since 1960. Biological escapement goals were met in all three subregions, but escapements in the Northern Southeast Inside Subregion were more variable (Table 5). On a finer scale, escapements were met or exceeded for all 15 districts in the region and for 40 of the 46 pink salmon stock groups in Southeast Alaska. The Southern Southeast Subregion includes all the area from Sumner Strait south to Dixon Entrance (Districts 101–108). The escapement index value of 9.81 million was above the escapement goal range of 3.0 to 8.0 million index fish.

Sockeye salmon harvests in the Alaska boundary area were above the 1985–2020 average in the District 101–104 traditional purse seine fisheries, and were well below the treaty period average in the District 101 drift gillnet fishery. The Hugh Smith Lake adult sockeye salmon escapement was 3,200, 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 44,500 fish, which was below the sustainable escapement goal range of 55,000 to 120,000.

Summer chum salmon harvests in the Alaska boundary area were below the 1985–2020 average in the District 101–104 traditional purse seine fisheries and well below the treaty period average in 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 below average at many index streams in southern Southeast Alaska, but the index of 77,000 fish in 2021 met the escapement goal.

Coho salmon harvests in the Alaska boundary area were above average in the District 101–104 traditional purse seine fisheries and average in 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 21,006 coho salmon in the 14 surveyed streams in the Ketchikan survey index was well above the escapement goal of 4,250–8,500 fish and was highlighted by a peak count of 9,000 fish at the Blossom

River. The total escapement of 903 coho salmon to Hugh Smith Lake was within the biological escapement goal range of 500–1,600 fish.

The 2021 season was challenging due to the continued broad impact of the COVID-19 pandemic on all aspects of society, including fisheries and fisheries management. In March 2020, the State of Alaska designated fisheries as critical infrastructure to protect the food supply chain and the economy. The Commissioner of the Alaska Department of Fish and Game (ADF&G) immediately directed staff to develop action plans to safely implement field projects to the extent practicable so that fisheries could be prosecuted with the least amount of disruption. Alaska was successful in maintaining all its domestic projects necessary for fisheries management with no incidence of COVID-19, and fisheries occurred as planned with extra safety precautions in place for vessel operators, processors, and staff.

In Canadian Area 1, there are no longer commercial net interception fisheries on passing salmon stocks. Area 1 pink stocks are even year dominant, little to no return is expected in odd years. As expected, there were no harvestable surplus of pink salmon identified in 2021. In response to the low returns of chum salmon over the past decade, with no inspected streams reaching escapement targets, no harvestable surplus of chum salmon was identified. Therefore, no pink or chum-directed terminal gillnet and seine fisheries occurred in 2021. There were two troll fisheries operating in Area 1 in 2021, the pink-directed AB-Line fishery and the Chinook ITQ fishery, coho retention was permitted in both fisheries. Under the Pacific Salmon Strategy Initiative (PSSI), the Coho-directed troll fishery was closed in 2021. While Area 1 pink catches were below the 2020 totals, total harvest exceeded the last decadal average. In contrast, coho catches in Area 1 were well below the last decadal average.

The Area 3 commercial gillnet fishery was closed under Pacific Salmon Strategy Initiative (PSSI), therefore no openings were permitted in 2021. There were four commercial seine openings in 2021, which were pink-directed fisheries, operated with non-retention/non-possession restrictions for coho, chinook, sockeye, and steelhead. These retention restrictions were put in place in response to low abundances of sockeye salmon to the Gitwinski fishwheels during the time of the openings and the decreasing trend of Area 3/Nass coho salmon abundance. Specific measures continue to be in place to rebuild local wild chum and Chinook salmon populations, including time and area closures and retention restrictions. Pink salmon catches were well below average in Area 3 for seines, with a total harvest of 159,017 pinks, compared to the previous odd-year decadal average of 698,911.

There were no commercial fishing opportunities in Canadian Area 4 in 2021. In-season sockeye escapement estimates past the Skeena Tyee test fishery did not meet commercial triggers; subsequently, there were no commercial gillnet or seine openings targeting Skeena Sockeye salmon. In response to poor preseason forecasts for Skeena Chinook, no directed gillnet fisheries were permitted in 2021.

Area 5 did not open to commercial net fishing in 2021 due to lack of identified harvestable Skeena sockeye salmon.

The preliminary post-season sockeye salmon escapement estimate to the upper Nass River is 349,333 exceeded the escapement target of 200,000. The preliminary post-season sockeye salmon escapement estimate to the Skeena River is 1,256,958 exceeding the escapement target of 900,000, with a preliminary total run estimate of 1,726,883. Pink salmon returns throughout the North Coast area were much lower than historical averages, based on brood year strength, and it is likely that escapement goals were not met in many cases. Chum salmon escapements in Areas 3 and 4 have been improving with management actions to reduce impacts to wild chum implemented through the respective chum rebuilding plans, though both areas remain below escapement targets.

The COVID-19 pandemic continued to impact Canadian fisheries in 2021. In 2020, in response to the COVID-19 pandemic, Public Safety Canada identified workers undertaking fishing and fish processing essential functions to ensuring the health, safety, and well-being of the population. Department of Fisheries and Oceans staff maintained all critical functions to implement fisheries, including licensing, monitoring, and enforcement, however some fisheries were implemented in a reduced or modified capacity due to concerns around COVID-19 transmission. Canada was able to meet all its PST obligations and does not anticipate any implications for meeting annual Treaty commitments due to the COVID-19 pandemic.

MANAGEMENT PERFORMANCE

Pacific Salmon Treaty based harvest sharing agreements were renewed in 2019 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 2021, the first potential opening was July 4 (week 28). The pre-week 31 fishing plan for District 104 was based on the preseason Canadian Department of Fisheries and Oceans (DFO) forecast returns of approximately 2.13 million Nass and Skeena sockeye salmon.

In the 2021 Treaty period (Alaska statistical weeks 28-30), 4,048 sockeye salmon and 11,201 sockeye salmon were harvested during two 8-hour opening in Week 29 (Table 4). In Week 30 a total of 7,564 sockeye salmon were taken during the initial 8-hour opening, and 26,491 sockeye salmon were harvested during the second 15-hour opening. The fishery was closed in Week 28 due to low Skeena River sockeye salmon abundance. A total of 48 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 30,000 and 39,000 Nass and Skeena sockeye salmon may have been harvested in the District 104 purse seine fishery during the 2021 Treaty period. The preliminary estimate for the number of Nass and Skeena sockeye salmon harvested was 32,312 fish in the District 104 purse seine fishery.

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 437,000 in 2021 which, minus an escapement goal of 200,000, would result in an AAH of about 237,000 fish. Using this forecast, the 2021 allowable harvest in the District 101 drift gillnet fishery was approximately 41,400 Nass River sockeye salmon. A total of 21,577 sockeye salmon were harvested, which was only 21% of the 1985-2020 average of 104,063 fish and was the fourth lowest harvest since the inception of the Pacific Salmon Treaty. A preliminary estimate based on genetics was 14,677 Nass River sockeye salmon harvested in the District 101 drift gillnet fishery. 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 2021 season.

The District 101 drift gillnet fishery opens by regulation on the third Sunday in June, which was June 20 (week 26) in 2021. 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 2021, 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 56.75 million pink salmon, the Alaskan Districts 101, 102 and 103 AAH was approximately 45.99 million pinks. The resulting Area 3-1 to 3-4 Canadian commercial net total allowable catch of this AAH was approximately 1.15 million pinks of Alaskan Districts 101, 102 and 103 origin. In the Canadian northern boundary area, pink salmon returns were anticipated to be average to below average for Area 3 and Area 4, based on brood year return strength. Actual returns to Area 3 and 4 were above the last decadal averages. In 2021, preliminary Canadian pink salmon catch in was 136,045, and the Alaska stock component of this catch is estimated to be 122,217, or 0.27 % of the AAH. This result is below the annex agreement of 2.49%.

In addition, 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 56.75 million pink salmon, the resulting Area 1 Canadian commercial troll total allowable catch of this AAH was approximately 1.18 million pink salmon 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. Additionally, pink retention was permitted in the Area 1 Chinook-directed troll fisheries. The Area 1 harvest equals a total of 81,799 pink salmon, with an estimated 77,103 being of Alaskan origin. This equates to 0.17% of the Alaskan District 101, 102 and 103 pink AAH, well below the annex agreement of 2.57%.

2022 FORECASTS

The Southeast Alaska pink salmon harvest in 2022 is predicted to be in the *weak* range, with a point estimate of 16 million fish (80% prediction interval: 10–24 million fish). The 2022 harvest forecast of 16 million pink salmon is approximately half of the recent 10-year average harvest of 34 million pink salmon. A forecast of 16 million pink salmon is an improvement over the previous even-year harvest in 2020 (8 million) and is just below of the average even-year harvest since 2006 (18 million). 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 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 improved Nass River sockeye salmon total run of 560,000 (with a 10% probability of the return exceeding 1.198 million and a 90% probability the return will exceed 267,000) is expected compared to recent trends. The sibling model forecast predicts a 50% probability of approximately 2.13 million sockeye salmon returning to the Skeena River in 2022 with a 10% probability of a return exceeding 4.53 million and a 90% probability the return would exceed 1.00 million. Below average pink salmon returns are anticipated to Areas 1, 3, 4 and 5, based on brood year escapements.

INTRODUCTION

This report reviews the 2021 Boundary Area pink, chum, coho, and sockeye salmon gillnet and purse seine fisheries of southern Southeast (SSE) Alaska and northern British Columbia and outlines preliminary expectations and fishing plans for 2022. 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 2021. 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

2021 Salmon Forecast

The 2021 pink salmon harvest in Southeast Alaska was expected to be *average*, with a point estimate of 28 million fish and a forecast range of 19-42 million fish. Formal forecasts were not made for subregions or for species other than pink salmon in Southeast Alaska.

Review of the 2021 Fishing Season

Commercial fisheries harvested 41.8 million salmon in southern Southeast Alaska in 2021. 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 38.1 million (91%) pink, 2.2 million (5%) chum, 708,924 coho (2%), 828,523 (2%) sockeye, and 86,707 (0.2%) 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 1985–2020 average.

District 101 Purse Seine Fishery

The District 101 purse seine fishery opened July 4, 2021 for the first of 17 fishing periods (Table 1). The fishery harvested 9,854,467 pink salmon, 94,591 sockeye salmon, 200,944 chum salmon, 54,394 coho salmon, and 9 Chinook salmon (Table 1). The number of days that the fishery was open was 140% of average, and the number of boats fishing was 90% of average. The pink salmon harvest of 9,854,467 was 186% of average and catches were above average in all weeks of the fishery. Sockeye salmon catches were also low in the beginning weeks but were higher in the middle and end of the season, and the catch of 94,591 fish was 109% the 1985–2020 average. The total chum salmon catch of 200,944 was 70% of average and the total coho salmon harvest of 54,394 fish was 152% of average.

District 102 Purse Seine

Limited portions of District 102 near Kendrick Bay were opened during weeks 26 and 27 (June 20–July 3) to access returns of SSRAA enhanced summer chum salmon returning to Kendrick Bay. The fishery was open only 39 hours in weeks 26 and 27 to address Chinook conservation concerns. A total of 17 purse seine

vessels fished in week 26 and 37 in week 27, harvesting 17,955 chum salmon (Table 2). The traditional seine fishery in District 102 targeting local stocks of pink salmon opened Sunday, July 4 (Week 28). During the traditional fishing period there were 17 openings that ranged from 15 to 63 hours in duration (Table 2).

The District 102 purse seine fishery harvested 7,741,394 pink salmon, 69,461 sockeye salmon, 435,263 chum salmon, 54,035 coho salmon, and 0 Chinook salmon (Table 2). The number of days that the fishery was open was below average in weeks 26 and 27, and above average in July and August. The overall number of days open was 82% of the 1985–2020 average. There were two openings targeting fall chum salmon. The number of boats fishing the district for the fall fishery and harvest was confidential (Table 2).

Pink salmon harvests were well above average throughout weeks 31 through 36 of the 2021 season, and the total harvest of 7,741,394 fish was 201% of the 1985–2020 average (Table 2). Sockeye salmon catches were below average in the beginning of the season and above average at the end of the season. The total sockeye salmon catch of 69,461 fish was 170% of average. Catches of summer-run chum salmon peaked in mid-July and the total chum salmon catch of 435,263 fish was 93% of the 1985–2020 average. Catches of coho salmon peaked in week 31 with a harvest of 9,673 fish and again in week 36 with 8,237 fish. The total harvest of 54,035 fish was 114% of the 1985–2020 average.

District 103 Purse Seine

The District 103 purse seine fishery opened July 18, 2021 for the first of 13 fishing periods (Table 3). The fishery harvested 4,129,189 pink salmon, 28,229 sockeye salmon, 154,006 chum salmon, 29,347 coho salmon, and 49 Chinook salmon (Table 3). The number of days that the fishery was open was above average, and the number of boats fishing was below average for the 2021 fishing season.

