# Assessment of the Canadian and Alaskan Sockeye Stocks Harvested in the Northern Boundary Fisheries using Run Reconstruction Techniques, 1982-2001

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**Pacific Salmon Commission**
**Technical Report No. 13**

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# Assessment of the Canadian and Alaskan Sockeye Stocks Harvested in the Northern Boundary Fisheries using Run Reconstruction Techniques, 1982-2001

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The work reported here would not have been possible without the cooperation and support of key individuals in the management and assessment of northern British Columbia and southeast Alaskan salmon fisheries. Financial support for this work was provided through the Department of Fisheries and Oceans (DFO) and Nisga'a Lisims Government (NLG). Within DFO, we thank Les Jantz, Steve Cox-Rogers and Brian Spillsted for providing information on northern catches and escapements. Within NLG, we thank Harry Nyce and Herb Morven for their leadership in initiating this work and on going commitment to the collection of quality stock assessment data for Nass Area stocks. We thank Robert Bocking and Richard Alexander of LGL Limited for providing the in-river catch and escapement estimates for Nass River sockeye. Within the Alaska Department of Fish and Game, we thank Richard Bloomquist for coordinating the transfer of detailed catch data for southern southeast Alaska; and Tim Zadina, Philip Doherty, Jerome Pella, and Scott Marshall for their review of preliminary run reconstruction results.

# ABSTRACT

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Detailed information on the catch, escapement, migration timing and behaviour of northern boundary sockeye salmon stocks has been obtained through national and international studies conducted over the past 20 years. The Northern Boundary Annex to the 1999 Canada/U.S. Salmon Treaty agreement requires detailed accounting of the harvests for Nass and Skeena sockeye stocks. The Northern Boundary Technical Committee was asked to provide the catch, escapement and total run size estimates for the regional sockeye stocks required to implement the new Treaty provisions. A review of the existing run reconstruction data and analyses was initiated in 2001, and lead to the preparation of a jointly approved series of run reconstructions for the 1982-2001 harvests. This report describes the revisions made to the catch and escapement data, migration parameters and assumptions used in the run reconstructions, and compares the revised results with those reported by Gazey and English (2000).

Two run reconstruction methods are used. The first assumes that the stock composition of the harvest in each fisheries is determined by the relative abundance of each stock in the fishery (i.e. the fish present in a fishery are equally vulnerable to the fishing gear). The second assumes that stock contributions to Alaskan catches are known from scale sample data analyses and relies upon the equal vulnerability assumption to estimate stock specific harvests for Canadian fisheries. Both methods use information on migration patterns that were stock-specific and fixed throughout each year, but variable across years. An initial set of migration route parameters for each stock was generated based on the 1982-83 north coast tagging studies results. Alternative sets of migration parameters were developed by adjusting the initial set of values until the estimated catches by stock and week in the Alaskan fisheries derived assuming equal vulnerability were similar to those derived using the scale stock composition estimates for these Alaskan fisheries. Five sets of migration parameter values were required to fit the 1982-2001 scale data, with one set providing the best fit for 14 of the 20 reconstruction years. The run reconstruction results derived using the second method were considered by the Canadian and Alaskan fisheries managers to be the most reasonable estimates of stock size and catch by stock for sockeye harvested in northern boundary fisheries. Consequently, the migration route parameters only affect the stock specific catch estimates for Canadian fisheries, with the vast majority of the Alaskan harvests by stock determined using the scale data or the definition of terminal fishing areas for Alaskan stocks.

The revised estimates for the Skeena stock for 1982-95 were all greater than the earlier estimates because of the combined effect of increasing the annual escapement estimates for the Skeena and decreasing the escapement estimates for Alaskan stocks. The increase in the escapement estimates for Nass sockeye resulted in higher stock size estimates for 1982-1990. The reductions in the estimates of the size of the Nass stock in 1991-1995 were the combined affect of changes to the migration routing parameters, harvest data and escapement estimates.

The 1999 Annex states that the Tree Point gillnet fishery may harvest, on average, 13.8% of the Annual Allowable Harvest (AAH) for Nass sockeye. This exploitation rate was based on earlier analyses of the 1985-1997 catch and escapement data, conducted during the negotiation of the annex. Despite the numerous and substantial changes to both BC and Alaskan catch and escapement data used in our analyses, we estimate that the 1985-1997 average exploitation rate for Nass sockeye in the Tree Point fishery was

13.9% (Table 14). Since 1997, exploitation rate for Nass sockeye in the Tree Point fishery has averaged 15.6% and ranged from harvested 20.3% in 1998 and 1999 to 10.9% in 2000.

The 1999 Annex also states that the Alaska District 104 fishery may harvest, on average, 2.45% of the combined Skeena-Nass AAH in fisheries prior to the end of July (Week 31). This percentage was based on an earlier analysis of 1985-1997 harvest of Skeena and Nass stocks in the District 104 fishery, where the percent Skeena-Nass in the District 104 fishery prior to Week 31 was applied to a fixed maximum harvest of 120,000 sockeye. We have repeated these analysis procedures using the results from the run reconstruction and derived an estimate of 2.34% for the 1985-1997 base period. The main reason for the difference between this value and that defined in the 1999 Annex is the increase in the escapement estimates for Skeena and Nass sockeye. The run reconstruction results indicate that the District 104 catch prior to Week 31 was, on average, 3.30% of the Skeena-Nass AAH during the 1985-1997 period and 2.25% of the Skeena-Nass AAH from 1999-2001. The later estimate indicates that recent harvests in District 104 have been, on average, less than the harvest share defined in the 1999 Annex and our estimate of 2.34% based on the revised catch and escapement data.

The run reconstructions reported here represent a systematic application of an analytical technique that allows the fisheries managers and analysts to combine all the available information for northern boundary fisheries into a single process to better understand the relative and potential contributions of majors stocks to each fishery. The process of organizing the data required for run reconstruction analyses reveals data gaps and assumptions critical to the interpretation of annual harvest statistics. The combined assessment of northern BC and Alaskan stocks by the Northern Boundary Technical Committee promotes an increased understanding of each others stocks and fisheries and an ongoing need to work cooperatively in the management and assessment of these valuable stocks.

# 1.0 INTRODUCTION

Detailed information on the catch, escapement, migration timing and behaviour of northern boundary sockeye salmon stocks has been obtained through national and international studies conducted over the past 20 years. In 1982-83, large-scale tagging studies were conducted to estimate the contribution of Canadian and Alaskan sockeye stocks to fisheries in the northern boundary area (Gazey 1983; Gazey et al. 1983; English et al. 1984; 1985; Pella et al. 1993). In most years since 1982, Alaska Department of Fish and Game (ADF&G) catch monitoring programs obtained scale samples to estimate the stock composition in the major southern southeast Alaskan sockeye fisheries (Oliver et al. 1984; Oliver and Farrington 1989). In 1993, the Department of Fisheries and Oceans (DFO) and the Nisga'a Tribal Council initiated a project to compile catch and escapement data, and combine these with information on migration routes and timing to reconstruct annual returns by stock. A report presenting preliminary results for 1982-92 was reviewed by the Pacific Region Stock Assessment Review Committee (PSARC) and circulated to Alaska fisheries managers in 1996. Minor revisions were made, data for three more years (1993-95) were added, and the results were used for the 1996-99 negotiation of the northern boundary annex to the Canada/U.S. Salmon Treaty (PSC 1999). A description of the data, analytical methods and reconstruction results for the 1982-95 sockeye and pink salmon returns was published in Gazey and English (2000).

The Northern Boundary Annex to the 1999 Canada/U.S. Salmon Treaty agreement requires detailed accounting of the harvests for Nass and Skeena sockeye stocks. It stipulates an annual harvest share of Nass River sockeye for the Alaskan Tree Point fishery, and harvest limitations for Nass and Skeena River sockeye stocks in the Alaska Noyes Island fishery. The Northern Boundary Technical Committee (NBTC) was asked to provide the catch, escapement and total run size estimates for the regional sockeye stocks required to implement the new Treaty provisions. A review of the existing run reconstruction data and analyses was initiated in 2001, and lead to the preparation of a jointly approved series of run reconstructions for the 1982-2001 harvests. This report describes the revisions made to the catch and escapement data, migration parameters and assumptions used in the run reconstructions, and compares the latest results with those reported by Gazey and English (2000).

# 2.0 DATA SOURCES AND PREPARATION

## 2.1 Stock and Fishery Definitions

The present stock and fishery definitions are similar to those of Gazey and English (2000), and are consistent with: (1) the stock and fishery management units defined by the DFO and ADF&G, (2) those used for the North Coast mark-recapture program (Gazey et al. 1983, English et al. 1984, 1985, and Pella et al. 1993); and (3) the management areas defined in the Canada/US Treaty and Nisga'a Final Agreement. The Canadian and Alaskan fisheries included in the run reconstructions are described in Tables 1 and 2. Gazey and English (2000) split Area 3 into sub-areas 3x, 3y+7 and 3z-7, but five sub-areas were used here, namely 3A, 3B, 3C, 3D and 3E (Figure 1, Appendix A). Some of the new sub-area boundaries match the earlier ones, with 3A and 3x remaining unchanged, 3B+3C being 3y+7, and 3D+3E being 3z-7. None of the Alaskan fisheries boundaries were changed, but sockeye catches in the Annette Island Tribal fisheries in Lower Clarence Strait and the Revilla area were added to the these fisheries.

The sockeye stock groupings defined for the northern boundary fisheries consist of the two largest stocks from northern BC (Nass, Skeena), one trans-boundary stock (Stikine), two Alaskan stocks (McDonald Lake, Alaskan Other) and Fraser River stocks from southern BC (Table 3). The data sources and procedures used to compile the associated catch and escapement estimates are described below.

## 2.2 Catch

For the present analysis, catch data for Canadian fisheries were processed in a slightly different manner than described in Gazey and English (2000). In both analyses, fisheries officer hail data were used to partition the catches from sale slip records into daily catches in Canadian gillnet and seine fisheries. Gazey and English (2000) used weekly catches by Statistical Area, but the present analysis uses annual catches by Statistical Area. DFO fisheries managers believed the new approach would provide a more accurate distribution of the catches within each Area, and the resulting daily catch estimates were slightly different than previous ones. As in the last analysis, Alaska catch data were organized by 1-7 d fishery openings (generally 2-3 d). Run reconstructions were conducted with daily time steps, so average daily harvest rates are applied to openings greater than 1 d.

### 2.2.1 Canadian Fisheries

Since the northern boundary run reconstructions began in the early 1990's, substantial efforts were made to organize and verify the Canadian fisheries catch data. Past efforts focused mostly on the collection, organization and verification of the fisheries officer hail data, with the post-1981 data now available in structured databases. These data include daily estimates of fishing effort and catch by salmon species, sub-area and gear type. Annual catch statistics by species, Statistical Area and gear type were obtained from the DFO Sale Slip Catch Database. For Statistical Areas 1, 3 and 4, annual catch statistics from Sale Slips were partitioned by day and sub-area using the hail data. Table 1 shows the link between the hail data sub-areas and the fisheries in the run reconstruction model. Area 5 was analyzed as a single fishery, so all hail data were pooled and used to partition the annual catch to specific days. For cases where no hail data are available (small fisheries early or late in the season), single day openings were assumed, and the entire catch was allocated to the first day of the catch week. These catch records can be identified in the database because the boat count estimates, derived from the hail data, are missing.

The lack of detailed hail data by sub-area within Area 3 and 4 in 1982-84 required additional analysis and assumptions to partition the weekly catches. For Area 3, the 1982-84 hail data do not specify if catches are above and below China Hat (new 3C-3D boundary). An analysis of the more detailed 1985-92 sockeye hail data revealed that: (1) most seine catches in the old area Area 3z occur in 3C (below China Hat); (2) most of the gillnet catch in Area 3z occurs in 3D+3E (above China Hat); and (3) seine catches above China Hat were similar to gillnet catches below China Hat. So for 1982-84, all Area 3z seine catches were assigned to 3C, all Area 3z gillnet catches were assigned to 3D.

For Area 4, the 1982-84 daily hail data do not specify catches by sub-area. However, aerial survey counts of fishing vessels by sub-area were available, and used to partition catch by sub-area. An analysis of the hail data for 1985-92 did not reveal consistent differences in the catch rates between sub-areas, so an equal catch rate across sub-areas was assumed, and weekly catches were partitioned using the distribution of fishing vessels determined from the aerial surveys.

The above assumptions were discussed with the North Coast fishery management biologists who agreed that the estimates of daily catches by sub-area and gear type used in these run reconstructions were the best that could be derived using the available data.

### 2.2.2 Alaskan Fisheries

For the earlier analyses of the 1982-95 Alaska harvest data, ADF&G staff provided data on Alaskan catches by landing date, sub-area, and gear type in separate files from their data on fishery openings. Gazey and English (2000) compiled these data into a database of catch by opening for each of the Alaskan fisheries. For the present analyses, ADF&G provided catch estimates by opening and sub-district, which were compiled by fisheries before conducting the analysis (Table 2). This process revealed that the earlier data sets provided by ADF&G had not consistently included the Tribal catches of the Annette Island fishery, and incidental catches in District 105.

## 2.3 Escapement

A list of the sockeye salmon stocks included in the model is provided in Table 3. Different methods were used to estimate the total and daily escapements by stock.

### 2.3.1 Northern B.C. Stocks

For Nass and Skeena sockeye stocks, test fishing indices were used to determine daily escapements. Total escapement estimates are combinations of all in-river catches and spawning populations. For Nass sockeye, the 1992-2001 figures were obtained from the Nisga'a Fishery Program reports. The 1982-91 catch and escapement data were obtained from DFO records, and adjusted using data collected through the Nisga'a Fisheries Program. Methods used to adjust the Nisga'a harvest estimates were described by Bocking et al. (1994). Historical escapements for the four major Nass watershed sockeye stocks were expanded to total estimates for the Nass, using the DFO counts and the 1992-2001 fishwheel mark-recapture estimates of escapements (Table 4). These adjustments resulted in a 7-13% increase in the annual escapement estimates for Nass sockeye over those presented in Gazey and English (2000). Daily escapement indices for Nass sockeye were obtained from the 1982-92 Monkley Dump gillnet test fishery (Southgate et al. 1990), and from the 1993-2001 Nisga'a fishwheel program (Link et al. 1996; 2001; Link and English 1996; 1997; Link and Gurak 1997; Link 1999; Alexander and Link 2001; Alexander 2001; Alexander and Bocking 2003). Data from years with complete coverage of the Nass sockeye run were used to produce daily escapement indices for periods after the termination of the annual fishwheel operations or gillnet test fishing.

For Skeena sockeye stocks, only DFO records were used to estimate in-river catches and escapements. Escapement estimates were larger than those used in earlier analyses because of recent adjustments for non-Babine stocks, and for periods when the Babine River counting fence was not operated (Table 5). The average annual expansion factor used to estimate non-Babine escapements was 3.61, which includes adjustments for the streams not surveyed, and biases in visual survey efficiencies determined during the 1999 tests (Steve Cox-Rogers, DFO Prince Rupert, pers. comm.). Daily escapement indices for Skeena sockeye were obtained from the Tyee gillnet test fishery (Cox-Rogers and Jantz 1993), and used to the estimate daily escapements above the Tyee test fishery (in-river catch plus spawners).

The annual escapement estimates and run timing for the Stikine River were obtained from the annual Pacific Salmon Commission (PSC) reports for the transboundary area (PSC Transboundary Technical Committee 2003). Escapement estimates were partitioned into daily estimates using a triangular distribution defined by the start, peak and end dates for the sockeye entering the Stikine River each year.

### 2.3.2 Southern B.C. Sockeye Stocks

Scale data analyses have indicated that Fraser River sockeye are occasionally caught in northern boundary fisheries (Area 1 net, Area 1 troll south, Noyes and Dall). The run sizes for Fraser River stocks escaping these fisheries is unknown, so their reconstruction was not possible. However, the PSC compiles estimates of Fraser River stock catches in northern boundary fisheries (PSC 1994, Gable and Cox-Rogers 1993). These data were deducted from the northern boundary fishery catches before reconstructing the runs of northern boundary stocks. When multiple openings occurred within a week, the estimated Fraser River sockeye catch was adjusted using total catch (all stocks) for each opening. Similarly, the total catch of Fraser River sockeye for District 104 during 1982-88 was allocated to the Dall and Noyes fisheries in proportion to the total catch in each fishery by week. Estimates of Fraser River sockeye caught in the Dall and Noyes fisheries were available for 1989-2001.

### 2.3.3 Alaskan Stocks

In Gazey and English (2000), the total annual escapement estimates for Alaskan sockeye stocks were obtained from ADF&G records (Ben Van Alen, ADF&G Juneau, pers. comm.). Estimates for the McDonald and Hugh Smith sockeye stocks were derived from the weir counts, and those of other southern southeast stocks were obtained by accounting for the contribution of the total weir counts to the total estimated sockeye escapements in 1982-83 (periods of intensive sockeye escapement monitoring in Districts 101-108).

For the analyses presented in this report, ADF&G proposed that the escapement estimates for Alaska sockeye stocks be replaced with values derived by assuming a 50% exploitation rate for Alaska stocks in Alaska fisheries. Therefore, the Alaska scale stock composition data were combined with the harvest data to estimate the total catch of Alaska sockeye in Alaska fisheries and the annual escapement for all Alaska stocks combined was set equal to the total catch estimate (i.e. 50% exploitation rate). The total escapement was separated into two stocks by subtracting the annual McDonald Lake escapement estimates from the annual total escapement estimate. The escapement estimates for McDonald Lake sockeye were derived from a series of seven foot surveys conducted annually, except for 1983 and 1984 when the estimates were derived from weir count data. Since most of the historical escapement estimates for McDonald Lake were revised after 1995, the changes to the Alaska sockeye escapement estimates were substantial. The escapement timing for Alaska sockeye also changed. Alaska Department of Fish & Game fishery managers reviewed the weekly harvest data for Alaska sockeye stocks in each management district and defined the start, peak and ending dates for the McDonald Lake and other Alaskan stocks. These dates are used to define the triangular escapement distributions used to convert annual escapement estimates into daily escapement estimates for each stock.

## 2.4 Migration Routes

A migration route is defined as the sequence of fisheries traversed by a particular sockeye stock. The routes were inferred from: (1) discussions with DFO and ADF&G staff, and (2) the 1982-85 North Coast Salmon Tagging Studies results (Gazey et al. 1983, English et al. 1984, 1985, Taylor et al. 1986). The earlier run reconstruction results were derived using two sets of migration parameters: 1) those which applied to the 1982 catch and escapement data, produced interception estimates consistent with the stock composition estimates from the 1982 North Coast Tagging program results; and 2) those which applied to the 1983 catch and escapement data, produced estimates consistent with those of the 1983 program results. These are referred to as the 1982 and 1982 migration route parameters.

This initial set of migration route parameters was used as the starting point for the analyses presented in this report. The alternative sets of migration route parameters used for the various reconstruction years were produced as follows:

1. run reconstructions for a specific year were completed based on the initial set of migration route parameters for 1982-83;
2. catch estimates for each stock in the Alaskan fisheries from the "equal vulnerability" run reconstructions were compared with those based on stock composition estimates derived from the Alaskan scale samples analysis;
3. differences in catches by fishery between the "equal vulnerability" and "scale data" reconstructions was expressed as a sum of squares;
4. the migration route parameters that produced the smallest sum of squares were used as the starting point for further fishery by fishery comparisons;
5. the Tree Point fishery was the first fishery examined because of its proximity to key Canadian fisheries, and its consistent interception of Nass and Skeena sockeye;
6. if the weekly stock-specific catch estimates from the "equal vulnerability" reconstructions differed from those based on scale data, the migration parameters were adjusted by trial and error until the differences were as small as could be practically achieved for that year;
7. step 6 was repeated for each of the major Alaskan fisheries in the sequence: Lower Clarence, Revilla, Noyes Island, Dall Island and Sumner;
8. each alternative migration route was checked for the impact on the previous fisheries examined to ensure that it did not lead to substantially greater discrepancies between their corresponding catch estimates;
9. once a set of migration route parameters produced an adequate fit to the scale data, it was labelled and added to the list of alternative sets of parameters to be examined for any reconstruction year; and
10. this process is then repeated for the next run reconstruction year.

It should be noted that our final analysis results for each year are those derived using all the available stock composition estimates for the Alaskan fisheries. Therefore, the estimates of the number of Nass, Skeena and Alaska sockeye caught in scale sampled Alaskan fisheries are identical to those derived from the direct combination of scale and catch data. The new estimates obtained from the run reconstruction analysis are the number of Nass, Skeena and Alaskan sockeye caught in Canadian fisheries and those Alaskan fisheries without scale stock composition estimates. Since stock composition estimates are available for the vast majority of the harvest in southern southeast Alaska fisheries, the impact of alternative routing parameters is essentially limited to the stock-specific catch estimates for Canadian fisheries.

Migration route parameters and diagrams are provided for each sockeye stock in Appendix B and C to this report.

### 2.5 Residency Time

Residency time is defined as the number of days (to the nearest day) a stock resides within the boundaries of a single fishery (Appendix B). As in English et al. (1985), travel times across boundaries of adjacent fisheries was assumed to be <1 d.

### 2.6 Stock Composition in Alaskan Areas from Scales

Scale pattern analysis results were used to estimate stock composition for sockeye catches in major Alaskan fisheries (Oliver et al., 1984) since 1982. A maximum of six stock groupings were used to partition the catch by week: (1) Southeast Alaska; (2) Nass River; (3) Skeena River; (4) Stikine River; (5) Tahltan River; and (6) south coast stocks (assumed to be mostly the Fraser River). In many years and areas, the catch has been partitioned into only two stocks: 1) Alaska and 2) Nass and Skeena combined. In addition, the weekly stocks composition estimates are only available by major fisheries (defined by district and gear type). Separate estimates are available for most weeks for southern southeast Alaska's four district purse seine fisheries (District 101, 102, 103 and 104); and two major gillnet fisheries: District 101 (Cape Fox) and District 106 (Sumner and Upper Clarence Strait). Stock composition estimates are not available by sub-district area and, typically, scale data is limited for weeks at the start and end of the sockeye fishing season when catches are small.

The use of the above stock composition estimates is optional for the northern boundary run reconstructions. If this option is selected, the stock composition estimates available for each Alaskan fishery are used at their defined level of resolution (stock group by week by fishery) and the equal vulnerability assumption is used for all fisheries without scale stock composition estimates and where the stock composition estimate do not separate Nass and Skeena stocks. In these latter cases, the stock composition data would be used to estimate the total catch of Nass and Skeena sockeye combined and the relative abundance of these two stocks would be used to estimate the catch for each stock in that fishery during the defined fishing period.

## 3.0 ANALYTICAL METHODS

The theoretical basis for the run reconstructions was described in part by Starr and Hilborn (1988), Gazey et al. (1989), Gazey (1992), and Cave and Gazey (1994). However, the procedure used here is particular in that; 1) stocks cannot move in and out of fishing areas in a day; 2) catch by major stock groups (from scale stock composition estimate) are used for areas and weeks; 3) catches pooled over time (up to 7 d) can be used; and 4) stocks can migrate simultaneously in opposite directions. Gazey and English (2000) provided the first complete documentation of the algorithms used to do the reconstructions for the present report.

# 4.0 RESULTS

## 4.1 Sockeye Catch and Escapement Estimates

The importance of each sockeye fishery and stock to the reconstruction results is largely a function of the corresponding catch and escapement estimates (Table 6). Sockeye catch is distributed over 24 fisheries with the 4 major ones (Area 3, Area 4, Noyes, Dall) accounting for >76% of the harvest. Discrepancies between the Table 6 figures and those reported by Gazey and English (2000) are given in Table 7, and are largely caused by changes to the input data. Those concerning the Area 1 troll fishery (1TS) in 1993-95 are due to the addition of data missing from the previous analysis. The largest change for Canadian fisheries is for Area 3 in 1993, because hail data used to allocate the harvest in that area were not previously available. For Alaska, increases in the Lower Clarence and Revilla harvests are caused by the addition of Tribal harvests in the Annette Island fisheries; and catches in District 105 to the run reconstruction database.

Total escapements estimates changed more substantially than catches. Escapement estimates for both Alaskan stocks were substantially lower than those used in previous reconstructions. Estimates for McDonald Lake were lower than reported earlier for all years except 1987, and are due to errors in the older data input files. Large differences for the other Alaskan stocks (US Other) were caused by using a modified escapement estimation procedure (equating escapement and total catch of Alaskan stocks in Alaskan fisheries), and alternative escapement estimates for McDonald Lake (US Other = total minus McDonald). As a result, the most recent escapement estimates for Other and McDonald declined by 35% and 16%, respectively. By contrast, escapement estimates for Skeena and Nass stocks increased by 8% and 7%, respectively. Corrections made to the escapements of non-Babine stocks and the incomplete Babine fence counts lead to higher estimates of Skeena escapement for each year, with increases in the 34,000-173,000 range. Corrections made to the Nass sockeye escapement estimates to account for non-Meziadin stocks prior to 1992 lead the 1982-91 estimates to increase by 23,000-50,000. Systematically accounting for year-to-year changes in the coverage of the sockeye run only lead to minor changes to the 1992-95 Nass escapement estimates. There were no changes to the escapement estimates for Stikine sockeye.

## 4.2 Migratory Parameters

Five different sets of migration parameters (Routings A-E) were used to define sockeye migration patterns that were consistent with the stock composition data available for the 1982-2001 fishing seasons. These migration parameters, provided in Appendix B, define the portion of each stock that would migrate through each fishery (Table 8). Some of the migration parameters are similar across all routings. For example, 85% of the Skeena stock migrate through the Area 4W fishery and 100% of the Skeena stock migrate through the 4X, 4Y, and 4Z terminal fisheries. In contrast, the portion of the Skeena stock migrating through the Tree Point fishery varies from 7.1% under Routing B to 0.5% under Routing E.

One of the parameter sets (Routing A) was used for 14 of the 20 years reconstructed. Routing A was originally based on the 1983 migration parameters defined to produce seasonal stock composition estimates that were within three percentage points of the 1983 International tagging study estimates for each fishery-stock combination (Gazey and English 2000). The results of detailed comparisons of weekly stock composition data for 1983 and other years were used to further refine the 1983 parameters into the Routing A parameters. These refinements included routing more Skeena sockeye through the outside portions of

Area 3 and 4, reducing the portion of the Skeena stock that migrates through the Tree Point and lower Clarence fisheries, and ensuring that the same portions of each stock migrate through both the Dall and Noyes Island fisheries (Table 8). The later change was necessary because the 1983 routing parameters were defined to reflect the tagging study stock compositions which were different for the Dall and Noyes Island fisheries in 1983. In all other years, the stock composition estimates derived from scale data are the same for both of these fisheries (i.e. District 104), so the portion of each stock routed through the District 104 fishery must be equal for the Noyes and Dall Island fisheries.

Each of the other four sets of migration parameters was developed by making minor adjustments to the Routing A parameters to accommodate observed changes in stock composition estimates for key fisheries in specific years. Routing B was defined for 1991 when Skeena sockeye comprised a larger portion of the Tree Point fishery than in any other year. A substantial increase in the portion of the Skeena stock routed through 3B and on to Tree Point (from 1.3% to 7.1%) and the portion of the Nass stock routed through the Tree Point fishery was increased from 21% to 30% to replicate the stock proportions estimated from the Tree Point scale data (Table 8).

Routing C was used for the 1989 and 1990 fishing seasons when Alaskan scale data suggested that the abundance of Nass and Skeena stocks in Alaskan fisheries was higher than could be accounted for by changes in run size alone. Routing C was based on Routing A with more Nass fish routed through all Alaskan fisheries, more Skeena fish in the lower Clarence, Noyes and Dall Island fisheries, and less Alaskan stocks in the Noyes and Dall Island fisheries.

The Routing D parameters, used for 1998 reconstruction, are a composite of Routing A and C parameters for the Nass and Skeena stocks. The Skeena routing is similar to that in Routing C with slight increase in the portion passing through Tree Point and lower Clarence fisheries. Most of the migration parameters for Nass sockeye are identical to those for Routing A but two important changes to parameters for the 3B fishery results in a substantial increase in the portion of the Nass stock routed through the Tree Point fishery and a major reduction in the Nass fish passing through the Area 4 and 5 fisheries.

Routing E represents a slight modification to Routing A to reduced contribution of Nass and Skeena stocks to the Tree Point and lower Clarence fisheries. Therefore, this routing has the smallest portion of the Nass and Skeena stocks in the inside Alaskan fisheries while the portion of Alaskan stocks migrating through these fisheries is similar across all sets of routing parameters. The Routing E parameters were initially defined for the 2001 run reconstruction and later found to be an improvement over the Routing D parameters that previously provided the most consistent fit to the Alaska scale data for the 1999 reconstruction.

### 4.3 Reconstruction Results

The comparison of the weekly catch by stock estimates derived from the “equal vulnerability” analysis with those derived using the Alaska scale data was the primary method used to refine the migration parameters and evaluate the run reconstruction results for each year. The summary graphs for the Tree Point fishery were a key diagnostic for each reconstruction (Figures 2 to 5). These graphs quickly revealed any substantive differences between the run reconstruction approaches and the degree to which these differences could be reduced by altering the migration parameters for specific stocks. For example: if the “equal vulnerability” approach produced consistently lower catch estimates for the Skeena stock than those derived using the scale data, the portion of the Skeena stock routed through the Tree Point fishery would be increased. In most years, Nass sockeye are the dominant stock intercepted in the Tree Point fishery

(e.g.1986, 1992-99, 2001), however, in some years, like 1991, the scale data suggest that a substantial portion of the Tree Point catch was Skeena sockeye (Figure 3). While the change in the relative size of the Nass and Skeena stock accounted for some of this difference, adjustments to the migration routing parameters for Skeena sockeye were required to get a better match between the scale and "equal vulnerability" results. The degree of agreement between the reconstructions is generally very good, however, there were a few periods where no adjustments to migration parameters could account for the large week to week variation in stock proportions derived from the scale data. The largest discrepancy between the two reconstruction approaches occurred in week 32 of the 2000 run reconstructions (Figure 5). The scale data for the Tree Point fishery indicated that the week 32 stock proportions were 79% Skeena, 12% Nass and 9% Alaska. The Nass and Skeena proportions were was substantially different from those in the adjacent weeks (27-38% Nass and 24-53% Skeena). This anomaly in the scale data coupled with a coincident peak in the abundance of Nass sockeye in week 32 resulted in the substantial difference between the sets of reconstruction results. Further checking of the scale data did not reveal any deficiencies in sample sizes or inconsistencies in the age structure that could explain the anomalous stock composition estimate for week 32. We must therefore conclude that: Skeena sockeye were more vulnerable to the Tree Point fishery in week 32 than in other weeks; or the scale samples obtained from the week 32 Tree Point fishery were not representative of the entire fishery. Final estimates of the stock-specific catches by fishery and escapement by stock for 1982-2001 are given in Appendix D.

### 4.4 Annual estimates of stock size and exploitation rates

For most years, the two reconstruction approaches produced similar estimates of total stock size for each of the three major stock groups (i.e Skeena, Nass and Alaska). Skeena stock sizes ranged from a low of 930,000 in 1999 to over 7 million in 1996 (Table 9). The stock sizes for Nass sockeye ranged from 347,000 in 1988 to over 2 million in 1993. The total for all southern southeast Alaska sockeye stocks ranged from 469,000 in 1988 to 1.5 million in 1993. Over the 20 years examined, the difference between the stock size estimates derived from equal vulnerability approach and those derived using the scale data for Alaska fisheries ranged from -1% to 4% for Skeena stocks (Table 10). For 16 (80%) of the years, stock size estimates for the Nass differed by less than $\pm$10%. Alaska stock size estimates differed by less than $\pm$10% in 14 (70%) of the years examined. In all the years where the differences were greater than 10%, the estimates derived from the equal vulnerability approach were less than those derived using the scale data. The years with the largest differences for Nass and Alaskan stocks were years when Skeena stocks were abundant (e.g. 1988, 1996, 2000). In these years, the equal vulnerability approach has assigned more of the Alaska catch to the abundant Skeena stock than that indicated by the scale data.

The exploitation rates were similar for each run reconstruction approach. Reconstructions based on scale data indicate that, mean annual harvest rates for Skeena, Nass and US McDonald range from 49 to 65% (Table 9). The annual harvest rates for US Other (mean 45.3%) were generally lower than those for the Skeena, Nass and US McDonald stocks. The harvest rate estimates for Stikine stocks (mean 28.6%) were consistently lower than those estimated for all other stocks.

### 4.5 Contribution of Alaskan stocks to fisheries

As in Gazey and English (2000), we have examined the contribution of Alaskan sockeye salmon in northern boundary fisheries (Table 11). The contribution of Alaskan stocks to Canadian net fisheries has been consistently small (rarely greater than 7%). Contributions of Alaskan stocks to Alaskan fisheries were

higher and more variable: 10-45% for the Noyes and Dall Island fisheries; 31-88% in the Sumner Straits fishery; 27-79% in Lower Clarence; and 8-39% at Tree Point.

### 4.6 Comparison with previous run reconstruction estimates

The stock size and harvest rate estimates reported in Gazey and English (2000) were compared with those provided in this report (Table 12, Appendix D). The revised estimates for the Skeena stock for 1982-95 were all greater than the earlier estimates because of the combined effect of increasing the annual escapement estimates for the Skeena and decreasing the escapement estimates for Alaskan stocks. The increase in the escapement estimates for Nass sockeye resulted in higher stock size estimates for 1982-1990. The reductions in the estimates of the size of the Nass stock in 1991-1995 were the combined affect of changes to the migration routing parameters, harvest data and escapement estimates. The largest difference for Nass sockeye occurred in 1993 due to a major reallocation of catch from inside Area 3 fisheries to outside Area 3 fisheries (see Table 7). The increases in the Stikine stock size estimates derived using the equal vulnerability approach were primarily due to the reduction in the escapement estimates for Alaskan stocks. The changes for the two Alaskan sockeye stocks were similar under the two reconstruction approaches because the scale data do not separate these stocks so both approaches must rely upon the escapement data and equal vulnerability assumptions to estimate the catch for these stocks. In most years, the changes to the US McDonald escapement estimates were less than those for the US Other stocks so more of the Alaska catch was assigned to the US McDonald stock. The changes in exploitation rates are consistent with the above explanations, with lower exploitation rates for Skeena and Nass stocks and higher rates for the other stocks.

## 5.0 DISCUSSION

The run reconstruction methods outlined in Gazey and English (2000) and this report have been incorporated into the annual assessments for northern boundary sockeye salmon fisheries. The run reconstruction results outlined in this report provide fisheries managers with consistent and objective estimates of run size, run timing and fisheries specific stock compositions using all the available catch, escapement and stock composition data for 1982-2001. Each year's run reconstruction results were reviewed by Canadian and Alaskan fisheries managers and alternative assumptions tested as a component of the post-season stock assessment process. This process has helped to build the understanding and information base required to evaluate long-term fisheries management performance against the abundance based harvest limits defined in the 1999 Annex to the Canada-US Pacific Salmon Treaty.

The information required for a rigorous run reconstruction analysis encourages the managers and stock assessment biologist to test their understanding and assumptions regarding the stocks and fisheries in question. Existing databases seldom have data of sufficient spatial and temporal resolution for the analysis for daily fishing dynamics on rapidly moving stocks. The types of analysis required to convert the available catch and escapement data into a form suitable for daily run reconstructions provide insight into the strengths and weakness of the fundamental information required to manage salmon fisheries. In the above analysis, this process lead to the redefinition of fisheries, the identification and correction of errors in Canadian hail and sale slip databases, the reanalysis of escapement estimates for major Canadian and Alaskan stocks and the identification of stock-specific migration routes. The integration of independent stock composition data into the run reconstructions for sockeye has made it much easier to compare results from the two reconstruction approaches. These analyses and comparisons have helped identify data deficiencies associated

with earlier run reconstructions (Gazey and English, 2000) and make the necessary corrections. While most of the critical analyses and corrections have been completed, it is important to note that these are ongoing tasks that are an integral part of the run reconstruction process and results may change as the process and understanding evolves.

The 1982-2001 run reconstructions provided in this report are the product of over 10 years of data processing, analyses and consultations with fishery managers. These analyses have been endorsed by DFO and AGF&G representatives as the best available estimates of the stock-specific harvests for each of the sockeye fisheries in the Northern Boundary Area (Appendices E and F). The results for the Skeena and Nass sockeye stocks (Tables 13 and 14) provide all the information required to assess fisheries management performance against the goals defined in the 1999 Annex to the Canada-US Pacific Salmon Treaty (PSC 2000). The 1999 Annex states that the Tree Point gillnet fishery may harvest, on average, 13.8% of the Annual Allowable Harvest (AAH) for Nass sockeye. This exploitation rate was based on earlier analyses of the 1985-1997 catch and escapement data, conducted during the negotiation of the annex. Despite the numerous and substantial changes to both BC and Alaskan catch and escapement data used in our analyses, our estimate that the 1985-1997 average exploitation rate for Nass sockeye in the Tree Point fishery was 13.9% (Table 14). Since 1997, exploitation rate for Nass sockeye in the Tree Point fishery has averaged 15.6% and ranged from 20.3% in 1998 and 1999 to 10.9% in 2000.

The 1999 Annex also states that the Alaska District 104 fishery may harvest, on average 2.45% of the combined Skeena-Nass AAH in fisheries prior to the end of July (Week 31). This percentage was based on an earlier analysis of 1985-1997 harvest of Skeena and Nass stocks in the District 104 fishery, where the percent Skeena-Nass in the District 104 fishery prior to Week 31 was applied to a fixed maximum harvest of 120,000 sockeye. The resulting catch estimates were divided by the AAH for Skeena and Nass stocks combined to calculate the percent of the AAH. We have repeated these analysis procedures using the results from the run reconstruction and derived an estimate of 2.34% for the 1985-1997 base period (Table 15). The main reason for the difference between this value and that defined in the 1999 Annex is the increase in the escapement estimates for Skeena and Nass sockeye. The run reconstruction results provide estimates of the total catch, escapement and AAH for all Skeena and Nass stocks combined along with the District 104 catch prior to Week 31 (Table 15). Analyses of these data indicated that the District 104 catch prior to Week 31 was, on average, 3.30% of the Skeena-Nass AAH during the 1985-1997 period and 2.25% of the Skeena-Nass AAH from 1999-2001. The later estimate indicates that recent harvests in District 104 have been, on average, less than the harvest share defined in the 1999 Annex and our estimate of 2.34% based on the revised catch and escapement data. The annual exploitation rates for Skeena and Nass stocks in the District 104 fishery prior to Week 31 have been highly variable, ranging from 12.52% in 1997 to 0.39% in 1999.

For both of the above harvest shares, the AAH is equal to the total catch in those years where the net escapement is less than the escapement goals of 1,100,000 for Skeena-Nass stocks combined or 200,000 for Nass stocks alone. In those years where the net escapement is greater than the escapement goal, the AAH is equal to the total run less the escapement goal.

The run reconstructions reported here represent a systematic application of an analytical technique that allows the fisheries managers and analysts to combine all the available information for northern boundary fisheries into a single process to better understand the relative and potential contributions of majors stocks to each fishery. Since managers must make some assumptions regarding the stocks present in each fishery before permitting fisheries to take place, these types of models provide a means of documenting and systematically evaluating these assumptions. They also provide a consistent procedure for post season analyses and catch accounting that is necessary for examining stock trends, alternative management options and assessing management performance with respect to catch allocation goals.

While the uncertainty associated with the above run reconstructions must be acknowledged, so must the potential benefits of the further development and application of run reconstruction techniques. The inputs to the model specify clear requirements for data collection and organization which alone would be of significant benefit to fisheries managers. The process of organizing the data required for run reconstruction analyses reveals data gaps and assumptions critical to the interpretation of annual harvest statistics. The combined assessment of northern BC and Alaskan stocks by the Northern Boundary Technical Committee promotes an increased understanding of each others stocks and fisheries and an ongoing need to work cooperatively in the management and assessment of these valuable stocks.