Pink salmon catches peaked in week 33 with a harvest of 1,604,814 fish, and harvest remained high through openings in week 34 and the one opening in week 35. The total pink salmon harvest of 4,129,189 was 111% of the 1985–2020 average. Sockeye salmon catches were above average and the total catch of 28,229 fish was 127% of average. Chum salmon harvests were above average through early August and then dropped sharply in the final three weeks of the fishery. The total chum salmon harvest of 154,006 fish was 148% of the long-term average. Catches of coho salmon were well above average in week 32 and then dropped well below average in weeks 33 through 36. The total coho salmon harvest of 29,347 fish was 98% of the 1985–2020 average.

District 104 Purse Seine Fishery

The District 104 purse seine fishery opens by regulation on the first Sunday in July. In 2021, the first potential opening was July 4 (week 28). The pre-week 31 fishing plan for District 104 was based on the preseason Canadian Department of Fisheries and Oceans (DFO) forecast returns of approximately 2,134,000 Nass and Skeena sockeye salmon. In the 2021 Treaty period (Alaska statistical weeks 28–30), an estimated 25,300 sockeye salmon were harvested during a two 8-hour opening in week 30, an 8-hour opening in week 31, and a 15-hour opening in week 31 (Table 4). The fishery was closed in weeks 28 due to low Skeena River sockeye salmon abundance. A total of 48 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 30,000 and 39,000 Nass and Skeena sockeye salmon may have been harvested in the District 104 purse seine fishery during the 2021 Treaty period. 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 2021, a total of 10,746,081 pink salmon, 496,404 sockeye salmon, 212,045 chum salmon, 97,575 coho salmon, and 6,516 Chinook salmon were harvested in the District 104 purse seine fishery (Table 4). The

number of days that the fishery was open, was above the 1985-2020 average and the number of boats fishing was below the 1985–2020 average. Purse seine fisheries were on non-retention for Chinook salmon throughout most the season, except for weeks 32 through 34. Sockeye salmon harvests were below average in the treaty period (week 28–30) harvest of 49,304 fish was 55% of the 1985–2020 average. The total sockeye salmon harvest of 494,748 was 111% of the 1985–2020 average of 444,000 fish. Harvests of coho salmon were just slightly below average and the overall harvest of 97,575 fish was 90% of the long-term average. The overall pink salmon harvest of 10,746,081 was 141% of the long-term average and the chum salmon harvest of 212,045 was 75% of the long-term average.

Districts 105, 106, and 107 Purse Seine Fisheries

For the 2021 season, the combined Districts 105, 106, and 107 traditional state managed purse seine fisheries harvested 2,559,938 pink salmon, 92,017 chum salmon, 16,160 coho salmon, and 50,014 sockeye salmon.

District 101 Drift Gillnet Fishery

The 2019 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 2021 season, DFO forecast a total return of 437,000 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 20 in 2021. 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 Week 37 (September 5) management was based on the strength of wild stock fall chum and coho salmon.

The District 101 drift gillnet fishery opened Sunday June 20 (week 26) in 2021. 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 52, which was approximately 51% of the 1985-2020 average of 102 boats. A total of 21,577 sockeye salmon were harvested, which was only 21% of the 1985–2019 average of 104,000 fish, and the fourth lowest harvest since the inception of the PST. Harvests of sockeye salmon were below treaty period averages throughout the season and were well below average in the beginning weeks of the season. The cumulative sockeye salmon harvest prior to the initiation of the Pink Salmon Management Plan in Week 30 was 8,059 fish, or about 37% of the season's total sockeye salmon harvest. The preliminary estimate of Nass River sockeye salmon harvested at Tree Point in 2021 was 14,677 fish.

Pink salmon harvests were below average most of the season and the total harvest of 144,365 fish was 31% of average. Chum salmon harvests were also below average in most weeks of the fishery and the total harvest of 171,272 fish was 60% of average. Coho salmon harvests were above average early in the season and then average throughout the rest of the season and the total harvest of 47,362 fish was 100% of the treaty period average. Chinook salmon harvests were above average in most weeks of the season.

District 106 Drift Gillnet Fishery

The 2021 harvest in the District 106 commercial gillnet fishery included 156,483 pink salmon, 51,776 sockeye salmon, 136,560 chum salmon, 74,756 coho salmon, and 965 Chinook salmon (Table 6). The number of boats participating in the District 106 fishery was below average during every week except week 32. Chinook salmon harvest was below average, and the total Chinook salmon harvest of 965 fish was 46% of the recent 10-year average. Sockeye salmon harvests were below average all season, and the total sockeye salmon harvest of 51,776 fish was 82% of the recent 10-year average. The overall harvest of 74,756 coho salmon was 63% of the recent 10-year average of 136,800 fish. Pink salmon harvests were below average throughout the season, and the overall harvest of 156,483 fish was 50% of the recent 10-year average. Chum salmon harvests were near average throughout the season and the overall harvest of 136,560 chum salmon was 91% of average.

Annette Island Reserve Fisheries

In 2021, the Annette Island purse seine fishery harvested 2,584,339 pink salmon, 46,151 chum salmon, 10,516 sockeye salmon, 9,188 coho salmon, and 478 Chinook salmon. The 2021 Annette Island drift gillnet fishery harvested 147,514 pink salmon, 88,052 chum salmon, 2,808 sockeye salmon, 14,454 coho salmon, and 819 Chinook salmon (Tables 7-8).

Pink, Sockeye, and Chum Salmon Escapements

The total 2021 Southeast Alaska pink salmon escapement index of 15.67 million index fish ranked 10th since 1960. Biological escapement goals were met or exceeded in all three subregions (Table 9). On a finer scale, escapements met or exceeded management targets for all 15 districts in the region and for 40 of the 46 pink salmon stock groups in Southeast Alaska. The Southern Southeast Subregion includes all the area from Sumner Strait south to Dixon Entrance (Districts 101–108). The escapement index value of 9.81 million was above the escapement goal range of 3.0 to 8.0 million index fish. The pink salmon harvest of 38.1 million in the Southern Southeast Subregion was 207% of the recent 10-year average. The overall Southeast Alaska pink salmon harvest of 38.1 million fish was approximately 207% of the 2011–2020 average of 19.1 million.

Sockeye salmon escapements throughout Southeast Alaska were mixed in 2021, and escapement targets were met for 8 of the 12 sockeye salmon systems with formal escapement goals. The Hugh Smith Lake adult sockeye salmon escapement was 3,200, 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 44,500 fish, which was below the sustainable escapement goal range of 55,000 to 120,000, though a considerable improvement over recent previous years.

For summer-run chum salmon, lower bound sustainable escapement goals were not 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 below average at many index streams in southern Southeast Alaska, but the index of 77,000 exceeded the lower bound of the escapement goal in 2021. 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 55,000 exceeded the upper bounds 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 2019 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 total return of Nass and Skeena River sockeye in 2021 was 2,229,421 fish. This return would have allowed a treaty-period catch in the District 104 purse seine fishery of 27,671 Nass and Skeena river sockeye salmon. The 2021 total catch of sockeye salmon during the District 104 treaty period was 49,304 fish. Annual AAH fishery performance in the District 104 fishery is presented in Table 10 with bilaterally accepted numbers through 2020 and preliminary run reconstruction estimates for 2021. The preliminary estimates of Nass and Skeena sockeye salmon harvested prior to week 31 in the District 104 purse seine fishery was 32,312 fish in 2021.

District 101 Drift Gillnet Fishery

The 2019 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 200,000 sockeye salmon, 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 total return of Nass River sockeye salmon in 2021 was 502,538 fish. This return allows a catch in the District 101 gillnet fishery of 41,750 Nass River sockeye salmon. The 2021 total catch of sockeye salmon in the District 101 gillnet fishery was 21,577 fish, which was only 21% of the 1985-2019 average of 104,000 fish and was the fourth 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 2020 and preliminary run reconstruction estimates for 2021. The preliminary estimate of Nass River sockeye salmon harvested in the District 101 drift gillnet fishery in 2021 was 14,677 fish.

2022 Southeast Alaska Pink Salmon Forecast

The Southeast Alaska pink salmon harvest in 2022 is predicted to be in the *weak* range, with a point estimate of 16 million fish (80% prediction interval: 10-24 million fish). An actual harvest of 16 million pink salmon would be approximately a half of the recent 10-year average of 34 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 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

2021 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** Haida Gwaii stocks are even-year dominated, odd-year cycle opportunities are determined in season. Given the trends in low odd-year escapements, no opportunities are anticipated.
- Chum** There has been a continued trend of poor productivity and low returns over the last decade. Fisheries will only occur if a terminal surplus is identified in season.

Area 3 Expectations

- Sockeye** Pre-season Nass River Sockeye returns are forecast to be below average with an expected total return to Canada (TRTC) from 217,000 (75% probability) to 469,000 (25% probability) and a point estimate (50% probability) of 318,000 based on a sibling-regression model. The returns of Nass Sockeye will be monitored in-season considering increasing uncertainty and recent trends towards lower survival.
- Pink** Below average return was expected based on below average brood year escapements.
- Chum** Area 3 chum stocks remain below target levels with a below average return expected in 2021. Fishing opportunities were constrained to reduce impacts to wild chum returning to Area 3 streams.

Area 4 Expectations

- Sockeye** The sibling model forecast predicted a 50% probability of approximately 1.69 million sockeye returning to the Skeena in 2021 with a 10% probability of the return exceeding 3.61 million and a 75% probability the return would exceed 796,000. Modest surpluses are anticipated, and commercial opportunities will be based on in-season estimates.
- Pink** A below average return was expected based on brood year escapements. Area 4 pink salmon returns are generally stronger in odd years but have been trending low in recent years. Fishing opportunities in Area 4 will be based on in-season indications of abundance, but are not anticipated.
- Chum** Skeena chum escapements are depressed and well below average returns are expected. No harvestable surpluses of Area 4 chum are expected.

Area 5 Expectations

- Sockeye** Commercial fisheries targeting sockeye salmon are concurrent with fisheries targeting Skeena River stocks. The sibling model forecast predicted a 50% probability of approximately 1.69 million sockeye returning to the Skeena in 2021 with a 10% probability of the return exceeding

3.61 million and a 75% probability the return would exceed 796,000. 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 continue to follow a trend of poor returns in recent years. Fishing opportunities in Area 5 will be based on in-season indications of abundance, but are not anticipated.

Chum Local chum stocks are depressed with a well-below average return expected in 2021. No harvestable surpluses are expected.

Review of 2021 Fishing Season - Net and Troll Fisheries

Area 1

Commercial net interception fisheries on passing salmon stocks no longer occur in Area 1, focusing instead on local pink and chum salmon stocks (Figure 3). Odd year pink stocks continue to have very weak returns and have not provided fishing opportunities in recent history (>40 years). In addition, chum salmon returns to Area 1 have been consistently at or below management targets for the past two decades. Therefore, no pink or chum surpluses were identified in-season therefore there were no terminal gillnet or seine fisheries in Area 1 (Tables 12-13).

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. The Chinook-directed salmon fishery in portions of Area 1 was opened from August 12 to September 30, in response to concerns of Fraser River and West Coast Vancouver Island Chinook stocks of concern. The pink-directed troll fishery in Dixon Entrance was opened from July 1 to September 30 at the A-B Line. The coho-directed troll fishery was closed due to the Pacific Salmon Strategies Initiative (PSSI) in late June and did not open in 2021, however coho retention was permitted in the pink-directed A-B Line and Chinook ITQ troll fisheries. Chum salmon retention was restricted throughout the season to protect mainland and Haida Gwaii stocks. Sockeye salmon by-catch retention was permitted in portions of Area 1 and 101 from July 1st to August 4th when the in-season forecasting remained below the commercial Skeena sockeye TRTC threshold of 1.05.

The preliminary catch estimate for the Area 1 portion (includes Area 101) of the 2021 troll fishery is 73 sockeye, 61,754 coho, 81,796 pink and 42,562 Chinook salmon (Table 14).

Area 3

Management units (sub-areas) of Statistical Area 3 are outlined in Figure 5. In previous years, the Area 3 sockeye salmon gillnet fishery has commenced in mid-June to assess stock strength of returning Nass-bound sockeye salmon. However, in 2021 with the announcement of the PSSI, the Area 3 sockeye salmon gillnet fishery was closed due to conservation concerns. Since 1994, in-season escapement estimates have been provided by the Nisga'a fishwheel operations conducted in the lower Nass River approximately five miles upstream from the old Nass gillnet test fishery site. In 2021, fishwheel operations began on May 31st and closed for the season on September 11th. Two high-water shutdown periods were experienced in 2021 in June and early July (June 2-6 and June 21- July 3). Water levels at the fishwheel were the second highest on record over the 28 years of operation. The Nass River fishwheel 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 17) net fishery is managed for Nass sockeye and local pink salmon abundance from mid-July to late August or early September. In 2021, gillnet fisheries in Area 3 were closed due to conservation concerns (Table 15-17).

In 2021, all Area 3 seine fisheries, which were pink-directed fisheries, operated with non-retention/non-possession restrictions for coho, chinook, sockeye, and steelhead. Incidental sockeye salmon were restricted due to the low escapement past the Gitwilsilkw fishwheels during the time of the openings. Chum salmon retention was permitted in all four of the seine fishery openings but catches declined in the latter two openings. Seine opportunities ceased on July 30 until escapement into the main pink rivers showed improvement (Table 18, 20). Unfortunately, pink salmon escapements did not improve, and no further opportunities were granted. No seine opportunities were permitted in Area 3 sub areas 7-17 (Table 19) and no troll opportunities were identified in Areas 3/103 (Table 21).