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# TABLES

Table 1. Definition of Canadian Fisheries based on hail survey data.

| No. | Fishery | Definition | 1982-1983 | 1984 | 1985 | 1986-2001 |
|---|---|---|---|---|---|---|
| 1 | Langara | Area 1 Net | 1-2, 1-3, 1-4 | 1-2, 1-3, 1-4 | 1-2, 1-3, 1-4 | 1-2, 1-3, 1-4 |
| 2 | 1TN | Area 1 Troll North | 101-4 | 101-4 | 101-4 (< July 22) | 101-4 (< July 22) |
| 3 | 1TS | Area 1 Troll South | 101-other | 101-other | 101-other | 101-other |
| 4 | Masset | Masset Inlet | 1-6 | 1-6 | 1-6 | 1-6 |
| 5 | 3A | Dundas West | 3X | 3X | 3-1 | 3-1W |
| 6 | 3B | Entrance | 3Y | 3Y | 3Y | 3-1E, 3-3-1, 3-3-2, 3-4 |
| 7 | 3C | Outside Portland | 3Z(seine) | 3Z(seine) | 3-7(seine) | 3-6, 3-7-2 |
| 8 | 3D | Inside Portland | 3Z(gillnet) | 3Z(gillnet) | 3-7(gillnet), 3-9 | 3-7-1, 3-9, 3-11 |
| 9 | 3E | Nass Terminal | | | 3-11 to 3-17 | 3-11 to 3-17 |
| 10 | 4W | Outside Area 4 | 15-20 | 4,5,6 | 4,5,6 | 4,5,6 |
| 11 | 4X | Lower Chatham Sound | 14 | 3 | 3 | 3 |
| 12 | 4Y | Smith | | 2 | 2 | 2 |
| 13 | 4Z | River/Gap/Slough | 11-13 | 1 | 1 | 1 |
| 14 | Area 5 | Area 5 Net | 5-all | 5-all | 5-all | 5-all |

**Area 1 Fishery Codes**

| | |
|---|---|
| 1-2 | Langara Island |
| 1-3 | Virago Sound |
| 1-4 | Naden Harbour |
| 1-6 | Masset Inlet |
| 101-4 | A-B line Troll |
| 101-other | Dixon Enterance Troll |

**Area 3 Fishery Codes**

| | |
|---|---|
| 3X | Dundas Island |
| 3Y | Tracy Bay - Boston Rocks |
| 3Z | Portland Inlet |
| 3-1W | Dundas Island West |
| 3-1E | Dundas Island East |
| 3-3-1 | Boston Rocks |
| 3-3-2 | Tracy Bay |
| 3-4 | Finlayson Island |
| 3-7-1 | Area 3-7 above China Hat |
| 3-7-2 | Area 3-7 below China Hat |
| 3-9 | Nasoga Gulf |
| 3-11 | Pearse Island |
| 3-12 | Kincolith |
| 3-14 | Observatory Inlet |
| 3-17 | Dogfish Bay |

**Area 4 Fishery Codes (1982-1983)**

| | | Sub-stat Areas |
|---|---|---|
| 11 | Slough | 4-15 |
| 12 | River | 4-15 |
| 13 | Gap | 4-15 |
| 14 | Lower Chatham Sound | 4-9, 4-12 |
| 15 | Upper Chatham Sound | 4-13 |
| 16 | North Boundary | 4-5, 4-6, 4-7, 4-8, 4-14 |
| 17 | Hudson Bay Pass | 4-1 |
| 18 | Outer Stephens | 4-2 |
| 19 | Edye Pass | 4-4 |
| 20 | Oval Bay | 4-3 |

**Area 4 Fishery Codes (1984-2001)**

| | | |
|---|---|---|
| 1 | River/Gap/Slough | 4-15 |
| 2 | Smith | 4-12 |
| 3 | North Porcher | 4-9 |
| 4 | North Boundary | 4-5, 4-6, 4-7, 4-8, 4-14 |
| 5 | Hudson Bay Pass | 4-1 |
| 6 | Outside Areas | 4-2, 4-3, 4-4 |

Table 2. Definition of Alaskan fisheries.

| No. | Fishery | Definition | Alaska Sub-Districts |
|---|---|---|---|
| 20 | Noyes | Noyes Island | 104-30, 104-35, 104-40, 104-50 |
| 21 | Dall | Dall Island | 104-10, 104-20 |
| 22 | Cordova | Cordova Bay | 103-11, 103-15, 103-21, 103-23, 103-25, 103-30, 103-40 |
| 23 | Sumner | Sumner Strait | 106-41,106-42 |
| 24 | U.Clar | Upper Clarence Strait | 106-10, 106-20, 106-22, 106-30 |
| 25 | M. Clar | Middle Clarence Strait | 102-70, 102-80 |
| 26 | L. Clar | Lower Clarence Strait | 101-21, 101-25, 101-26, 101-27, 101-28, 101-29, 102-10, 102-20, 102-40, 102-50, 102-60 |
| 27 | Revilla | Revilla | 101-23, 101-24, 101-30, 101-33, 101-41, 101-42 101-43, 101-44, 101-45, 101-46, 101-47, 101-53 |
| 28 | Union | Union Bay | 107-10, 107-20 |
| 29 | Tree | Tree Point (Cape Fox) | 101-11 |
| 30 | Term101 | Terminal District 101 | 101-80,101-85, 101-90, 101-95 |
| 31 | Term103 | Terminal District 103 | 103-50, 103-60, 103-65, 103-70, 103-80, 103-90 |
| 32 | Dist. 105 | District 105 | 105-10, 105-20, 105-31, 105-41, 105-42, 105-43, 105-50 |
| 33 | Term108 | Terminal District 108 | 108-10, 108-20, 108-30, 108-40, 108-45, 108-50, 108-60 |

Table 3. Definition of sockeye stocks as used in the run reconstructions.

| No. | Stock | Definition | Location |
|---|---|---|---|
| **Sockeye Stocks** | | | |
| 1 | Skeena | Skeena River | Statistical Area 4-15 |
| 2 | Nass | Nass River | Statistical Area 3-18 |
| 3 | Stikine | Stikine River | District 108-40 |
| 4 | US McD | McDonald Lake | District 101-80 |
| 5 | US Other | Alaskan Other | Districts 101, 102, 103, 105, 107 |
| 6 | Fraser | Fraser River | Statistical Area 29 |

Table 4. In-river catch and escapement estimates used to compute the total sockeye escapements to the Nass River, 1982-2001.

| Year | Escape to Nass River | Nisga'a Fishery FSC | Nisga'a Fishery Sale | Nisga'a Fishery Total | Gitanyow 16.2% | In-River Harvest | Adj. Net Escapement | Gitanyow %of Nisga'a | DFO Escapement | Escape above GW | Nisga'a Catch Above GW | Source |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1982 | 372,881 | 19,681 | | 19,681 | 3192 | 22872 | 350,009 | 16.2% | 320,439 | | | DFO |
| 1983 | 234,871 | 21,890 | | 21,890 | 3550 | 25439 | 209,431 | 16.2% | 185,109 | | | DFO, Bocking et al. (1993) |
| 1984 | 243,053 | 35,349 | | 35,349 | 5732 | 41081 | 201,972 | 16.2% | 185,605 | | | DFO, Bocking et al. (1993) |
| 1985 | 448,420 | 35,601 | | 35,601 | 5773 | 41374 | 407,046 | 16.2% | 362,541 | | | DFO, Bocking et al. (1993) |
| 1986 | 259,300 | 39,241 | | 39,241 | 6363 | 45604 | 213,696 | 16.2% | 197,010 | | | DFO, Bocking et al. (1993) |
| 1987 | 250,816 | 34,981 | | 34,981 | 5673 | 40653 | 210,162 | 16.2% | 184,225 | | | DFO, Bocking et al. (1993) |
| 1988 | 190,023 | 29,453 | | 29,453 | 4776 | 34229 | 155,794 | 16.2% | 133,810 | | | DFO, Bocking et al. (1993) |
| 1989 | 158,920 | 27,107 | | 27,107 | 4396 | 31502 | 127,417 | 16.2% | 111,499 | | | DFO, Bocking et al. (1993) |
| 1990 | 205,319 | 23,970 | | 23,970 | 3887 | 27857 | 177,462 | 16.2% | 154,578 | | | DFO, Bocking et al. (1993) |
| 1991 | 381,589 | 62,704 | | 62,704 | 10168 | 72872 | 308,717 | 16.2% | 282,727 | | | DFO, Bocking et al. (1993) |
| 1992 | 731,534 | 50,506 | | 50,506 | 8190 | 58696 | 672,838 | 16.2% | | 704801 | 23773 | Link et al. (1993), English & Bocking (1993) |
| 1993 | 573,694 | 30,490 | | 30,490 | 4944 | 35434 | 538,260 | 16.2% | | 555776 | 12572 | Link & English (1996), Bocking & English (1996) |
| 1994 | 344,368 | 29,325 | | 29,325 | 5000 | 34325 | 310,043 | 17.1% | | 325043 | 10000 | Link & English (1997) |
| 1995 | 303,739 | 34,054 | | 34,054 | 5000 | 39054 | 264,685 | 14.7% | | 281616 | 11931 | Link & Gurak (1997) |
| 1996 | 252,336 | 29,220 | | 29,220 | 5000 | 34220 | 218,116 | 17.1% | | 232270 | 9153 | Link (1999) |
| 1997 | 287,242 | 31,640 | | 31,640 | 5146 | 36786 | 250,456 | 16.3% | | 266804 | 11202 | Link, Alexander & Blakley (2001) |
| 1998 | 304,888 | 32,149 | | 32,149 | 6281 | 38430 | 266,458 | 19.5% | | 281928 | 9189 | Alexander & Link (2001) |
| 1999 | 256,022 | 33,838 | | 33,838 | 11227 | 45065 | 210,957 | 33.2% | | 239346 | 17162 | Alexander (2001) |
| 2000 | 300,468 | 22,448 | 70,729 | 93,177 | 2884 | 96061 | 204,407 | 12.8% | | 243584 | 36293 | Alexander, Link & Bocking (2002) |
| 2001 | 246,980 | 25,756 | 51,427 | 77,183 | 2544 | 79727 | 167,253 | 9.9% | | 206,033 | 34736 | Alexander & Bocking (2003) |
| Averages | | | | | | | | | | | | |
| 1982-2001 | 317,323 | 32,470 | 61,078 | 38,578 | 5,486 | 44,064 | 273,259 | 16.8% | 211,754 | 333,720 | 17,601 | |
| 1994-2001 | 287,005 | 29,804 | 61,078 | 45,073 | 5,385 | 50,459 | 236,547 | 17.6% | | 259,578 | 17,458 | |
| 1997,98,00 | 297,533 | 28,746 | 70,729 | 52,322 | 4,770 | 57,092 | 240,440 | 16.2% | | 264,105 | 18,895 | |

Table 5. In-river catch and escapement estimates used to compute total sockeye escapements to the Skeena River, 1982-2001.

| | Babine | Babine | Harvest above Fence | | Harvest below Fence | | Total FSC | Total ESSR | Non-Babine Escapement | | | Terminal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Fence | Miissed[1] | FSC[2] | ESSR[3] | FSC[2] | ESSR[3] | harvest | harvest | Unadjusted | Factor[4] | Adjusted | Run[5] |
| 1982 | 1,136,835 | | 42,000 | 0 | 165,320 | 0 | 207,320 | 0 | 45,902 | 3.16 | 145,176 | 1,447,331 |
| 1983 | 886,393 | | 20,000 | 0 | 119,966 | 0 | 139,966 | 0 | 27,331 | 3.96 | 108,146 | 1,114,505 |
| 1984 | 1,052,385 | | 12,100 | 0 | 166,560 | 0 | 178,660 | 0 | 23,330 | 3.97 | 92,631 | 1,311,576 |
| 1985 | 2,148,044 | | 16,000 | 0 | 168,072 | 0 | 184,072 | 0 | 44,262 | 3.68 | 162,918 | 2,479,034 |
| 1986 | 701,507 | | 4,050 | 0 | 146,716 | 0 | 150,766 | 0 | 38,305 | 3.01 | 115,485 | 963,708 |
| 1987 | 1,307,852 | | 0 | 0 | 139,307 | 0 | 139,307 | 0 | 36,372 | 3.54 | 128,903 | 1,576,062 |
| 1988 | 1,408,879 | | 25,000 | 0 | 109,586 | 0 | 134,586 | 0 | 33,614 | 3.53 | 118,772 | 1,637,237 |
| 1989 | 1,132,316 | | 22,000 | 0 | 126,828 | 0 | 148,828 | 0 | 27,678 | 3.72 | 103,000 | 1,362,144 |
| 1990 | 978,646 | | 27,008 | 0 | 130,177 | 0 | 157,185 | 0 | 32,920 | 3.28 | 108,062 | 1,216,885 |
| 1991 | 1,176,318 | | 15,650 | 0 | 123,419 | 0 | 139,069 | 0 | 77,050 | 3.00 | 231,264 | 1,531,001 |
| 1992 | 1,142,916 | 117,514 | 33,093 | 0 | 85,138 | 0 | 118,231 | 0 | 76,152 | 3.10 | 235,791 | 1,581,359 |
| 1993 | 1,737,426 | | 68,250 | 104,340 | 120,105 | 29,395 | 188,355 | 133,735 | 69,590 | 3.06 | 213,165 | 2,100,091 |
| 1994 | 1,052,905 | | 32,300 | 15,900 | 104,011 | 26,376 | 136,311 | 42,276 | 22,366 | 6.76 | 151,084 | 1,334,376 |
| 1995 | 1,737,009 | | 18,491 | 80,000 | 116,925 | 129,421 | 135,416 | 209,421 | 81,175 | 3.12 | 253,547 | 2,236,902 |
| 1996 | 1,900,591 | 145,860 | 39,422 | 150,000 | 101,047 | 234,280 | 140,469 | 384,280 | 78,075 | 3.45 | 269,427 | 2,651,205 |
| 1997 | 995,147 | 110,992 | 13,699 | 75,000 | 111,767 | 151,106 | 125,466 | 226,106 | 53,495 | 3.30 | 176,368 | 1,545,380 |
| 1998 | 510,246 | | 9,744 | 0 | 120,046 | 0 | 129,790 | 0 | 21,865 | 3.91 | 85,395 | 715,687 |
| 1999 | 606,136 | | 23,220 | 0 | 89,635 | 0 | 112,855 | 0 | 41,450 | 3.45 | 142,828 | 838,599 |
| 2000 | 1,831,613 | | 23,000 | 432,456 | 146,679 | 352,248 | 169,679 | 784,704 | 17,271 | 3.60 | 62,177 | 2,392,717 |
| 2001 | 1,984,261 | | 12,050 | 483,310 | 48,537 | 217,799 | 60,587 | 701,109 | 33444 | 3.60 | 120,402 | 2,370,999 |
| Mean | 1,271,371 | 124,789 | 22,854 | 67,050 | 121,992 | 57,031 | 144,846 | 124,082 | 44,082 | 3.61 | 151,227 | 1,620,340 |

[1] Babine missed is the number of fish estimated to have passed the Babine fence during periods when it was not operational.

[2] FSC = Food, social and ceremonial harvests by Skeena River First Nations

[3] ESSR = River fisheries conducted by Skeena River First Nations to harvest escapements surplus to spawning requirements.

[4] The non-Babine escapement adjustment factor includes an annual adjustment for streams not surveyed and a fixed adjustment of 2.59 for observer efficiency.

[5] Terminal run is the annual estimate of the number of Skeena River sockeye that passed the Tyee test fishery site at the mouth of the Skeena River.

Table 6. Total annual sockeye catch by fishery, and escapements by stock.

| | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | Mean | Percent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Catch (thousands) | | | | | | | | | | | | | | | | | | | | | | |
| Langara | 59 | 32 | 32 | 118 | 34 | 35 | 42 | 87 | 69 | 59 | 86 | 221 | 114 | 106 | 0 | 371 | 0 | 0 | 0 | 0 | 73 | 2.4% |
| 1TS | 4 | 4 | 18 | 33 | 21 | 45 | 52 | 114 | 27 | 32 | 16 | 37 | 32 | 50 | 19 | 118 | 0 | 0 | 1 | 0 | 31 | 1.0% |
| 3A | 316 | 106 | 118 | 232 | 51 | 37 | 173 | 60 | 47 | 298 | 198 | 254 | 71 | 614 | 493 | 167 | 2 | 0 | 0 | 0 | 162 | 5.3% |
| 3B | 122 | 176 | 47 | 73 | 91 | 156 | 104 | 196 | 109 | 391 | 286 | 587 | 185 | 582 | 306 | 337 | 51 | 49 | 97 | 70 | 201 | 6.5% |
| 3C | 12 | 123 | 28 | 39 | 28 | 52 | 13 | 148 | 51 | 98 | 133 | 226 | 51 | 165 | 53 | 56 | 32 | 83 | 72 | 48 | 76 | 2.5% |
| 3D | 198 | 47 | 78 | 13 | 14 | 32 | 14 | 25 | 8 | 55 | 71 | 62 | 24 | 26 | 41 | 13 | 31 | 114 | 39 | 25 | 47 | 1.5% |
| 3E | 0 | 0 | 0 | 52 | 13 | 21 | 0 | 14 | 2 | 46 | 304 | 221 | 17 | 85 | 136 | 10 | 38 | 166 | 98 | 29 | 63 | 2.0% |
| 4W | 822 | 115 | 202 | 596 | 63 | 93 | 205 | 114 | 151 | 215 | 499 | 580 | 237 | 587 | 863 | 278 | 26 | 0 | 112 | 69 | 291 | 9.5% |
| 4X | 331 | 48 | 127 | 403 | 94 | 94 | 231 | 93 | 100 | 137 | 237 | 337 | 110 | 296 | 639 | 156 | 20 | 0 | 563 | 654 | 234 | 7.6% |
| 4Y | 0 | 0 | 165 | 385 | 117 | 127 | 390 | 144 | 259 | 278 | 471 | 271 | 118 | 372 | 801 | 328 | 18 | 0 | 758 | 339 | 267 | 8.7% |
| 4Z | 539 | 122 | 261 | 649 | 187 | 203 | 687 | 272 | 319 | 362 | 448 | 496 | 187 | 424 | 1116 | 364 | 30 | 6 | 560 | 507 | 387 | 12.6% |
| Area 5 | 72 | 14 | 36 | 55 | 31 | 40 | 40 | 22 | 52 | 46 | 72 | 43 | 36 | 49 | 251 | 20 | 3 | 0 | 0 | 14 | 45 | 1.5% |
| Noyes | 192 | 503 | 161 | 292 | 235 | 92 | 387 | 325 | 474 | 468 | 614 | 459 | 765 | 241 | 450 | 767 | 365 | 103 | 109 | 390 | 370 | 12.0% |
| Dall | 91 | 141 | 134 | 139 | 210 | 79 | 204 | 192 | 323 | 382 | 459 | 486 | 371 | 255 | 411 | 477 | 122 | 62 | 118 | 147 | 240 | 7.8% |
| Cordova | 1 | 1 | 1 | 10 | 6 | 1 | 2 | 8 | 9 | 5 | 3 | 9 | 10 | 3 | 18 | 1 | 4 | 0 | 9 | 1 | 5 | 0.2% |
| Sumner | 122 | 28 | 28 | 172 | 85 | 79 | 57 | 108 | 105 | 89 | 147 | 130 | 157 | 133 | 223 | 118 | 79 | 73 | 58 | 99 | 105 | 3.4% |
| U.Clar | 72 | 23 | 66 | 94 | 62 | 57 | 35 | 89 | 82 | 56 | 56 | 76 | 55 | 79 | 89 | 88 | 43 | 35 | 34 | 72 | 63 | 2.1% |
| M.Clar | 0 | 4 | 2 | 1 | 3 | 0 | 0 | 5 | 5 | 1 | 6 | 8 | 6 | 23 | 19 | 16 | 8 | 11 | 4 | 14 | 7 | 0.2% |
| L.Clar | 104 | 67 | 112 | 154 | 87 | 64 | 47 | 134 | 130 | 102 | 109 | 295 | 102 | 270 | 205 | 126 | 68 | 74 | 110 | 185 | 127 | 4.1% |
| Revilla | 35 | 19 | 38 | 50 | 43 | 51 | 30 | 81 | 31 | 39 | 69 | 96 | 20 | 53 | 66 | 20 | 20 | 29 | 33 | 25 | 42 | 1.4% |
| Union | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 7 | 1 | 3 | 7 | 44 | 9 | 8 | 5 | 26 | 7 | 15 | 7 | 57 | 10 | 0.3% |
| Tree | 191 | 136 | 88 | 173 | 146 | 107 | 116 | 145 | 86 | 132 | 245 | 394 | 100 | 164 | 212 | 167 | 160 | 160 | 95 | 80 | 155 | 5.0% |
| Term101 | 1 | 0 | 3 | 18 | 12 | 0 | 0 | 7 | 0 | 6 | 23 | 150 | 0 | 0 | 250 | 40 | 21 | 35 | 36 | 30 | 32 | 1.0% |
| Term103 | 0 | 9 | 2 | 17 | 8 | 0 | 1 | 13 | 10 | 14 | 1 | 41 | 5 | 7 | 7 | 29 | 14 | 8 | 7 | 26 | 0 | 0.0% |
| Dist105 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 34 | 0 | 24 | 0 | 25 | 3 | 2 | 0 | 2 | 5 | 0.2% |
| Term108 | 7 | 0 | 1 | 1 | 4 | 2 | 1 | 10 | 12 | 18 | 53 | 77 | 97 | 77 | 154 | 93 | 22 | 36 | 16 | 1 | 34 | 1.1% |
| Total | 3291 | 1719 | 1749 | 3771 | 1646 | 1467 | 2831 | 2413 | 2462 | 3334 | 4613 | 5634 | 2879 | 4693 | 6827 | 4211 | 1187 | 1061 | 2936 | 2884 | 3069 | |
| Escapement (thousands) | | | | | | | | | | | | | | | | | | | | | | |
| Skeena | 1447 | 1115 | 1312 | 2479 | 964 | 1576 | 1637 | 1362 | 1217 | 1531 | 1581 | 2100 | 1334 | 2237 | 2651 | 1394 | 716 | 839 | 2393 | 2301 | 1609 | 67.5% |
| Nass | 373 | 235 | 243 | 448 | 259 | 251 | 190 | 159 | 205 | 382 | 732 | 574 | 344 | 304 | 252 | 287 | 305 | 256 | 300 | 247 | 317 | 13.3% |
| Stikine | 69 | 72 | 76 | 185 | 69 | 39 | 42 | 75 | 57 | 120 | 155 | 176 | 128 | 142 | 184 | 126 | 90 | 66 | 56 | 50 | 99 | 4.1% |
| US McD | 50 | 56 | 121 | 101 | 95 | 187 | 67 | 76 | 113 | 166 | 100 | 80 | 105 | 44 | 62 | 68 | 58 | 90 | 91 | 43 | 89 | 3.7% |
| US Other | 292 | 219 | 142 | 269 | 210 | 86 | 162 | 226 | 231 | 183 | 405 | 595 | 306 | 234 | 575 | 460 | 158 | 160 | 137 | 318 | 268 | 11.3% |
| Total | 2231 | 1697 | 1894 | 3482 | 1597 | 2139 | 2098 | 1898 | 1823 | 2382 | 2973 | 3525 | 2217 | 2961 | 3724 | 2335 | 1327 | 1411 | 2977 | 2959 | 2383 | |

Table 7. Differences in annual sockeye catch by fishery, and escapements by stock, 1982-95.

| | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | Total | Percent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Catch (thousands) | | | | | | | | | | | | | | | | |
| Langara | 0 | 0 | 4 | 9 | 2 | 0 | 0 | 0 | 6 | 2 | 0 | 0 | 0 | 1 | 24 | 2.2% |
| 1TS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 37 | 32 | 50 | 119 | 32.5% |
| 3X | 4 | 10 | -2 | -2 | 3 | -3 | 1 | -10 | 1 | 10 | 1 | -16 | -2 | 18 | 13 | 0.5% |
| 3Y+7 | -8 | -6 | 0 | -7 | -2 | -3 | 0 | 5 | 0 | -8 | 7 | 238 | 1 | -5 | 212 | 5.2% |
| 3Z-7 | 6 | 2 | 3 | 9 | 0 | 9 | -1 | 6 | 0 | 2 | -6 | -221 | 2 | -4 | -193 | -11.8% |
| 4W | 33 | 0 | 8 | 0 | 0 | 3 | -2 | -5 | 7 | 0 | 9 | -2 | 0 | -2 | 49 | 1.1% |
| 4X | -6 | -1 | 5 | -5 | 0 | 0 | 5 | -1 | 0 | 0 | 2 | 24 | 1 | 6 | 30 | 1.2% |
| 4Y | 0 | 0 | 7 | -10 | 0 | -1 | -3 | -1 | -9 | -7 | 8 | 3 | 3 | 11 | 1 | 0.0% |
| 4Z | 42 | 3 | -2 | 15 | 1 | 1 | 8 | 8 | 9 | 10 | -4 | -14 | -3 | 12 | 86 | 1.7% |
| Area 5 | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | -1 | 5 | 0.8% |
| Noyes | 1 | -7 | -2 | -17 | -7 | 0 | -1 | 8 | -10 | -14 | -1 | -40 | -5 | -8 | -103 | -1.9% |
| Dall | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | -1 | 0 | 0.0% |
| Cordova | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0% |
| Sumner | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.1% |
| U.Clar | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | -1 | 0 | 0 | 0 | 1 | 0.1% |
| M.Clar | 0 | 0 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | -1.5% |
| L.Clar | 44 | 30 | 47 | 64 | 37 | 46 | 26 | 49 | 53 | 43 | 57 | 81 | 40 | 80 | 697 | 64.5% |
| Revilla | 6 | 3 | 4 | 7 | 4 | 8 | 5 | 3 | 6 | 2 | 6 | 83 | 5 | 14 | 156 | 31.3% |
| Union | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 7 | 1 | 3 | 7 | 44 | 9 | 8 | 82 | |
| Tree | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 0.1% |
| Term101 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | -2 | 0 | 51 | 0 | -7 | 48 | 27.9% |
| Term103 | 0 | 9 | 2 | 17 | 8 | 0 | 1 | 13 | 10 | 14 | 1 | 41 | 5 | 7 | 128 | |
| Dist105 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 34 | 0 | 24 | 62 | |
| Term108 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -2 | 1 | -6 | 0 | 7 | -1 | 1 | 0 | 0.0% |
| Total | 125 | 44 | 77 | 81 | 48 | 61 | 39 | 87 | 76 | 52 | 87 | 351 | 87 | 204 | 1419 | 3.5% |
| Escapement (thousands) | | | | | | | | | | | | | | | | |
| Skeena | 144 | 103 | 92 | 125 | 123 | 140 | 111 | 102 | 72 | 159 | 34 | 148 | 129 | 173 | 1655 | 8.2% |
| Nass | 33 | 26 | 22 | 50 | 23 | 32 | 27 | 20 | 26 | 37 | 45 | -10 | -1 | -8 | 322 | 7.4% |
| Stikine | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0% |
| US McD | -7 | 0 | -3 | -20 | -13 | 49 | -6 | -6 | -7 | -22 | -46 | -163 | -12 | -8 | -264 | -16.2% |
| US Other | -5 | -49 | -279 | -127 | -129 | -439 | -68 | -36 | -120 | -382 | -282 | -158 | -66 | 72 | -2068 | -36.7% |
| Total | 165 | 80 | -168 | 28 | 4 | -218 | 64 | 80 | -29 | -208 | -249 | -183 | 50 | 229 | -355 | -1.1% |

Table 8. Percentage of sockeye stocks passing through each fishery in the absence of fishing, by migration routes (A-E).

| | Skeena | | | | | Nass | | | | | Stikine | US McD | | US Other | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | A | B | C | D | E | All | ABDE | C | ABE | C | D |
| 1N | 34.1 | 43.0 | 23.5 | 24.4 | 36.2 | 35.1 | 29.4 | 26.3 | 20.0 | 46.4 | 0.0 | 12.7 | 12.7 | 0.1 | 0.3 | 0.3 |
| 1TS | 68.1 | 86.1 | 47.0 | 48.8 | 72.4 | 42.8 | 35.9 | 32.1 | 24.4 | 56.6 | 0.0 | 12.7 | 12.7 | 0.1 | 0.3 | 0.3 |
| 3A | 58.2 | 77.9 | 57.8 | 61.0 | 59.0 | 35.8 | 34.0 | 33.0 | 31.0 | 38.8 | 0.0 | 12.7 | 12.7 | 0.1 | 0.3 | 0.3 |
| 3B | 17.0 | 34.0 | 17.0 | 17.0 | 17.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 0.0 | 10.2 | 10.2 | 0.3 | 0.7 | 0.7 |
| 3C | 8.5 | 8.5 | 8.5 | 8.5 | 8.5 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3D | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3E | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4W | 85.0 | 85.0 | 85.0 | 85.0 | 85.0 | 54.0 | 45.0 | 40.0 | 30.0 | 54.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.6 | 0.6 |
| 4X | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 43.2 | 36.0 | 32.0 | 24.0 | 43.2 | 0.0 | 0.0 | 0.0 | 0.2 | 0.6 | 0.6 |
| 4Y | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4Z | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Area 5 | 15.0 | 15.0 | 15.0 | 15.0 | 15.0 | 41.0 | 34.2 | 30.4 | 22.8 | 41.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.6 | 0.6 |
| Refuge | 25.5 | 5.0 | 25.5 | 21.3 | 25.5 | 16.9 | 22.8 | 1.6 | 32.7 | 14.8 | 0.0 | 14.9 | 24.8 | 13.7 | 22.6 | 13.5 |
| Noyes | 39.5 | 50.7 | 47.0 | 50.0 | 38.0 | 39.8 | 38.6 | 61.5 | 40.5 | 32.8 | 0.0 | 34.7 | 24.8 | 31.9 | 22.6 | 31.6 |
| Dall | 39.5 | 50.7 | 47.0 | 50.0 | 38.0 | 39.8 | 38.6 | 61.5 | 40.5 | 32.8 | 0.0 | 34.7 | 24.8 | 31.9 | 22.6 | 31.6 |
| Cordova | 5.5 | 7.6 | 23.6 | 25.6 | 1.8 | 32.1 | 32.2 | 55.7 | 36.1 | 22.6 | 0.0 | 49.5 | 49.5 | 45.6 | 45.1 | 45.1 |
| Sumner | 0.9 | 1.3 | 4.0 | 4.3 | 0.3 | 8.2 | 9.1 | 10.6 | 6.9 | 6.1 | 100.0 | 37.8 | 37.8 | 52.0 | 52.0 | 52.0 |
| U-Clar | 0.9 | 1.3 | 4.0 | 4.3 | 0.3 | 8.2 | 9.1 | 10.6 | 6.9 | 6.1 | 20.0 | 37.8 | 37.8 | 52.0 | 52.0 | 52.0 |
| M-Clar | 0.9 | 1.3 | 4.0 | 4.3 | 0.3 | 8.2 | 9.1 | 10.6 | 6.9 | 6.1 | 0.0 | 37.8 | 37.8 | 48.0 | 48.0 | 48.0 |
| L-Clar | 7.1 | 9.9 | 30.6 | 33.2 | 2.3 | 38.2 | 38.3 | 66.4 | 43.0 | 26.9 | 0.0 | 90.0 | 90.0 | 45.6 | 45.1 | 45.1 |
| Revilla | 0.6 | 0.7 | 0.9 | 1.4 | 0.3 | 2.1 | 3.0 | 17.5 | 4.5 | 1.8 | 0.0 | 20.0 | 20.0 | 10.0 | 10.0 | 10.0 |
| Union | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 40.0 | 40.0 | 40.0 |
| Tree | 1.3 | 7.1 | 1.7 | 2.7 | 0.5 | 21.0 | 30.0 | 35.0 | 45.0 | 18.0 | 0.0 | 12.7 | 12.7 | 1.5 | 3.5 | 3.5 |
| Term101 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 100.0 | 0.0 | 0.0 | 0.0 |
| Term103 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 2.0 | 2.0 |
| Dist105 | 0.9 | 1.3 | 4.0 | 4.3 | 0.3 | 8.2 | 9.1 | 10.6 | 6.9 | 6.1 | 100.0 | 37.8 | 37.8 | 52.0 | 52.0 | 52.0 |
| Term108 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Table 9. Estimates of total run size and exploitation rates by stock based on the equal vulnerability assumption, and the stock composition estimates from the Alaska scale sample data analyses.

| | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | Mean | Percent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Equal Vulnerability** | | | | | | | | | | | | | | | | | | | | | | |
| Stock Size (thousands) | | | | | | | | | | | | | | | | | | | | | | |
| Skeena | 3,879 | 1,996 | 2,475 | 5,354 | 1,932 | 2,506 | 4,137 | 2,661 | 2,836 | 3,864 | 4,229 | 4,775 | 2,629 | 5,575 | 7,691 | 3,940 | 997 | 934 | 4,721 | 4,393 | 3,560 | 67% |
| Nass | 985 | 635 | 511 | 841 | 536 | 528 | 348 | 599 | 419 | 894 | 2,038 | 2,200 | 892 | 1,165 | 893 | 877 | 690 | 849 | 653 | 536 | 848 | 16% |
| Stikine | 106 | 81 | 87 | 254 | 94 | 55 | 55 | 109 | 89 | 168 | 258 | 296 | 298 | 270 | 425 | 271 | 141 | 127 | 87 | 67 | 170 | 3% |
| US McD | 102 | 133 | 283 | 267 | 261 | 367 | 131 | 187 | 227 | 363 | 262 | 469 | 248 | 133 | 559 | 237 | 162 | 255 | 221 | 161 | 259 | 5% |
| US Other | 439 | 382 | 244 | 473 | 391 | 127 | 249 | 393 | 395 | 328 | 667 | 1,079 | 578 | 488 | 950 | 866 | 311 | 287 | 215 | 684 | 479 | 9% |
| Alaska % | 10% | 16% | 15% | 10% | 20% | 14% | 8% | 15% | 16% | 12% | 12% | 18% | 18% | 8% | 14% | 18% | 21% | 22% | 7% | 14% | 14% | |
| Harvest Rate (%) | | | | | | | | | | | | | | | | | | | | | | |
| Skeena | 63 | 44 | 47 | 54 | 50 | 37 | 60 | 49 | 57 | 60 | 63 | 56 | 49 | 60 | 66 | 65 | 28 | 10 | 49 | 48 | 50.1 | |
| Nass | 62 | 63 | 52 | 47 | 52 | 52 | 45 | 73 | 51 | 57 | 64 | 74 | 61 | 74 | 72 | 67 | 56 | 70 | 54 | 54 | 59.9 | |
| Stikine | 35 | 11 | 12 | 27 | 26 | 29 | 23 | 31 | 35 | 29 | 40 | 40 | 57 | 47 | 57 | 54 | 36 | 48 | 35 | 25 | 34.8 | |
| US McD | 51 | 58 | 57 | 62 | 64 | 49 | 48 | 59 | 50 | 54 | 62 | 83 | 58 | 67 | 89 | 71 | 64 | 65 | 59 | 73 | 62.7 | |
| US Other | 33 | 43 | 42 | 43 | 46 | 32 | 35 | 43 | 41 | 44 | 39 | 45 | 47 | 52 | 39 | 47 | 49 | 44 | 36 | 53 | 43.2 | |
| **Using Alaska Scale Data** | | | | | | | | | | | | | | | | | | | | | | |
| Stock Size (thousands) | | | | | | | | | | | | | | | | | | | | | | |
| Skeena | 3,765 | 1,967 | 2,428 | 5,338 | 1,843 | 2,400 | 4,003 | 2,633 | 2,722 | 3,760 | 4,199 | 4,754 | 2,720 | 5,610 | 7,486 | 3,759 | 1,003 | 928 | 4,692 | 4,385 | 3,507 | 66% |
| Nass | 921 | 615 | 543 | 841 | 659 | 563 | 401 | 587 | 460 | 959 | 1,960 | 2,151 | 837 | 1,169 | 1,054 | 995 | 712 | 843 | 626 | 581 | 871 | 16% |
| Stikine | 113 | 78 | 81 | 217 | 76 | 43 | 45 | 91 | 73 | 156 | 242 | 313 | 273 | 247 | 401 | 238 | 116 | 121 | 76 | 67 | 155 | 3% |
| US McD | 136 | 159 | 296 | 286 | 248 | 420 | 167 | 198 | 266 | 390 | 315 | 505 | 246 | 135 | 597 | 271 | 165 | 255 | 259 | 155 | 281 | 5% |
| US Other | 576 | 407 | 252 | 506 | 387 | 156 | 304 | 440 | 445 | 353 | 738 | 1,096 | 569 | 469 | 976 | 924 | 307 | 302 | 243 | 653 | 501 | 9% |
| Alaska % | 13% | 18% | 15% | 11% | 20% | 16% | 10% | 16% | 18% | 13% | 14% | 18% | 18% | 8% | 15% | 19% | 20% | 23% | 9% | 14% | 15% | |
| Harvest Rate (%) | | | | | | | | | | | | | | | | | | | | | | |
| Skeena | 62 | 43 | 46 | 54 | 48 | 34 | 59 | 48 | 55 | 59 | 62 | 56 | 51 | 60 | 65 | 63 | 29 | 10 | 49 | 48 | 49.4 | |
| Nass | 60 | 62 | 55 | 47 | 61 | 55 | 53 | 73 | 55 | 60 | 63 | 73 | 59 | 74 | 76 | 71 | 57 | 70 | 52 | 57 | 61.7 | |
| Stikine | 39 | 8 | 6 | 15 | 9 | 9 | 7 | 18 | 21 | 23 | 36 | 44 | 53 | 42 | 54 | 47 | 22 | 45 | 26 | 25 | 26.8 | |
| US McD | 64 | 65 | 59 | 65 | 62 | 55 | 60 | 62 | 58 | 57 | 68 | 84 | 57 | 67 | 90 | 75 | 65 | 65 | 65 | 72 | 65.8 | |
| US Other | 49 | 46 | 43 | 47 | 46 | 45 | 47 | 49 | 48 | 48 | 45 | 46 | 46 | 50 | 41 | 50 | 49 | 47 | 44 | 51 | 46.7 | |

Table 10. Differences between run reconstruction results based on the equal vulnerability assumption, and on the Alaskan scale sample data analyses, expressed as a percentage of the estimates based on equal vulnerability.

| | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | Mean |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stock Size (% change) | | | | | | | | | | | | | | | | | | | | | |
| Skeena | 3 | 1 | 2 | 0 | 5 | 4 | 3 | 1 | 4 | 3 | 1 | 0 | -3 | -1 | 3 | 5 | -1 | 1 | 1 | 0 | 2 |
| Nass | 6 | 3 | -6 | 0 | -23 | -7 | -15 | 2 | -10 | -7 | 4 | 2 | 6 | 0 | -18 | -13 | -3 | 1 | 4 | -8 | -3 |
| Stikine | -7 | 4 | 7 | 15 | 19 | 22 | 18 | 17 | 18 | 7 | 6 | -6 | 8 | 9 | 6 | 12 | 18 | 5 | 13 | 0 | 9 |
| US McD | -33 | -20 | -5 | -7 | 5 | -14 | -27 | -6 | -17 | -7 | -20 | -8 | 1 | -2 | -7 | -14 | -2 | 0 | -17 | 4 | -8 |
| US Other | -31 | -7 | -3 | -7 | 1 | -23 | -22 | -12 | -13 | -8 | -11 | -2 | 2 | 4 | -3 | -7 | 1 | -5 | -13 | 5 | -5 |
| US Total | -32 | -10 | -4 | -7 | 3 | -17 | -24 | -10 | -14 | -8 | -13 | -3 | 1 | 3 | -4 | -8 | 0 | -3 | -15 | 4 | -6 |
| Harvest Rate (difference) | | | | | | | | | | | | | | | | | | | | | |
| Skeena | 1 | 1 | 1 | 0 | 2 | 3 | 1 | 1 | 2 | 1 | 1 | 0 | -2 | 0 | 1 | 2 | -1 | 0 | 0 | 0 | 1 |
| Nass | 2 | 1 | -3 | 0 | -9 | -3 | -8 | 0 | -4 | -3 | 1 | 1 | 2 | 0 | -4 | -4 | -1 | 0 | 2 | -3 | -2 |
| Stikine | -4 | 3 | 6 | 12 | 17 | 20 | 16 | 13 | 14 | 6 | 4 | -4 | 4 | 5 | 3 | 7 | 14 | 3 | 9 | 0 | 8 |
| US McD | -13 | -7 | -2 | -3 | 2 | -6 | -12 | -3 | -8 | -3 | -6 | -1 | 1 | 0 | -1 | -4 | -1 | 0 | -6 | 1 | -3 |
| US Other | -16 | -3 | -1 | -4 | 0 | -13 | -12 | -6 | -7 | -4 | -6 | -1 | 1 | 2 | -2 | -3 | 0 | -3 | -8 | 2 | -4 |

Table 11. Estimates of Alaska stock contributions (%) to northern boundary fisheries, from reconstructions using scale sample data.

| Fishery | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | Mean |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Langara | 3 | 7 | 4 | 2 | 5 | 7 | 2 | 3 | 2 | 3 | 3 | 3 | 1 | 2 | 0 | 4 | 0 | 0 | 0 | 0 | 2.6 |
| 1TS | 2 | 5 | 1 | 1 | 3 | 4 | 1 | 1 | 4 | 3 | 2 | 7 | 2 | 2 | 4 | 5 | 0 | 0 | 3 | 0 | 2.5 |
| 3A | 4 | 4 | 6 | 2 | 5 | 5 | 1 | 4 | 4 | 3 | 3 | 4 | 2 | 1 | 3 | 2 | 4 | 0 | 0 | 0 | 2.9 |
| 3B | 5 | 7 | 12 | 6 | 7 | 11 | 3 | 7 | 9 | 4 | 5 | 6 | 4 | 2 | 6 | 4 | 3 | 6 | 2 | 3 | 5.6 |
| 3C | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 3D | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 3E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 4W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 4X | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 4Y | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 4Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Area 5 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 2 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0.6 |
| Noyes | 38 | 21 | 27 | 21 | 21 | 40 | 17 | 10 | 14 | 20 | 17 | 20 | 19 | 15 | 23 | 18 | 11 | 39 | 32 | 16 | 22.0 |
| Dall | 38 | 22 | 26 | 23 | 22 | 40 | 19 | 10 | 17 | 18 | 18 | 21 | 12 | 16 | 26 | 17 | 18 | 45 | 32 | 18 | 22.9 |
| Cordova | 88 | 70 | 87 | 70 | 71 | 98 | 34 | 96 | 92 | 91 | 89 | 88 | 88 | 90 | 99 | 79 | 85 | 100 | 86 | 68 | 83.5 |
| Sumner | 49 | 67 | 69 | 48 | 68 | 82 | 88 | 65 | 59 | 52 | 59 | 40 | 55 | 31 | 51 | 61 | 63 | 71 | 70 | 63 | 60.6 |
| U-Clar | 48 | 67 | 68 | 44 | 69 | 83 | 87 | 67 | 63 | 58 | 61 | 41 | 57 | 30 | 58 | 65 | 66 | 74 | 70 | 76 | 62.6 |
| M-Clar | 0 | 60 | 56 | 77 | 73 | 0 | 0 | 77 | 76 | 76 | 89 | 95 | 45 | 76 | 88 | 84 | 79 | 89 | 83 | 52 | 63.8 |
| L-Clar | 51 | 40 | 57 | 56 | 65 | 55 | 43 | 27 | 49 | 59 | 67 | 72 | 36 | 32 | 69 | 79 | 52 | 70 | 36 | 49 | 53.2 |
| Revilla | 56 | 47 | 61 | 67 | 61 | 69 | 41 | 32 | 50 | 56 | 75 | 73 | 44 | 34 | 77 | 79 | 54 | 81 | 48 | 53 | 57.9 |
| Union | 100 | 100 | 100 | 100 | 100 | 0 | 0 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 90.0 |
| Tree | 36 | 36 | 39 | 17 | 9 | 23 | 13 | 23 | 16 | 11 | 20 | 11 | 14 | 8 | 14 | 19 | 10 | 9 | 18 | 14 | 18.0 |
| Term101* | 100 |  | 100 | 100 | 100 |  |  | 100 |  | 100 | 100 | 100 |  |  | 100 | 100 | 100 | 100 | 100 | 100 | 100.0 |
| Term103 | 100 | 100 | 100 | 100 | 100 |  | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100.0 |
| Dist105 | 100 | 72 | 76 | 63 | 60 | 100 | 48 | 0 | 78 | 70 | 73 | 65 | 68 | 43 | 58 | 64 | 60 | 84 | 58 | 84 | 66.2 |
| Term108* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |

* Term101 is a terminal fishery for the McDonald Lake stock and Term108 is a terminal fishery for the Stikine stock.