The first commercial fishery opening in Area 3 was in Week 29, with a single 16-hour opening on July 12, targeting pink salmon, with retention of chum salmon permitted. Fishing was restricted to sub-areas 3-3 and 3-7, the outside of Area 3 southwest of Wales Island and south of Sommerville Island. Fishing effort was low, with only 17 vessels participating in the opening. A total of 8,422 pink salmon and 4,063 chum salmon were caught during the week (Table 18-20).

Two additional 16-hour seine openings occurred on July 19 and 20 (Week 30) with low effort, 18 and 17 boat days, respectively. Opening occurred in sub areas 3-3 and 3-7, with retention of pink and chum salmon, all other species remained prohibited. The total weekly seine catch was 114,553 pink salmon and 9,862 chum salmon (Table 18-20).

The final 16-hour seine opening in Area 3 for 2021 occurred on July 30 (Week 31) with only pink salmon retention. This opening had a boundary reduction to only include 3-3 and 3-7B, encompassing the 0.5nm boundary around Wales Island. Effort remained low, with 20 boat days, resulting in a final weekly catch of 36,042 pink 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 30 until escapement into the main pink rivers showed improvement. Unfortunately pink escapements did not improve and no further opportunities were granted.

There were no Nisga'a marine fisheries in 2021. Total Nisga'a Treaty and Harvest Agreement catches in both the Nass River and the marine approach areas included 39,285 sockeye, 1,750 coho, 3,281 pink, 19 chum, and 5,682 Chinook salmon. No Nisga'a In-land Economic Demonstration Fishery occurred in 2021. In-river, the Gitanyow First Nation had an approved In-land Economic Demonstration Fishery, which harvested 8,108 sockeye. In 2021, there was also a Marine Demonstration Fishery operated by the North Coast Skeena First Nations Stewardship Society in the Nass Approach Waters, which harvested 13,234 pink salmon. This marine demonstration fishery occurred for one day, July 22, in the same boundary area as the 2021 seine commercial fisheries.

By the end of the season, the TRTC estimate was 413,000 sockeye salmon, exceeding pre-season expectations. The preliminary post-season sockeye salmon escapement estimate to the upper Nass River of 349,333 exceeded the escapement target of 200,000. The Meziadin River sockeye escapement of 273,955 was well above both the 2000-2020 average (150,000) and the desired escapement target (160,000). The Kwinagess River sockeye salmon escapement of 8,478 is above the 2002-2020 average (4,700).

Area 4

The sibling model forecast predicted a 50% probability of approximately 1.69 million sockeye returning to the Skeena in 2021 with a 10% probability of the return exceeding 3.61 million and a 75% probability the return would exceed 796,000. Modest surpluses were expected, but would be dependent on in-season estimates of abundance. In-season abundance indicators include the Tyee test fishery, various in-river fish counting facilities, harvest rate and CPUE models, First Nation's FSC fish catches, and commercial catches in Area 4 and other fishing areas in Northern BC and southern Southeast Alaska. The Tyee test fishery operated from June 10 to September 26.

With the concerns surrounding Chinook salmon returning to Area 4 no targeted Chinook gillnet openings were planned for 2021. Due to late run timing of Skeena sockeye past the Tyee test fishery, there were no commercial fisheries in Area 4 in 2021 (Tables 22-24). The Skeena TRTC 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 in-season: a simple p50 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. Post-season analysis indicates that the 50% peak entry date of Skeena sockeye salmon into the outer portion of the Skeena sockeye fishing area was 5 days later than the average date of July 22/23. Later run-timing for Skeena sockeye entering the outer portion of Areas 3, 4 and 5 has most recently been observed in 7 of the last 10 years. The preliminary post-season sockeye salmon escapement estimate to the Skeena River is 1,021,519 exceeding the escapement target of 900,000, with a preliminary total run estimate of 1,726,883.

Recreational fishing for Skeena River sockeye started closed, on August 18 sockeye opened to one per day and increased to 2 on September 2. On July 15, Chinook recreational fishing was closed in the entire Skeena River watershed and the river and lakes in Region 6 flowing into PFMA's 3 to 6, not including the Nass and Kitimat rivers, to fishing for Chinook salmon. In the marine water of Area 4, all salmon species began open. Recreational fishing for Chinook was reduced to one per day in marine waters in Area 4 on June 1. On June 18, Chinook closed until July 31 to address conservation concerns. The Lower Skeena Creel Survey started on June 12 and continued through September 18. The survey reported a retained catch of 534 large Chinook, 538 jack Chinook, 583 coho, 1,737 sockeye, and 167 pink salmon. There was no creel program on Babine Lake in 2018.

First Nation's Food, Social and Ceremonial fisheries throughout the Skeena River mainstem and marine approach waters reported a harvest of 139,553 sockeye, 2,747 coho, 13,557 pink, 98 chum and 4,415 Chinook salmon. In addition, two Excess to Spawning Salmon Requirement Fisheries were licensed in the Moricetown Canyon and Babine River counting fence that were targeting pink and jack sockeye, respectively. Total harvest were 1,427 pink salmon at Moricetown Canyon, the Babine Fence jack sockeye ESSR did not proceed.

Escapement to the Pinkut spawning channels and creek was 76,688 effective spawners, of a total capacity of 88,000. Female sockeye target of 29,000 were not met with only 22,000 female sockeye loaded into the channel. In 2021, a fence breach in Pinkut Creek on September 12 so female loading numbers are unknown. Egg targets were not met in Pinkut channel and of unknown status in Pinkut Creek. The combined escapement to Fulton River spawning channels #1 and #2 and the Fulton River above the fence totaled 382,000 effective spawners, of a total capacity of 381,000. At the Fulton River facility, egg deposition targets were not reached in both spawning channels. At the Fulton facilities, there was a strong jack and 5-year old return compared to 2020.

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 2021, there were no commercial net fisheries in Area 5 (Tables 25-27).

Fishing Effort (Seine and Gillnet)

In Area 1, the total commercial gillnet effort was 0 boat days, which is below the 2000-2009 average effort of 3 boat days, and the same as the decadal average effort of 0 boat days. The total Area 1 seine effort of 0 boat days is also below the 2000-2009 average of 1 boat day, and the previous decadal average of 2 boat days. For gillnets and seines there were no openings, this was below or the same as the 2000-2009 averages of 3 and 0 days fishing, respectively, and below the decadal averages of 0 and 1 days, respectively (Table 28).

In Area 3, the total commercial gillnet effort was 0 boat days, which is well below the 2000-2009 average effort of 2,522 boat days, and the decadal average effort of 1,013 boat days. The total Area 3 seine effort of 72 boat days is also well below the 2000-2009 average of 369 boat days, and the previous decadal average of 145 boat days. For gillnets there were no openings, while seines fished four openings, well below the 2000-2009 averages of 15 and 13 days fishing, respectively, and below the decadal averages of 9 and 8 days, respectively (Table 28).

There were no commercial fishing opportunities granted in Area 4 in 2021, thus the total number of boat days and days fishing for gillnet and seine nets was zero. This is well below the gillnet boat days and days fishing 2000-2009 averages of 2,780 and 10, respectively, and below the decadal averages of 593 and 5, respectively. Also, well below the seine fishery boat days and days fishing 2000-2009 averages of 228 and 8, respectively, and below the decadal averages of 40 and 4 (Table 28).

Finally, in Area 5, the total commercial gillnet effort was 0 boat days, which is below the 2000-2009 average effort of 53 boat days, and the decadal average effort of 4 boat days. The total Area 5 seine effort of 0 boat days is also well below the 2000-2009 average of 35 boat days, and the previous decadal average of 2 boat days. For gillnets and seines there were no openings, below the 2000-2009 averages of 5 and 8 days fishing, respectively, and below the decadal averages of 2 and 1 days, respectively (Table 28).

Salmon Escapements

The cumulative preliminary escapements for Canadian Areas 3 to 5 in 2021 are 1,377,645 sockeye; 25,622 coho; 1,332,822 pink; 65,483 chum; and 23,972 Chinook salmon (Table 29).

Annual salmon escapements for Canadian Area 1, 3, 4, and 5 can be found in Tables 30-33.

Management Performance Relative to Treaty Requirements

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

For 2021, Canada was to manage the Area 3-1 to 3-4 net fisheries to achieve an annual catch share of 2.49% of the annual allowable harvest (AAH) of Alaskan Districts 101, 102 and 103 pink salmon. With a total

return of approximately 56.75 million pink salmon, the Alaskan Districts 101, 102 and 103 AAH was approximately 45.99 million pinks. The resulting Area 3-1 to 3-4 Canadian commercial net total allowable catch of this AAH was approximately 1.15 million pink salmon of Alaskan Districts 101, 102 and 103 origin (Table 34).

In the Canadian northern boundary area, pink salmon returns were anticipated to be average to below average for Area 3 and Area 4, based on brood year return strength. Escapement to Area 3 and 4 were above the last decadal average (Table 31-32). The 2021 preliminary Canadian pink salmon catch in Sub-areas 3-1 to 3-4 was 136,045, and the Alaska stock component of this catch is estimated to be 122,217, or 0.27 % of the AAH. This result is below the annex agreement of 2.49% (Table 34).

Area 1 Pink Troll Fishery (Preliminary)

For 2021, Canada was to manage the Area 1 troll fishery to achieve an annual catch share of 2.57% of the annual allowable harvest (AAH) of Alaskan Districts 101, 102 and 103 pink salmon. With a Total Return of 56.75 million pink salmon, the resulting Area 1 Canadian commercial troll total allowable catch of this AAH was approximately 1.18 million pink salmon of Alaskan Districts 101, 102 and 103 origin (Table 35).

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 August 12 to September 30. Effort directed at pink salmon in Area 1 was minimal in 2021, with pinks being harvested as by-catch in fisheries directed at Chinook. The fishery harvested a total of 81,799 pink salmon, with an estimated 77,103 being of Alaskan origin. This equates to 0.17% of the Alaskan District 101, 102 and 103 pink AAH, well below the annex agreement of 2.57% (Table 35).

The pattern of total Area 1 weekly pink salmon troll catch in 2021 is illustrated in Table 14.

2022 Salmon Forecast Northern British Columbia

Expectations and fishing plans for 2022 are still preliminary. 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 further details. A summary of the forecasts for Areas 1, 3, 4 and 5 is provided in Table 36.

Area 1 Expectations

- | | |
|-----------------------|---|
| <i>Sockeye</i> | There are no significant local sockeye salmon stocks in Area 1 and no directed commercial fisheries on passing stocks. |
| <i>Pink</i> | Haida Gwaii pinks are expected to be below average to near average based on the trend of below average escapements for the last 3 cycles, and that Alaskan forecasts based on juvenile Pink abundance indices are forecasting for weak returns, in part due to abnormally warm waters since 2014. |
| <i>Chum</i> | 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 returns are forecasted to be improved with an expected TRTC from 380,000 (75% probability) to 828,000 (25% probability) and a point estimate of 560,000 (50% probability) based on a sibling-regression model. Nass Sockeye returns will be carefully monitored to account increasing uncertainty and recent trends towards lower survival. Fishery opportunities will be determined in-season
- Pink** Pink returns to the Nass watershed have been dominant in odd-years since the 1980s. Area 3 even year Pink salmon are influenced mostly by returns to Kwinimass and Khutzeymateen Rivers. Area 3 even-year Pink have been trending above average over the last 3 generations. Fisheries will be determined based on in-season estimates of abundance.
- Chum** Area 3 chum salmon stocks remain below target escapement levels, though recent improvements in aggregate return are encouraging. Nonetheless, fishing opportunities will be constrained to reduce impacts to wild chum salmon returning to Area 3 streams.

Area 4 Expectations

- Sockeye** The total Skeena Sockeye return is expected to be modest with a pre-season return forecast from 1.00 million (90% probability) to 4.53 million (10% probability) and a point estimate of 2.13 million (50% probability) based on the sibling model. Fishing opportunities will be determined based on in-season estimates of abundance.
- Pink** A below average return is expected due to a poor brood year return in 2020. Fisheries will be determined based on in-season estimates of abundance.
- Chum** Skeena River chum salmon escapements are depressed and there will be no chum salmon retention in Area 4.

Area 5 Expectations

- Sockeye** Commercial fisheries targeting sockeye salmon will depend on Skeena River returns.
- Pink** Pink salmon targeted fisheries in Area 5 are not anticipated, but will be dependent on fishing opportunities in Area 4.
- Chum** Local chum salmon stocks are depressed, and no surplus is anticipated.

TABLES

Table 1.—Weekly commercial catch and fishing effort by opening in the 2021 Alaska District 101 purse seine fishery.