Table 12. Differences between the run reconstruction estimates based on new input data and migration route parameters, and those reported by Gazey and English (2000) based on the equal vulnerability assumption and the Alaskan scale sample data analyses.

| | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | Mean |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Equal Vulnerability** | | | | | | | | | | | | | | | |
| Stock Size (thousands) | | | | | | | | | | | | | | | |
| Skeena | 304 | 42 | 107 | 25 | 86 | 121 | 96 | 70 | 56 | 344 | 126 | 369 | 156 | 296 | 157 |
| Nass | 89 | 51 | 23 | 132 | 27 | 90 | 44 | 171 | 96 | -88 | -29 | -297 | -72 | -93 | 10 |
| Stikine | 1 | 2 | 6 | 24 | 9 | 7 | 4 | -2 | 5 | 3 | 16 | 25 | 17 | 22 | 10 |
| US McD | -18 | 36 | 101 | 49 | 66 | 195 | 32 | 36 | 22 | 52 | 13 | -27 | 39 | 5 | 43 |
| US Other | -85 | -6 | -324 | -115 | -137 | -571 | -72 | -111 | -132 | -468 | -289 | 98 | 11 | 206 | -143 |
| Alaska % | -3% | 0% | -6% | -1% | -3% | -9% | -1% | -3% | -3% | -7% | -3% | 0% | 1% | 2% | -2% |
| Harvest Rate (%) | | | | | | | | | | | | | | | |
| Skeena | -1 | -4 | -1 | -2 | -4 | -3 | -2 | -2 | -2 | -1 | 1 | 0 | -2 | -1 | -2 |
| Nass | 0 | -1 | -3 | 3 | -2 | 2 | -1 | 5 | 6 | -8 | -3 | -3 | -3 | -1 | -1 |
| Stikine | 0 | 2 | 6 | 7 | 7 | 11 | 6 | -1 | 3 | 2 | 4 | 5 | 2 | 4 | 4 |
| US McD | -2 | 16 | 25 | 17 | 19 | 29 | 21 | 13 | 9 | 14 | 21 | 32 | 14 | 7 | 17 |
| US Other | -10 | 12 | 16 | 10 | 10 | 7 | 7 | -5 | 8 | 15 | 11 | 22 | 13 | 10 | 9 |
| **Using Alaska Scale Data** | | | | | | | | | | | | | | | |
| Stock Size (thousands) | | | | | | | | | | | | | | | |
| Skeena | 294 | 88 | 148 | 83 | 128 | 136 | 140 | 73 | 95 | 256 | 104 | 379 | 224 | 419 | 183 |
| Nass | 47 | 77 | 34 | 146 | 54 | 73 | 45 | 169 | 55 | -9 | 37 | -241 | 1 | -52 | 31 |
| Stikine | 2 | 1 | 0 | 2 | 0 | 0 | 0 | -2 | 1 | -6 | 4 | 22 | 0 | 10 | 2 |
| US McD | 4 | 42 | 100 | 35 | 39 | 235 | 44 | 34 | 22 | 65 | 31 | -21 | 14 | -34 | 44 |
| US Other | -53 | -84 | -363 | -152 | -167 | -602 | -117 | -109 | -124 | -450 | -326 | 40 | -76 | 124 | -176 |
| Alaska % | -2% | -2% | -7% | -2% | -4% | -9% | -2% | -3% | -3% | -6% | -4% | 0% | -2% | 1% | -3% |
| Harvest Rate (%) | | | | | | | | | | | | | | | |
| Skeena | 0 | -3 | 0 | -1 | -3 | -3 | -1 | -3 | -1 | -2 | 0 | 1 | -1 | 0 | -1 |
| Nass | -1 | 1 | -2 | 4 | 0 | 0 | -1 | 6 | -1 | -4 | -1 | -3 | 0 | 0 | 0 |
| Stikine | 1 | 1 | 0 | 1 | 0 | 0 | 0 | -1 | 1 | -3 | 1 | 5 | 0 | 2 | 1 |
| US McD | 7 | 13 | 22 | 13 | 14 | 30 | 20 | 12 | 7 | 15 | 19 | 30 | 7 | -2 | 15 |
| US Other | -4 | 1 | 11 | 7 | 7 | 14 | 2 | -3 | 10 | 18 | 10 | 17 | 4 | -3 | 7 |

Table 13. Total annual catch by fishery and escapement for the Skeena River stocks, 1982-2001.

| | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Catch** | | | | | | | | | | | |
| 1N | 43,921 | 15,178 | 5,048 | 73,004 | 24,315 | 21,375 | 37,223 | 9,633 | 22,928 | 22,914 | 32,140 |
| 1TS | 1,393 | 1,782 | 1,800 | 12,645 | 14,481 | 26,886 | 42,822 | 15,998 | 17,863 | 28,394 | 8,665 |
| 3A | 283,214 | 91,196 | 103,442 | 214,753 | 42,485 | 32,792 | 165,463 | 53,795 | 41,828 | 264,614 | 159,018 |
| 3B | 75,456 | 93,875 | 27,147 | 50,672 | 39,436 | 87,587 | 80,541 | 118,511 | 69,030 | 269,012 | 116,236 |
| 3C | 3,693 | 60,431 | 13,424 | 24,410 | 11,615 | 21,996 | 8,246 | 70,964 | 29,638 | 38,210 | 32,724 |
| 3D | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4W | 761,257 | 101,553 | 179,351 | 550,255 | 54,652 | 87,001 | 194,233 | 106,507 | 145,354 | 192,809 | 408,004 |
| 4X | 294,589 | 44,362 | 114,294 | 369,528 | 88,286 | 89,854 | 223,245 | 86,947 | 97,379 | 126,601 | 198,312 |
| 4Y | 0 | 0 | 165,017 | 385,245 | 116,651 | 126,586 | 389,634 | 143,657 | 259,054 | 277,903 | 471,083 |
| 4Z | 539,230 | 121,527 | 261,296 | 649,470 | 186,636 | 202,857 | 687,286 | 272,008 | 318,896 | 361,931 | 448,352 |
| Area 5 | 46,980 | 10,028 | 28,392 | 38,615 | 23,349 | 27,710 | 34,562 | 16,358 | 44,534 | 29,232 | 33,790 |
| Noyes | 105,261 | 205,239 | 92,250 | 206,953 | 115,591 | 34,776 | 300,847 | 122,595 | 199,147 | 284,815 | 367,097 |
| Dall | 50,559 | 53,821 | 77,077 | 97,566 | 105,579 | 29,646 | 150,841 | 90,621 | 147,901 | 241,620 | 266,993 |
| Cordova | 42 | 209 | 76 | 2,373 | 1,265 | 0 | 878 | 232 | 654 | 322 | 215 |
| Sumner | 15,499 | 1,898 | 2,491 | 41,327 | 8,908 | 3,800 | 3,005 | 22,425 | 24,628 | 7,222 | 19,692 |
| U-Clar | 11,008 | 1,689 | 6,581 | 23,573 | 6,343 | 3,780 | 2,143 | 18,195 | 20,314 | 5,011 | 7,606 |
| M-Clar | 0 | 607 | 285 | 107 | 276 | 0 | 0 | 701 | 1,123 | 148 | 278 |
| L-Clar | 29,036 | 20,602 | 23,242 | 45,943 | 10,309 | 9,106 | 9,506 | 68,751 | 31,969 | 17,778 | 14,364 |
| Revilla | 10,473 | 6,836 | 6,540 | 13,109 | 4,253 | 3,169 | 6,639 | 19,118 | 7,334 | 6,975 | 7,276 |
| Union | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tree | 46,001 | 21,782 | 8,429 | 58,768 | 24,568 | 15,460 | 28,313 | 33,776 | 25,508 | 52,929 | 26,262 |
| Term101 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Term103 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dist105 | 0 | 9 | 1 | 218 | 57 | 0 | 32 | 0 | 7 | 118 | 1 |
| Term108 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| In River | 207,320 | 139,966 | 178,660 | 184,072 | 150,766 | 139,307 | 134,586 | 148,828 | 157,185 | 139,069 | 118,231 |
| **Total Catch** | 2,524,932 | 992,590 | 1,294,843 | 3,042,606 | 1,029,821 | 963,688 | 2,500,045 | 1,419,620 | 1,662,274 | 2,367,627 | 2,736,339 |
| **Escapement** | | | | | | | | | | | |
| Gross | 1,447,331 | 1,114,507 | 1,311,575 | 2,479,035 | 963,709 | 1,576,061 | 1,637,238 | 1,362,147 | 1,216,884 | 1,530,996 | 1,581,361 |
| Net | 1,240,011 | 974,541 | 1,132,915 | 2,294,963 | 812,943 | 1,436,754 | 1,502,652 | 1,213,319 | 1,059,699 | 1,391,927 | 1,463,130 |
| **Total Run** | 3,764,943 | 1,967,131 | 2,427,758 | 5,337,569 | 1,842,764 | 2,400,442 | 4,002,697 | 2,632,939 | 2,721,973 | 3,759,554 | 4,199,469 |
| **Skeena AAH** | 2,664,943 | 992,590 | 1,327,758 | 4,237,569 | 1,029,821 | 1,300,442 | 2,902,697 | 1,532,939 | 1,662,274 | 2,659,554 | 3,099,469 |
| **Alaska %** | | | | | | | | | | | |
| Noyes-Dall | 5.8% | 26.1% | 12.8% | 7.2% | 21.5% | 5.0% | 15.6% | 13.9% | 20.9% | 19.8% | 20.5% |
| Tree Point | 1.7% | 2.2% | 0.6% | 1.4% | 2.4% | 1.2% | 1.0% | 2.2% | 1.5% | 2.0% | 0.8% |
| Other | 2.5% | 3.2% | 3.0% | 3.0% | 3.1% | 1.5% | 0.8% | 8.4% | 5.2% | 1.4% | 1.6% |
| Total | 10.1% | 31.5% | 16.3% | 11.6% | 26.9% | 7.7% | 17.3% | 24.6% | 27.6% | 23.2% | 22.9% |
| **Canadian %** | | | | | | | | | | | |
| Area 3 | 13.6% | 24.7% | 10.8% | 6.8% | 9.1% | 10.9% | 8.8% | 15.9% | 8.5% | 21.5% | 9.9% |
| Area 4 | 59.9% | 26.9% | 54.2% | 46.1% | 43.3% | 38.9% | 51.5% | 39.7% | 49.4% | 36.1% | 49.2% |
| In-river | 7.8% | 14.1% | 13.5% | 4.3% | 14.6% | 10.7% | 4.6% | 9.7% | 9.5% | 5.2% | 3.8% |
| Other | 3.5% | 2.7% | 2.7% | 2.9% | 6.0% | 5.8% | 3.9% | 2.7% | 5.1% | 3.0% | 2.4% |
| Total | 84.7% | 68.5% | 81.2% | 60.2% | 73.1% | 66.4% | 68.8% | 68.1% | 72.4% | 65.8% | 65.4% |

Table 13 (continued).

| | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 1985-97 | 1999-01 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Catch** | | | | | | | | | | | |
| 1N | 46,497 | 28,243 | 86,452 | 0 | 184,932 | 0 | 0 | 0 | 0 | 45,358 | 0 |
| 1TS | 18,986 | 19,698 | 43,093 | 17,197 | 78,137 | 0 | 0 | 902 | 0 | 26,528 | 301 |
| 3A | 203,423 | 62,548 | 558,200 | 458,663 | 150,347 | 1,647 | 0 | 0 | 0 | 185,225 | 0 |
| 3B | 239,789 | 86,663 | 371,469 | 200,483 | 199,086 | 15,246 | 10,228 | 56,817 | 44,222 | 148,347 | 37,089 |
| 3C | 81,639 | 18,922 | 89,438 | 33,277 | 26,026 | 6,769 | 9,244 | 33,421 | 26,854 | 37,470 | 23,173 |
| 3D | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4W | 461,266 | 206,211 | 535,719 | 814,767 | 247,331 | 19,512 | 0 | 106,945 | 65,132 | 308,008 | 57,359 |
| 4X | 271,591 | 95,762 | 267,799 | 601,278 | 139,762 | 16,091 | 0 | 542,491 | 627,155 | 204,334 | 389,882 |
| 4Y | 270,510 | 117,765 | 371,517 | 801,309 | 327,713 | 18,372 | 0 | 758,124 | 339,230 | 312,202 | 365,785 |
| 4Z | 495,551 | 186,618 | 424,361 | 1,115,910 | 363,671 | 30,037 | 5,507 | 559,567 | 506,559 | 439,504 | 357,211 |
| Area 5 | 21,405 | 19,751 | 31,086 | 194,535 | 11,865 | 1,371 | 0 | 0 | 11,035 | 40,522 | 3,678 |
| Noyes | 182,015 | 351,075 | 139,293 | 233,881 | 321,603 | 63,789 | 24,621 | 57,227 | 271,903 | 219,976 | 117,917 |
| Dall | 206,494 | 104,710 | 150,758 | 209,826 | 206,767 | 32,181 | 16,760 | 61,977 | 100,495 | 154,563 | 59,744 |
| Cordova | 617 | 805 | 184 | 0 | 110 | 388 | 0 | 263 | 273 | 589 | 179 |
| Sumner | 28,639 | 18,796 | 58,855 | 32,077 | 19,256 | 15,731 | 640 | 8,529 | 7,674 | 22,202 | 5,614 |
| U-Clar | 18,110 | 9,104 | 40,817 | 17,350 | 22,745 | 8,486 | 412 | 6,157 | 5,722 | 15,007 | 4,097 |
| M-Clar | 30 | 3,394 | 4,492 | 2,126 | 1,702 | 968 | 667 | 491 | 4,813 | 1,106 | 1,990 |
| L-Clar | 44,397 | 40,141 | 128,428 | 43,550 | 16,250 | 12,888 | 4,799 | 60,623 | 53,305 | 36,961 | 39,576 |
| Revilla | 13,809 | 6,032 | 22,705 | 9,898 | 2,545 | 3,156 | 1,679 | 14,370 | 5,733 | 9,451 | 7,261 |
| Union | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tree | 44,579 | 9,319 | 39,633 | 49,031 | 40,265 | 40,172 | 15,054 | 31,592 | 13,929 | 34,493 | 20,192 |
| Term101 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Term103 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dist105 | 4,364 | 13 | 8,817 | 50 | 5,070 | 379 | 30 | 30 | 47 | 1,442 | 36 |
| Term108 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| In River | 322,090 | 178,587 | 344,837 | 524,749 | 200,466 | 129,790 | 112,855 | 954,383 | 761,696 | 210,983 | 609,645 |
| **Total Catch** | 2,975,801 | 1,564,157 | 3,717,953 | 5,359,957 | 2,565,649 | 416,973 | 202,496 | 3,253,909 | 2,845,777 | 2,454,272 | 2,100,727 |
| | | | | | | | | | | | |
| **Escapement** | | | | | | | | | | | |
| Gross | 2,100,087 | 1,334,373 | 2,236,899 | 2,651,202 | 1,394,273 | 715,689 | 838,601 | 2,392,719 | 2,300,594 | 1,697,251 | 1,843,971 |
| Net | 1,777,997 | 1,155,786 | 1,892,062 | 2,126,453 | 1,193,807 | 585,899 | 725,746 | 1,438,336 | 1,538,898 | 1,486,269 | 1,234,327 |
| | | | | | | | | | | | |
| **Total Run** | 4,753,798 | 2,719,943 | 5,610,015 | 7,486,410 | 3,759,456 | 1,002,872 | 928,242 | 4,692,245 | 4,384,675 | 3,940,541 | 3,335,054 |
| **Skeena AAH** | 3,653,798 | 1,619,943 | 4,510,015 | 6,386,410 | 2,659,456 | 416,973 | 202,496 | 3,592,245 | 3,284,675 | 2,865,722 | 2,359,805 |
| **Alaska %** | | | | | | | | | | | |
| Noyes-Dall | 10.6% | 28.1% | 6.4% | 6.9% | 19.9% | 23.0% | 20.4% | 3.3% | 11.3% | 13.1% | 7.5% |
| Tree Point | 1.2% | 0.6% | 0.9% | 0.8% | 1.5% | 9.6% | 7.4% | 0.9% | 0.4% | 1.2% | 0.9% |
| Other | 3.0% | 4.8% | 5.9% | 1.6% | 2.5% | 10.1% | 4.1% | 2.5% | 2.4% | 3.0% | 2.5% |
| Total | 14.9% | 33.5% | 13.2% | 9.4% | 23.9% | 42.7% | 31.9% | 6.7% | 14.1% | 17.3% | 10.9% |
| | | | | | | | | | | | |
| **Canadian %** | | | | | | | | | | | |
| Area 3 | 14.4% | 10.4% | 22.6% | 10.8% | 14.1% | 5.7% | 9.6% | 2.5% | 2.2% | 12.9% | 2.6% |
| Area 4 | 41.0% | 37.4% | 35.5% | 52.2% | 40.6% | 20.1% | 2.7% | 54.8% | 46.8% | 44.1% | 49.6% |
| In-river | 8.8% | 11.0% | 7.6% | 8.2% | 7.5% | 31.1% | 55.7% | 26.6% | 23.2% | 7.4% | 25.8% |
| Other | 2.4% | 4.2% | 3.6% | 3.3% | 10.3% | 0.3% | 0.0% | 0.0% | 0.3% | 3.9% | 0.2% |
| Total | 66.6% | 63.0% | 69.3% | 74.6% | 72.5% | 57.3% | 68.1% | 83.9% | 72.5% | 68.3% | 78.1% |

Table 14. Total annual catch by fishery and escapement for Nass River stocks, 1982-2001.

| | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Catch** | | | | | | | | | | | |
| 1N | 5,430 | 3,278 | 573 | 5,700 | 2,853 | 2,553 | 941 | 1,108 | 1,770 | 2,128 | 11,204 |
| 1TS | 130 | 248 | 146 | 642 | 828 | 1,909 | 987 | 1,687 | 651 | 978 | 1,346 |
| 3A | 19,937 | 9,637 | 7,947 | 12,748 | 5,590 | 1,929 | 5,602 | 4,160 | 2,870 | 24,606 | 32,364 |
| 3B | 39,696 | 69,602 | 14,811 | 18,443 | 44,848 | 50,117 | 19,429 | 63,753 | 30,228 | 108,192 | 154,641 |
| 3C | 7,894 | 62,072 | 14,562 | 14,426 | 16,273 | 29,569 | 5,026 | 76,780 | 21,279 | 60,004 | 100,464 |
| 3D | 197,854 | 47,097 | 77,677 | 13,144 | 14,271 | 32,115 | 13,502 | 24,599 | 8,253 | 54,831 | 71,369 |
| 3E | 0 | 0 | 0 | 52,080 | 12,521 | 21,356 | 171 | 13,830 | 1,529 | 46,090 | 304,326 |
| 4W | 59,511 | 13,074 | 22,545 | 45,023 | 8,384 | 5,963 | 10,344 | 7,093 | 5,135 | 21,856 | 89,654 |
| 4X | 35,027 | 3,808 | 12,187 | 33,366 | 5,816 | 4,346 | 7,536 | 5,565 | 2,201 | 10,026 | 37,942 |
| 4Y | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Area 5 | 24,528 | 4,188 | 6,992 | 15,684 | 7,544 | 11,888 | 5,635 | 5,388 | 6,926 | 16,334 | 37,466 |
| Noyes | 14,548 | 54,445 | 25,503 | 16,708 | 57,974 | 20,620 | 21,951 | 33,093 | 28,951 | 49,491 | 98,624 |
| Dall | 5,944 | 15,640 | 21,353 | 8,497 | 52,327 | 17,257 | 13,597 | 27,633 | 30,862 | 46,914 | 68,330 |
| Cordova | 52 | 133 | 70 | 488 | 514 | 31 | 243 | 108 | 95 | 114 | 128 |
| Sumner | 24,216 | 3,859 | 5,359 | 27,127 | 16,481 | 8,708 | 2,922 | 11,587 | 16,102 | 22,766 | 14,534 |
| U-Clar | 11,062 | 3,664 | 11,557 | 18,469 | 11,830 | 4,945 | 1,721 | 8,888 | 8,296 | 13,383 | 5,308 |
| M-Clar | 0 | 1,201 | 419 | 215 | 466 | 0 | 0 | 345 | 130 | 22 | 334 |
| L-Clar | 21,841 | 19,907 | 24,454 | 22,180 | 20,148 | 19,407 | 17,265 | 28,673 | 34,700 | 24,669 | 22,145 |
| Revilla | 4,798 | 3,498 | 8,229 | 3,609 | 12,541 | 12,393 | 11,196 | 36,183 | 8,231 | 10,546 | 10,141 |
| Union | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tree | 75,409 | 65,105 | 45,595 | 84,212 | 108,303 | 66,943 | 72,968 | 77,290 | 46,095 | 64,361 | 168,223 |
| Term101 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Term103 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dist105 | 0 | 46 | 3 | 126 | 68 | 0 | 81 | 0 | 1 | 97 | 1 |
| Term108 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| In River | 22,872 | 25,439 | 41,081 | 41,374 | 45,604 | 40,653 | 34,229 | 31,502 | 27,857 | 72,872 | 58,696 |
| **Total Catch** | 570,749 | 405,941 | 341,063 | 434,261 | 445,184 | 352,702 | 245,346 | 459,265 | 282,162 | 650,280 | 1,287,240 |
| **Escapement** | | | | | | | | | | | |
| Gross | 372,880 | 234,871 | 243,051 | 448,416 | 259,299 | 250,819 | 190,022 | 158,920 | 205,318 | 381,588 | 731,540 |
| Net | 350,008 | 209,432 | 201,970 | 407,042 | 213,695 | 210,166 | 155,793 | 127,418 | 177,461 | 308,716 | 672,844 |
| **Total Run** | 920,757 | 615,373 | 543,033 | 841,303 | 658,879 | 562,868 | 401,139 | 586,683 | 459,623 | 958,996 | 1,960,084 |
| **Nass AAH** | 720,757 | 415,373 | 343,033 | 641,303 | 458,879 | 362,868 | 245,346 | 459,265 | 282,162 | 758,996 | 1,760,084 |
| **Alaska %** | | | | | | | | | | | |
| Noyes-Dall | 2.8% | 16.9% | 13.7% | 3.9% | 24.0% | 10.4% | 14.5% | 13.2% | 21.2% | 12.7% | 9.5% |
| Tree Point | 10.5% | 15.7% | 13.3% | 13.1% | 23.6% | 18.4% | 29.7% | 16.8% | 16.3% | 8.5% | 9.6% |
| Other | 8.6% | 7.8% | 14.6% | 11.3% | 13.5% | 12.5% | 13.6% | 18.7% | 23.9% | 9.4% | 3.0% |
| Total | 21.9% | 40.3% | 41.6% | 28.3% | 61.2% | 41.4% | 57.9% | 48.7% | 61.5% | 30.6% | 22.0% |
| **Canadian %** | | | | | | | | | | | |
| Area 3 | 36.8% | 45.4% | 33.5% | 17.3% | 20.4% | 37.2% | 17.8% | 39.9% | 22.7% | 38.7% | 37.7% |
| Area 4 | 13.1% | 4.1% | 10.1% | 12.2% | 3.1% | 2.8% | 7.3% | 2.8% | 2.6% | 4.2% | 7.2% |
| In-river | 3.2% | 6.1% | 12.0% | 6.5% | 9.9% | 11.2% | 14.0% | 6.9% | 9.9% | 9.6% | 3.3% |
| Other | 4.2% | 1.9% | 2.2% | 3.4% | 2.4% | 4.5% | 3.1% | 1.8% | 3.3% | 2.6% | 2.8% |
| Total | 57.3% | 57.4% | 57.9% | 39.4% | 35.9% | 55.8% | 42.1% | 51.3% | 38.5% | 55.1% | 51.1% |

Table 14 (continued).

| | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 1985-97 | 1999-01 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Catch** | | | | | | | | | | | |
| 1N | 20,222 | 9,308 | 14,871 | 0 | 31,380 | 0 | 0 | 0 | 0 | 8,003 | 0 |
| 1TS | 4,976 | 3,304 | 4,394 | 701 | 11,721 | 0 | 0 | 56 | 0 | 2,625 | 19 |
| 3A | 40,917 | 7,443 | 48,202 | 17,866 | 12,869 | 567 | 0 | 0 | 0 | 16,705 | 0 |
| 3B | 314,795 | 90,843 | 200,464 | 87,507 | 123,544 | 34,568 | 35,853 | 38,087 | 23,783 | 100,523 | 32,574 |
| 3C | 144,187 | 32,483 | 75,480 | 19,223 | 29,718 | 25,136 | 73,516 | 38,469 | 20,705 | 48,070 | 44,230 |
| 3D | 61,540 | 23,831 | 26,061 | 41,365 | 13,493 | 31,379 | 113,567 | 38,750 | 25,425 | 30,644 | 59,247 |
| 3E | 220,942 | 17,238 | 84,533 | 135,644 | 9,558 | 37,740 | 166,388 | 97,619 | 29,266 | 70,755 | 97,758 |
| 4W | 118,172 | 30,297 | 50,979 | 47,563 | 30,333 | 6,401 | 0 | 5,380 | 3,582 | 36,215 | 2,987 |
| 4X | 64,945 | 14,096 | 27,813 | 36,551 | 15,878 | 3,611 | 0 | 20,661 | 26,686 | 20,468 | 15,782 |
| 4Y | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4Z | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Area 5 | 21,212 | 16,545 | 18,027 | 55,418 | 8,189 | 1,997 | 0 | 0 | 2,432 | 17,404 | 811 |
| Noyes | 76,160 | 83,963 | 49,331 | 90,794 | 164,249 | 77,376 | 22,001 | 8,451 | 53,788 | 60,916 | 28,080 |
| Dall | 106,094 | 38,154 | 58,560 | 77,226 | 129,842 | 40,006 | 13,706 | 8,877 | 20,314 | 51,946 | 14,299 |
| Cordova | 529 | 368 | 95 | 130 | 60 | 170 | 0 | 1,013 | 83 | 223 | 365 |
| Sumner | 14,096 | 13,758 | 15,746 | 23,384 | 14,366 | 11,508 | 7,091 | 5,794 | 15,454 | 15,506 | 9,446 |
| U-Clar | 8,381 | 4,204 | 7,537 | 10,653 | 4,146 | 5,414 | 2,939 | 2,969 | 9,361 | 8,289 | 5,090 |
| M-Clar | 342 | 149 | 1,041 | 225 | 886 | 703 | 475 | 213 | 1,610 | 320 | 766 |
| L-Clar | 38,302 | 24,713 | 56,541 | 19,276 | 10,694 | 19,974 | 17,394 | 9,876 | 40,228 | 26,055 | 22,499 |
| Revilla | 12,548 | 5,125 | 12,486 | 5,502 | 1,566 | 6,011 | 3,900 | 2,980 | 5,768 | 10,928 | 4,216 |
| Union | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tree | 307,034 | 76,941 | 111,085 | 133,218 | 94,427 | 104,000 | 129,794 | 46,305 | 55,096 | 108,546 | 77,065 |
| Term101 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Term103 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dist105 | 1,494 | 6 | 1,742 | 21 | 598 | 329 | 158 | 14 | 50 | 326 | 74 |
| Term108 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| In River | 35,434 | 34,325 | 39,054 | 34,220 | 36,786 | 38,430 | 45,065 | 96,061 | 79,727 | 40,970 | 73,618 |
| **Total Catch** | 1,612,322 | 527,094 | 904,042 | 836,487 | 744,303 | 445,320 | 631,847 | 421,575 | 413,358 | 675,438 | 488,927 |
| **Escapement** | | | | | | | | | | | |
| Gross | 573,697 | 344,369 | 303,743 | 252,129 | 287,246 | 304,893 | 256,024 | 300,469 | 246,985 | 337,470 | 267,826 |
| Net | 538,263 | 310,044 | 264,689 | 217,909 | 250,460 | 266,463 | 210,959 | 204,408 | 167,258 | 296,500 | 194,208 |
| **Total Run** | 2,150,585 | 837,138 | 1,168,731 | 1,054,396 | 994,763 | 711,783 | 842,806 | 625,983 | 580,616 | 971,938 | 683,135 |
| **Nass AAH** | 1,950,585 | 637,138 | 968,731 | 854,396 | 794,763 | 511,783 | 642,806 | 425,983 | 413,358 | 782,655 | 494,049 |
| **Alaska %** | | | | | | | | | | | |
| Noyes-Dall | 9.3% | 19.2% | 11.1% | 19.7% | 37.0% | 22.9% | 5.6% | 4.1% | 17.9% | 14.4% | 8.6% |
| Tree Point | 15.7% | 12.1% | 11.5% | 15.6% | 11.9% | 20.3% | 20.2% | 10.9% | 13.3% | 13.9% | 15.6% |
| Other | 3.9% | 7.6% | 9.8% | 6.9% | 4.1% | 8.6% | 5.0% | 5.4% | 17.6% | 7.9% | 8.6% |
| Total | 29.0% | 38.8% | 32.4% | 42.2% | 53.0% | 51.9% | 30.7% | 20.3% | 48.8% | 36.2% | 32.8% |
| **Canadian %** | | | | | | | | | | | |
| Area 3 | 40.1% | 27.0% | 44.9% | 35.3% | 23.8% | 25.3% | 60.6% | 50.0% | 24.0% | 34.1% | 47.3% |
| Area 4 | 9.4% | 7.0% | 8.1% | 9.8% | 5.8% | 2.0% | 0.0% | 6.1% | 7.3% | 7.2% | 3.8% |
| In-river | 1.8% | 5.4% | 4.0% | 4.0% | 4.6% | 7.5% | 7.0% | 22.6% | 19.3% | 5.2% | 14.9% |
| Other | 2.4% | 4.6% | 3.8% | 6.6% | 6.5% | 0.4% | 0.0% | 0.0% | 0.6% | 3.6% | 0.2% |
| Total | 53.7% | 43.9% | 60.9% | 55.7% | 40.7% | 35.1% | 67.6% | 78.7% | 51.2% | 50.1% | 66.2% |

Table 15. Total annual catch by fishery and escapement for Skeena and Nass River stocks combined, 1982-2001.

| | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Catch** | | | | | | | | | | | |
| 1N | 49,351 | 18,456 | 5,621 | 78,704 | 27,168 | 23,928 | 38,164 | 10,741 | 24,698 | 25,042 | 43,344 |
| 1TS | 1,523 | 2,030 | 1,946 | 13,287 | 15,309 | 28,795 | 43,809 | 17,685 | 18,514 | 29,372 | 10,011 |
| 3A | 303,151 | 100,833 | 111,389 | 227,501 | 48,075 | 34,721 | 171,065 | 57,955 | 44,698 | 289,220 | 191,382 |
| 3B | 115,152 | 163,477 | 41,958 | 69,115 | 84,284 | 137,704 | 99,970 | 182,264 | 99,258 | 377,204 | 270,877 |
| 3C | 11,587 | 122,503 | 27,986 | 38,836 | 27,888 | 51,565 | 13,272 | 147,744 | 50,917 | 98,214 | 133,188 |
| 3D | 197,854 | 47,097 | 77,677 | 13,144 | 14,271 | 32,115 | 13,502 | 24,599 | 8,253 | 54,831 | 71,369 |
| 3E | 0 | 0 | 0 | 52,080 | 12,521 | 21,356 | 171 | 13,830 | 1,529 | 46,090 | 304,326 |
| 4W | 820,768 | 114,627 | 201,896 | 595,278 | 63,036 | 92,964 | 204,577 | 113,600 | 150,489 | 214,665 | 497,658 |
| 4X | 329,616 | 48,170 | 126,481 | 402,894 | 94,102 | 94,200 | 230,781 | 92,512 | 99,580 | 136,627 | 236,254 |
| 4Y | 0 | 0 | 165,017 | 385,245 | 116,651 | 126,586 | 389,634 | 143,657 | 259,054 | 277,903 | 471,083 |
| 4Z | 539,230 | 121,527 | 261,296 | 649,470 | 186,636 | 202,857 | 687,286 | 272,008 | 318,896 | 361,931 | 448,352 |
| Area 5 | 71,508 | 14,216 | 35,384 | 54,299 | 30,893 | 39,598 | 40,197 | 21,746 | 51,460 | 45,566 | 71,256 |
| Noyes | 119,809 | 259,684 | 117,753 | 223,661 | 173,565 | 55,396 | 322,798 | 155,688 | 228,098 | 334,306 | 465,721 |
| Dall | 56,503 | 69,461 | 98,430 | 106,063 | 157,906 | 46,903 | 164,438 | 118,254 | 178,763 | 288,534 | 335,323 |
| Cordova | 94 | 342 | 146 | 2,861 | 1,779 | 31 | 1,121 | 340 | 749 | 436 | 343 |
| Sumner | 39,715 | 5,757 | 7,850 | 68,454 | 25,389 | 12,508 | 5,927 | 34,012 | 40,730 | 29,988 | 34,226 |
| U-Clar | 22,070 | 5,353 | 18,138 | 42,042 | 18,173 | 8,725 | 3,864 | 27,083 | 28,610 | 18,394 | 12,914 |
| M-Clar | 0 | 1,808 | 704 | 322 | 742 | 0 | 0 | 1,046 | 1,253 | 170 | 612 |
| L-Clar | 50,877 | 40,509 | 47,696 | 68,123 | 30,457 | 28,513 | 26,771 | 97,424 | 66,669 | 42,447 | 36,509 |
| Revilla | 15,271 | 10,334 | 14,769 | 16,718 | 16,794 | 15,562 | 17,835 | 55,301 | 15,565 | 17,521 | 17,417 |
| Union | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tree | 121,410 | 86,887 | 54,024 | 142,980 | 132,871 | 82,403 | 101,281 | 111,066 | 71,603 | 117,290 | 194,485 |
| Term101 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Term103 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dist105 | 0 | 55 | 4 | 344 | 125 | 0 | 113 | 0 | 8 | 215 | 2 |
| Term108 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| In River | 230,192 | 165,405 | 219,741 | 225,446 | 196,370 | 179,960 | 168,815 | 180,330 | 185,042 | 211,941 | 176,927 |
| **Total Catch** | 3,095,681 | 1,398,531 | 1,635,906 | 3,476,867 | 1,475,005 | 1,316,390 | 2,745,391 | 1,878,885 | 1,944,436 | 3,017,907 | 4,023,579 |
| | | | | | | | | | | | |
| **Escapement** | | | | | | | | | | | |
| Gross | 1,820,211 | 1,349,378 | 1,554,626 | 2,927,451 | 1,223,008 | 1,826,880 | 1,827,260 | 1,521,067 | 1,422,202 | 1,912,584 | 2,312,901 |
| Net | 1,590,019 | 1,183,973 | 1,334,885 | 2,702,005 | 1,026,638 | 1,646,920 | 1,658,445 | 1,340,737 | 1,237,160 | 1,700,643 | 2,135,974 |
| | | | | | | | | | | | |
| **Total Run** | 4,685,700 | 2,582,504 | 2,970,791 | 6,178,872 | 2,501,643 | 2,963,310 | 4,403,836 | 3,219,622 | 3,181,596 | 4,718,550 | 6,159,553 |
| | | | | | | | | | | | |
| **Total AAH** | 3,585,700 | 1,482,504 | 1,870,791 | 5,078,872 | 1,475,005 | 1,863,310 | 3,303,836 | 2,119,622 | 2,081,596 | 3,618,550 | 5,059,553 |
| | | | | | | | | | | | |
| **District 104 Catch before Week 31** | | | | | | | | | | | |
| Skeena | 123,518 | 96,391 | 50,732 | 67,395 | 39,692 | 21,355 | 168,481 | 100,452 | 97,221 | 54,836 | 42,618 |
| Nass | 10,800 | 18,608 | 23,142 | 8,063 | 24,620 | 20,210 | 19,668 | 24,702 | 32,819 | 15,449 | 13,693 |
| Total | 134,318 | 114,999 | 73,874 | 75,458 | 64,312 | 41,565 | 188,149 | 125,154 | 130,040 | 70,285 | 56,311 |
| % of TAC | 3.75% | 7.76% | 3.95% | 1.49% | 4.36% | 2.23% | 5.69% | 5.90% | 6.25% | 1.94% | 1.11% |
| **District 104 Allocation before Week 31** | | | | | | | | | | | |
| Base Catch | 120,000 | 120,000 | 120,000 | 120,000 | 120,000 | 120,000 | 120,000 | 120,000 | 120,000 | 120,000 | 120,000 |
| Skeena-Nass | | | | | | | | | | | |
| % | 63.0% | 68.2% | 71.5% | 75.0% | 70.4% | 57.4% | 75.6% | 86.8% | 79.4% | 71.3% | 72.8% |
| No. | 75,618 | 81,781 | 85,801 | 90,020 | 84,509 | 68,906 | 90,752 | 104,218 | 95,271 | 85,553 | 87,315 |
| % of TAC | 2.11% | 5.52% | 4.59% | 1.77% | 5.73% | 3.70% | 2.75% | 4.92% | 4.58% | 2.36% | 1.73% |

Table 15. (continued)

| | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 1985-97 | 1999-01 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Catch** | | | | | | | | | | | |
| 1N | 66,719 | 37,551 | 101,323 | 0 | 216,312 | 0 | 0 | 0 | 0 | 53,361 | 0 |
| 1TS | 23,962 | 23,002 | 47,487 | 17,898 | 89,858 | 0 | 0 | 958 | 0 | 29,153 | 319 |
| 3A | 244,340 | 69,991 | 606,402 | 476,529 | 163,216 | 2,214 | 0 | 0 | 0 | 201,930 | 0 |
| 3B | 554,584 | 177,506 | 571,933 | 287,990 | 322,630 | 49,814 | 46,081 | 94,904 | 68,005 | 248,871 | 69,663 |
| 3C | 225,826 | 51,405 | 164,918 | 52,500 | 55,744 | 31,905 | 82,760 | 71,890 | 47,559 | 85,540 | 67,403 |
| 3D | 61,540 | 23,831 | 26,061 | 41,365 | 13,493 | 31,379 | 113,567 | 38,750 | 25,425 | 30,644 | 59,247 |
| 3E | 220,942 | 17,238 | 84,533 | 135,644 | 9,558 | 37,740 | 166,388 | 97,619 | 29,266 | 70,755 | 97,758 |
| 4W | 579,438 | 236,508 | 586,698 | 862,330 | 277,664 | 25,913 | 0 | 112,325 | 68,714 | 344,223 | 60,346 |
| 4X | 336,536 | 109,858 | 295,612 | 637,829 | 155,640 | 19,702 | 0 | 563,152 | 653,841 | 224,802 | 405,664 |
| 4Y | 270,510 | 117,765 | 371,517 | 801,309 | 327,713 | 18,372 | 0 | 758,124 | 339,230 | 312,202 | 365,785 |
| 4Z | 495,551 | 186,618 | 424,361 | 1,115,910 | 363,671 | 30,037 | 5,507 | 559,567 | 506,559 | 439,504 | 357,211 |
| Area 5 | 42,617 | 36,296 | 49,113 | 249,953 | 20,054 | 3,368 | 0 | 0 | 13,467 | 57,927 | 4,489 |
| Noyes | 258,175 | 435,038 | 188,624 | 324,675 | 485,852 | 141,165 | 46,622 | 65,678 | 325,691 | 280,892 | 145,997 |
| Dall | 312,588 | 142,864 | 209,318 | 287,052 | 336,609 | 72,187 | 30,466 | 70,854 | 120,809 | 206,509 | 74,043 |
| Cordova | 1,146 | 1,173 | 279 | 130 | 170 | 558 | 0 | 1,276 | 356 | 812 | 544 |
| Sumner | 42,735 | 32,554 | 74,601 | 55,461 | 33,622 | 27,239 | 7,731 | 14,323 | 23,128 | 37,708 | 15,061 |
| U-Clar | 26,491 | 13,308 | 48,354 | 28,003 | 26,891 | 13,900 | 3,351 | 9,126 | 15,083 | 23,296 | 9,187 |
| M-Clar | 372 | 3,543 | 5,533 | 2,351 | 2,588 | 1,671 | 1,142 | 704 | 6,423 | 1,426 | 2,756 |
| L-Clar | 82,699 | 64,854 | 184,969 | 62,826 | 26,944 | 32,862 | 22,193 | 70,499 | 93,533 | 63,016 | 62,075 |
| Revilla | 26,357 | 11,157 | 35,191 | 15,400 | 4,111 | 9,167 | 5,579 | 17,350 | 11,501 | 20,379 | 11,477 |
| Union | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tree | 351,613 | 86,260 | 150,718 | 182,249 | 134,692 | 144,172 | 144,848 | 77,897 | 69,025 | 143,039 | 97,257 |
| Term101 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Term103 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dist105 | 5,858 | 19 | 10,559 | 71 | 5,668 | 708 | 188 | 44 | 97 | 1,768 | 110 |
| Term108 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| In River | 357,524 | 212,912 | 383,891 | 558,969 | 237,252 | 168,220 | 157,920 | 1,050,444 | 841,423 | 251,952 | 683,262 |
| **Total Catch** | 4,588,123 | 2,091,251 | 4,621,995 | 6,196,444 | 3,309,952 | 862,293 | 834,343 | 3,675,484 | 3,259,135 | 3,129,710 | 2,589,654 |
| | | | | | | | | | | | |
| **Escapement** | | | | | | | | | | | |
| Gross | 2,673,784 | 1,678,742 | 2,540,642 | 2,903,331 | 1,681,519 | 1,020,582 | 1,094,625 | 2,693,188 | 2,547,579 | 2,034,721 | 2,111,797 |
| Net | 2,316,260 | 1,465,830 | 2,156,751 | 2,344,362 | 1,444,267 | 852,362 | 936,705 | 1,642,744 | 1,706,156 | 1,782,769 | 1,428,535 |
| | | | | | | | | | | | |
| **Total Run** | 6,904,383 | 3,557,081 | 6,778,746 | 8,540,806 | 4,754,219 | 1,714,655 | 1,771,048 | 5,318,228 | 4,965,291 | 4,912,478 | 4,018,189 |
| | | | | | | | | | | | |
| **Total AAH** | 5,804,383 | 2,457,081 | 5,678,746 | 7,440,806 | 3,654,219 | 862,293 | 834,343 | 4,218,228 | 3,865,291 | 3,818,121 | 2,972,621 |
| | | | | | | | | | | | |
| **District 104 Catch before Week 31** | | | | | | | | | | | |
| Skeena | 76,465 | 58,506 | 33,893 | 106,080 | 296,235 | 5,320 | 2,035 | 25,049 | 137,424 | 89,479 | 54,836 |
| Nass | 42,967 | 49,413 | 23,096 | 37,108 | 161,186 | 6,343 | 1,197 | 4,172 | 30,430 | 36,384 | 11,933 |
| Total | 119,432 | 107,919 | 56,989 | 143,188 | 457,421 | 11,663 | 3,232 | 29,221 | 167,854 | 125,863 | 66,769 |
| % of TAC | 2.06% | 4.39% | 1.00% | 1.92% | 12.52% | 1.35% | 0.39% | 0.69% | 4.34% | 3.30% | 2.25% |
| **District 104 Allocation before Week 31** | | | | | | | | | | | |
| Base Catch | 120,000 | 120,000 | 120,000 | 120,000 | 120,000 | | | | | 120,000 | |
| Skeena-Nass | | | | | | | | | | | |
| % | 76.3% | 73.9% | 79.8% | 67.0% | 82.4% | | | | | 74.5% | |
| No. | 91,562 | 88,627 | 95,811 | 80,444 | 98,825 | | | | | 89,370 | |
| % of TAC | 1.58% | 3.61% | 1.69% | 1.08% | 2.70% | | | | | 2.34% | |

# FIGURES

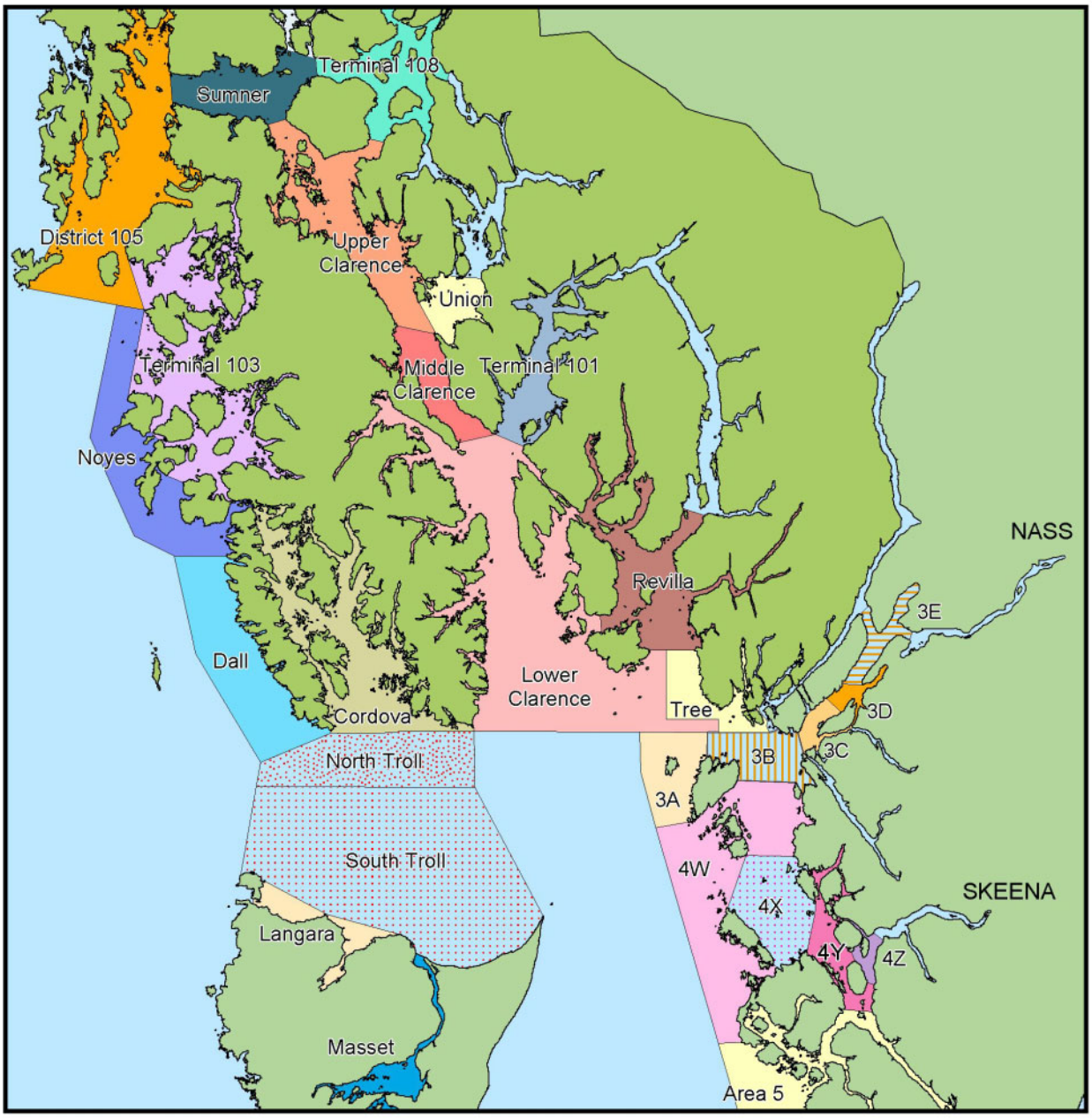



Figure 1. Geographic location and boundaries of Alaskan and Canadian fisheries used for run reconstructions.

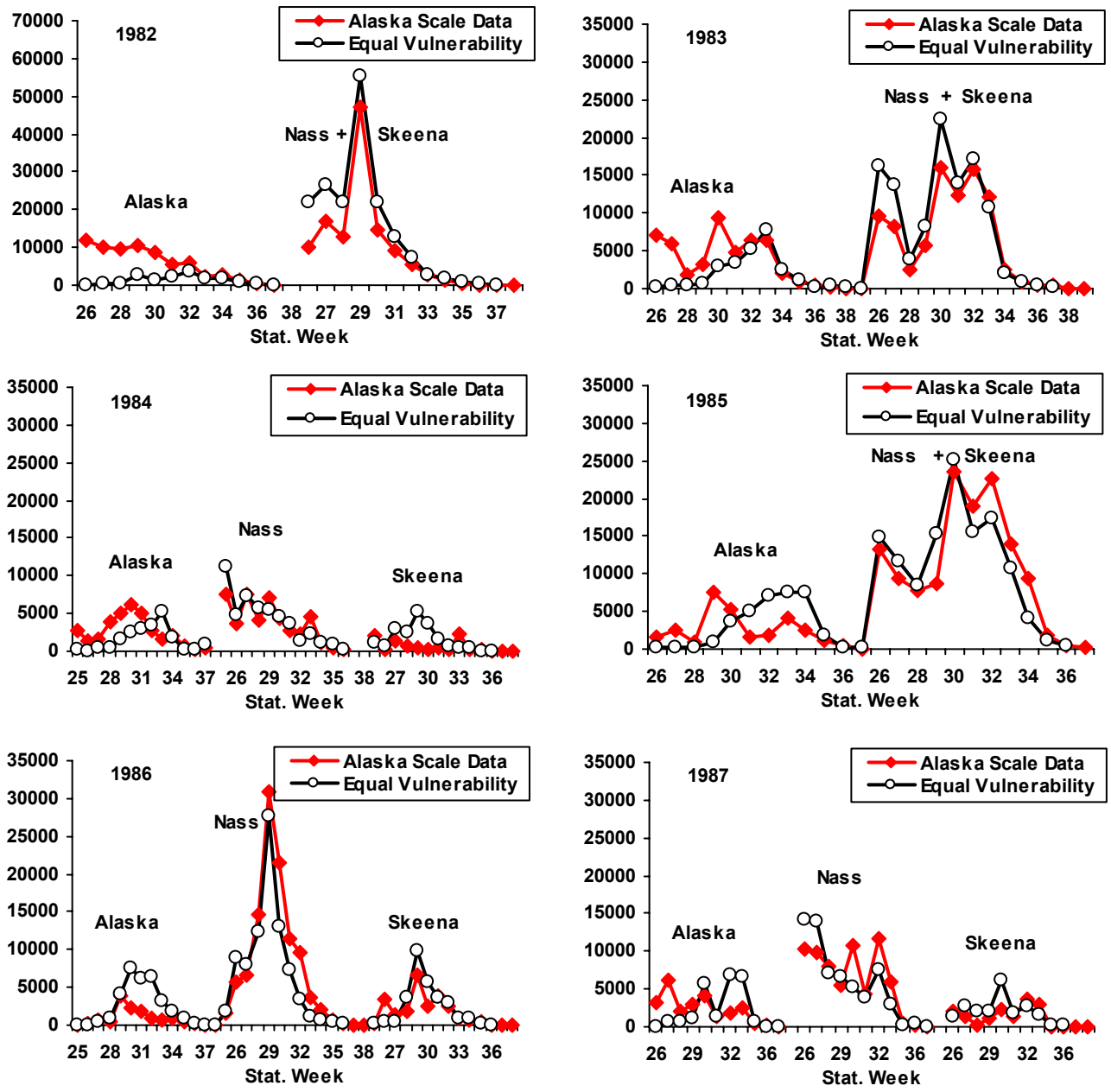



Figure 2. Weekly catch estimates for the Tree Point fishery, by stock and reconstruction method for 1982-87.

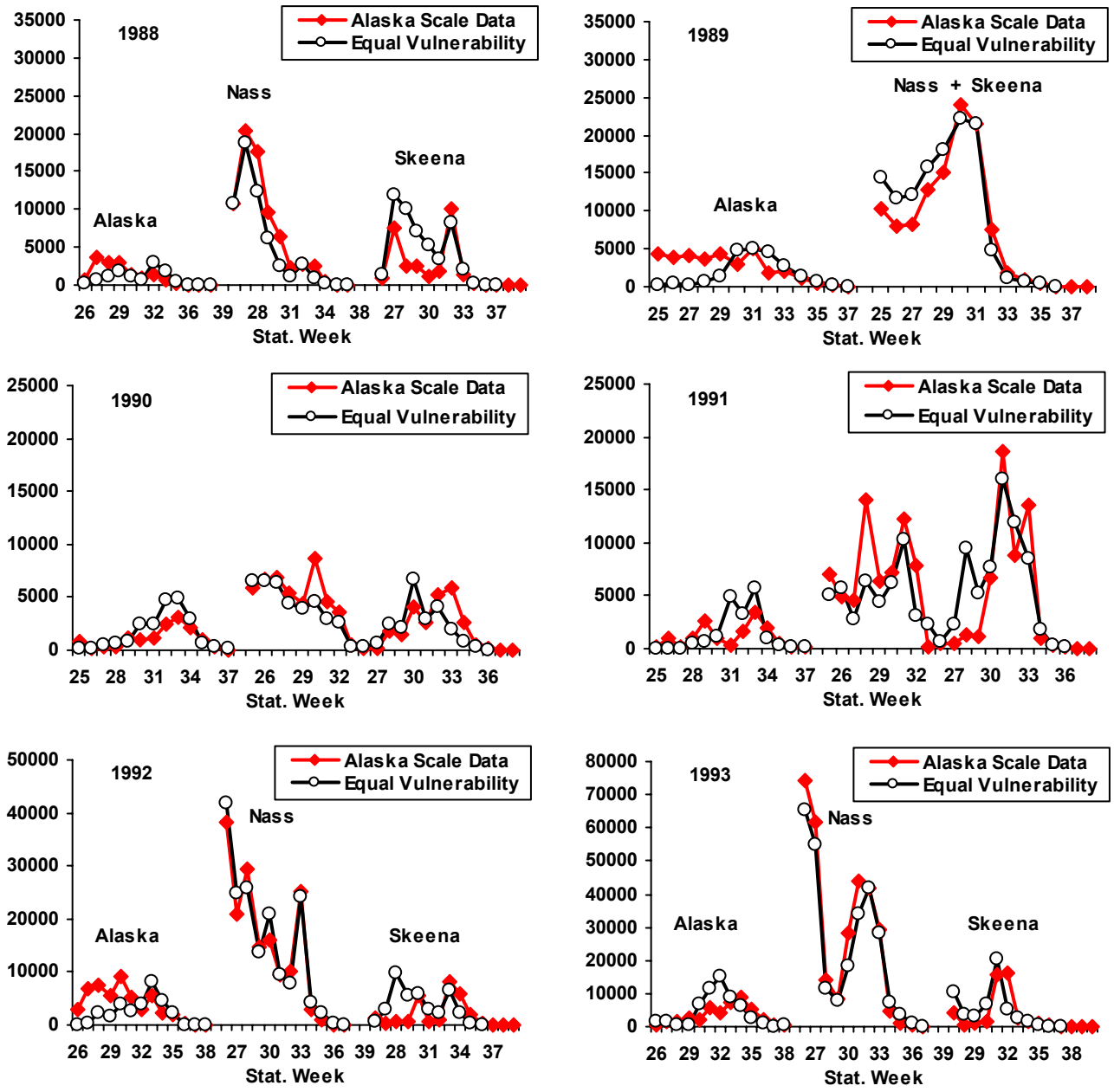



Figure 3. Weekly catch estimates for the Tree Point fishery, by stock and reconstruction method for 1988-93.

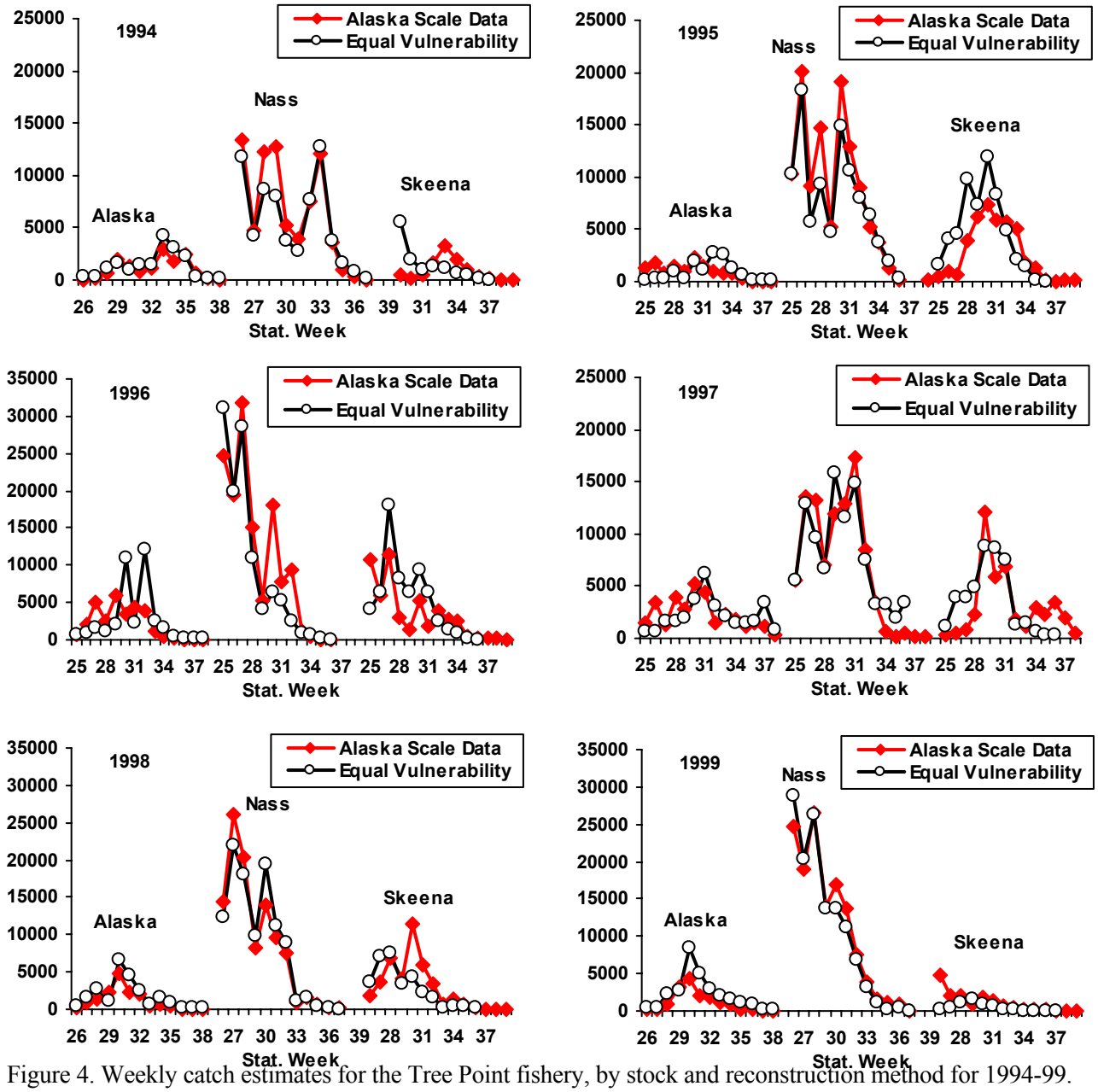



Figure 4. Weekly catch estimates for the Tree Point fishery, by stock and reconstruction method for 1994-99.

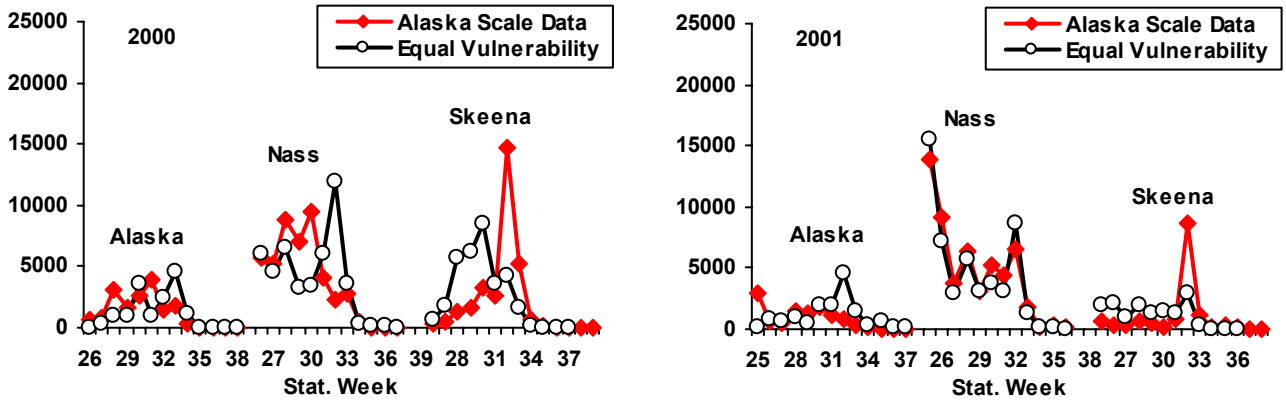
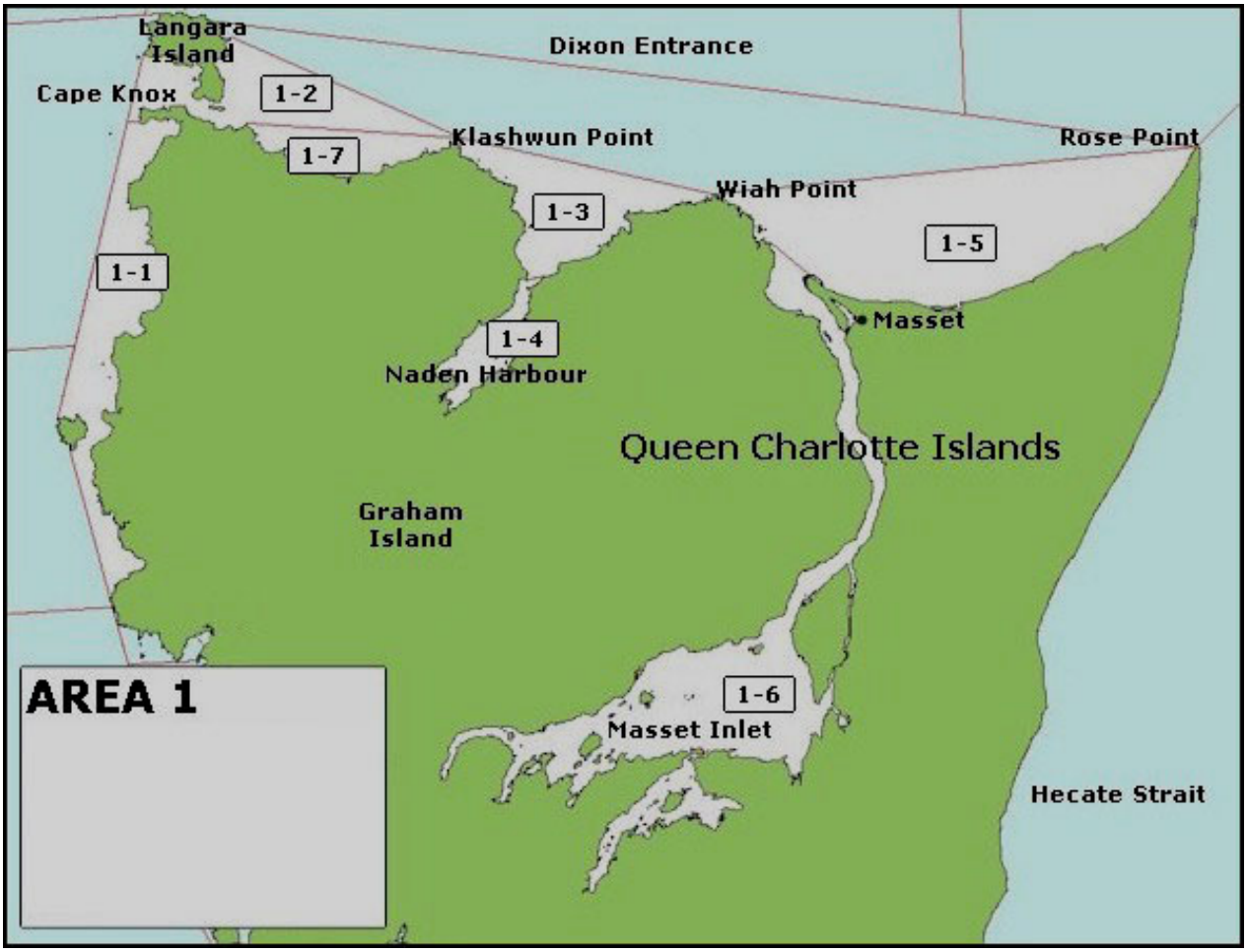


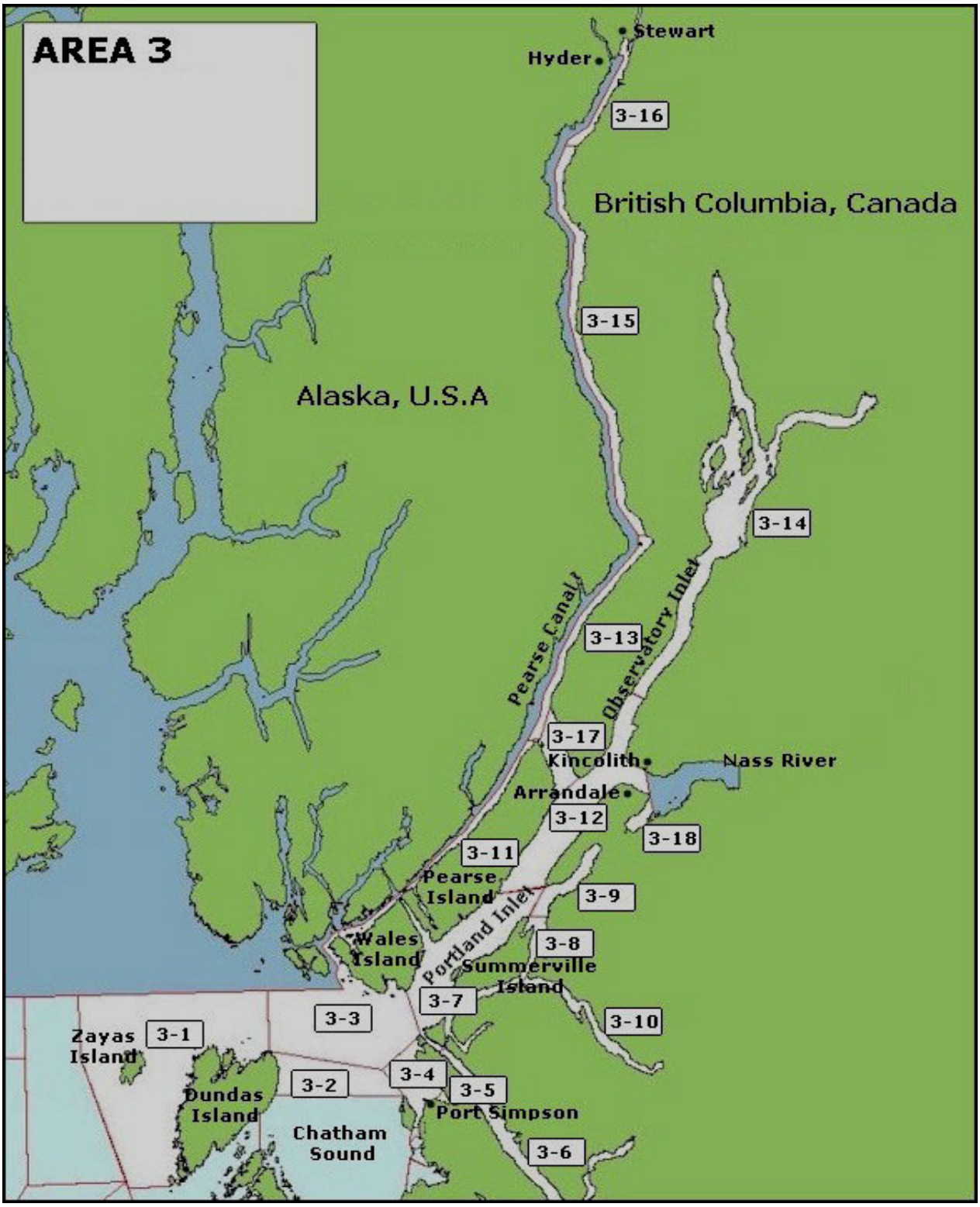

Figure 5. Weekly catch estimates for the Tree Point fishery, by stock and reconstruction method for 2000-2001.

# APPENDICES

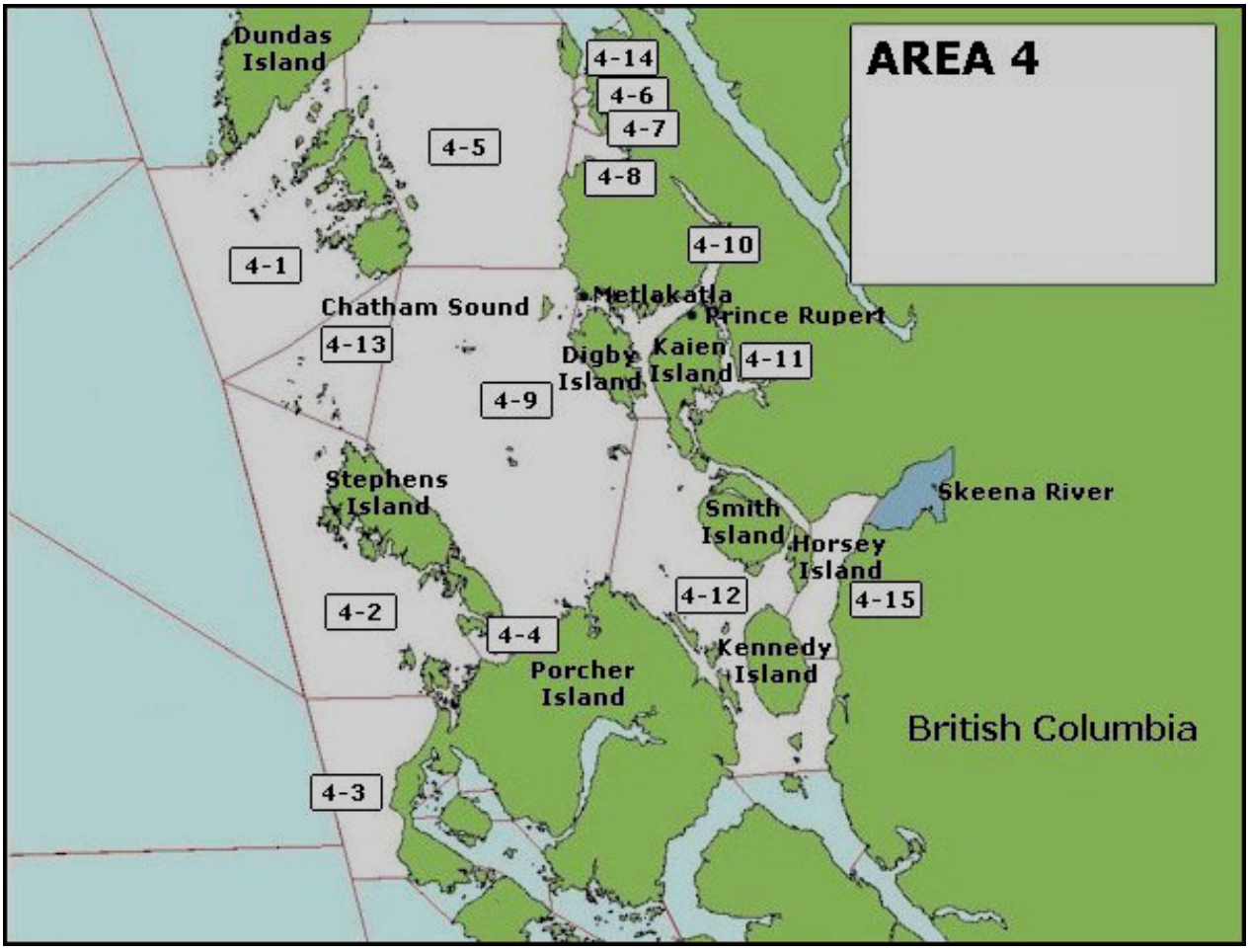
Appendix A. Canadian Department of Fisheries and Oceans, Statistical Area 1 map.



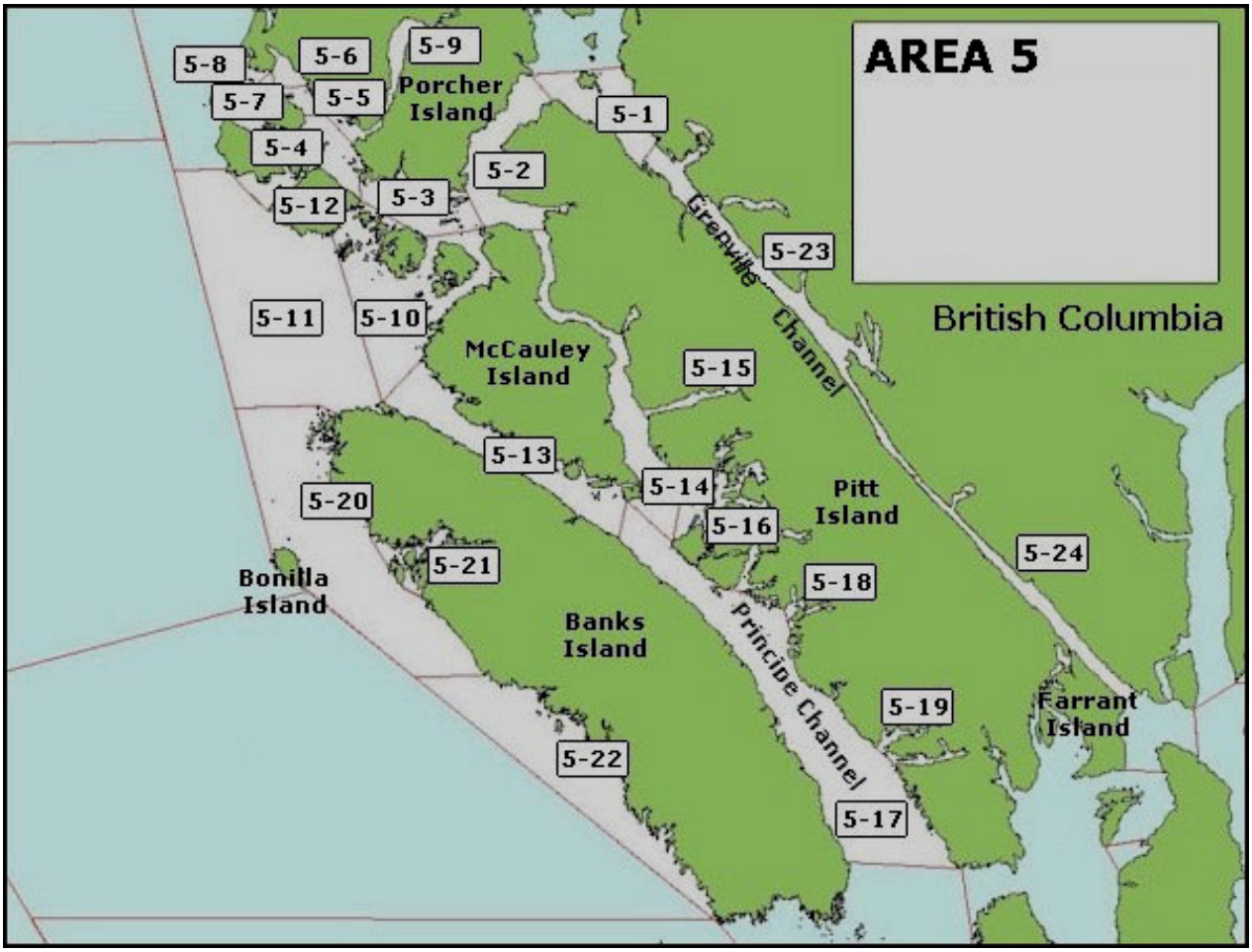
Appendix A. Canadian Department of Fisheries and Oceans, Statistical Area 3 map.



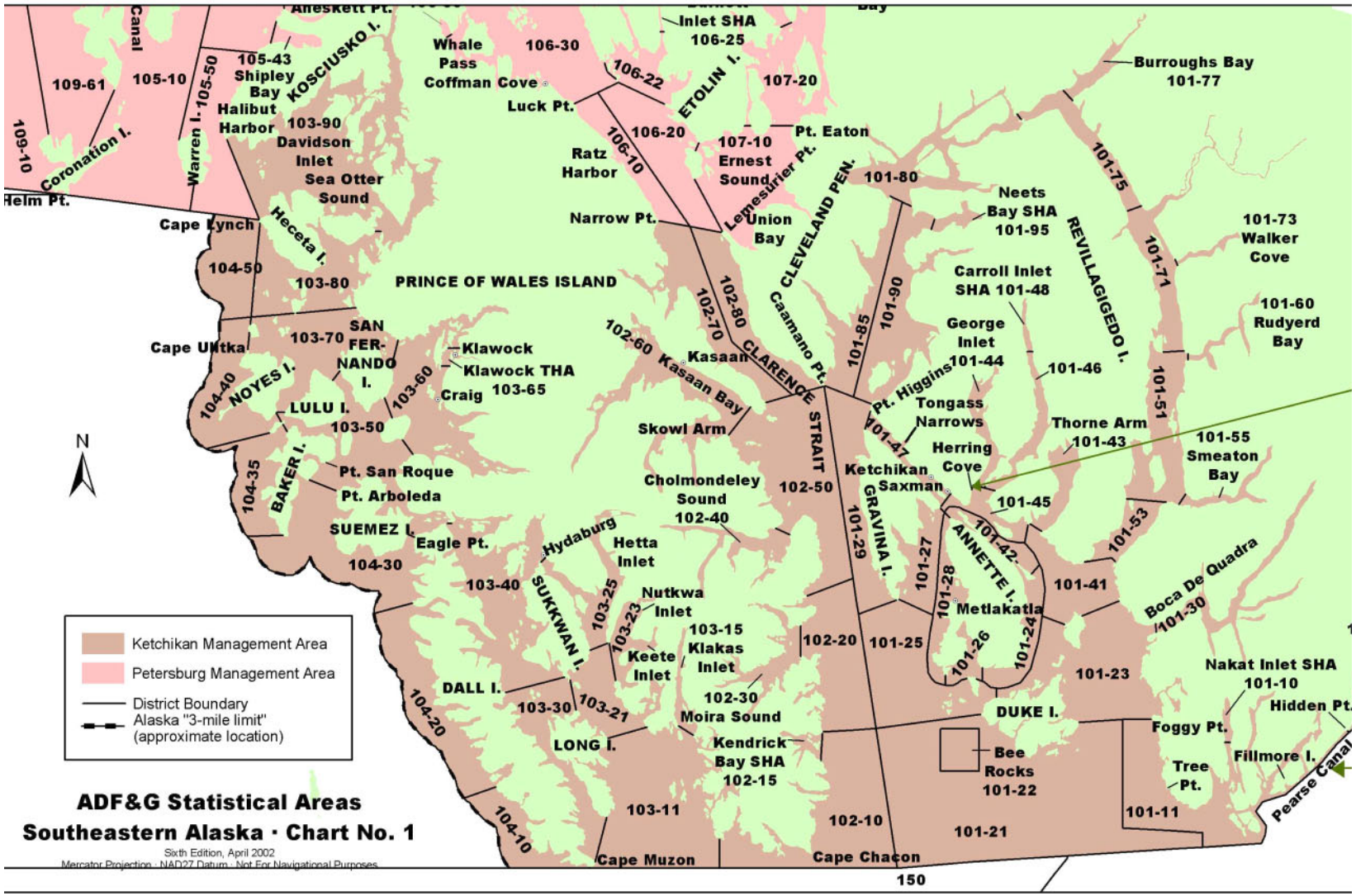
Appendix A. Canadian Department of Fisheries and Oceans, Statistical Area 4 map.



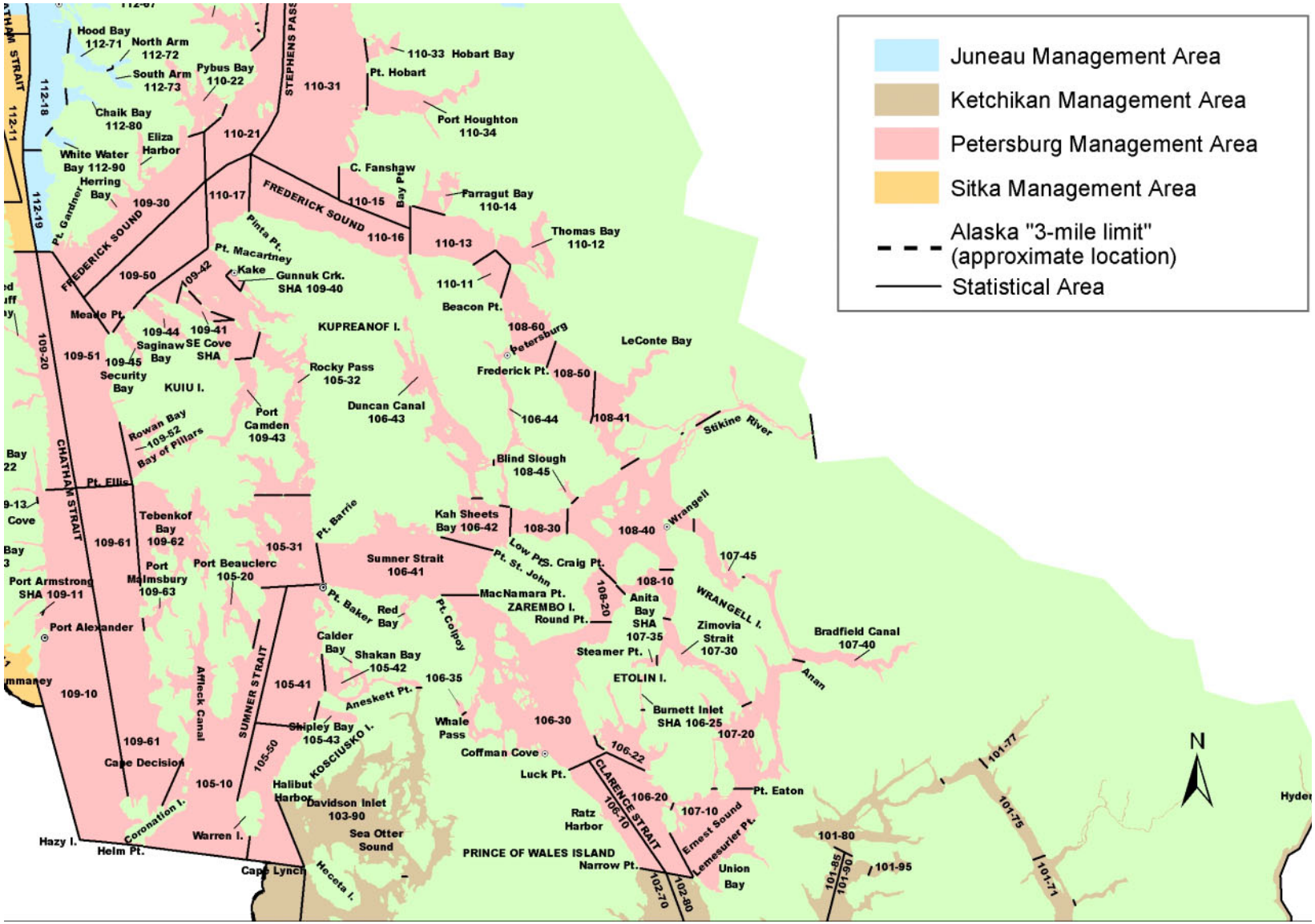
Appendix A. Canadian Department of Fisheries and Oceans, Statistical Area 5 map.