Week	Openings	Closures	Effort			Catch					Total
			Boats	Hours	Boat Hours	Chinook	Sockeye	Coho	Pink	Chum	
28	July 4, 2021	July 4, 2021	55	15	825	9	1,309	496	39,142	8,152	49,108
28B	July 8, 2021	July 8, 2021	39	15	585	0	656	338	80,900	5,300	87,194
29	July 11, 2021	July 11, 2021	26	15	390	0	575	425	111,020	4,223	116,243
29B	July 15, 2021	July 15, 2021	67	15	1,005	0	1,199	1,436	298,033	10,062	310,730
30	July 18, 2021	July 18, 2021	68	15	1,020	0	3,463	2,663	633,368	30,850	670,344
30B	July 22, 2021	July 22, 2021	72	15	1,080	0	2,501	2,457	474,613	16,147	495,718
31	July 25, 2021	July 26, 2021	57	39	2,223	0	14,465	4,364	685,653	26,115	730,597
31B	July 29, 2021	July 30, 2021	45	39	1,755	0	10,692	3,383	570,580	17,004	601,659
32	August 2, 2021	August 3, 2021	37	39	1,443	0	7,759	3,475	655,782	10,446	677,462
32B	August 6, 2021	August 7, 2021	26	39	1,014	0	8,914	1,842	614,740	7,655	633,151
33	August 10, 2021	August 11, 2021	32	39	1,248	0	6,249	2,502	919,408	10,492	938,651
33B	August 14, 2021	August 16, 2021	48	63	3,024	0	8,998	6,033	1,507,631	14,073	1,536,735
34	August 18, 2021	August 20, 2021	56	63	3,528	0	6,249	6,661	1,737,227	14,941	1,765,078
35	August 22, 2021	August 24, 2021	37	63	2,331	0	6,983	4,166	716,286	9,601	737,036
35B	August 26, 2021	August 27, 2021	21	39	819	0	5,014	4,455	421,408	5,779	436,656
36	August 30, 2021	August 31, 2021	19	39	741	0	7,331	3,204	248,155	4,749	263,439
36B	September 3, 2021	September 4, 2021	16	39	624	0	2,234	6,494	140,521	5,355	154,604
Season Total			127	591	23,655	9	94,591	54,394	9,854,467	200,944	10,204,405

Table 2.—Weekly commercial catch and fishing effort by opening in the 2021 Alaska District 102 purse seine fishery.

Week	Openings	Closures	Effort			Catch					
			Boats	Hours	Boat Hours	Chinook	Sockeye	Coho	Pink	Chum	Total
26	June 20, 2021	June 21, 2021	17	39	663	0	184	2,441	102,293	9,067	113,985
27	June 27, 2021	June 28, 2021	37	39	1,443	0	208	587	3,913	8,888	13,596
28	July 4, 2021	July 4, 2021	17	15	255	0	298	336	1,862	6,743	9,239
28B	July 8, 2021	July 8, 2021	19	15	285	0	642	378	2,590	15,442	19,052
29	July 11, 2021	July 11, 2021	17	15	255	0	641	693	7,117	18,322	26,773
29B	July 15, 2021	July 15, 2021	20	15	300	0	1,150	1,314	47,506	29,905	79,875
30	July 18, 2021	July 18, 2021	20	15	300	0	937	1,570	35,365	38,308	76,180
30B	July 22, 2021	July 22, 2021	17	15	255	0	1,157	1,361	110,287	37,361	150,166
31	July 25, 2021	July 26, 2021	29	39	1,131	0	5,000	4,141	218,469	93,482	321,092
31B	July 29, 2021	July 30, 2021	47	39	1,833	0	7,074	5,532	867,666	50,910	931,182
32	August 2, 2021	August 3, 2021	26	39	1,014	0	3,643	2,419	587,660	9,669	603,391
32B	August 6, 2021	August 7, 2021	25	39	975	0	4,545	2,335	694,686	21,596	723,162
33	August 10, 2021	August 11, 2021	34	39	1,326	0	3,480	3,014	1,074,416	20,537	1,101,447
33B	August 14, 2021	August 16, 2021	44	63	2,772	0	8,216	4,555	1,401,378	19,108	1,433,257
34	August 18, 2021	August 20, 2021	24	63	1,512	0	5,410	2,662	702,937	8,273	719,282
35	August 22, 2021	August 24, 2021	46	63	2,898	0	14,516	5,676	934,404	15,215	969,811
35B	August 26, 2021	August 27, 2021	24	39	936	0	3,493	2,571	520,901	15,560	542,525
36	August 30, 2021	August 31, 2021	14	39	546	0	7,105	6,405	324,096	12,259	349,865
36B	September 3, 2021	September 4, 2021	16	39	624	0	1,762	6,045	103,848	4,576	116,231
38	September 17, 2021	September 17, 2021	1	12	12	0	0	0	0	42	42
39	September 19, 2021	September 19, 2021	0	12	0	0	0	0	0	0	0
Season Total			122	426	19,335	0	69,461	54,035	7,741,394	435,263	8,300,153

Table 3.—Weekly commercial catch and fishing effort by opening in the 2021 Alaska District 103 purse seine fishery.

Week	Openings	Closures	Effort			Catch					
			Boats	Hours	Boat Hours	Chinook	Sockeye	Coho	Pink	Chum	Total
30	July 18, 2021	July 18, 2021	9	15	135	0	518	980	9,071	16,250	26,819
30B	July 22, 2021	July 22, 2021	5	15	75	0	91	111	1,142	3,776	5,120
31	July 25, 2021	July 26, 2021	7	39	273	0	814	428	12,392	29,464	43,098
31B	July 29, 2021	July 30, 2021	3	39	117	0	111	38	4,054	8,201	12,404
32	August 2, 2021	August 3, 2021	6	39	234	49	1,254	428	46,940	6,362	55,033
32B	August 6, 2021	August 7, 2021	20	39	780	0	4,114	7,808	328,690	20,038	360,650
33	August 10, 2021	August 11, 2021	35	39	1,365	0	4,242	2,263	717,287	21,774	745,566
33B	August 14, 2021	August 15, 2021	47	39	1,833	0	5,041	3,158	887,527	17,599	913,325
34	August 18, 2021	August 19, 2021	31	39	1,209	0	2,602	2,932	682,483	9,247	697,264
35	August 22, 2021	August 23, 2021	36	39	1,404	0	4,881	2,995	593,922	10,201	611,999
35B	August 26, 2021	August 27, 2021	29	39	1,131	0	2,618	3,334	516,044	7,088	529,084
36	August 30, 2021	August 31, 2021	23	39	897	0	1,563	3,126	276,747	3,627	285,063
36B	September 3, 2021	September 4, 2021	8	39	312	0	380	1,746	52,890	379	55,395
Season Total			81	459	9,765	49	28,229	29,347	4,129,189	154,006	4,340,820

Table 4.–Weekly commercial catch and fishing effort by opening in the 2021 Alaska District 104 purse seine fishery.

Week	Openings	Closures	Effort			Catch					Total
			Boats	Hours	Boat Hours	Chinook	Sockeye	Coho	Pink	Chum	
29	July 11, 2021	July 11, 2021	37	8	296	0	4,048	4,596	91,323	14,684	114,651
29B	July 15, 2021	July 15, 2021	29	8	232	0	11,201	6,880	90,327	19,651	128,059
30	July 18, 2021	July 18, 2021	22	8	176	0	7,564	3,639	80,654	10,376	102,233
30B	July 22, 2021	July 22, 2021	27	15	405	0	26,491	8,633	320,256	12,425	367,805
31	July 25, 2021	July 26, 2021	53	39	2,067	0	37,755	14,221	524,619	33,090	609,685
31B	July 29, 2021	July 30, 2021	54	39	2,106	0	79,743	16,070	2,036,995	24,483	2,157,291
32	August 2, 2021	August 3, 2021	85	39	3,315	6,400	83,714	11,931	2,656,744	26,117	2,784,906
32B	August 6, 2021	August 7, 2021	71	39	2,769	0	54,788	6,048	2,254,512	23,591	2,338,939
33	August 10, 2021	August 11, 2021	32	39	1,248	0	18,729	1,756	642,199	13,747	676,431
33B	August 14, 2021	August 15, 2021	28	39	1,092	93	38,533	3,191	685,651	10,102	737,570
34	August 18, 2021	August 19, 2021	20	39	780	23	41,288	3,023	444,107	9,226	497,667
35	August 22, 2021	August 23, 2021	32	39	1,248	0	42,888	3,040	384,911	4,728	435,567
35B	August 26, 2021	August 27, 2021	24	39	936	0	22,969	3,523	298,543	5,117	330,152
36	August 30, 2021	August 31, 2021	22	39	858	0	21,597	6,293	186,778	3,566	218,234
36B	September 3, 2021	September 4, 2021	9	39	351	0	5,096	4,731	48,462	1,142	59,431
Season Total			102	468	17,879	6,516	496,404	97,575	10,746,081	212,045	11,558,621

Table 5.—Weekly commercial catch and fishing effort by opening in the 2021 Alaska District 101 drift gillnet fishery.

Week	Openings	Closures	Effort			Catch					
			Boats	Hours	Boat Hours	Chinook	Sockeye	Coho	Pink	Chum	Total
26	June 20, 2021	June 24, 2021	26	96	2,496	390	487	150	269	3,869	5,165
27	June 27, 2021	July 1, 2021	32	96	3,071	549	2,348	723	2,841	13,828	20,289
28	July 4, 2021	July 8, 2021	38	96	3,647	406	2,984	894	4,673	27,368	36,325
29	July 11, 2021	July 15, 2021	42	96	4,031	279	2,240	1,358	11,700	34,936	50,513
30	July 18, 2021	July 22, 2021	43	96	4,127	111	3,567	1,373	23,558	27,727	56,336
31	July 25, 2021	July 30, 2021	35	120	4,199	48	3,158	2,193	16,067	20,414	41,880
32	August 1, 2021	August 6, 2021	36	120	4,319	67	1,632	4,965	29,189	16,342	52,195
33	August 8, 2021	August 13, 2021	29	120	3,480	18	2,354	4,138	20,035	8,344	34,889
34	August 15, 2021	August 20, 2021	26	120	3,120	9	1,003	3,736	15,599	5,428	25,775
35	August 22, 2022	August 27, 2021	27	120	3,240	5	633	4,727	12,751	4,687	22,803
36	August 29, 2021	September 3, 2021	33	120	3,959	7	1,052	9,717	7,587	5,521	23,884
37	September 5, 2021	September 9, 2021	30	96	2,880	1	93	5,779	88	1,450	7,411
38	September 12, 2021	September 16, 2021	25	96	2,400	0	25	6,137	8	1,218	7,388
39	September 19, 2021	September 23, 2021	16	96	1,536	0	1	1,369	0	128	1,498
40	September 26, 2021	September 30, 2021	4	96	384	2	0	103	0	12	117
Season Total			52	1,584	46,889	1,892	21,577	47,362	144,365	171,272	386,468

Table 6.–Weekly commercial catch and fishing effort by opening in the 2021 Alaska District 106 drift gillnet fishery.

Week	Openings	Closures	Effort			Catch					Total
			Boats	Hours	Boat Hours	Chinook	Sockeye	Coho	Pink	Chum	
26	June 20, 2021	June 22, 2021	19	48	912	151	970	153	3,923	3,123	8,320
27	June 27, 2021	June 29, 2021	38	48	1,824	107	885	338	3,131	3,202	7,663
28	July 4, 2021	July 6, 2021	39	48	1,871	176	1,905	884	2,534	6,684	12,183
29	July 11, 2021	July 13, 2021	36	48	1,727	121	946	1,749	1,598	11,875	16,289
30	July 18, 2021	July 20, 2021	51	48	2,447	136	3,084	3,427	9,799	19,842	36,288
31	July 25, 2021	July 27, 2021	68	48	3,263	65	4,202	3,879	11,290	25,874	45,310
32	August 1, 2021	August 4, 2021	90	72	6,480	75	7,246	6,930	30,823	12,326	57,400
33	August 8, 2021	August 12, 2021	48	96	4,608	38	7,820	5,548	21,040	9,584	44,030
34	August 15, 2021	August 20, 2021	68	120	8,160	24	14,328	9,016	40,188	15,028	78,584
35	August 22, 2021	August 26, 2021	65	96	6,240	32	8,333	6,810	17,405	8,691	41,271
36	August 29, 2021	September 1, 2021	69	72	4,967	17	1,823	12,167	13,790	12,418	40,215
37	September 5, 2021	September 8, 2021	68	72	4,895	3	187	11,786	904	4,690	17,570
38	September 12, 2021	September 15, 2021	55	72	3,959	7	25	8,814	47	2,689	11,582
39	September 19, 2021	September 21, 2021	24	48	1,152	9		2,751	11	354	3,125
40	September 26, 2021	September 28, 2021	13	48	624	4	22	504		180	
Season Total			120	984	53,129	965	51,776	74,756	156,483	136,560	419,830

Table 7.—Weekly commercial catch and fishing effort by opening in the 2021 Annette Island Reserve purse seine fishery.

Week	Openings	Closures	Effort		Catch					
			Boats ¹	Hours	Chinook	Sockeye	Coho	Pink	Chum	Total
27	June 27, 2021	June 27, 2021	1	15	48	62	110	4,980	953	6,153
28	July 5, 2021	July 5, 2021	1	15	141	122	243	26,434	2,242	29,182
28B	July 7, 2021	July 7, 2021	1	15	42	77	126	14,321	1,441	16,007
29	July 11, 2021	July 11, 2021	1	15	63	455	343	72,426	4,464	77,751
29B	July 14, 2021	July 14, 2021	1	15	30	339	484	83,325	3,770	87,948
29C	July 16, 2021	July 16, 2021	1	15	25	240	478	147,807	4,913	153,463
30	July 19, 2021	July 19, 2021	1	15	8	121	296	94,603	3,088	98,116
30B	July 21, 2021	July 21, 2021	1	15	14	570	334	123,648	2,508	127,074
30C	July 23, 2021	July 23, 2021	1	15	3	724	650	165,409	4,755	171,541
31	July 25, 2021	July 25, 2021	1	15	25	202	246	74,242	2,068	76,783
31B	July 27, 2021	July 27, 2021	1	15	1	327	216	58,051	1,629	60,224
31C	July 30, 2021	July 30, 2021	1	15	8	527	227	84,980	1,544	87,286
32	August 1, 2021	August 1, 2021	1	15	2	209	209	75,097	849	76,366
32B	August 3, 2021	August 3, 2021	1	15	13	1,340	211	85,745	1,480	88,789
32C	August 5, 2021	August 6, 2021	1	39	15	1,454	511	200,393	2,999	205,372
33	August 9, 2021	August 10, 2021	1	39	2	1,704	421	191,457	1,422	195,006
33B	August 12, 2021	August 13, 2021	1	39	0	483	458	163,783	1,101	165,825
34	August 15, 2021	August 16, 2021	1	39	0	359	426	196,318	1,021	198,124
34B	August 18, 2021	August 20, 2021	1	63	19	706	907	281,705	1,333	284,670
35	August 22, 2021	August 24, 2021	1	63	19	177	599	285,928	904	287,627
35B	August 26, 2021	August 27, 2021	1	39	0	247	1,338	103,069	1,309	105,963
36	August 30, 2021	August 30, 2021	1	15	0	64	213	37,490	209	37,976
36B	September 1, 2021	September 1, 2021	1	15	0	7	142	13,128	149	13,426
38	September 12, 2021	September 12, 2021	1	15	0	0	0	0	0	0
Season Total				576	478	10,516	9,188	2,584,339	46,151	2,650,672

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 ADF&G managers as complete.

Table 8.—Weekly commercial catch and fishing effort by opening in the 2021 Annette Island Reserve gillnet fishery.

Week	Openings	Closures	Effort		Catch					
			Boats ¹	Hours	Chinook	Sockeye	Coho	Pink	Chum	Total
25	June 13, 2021	June 16, 2021	1	72	53	5	0	0	63	121
26	June 20, 2021	June 23, 2021	1	72	43	13	10	98	102	266
27	June 27, 2021	June 30, 2021	1	72	56	2	9	516	327	910
28	July 4, 2021	July 8, 2021	1	96	364	149	179	14,166	17,168	32,026
29	July 11, 2021	July 16, 2021	1	120	180	259	500	28,819	22,719	52,477
30	July 18, 2021	July 23, 2021	1	120	89	321	689	27,659	15,272	44,030
31	July 25, 2021	July 30, 2021	1	120	20	317	811	20,803	8,124	30,075
32	August 1, 2021	August 6, 2021	1	120	5	368	407	15,079	10,965	26,824
33	August 8, 2021	August 13, 2021	1	120	9	455	794	11,908	2,980	16,146
34	August 15, 2021	August 20, 2021	1	120	0	324	1,114	12,439	2,811	16,688
35	August 22, 2021	August 27, 2021	1	120	0	445	1,086	10,464	2,221	14,216
36	August 29, 2021	September 2, 2021	1	96	0	103	1,565	4,553	2,132	8,353
37	September 5, 2021	September 8, 2021	1	72	0	33	2,059	421	1,226	3,739
38	September 12, 2021	September 16, 2021	1	96	0	14	3,783	589	1,625	6,011
39	September 19, 2021	September 22, 2021	1	72	0	0	879	0	227	1,106
40	September 26, 2021	September 29, 2021	1	72	0	0	569	0	90	659
Season Total				1,560	819	2,808	14,454	147,514	88,052	253,647

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 ADF&G managers as complete.

Table 9.—Southern Southeast Alaska pink salmon escapement indices by stock group and district for 2021 (in millions).

Stock group	District	Pink salmon index 2021	Management target		Met minimum escapement	Recent 10-year average
E Behm	101	2.83	0.67	1.77	+	1.69
Portland	101	0.54	0.1	0.28	+	0.48
W Behm	101	0.80	0.25	0.66	+	0.56
Kasaan	102	1.37	0.24	0.64	+	0.79
Moir	102	0.14	0.05	0.13	+	0.15
E Dall	103	0.24	0.13	0.36		0.27
Hetta	103	1.09	0.30	0.79	+	0.74
Klawock	103	1.00	0.42	1.11		0.84
Sea Otter Sound	103	0.24	0.10	0.28		0.18
Affleck Canal	105	0.22	0.14	0.38		0.25
Shipley Bay	105	0.20	0.11	0.28		0.18
Burnett	106	0.10	0.05	0.14		0.09
Ratz Harbor	106	0.13	0.04	0.12	+	0.10
Totem Bay	106	0.08	0.05	0.13		0.07
Whale Pass	106	0.19	0.07	0.18	+	0.11
Anan	107	0.43	0.21	0.57		0.30
Union Bay	107	0.12	0.05	0.12	+	0.09
Stikine	108	0.09	0.02	0.06	+	0.05
District Total	101	4.17	1.02	2.71	+	2.76
District Total	102	1.52	0.29	0.77	+	0.96
District Total	103	2.57	0.95	2.54	+	2.01
District Total	105	0.41	0.25	0.66		0.42
District Total	106	0.50	0.21	0.57		0.37
District Total	107	0.55	0.26	0.69		0.41
District Total	108	0.09	0.02	0.06	+	0.05
Southern Southeast Alaska Total		9.81	3.00	8.00	+	6.95

Table 10.—Preliminary annual allowable harvest (AAH) calculations for the Alaska District 104 Week 27-30 purse seine fishery, 1999-2021.

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	2,086,458	1,100,000	986,458	24,168	19,743	9,999	-14,169	-116,508
2019	1,208,155	862,549	337,606	8,271	9,399	4,450	-3,821	-120,330
2020	1,983,411	1,100,000	883,411	21,644	6,923	5,300	-16,344	-136,673
2021 ^a	2,229,421	1,100,000	1,594,000	27,671	49,304	32,312	4,641	-132,032

^a Preliminary information pending completion of run reconstruction analyses.

Table 11.—Preliminary annual allowable harvest (AAH) calculations for the Alaska District 101 gillnet fishery, 1999-2021.

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	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	438,311	200,000	238,311	32,887	39,912	14,388	-18,499	-281,580
2017	362,540	200,000	162,540	22,431	25,073	12,444	-9,987	-292,134
2018	315,972	200,000	115,972	16,004	19,920	11,303	-4,701	-297,677
2019	377,745	200,000	177,745	24,529	15,996	11,269	-13,260	-310,937
2020 ^a	295,194	200,000	95,194	13,137	9,342	7,528	-5,609	-316,545
2021 ^a	500,000	200,000	302,538	41,750	21,577	14,677	-26,703	-343,619

^a Preliminary information pending completion of run reconstruction analyses.

Table 12.—Weekly commercial catch and fishing effort in the 2021 Canadian Area 1 gillnet fishery.

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

2021 catch figures are based on Phone-in (FOS) estimates

* Boat Days are the sum of daily vessels operating in a 24-hour period.

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

Table 13.—Weekly commercial catch and fishing effort in the 2021 Canadian Area 1 seine fishery.

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

2021 catch figures are based on Phone-in (FOS) estimates

* Boat Days are the sum of daily vessels operating in a 24-hour period.

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

Table 14.—Weekly commercial catch and fishing effort in the 2021 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**
24	62	Jun. 12	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0	0
25	63	Jun. 19	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0	0
26	64	Jun. 26	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0	0
27	71	Jul. 3	1	394	532	CLOSED	CLOSED	927	7	72	3
28	72	Jul. 10	14	2,878	8,425	CLOSED	CLOSED	11,317	65	168	7
29	73	Jul. 17	8	4,182	8,621	CLOSED	CLOSED	12,811	77	168	7
30	74	Jul. 24	19	3,900	14,186	CLOSED	CLOSED	18,105	82	168	7
31	75	Jul. 31	25	7,808	21,426	CLOSED	CLOSED	29,259	140	168	7
32	81	Aug. 7	2	6,455	14,950	CLOSED	CLOSED	21,407	86	168	7
33	82	Aug. 14	2	11,772	4,843	CLOSED	11,366	27,983	276	168	7
34	83	Aug. 21	1	10,080	3,195	CLOSED	16,554	29,831	509	168	7
35	84	Aug. 28	0	4,662	3,203	CLOSED	6,559	14,424	377	168	7
36	91	Sep. 4	1	2,359	2,281	CLOSED	5,903	10,544	283	168	7
37	92	Sep. 11	0	5,018	116	CLOSED	1,952	7,085	170	168	7
38	93	Sep. 18	0	1,895	18	CLOSED	177	2,089	60	168	7
39	94	Sep. 25	0	351	0	CLOSED	51	402	20	168	7
40	101	Oct. 2	0	0	0	0	0	0	0	120	5
Total			73	61,754	81,796	0	42,562	186,186	2,151	2,208	92

2021 catch figures are based on Phone-in (FOS) estimates.

* Boat Days are the sum of daily vessels operating in a 24-hour period.

**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 2021 Canadian Area 3 Entrance (subareas 1-4) gillnet fishery.

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

2021 catch figures are based on Phone-in (FOS) estimates

* Boat Days are the sum of daily vessels operating in a 24-hour period.

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

Table 16.—Weekly commercial catch and fishing effort in the 2021 Canadian Area 3 Inside (subareas 7-17) gillnet fishery.

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

2021 catch figures are based on Phone-in (FOS) estimates

* Boat Days are the sum of daily vessels operating in a 24-hour period.

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

Table 17.—Weekly commercial catch and fishing effort in the 2021 Canadian total Area 3 gillnet fishery.

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

2021 catch figures are based on Phone-in (FOS) estimates

* Boat Days are the sum of daily vessels operating in a 24-hour period.

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

Table 18.—Weekly commercial catch and fishing effort in the 2021 Canadian Area 3 Entrance (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. 3	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0	0
28	72	Jul. 10	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0	0
29	73	Jul. 17	CLOSED	CLOSED	8,422	4063	CLOSED	12,485	17	16	1
30	74	Jul. 24	CLOSED	CLOSED	114,553	9862	CLOSED	124,415	35	32	2
31	75	Jul. 31	CLOSED	CLOSED	36042	0	CLOSED	36,042	20	16	1
Total			0	0	159,017	13,925	0	172,942	72	64	4

2021 catch figures are based on Phone-in (FOS) estimates

* Boat Days are the sum of daily vessels operating in a 24-hour period.

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

Table 19.—Weekly commercial catch and fishing effort in the 2021 Canadian Area 3 Inside (subareas 7-17) seine fishery.

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

2021 catch figures are based on Phone-in (FOS) estimates

* Boat Days are the sum of daily vessels operating in a 24-hour period.

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

Table 20.—Weekly commercial catch and fishing effort in the 2021 Canadian total 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. 3	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0	0
28	72	Jul. 10	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0	0	0	0
29	73	Jul. 17	CLOSED	CLOSED	8,422	4063	CLOSED	12,485	17	16	1
30	74	Jul. 24	CLOSED	CLOSED	114,553	9862	CLOSED	124,415	35	32	2
31	75	Jul. 31	CLOSED	CLOSED	36042	0	CLOSED	36,042	20	16	1
Total			0	0	159,017	13,925	0	172,942	72	64	4

2021 catch figures are based on Phone-in (FOS) estimates.

* Boat Days are the sum of daily vessels operating in a 24-hour period.

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

Table 21.—Weekly commercial catch and fishing effort in the 2021 Canadian Area 3/103 troll fishery.

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

2021 catch figures are based on Phone-in (FOS) estimates.

* Boat Days are the sum of daily vessels operating in a 24-hour period.

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

Table 22.—Weekly commercial catch and fishing effort in the 2021 Canadian total Area 4 gillnet fishery.

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

2021 catch figures are based on Phone-in (FOS) estimates.

* Boat Days are the sum of daily vessels operating in a 24-hour period.

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

Table 23.—Weekly commercial catch and fishing effort in the 2021 Canadian total Area 4 seine fishery.

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

2021 catch figures are based on Phone-in (FOS) estimates.

* Boat Days are the sum of daily vessels operating in a 24-hour period.

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

***Sockeye catches were from validated landings as part of the Individual Transferable Quota fishery.

Table 24.—Weekly commercial catch and fishing effort in the 2021 Canadian Area 4/104 troll fishery.

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

2021 catch figures are based on Phone-in (FOS) estimates.

* Boat Days are the sum of daily vessels operating in a 24-hour period.

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

Table 25.—Weekly commercial catch and fishing effort in the 2021 Canadian total Area 5 gillnet fishery.

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

2021 catch figures are based on Phone-in (FOS) estimates.

* Boat Days are the sum of daily vessels operating in a 24-hour period.

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

Table 26.—Weekly commercial catch and fishing effort in the 2021 Canadian total Area 5 seine fishery.

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

2021 catch figures are based on Phone-in (FOS) estimates.

* Boat Days are the sum of daily vessels operating in a 24-hour period.

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

Table 27.—Weekly commercial catch and fishing effort in the 2021 Canadian Area 5/105 troll fishery.