Appendix A. Southern Alaska fisheries districts and sub-district boundaries (southern section).



Appendix A. Southern Alaska fisheries districts and sub-district boundaries (northern section).



Appendix B1. Sockeye migration route parameters for set A.

| Name | Code | Resid. | Name | Code | Resid. | Name | Code | Resid. | Name | Code | Resid. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Term108 | 33 | 1 | 4Y | 12 | 1 | 3A | 5 | 1 | Sumner | 23 | 2 |
| Term103 | 31 | 1 | 4X | 11 | 1 | Tree | 29 | 1 | Cordova | 22 | 1 |
| Term101 | 30 | 2 | 4W | 10 | 1 | L.Clar | 26 | 2 | Dall | 21 | 2 |
| Union | 28 | 1 | 3E | 9 | 1 | 1TS | 3 | 3 | Noyes | 20 | 2 |
| Revilla | 27 | 2 | 3D | 8 | 1 | 1N | 1 | 1 | Dist105 | 32 | 1 |
| Area 5 | 14 | 1 | 3C | 7 | 1 | M.Clar | 25 | 2 | Refuge | 15 | 1 |
| 4Z | 13 | 2 | 3B | 6 | 2 | U.Clar | 24 | 2 | | | |

**Migration routes through the fisheries**

| | From | To | To | To | To | Prop. | Prop. | Prop. | Prop. |
|---|---|---|---|---|---|---|---|---|---|
| **Skeena** | | | | | | | | | |
| 4Z | 13 | 12 | | | | 1.00 | | | |
| 4Y | 12 | 11 | | | | 1.00 | | | |
| 4X | 11 | 10 | 14 | | | 0.85 | 0.15 | | |
| 4W | 10 | 7 | 6 | 5 | 15 | 0.10 | 0.10 | 0.50 | 0.30 |
| Area 5 | 14 | 3 | | | | 1.00 | | | |
| 3A | 5 | 3 | 26 | | | 0.90 | 0.10 | | |
| 3B | 6 | 5 | 29 | | | 0.93 | 0.08 | | |
| 3C | 7 | 6 | | | | 1.00 | | | |
| Tree | 29 | 26 | 27 | | | 0.50 | 0.50 | | |
| Revilla | 27 | 26 | | | | 1.00 | | | |
| L.Clar | 26 | 3 | 22 | 25 | | 0.10 | 0.77 | 0.13 | |
| 1TS | 3 | 21 | 1 | | | 0.50 | 0.50 | | |
| Cordova | 22 | 21 | | | | 1.00 | | | |
| Dall | 21 | 20 | | | | 1.00 | | | |
| M.Clar | 25 | 24 | | | | 1.00 | | | |
| U.Clar | 24 | 23 | | | | 1.00 | | | |
| Sumner | 23 | 32 | | | | 1.00 | | | |
| **Nass** | | | | | | | | | |
| 3E | 9 | 8 | | | | 1.00 | | | |
| 3D | 8 | 7 | | | | 1.00 | | | |
| 3C | 7 | 6 | | | | 1.00 | | | |
| 3B | 6 | 29 | 5 | 10 | | 0.21 | 0.25 | 0.54 | |
| 4W | 10 | 11 | 5 | | | 0.80 | 0.20 | | |
| 4X | 11 | 14 | 15 | | | 0.95 | 0.05 | | |
| Area 5 | 14 | 3 | | | | 1.00 | | | |
| 3A | 5 | 3 | 26 | | | 0.05 | 0.95 | | |
| Tree | 29 | 26 | 27 | 15 | | 0.20 | 0.10 | 0.70 | |
| Revilla | 27 | 25 | | | | 1.00 | | | |
| L.Clar | 26 | 22 | 25 | | | 0.84 | 0.16 | | |
| M.Clar | 25 | 24 | | | | 1.00 | | | |
| U.Clar | 24 | 23 | | | | 1.00 | | | |
| Sumner | 23 | 32 | | | | 1.00 | | | |
| Cordova | 22 | 21 | | | | 1.00 | | | |
| Dall | 21 | 20 | | | | 1.00 | | | |
| 1TS | 3 | 21 | 1 | | | 0.18 | 0.82 | | |

| | From | To | To | To | To | Prop. | Prop. | Prop. | Prop. |
|---|---|---|---|---|---|---|---|---|---|
| **Stikine** | | | | | | | | | |
| Term108 | 33 | 24 | 23 | | | 0.20 | 0.80 | | |
| U.Clar | 24 | 23 | | | | 1.00 | | | |
| Sumner | 23 | 32 | | | | 1.00 | | | |
| **MacD** | | | | | | | | | |
| Term101 | 30 | 26 | 27 | | | 0.80 | 0.20 | | |
| Revilla | 27 | 29 | 26 | | | 0.50 | 0.50 | | |
| L.Clar | 26 | 25 | 22 | 29 | | 0.42 | 0.55 | 0.03 | |
| Tree | 29 | 5 | 6 | | | 0.20 | 0.80 | | |
| 3B | 6 | 5 | | | | 1.00 | | | |
| 3A | 5 | 3 | | | | 1.00 | | | |
| 1TS | 3 | 1 | | | | 1.00 | | | |
| Cordova | 22 | 21 | 15 | | | 0.70 | 0.30 | | |
| Dall | 21 | 20 | | | | 1.00 | | | |
| M.Clar | 25 | 24 | | | | 1.00 | | | |
| U.Clar | 24 | 23 | | | | 1.00 | | | |
| Sumner | 23 | 32 | | | | 1.00 | | | |
| **US_Oth** | | | | | | | | | |
| Stock | 99 | 27 | 25 | 28 | 31 | 0.10 | 0.48 | 0.40 | 0.02 |
| Union | 28 | 24 | | | | 1.00 | | | |
| Revilla | 27 | 26 | 29 | | | 0.85 | 0.15 | | |
| L.Clar | 26 | 22 | | | | 1.00 | | | |
| M.Clar | 25 | 26 | 24 | | | 0.75 | 0.25 | | |
| U.Clar | 24 | 23 | | | | 1.00 | | | |
| Sumner | 23 | 32 | | | | 1.00 | | | |
| Cordova | 22 | 21 | 15 | | | 0.70 | 0.30 | | |
| Dall | 21 | 20 | | | | 1.00 | | | |
| Tree | 29 | 5 | 6 | 26 | | 0.05 | 0.20 | 0.75 | |
| 3B | 6 | 5 | 10 | | | 0.10 | 0.90 | | |
| 4W | 10 | 5 | 11 | | | 0.10 | 0.90 | | |
| 4X | 11 | 14 | | | | 1.00 | | | |
| 3X | 5 | 3 | | | | 1.00 | | | |
| 1TS | 3 | 1 | | | | 1.00 | | | |

Appendix B2. Sockeye migration route parameters for set B.

| Name | Code | Resid. | Name | Code | Resid. | Name | Code | Resid. | Name | Code | Resid. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Term108 | 33 | 1 | 4Y | 12 | 1 | 3A | 5 | 1 | Sumner | 23 | 2 |
| Term103 | 31 | 1 | 4X | 11 | 1 | Tree | 29 | 1 | Cordova | 22 | 1 |
| Term101 | 30 | 2 | 4W | 10 | 1 | L.Clar | 26 | 2 | Dall | 21 | 2 |
| Union | 28 | 1 | 3E | 9 | 1 | 1TS | 3 | 3 | Noyes | 20 | 2 |
| Revilla | 27 | 2 | 3D | 8 | 1 | 1N | 1 | 1 | Dist105 | 32 | 1 |
| Area 5 | 14 | 1 | 3C | 7 | 1 | M.Clar | 25 | 2 | Refuge | 15 | 1 |
| 4Z | 13 | 2 | 3B | 6 | 2 | U.Clar | 24 | 2 | | | |

**Migration routes through the fisheries**

| | From | To | To | To | To | Prop. | Prop. | Prop. | Prop. |
|---|---|---|---|---|---|---|---|---|---|
| **Skeena** | | | | | | | | | |
| 4Z | 13 | 12 | | | | 1.00 | | | |
| 4Y | 12 | 11 | | | | 1.00 | | | |
| 4X | 11 | 10 | 14 | | | 0.85 | 0.15 | | |
| 4W | 10 | 7 | 6 | 5 | | 0.10 | 0.30 | 0.60 | |
| Area 5 | 14 | 3 | | | | 1.00 | | | |
| 3A | 5 | 3 | 26 | | | 0.90 | 0.10 | | |
| 3B | 6 | 5 | 29 | | | 0.79 | 0.21 | | |
| 3C | 7 | 6 | | | | 1.00 | | | |
| Tree | 29 | 26 | 27 | 15 | | 0.20 | 0.10 | 0.70 | |
| Revilla | 27 | 26 | | | | 1.00 | | | |
| L.Clar | 26 | 3 | 22 | 25 | | 0.10 | 0.77 | 0.13 | |
| 1TS | 3 | 21 | 1 | | | 0.50 | 0.50 | | |
| Cordova | 22 | 21 | | | | 1.00 | | | |
| Dall | 21 | 20 | | | | 1.00 | | | |
| M.Clar | 25 | 24 | | | | 1.00 | | | |
| U.Clar | 24 | 23 | | | | 1.00 | | | |
| Sumner | 23 | 32 | | | | 1.00 | | | |
| **Nass** | | | | | | | | | |
| 3E | 9 | 8 | | | | 1.00 | | | |
| 3D | 8 | 7 | | | | 1.00 | | | |
| 3C | 7 | 6 | | | | 1.00 | | | |
| 3B | 6 | 29 | 5 | 10 | | 0.30 | 0.25 | 0.45 | |
| 4W | 10 | 11 | 5 | | | 0.80 | 0.20 | | |
| 4X | 11 | 14 | 15 | | | 0.95 | 0.05 | | |
| Area 5 | 14 | 3 | | | | 1.00 | | | |
| 3A | 5 | 3 | 26 | | | 0.05 | 0.95 | | |
| Tree | 29 | 26 | 27 | 15 | | 0.20 | 0.10 | 0.70 | |
| Revilla | 27 | 25 | | | | 1.00 | | | |
| L.Clar | 26 | 22 | 25 | | | 0.84 | 0.16 | | |
| M.Clar | 25 | 24 | | | | 1.00 | | | |
| U.Clar | 24 | 23 | | | | 1.00 | | | |
| Sumner | 23 | 32 | | | | 1.00 | | | |
| Cordova | 22 | 21 | | | | 1.00 | | | |
| Dall | 21 | 20 | | | | 1.00 | | | |
| 1TS | 3 | 21 | 1 | | | 0.18 | 0.82 | | |

| | From | To | To | To | To | Prop. | Prop. | Prop. | Prop. |
|---|---|---|---|---|---|---|---|---|---|
| **Stikine** | | | | | | | | | |
| Term108 | 33 | 24 | 23 | | | 0.20 | 0.80 | | |
| U.Clar | 24 | 23 | | | | 1.00 | | | |
| Sumner | 23 | 32 | | | | 1.00 | | | |
| **MacD** | | | | | | | | | |
| Term101 | 30 | 26 | 27 | | | 0.80 | 0.20 | | |
| Revilla | 27 | 29 | 26 | | | 0.50 | 0.50 | | |
| L.Clar | 26 | 25 | 22 | 29 | | 0.42 | 0.55 | 0.03 | |
| Tree | 29 | 5 | 6 | | | 0.20 | 0.80 | | |
| 3B | 6 | 5 | | | | 1.00 | | | |
| 3A | 5 | 3 | | | | 1.00 | | | |
| 1TS | 3 | 1 | | | | 1.00 | | | |
| Cordova | 22 | 21 | 15 | | | 0.70 | 0.30 | | |
| Dall | 21 | 20 | | | | 1.00 | | | |
| M.Clar | 25 | 24 | | | | 1.00 | | | |
| U.Clar | 24 | 23 | | | | 1.00 | | | |
| Sumner | 23 | 32 | | | | 1.00 | | | |
| **US_Oth** | | | | | | | | | |
| Stock | 99 | 27 | 25 | 28 | 31 | 0.10 | 0.48 | 0.40 | 0.02 |
| Union | 28 | 24 | | | | 1.00 | | | |
| Revilla | 27 | 26 | 29 | | | 0.85 | 0.15 | | |
| L.Clar | 26 | 22 | | | | 1.00 | | | |
| M.Clar | 25 | 26 | 24 | | | 0.75 | 0.25 | | |
| U.Clar | 24 | 23 | | | | 1.00 | | | |
| Sumner | 23 | 32 | | | | 1.00 | | | |
| Cordova | 22 | 21 | 15 | | | 0.70 | 0.30 | | |
| Dall | 21 | 20 | | | | 1.00 | | | |
| Tree | 29 | 5 | 6 | 26 | | 0.05 | 0.20 | 0.75 | |
| 3B | 6 | 5 | 10 | | | 0.10 | 0.90 | | |
| 4W | 10 | 5 | 11 | | | 0.10 | 0.90 | | |
| 4X | 11 | 14 | | | | 1.00 | | | |
| 3X | 5 | 3 | | | | 1.00 | | | |
| 1TS | 3 | 1 | | | | 1.00 | | | |

Appendix B3. Sockeye migration route parameters for set C.

| Name | Code | Resid. | Name | Code | Resid. | Name | Code | Resid. | Name | Code | Resid. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Term108 | 33 | 1 | 4Y | 12 | 1 | 3A | 5 | 1 | Sumner | 23 | 2 |
| Term103 | 31 | 1 | 4X | 11 | 1 | Tree | 29 | 1 | Cordova | 22 | 1 |
| Term101 | 30 | 2 | 4W | 10 | 1 | L.Clar | 26 | 2 | Dall | 21 | 2 |
| Union | 28 | 1 | 3E | 9 | 1 | 1TS | 3 | 3 | Noyes | 20 | 2 |
| Revilla | 27 | 2 | 3D | 8 | 1 | 1N | 1 | 1 | Dist105 | 32 | 1 |
| Area 5 | 14 | 1 | 3C | 7 | 1 | M.Clar | 25 | 2 | Refuge | 15 | 1 |
| 4Z | 13 | 2 | 3B | 6 | 2 | U.Clar | 24 | 2 | | | |

**Migration routes through the fisheries**

| | From | To | To | To | To | Prop. | Prop. | Prop. | Prop. |
|---|---|---|---|---|---|---|---|---|---|
| **Skeena** | | | | | | | | | |
| 4Z | 13 | 12 | | | | 1.00 | | | |
| 4Y | 12 | 11 | | | | 1.00 | | | |
| 4X | 11 | 10 | 14 | | | 0.85 | 0.15 | | |
| 4W | 10 | 7 | 6 | 5 | 15 | 0.10 | 0.10 | 0.50 | 0.30 |
| Area 5 | 14 | 3 | | | | 1.00 | | | |
| 3A | 5 | 3 | 26 | | | 0.50 | 0.50 | | |
| 3B | 6 | 5 | 29 | | | 0.90 | 0.10 | | |
| 3C | 7 | 6 | | | | 1.00 | | | |
| Tree | 29 | 26 | 27 | | | 0.50 | 0.50 | | |
| Revilla | 27 | 26 | | | | 1.00 | | | |
| L.Clar | 26 | 3 | 22 | 25 | | 0.10 | 0.77 | 0.13 | |
| 1TS | 3 | 21 | 1 | | | 0.50 | 0.50 | | |
| Cordova | 22 | 21 | | | | 1.00 | | | |
| Dall | 21 | 20 | | | | 1.00 | | | |
| M.Clar | 25 | 24 | | | | 1.00 | | | |
| U.Clar | 24 | 23 | | | | 1.00 | | | |
| Sumner | 23 | 32 | | | | 1.00 | | | |
| **Nass** | | | | | | | | | |
| 3E | 9 | 8 | | | | 1.00 | | | |
| 3D | 8 | 7 | | | | 1.00 | | | |
| 3C | 7 | 6 | | | | 1.00 | | | |
| 3B | 6 | 29 | 5 | 10 | | 0.35 | 0.25 | 0.40 | |
| 4W | 10 | 11 | 5 | | | 0.80 | 0.20 | | |
| 4X | 11 | 14 | 15 | | | 0.95 | 0.05 | | |
| Area 5 | 14 | 3 | | | | 1.00 | | | |
| 3A | 5 | 3 | 26 | | | 0.05 | 0.95 | | |
| Tree | 29 | 26 | 27 | | | 0.50 | 0.50 | | |
| Revilla | 27 | 26 | | | | 1.00 | | | |
| L.Clar | 26 | 22 | 25 | | | 0.84 | 0.16 | | |
| M.Clar | 25 | 24 | | | | 1.00 | | | |
| U.Clar | 24 | 23 | | | | 1.00 | | | |
| Sumner | 23 | 32 | | | | 1.00 | | | |
| Cordova | 22 | 21 | | | | 1.00 | | | |
| Dall | 21 | 20 | | | | 1.00 | | | |
| 1TS | 3 | 21 | 1 | | | 0.18 | 0.82 | | |

| | From | To | To | To | To | Prop. | Prop. | Prop. | Prop. |
|---|---|---|---|---|---|---|---|---|---|
| **Stikine** | | | | | | | | | |
| Term108 | 33 | 24 | 23 | | | 0.20 | 0.80 | | |
| U.Clar | 24 | 23 | | | | 1.00 | | | |
| Sumner | 23 | 32 | | | | 1.00 | | | |
| **MacD** | | | | | | | | | |
| Term101 | 30 | 26 | 27 | | | 0.80 | 0.20 | | |
| Revilla | 27 | 29 | 26 | | | 0.50 | 0.50 | | |
| L.Clar | 26 | 25 | 22 | 29 | | 0.42 | 0.55 | 0.03 | |
| Tree | 29 | 5 | 6 | | | 0.20 | 0.80 | | |
| 3B | 6 | 5 | | | | 1.00 | | | |
| 3A | 5 | 3 | | | | 1.00 | | | |
| 1TS | 3 | 1 | | | | 1.00 | | | |
| Cordova | 22 | 21 | 15 | | | 0.50 | 0.50 | | |
| Dall | 21 | 20 | | | | 1.00 | | | |
| M.Clar | 25 | 24 | | | | 1.00 | | | |
| U.Clar | 24 | 23 | | | | 1.00 | | | |
| Sumner | 23 | 32 | | | | 1.00 | | | |
| **US_Oth** | | | | | | | | | |
| Stock | 99 | 27 | 25 | 28 | 31 | 0.10 | 0.48 | 0.40 | 0.02 |
| Union | 28 | 24 | | | | 1.00 | | | |
| Revilla | 27 | 26 | 29 | | | 0.65 | 0.35 | | |
| L.Clar | 26 | 22 | | | | 1.00 | | | |
| M.Clar | 25 | 26 | 24 | | | 0.75 | 0.25 | | |
| U.Clar | 24 | 23 | | | | 1.00 | | | |
| Sumner | 23 | 32 | | | | 1.00 | | | |
| Cordova | 22 | 21 | 15 | | | 0.50 | 0.50 | | |
| Dall | 21 | 20 | | | | 1.00 | | | |
| Tree | 29 | 5 | 6 | 26 | | 0.05 | 0.20 | 0.75 | |
| 3B | 6 | 5 | 10 | | | 0.10 | 0.90 | | |
| 4W | 10 | 5 | 11 | | | 0.10 | 0.90 | | |
| 4X | 11 | 14 | | | | 1.00 | | | |
| 3X | 5 | 3 | | | | 1.00 | | | |
| 1TS | 3 | 1 | | | | 1.00 | | | |

Appendix B4. Sockeye migration route parameters for set D.

| Name | Code | Resid. | Name | Code | Resid. | Name | Code | Resid. | Name | Code | Resid. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Term108 | 33 | 1 | 4Y | 12 | 1 | 3A | 5 | 1 | Sumner | 23 | 2 |
| Term103 | 31 | 1 | 4X | 11 | 1 | Tree | 29 | 1 | Cordova | 22 | 1 |
| Term101 | 30 | 2 | 4W | 10 | 1 | L.Clar | 26 | 2 | Dall | 21 | 2 |
| Union | 28 | 1 | 3E | 9 | 1 | 1TS | 3 | 3 | Noyes | 20 | 2 |
| Revilla | 27 | 2 | 3D | 8 | 1 | 1N | 1 | 1 | Dist105 | 32 | 1 |
| Area 5 | 14 | 1 | 3C | 7 | 1 | M.Clar | 25 | 2 | Refuge | 15 | 1 |
| 4Z | 13 | 2 | 3B | 6 | 2 | U.Clar | 24 | 2 | | | |

**Migration routes through the fisheries**

| | From | To | To | To | To | Prop. | Prop. | Prop. | Prop. |
|---|---|---|---|---|---|---|---|---|---|
| **Skeena** | | | | | | | | | |
| 4Z | 13 | 12 | | | | 1.00 | | | |
| 4Y | 12 | 11 | | | | 1.00 | | | |
| 4X | 11 | 10 | 14 | | | 0.85 | 0.15 | | |
| 4W | 10 | 7 | 6 | 5 | 15 | 0.10 | 0.10 | 0.55 | 0.25 |
| Area 5 | 14 | 3 | | | | 1.00 | | | |
| 3A | 5 | 3 | 26 | | | 0.50 | 0.50 | | |
| 3B | 6 | 5 | 29 | | | 0.84 | 0.16 | | |
| 3C | 7 | 6 | | | | 1.00 | | | |
| Tree | 29 | 26 | 27 | | | 0.50 | 0.50 | | |
| Revilla | 27 | 26 | | | | 1.00 | | | |
| L.Clar | 26 | 3 | 22 | 25 | | 0.10 | 0.77 | 0.13 | |
| 1TS | 3 | 21 | 1 | | | 0.50 | 0.50 | | |
| Cordova | 22 | 21 | | | | 1.00 | | | |
| Dall | 21 | 20 | | | | 1.00 | | | |
| M.Clar | 25 | 24 | | | | 1.00 | | | |
| U.Clar | 24 | 23 | | | | 1.00 | | | |
| Sumner | 23 | 32 | | | | 1.00 | | | |
| **Nass** | | | | | | | | | |
| 3E | 9 | 8 | | | | 1.00 | | | |
| 3D | 8 | 7 | | | | 1.00 | | | |
| 3C | 7 | 6 | | | | 1.00 | | | |
| 3B | 6 | 29 | 5 | 10 | | 0.45 | 0.25 | 0.30 | |
| 4W | 10 | 11 | 5 | | | 0.80 | 0.20 | | |
| 4X | 11 | 14 | 15 | | | 0.95 | 0.05 | | |
| Area 5 | 14 | 3 | | | | 1.00 | | | |
| 3A | 5 | 3 | 26 | | | 0.05 | 0.95 | | |
| Tree | 29 | 26 | 27 | 15 | | 0.20 | 0.10 | 0.70 | |
| Revilla | 27 | 26 | | | | 1.00 | | | |
| L.Clar | 26 | 22 | 25 | | | 0.84 | 0.16 | | |
| M.Clar | 25 | 24 | | | | 1.00 | | | |
| U.Clar | 24 | 23 | | | | 1.00 | | | |
| Sumner | 23 | 32 | | | | 1.00 | | | |
| Cordova | 22 | 21 | | | | 1.00 | | | |
| Dall | 21 | 20 | | | | 1.00 | | | |
| 1TS | 3 | 21 | 1 | | | 0.18 | 0.82 | | |

| | From | To | To | To | To | Prop. | Prop. | Prop. | Prop. |
|---|---|---|---|---|---|---|---|---|---|
| **Stikine** | | | | | | | | | |
| Term108 | 33 | 24 | 23 | | | 0.20 | 0.80 | | |
| U.Clar | 24 | 23 | | | | 1.00 | | | |
| Sumner | 23 | 32 | | | | 1.00 | | | |
| **MacD** | | | | | | | | | |
| Term101 | 30 | 26 | 27 | | | 0.80 | 0.20 | | |
| Revilla | 27 | 29 | 26 | | | 0.50 | 0.50 | | |
| L.Clar | 26 | 25 | 22 | 29 | | 0.42 | 0.55 | 0.03 | |
| Tree | 29 | 5 | 6 | | | 0.20 | 0.80 | | |
| 3B | 6 | 5 | | | | 1.00 | | | |
| 3A | 5 | 3 | | | | 1.00 | | | |
| 1TS | 3 | 1 | | | | 1.00 | | | |
| Cordova | 22 | 21 | 15 | | | 0.70 | 0.30 | | |
| Dall | 21 | 20 | | | | 1.00 | | | |
| M.Clar | 25 | 24 | | | | 1.00 | | | |
| U.Clar | 24 | 23 | | | | 1.00 | | | |
| Sumner | 23 | 32 | | | | 1.00 | | | |
| **US_Oth** | | | | | | | | | |
| Stock | 99 | 27 | 25 | 28 | 31 | 0.10 | 0.48 | 0.40 | 0.02 |
| Union | 28 | 24 | | | | 1.00 | | | |
| Revilla | 27 | 26 | 29 | | | 0.65 | 0.35 | | |
| L.Clar | 26 | 22 | | | | 1.00 | | | |
| M.Clar | 25 | 26 | 24 | | | 0.75 | 0.25 | | |
| U.Clar | 24 | 23 | | | | 1.00 | | | |
| Sumner | 23 | 32 | | | | 1.00 | | | |
| Cordova | 22 | 21 | 15 | | | 0.70 | 0.30 | | |
| Dall | 21 | 20 | | | | 1.00 | | | |
| Tree | 29 | 5 | 6 | 26 | | 0.05 | 0.20 | 0.75 | |
| 3B | 6 | 5 | 10 | | | 0.10 | 0.90 | | |
| 4W | 10 | 5 | 11 | | | 0.10 | 0.90 | | |
| 4X | 11 | 14 | | | | 1.00 | | | |
| 3X | 5 | 3 | | | | 1.00 | | | |
| 1TS | 3 | 1 | | | | 1.00 | | | |

Appendix B5. Sockeye migration route parameters for set E.

| Name | Code | Resid. | Name | Code | Resid. | Name | Code | Resid. | 0 | Name | Code | Resid. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Term108 | 33 | 1 | 4Y | 12 | 1 | 3A | 5 | 1 | 0 | Sumner | 23 | 2 |
| Term103 | 31 | 1 | 4X | 11 | 1 | Tree | 29 | 1 | 0 | Cordova | 22 | 1 |
| Term101 | 30 | 2 | 4W | 10 | 1 | L.Clar | 26 | 2 | 0 | Dall | 21 | 2 |
| Union | 28 | 1 | 3E | 9 | 1 | 1TS | 3 | 3 | 0 | Noyes | 20 | 2 |
| Revilla | 27 | 2 | 3D | 8 | 1 | 1N | 1 | 1 | 0 | Dist105 | 32 | 1 |
| Area 5 | 14 | 1 | 3C | 7 | 1 | M.Clar | 25 | 2 | 0 | Refuge | 15 | 1 |
| 4Z | 13 | 2 | 3B | 6 | 2 | U.Clar | 24 | 2 | 0 | | | |

**Migration routes through the fisheries**

| | From | To | To | To | To | Prop. | Prop. | Prop. | Prop. |
|---|---|---|---|---|---|---|---|---|---|
| **Skeena** | | | | | | | | | |
| 4Z | 13 | 12 | | | | 1.00 | | | |
| 4Y | 12 | 11 | | | | 1.00 | | | |
| 4X | 11 | 10 | 14 | | | 0.85 | 0.15 | | |
| 4W | 10 | 7 | 6 | 5 | 15 | 0.10 | 0.10 | 0.50 | 0.30 |
| Area 5 | 14 | 3 | | | | 1.00 | | | |
| 3A | 5 | 3 | 26 | | | 0.97 | 0.03 | | |
| 3B | 6 | 5 | 29 | | | 0.97 | 0.03 | | |
| 3C | 7 | 6 | | | | 1.00 | | | |
| Tree | 29 | 26 | 27 | | | 0.50 | 0.50 | | |
| Revilla | 27 | 26 | | | | 1.00 | | | |
| L.Clar | 26 | 3 | 22 | 25 | | 0.10 | 0.77 | 0.13 | |
| 1TS | 3 | 21 | 1 | | | 0.50 | 0.50 | | |
| Cordova | 22 | 21 | | | | 1.00 | | | |
| Dall | 21 | 20 | | | | 1.00 | | | |
| M.Clar | 25 | 24 | | | | 1.00 | | | |
| U.Clar | 24 | 23 | | | | 1.00 | | | |
| Sumner | 23 | 32 | | | | 1.00 | | | |
| **Nass** | | | | | | | | | |
| 3E | 9 | 8 | | | | 1.00 | | | |
| 3D | 8 | 7 | | | | 1.00 | | | |
| 3C | 7 | 6 | | | | 1.00 | | | |
| 3B | 6 | 29 | 5 | 10 | | 0.18 | 0.28 | 0.54 | |
| 4W | 10 | 11 | 5 | | | 0.80 | 0.20 | | |
| 4X | 11 | 14 | 15 | | | 0.95 | 0.05 | | |
| Area 5 | 14 | 3 | | | | 1.00 | | | |
| 3A | 5 | 3 | 26 | | | 0.40 | 0.60 | | |
| Tree | 29 | 26 | 27 | 15 | | 0.20 | 0.10 | 0.70 | |
| Revilla | 27 | 26 | | | | 1.00 | | | |
| L.Clar | 26 | 22 | 25 | | | 0.84 | 0.16 | | |
| M.Clar | 25 | 24 | | | | 1.00 | | | |
| U.Clar | 24 | 23 | | | | 1.00 | | | |
| Sumner | 23 | 32 | | | | 1.00 | | | |
| Cordova | 22 | 21 | | | | 1.00 | | | |
| Dall | 21 | 20 | | | | 1.00 | | | |
| 1TS | 3 | 21 | 1 | | | 0.18 | 0.82 | | |

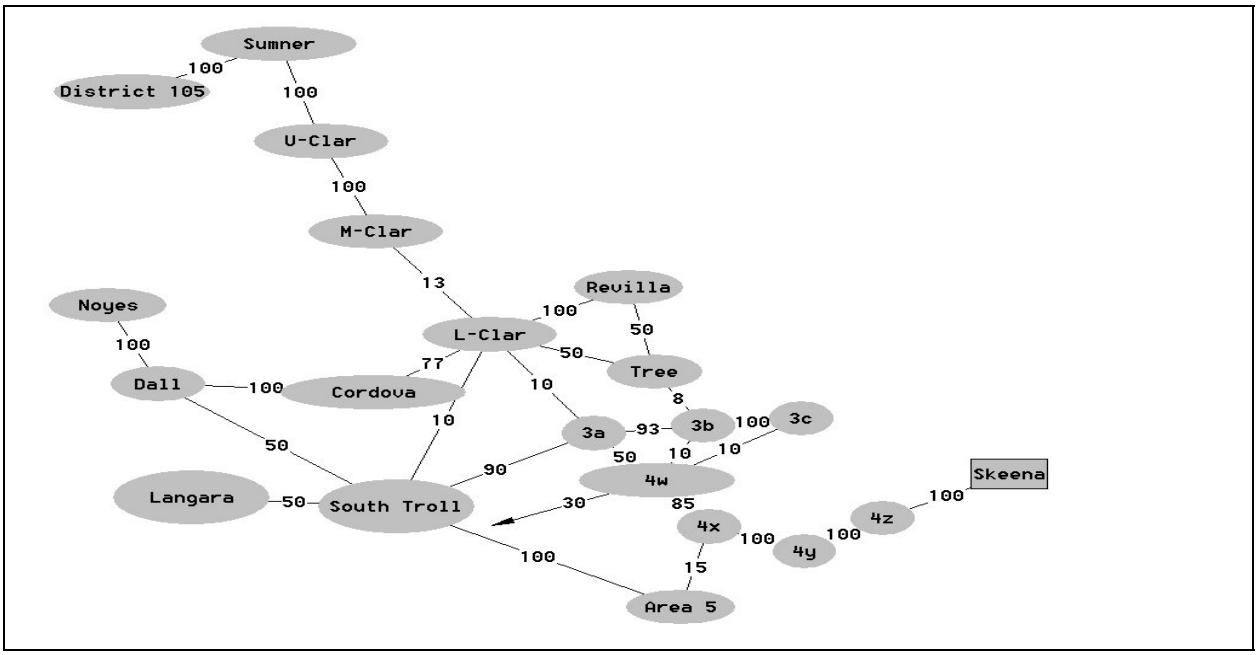
| | From | To | To | To | To | Prop. | Prop. | Prop. | Prop. |
|---|---|---|---|---|---|---|---|---|---|
| **Stikine** | | | | | | | | | |
| Term108 | 33 | 24 | 23 | | | 0.20 | 0.80 | | |
| U.Clar | 24 | 23 | | | | 1.00 | | | |
| Sumner | 23 | 32 | | | | 1.00 | | | |
| **MacD** | | | | | | | | | |
| Term101 | 30 | 26 | 27 | | | 0.80 | 0.20 | | |
| Revilla | 27 | 29 | 26 | | | 0.50 | 0.50 | | |
| L.Clar | 26 | 25 | 22 | 29 | | 0.42 | 0.55 | 0.03 | |
| Tree | 29 | 5 | 6 | | | 0.20 | 0.80 | | |
| 3B | 6 | 5 | | | | 1.00 | | | |
| 3A | 5 | 3 | | | | 1.00 | | | |
| 1TS | 3 | 1 | | | | 1.00 | | | |
| Cordova | 22 | 21 | 15 | | | 0.70 | 0.30 | | |
| Dall | 21 | 20 | | | | 1.00 | | | |
| M.Clar | 25 | 24 | | | | 1.00 | | | |
| U.Clar | 24 | 23 | | | | 1.00 | | | |
| Sumner | 23 | 32 | | | | 1.00 | | | |
| **US_Oth** | | | | | | | | | |
| Stock | 99 | 27 | 25 | 28 | 31 | 0.10 | 0.48 | 0.40 | 0.02 |
| Union | 28 | 24 | | | | 1.00 | | | |
| Revilla | 27 | 26 | 29 | | | 0.85 | 0.15 | | |
| L.Clar | 26 | 22 | | | | 1.00 | | | |
| M.Clar | 25 | 26 | 24 | | | 0.75 | 0.25 | | |
| U.Clar | 24 | 23 | | | | 1.00 | | | |
| Sumner | 23 | 32 | | | | 1.00 | | | |
| Cordova | 22 | 21 | 15 | | | 0.70 | 0.30 | | |
| Dall | 21 | 20 | | | | 1.00 | | | |
| Tree | 29 | 5 | 6 | 26 | | 0.05 | 0.20 | 0.75 | |
| 3B | 6 | 5 | 10 | | | 0.10 | 0.90 | | |
| 4W | 10 | 5 | 11 | | | 0.10 | 0.90 | | |
| 4X | 11 | 14 | | | | 1.00 | | | |
| 3X | 5 | 3 | | | | 1.00 | | | |
| 1TS | 3 | 1 | | | | 1.00 | | | |

## Appendix C.

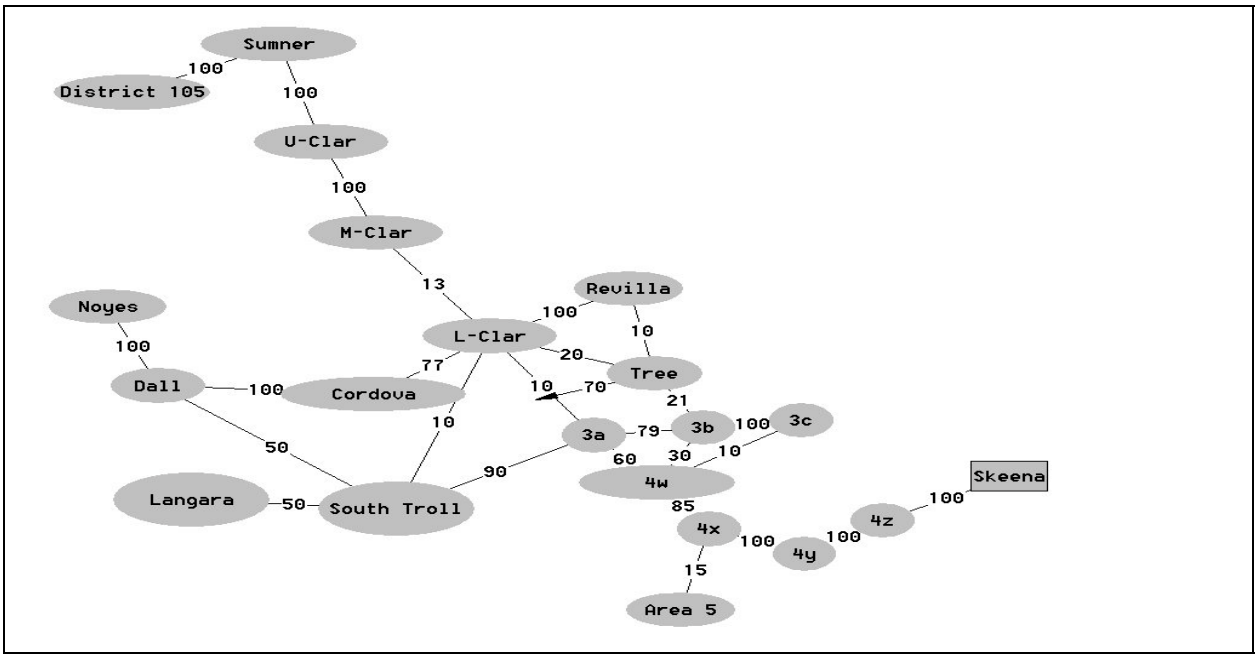
### Migration route diagrams used for the run reconstructions, 1982-2001.

The migration routes diagrams are provided to display the parameters that define the migration patterns for each stock and period. The migration parameters are constructed by working backwards through the fisheries from the river mouth to the first interception fisheries. For example: the first figure defines the Skeena sockeye migration routes for Routing A (next page). Here 100% of the fish move through the Area 4X, 4Y and 4Z fisheries. Outside these terminal fisheries, the run divides into sub-stocks, with 85% migrating through Area 4W and 15% through Area 5. Of the fish that migrate through Area 4W, 50% migrated through the Area 3A fishery, 10% through Area 3B, 10% through Area 3C and 30% are not vulnerable to any interception fishery. This process is repeated until each fishery intercepting Skeena sockeye has been linked to the terminal fisheries for that stock. The numbers on each migration path indicates the percentage of the fish in a specific fishery that migrated through the adjacent fisheries and these numbers must sum up to 100% for the migration routes entering each fishery. The resulting portions of the total Skeena stock that migrate through each fishery are presented in Table 8 along with the proportions for the other sockeye stocks.

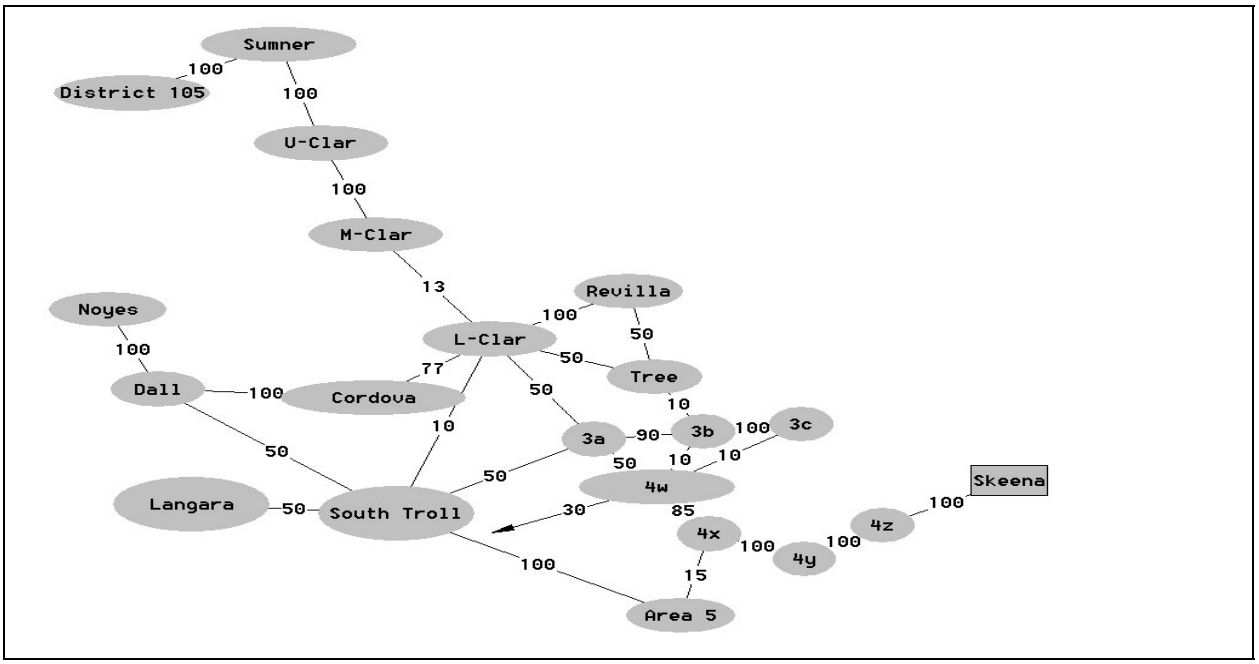
Appendix C. Skeena migration route A.



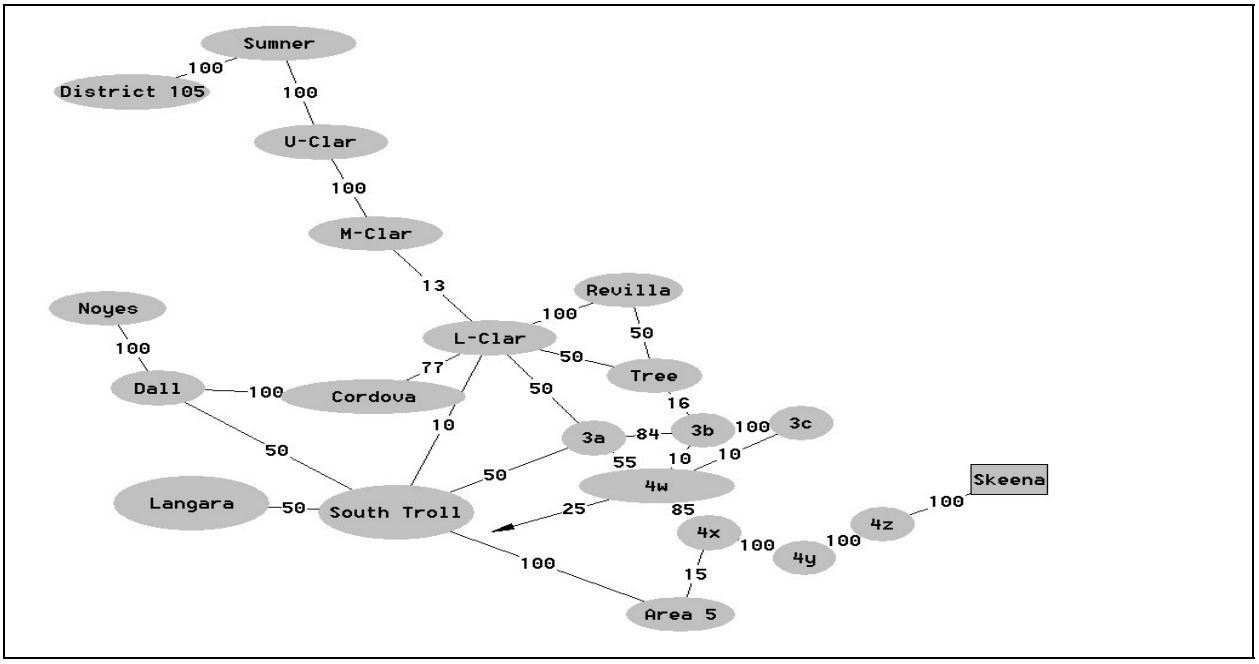

Appendix C. Skeena migration route B.



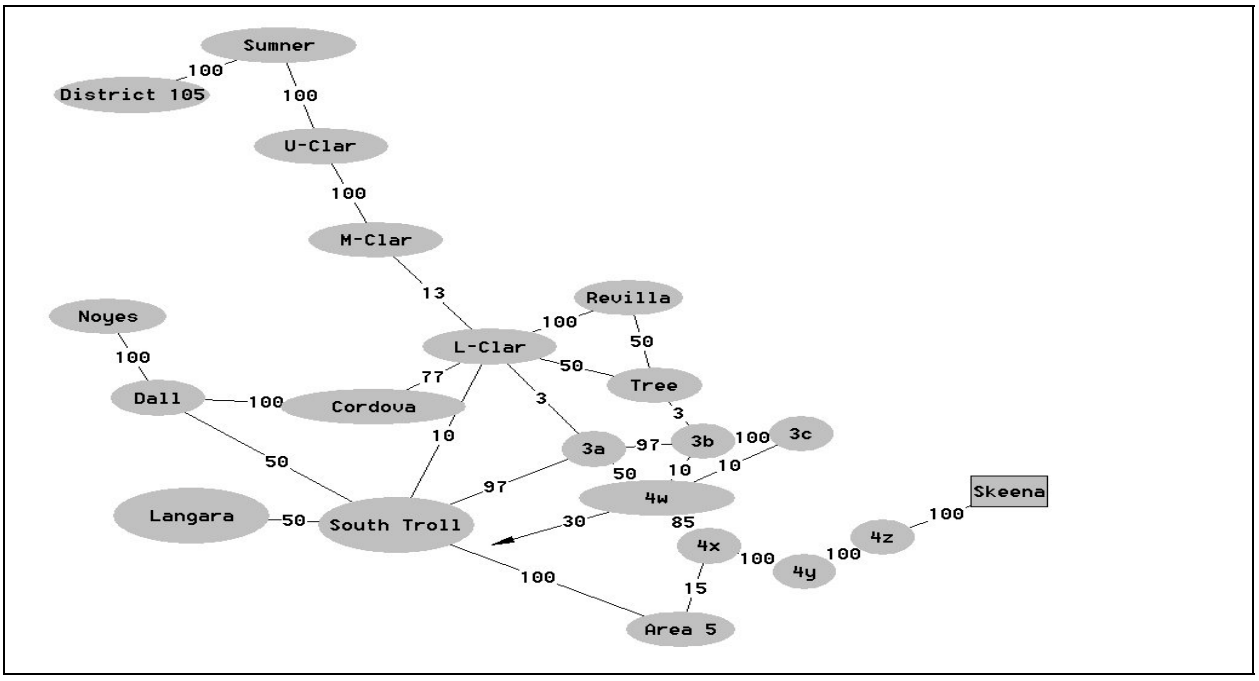
Appendix C. Skeena migration route C.



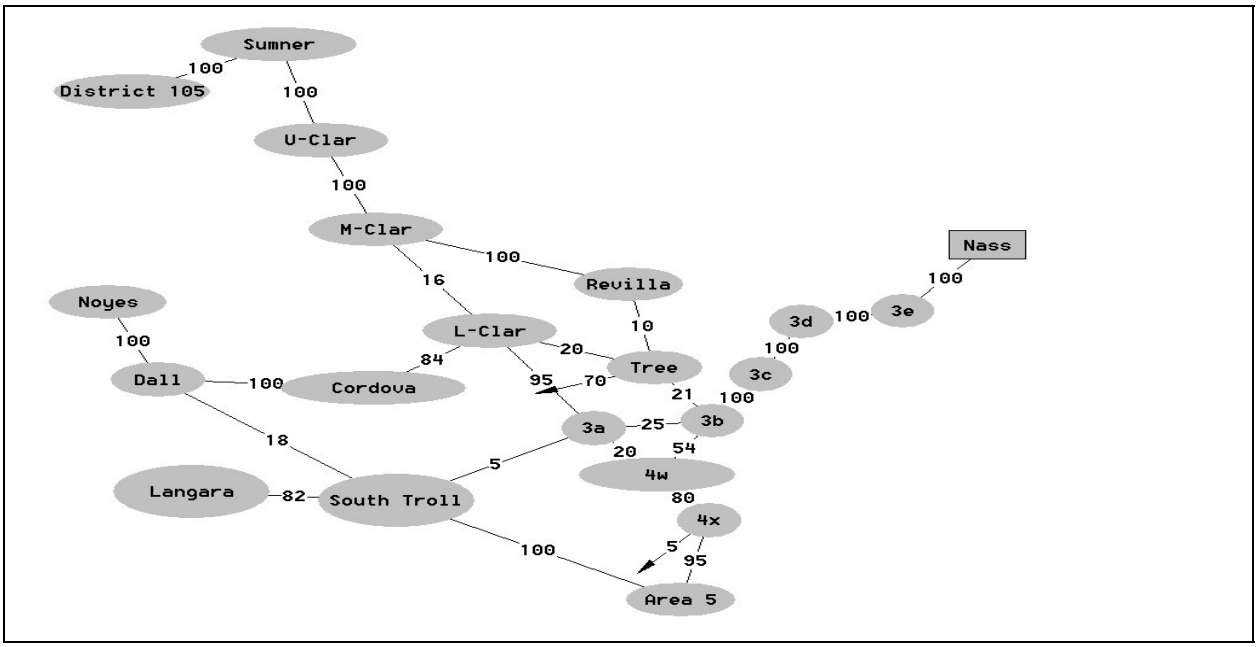

Appendix C. Skeena migration route D.



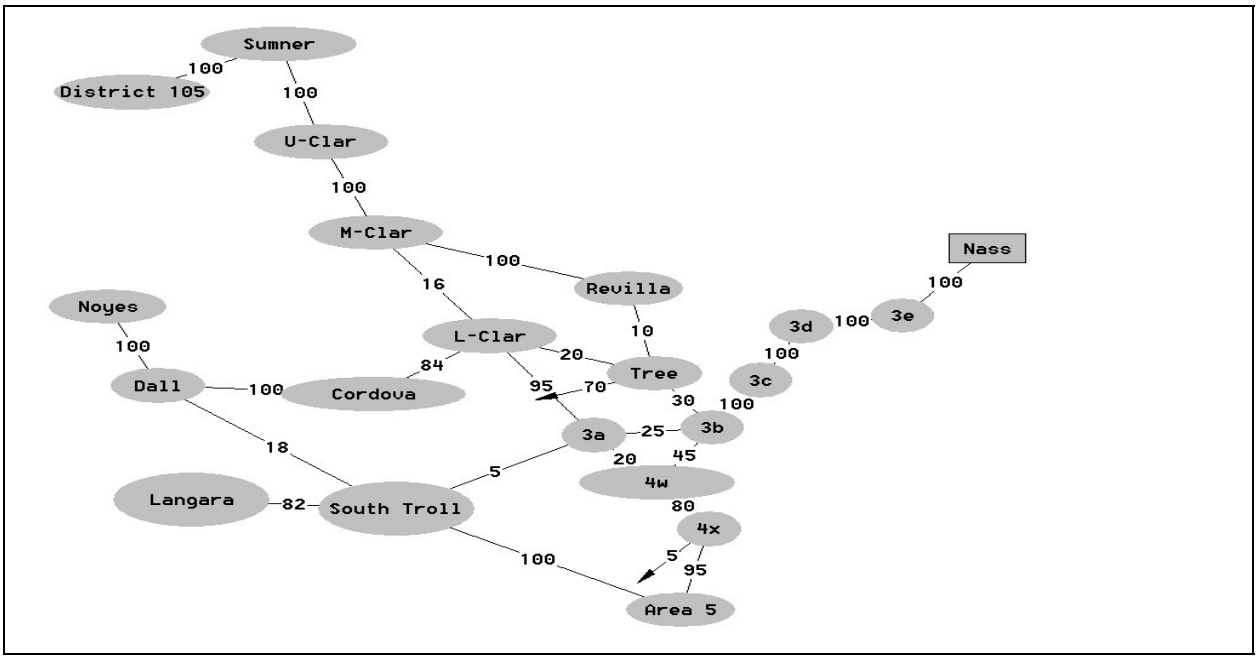
Appendix C. Skeena migration route E.



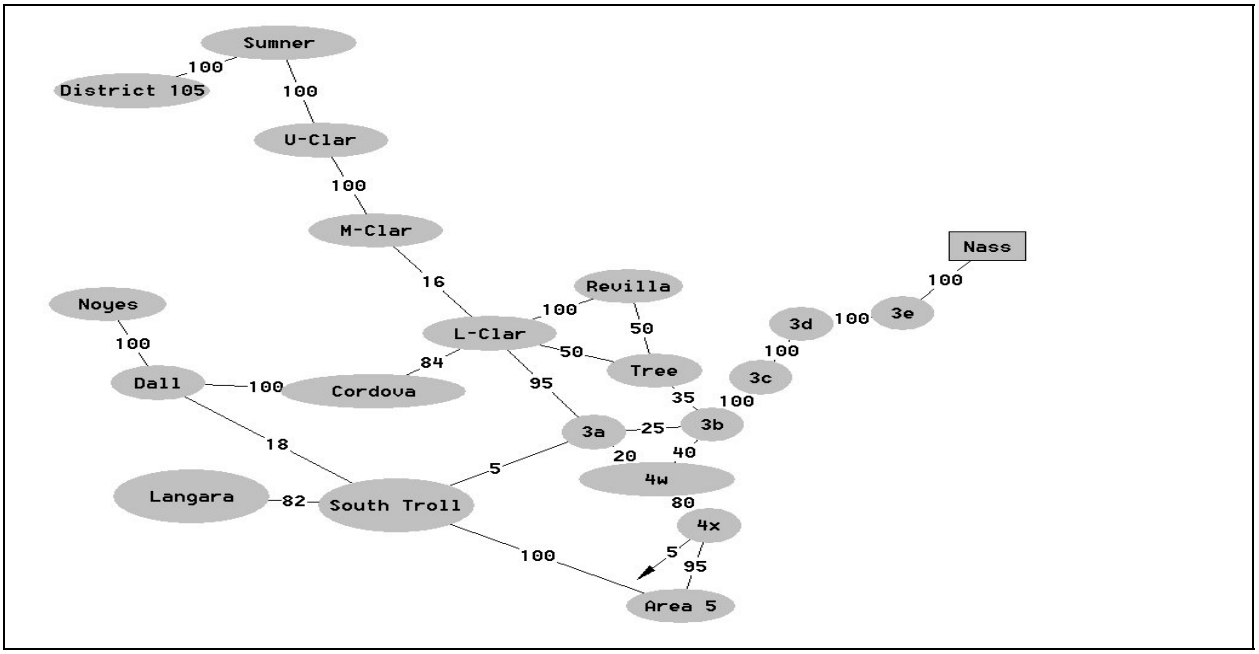

Appendix C. Nass migration route A.



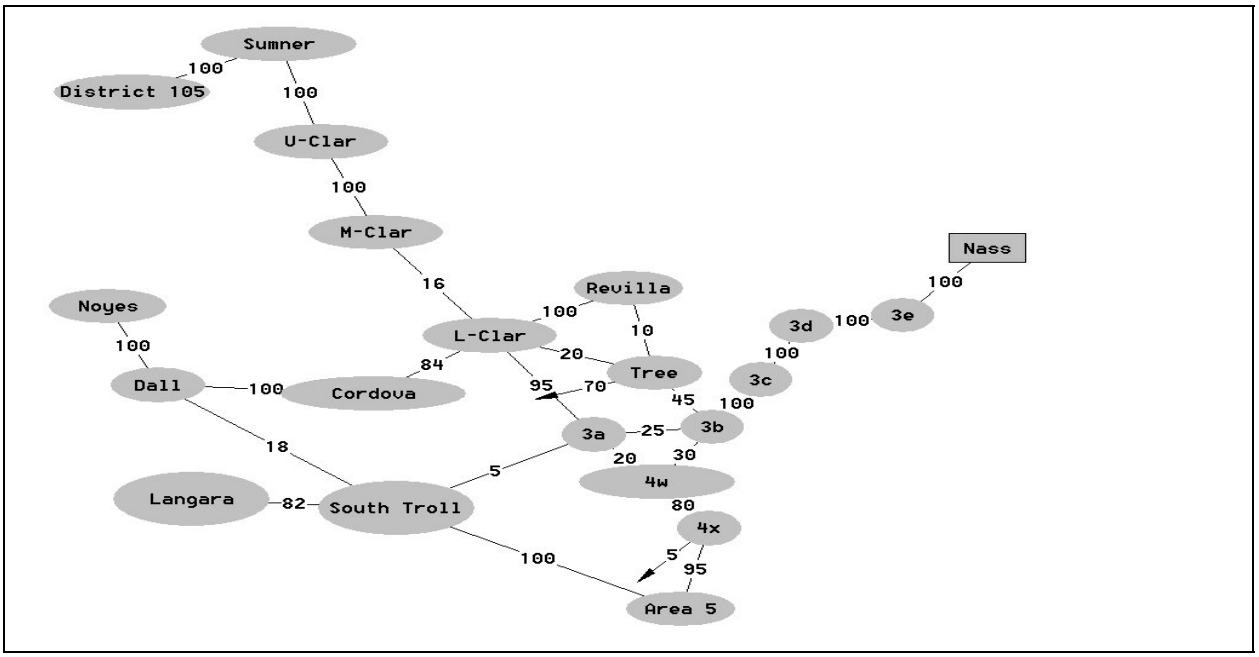
Appendix C. Nass migration route B.



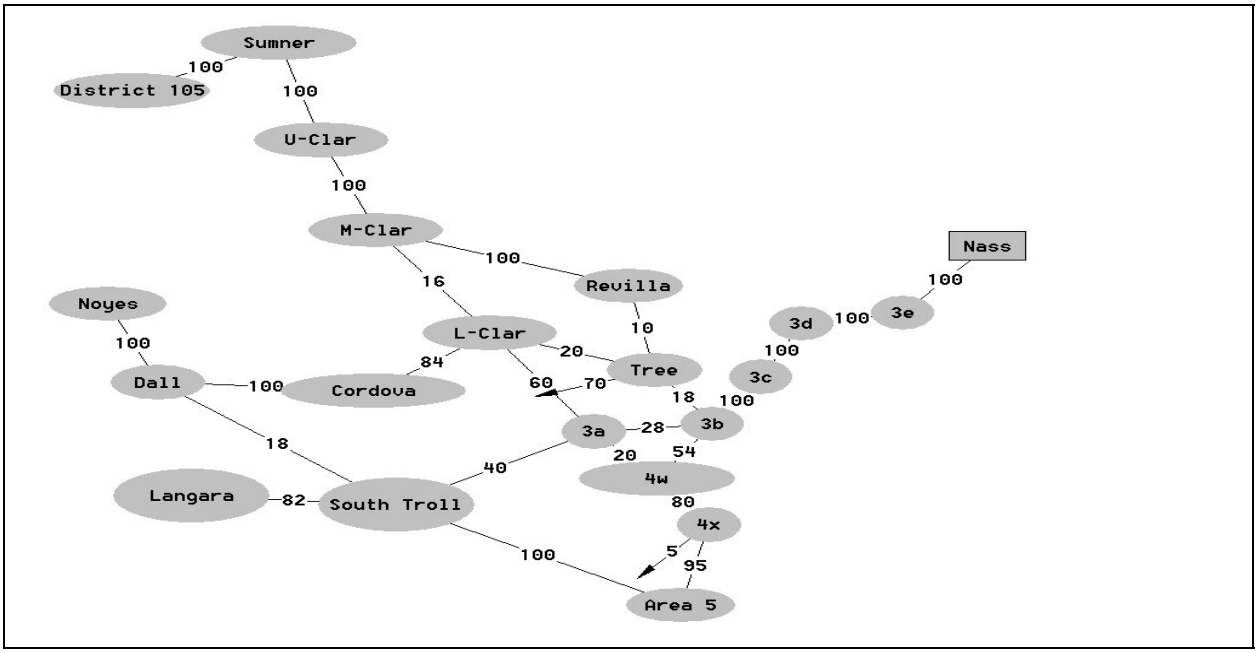

Appendix C. Nass migration route C.



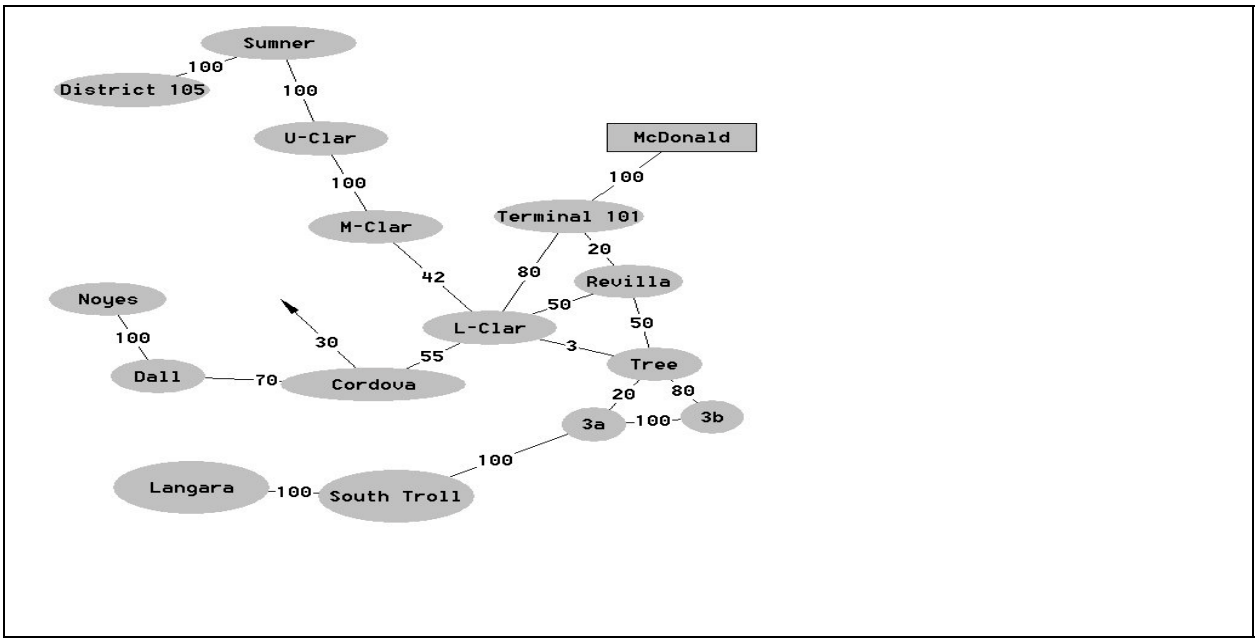
Appendix C. Nass migration route D.



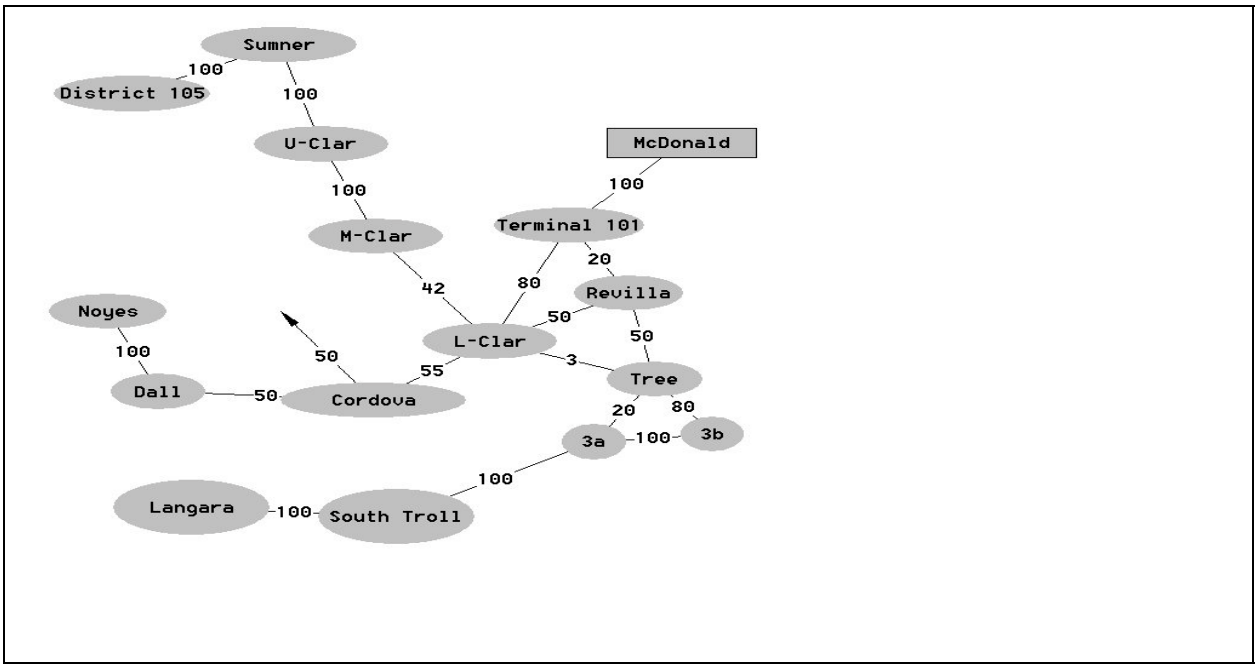

Appendix C. Nass migration route E.



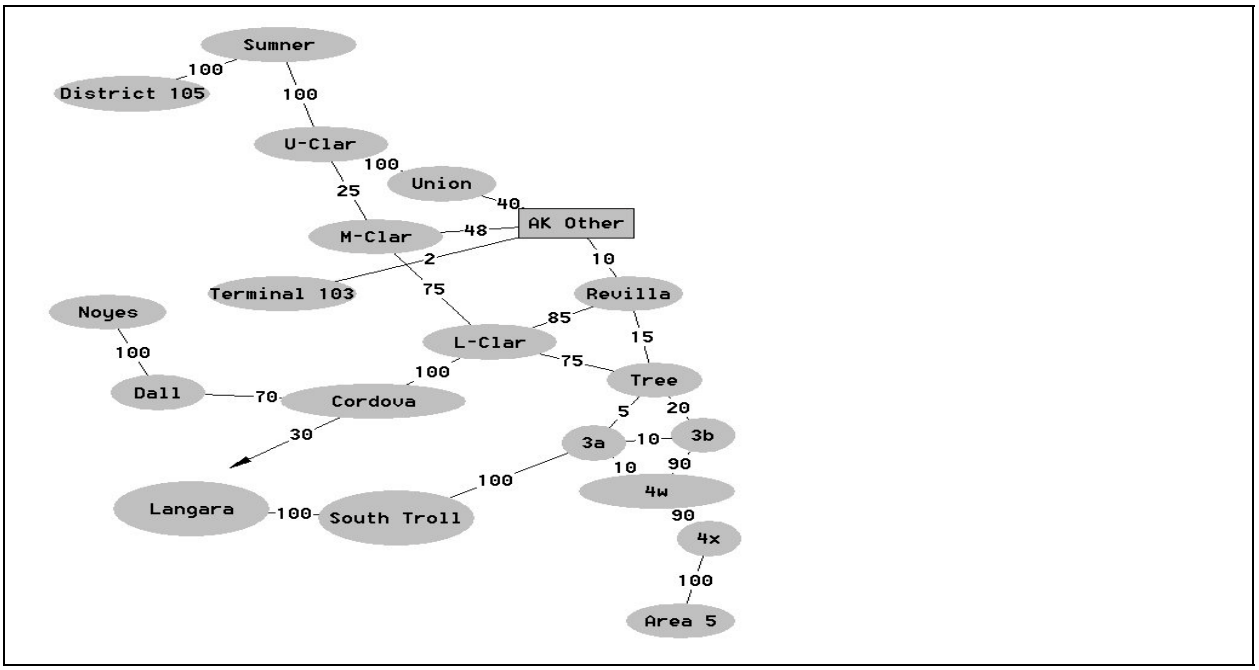
Appendix C. US_McDonald migration routes A, B, D and E.



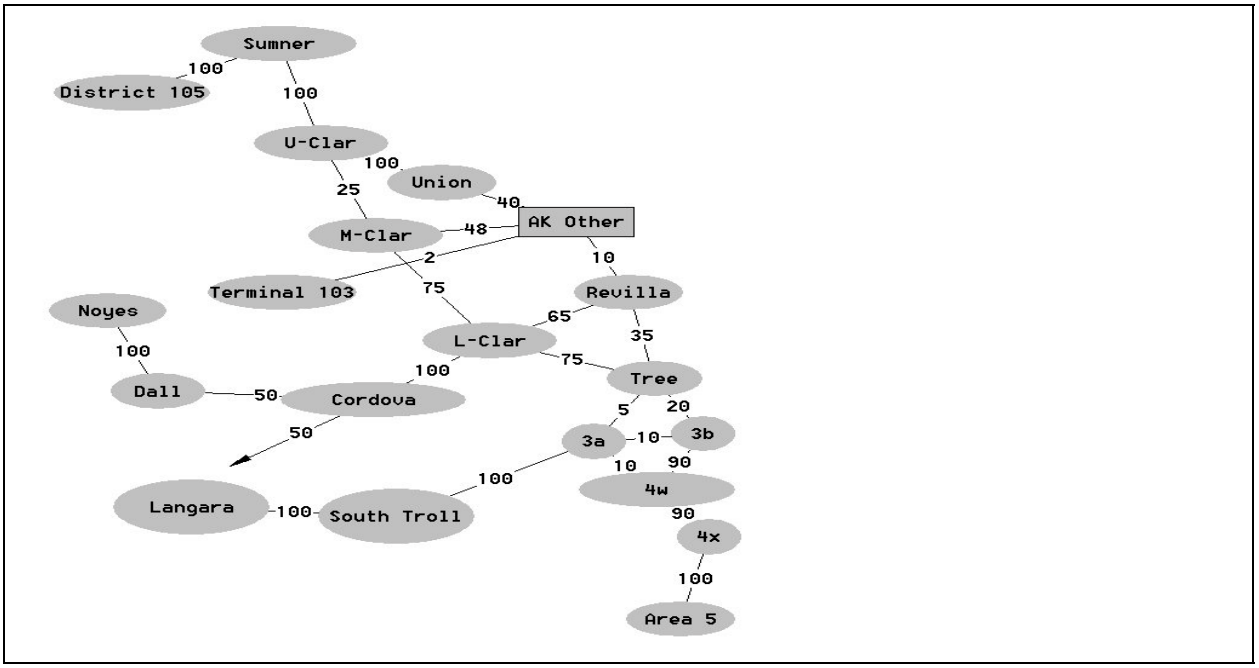

Appendix C. US_McDonald migration route C.



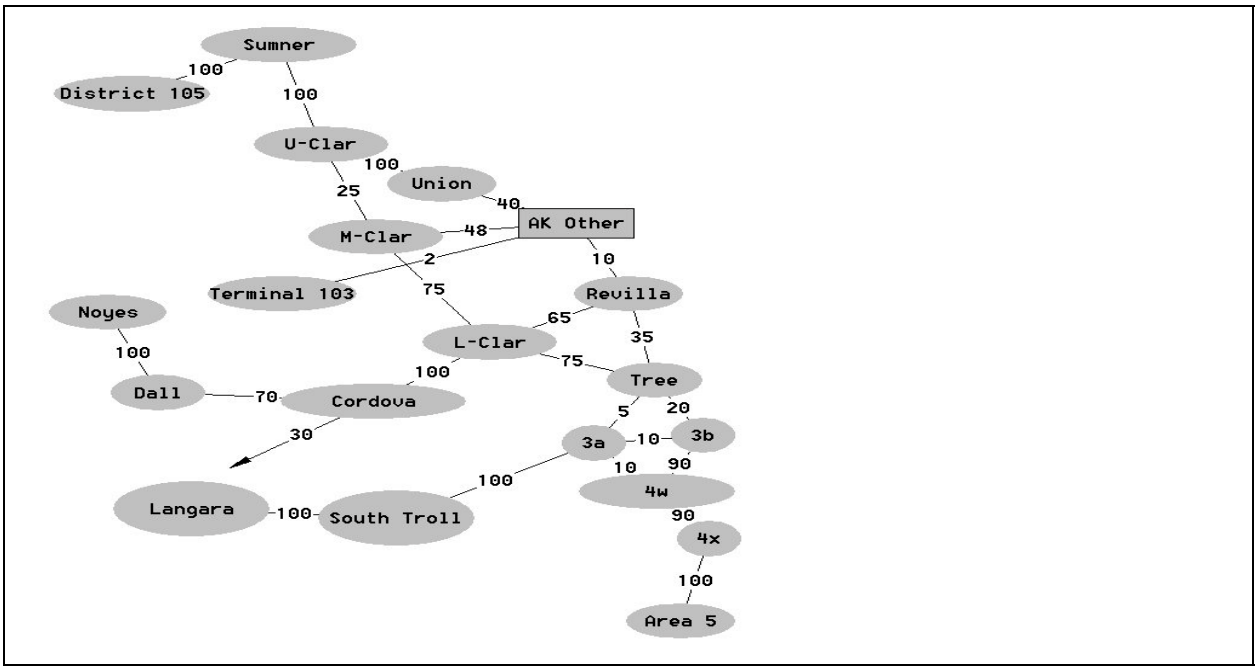
Appendix C. US_Other migration routes A, B and E.



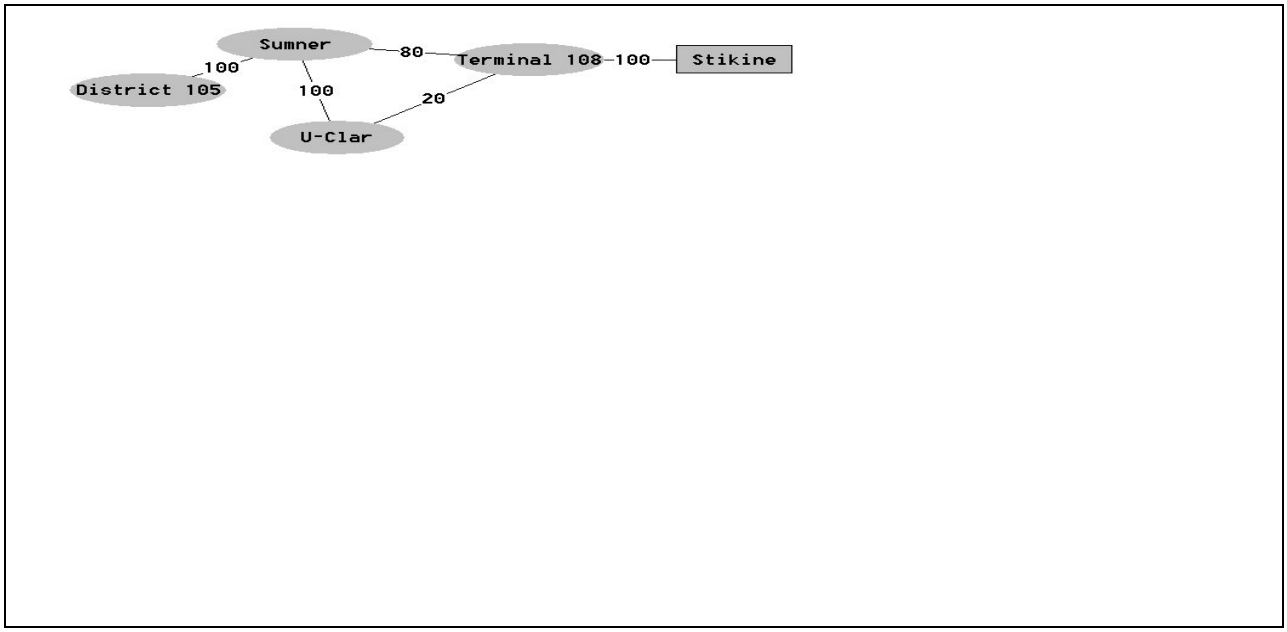

Appendix C. US_Other migration route C.



Appendix C. US_Other migration route D.




Appendix C. Stikine migration route, all years.



**Appendix D.1 1982 Sockeye catch by stock.**

| | Revised Analysis (Available Scale Data) | | | | | | | Gazey and English 2000 (Available Scale Data) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Fishery** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** |
| Langara | 43921 | 5430 | 0 | 1553 | 67 | 7741 | 58712 | 42288 | 5246 | 0 | 1238 | 2234 | 7706 | 58712 |
| 1Troll | 1393 | 130 | 0 | 84 | 3 | 2239 | 3849 | 1238 | 175 | 0 | 71 | 91 | 2274 | 3849 |
| 3A | 283214 | 19937 | 0 | 12541 | 566 | 0 | 316258 | 244173 | 39182 | 0 | 9701 | 18505 | 0 | 311561 |
| 3B | 75456 | 39696 | 0 | 5865 | 783 | 0 | 121801 | 59954 | 48880 | 0 | 9914 | 10944 | 0 | 129691 |
| 3C | 3693 | 7894 | 0 | 0 | 0 | 0 | 11587 | 2934 | 9720 | 0 | 0 | 0 | 0 | 12655 |
| 3D | 0 | 197854 | 0 | 0 | 0 | 0 | 197854 | 0 | 192373 | 0 | 0 | 0 | 0 | 192373 |
| 3E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4W | 761257 | 59511 | 0 | 0 | 1292 | 0 | 822059 | 669620 | 100961 | 0 | 0 | 17931 | 0 | 788512 |
| 4X | 294589 | 35027 | 0 | 0 | 1017 | 0 | 330632 | 287787 | 48504 | 0 | 0 | 1191 | 0 | 337482 |
| 4Y | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4Z | 539230 | 0 | 0 | 0 | 0 | 0 | 539230 | 496593 | 0 | 0 | 0 | 0 | 0 | 496593 |
| Area 5 | 46980 | 24528 | 0 | 0 | 923 | 0 | 72431 | 65103 | 4279 | 0 | 0 | 807 | 0 | 70189 |
| Noyes | 105261 | 14548 | 0 | 11199 | 60889 | 0 | 191898 | 104848 | 12407 | 0 | 12305 | 59447 | 0 | 189007 |
| Dall | 50559 | 5944 | 0 | 6254 | 28705 | 0 | 91462 | 49740 | 6569 | 0 | 3429 | 31435 | 0 | 91173 |
| Cordova | 42 | 52 | 0 | 77 | 601 | 0 | 771 | 53 | 0 | 0 | 308 | 138 | 0 | 499 |
| Sumner | 15499 | 24216 | 22190 | 2597 | 57058 | 0 | 121559 | 29770 | 9891 | 20783 | 7841 | 51804 | 0 | 120089 |
| U-Clar | 11008 | 11062 | 15300 | 4171 | 30686 | 0 | 72227 | 18242 | 3785 | 14448 | 4387 | 30429 | 0 | 71291 |
| M-Clar | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| L-Clar | 29036 | 21841 | 0 | 12706 | 40610 | 0 | 104192 | 21377 | 4839 | 0 | 9228 | 24016 | 0 | 59460 |
| Revilla | 10473 | 4798 | 0 | 4720 | 14526 | 0 | 34516 | 0 | 0 | 0 | 0 | 29065 | 0 | 29065 |
| Union | 0 | 0 | 0 | 0 | 305 | 0 | 305 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tree | 46001 | 75409 | 0 | 24111 | 45271 | 0 | 190792 | 74276 | 46833 | 0 | 15758 | 53588 | 0 | 190455 |
| Term101 | 0 | 0 | 0 | 629 | 0 | 0 | 629 | 0 | 0 | 0 | 792 | 0 | 0 | 792 |
| Term103 | 0 | 0 | 0 | 0 | 122 | 0 | 122 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dist105 | 0 | 0 | 0 | 0 | 43 | 0 | 43 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Term108 | 0 | 0 | 7127 | 0 | 0 | 0 | 7127 | 0 | 0 | 6746 | 0 | 0 | 0 | 6746 |
| Total Catch | 2317608 | 547877 | 44617 | 86506 | 283467 | 9980 | 3290056 | 2167996 | 533645 | 41977 | 74971 | 331624 | 9980 | 3160193 |
| Escapement | 1447331 | 372880 | 68761 | 49716 | 292283 | 0 | 2230971 | 1302823 | 340120 | 68761 | 56945 | 297055 | 0 | 2065704 |
| Total Run | 3764939 | 920757 | 113378 | 136222 | 575750 | 9980 | 5511047 | 3470819 | 873765 | 110738 | 131916 | 628679 | 9980 | 5215917 |
| Expl Rate | 61.56 | 59.5 | 39.35 | 63.5 | 49.23 | 0 | 59.52 | 62.5 | 61.1 | 37.9 | 56.8 | 52.8 | 0.0 | 60.4 |

**Appendix D.2 1983 Sockeye catch by stock.**

| | Revised Analysis (Available Scale Data) | | | | | | | Gazey and English 2000 (Available Scale Data) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Fishery** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** |
| Langara | 15178 | 3278 | 0 | 2102 | 67 | 11803 | 32428 | 14495 | 3870 | 0 | 1023 | 453 | 12588 | 32429 |
| 1Troll | 1782 | 248 | 0 | 100 | 86 | 1641 | 3857 | 1645 | 241 | 0 | 344 | 18 | 1609 | 3857 |
| 3A | 91196 | 9637 | 0 | 4586 | 134 | 0 | 105553 | 80681 | 13427 | 0 | 1055 | 771 | 0 | 95934 |
| 3B | 93875 | 69602 | 0 | 11423 | 926 | 0 | 175826 | 103032 | 62982 | 0 | 5135 | 11748 | 0 | 182898 |
| 3C | 60431 | 62072 | 0 | 0 | 0 | 0 | 122503 | 66326 | 56169 | 0 | 0 | 0 | 0 | 122494 |
| 3D | 0 | 47097 | 0 | 0 | 0 | 0 | 47097 | 0 | 44555 | 0 | 0 | 0 | 0 | 44555 |
| 3E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4W | 101553 | 13074 | 0 | 0 | 490 | 0 | 115117 | 88805 | 23461 | 0 | 0 | 3058 | 0 | 115324 |
| 4X | 44362 | 3808 | 0 | 0 | 172 | 0 | 48342 | 45335 | 3436 | 0 | 0 | 498 | 0 | 49269 |
| 4Y | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4Z | 121527 | 0 | 0 | 0 | 0 | 0 | 121527 | 119386 | 0 | 0 | 0 | 0 | 0 | 119386 |
| Area 5 | 10028 | 4188 | 0 | 0 | 146 | 0 | 14361 | 11178 | 2741 | 0 | 0 | 439 | 0 | 14358 |
| Noyes | 205239 | 54445 | 0 | 25824 | 80681 | 136324 | 502514 | 219374 | 44056 | 0 | 26692 | 83401 | 136324 | 509847 |
| Dall | 53821 | 15640 | 0 | 8365 | 22386 | 40472 | 140684 | 48474 | 20926 | 0 | 4849 | 26029 | 40472 | 140750 |
| Cordova | 209 | 133 | 0 | 132 | 673 | 0 | 1147 | 397 | 0 | 0 | 339 | 411 | 0 | 1147 |
| Sumner | 1898 | 3859 | 3594 | 4049 | 14734 | 0 | 28135 | 3517 | 2164 | 3330 | 3512 | 15142 | 0 | 27665 |
| U-Clar | 1689 | 3664 | 2200 | 3576 | 11756 | 0 | 22885 | 3692 | 1661 | 1796 | 2693 | 12639 | 0 | 22481 |
| M-Clar | 607 | 1201 | 0 | 230 | 2450 | 0 | 4487 | 1867 | 0 | 0 | 1347 | 1182 | 0 | 4396 |
| L-Clar | 20602 | 19907 | 0 | 9952 | 16740 | 0 | 67201 | 16165 | 5603 | 0 | 5279 | 10342 | 0 | 37389 |
| Revilla | 6836 | 3498 | 0 | 4009 | 5066 | 0 | 19408 | 0 | 0 | 0 | 0 | 16190 | 0 | 16190 |
| Union | 0 | 0 | 0 | 0 | 1239 | 0 | 1239 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tree | 21782 | 65105 | 0 | 28934 | 19953 | 0 | 135774 | 43288 | 43217 | 0 | 8179 | 40707 | 0 | 135391 |
| Term101 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Term103 | 0 | 0 | 0 | 0 | 9308 | 0 | 9308 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dist105 | 9 | 46 | 57 | 9 | 276 | 0 | 397 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Term108 | 0 | 0 | 149 | 0 | 0 | 0 | 149 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Catch | 852624 | 380500 | 6000 | 103293 | 187283 | 190240 | 1719939 | 867658 | 328510 | 5126 | 60448 | 223028 | 190993 | 1675763 |
| Escapement | 1114507 | 234871 | 71683 | 56142 | 219223 | 0 | 1696426 | 1011521 | 208999 | 71683 | 56142 | 267858 | 0 | 1616203 |
| Total Run | 1967131 | 615371 | 77683 | 159435 | 406506 | 190240 | 3226126 | 1879179 | 537509 | 76809 | 116590 | 490886 | 190993 | 3100973 |
| Expl Rate | 43.34 | 61.83 | 7.72 | 64.79 | 46.07 | 0 | 47.42 | 46.2 | 61.1 | 6.7 | 51.9 | 45.4 | 0.0 | 47.9 |