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

2021 catch figures are based on Phone-in (FOS) estimates.

* Boat Days are the sum of daily vessels operating in a 24-hour period.

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

Table 28.—Annual gillnet and seine effort for Canadian Areas 1, 3, 4, and 5, 1980-2021.

Year	Gear	Area 1		Area 3		Area 4		Area 5	
		Boat Days	Days Fishing*	Boat Days	Days Fishing*	Boat Days	Days Fishing*	Boat Days	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

Year	Gear	Area 1		Area 3		Area 4		Area 5	
		Boat Days	Days Fishing*	Boat Days	Days Fishing*	Boat Days	Days Fishing*	Boat Days	Days Fishing*
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
2003	GN	0	0	3,417	17	2,484	8	27	5
	SN	0	0	210	15	118	9	32	11
2004	GN	0	3	3,241	13	1,581	6	78	5
	SN	0	0	448	13	218	13	28	7
2005	GN	0	0	2,645	16	198	2	0	0
	SN	0	0	291	18	0	0	19	6
2006	GN	7	5	3,487	15	6,376	17	71	13
	SN	0	0	236	7	682	16	3	6
2007	GN	0	0	1,694	9	1,796	7	11	2
	SN	0	0	478	15	85	9	82	15
2008	GN	0	0	595	7	2,213	9	18	7
	SN	0	0	61	3	274	14	10	1
2009	GN	0	0	1,517	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	1,070	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	1,457	9	199	2	0	0
	SN	0	0	179	12	0	0	0	0
2014	GN	0	0	1357	10	1,831	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
2019	GN	0	0	567	7	0	0	0	0
	SN	0	0	58	3	0	0	0	0

Year	Gear	Area 1		Area 3		Area 4		Area 5	
		Boat Days	Days Fishing*	Boat Days	Days Fishing*	Boat Days	Days Fishing*	Boat Days	Days Fishing*
2020	GN	0	0	0	0	201	2	0	0
	SN	35	9	13	1	0	0	0	0
2021	GN	0	0	0	0	0	0	0	0
	SN	0	0	72	4	0	0	0	0
AVG 80-89	GN	55.8	13.2	1,877.3	23.4	8,728.0	20.9	451.1	16.3
	SN	164.4	13.8	1,353.4	21.4	346.6	6.8	202.9	14.9
	TOTAL	220.2	27.0	3,230.7	44.8	9,074.6	27.7	654.0	31.2
AVG 90-99	GN	103.5	16.8	2,844.6	28.2	8,704.9	19.8	289.5	17.4
	SN	142.3	9.2	1,271.1	15.0	242.1	8.5	126.4	11.1
	TOTAL	245.8	26.0	4,115.7	43.2	8,947.0	28.3	415.9	28.5
AVG 00-09	GN	2.6	1.5	2,283.0	13.2	2,892.4	10.2	49.8	5.8
	SN	0.7	0.2	265.9	12.1	256.5	9.8	36.4	8.8
	TOTAL	4.0	1.7	2,548.9	25.3	3,148.9	20.0	86.2	14.6
AVG 10-19	GN	0.0	0.0	962.5	9.5	633.9	4.9	4.6	2.2
	SN	1.7	1.1	148.5	7.7	41.0	4.3	0.6	0.2
	TOTAL	1.7	1.1	1,111.0	17.2	674.9	9.2	5.2	2.4

Table 29.—Escapements to Canadian Areas 3, 4, and 5 in 2021 (preliminary).

Area	Sockeye	Coho	Pink	Chum	Chinook
3	348,826	12,365	562,047	65,096	15,763
4	1,021,519	13,257	753,144	387	8,209
5	7,300	UKN	17,631	UKN	UKN

Table 30.—Annual salmon escapements for Canadian Area 1, 1970 - 2021 (2021 is preliminary).

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

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK
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
2019	5,900	UNK	UNK	14,000	UNK
2020	7,900	UNK	802,400	UNK	UNK
2021	6,200	UNK	UNK	UNK	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 10-19	12,075	UNK	535,067	7,575	UNK

Table 31.—Annual escapements for Canadian Area 3, 1970 -2021 (2021 is preliminary).

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

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK
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
2019	245,476	128,091	160,466	28,198	11,981
2020	215,462	7,790	552,508	60,535	4,074
2021	348,826	12,365	562,047	65,096	15,763
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 10-19	235,735	182,120	304,938	29,453	12,507

Table 32. Annual escapements for Canadian Area 4, 1970 - 2021 (2021 is preliminary).

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

YEAR	SOCKEYE	COHO	PINK	CHUM	CHINOOK
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
2019	570,999	27,245	297,437	1174	23,248
2020	1,488, 135	10,735	31,025	71	9,660
2021	1,021,519	13,257	753,144	387	8,209
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 10-19	981,403	34,440	434,638	1,523	30,902

Table 33.—Annual escapements for Canadian Area 5, 1970 - 2021 (2021 is preliminary).

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

YEAR	SOCKEYE	COHO	PINK	CHUM
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
2019	3,999	147	4,198	1,113
2020	825	234	1,742	66
2021	7,300	UKN	17,631	UKN
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 10-19	9,929	915	41,257	1,089

Table 34.—Annual allowable harvest (AAH) calculations for Canadian Area 3 Entrance (1-4) net fishery, 1999-2021. The pink salmon escapement requirement in Alaskan districts 101, 102, and 103 is 10,750,000.

Year	AAH of Alaska District 101, 102, 103 Pink Salmon			Actual Number and % AAH of Alaska Pink Salmon Harvested in Canadian Area 3 (1-4) Net Fishery			Overage/Underage Based on the 2.49% AAH Stipulated in the Treaty		
	Total Run	Actual Escapement	AAH	Total Pink Harvest in Area 3 (1- 4) Net	Actual Number of Alaskan Pink Harvested	Actual % AAH	Allowable Harvest	Overage (Positive)/ Underage (Negative)	Cumulative Overage/ Underage
1999	53,011,083	19,900,203	42,261,083	2,224,180	1,276,329	3.02%	1,052,301	224,028	224,028
2000	22,935,854	11,936,450	12,185,854	89,980	67,465	0.55%	303,428	-235,963	-11,934
2001	62,126,912	21,903,643	51,376,912	1,155,691	911,959	1.78%	1,279,285	-367,326	-379,260
2002	43,056,270	20,178,163	32,306,270	1,163,645	766,390	2.37%	804,426	-38,036	-417,296
2003	42,771,456	20,047,003	32,021,456	924,183	668,100	2.09%	797,334	-129,234	-546,530
2004	34,999,070	16,769,261	24,249,070	559,034	448,730	1.85%	603,802	-155,072	-701,602
2005	43,651,072	17,519,566	32,901,072	894,890	690,317	2.10%	819,237	-128,920	-830,522
2006	11,524,695	8,532,450	2,992,245	143,733	112,342	3.75%	74,507	37,836	-792,687
2007	52,342,831	23,578,584	41,592,831	1,740,271	1,421,812	3.42%	1,035,661	386,150	-406,536
2008	25,728,121	13,669,062	14,978,121	12,082	10,580	0.07%	372,955	-362,375	-768,912
2009	38,891,939	16,095,463	28,141,939	432,861	276,270	0.98%	700,734	-424,464	-1,193,376
2010	23,621,861	12,113,776	12,871,861	36,334	21,353	0.17%	320,509	-299,156	-1,492,532
2011	20,770,059	11,519,923	10,020,059	201,754	180,930	1.81%	249,499	-68,569	-1,561,101
2012	31,674,423	14,216,273	20,924,423	150,740	127,120	0.61%	521,018	-393,898	-1,954,999
2013	80,810,736	32,020,713	70,060,736	1,249,570	1,149,166	1.64%	1,744,512	-595,346	-2,550,345
2014	50,784,488	22,042,385	40,034,488	450,671	347,104	0.87%	996,859	-649,755	-3,200,100
2015	20,541,455	8,508,770	12,032,685	80,266	77,331	0.64%	299,614	-222,290	-3,422,390
2016	30,543,683	15,081,340	19,793,683	430,435	393,118	1.99%	492,863	-99,745	-3,522,135
2017	21,573,460	13,215,600	10,823,460	231,197	207,268	1.91%	269,504	-62,236	-3,582,072
2018	13,437,220	9,573,382	3,863,838	68,764	58,001	1.50%	96,210	-38,208	-3,620,280
2019	26,975,678	11,507,785	16,225,678	24,251	22,963	0.14%	404,019	-381,056	-4,001,336
2020	17,358,249	11,857,328	6,608,249	1,816	1,703	0.03%	164,545	-162,842	-4,164,179
2021	56,747,018	21,685,543	45,997,018	136,045	122,217	0.27%	1,145,326	-1,023,109	-5,187,287

Table 35.—Annual allowable harvest (AAH) calculations for Canadian Area 1/101 troll fishery, 1999-2021. The pink salmon escapement requirement in Alaskan districts 101, 102, and 103 is 10,750,000.

Year	AAH of Alaska District 101, 102, 103 Pink Salmon			Actual Number and % AAH of Alaska Pink Salmon Harvested in Canadian Area 1 Troll Fishery			Overage/Underage Based on the 2.57% AAH Stipulated in the Treaty		
	Total Run	Actual Escapement	AAH	Total Pink Harvest in Area 1 Troll	Actual Number of Alaskan Pink Harvested	Actual % AAH	Allowable Harvest	Overage (Positive)/ Underage (Negative)	Cumulative Overage/ Underage
1999	53,011,083	19,900,203	42,261,083	31,013	25,125	0.06%	1,086,110	-1,060,984	-1,060,984
2000	22,935,854	11,936,450	12,185,854	73,358	56,042	0.46%	313,176	-257,134	-1,318,119
2001	62,126,912	21,903,643	51,376,912	132,709	116,490	0.23%	1,320,387	-1,203,896	-2,522,015
2002	43,056,270	20,178,163	32,306,270	22,918	17,723	0.05%	830,271	-812,548	-3,334,563
2003	42,771,456	20,047,003	32,021,456	74,160	61,284	0.19%	822,951	-761,668	-4,096,231
2004	34,999,070	16,769,261	24,249,070	22,198	19,499	0.08%	623,201	-603,702	-4,699,933
2005	43,651,072	17,519,566	32,901,072	27,768	23,098	0.07%	845,558	-822,460	-5,522,393
2006	11,524,695	8,532,450	2,992,245	34,854	30,134	1.01%	76,901	-46,767	-5,569,160
2007	52,342,831	23,578,584	41,592,831	61,276	55,418	0.13%	1,068,936	-1,013,518	-6,582,678
2008	25,728,121	13,669,062	14,978,121	23,243	21,171	0.14%	384,938	-363,766	-6,946,444
2009	38,891,939	16,095,463	28,141,939	61,522	50,392	0.18%	723,248	-672,855	-7,619,300
2010	23,621,861	12,113,776	12,871,861	17,950	12,708	0.10%	330,807	-318,099	-7,937,399
2011	20,770,059	11,519,923	10,020,059	44,193	41,631	0.42%	257,516	-215,885	-8,153,284
2012	31,674,423	14,216,273	20,924,423	48,223	44,739	0.21%	537,758	-493,019	-8,646,302
2013	80,810,736	32,020,713	70,060,736	84,216	80,590	0.12%	1,800,561	-1,719,971	-10,366,273
2014	50,784,488	22,042,385	40,034,488	31,775	26,798	0.07%	1,028,886	-1,002,089	-11,368,362
2015	20,541,455	8,508,770	12,032,685	41,551	39,456	0.33%	309,240	-269,784	-11,638,146
2016	30,447,094	15,081,340	19,697,094	32,343	30,949	0.16%	506,215	-475,267	-12,113,413
2017	21,573,460	13,215,600	10,823,460	33,299	31,471	0.29%	278,163	-246,692	-12,360,104
2018	13,437,220	9,573,382	3,863,838	27,194	24,478	0.63%	99,301	-74,822	-12,434,926
2019	26,975,678	11,507,785	16,225,678	56,182	53,950	0.33%	417,000	-363,050	-12,797,976
2020	17,358,249	11,857,328	6,608,249	133,167	111,616	1.69%	169,832	-58,216	-12,856,192
2021	56,747,018	21,685,543	45,997,018	81,799	77,103	0.17%	1,182,123	-1,105,021	-13,961,213

Table 36.—Pre-season salmon forecast, for Canadian Areas 1, 3, 4, and 5 in 2022. Values for TRTC given in 50% probability estimates with 90%-10% probabilities in parentheses.