**Appendix D.3 1984 Sockeye catch by stock.**

| | Revised Analysis (Available Scale Data) | | | | | | | Gazey and English 2000 (Available Scale Data) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Fishery** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** |
| Langara | 5048 | 573 | 0 | 1099 | 12 | 24894 | 31625 | 73 | 30 | 0 | 1 | 1 | 28393 | 28498 |
| 1Troll | 1800 | 146 | 0 | 224 | 9 | 15713 | 17893 | 27 | 5 | 0 | 6 | 0 | 17854 | 17892 |
| 3A | 103442 | 7947 | 0 | 6572 | 75 | 0 | 118036 | 106557 | 10322 | 0 | 2814 | 762 | 0 | 120455 |
| 3B | 27147 | 14811 | 0 | 5216 | 296 | 0 | 47469 | 26555 | 15077 | 0 | 2920 | 2395 | 0 | 46947 |
| 3C | 13424 | 14562 | 0 | 0 | 0 | 0 | 27986 | 13132 | 14823 | 0 | 0 | 0 | 0 | 27955 |
| 3D | 0 | 77677 | 0 | 0 | 0 | 0 | 77677 | 0 | 74585 | 0 | 0 | 0 | 0 | 74585 |
| 3E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4W | 179351 | 22545 | 0 | 0 | 186 | 0 | 202082 | 160917 | 30707 | 0 | 0 | 2420 | 0 | 194044 |
| 4X | 114294 | 12187 | 0 | 0 | 119 | 0 | 126600 | 100426 | 18777 | 0 | 0 | 2501 | 0 | 121704 |
| 4Y | 165017 | 0 | 0 | 0 | 0 | 0 | 165017 | 157849 | 0 | 0 | 0 | 0 | 0 | 157849 |
| 4Z | 261296 | 0 | 0 | 0 | 0 | 0 | 261296 | 262926 | 0 | 0 | 0 | 0 | 0 | 262926 |
| Area 5 | 28392 | 6992 | 0 | 0 | 125 | 0 | 35509 | 28724 | 6072 | 0 | 0 | 647 | 0 | 35443 |
| Noyes | 92250 | 25503 | 0 | 22012 | 20773 | 0 | 160538 | 93622 | 25526 | 0 | 13041 | 30469 | 0 | 162658 |
| Dall | 77077 | 21353 | 0 | 19027 | 16170 | 0 | 133628 | 77075 | 21354 | 0 | 10757 | 24441 | 0 | 133627 |
| Cordova | 76 | 70 | 0 | 271 | 724 | 0 | 1141 | 144 | 0 | 0 | 941 | 55 | 0 | 1140 |
| Sumner | 2491 | 5359 | 734 | 11568 | 7674 | 0 | 27827 | 2472 | 5059 | 629 | 3395 | 15482 | 0 | 27037 |
| U-Clar | 6581 | 11557 | 3201 | 21176 | 23309 | 0 | 65824 | 6567 | 10670 | 3034 | 9660 | 34824 | 0 | 64755 |
| M-Clar | 285 | 419 | 0 | 231 | 652 | 0 | 1587 | 704 | 0 | 0 | 704 | 177 | 0 | 1585 |
| L-Clar | 23242 | 24454 | 0 | 42994 | 20818 | 0 | 111507 | 13513 | 10724 | 0 | 15358 | 22891 | 0 | 62486 |
| Revilla | 6540 | 8229 | 0 | 16533 | 6332 | 0 | 37633 | 0 | 0 | 0 | 0 | 33527 | 0 | 33527 |
| Union | 0 | 0 | 0 | 0 | 1043 | 0 | 1043 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tree | 8429 | 45595 | 0 | 25322 | 8515 | 0 | 87862 | 8364 | 43989 | 0 | 10244 | 23587 | 0 | 86184 |
| Term101 | 0 | 0 | 0 | 2669 | 0 | 0 | 2669 | 0 | 0 | 0 | 2507 | 0 | 0 | 2507 |
| Term103 | 0 | 0 | 0 | 0 | 2243 | 0 | 2243 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dist105 | 1 | 3 | 11 | 8 | 39 | 0 | 62 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Term108 | 0 | 0 | 1285 | 0 | 0 | 0 | 1285 | 0 | 0 | 1132 | 0 | 0 | 0 | 1132 |
| Total Catch | 1116183 | 299981 | 5231 | 174922 | 109116 | 40607 | 1746039 | 1059649 | 287719 | 4795 | 72350 | 194179 | 46247 | 1664939 |
| Escapement | 1311575 | 243051 | 76211 | 121224 | 142454 | 0 | 1894515 | 1220263 | 220954 | 76211 | 124093 | 420876 | 0 | 2062397 |
| Total Run | 2427758 | 543032 | 81442 | 296146 | 251570 | 40607 | 3599947 | 2279912 | 508673 | 81006 | 196443 | 615055 | 46247 | 3681089 |
| Expl Rate | 45.98 | 55.24 | 6.42 | 59.07 | 43.37 | 0 | 47.37 | 46.5 | 56.6 | 5.9 | 36.8 | 31.6 | 0.0 | 44.0 |

**Appendix D.4 1985 Sockeye catch by stock.**

| | Revised Analysis (Available Scale Data) | | | | | | | Gazey and English 2000 (Available Scale Data) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Fishery** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** |
| Langara | 73004 | 5700 | 0 | 2246 | 39 | 36934 | 117924 | 63269 | 6818 | 0 | 609 | 309 | 38207 | 109212 |
| 1Troll | 12645 | 642 | 0 | 264 | 5 | 19180 | 32736 | 12291 | 731 | 0 | 89 | 32 | 19593 | 32736 |
| 3A | 214753 | 12748 | 0 | 4835 | 91 | 0 | 232427 | 219855 | 12869 | 0 | 664 | 477 | 0 | 233865 |
| 3B | 50672 | 18443 | 0 | 4015 | 241 | 0 | 73371 | 58238 | 16133 | 0 | 1905 | 1938 | 0 | 78214 |
| 3C | 24410 | 14426 | 0 | 0 | 0 | 0 | 38836 | 28054 | 12620 | 0 | 0 | 0 | 0 | 40674 |
| 3D | 0 | 13144 | 0 | 0 | 0 | 0 | 13144 | 0 | 11207 | 0 | 0 | 0 | 0 | 11207 |
| 3E | 0 | 52080 | 0 | 0 | 0 | 0 | 52080 | 0 | 44403 | 0 | 0 | 0 | 0 | 44403 |
| 4W | 550255 | 45023 | 0 | 0 | 455 | 0 | 595734 | 531607 | 60534 | 0 | 0 | 3982 | 0 | 596123 |
| 4X | 369528 | 33366 | 0 | 0 | 321 | 0 | 403215 | 371801 | 34601 | 0 | 0 | 1929 | 0 | 408331 |
| 4Y | 385245 | 0 | 0 | 0 | 0 | 0 | 385245 | 395308 | 0 | 0 | 0 | 0 | 0 | 395308 |
| 4Z | 649470 | 0 | 0 | 0 | 0 | 0 | 649470 | 633901 | 0 | 0 | 0 | 0 | 0 | 633901 |
| Area 5 | 38615 | 15684 | 0 | 0 | 206 | 0 | 54505 | 41993 | 11741 | 0 | 0 | 776 | 0 | 54510 |
| Noyes | 206953 | 16708 | 0 | 21208 | 38737 | 8736 | 292342 | 229553 | 6876 | 0 | 23569 | 40203 | 8736 | 308937 |
| Dall | 97566 | 8497 | 0 | 11607 | 20116 | 1527 | 139313 | 93005 | 12655 | 0 | 8802 | 23001 | 1527 | 138990 |
| Cordova | 2373 | 488 | 0 | 2110 | 4697 | 0 | 9667 | 1571 | 0 | 0 | 5017 | 3020 | 0 | 9608 |
| Sumner | 41327 | 27127 | 20565 | 26581 | 56432 | 0 | 172033 | 59240 | 9216 | 20293 | 23457 | 59556 | 0 | 171762 |
| U-Clar | 23573 | 18469 | 10482 | 12812 | 28570 | 0 | 93907 | 34208 | 6606 | 9037 | 11804 | 31669 | 0 | 93324 |
| M-Clar | 107 | 215 | 0 | 164 | 898 | 0 | 1384 | 359 | 0 | 0 | 1180 | 0 | 0 | 1539 |
| L-Clar | 45943 | 22180 | 0 | 41576 | 43853 | 0 | 153552 | 30253 | 3203 | 0 | 28923 | 27781 | 0 | 90160 |
| Revilla | 13109 | 3609 | 0 | 17988 | 15736 | 0 | 50442 | 0 | 0 | 0 | 0 | 43433 | 0 | 43433 |
| Union | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tree | 58768 | 84212 | 0 | 21526 | 8457 | 0 | 172963 | 95854 | 46411 | 0 | 6327 | 23509 | 0 | 172101 |
| Term101 | 0 | 0 | 0 | 18261 | 0 | 0 | 18261 | 0 | 0 | 0 | 18260 | 0 | 0 | 18260 |
| Term103 | 0 | 0 | 0 | 0 | 16596 | 0 | 16596 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dist105 | 218 | 126 | 486 | 474 | 912 | 0 | 2216 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Term108 | 0 | 0 | 1049 | 0 | 0 | 0 | 1049 | 0 | 0 | 551 | 0 | 0 | 0 | 551 |
| Total Catch | 2858537 | 392887 | 32583 | 185668 | 236363 | 66377 | 3772414 | 2900361 | 296625 | 29881 | 130608 | 261615 | 68063 | 3687153 |
| Escapement | 2479035 | 448416 | 184747 | 100792 | 269497 | 0 | 3482487 | 2354163 | 398142 | 184747 | 120848 | 396140 | 0 | 3454040 |
| Total Run | 5337572 | 841303 | 217330 | 286460 | 505860 | 66377 | 7188524 | 5254524 | 694767 | 214628 | 251456 | 657755 | 68063 | 7073130 |
| Expl Rate | 53.56 | 46.7 | 14.99 | 64.81 | 46.72 | 0 | 51.55 | 55.2 | 42.7 | 13.9 | 51.9 | 39.8 | 0.0 | 51.2 |

**Appendix D.5 1986 Sockeye catch by stock.**

| | Revised Analysis (Available Scale Data) | | | | | | | Gazey and English 2000 (Available Scale Data) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Fishery** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** |
| Langara | 24315 | 2853 | 0 | 1697 | 37 | 4764 | 33666 | 22577 | 3915 | 0 | 659 | 225 | 4742 | 32118 |
| 1Troll | 14481 | 828 | 0 | 549 | 26 | 5537 | 21421 | 13551 | 1081 | 0 | 1184 | 46 | 5559 | 21421 |
| 3A | 42485 | 5590 | 0 | 2595 | 32 | 0 | 50703 | 39167 | 8057 | 0 | 385 | 295 | 0 | 47904 |
| 3B | 39436 | 44848 | 0 | 6530 | 280 | 0 | 91095 | 41071 | 45505 | 0 | 3796 | 2291 | 0 | 92664 |
| 3C | 11615 | 16273 | 0 | 0 | 0 | 0 | 27888 | 12097 | 16512 | 0 | 0 | 0 | 0 | 28608 |
| 3D | 0 | 14271 | 0 | 0 | 0 | 0 | 14271 | 0 | 14220 | 0 | 0 | 0 | 0 | 14220 |
| 3E | 0 | 12521 | 0 | 0 | 0 | 0 | 12521 | 0 | 12477 | 0 | 0 | 0 | 0 | 12477 |
| 4W | 54652 | 8384 | 0 | 0 | 87 | 0 | 63123 | 48032 | 13832 | 0 | 0 | 712 | 0 | 62576 |
| 4X | 88286 | 5816 | 0 | 0 | 93 | 0 | 94195 | 85846 | 7859 | 0 | 0 | 572 | 0 | 94277 |
| 4Y | 116651 | 0 | 0 | 0 | 0 | 0 | 116651 | 117068 | 0 | 0 | 0 | 0 | 0 | 117068 |
| 4Z | 186636 | 0 | 0 | 0 | 0 | 0 | 186636 | 186271 | 0 | 0 | 0 | 0 | 0 | 186271 |
| Area 5 | 23349 | 7544 | 0 | 0 | 223 | 0 | 31116 | 24191 | 6283 | 0 | 0 | 517 | 0 | 30991 |
| Noyes | 115591 | 57974 | 0 | 18741 | 30963 | 11265 | 234534 | 119005 | 58769 | 0 | 18321 | 33605 | 11265 | 240965 |
| Dall | 105579 | 52327 | 0 | 17155 | 28330 | 6742 | 210134 | 105622 | 52340 | 0 | 14486 | 30998 | 6742 | 210188 |
| Cordova | 1265 | 514 | 0 | 1212 | 3168 | 0 | 6158 | 1157 | 328 | 0 | 3703 | 546 | 0 | 5734 |
| Sumner | 8908 | 16481 | 1863 | 20767 | 37174 | 0 | 85193 | 16265 | 8895 | 1778 | 15745 | 42193 | 0 | 84876 |
| U-Clar | 6343 | 11830 | 832 | 17009 | 25913 | 0 | 61926 | 12443 | 5113 | 789 | 10868 | 31800 | 0 | 61013 |
| M-Clar | 276 | 466 | 0 | 607 | 1437 | 0 | 2786 | 275 | 286 | 0 | 1123 | 910 | 0 | 2594 |
| L-Clar | 10309 | 20148 | 0 | 30002 | 26643 | 0 | 87101 | 5501 | 5992 | 0 | 15804 | 21330 | 0 | 48627 |
| Revilla | 4253 | 12541 | 0 | 14405 | 11336 | 0 | 42535 | 0 | 0 | 0 | 0 | 38627 | 0 | 38627 |
| Union | 0 | 0 | 0 | 0 | 1276 | 0 | 1276 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tree | 24568 | 108303 | 0 | 10146 | 2625 | 0 | 145642 | 24499 | 107505 | 0 | 2834 | 9808 | 0 | 144646 |
| Term101 | 0 | 0 | 0 | 11537 | 0 | 0 | 11537 | 0 | 0 | 0 | 11536 | 0 | 0 | 11536 |
| Term103 | 0 | 0 | 0 | 0 | 7530 | 0 | 7530 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dist105 | 57 | 68 | 50 | 62 | 198 | 0 | 435 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Term108 | 0 | 0 | 4143 | 0 | 0 | 0 | 4143 | 0 | 0 | 3945 | 0 | 0 | 0 | 3945 |
| Total Catch | 879056 | 399582 | 6888 | 153014 | 177369 | 28308 | 1644217 | 874639 | 368971 | 6512 | 100445 | 214473 | 28308 | 1593348 |
| Escapement | 963709 | 259299 | 69036 | 94581 | 209798 | 0 | 1596423 | 840759 | 236251 | 69036 | 108217 | 339249 | 0 | 1593512 |
| Total Run | 1842765 | 658881 | 75924 | 247595 | 387167 | 28308 | 3212332 | 1715398 | 605222 | 75548 | 208662 | 553722 | 28308 | 3158552 |
| Expl Rate | 47.7 | 60.65 | 9.07 | 61.8 | 45.81 | 0 | 50.3 | 51.0 | 61.0 | 8.6 | 48.1 | 38.7 | 0.0 | 49.6 |

**Appendix D.6 1987 Sockeye catch by stock.**

| | Revised Analysis (Available Scale Data) | | | | | | | Gazey and English 2000 (Available Scale Data) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Fishery** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** |
| Langara | 21375 | 2553 | 0 | 2306 | 12 | 8589 | 34834 | 23594 | 2598 | 0 | 952 | 184 | 7507 | 34835 |
| 1Troll | 26886 | 1909 | 0 | 1864 | 13 | 14788 | 45461 | 26874 | 1552 | 0 | 1049 | 116 | 15870 | 45461 |
| 3A | 32792 | 1929 | 0 | 1853 | 8 | 0 | 36582 | 35544 | 3264 | 0 | 451 | 295 | 0 | 39554 |
| 3B | 87587 | 50117 | 0 | 17644 | 190 | 0 | 155538 | 92561 | 53911 | 0 | 3220 | 6110 | 0 | 155802 |
| 3C | 21996 | 29569 | 0 | 0 | 0 | 0 | 51565 | 23245 | 31807 | 0 | 0 | 0 | 0 | 55052 |
| 3D | 0 | 32115 | 0 | 0 | 0 | 0 | 32115 | 0 | 26659 | 0 | 0 | 0 | 0 | 26659 |
| 3E | 0 | 21356 | 0 | 0 | 0 | 0 | 21356 | 0 | 17728 | 0 | 0 | 0 | 0 | 17728 |
| 4W | 87001 | 5963 | 0 | 0 | 41 | 0 | 93005 | 80030 | 7866 | 0 | 0 | 1857 | 0 | 89753 |
| 4X | 89854 | 4346 | 0 | 0 | 32 | 0 | 94232 | 88588 | 4432 | 0 | 0 | 1238 | 0 | 94258 |
| 4Y | 126586 | 0 | 0 | 0 | 0 | 0 | 126586 | 128276 | 0 | 0 | 0 | 0 | 0 | 128276 |
| 4Z | 202857 | 0 | 0 | 0 | 0 | 0 | 202857 | 201866 | 0 | 0 | 0 | 0 | 0 | 201866 |
| Area 5 | 27710 | 11888 | 0 | 0 | 86 | 0 | 39684 | 32037 | 6482 | 0 | 0 | 862 | 0 | 39381 |
| Noyes | 34776 | 20620 | 0 | 27077 | 9984 | 0 | 92458 | 34781 | 20620 | 0 | 6511 | 30557 | 0 | 92469 |
| Dall | 29646 | 17257 | 0 | 23469 | 8150 | 0 | 78522 | 29645 | 17257 | 0 | 6842 | 24776 | 0 | 78520 |
| Cordova | 0 | 31 | 0 | 740 | 661 | 0 | 1432 | 0 | 0 | 0 | 1401 | 0 | 0 | 1401 |
| Sumner | 3800 | 8708 | 1574 | 45214 | 19867 | 0 | 79163 | 8107 | 4400 | 1572 | 9782 | 55292 | 0 | 79153 |
| U-Clar | 3780 | 4945 | 806 | 33958 | 13773 | 0 | 57261 | 5757 | 2957 | 801 | 7070 | 40652 | 0 | 57237 |
| M-Clar | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| L-Clar | 9106 | 19407 | 0 | 28264 | 7037 | 0 | 63813 | 1212 | 3291 | 0 | 4952 | 7510 | 0 | 16965 |
| Revilla | 3169 | 12393 | 0 | 30043 | 5130 | 0 | 50736 | 0 | 0 | 0 | 0 | 43049 | 0 | 43049 |
| Union | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tree | 15460 | 66943 | 0 | 20363 | 4652 | 0 | 107418 | 15460 | 66300 | 0 | 4727 | 20316 | 0 | 106803 |
| Term101 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Term103 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dist105 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Term108 | 0 | 0 | 1619 | 0 | 0 | 0 | 1619 | 0 | 0 | 1616 | 0 | 0 | 0 | 1616 |
| Total Catch | 824382 | 312048 | 3998 | 232796 | 69637 | 23377 | 1466238 | 827577 | 271126 | 3990 | 46955 | 232816 | 23377 | 1405841 |
| Escapement | 1576061 | 250819 | 39264 | 187173 | 86485 | 0 | 2139802 | 1435977 | 219207 | 39264 | 137575 | 525444 | 0 | 2357467 |
| Total Run | 2400443 | 562867 | 43262 | 419969 | 156122 | 23377 | 3582663 | 2263554 | 490333 | 43254 | 184530 | 758260 | 23377 | 3739931 |
| Expl Rate | 34.34 | 55.44 | 9.24 | 55.43 | 44.6 | 0 | 40.27 | 36.6 | 55.3 | 9.2 | 25.5 | 30.7 | 0.0 | 37.0 |

**Appendix D.7 1988 Sockeye catch by stock.**

| | Revised Analysis (Available Scale Data) | | | | | | | Gazey and English 2000 (Available Scale Data) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Fishery** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** |
| Langara | 37223 | 941 | 0 | 645 | 11 | 2825 | 41645 | 37617 | 982 | 0 | 136 | 89 | 2817 | 41641 |
| 1Troll | 42822 | 987 | 0 | 466 | 15 | 7599 | 51889 | 42668 | 1404 | 0 | 160 | 66 | 7607 | 51905 |
| 3A | 165463 | 5602 | 0 | 2091 | 42 | 0 | 173199 | 165413 | 5887 | 0 | 353 | 398 | 0 | 172051 |
| 3B | 80541 | 19429 | 0 | 3402 | 180 | 0 | 103552 | 82666 | 18874 | 0 | 699 | 1064 | 0 | 103304 |
| 3C | 8246 | 5026 | 0 | 0 | 0 | 0 | 13272 | 8464 | 4883 | 0 | 0 | 0 | 0 | 13346 |
| 3D | 0 | 13502 | 0 | 0 | 0 | 0 | 13502 | 0 | 14372 | 0 | 0 | 0 | 0 | 14372 |
| 3E | 0 | 171 | 0 | 0 | 0 | 0 | 171 | 0 | 182 | 0 | 0 | 0 | 0 | 182 |
| 4W | 194233 | 10344 | 0 | 0 | 129 | 0 | 204706 | 183858 | 21799 | 0 | 0 | 1370 | 0 | 207027 |
| 4X | 223245 | 7536 | 0 | 0 | 103 | 0 | 230884 | 214493 | 10369 | 0 | 0 | 928 | 0 | 225790 |
| 4Y | 389634 | 0 | 0 | 0 | 0 | 0 | 389634 | 392503 | 0 | 0 | 0 | 0 | 0 | 392503 |
| 4Z | 687286 | 0 | 0 | 0 | 0 | 0 | 687286 | 679310 | 0 | 0 | 0 | 0 | 0 | 679310 |
| Area 5 | 34562 | 5635 | 0 | 0 | 120 | 0 | 40317 | 33908 | 5648 | 0 | 0 | 759 | 0 | 40315 |
| Noyes | 300847 | 21951 | 0 | 24076 | 40620 | 0 | 387495 | 301374 | 18111 | 0 | 16282 | 48513 | 0 | 384280 |
| Dall | 150841 | 13597 | 0 | 14588 | 24763 | 0 | 203789 | 150816 | 11808 | 0 | 9622 | 29730 | 0 | 201976 |
| Cordova | 878 | 243 | 0 | 112 | 454 | 0 | 1687 | 878 | 0 | 0 | 566 | 0 | 0 | 1444 |
| Sumner | 3005 | 2922 | 1189 | 17240 | 32981 | 0 | 57337 | 5097 | 831 | 1189 | 9082 | 41138 | 0 | 57337 |
| U-Clar | 2143 | 1721 | 674 | 10213 | 20439 | 0 | 35191 | 3468 | 397 | 674 | 5709 | 24944 | 0 | 35192 |
| M-Clar | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| L-Clar | 9506 | 17265 | 0 | 9530 | 10308 | 0 | 46609 | 5256 | 5057 | 0 | 4124 | 4900 | 0 | 19337 |
| Revilla | 6639 | 11196 | 0 | 6948 | 5685 | 0 | 30468 | 0 | 0 | 0 | 0 | 25025 | 0 | 25025 |
| Union | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tree | 28313 | 72968 | 0 | 9978 | 4827 | 0 | 116086 | 28297 | 72429 | 0 | 2865 | 11939 | 0 | 115530 |
| Term101 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Term103 | 0 | 0 | 0 | 0 | 673 | 0 | 673 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dist105 | 32 | 81 | 18 | 49 | 74 | 0 | 255 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Term108 | 0 | 0 | 1095 | 0 | 0 | 0 | 1095 | 0 | 0 | 1095 | 0 | 0 | 0 | 1095 |
| Total Catch | 2365459 | 211118 | 2976 | 99340 | 141424 | 10424 | 2830742 | 2336086 | 193032 | 2958 | 49598 | 190863 | 10424 | 2782962 |
| Escapement | 1637238 | 190022 | 41915 | 67486 | 162174 | 0 | 2098835 | 1526435 | 163263 | 41915 | 73048 | 230367 | 0 | 2035028 |
| Total Run | 4002697 | 401140 | 44891 | 166826 | 303598 | 10424 | 4919153 | 3862521 | 356295 | 44873 | 122646 | 421230 | 10424 | 4807566 |
| Expl Rate | 59.1 | 52.63 | 6.63 | 59.55 | 46.58 | 0 | 57.33 | 60.5 | 54.2 | 6.6 | 40.4 | 45.3 | 0.0 | 57.7 |

**Appendix D.8 1989 Sockeye catch by stock.**

| | Revised Analysis (Available Scale Data) | | | | | | | Gazey and English 2000 (Available Scale Data) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Fishery** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** |
| Langara | 9633 | 1108 | 0 | 2253 | 167 | 73786 | 86947 | 8906 | 687 | 0 | 1259 | 366 | 75729 | 86947 |
| 1Troll | 15998 | 1687 | 0 | 816 | 56 | 94954 | 113510 | 18506 | 1206 | 0 | 600 | 185 | 93011 | 113508 |
| 3A | 53795 | 4160 | 0 | 2333 | 104 | 0 | 60393 | 62235 | 4969 | 0 | 1715 | 644 | 0 | 69563 |
| 3B | 118511 | 63753 | 0 | 11971 | 1734 | 0 | 195968 | 129945 | 49112 | 0 | 9887 | 12628 | 0 | 201573 |
| 3C | 70964 | 76780 | 0 | 0 | 0 | 0 | 147744 | 77811 | 59148 | 0 | 0 | 0 | 0 | 136958 |
| 3D | 0 | 24599 | 0 | 0 | 0 | 0 | 24599 | 0 | 21163 | 0 | 0 | 0 | 0 | 21163 |
| 3E | 0 | 13830 | 0 | 0 | 0 | 0 | 13830 | 0 | 11899 | 0 | 0 | 0 | 0 | 11899 |
| 4W | 106507 | 7093 | 0 | 0 | 357 | 0 | 113958 | 98571 | 17395 | 0 | 0 | 2879 | 0 | 118845 |
| 4X | 86947 | 5565 | 0 | 0 | 263 | 0 | 92776 | 87151 | 5865 | 0 | 0 | 1362 | 0 | 94378 |
| 4Y | 143657 | 0 | 0 | 0 | 0 | 0 | 143657 | 145160 | 0 | 0 | 0 | 0 | 0 | 145160 |
| 4Z | 272008 | 0 | 0 | 0 | 0 | 0 | 272008 | 264016 | 0 | 0 | 0 | 0 | 0 | 264016 |
| Area 5 | 16358 | 5388 | 0 | 0 | 489 | 0 | 22235 | 18364 | 2985 | 0 | 0 | 890 | 0 | 22239 |
| Noyes | 122595 | 33093 | 0 | 8282 | 23751 | 137254 | 324976 | 130531 | 16156 | 0 | 11960 | 21331 | 137254 | 317232 |
| Dall | 90621 | 27633 | 0 | 6108 | 13492 | 53772 | 191626 | 83735 | 30106 | 0 | 5996 | 18002 | 53772 | 191611 |
| Cordova | 232 | 108 | 0 | 2633 | 5520 | 0 | 8492 | 301 | 38 | 0 | 3150 | 5002 | 0 | 8491 |
| Sumner | 22425 | 11587 | 4216 | 19285 | 50313 | 0 | 107827 | 26374 | 7520 | 4155 | 15185 | 54406 | 0 | 107640 |
| U-Clar | 18195 | 8888 | 2015 | 18019 | 41609 | 0 | 88726 | 22195 | 4777 | 1924 | 12997 | 46401 | 0 | 88294 |
| M-Clar | 701 | 345 | 0 | 810 | 2690 | 0 | 4545 | 1045 | 0 | 0 | 1614 | 1885 | 0 | 4544 |
| L-Clar | 68751 | 28673 | 0 | 16259 | 19817 | 0 | 133500 | 50426 | 9839 | 0 | 9747 | 15198 | 0 | 85210 |
| Revilla | 19118 | 36183 | 0 | 12945 | 12941 | 0 | 81188 | 0 | 0 | 0 | 0 | 78208 | 0 | 78208 |
| Union | 0 | 0 | 0 | 0 | 6947 | 0 | 6947 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tree | 33776 | 77290 | 0 | 13174 | 20653 | 0 | 144894 | 74265 | 36765 | 0 | 6370 | 27456 | 0 | 144856 |
| Term101 | 0 | 0 | 0 | 6733 | 0 | 0 | 6733 | 0 | 0 | 0 | 1497 | 0 | 0 | 1497 |
| Term103 | 0 | 0 | 0 | 0 | 12995 | 0 | 12995 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dist105 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Term108 | 0 | 0 | 10079 | 0 | 0 | 0 | 10079 | 0 | 0 | 11729 | 0 | 0 | 0 | 11729 |
| Total Catch | 1270793 | 427766 | 16310 | 121620 | 213898 | 359766 | 2410152 | 1299538 | 279632 | 17809 | 81979 | 286842 | 359766 | 2325566 |
| Escapement | 1362147 | 158920 | 75054 | 75908 | 225679 | 0 | 1897708 | 1260374 | 138606 | 75054 | 82210 | 262454 | 0 | 1818698 |
| Total Run | 2632940 | 586686 | 91364 | 197528 | 439577 | 359766 | 3948094 | 2559912 | 418238 | 92863 | 164189 | 549296 | 359766 | 3784498 |
| Expl Rate | 48.27 | 72.91 | 17.85 | 61.57 | 48.66 | 0 | 51.93 | 50.8 | 66.9 | 19.2 | 49.9 | 52.2 | 0.0 | 51.9 |

**Appendix D.9 1990 Sockeye catch by stock.**

| | Revised Analysis (Available Scale Data) | | | | | | | Gazey and English 2000 (Available Scale Data) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Fishery** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** |
| Langara | 22928 | 1770 | 0 | 1621 | 60 | 42269 | 68649 | 17984 | 1992 | 0 | 339 | 200 | 42036 | 62551 |
| 1Troll | 17863 | 651 | 0 | 842 | 360 | 7453 | 27169 | 17623 | 196 | 0 | 1617 | 33 | 7686 | 27155 |
| 3A | 41828 | 2870 | 0 | 1868 | 68 | 0 | 46634 | 41973 | 3300 | 0 | 626 | 209 | 0 | 46108 |
| 3B | 69030 | 30228 | 0 | 9018 | 1056 | 0 | 109332 | 72518 | 28371 | 0 | 4616 | 3575 | 0 | 109080 |
| 3C | 29638 | 21279 | 0 | 0 | 0 | 0 | 50917 | 31136 | 19972 | 0 | 0 | 0 | 0 | 51108 |
| 3D | 0 | 8253 | 0 | 0 | 0 | 0 | 8253 | 0 | 8058 | 0 | 0 | 0 | 0 | 8058 |
| 3E | 0 | 1529 | 0 | 0 | 0 | 0 | 1529 | 0 | 1493 | 0 | 0 | 0 | 0 | 1493 |
| 4W | 145354 | 5135 | 0 | 0 | 355 | 0 | 150843 | 132223 | 10679 | 0 | 0 | 1359 | 0 | 144261 |
| 4X | 97379 | 2201 | 0 | 0 | 140 | 0 | 99720 | 96306 | 3651 | 0 | 0 | 432 | 0 | 100389 |
| 4Y | 259054 | 0 | 0 | 0 | 0 | 0 | 259054 | 268252 | 0 | 0 | 0 | 0 | 0 | 268252 |
| 4Z | 318896 | 0 | 0 | 0 | 0 | 0 | 318896 | 309543 | 0 | 0 | 0 | 0 | 0 | 309543 |
| Area 5 | 44534 | 6926 | 0 | 0 | 496 | 0 | 51956 | 46206 | 4384 | 0 | 0 | 739 | 0 | 51329 |
| Noyes | 199147 | 28951 | 0 | 21545 | 43312 | 181105 | 474060 | 205486 | 28951 | 0 | 34447 | 34398 | 181105 | 484387 |
| Dall | 147901 | 30862 | 0 | 19630 | 35015 | 89331 | 322739 | 147901 | 30862 | 0 | 22081 | 32563 | 89331 | 322738 |
| Cordova | 654 | 95 | 0 | 2764 | 5498 | 0 | 9010 | 703 | 46 | 0 | 3406 | 4855 | 0 | 9010 |
| Sumner | 24628 | 16102 | 2255 | 25630 | 36265 | 0 | 104881 | 24592 | 15726 | 2056 | 14675 | 47155 | 0 | 104204 |
| U-Clar | 20314 | 8296 | 1671 | 19808 | 32027 | 0 | 82117 | 20188 | 7458 | 1228 | 13306 | 38520 | 0 | 80700 |
| M-Clar | 1123 | 130 | 0 | 544 | 3491 | 0 | 5289 | 1254 | 0 | 0 | 3601 | 434 | 0 | 5289 |
| L-Clar | 31969 | 34700 | 0 | 33195 | 30587 | 0 | 130451 | 22363 | 15257 | 0 | 19019 | 20030 | 0 | 76669 |
| Revilla | 7334 | 8231 | 0 | 9103 | 6662 | 0 | 31330 | 0 | 0 | 0 | 0 | 25194 | 0 | 25194 |
| Union | 0 | 0 | 0 | 0 | 1299 | 0 | 1299 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tree | 25508 | 46095 | 0 | 7847 | 6207 | 0 | 85656 | 25397 | 46087 | 0 | 6183 | 7849 | 0 | 85516 |
| Term101 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Term103 | 0 | 0 | 0 | 0 | 10340 | 0 | 10340 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dist105 | 7 | 1 | 7 | 4 | 48 | 0 | 66 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Term108 | 0 | 0 | 11554 | 0 | 0 | 0 | 11554 | 0 | 0 | 11021 | 0 | 0 | 0 | 11021 |
| Total Catch | 1505089 | 254305 | 15487 | 153418 | 213287 | 320158 | 2461744 | 1481647 | 226483 | 14306 | 123917 | 217546 | 320158 | 2384056 |
| Escapement | 1216884 | 205318 | 57386 | 112974 | 231456 | 0 | 1824018 | 1145020 | 178548 | 57386 | 120058 | 351330 | 0 | 1852342 |
| Total Run | 2721973 | 459623 | 72873 | 266392 | 444743 | 320158 | 3965604 | 2626667 | 405031 | 71692 | 243975 | 568876 | 320158 | 3916240 |
| Expl Rate | 55.29 | 55.33 | 21.25 | 57.59 | 47.96 | 0 | 54 | 56.4 | 55.9 | 20.0 | 50.8 | 38.2 | 0.0 | 52.7 |

**Appendix D.10 1991 Sockeye catch by stock.**

| | Revised Analysis (Available Scale Data) | | | | | | | Gazey and English 2000 (Available Scale Data) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Fishery** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** |
| Langara | 22914 | 2128 | 0 | 1723 | 15 | 32382 | 59163 | 18436 | 5009 | 0 | 824 | 372 | 32394 | 57035 |
| 1Troll | 28394 | 978 | 0 | 906 | 186 | 1827 | 32291 | 27949 | 1305 | 0 | 1192 | 31 | 1815 | 32292 |
| 3A | 264614 | 24606 | 0 | 8368 | 67 | 0 | 297655 | 247753 | 35680 | 0 | 3048 | 1396 | 0 | 287877 |
| 3B | 269012 | 108192 | 0 | 13619 | 355 | 0 | 391177 | 235070 | 135632 | 0 | 8097 | 9553 | 0 | 388352 |
| 3C | 38210 | 60004 | 0 | 0 | 0 | 0 | 98214 | 33389 | 75222 | 0 | 0 | 0 | 0 | 108611 |
| 3D | 0 | 54831 | 0 | 0 | 0 | 0 | 54831 | 0 | 53722 | 0 | 0 | 0 | 0 | 53722 |
| 3E | 0 | 46090 | 0 | 0 | 0 | 0 | 46090 | 0 | 45157 | 0 | 0 | 0 | 0 | 45157 |
| 4W | 192809 | 21856 | 0 | 0 | 143 | 0 | 214807 | 171941 | 40365 | 0 | 0 | 2796 | 0 | 215102 |
| 4X | 126601 | 10026 | 0 | 0 | 72 | 0 | 136699 | 123055 | 12610 | 0 | 0 | 1038 | 0 | 136703 |
| 4Y | 277903 | 0 | 0 | 0 | 0 | 0 | 277903 | 285167 | 0 | 0 | 0 | 0 | 0 | 285167 |
| 4Z | 361931 | 0 | 0 | 0 | 0 | 0 | 361931 | 351895 | 0 | 0 | 0 | 0 | 0 | 351895 |
| Area 5 | 29232 | 16334 | 0 | 0 | 92 | 0 | 45658 | 34113 | 10663 | 0 | 0 | 730 | 0 | 45506 |
| Noyes | 284815 | 49491 | 0 | 46887 | 47725 | 39336 | 468254 | 287970 | 50110 | 0 | 51514 | 47654 | 39336 | 476584 |
| Dall | 241620 | 46914 | 0 | 36624 | 31844 | 24554 | 381556 | 240792 | 46912 | 0 | 24852 | 43614 | 24554 | 380724 |
| Cordova | 322 | 114 | 0 | 2422 | 2208 | 0 | 5066 | 362 | 67 | 0 | 1823 | 2807 | 0 | 5059 |
| Sumner | 7222 | 22766 | 12573 | 22722 | 23917 | 0 | 89201 | 6883 | 20697 | 12248 | 12519 | 34108 | 0 | 86455 |
| U-Clar | 5011 | 13383 | 5288 | 15882 | 16768 | 0 | 56331 | 4752 | 12242 | 4903 | 8000 | 24644 | 0 | 54541 |
| M-Clar | 148 | 22 | 0 | 195 | 331 | 0 | 696 | 170 | 0 | 0 | 381 | 146 | 0 | 697 |
| L-Clar | 17778 | 24669 | 0 | 40302 | 19658 | 0 | 102407 | 10155 | 12098 | 0 | 12506 | 24094 | 0 | 58853 |
| Revilla | 6975 | 10546 | 0 | 15585 | 6353 | 0 | 39459 | 0 | 0 | 0 | 0 | 36595 | 0 | 36595 |
| Union | 0 | 0 | 0 | 0 | 2565 | 0 | 2565 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tree | 52929 | 64361 | 0 | 11431 | 2801 | 0 | 131522 | 52902 | 64760 | 0 | 4642 | 8957 | 0 | 131261 |
| Term101 | 0 | 0 | 0 | 6203 | 0 | 0 | 6203 | 0 | 0 | 0 | 7954 | 0 | 0 | 7954 |
| Term103 | 0 | 0 | 0 | 0 | 13796 | 0 | 13796 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dist105 | 118 | 97 | 356 | 416 | 910 | 0 | 1898 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Term108 | 0 | 0 | 17966 | 0 | 0 | 0 | 17966 | 0 | 0 | 24340 | 0 | 0 | 0 | 24340 |
| Total Catch | 2228556 | 577406 | 36184 | 223286 | 169807 | 98099 | 3333338 | 2132754 | 622252 | 41490 | 137351 | 238536 | 98099 | 3270483 |
| Escapement | 1530996 | 381588 | 120152 | 166267 | 183311 | 0 | 2382314 | 1371650 | 345431 | 120152 | 187838 | 564729 | 0 | 2589800 |
| Total Run | 3759552 | 958994 | 156336 | 389553 | 353118 | 98099 | 5617553 | 3504404 | 967683 | 161642 | 325189 | 803265 | 98099 | 5762184 |
| Expl Rate | 59.28 | 60.21 | 23.14 | 57.32 | 48.09 | 0 | 57.59 | 60.9 | 64.3 | 25.7 | 42.2 | 29.7 | 0.0 | 55.1 |