Area	Species	Forecasted Return to Canada
Area 1	Sockeye	Below Average
	Pink	Below Average - Average
Area 3	Sockeye	471,000 (225,000 - 1,007,000)
	Pink	Above Average
Area 4	Sockeye	2,133,787 (1,004,867 - 4,530,993)
	Pink	Below Average
Area 5	Sockeye	UNK
	Pink	Below Average - Average

FIGURES

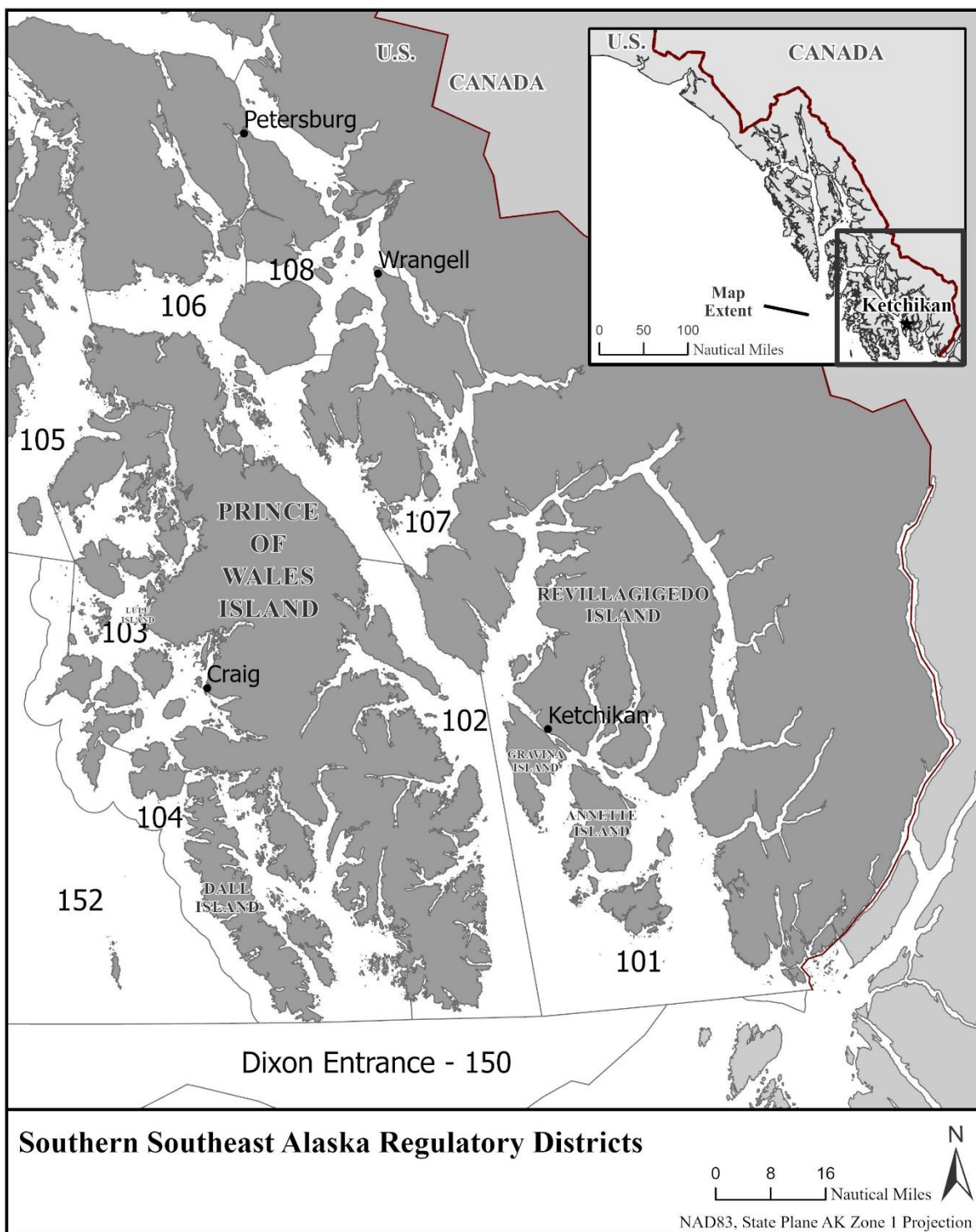


Figure 1.—Alaska Department of Fish and Game southern Southeast Alaska regulatory districts.

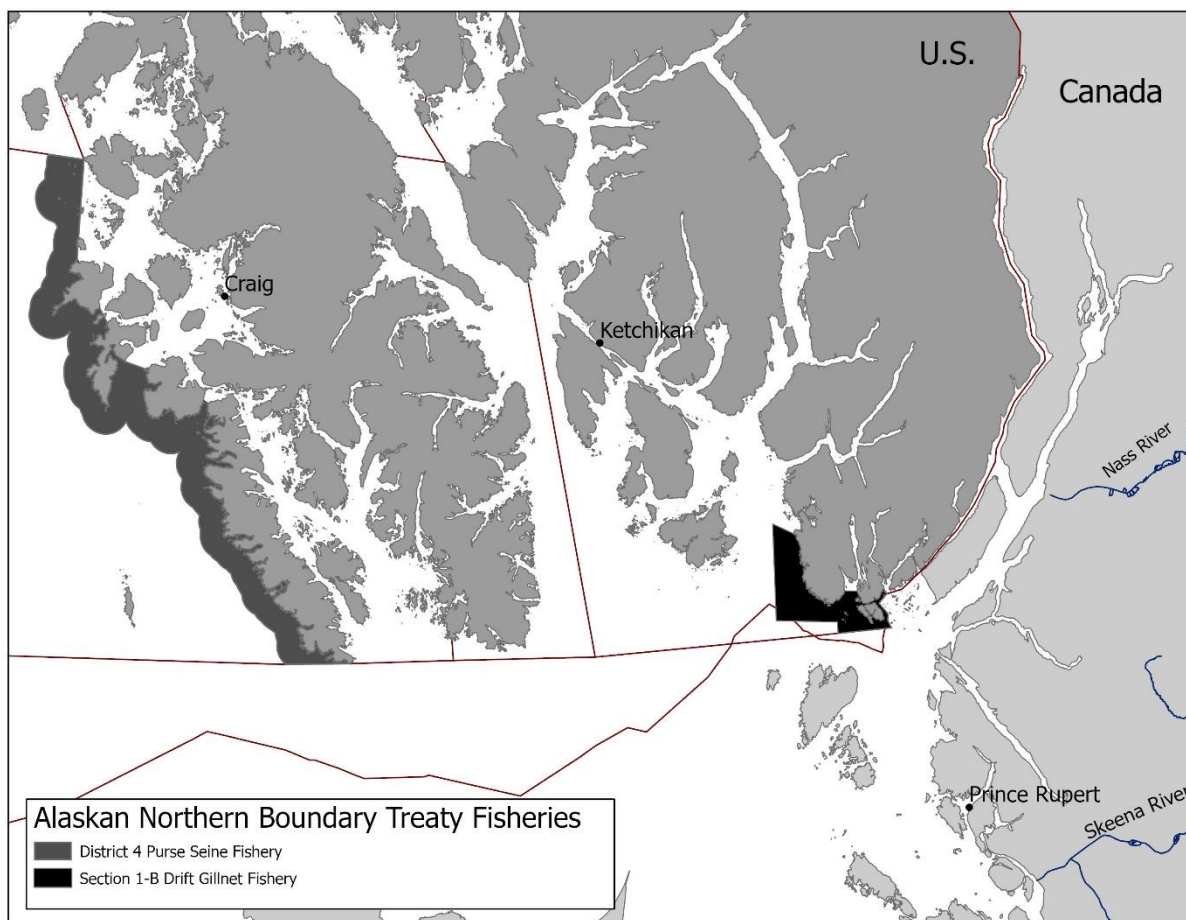


Figure 2.—Alaska District 101 drift gillnet and District 104 purse seine treaty fisheries.

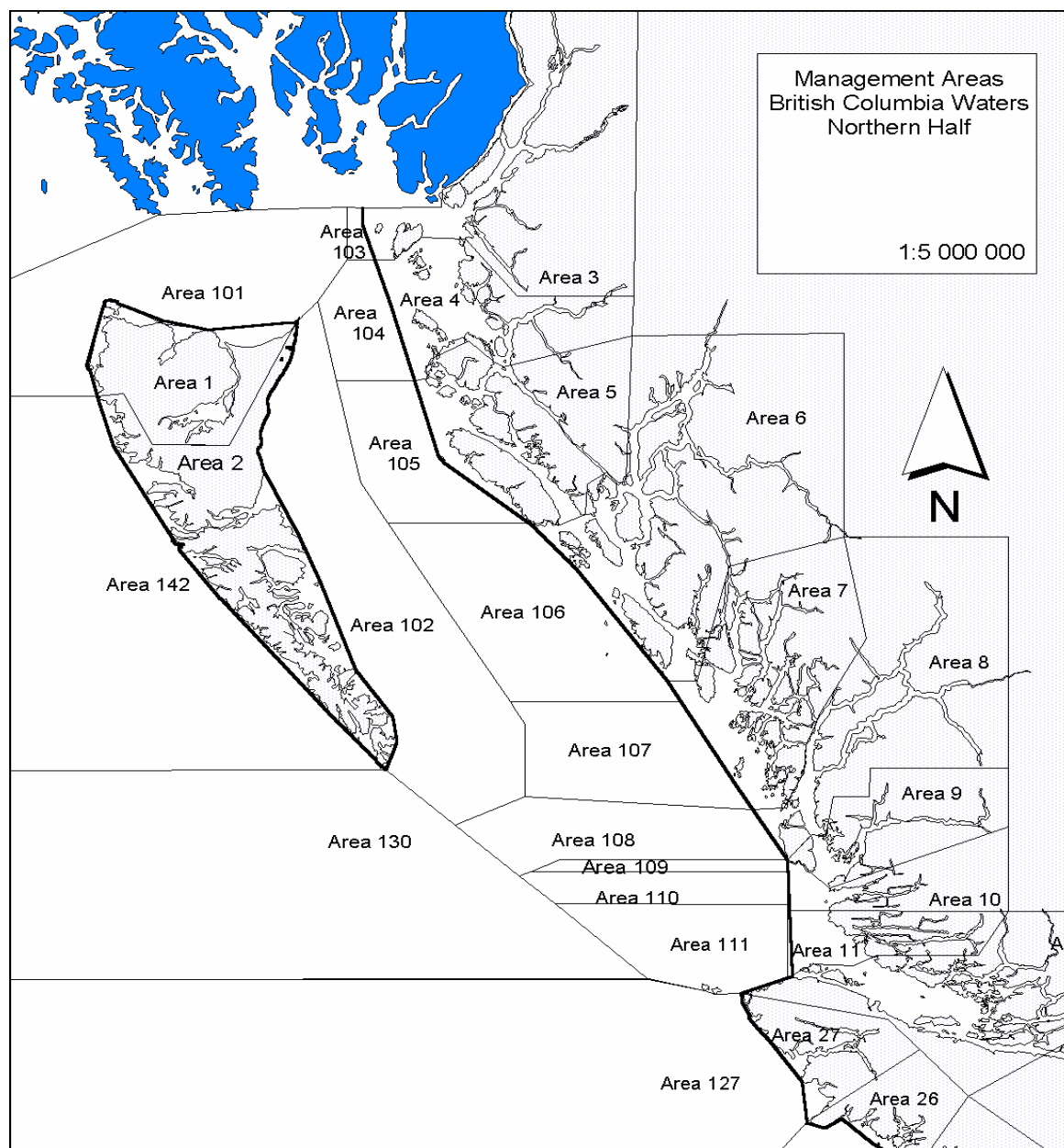


Figure 3.—Canadian Statistical Areas 1-10, northern British Columbia.

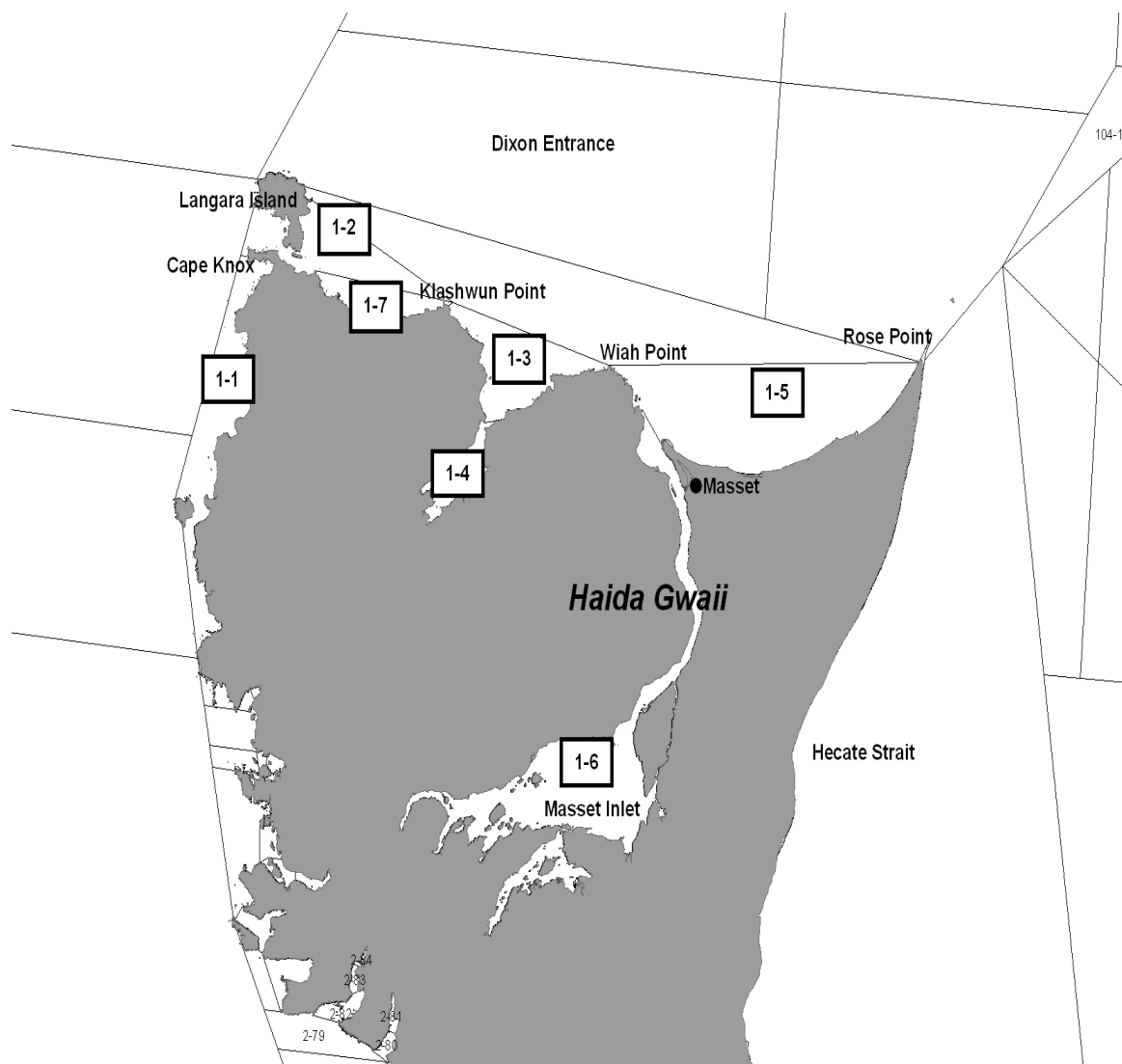


Figure 4.—Canadian Statistical Area 1 management sub-areas.

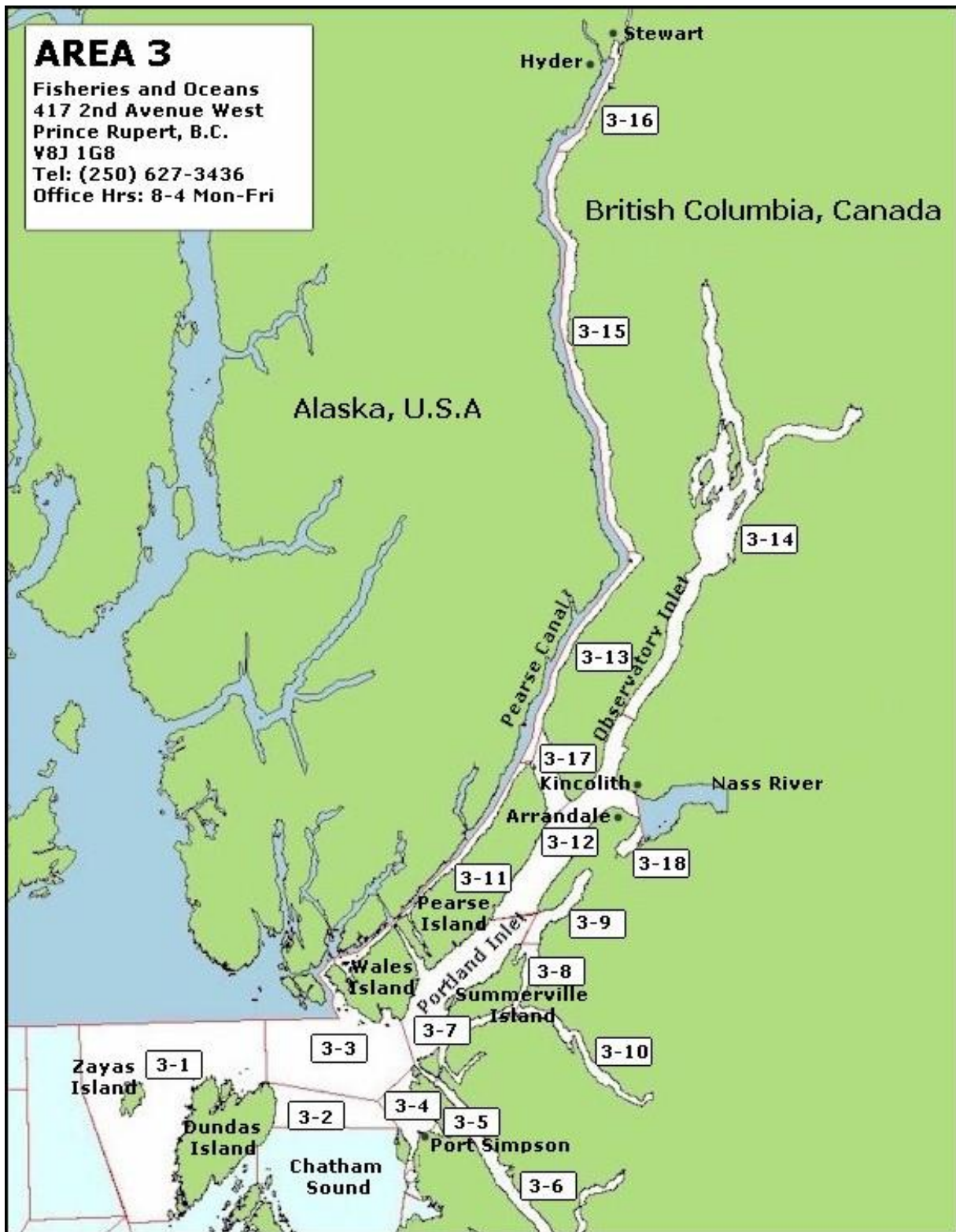


Figure 5.—Canadian Statistical Area 3 management sub-areas.

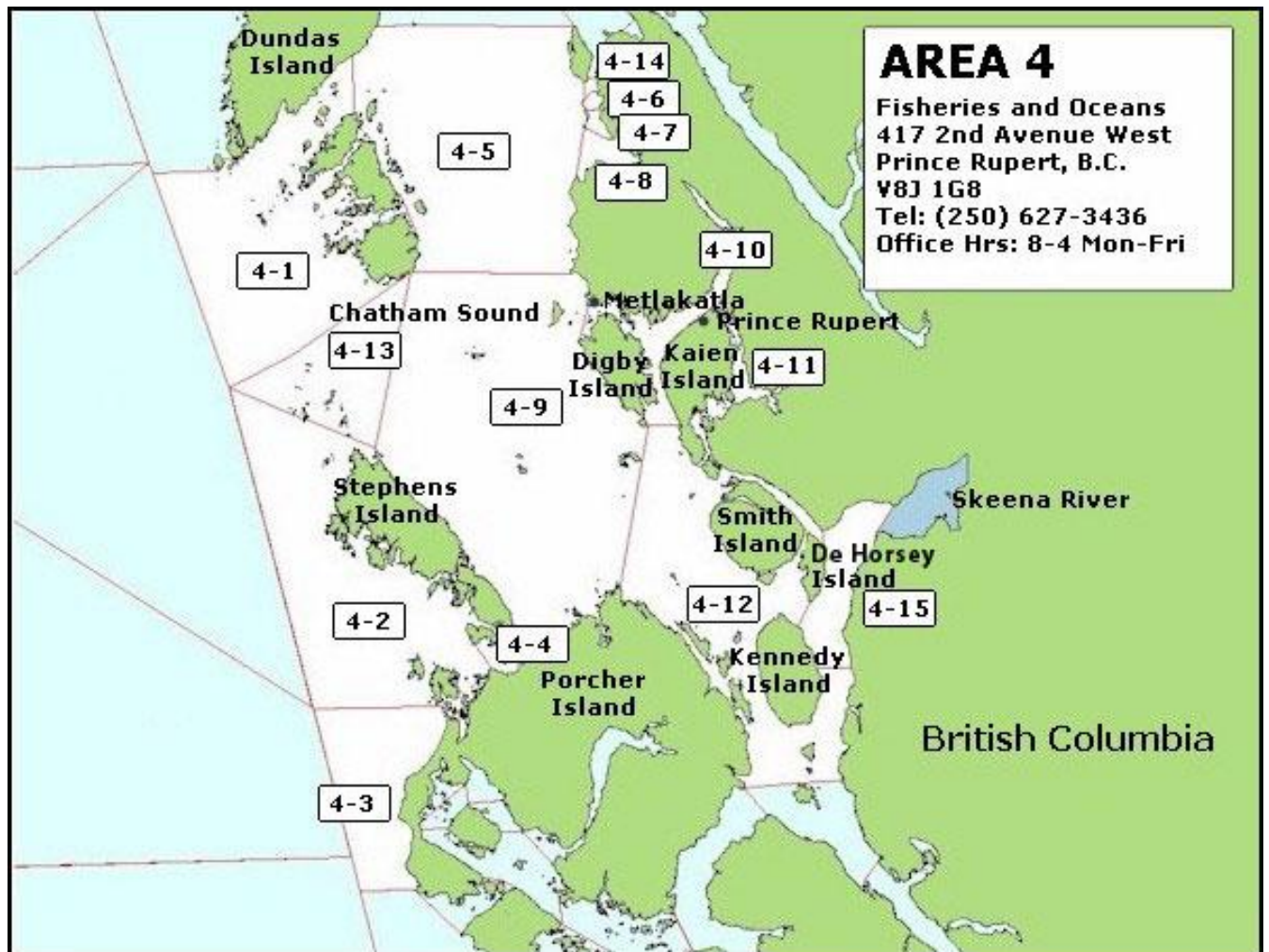


Figure 6.—Canadian Area 4 management sub-areas.

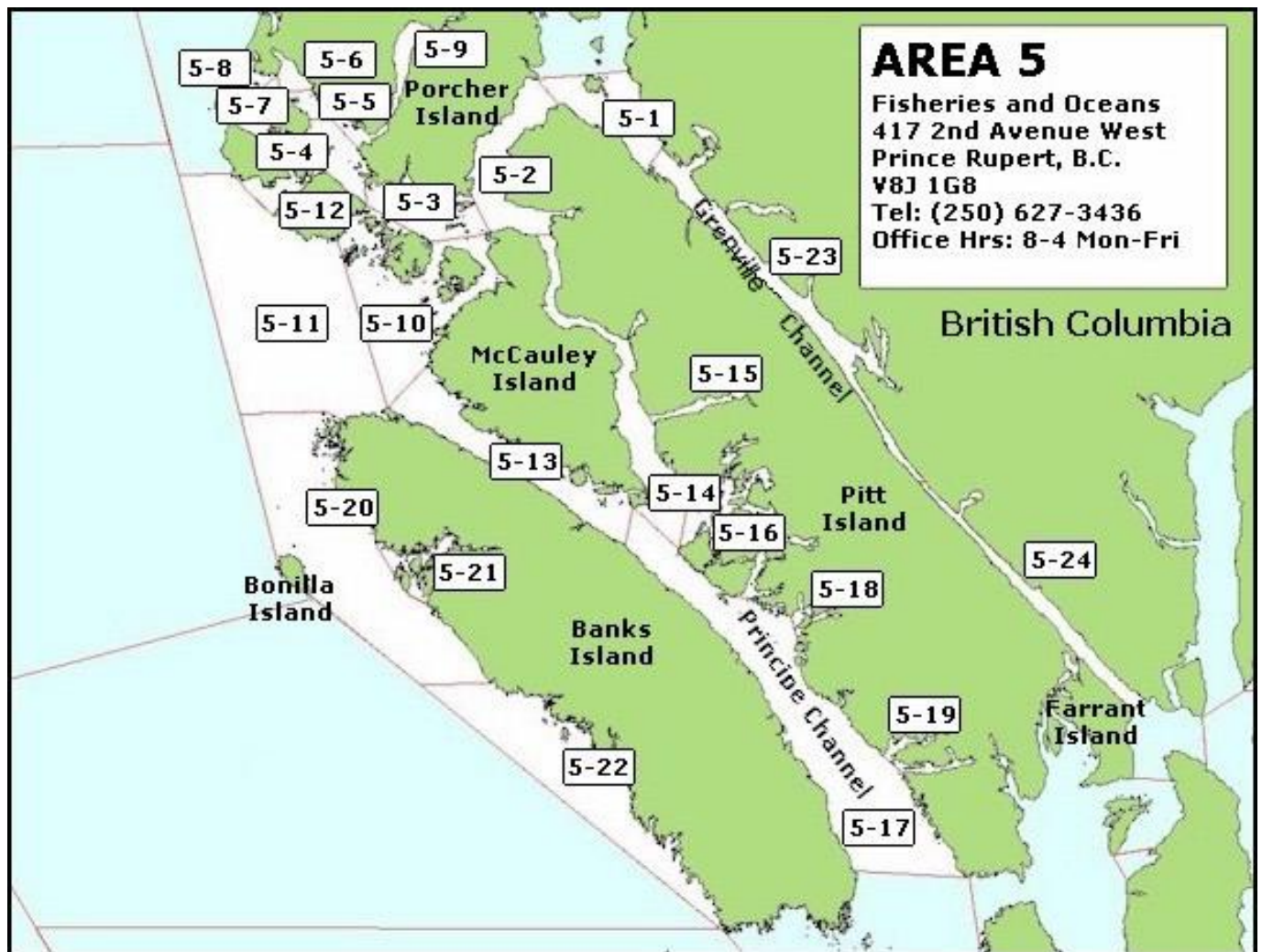


Figure 7.—Canadian Statistical Area 5 management sub-areas.