**Appendix D.11 1992 Sockeye catch by stock.**

| | Revised Analysis (Available Scale Data) | | | | | | | Gazey and English 2000 (Available Scale Data) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Fishery** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** |
| Langara | 32140 | 11204 | 0 | 2159 | 64 | 40836 | 86402 | 27940 | 12410 | 0 | 1187 | 353 | 44475 | 86365 |
| 1Troll | 8665 | 1346 | 0 | 224 | 122 | 5999 | 16356 | 8314 | 1764 | 0 | 974 | 29 | 5180 | 16261 |
| 3A | 159018 | 32364 | 0 | 6105 | 207 | 0 | 197694 | 161461 | 33334 | 0 | 1197 | 1055 | 0 | 197047 |
| 3B | 116236 | 154641 | 0 | 13649 | 1172 | 0 | 285697 | 114352 | 153669 | 0 | 5036 | 6920 | 0 | 279977 |
| 3C | 32724 | 100464 | 0 | 0 | 0 | 0 | 133188 | 32194 | 99832 | 0 | 0 | 0 | 0 | 132026 |
| 3D | 0 | 71369 | 0 | 0 | 0 | 0 | 71369 | 0 | 72363 | 0 | 0 | 0 | 0 | 72363 |
| 3E | 0 | 304326 | 0 | 0 | 0 | 0 | 304326 | 0 | 308562 | 0 | 0 | 0 | 0 | 308562 |
| 4W | 408004 | 89654 | 0 | 0 | 1117 | 0 | 498776 | 363387 | 119549 | 0 | 0 | 7183 | 0 | 490119 |
| 4X | 198312 | 37942 | 0 | 0 | 535 | 0 | 236790 | 189993 | 42506 | 0 | 0 | 2081 | 0 | 234580 |
| 4Y | 471083 | 0 | 0 | 0 | 0 | 0 | 471083 | 463175 | 0 | 0 | 0 | 0 | 0 | 463175 |
| 4Z | 448352 | 0 | 0 | 0 | 0 | 0 | 448352 | 452178 | 0 | 0 | 0 | 0 | 0 | 452178 |
| Area 5 | 33790 | 37466 | 0 | 0 | 462 | 0 | 71718 | 40068 | 30473 | 0 | 0 | 1181 | 0 | 71722 |
| Noyes | 367097 | 98624 | 0 | 32098 | 72966 | 42930 | 613716 | 365933 | 98464 | 0 | 30400 | 74995 | 42930 | 612722 |
| Dall | 266993 | 68330 | 0 | 23603 | 60005 | 39579 | 458510 | 265021 | 68025 | 0 | 30861 | 52747 | 39579 | 456233 |
| Cordova | 215 | 128 | 0 | 537 | 2154 | 0 | 3034 | 170 | 173 | 0 | 2196 | 495 | 0 | 3034 |
| Sumner | 19692 | 14534 | 25574 | 24027 | 62692 | 0 | 146519 | 18524 | 14525 | 23064 | 12991 | 73703 | 0 | 142807 |
| U-Clar | 7606 | 5308 | 9286 | 9600 | 24640 | 0 | 56440 | 7395 | 5308 | 7633 | 5442 | 28788 | 0 | 54566 |
| M-Clar | 278 | 334 | 0 | 708 | 4418 | 0 | 5738 | 218 | 334 | 0 | 2555 | 2573 | 0 | 5680 |
| L-Clar | 14364 | 22145 | 0 | 25871 | 46840 | 0 | 109220 | 11053 | 6728 | 0 | 13820 | 20454 | 0 | 52055 |
| Revilla | 7276 | 10141 | 0 | 22014 | 29196 | 0 | 68627 | 0 | 0 | 0 | 0 | 62822 | 0 | 62822 |
| Union | 0 | 0 | 0 | 0 | 6506 | 0 | 6506 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tree | 26262 | 168223 | 0 | 31552 | 18464 | 0 | 244501 | 26095 | 168197 | 0 | 8236 | 41721 | 0 | 244249 |
| Term101 | 0 | 0 | 0 | 23000 | 0 | 0 | 23000 | 0 | 0 | 0 | 23001 | 0 | 0 | 23001 |
| Term103 | 0 | 0 | 0 | 0 | 1423 | 0 | 1423 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dist105 | 1 | 1 | 4 | 2 | 14 | 0 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Term108 | 0 | 0 | 52702 | 0 | 0 | 0 | 52702 | 0 | 0 | 52819 | 0 | 0 | 0 | 52819 |
| Total Catch | 2618108 | 1228544 | 87566 | 215151 | 332996 | 129344 | 4611709 | 2547472 | 1236216 | 83516 | 137897 | 377102 | 132164 | 4514368 |
| Escapement | 1581361 | 731540 | 154542 | 99828 | 405230 | 0 | 2972501 | 1547394 | 687209 | 154542 | 145867 | 687258 | 0 | 3222270 |
| Total Run | 4199469 | 1960084 | 242108 | 314979 | 738226 | 129344 | 7454865 | 4094866 | 1923425 | 238058 | 283764 | 1064360 | 132164 | 7604474 |
| Expl Rate | 62.34 | 62.68 | 36.17 | 68.31 | 45.11 | 0 | 60.13 | 62.2 | 64.3 | 35.1 | 48.6 | 35.4 | 0.0 | 57.6 |

**Appendix D.12 1993 Sockeye catch by stock.**

| | Revised Analysis (Available Scale Data) | | | | | | | Gazey and English 2000 (Available Scale Data) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Fishery** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** |
| Langara | 46497 | 20222 | 0 | 7196 | 248 | 146475 | 220637 | 35176 | 23904 | 0 | 1432 | 452 | 160436 | 221400 |
| 1Troll | 18986 | 4976 | 0 | 1475 | 966 | 10406 | 36809 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3A | 203423 | 40917 | 0 | 9637 | 176 | 0 | 254154 | 202251 | 65506 | 0 | 1950 | 603 | 0 | 270310 |
| 3B | 239789 | 314795 | 0 | 30327 | 2305 | 0 | 587216 | 149980 | 247157 | 0 | 7361 | 6004 | 0 | 410503 |
| 3C | 81639 | 144187 | 0 | 0 | 0 | 0 | 225826 | 51063 | 113207 | 0 | 0 | 0 | 0 | 164269 |
| 3D | 0 | 61540 | 0 | 0 | 0 | 0 | 61540 | 0 | 109881 | 0 | 0 | 0 | 0 | 109881 |
| 3E | 0 | 220942 | 0 | 0 | 0 | 0 | 220942 | 0 | 394495 | 0 | 0 | 0 | 0 | 394495 |
| 4W | 461266 | 118172 | 0 | 0 | 1061 | 0 | 580499 | 386188 | 191855 | 0 | 0 | 3522 | 0 | 581565 |
| 4X | 271591 | 64945 | 0 | 0 | 647 | 0 | 337182 | 234032 | 77647 | 0 | 0 | 1639 | 0 | 313318 |
| 4Y | 270510 | 0 | 0 | 0 | 0 | 0 | 270510 | 268430 | 0 | 0 | 0 | 0 | 0 | 268430 |
| 4Z | 495551 | 0 | 0 | 0 | 0 | 0 | 495551 | 509830 | 0 | 0 | 0 | 0 | 0 | 509830 |
| Area 5 | 21405 | 21212 | 0 | 0 | 237 | 0 | 42855 | 25851 | 15791 | 0 | 0 | 591 | 0 | 42233 |
| Noyes | 182015 | 76160 | 0 | 27053 | 63828 | 109921 | 458977 | 213064 | 76735 | 0 | 47188 | 51330 | 109921 | 498238 |
| Dall | 206494 | 106094 | 0 | 34055 | 67552 | 72084 | 486279 | 208312 | 105581 | 0 | 29734 | 70360 | 72084 | 486071 |
| Cordova | 617 | 529 | 0 | 486 | 7608 | 0 | 9240 | 461 | 622 | 0 | 7438 | 717 | 0 | 9238 |
| Sumner | 28639 | 14096 | 35277 | 16059 | 35461 | 0 | 129532 | 28410 | 14097 | 29734 | 15831 | 35625 | 0 | 123697 |
| U-Clar | 18110 | 8381 | 18567 | 10979 | 19822 | 0 | 75859 | 18110 | 8380 | 14408 | 8814 | 21930 | 0 | 71642 |
| M-Clar | 30 | 342 | 0 | 1646 | 5971 | 0 | 7989 | 30 | 342 | 0 | 3678 | 3903 | 0 | 7953 |
| L-Clar | 44397 | 38302 | 0 | 81601 | 130933 | 0 | 295234 | 47129 | 56041 | 0 | 43907 | 67368 | 0 | 214445 |
| Revilla | 13809 | 12548 | 0 | 27520 | 41974 | 0 | 95850 | 0 | 0 | 0 | 0 | 13218 | 0 | 13218 |
| Union | 0 | 0 | 0 | 0 | 43597 | 0 | 43597 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tree | 44579 | 307034 | 0 | 24014 | 18278 | 0 | 393905 | 44522 | 307011 | 0 | 16571 | 25541 | 0 | 393645 |
| Term101 | 0 | 0 | 0 | 150316 | 0 | 0 | 150316 | 0 | 0 | 0 | 99390 | 0 | 0 | 99390 |
| Term103 | 0 | 0 | 0 | 0 | 41425 | 0 | 41425 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dist105 | 4364 | 1494 | 5900 | 2639 | 19532 | 0 | 33928 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Term108 | 0 | 0 | 76864 | 0 | 0 | 0 | 76864 | 0 | 0 | 70301 | 0 | 0 | 0 | 70301 |
| Total Catch | 2653712 | 1576887 | 136608 | 425002 | 501620 | 338886 | 5632715 | 2422841 | 1808252 | 114443 | 283292 | 302804 | 342441 | 5274074 |
| Escapement | 2100087 | 573697 | 176100 | 79729 | 594720 | 0 | 3524333 | 1952256 | 584026 | 176100 | 242850 | 753124 | 0 | 3708356 |
| Total Run | 4753799 | 2150584 | 312708 | 504731 | 1096340 | 338886 | 8818162 | 4375097 | 2392278 | 290543 | 526142 | 1055928 | 342441 | 8639989 |
| Expl Rate | 55.82 | 73.32 | 43.69 | 84.2 | 45.75 | 0 | 60.03 | 55.4 | 75.6 | 39.4 | 53.8 | 28.7 | 0.0 | 57.1 |

**Appendix D.13 1994 Sockeye catch by stock.**

| | Revised Analysis (Available Scale Data) | | | | | | | Gazey and English 2000 (Available Scale Data) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Fishery** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** |
| Langara | 28243 | 9308 | 0 | 1633 | 38 | 74538 | 113759 | 9848 | 6903 | 0 | 634 | 83 | 96316 | 113784 |
| 1Troll | 19698 | 3304 | 0 | 457 | 112 | 8083 | 31655 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3A | 62548 | 7443 | 0 | 1335 | 36 | 0 | 71362 | 64338 | 8031 | 0 | 413 | 227 | 0 | 73009 |
| 3B | 86663 | 90843 | 0 | 6736 | 409 | 0 | 184650 | 76545 | 101788 | 0 | 1648 | 2256 | 0 | 182237 |
| 3C | 18922 | 32483 | 0 | 0 | 0 | 0 | 51405 | 16713 | 36396 | 0 | 0 | 0 | 0 | 53109 |
| 3D | 0 | 23831 | 0 | 0 | 0 | 0 | 23831 | 0 | 22690 | 0 | 0 | 0 | 0 | 22690 |
| 3E | 0 | 17238 | 0 | 0 | 0 | 0 | 17238 | 0 | 16413 | 0 | 0 | 0 | 0 | 16413 |
| 4W | 206211 | 30297 | 0 | 0 | 259 | 0 | 236767 | 193905 | 40977 | 0 | 0 | 1968 | 0 | 236850 |
| 4X | 95762 | 14096 | 0 | 0 | 239 | 0 | 110096 | 93822 | 14302 | 0 | 0 | 602 | 0 | 108726 |
| 4Y | 117765 | 0 | 0 | 0 | 0 | 0 | 117765 | 115086 | 0 | 0 | 0 | 0 | 0 | 115086 |
| 4Z | 186618 | 0 | 0 | 0 | 0 | 0 | 186618 | 190400 | 0 | 0 | 0 | 0 | 0 | 190400 |
| Area 5 | 19751 | 16545 | 0 | 0 | 108 | 0 | 36404 | 24933 | 10962 | 0 | 0 | 508 | 0 | 36403 |
| Noyes | 351075 | 83963 | 0 | 45627 | 97856 | 186569 | 765091 | 348280 | 84579 | 0 | 51709 | 94042 | 186569 | 765179 |
| Dall | 104710 | 38154 | 0 | 15854 | 28630 | 183697 | 371045 | 104506 | 38493 | 0 | 9249 | 35100 | 183697 | 371045 |
| Cordova | 805 | 368 | 0 | 1828 | 6969 | 0 | 9969 | 376 | 757 | 0 | 7071 | 1725 | 0 | 9929 |
| Sumner | 18796 | 13758 | 38001 | 25219 | 61532 | 0 | 157305 | 17329 | 13637 | 37064 | 19190 | 67512 | 0 | 154732 |
| U-Clar | 9104 | 4204 | 10302 | 9172 | 22411 | 0 | 55192 | 7587 | 3994 | 9792 | 7731 | 23800 | 0 | 52904 |
| M-Clar | 3394 | 149 | 0 | 531 | 2320 | 0 | 6395 | 2843 | 120 | 0 | 1416 | 1439 | 0 | 5818 |
| L-Clar | 40141 | 24713 | 0 | 17515 | 19511 | 0 | 101880 | 15544 | 16294 | 0 | 10170 | 18996 | 0 | 61004 |
| Revilla | 6032 | 5125 | 0 | 4606 | 4314 | 0 | 20078 | 0 | 0 | 0 | 0 | 15093 | 0 | 15093 |
| Union | 0 | 0 | 0 | 0 | 8914 | 0 | 8914 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tree | 9319 | 76941 | 0 | 10270 | 3746 | 0 | 100276 | 8991 | 75512 | 0 | 5855 | 9462 | 0 | 99820 |
| Term101 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 115 | 0 | 0 | 115 |
| Term103 | 0 | 0 | 0 | 0 | 5323 | 0 | 5323 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dist105 | 13 | 6 | 50 | 19 | 128 | 0 | 216 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Term108 | 0 | 0 | 97054 | 0 | 0 | 0 | 97054 | 0 | 0 | 98174 | 0 | 0 | 0 | 98174 |
| Total Catch | 1385570 | 492769 | 145406 | 140801 | 262854 | 452887 | 2880288 | 1291048 | 491847 | 145030 | 115200 | 272814 | 466582 | 2782520 |
| Escapement | 1334373 | 344369 | 127527 | 104960 | 305957 | 0 | 2217186 | 1205398 | 344647 | 127527 | 116929 | 372112 | 0 | 2166613 |
| Total Run | 2719943 | 837138 | 272933 | 245761 | 568811 | 452887 | 4644587 | 2496446 | 836494 | 272557 | 232129 | 644926 | 466582 | 4482552 |
| Expl Rate | 50.94 | 58.86 | 53.28 | 57.29 | 46.21 | 0 | 52.26 | 51.7 | 58.8 | 53.2 | 49.6 | 42.3 | 0.0 | 51.7 |

**Appendix D.14 1995 Sockeye catch by stock.**

| | Revised Analysis (Available Scale Data) | | | | | | | Gazey and English 2000 (Available Scale Data) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Fishery** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** |
| Langara | 86452 | 14871 | 0 | 1998 | 86 | 2290 | 105697 | 74481 | 24719 | 0 | 1147 | 738 | 3741 | 104826 |
| 1Troll | 43093 | 4394 | 0 | 547 | 529 | 1451 | 50014 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3A | 558200 | 48202 | 0 | 7442 | 253 | 0 | 614097 | 528915 | 62582 | 0 | 2876 | 1517 | 0 | 595890 |
| 3B | 371469 | 200464 | 0 | 9188 | 1003 | 0 | 582124 | 352432 | 221016 | 0 | 3958 | 6612 | 0 | 584018 |
| 3C | 89438 | 75480 | 0 | 0 | 0 | 0 | 164918 | 84855 | 83218 | 0 | 0 | 0 | 0 | 168073 |
| 3D | 0 | 26061 | 0 | 0 | 0 | 0 | 26061 | 0 | 27088 | 0 | 0 | 0 | 0 | 27088 |
| 3E | 0 | 84533 | 0 | 0 | 0 | 0 | 84533 | 0 | 87865 | 0 | 0 | 0 | 0 | 87865 |
| 4W | 535719 | 50979 | 0 | 0 | 731 | 0 | 587429 | 504891 | 81567 | 0 | 0 | 2926 | 0 | 589384 |
| 4X | 267799 | 27813 | 0 | 0 | 380 | 0 | 295991 | 257909 | 30843 | 0 | 0 | 1309 | 0 | 290061 |
| 4Y | 371517 | 0 | 0 | 0 | 0 | 0 | 371517 | 360521 | 0 | 0 | 0 | 0 | 0 | 360521 |
| 4Z | 424361 | 0 | 0 | 0 | 0 | 0 | 424361 | 412258 | 0 | 0 | 0 | 0 | 0 | 412258 |
| Area 5 | 31086 | 18027 | 0 | 0 | 182 | 0 | 49296 | 35718 | 13848 | 0 | 0 | 594 | 0 | 50160 |
| Noyes | 139293 | 49331 | 0 | 5898 | 29445 | 16682 | 240648 | 135573 | 50447 | 0 | 16983 | 20099 | 16682 | 239784 |
| Dall | 150758 | 58560 | 0 | 6426 | 33459 | 6261 | 255464 | 141813 | 58935 | 0 | 21467 | 18811 | 6261 | 247287 |
| Cordova | 184 | 95 | 0 | 294 | 2226 | 0 | 2798 | 138 | 140 | 0 | 1889 | 631 | 0 | 2798 |
| Sumner | 58855 | 15746 | 17411 | 9754 | 31639 | 0 | 133406 | 57641 | 15694 | 14557 | 12884 | 28314 | 0 | 129090 |
| U-Clar | 40817 | 7537 | 6961 | 5285 | 18208 | 0 | 78809 | 39330 | 7537 | 4103 | 7346 | 16145 | 0 | 74461 |
| M-Clar | 4492 | 1041 | 0 | 2050 | 15719 | 0 | 23301 | 3605 | 2692 | 0 | 11182 | 5800 | 0 | 23279 |
| L-Clar | 128428 | 56541 | 0 | 26280 | 59132 | 0 | 270381 | 98947 | 29779 | 0 | 25365 | 32236 | 0 | 186327 |
| Revilla | 22705 | 12486 | 0 | 6628 | 11397 | 0 | 53216 | 0 | 0 | 0 | 0 | 38927 | 0 | 38927 |
| Union | 0 | 0 | 0 | 0 | 7969 | 0 | 7969 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tree | 39633 | 111085 | 0 | 7228 | 5801 | 0 | 163747 | 38162 | 111223 | 0 | 4477 | 8396 | 0 | 162258 |
| Term101 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7432 | 0 | 0 | 7432 |
| Term103 | 0 | 0 | 0 | 0 | 7447 | 0 | 7447 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dist105 | 8817 | 1742 | 3306 | 1468 | 9104 | 0 | 24436 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Term108 | 0 | 0 | 76697 | 0 | 0 | 0 | 76697 | 0 | 0 | 76074 | 0 | 0 | 0 | 76074 |
| | | | | | | | | | | | | | | 4457861 |
| Total Catch | 3373116 | 864987 | 104375 | 90486 | 234709 | 26684 | 4694357 | 3127191 | 909192 | 94734 | 117005 | 183054 | 26684 | 4457860 |
| Escapement | 2236899 | 303743 | 142308 | 44052 | 234039 | 0 | 2961041 | 2063957 | 312290 | 142308 | 51629 | 162363 | 0 | 2732547 |
| Total Run | 5610015 | 1168730 | 246683 | 134538 | 468748 | 26684 | 7628714 | 5191148 | 1221482 | 237042 | 168634 | 345417 | 26684 | 7163723 |
| Expl Rate | 60.13 | 74.01 | 42.31 | 67.26 | 50.07 | 0 | 61.19 | 60.2 | 74.4 | 40.0 | 69.4 | 53.0 | 0.0 | 61.9 |

**Appendix E.1 Sockeye catch by stock 1982. Differences between the revised analysis and results presented in Gazey and English 2000.**

| | Difference* | | | | | | |
|---|---|---|---|---|---|---|---|
| **Fishery** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** |
| Langara | 1633 | 184 | 0 | 315 | -2167 | 35 | 0 |
| 1Troll | 155 | -45 | 0 | 13 | -88 | -35 | 0 |
| 3A | 39041 | -19245 | 0 | 2840 | -17939 | 0 | 4697 |
| 3B | 15502 | -9184 | 0 | -4049 | -10161 | 0 | -7890 |
| 3C | 759 | -1826 | 0 | 0 | 0 | 0 | -1068 |
| 3D | 0 | 5481 | 0 | 0 | 0 | 0 | 5481 |
| 3E | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4W | 91637 | -41450 | 0 | 0 | -16639 | 0 | 33547 |
| 4X | 6802 | -13477 | 0 | 0 | -174 | 0 | -6850 |
| 4Y | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4Z | 42637 | 0 | 0 | 0 | 0 | 0 | 42637 |
| Area 5 | -18123 | 20249 | 0 | 0 | 116 | 0 | 2242 |
| Noyes | 413 | 2141 | 0 | -1106 | 1442 | 0 | 2891 |
| Dall | 819 | -625 | 0 | 2825 | -2730 | 0 | 289 |
| Cordova | -11 | 52 | 0 | -231 | 463 | 0 | 272 |
| Sumner | -14271 | 14325 | 1407 | -5244 | 5254 | 0 | 1470 |
| U-Clar | -7234 | 7277 | 852 | -216 | 257 | 0 | 936 |
| M-Clar | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| L-Clar | 7659 | 17002 | 0 | 3478 | 16594 | 0 | 44732 |
| Revilla | 10473 | 4798 | 0 | 4720 | -14539 | 0 | 5451 |
| Union | 0 | 0 | 0 | 0 | 305 | 0 | 305 |
| Tree | -28275 | 28576 | 0 | 8353 | -8317 | 0 | 337 |
| Term101 | 0 | 0 | 0 | -163 | 0 | 0 | -163 |
| Term103 | 0 | 0 | 0 | 0 | 122 | 0 | 122 |
| Dist105 | 0 | 0 | 0 | 0 | 43 | 0 | 43 |
| Term108 | 0 | 0 | 381 | 0 | 0 | 0 | 381 |
| Total Catch | 149612 | 14232 | 2640 | 11535 | -48157 | 0 | 129863 |
| Escapement | 144508 | 32760 | 0 | -7229 | -4772 | 0 | 165267 |
| Total Run | 294120 | 46992 | 2640 | 4306 | -52929 | 0 | 295130 |
| Expl Rate | -0.9 | -1.6 | 1.4 | 6.7 | -3.5 | 0.0 | -0.9 |

* Differences are the revised analysis minus the comparable estimate from Gazey and English 2000.

**Appendix E.2 Sockeye catch by stock 1983. Differences between the revised analysis and results presented in Gazey and English 2000.**

| | Difference* | | | | | | |
|---|---|---|---|---|---|---|---|
| **Fishery** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** |
| Langara | 683 | -592 | 0 | 1079 | -386 | -785 | -1 |
| 1Troll | 137 | 7 | 0 | -244 | 68 | 32 | 0 |
| 3A | 10515 | -3790 | 0 | 3531 | -637 | 0 | 9619 |
| 3B | -9157 | 6620 | 0 | 6288 | -10822 | 0 | -7072 |
| 3C | -5895 | 5903 | 0 | 0 | 0 | 0 | 9 |
| 3D | 0 | 2542 | 0 | 0 | 0 | 0 | 2542 |
| 3E | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4W | 12748 | -10387 | 0 | 0 | -2568 | 0 | -207 |
| 4X | -973 | 372 | 0 | 0 | -326 | 0 | -927 |
| 4Y | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4Z | 2141 | 0 | 0 | 0 | 0 | 0 | 2141 |
| Area 5 | -1150 | 1447 | 0 | 0 | -293 | 0 | 3 |
| Noyes | -14135 | 10389 | 0 | -868 | -2720 | 0 | -7333 |
| Dall | 5347 | -5286 | 0 | 3516 | -3643 | 0 | -66 |
| Cordova | -188 | 133 | 0 | -207 | 262 | 0 | 0 |
| Sumner | -1619 | 1695 | 264 | 537 | -408 | 0 | 470 |
| U-Clar | -2003 | 2003 | 404 | 883 | -883 | 0 | 404 |
| M-Clar | -1260 | 1201 | 0 | -1117 | 1268 | 0 | 91 |
| L-Clar | 4437 | 14304 | 0 | 4673 | 6398 | 0 | 29812 |
| Revilla | 6836 | 3498 | 0 | 4009 | -11124 | 0 | 3218 |
| Union | 0 | 0 | 0 | 0 | 1239 | 0 | 1239 |
| Tree | -21506 | 21888 | 0 | 20755 | -20754 | 0 | 383 |
| Term101 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Term103 | 0 | 0 | 0 | 0 | 9308 | 0 | 9308 |
| Dist105 | 9 | 46 | 57 | 9 | 276 | 0 | 397 |
| Term108 | 0 | 0 | 149 | 0 | 0 | 0 | 149 |
| Total Catch | -15034 | 51990 | 874 | 42845 | -35745 | -753 | 44176 |
| Escapement | 102986 | 25872 | 0 | 0 | -48635 | 0 | 80223 |
| Total Run | 87952 | 77862 | 874 | 42845 | -84380 | -753 | 125153 |
| Expl Rate | -2.8 | 0.7 | 1.1 | 12.9 | 0.6 | 0.0 | -0.5 |

* Differences are the revised analysis minus the comparable estimate from Gazey and English 2000.

**Appendix E.3 Sockeye catch by stock 1984. Differences between the revised analysis and results presented in Gazey and English 2000.**

| | Difference* | | | | | | |
|---|---|---|---|---|---|---|---|
| **Fishery** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** |
| Langara | 4975 | 543 | 0 | 1098 | 11 | -3499 | 3127 |
| 1Troll | 1773 | 141 | 0 | 218 | 9 | -2141 | 1 |
| 3A | -3115 | -2375 | 0 | 3758 | -687 | 0 | -2419 |
| 3B | 592 | -266 | 0 | 2296 | -2099 | 0 | 522 |
| 3C | 292 | -261 | 0 | 0 | 0 | 0 | 31 |
| 3D | 0 | 3092 | 0 | 0 | 0 | 0 | 3092 |
| 3E | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4W | 18434 | -8162 | 0 | 0 | -2234 | 0 | 8038 |
| 4X | 13868 | -6590 | 0 | 0 | -2382 | 0 | 4896 |
| 4Y | 7168 | 0 | 0 | 0 | 0 | 0 | 7168 |
| 4Z | -1630 | 0 | 0 | 0 | 0 | 0 | -1630 |
| Area 5 | -332 | 920 | 0 | 0 | -522 | 0 | 66 |
| Noyes | -1372 | -23 | 0 | 8971 | -9696 | 0 | -2120 |
| Dall | 2 | -1 | 0 | 8270 | -8271 | 0 | 1 |
| Cordova | -68 | 70 | 0 | -670 | 669 | 0 | 1 |
| Sumner | 19 | 300 | 105 | 8173 | -7808 | 0 | 790 |
| U-Clar | 14 | 887 | 167 | 11516 | -11515 | 0 | 1069 |
| M-Clar | -419 | 419 | 0 | -473 | 475 | 0 | 2 |
| L-Clar | 9729 | 13730 | 0 | 27636 | -2073 | 0 | 49021 |
| Revilla | 6540 | 8229 | 0 | 16533 | -27195 | 0 | 4106 |
| Union | 0 | 0 | 0 | 0 | 1043 | 0 | 1043 |
| Tree | 65 | 1606 | 0 | 15078 | -15072 | 0 | 1678 |
| Term101 | 0 | 0 | 0 | 162 | 0 | 0 | 162 |
| Term103 | 0 | 0 | 0 | 0 | 2243 | 0 | 2243 |
| Dist105 | 1 | 3 | 11 | 8 | 39 | 0 | 62 |
| Term108 | 0 | 0 | 153 | 0 | 0 | 0 | 153 |
| Total Catch | 56534 | 12262 | 436 | 102572 | -85063 | -5640 | 81100 |
| Escapement | 91312 | 22097 | 0 | -2869 | -278422 | 0 | -167882 |
| Total Run | 147846 | 34359 | 436 | 99703 | -363485 | -5640 | -81142 |
| Expl Rate | -0.5 | -1.3 | 0.5 | 22.2 | 11.8 | 0.0 | 3.4 |

* Differences are the revised analysis minus the comparable estimate from Gazey and English 2000.

**Appendix E.4 Sockeye catch by stock 1985. Differences between the revised analysis and results presented in Gazey and English 2000.**

| | Difference* | | | | | | |
|---|---|---|---|---|---|---|---|
| **Fishery** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** |
| Langara | 9735 | -1118 | 0 | 1637 | -270 | -1273 | 8712 |
| 1Troll | 354 | -89 | 0 | 175 | -27 | -413 | 0 |
| 3A | -5102 | -121 | 0 | 4171 | -386 | 0 | -1438 |
| 3B | -7566 | 2310 | 0 | 2110 | -1697 | 0 | -4843 |
| 3C | -3644 | 1806 | 0 | 0 | 0 | 0 | -1838 |
| 3D | 0 | 1937 | 0 | 0 | 0 | 0 | 1937 |
| 3E | 0 | 7677 | 0 | 0 | 0 | 0 | 7677 |
| 4W | 18648 | -15511 | 0 | 0 | -3527 | 0 | -389 |
| 4X | -2273 | -1235 | 0 | 0 | -1608 | 0 | -5116 |
| 4Y | -10063 | 0 | 0 | 0 | 0 | 0 | -10063 |
| 4Z | 15569 | 0 | 0 | 0 | 0 | 0 | 15569 |
| Area 5 | -3378 | 3943 | 0 | 0 | -570 | 0 | -5 |
| Noyes | -22600 | 9832 | 0 | -2361 | -1466 | 0 | -16595 |
| Dall | 4561 | -4158 | 0 | 2805 | -2885 | 0 | 323 |
| Cordova | 802 | 488 | 0 | -2907 | 1677 | 0 | 59 |
| Sumner | -17913 | 17911 | 272 | 3124 | -3124 | 0 | 271 |
| U-Clar | -10635 | 11863 | 1445 | 1008 | -3099 | 0 | 583 |
| M-Clar | -252 | 215 | 0 | -1016 | 898 | 0 | -155 |
| L-Clar | 15690 | 18977 | 0 | 12653 | 16072 | 0 | 63392 |
| Revilla | 13109 | 3609 | 0 | 17988 | -27697 | 0 | 7009 |
| Union | 0 | 0 | 0 | 0 | 3 | 0 | 3 |
| Tree | -37086 | 37801 | 0 | 15199 | -15052 | 0 | 862 |
| Term101 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Term103 | 0 | 0 | 0 | 0 | 16596 | 0 | 16596 |
| Dist105 | 218 | 126 | 486 | 474 | 912 | 0 | 2216 |
| Term108 | 0 | 0 | 498 | 0 | 0 | 0 | 498 |
| Total Catch | -41824 | 96262 | 2702 | 55060 | -25252 | -1686 | 85261 |
| Escapement | 124872 | 50274 | 0 | -20056 | -126643 | 0 | 28447 |
| Total Run | 83048 | 146536 | 2702 | 35004 | -151895 | -1686 | 115394 |
| Expl Rate | -1.6 | 4.0 | 1.1 | 12.9 | 7.0 | 0.0 | 0.4 |

* Differences are the revised analysis minus the comparable estimate from Gazey and English 2000.

**Appendix E.5 Sockeye catch by stock 1986. Differences between the revised analysis and results presented in Gazey and English 2000.**

| | Difference* | | | | | | |
|---|---|---|---|---|---|---|---|
| **Fishery** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** |
| Langara | 1738 | -1062 | 0 | 1038 | -188 | 22 | 1548 |
| 1Troll | 930 | -253 | 0 | -635 | -20 | -22 | 0 |
| 3A | 3318 | -2467 | 0 | 2210 | -263 | 0 | 2799 |
| 3B | -1635 | -657 | 0 | 2734 | -2011 | 0 | -1569 |
| 3C | -482 | -239 | 0 | 0 | 0 | 0 | -720 |
| 3D | 0 | 51 | 0 | 0 | 0 | 0 | 51 |
| 3E | 0 | 44 | 0 | 0 | 0 | 0 | 44 |
| 4W | 6620 | -5448 | 0 | 0 | -625 | 0 | 547 |
| 4X | 2440 | -2043 | 0 | 0 | -479 | 0 | -82 |
| 4Y | -417 | 0 | 0 | 0 | 0 | 0 | -417 |
| 4Z | 365 | 0 | 0 | 0 | 0 | 0 | 365 |
| Area 5 | -842 | 1261 | 0 | 0 | -294 | 0 | 125 |
| Noyes | -3414 | -795 | 0 | 420 | -2642 | 0 | -6431 |
| Dall | -43 | -13 | 0 | 2669 | -2668 | 0 | -54 |
| Cordova | 108 | 186 | 0 | -2491 | 2622 | 0 | 424 |
| Sumner | -7357 | 7586 | 85 | 5022 | -5019 | 0 | 317 |
| U-Clar | -6100 | 6717 | 43 | 6141 | -5887 | 0 | 913 |
| M-Clar | 1 | 180 | 0 | -516 | 527 | 0 | 192 |
| L-Clar | 4808 | 14156 | 0 | 14198 | 5313 | 0 | 38474 |
| Revilla | 4253 | 12541 | 0 | 14405 | -27291 | 0 | 3908 |
| Union | 0 | 0 | 0 | 0 | 1276 | 0 | 1276 |
| Tree | 69 | 798 | 0 | 7312 | -7183 | 0 | 996 |
| Term101 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Term103 | 0 | 0 | 0 | 0 | 7530 | 0 | 7530 |
| Dist105 | 57 | 68 | 50 | 62 | 198 | 0 | 435 |
| Term108 | 0 | 0 | 198 | 0 | 0 | 0 | 198 |
| Total Catch | 4417 | 30611 | 376 | 52569 | -37104 | 0 | 50869 |
| Escapement | 122950 | 23048 | 0 | -13636 | -129451 | 0 | 2911 |
| Total Run | 127367 | 53659 | 376 | 38933 | -166555 | 0 | 53780 |
| Expl Rate | -3.3 | -0.3 | 0.5 | 13.7 | 7.1 | 0.0 | 0.8 |

* Differences are the revised analysis minus the comparable estimate from Gazey and English 2000.

**Appendix E.6 Sockeye catch by stock 1987. Differences between the revised analysis and results presented in Gazey and English 2000.**

| | Difference* | | | | | | |
|---|---|---|---|---|---|---|---|
| **Fishery** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** |
| Langara | -2219 | -45 | 0 | 1354 | -172 | 1082 | -1 |
| 1Troll | 12 | 357 | 0 | 815 | -103 | -1082 | 0 |
| 3A | -2752 | -1335 | 0 | 1402 | -287 | 0 | -2972 |
| 3B | -4974 | -3794 | 0 | 14424 | -5920 | 0 | -264 |
| 3C | -1249 | -2238 | 0 | 0 | 0 | 0 | -3487 |
| 3D | 0 | 5456 | 0 | 0 | 0 | 0 | 5456 |
| 3E | 0 | 3628 | 0 | 0 | 0 | 0 | 3628 |
| 4W | 6971 | -1903 | 0 | 0 | -1816 | 0 | 3252 |
| 4X | 1266 | -86 | 0 | 0 | -1206 | 0 | -26 |
| 4Y | -1690 | 0 | 0 | 0 | 0 | 0 | -1690 |
| 4Z | 991 | 0 | 0 | 0 | 0 | 0 | 991 |
| Area 5 | -4327 | 5406 | 0 | 0 | -776 | 0 | 303 |
| Noyes | -5 | 0 | 0 | 20566 | -20573 | 0 | -11 |
| Dall | 1 | 0 | 0 | 16627 | -16626 | 0 | 2 |
| Cordova | 0 | 31 | 0 | -661 | 661 | 0 | 31 |
| Sumner | -4307 | 4308 | 2 | 35432 | -35425 | 0 | 10 |
| U-Clar | -1977 | 1988 | 5 | 26888 | -26879 | 0 | 24 |
| M-Clar | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| L-Clar | 7894 | 16116 | 0 | 23312 | -473 | 0 | 46848 |
| Revilla | 3169 | 12393 | 0 | 30043 | -37919 | 0 | 7687 |
| Union | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tree | 0 | 643 | 0 | 15636 | -15664 | 0 | 615 |
| Term101 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Term103 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dist105 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Term108 | 0 | 0 | 3 | 0 | 0 | 0 | 3 |
| Total Catch | -3195 | 40922 | 8 | 185841 | -163179 | 0 | 60397 |
| Escapement | 140084 | 31612 | 0 | 49598 | -438959 | 0 | -217665 |
| Total Run | 136889 | 72534 | 8 | 235439 | -602138 | 0 | -157268 |
| Expl Rate | -2.2 | 0.1 | 0.0 | 30.0 | 13.9 | 0.0 | 3.3 |

* Differences are the revised analysis minus the comparable estimate from Gazey and English 2000.

**Appendix E.7 Sockeye catch by stock 1988. Differences between the revised analysis and results presented in Gazey and English 2000.**

| | Difference* | | | | | | |
|---|---|---|---|---|---|---|---|
| **Fishery** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** |
| Langara | -394 | -41 | 0 | 509 | -78 | 8 | 4 |
| 1Troll | 154 | -417 | 0 | 306 | -51 | -8 | -16 |
| 3A | 50 | -285 | 0 | 1738 | -356 | 0 | 1148 |
| 3B | -2125 | 555 | 0 | 2703 | -884 | 0 | 248 |
| 3C | -218 | 143 | 0 | 0 | 0 | 0 | -74 |
| 3D | 0 | -870 | 0 | 0 | 0 | 0 | -870 |
| 3E | 0 | -11 | 0 | 0 | 0 | 0 | -11 |
| 4W | 10375 | -11455 | 0 | 0 | -1241 | 0 | -2321 |
| 4X | 8752 | -2833 | 0 | 0 | -825 | 0 | 5094 |
| 4Y | -2869 | 0 | 0 | 0 | 0 | 0 | -2869 |
| 4Z | 7976 | 0 | 0 | 0 | 0 | 0 | 7976 |
| Area 5 | 654 | -13 | 0 | 0 | -639 | 0 | 2 |
| Noyes | -527 | 3840 | 0 | 7794 | -7893 | 0 | 3215 |
| Dall | 25 | 1789 | 0 | 4966 | -4967 | 0 | 1813 |
| Cordova | 0 | 243 | 0 | -454 | 454 | 0 | 243 |
| Sumner | -2092 | 2091 | 0 | 8158 | -8157 | 0 | 0 |
| U-Clar | -1325 | 1324 | 0 | 4504 | -4505 | 0 | -1 |
| M-Clar | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| L-Clar | 4250 | 12208 | 0 | 5406 | 5408 | 0 | 27272 |
| Revilla | 6639 | 11196 | 0 | 6948 | -19340 | 0 | 5443 |
| Union | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tree | 16 | 539 | 0 | 7113 | -7112 | 0 | 556 |
| Term101 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Term103 | 0 | 0 | 0 | 0 | 673 | 0 | 673 |
| Dist105 | 32 | 81 | 18 | 49 | 74 | 0 | 255 |
| Term108 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Catch | 29373 | 18086 | 18 | 49742 | -49439 | 0 | 47780 |
| Escapement | 110803 | 26759 | 0 | -5562 | -68193 | 0 | 63807 |
| Total Run | 140176 | 44845 | 18 | 44180 | -117632 | 0 | 111587 |
| Expl Rate | -1.4 | -1.6 | 0.0 | 19.1 | 1.3 | 0.0 | -0.3 |

* Differences are the revised analysis minus the comparable estimate from Gazey and English 2000.

**Appendix E.8 Sockeye catch by stock 1989. Differences between the revised analysis and results presented in Gazey and English 2000.**

| | Difference* | | | | | | |
|---|---|---|---|---|---|---|---|
| **Fishery** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** |
| Langara | 727 | 421 | 0 | 994 | -199 | -1943 | 0 |
| 1Troll | -2508 | 481 | 0 | 216 | -129 | 1943 | 2 |
| 3A | -8440 | -809 | 0 | 618 | -540 | 0 | -9170 |
| 3B | -11434 | 14641 | 0 | 2084 | -10894 | 0 | -5605 |
| 3C | -6847 | 17632 | 0 | 0 | 0 | 0 | 10786 |
| 3D | 0 | 3436 | 0 | 0 | 0 | 0 | 3436 |
| 3E | 0 | 1931 | 0 | 0 | 0 | 0 | 1931 |
| 4W | 7936 | -10302 | 0 | 0 | -2522 | 0 | -4887 |
| 4X | -204 | -300 | 0 | 0 | -1099 | 0 | -1602 |
| 4Y | -1503 | 0 | 0 | 0 | 0 | 0 | -1503 |
| 4Z | 7992 | 0 | 0 | 0 | 0 | 0 | 7992 |
| Area 5 | -2006 | 2403 | 0 | 0 | -401 | 0 | -4 |
| Noyes | -7936 | 16937 | 0 | -3678 | 2420 | 0 | 7744 |
| Dall | 6886 | -2473 | 0 | 112 | -4510 | 0 | 15 |
| Cordova | -69 | 70 | 0 | -517 | 518 | 0 | 1 |
| Sumner | -3949 | 4067 | 61 | 4100 | -4093 | 0 | 187 |
| U-Clar | -4000 | 4111 | 91 | 5022 | -4792 | 0 | 432 |
| M-Clar | -344 | 345 | 0 | -804 | 805 | 0 | 1 |
| L-Clar | 18325 | 18834 | 0 | 6512 | 4619 | 0 | 48290 |
| Revilla | 19118 | 36183 | 0 | 12945 | -65267 | 0 | 2980 |
| Union | 0 | 0 | 0 | 0 | 6947 | 0 | 6947 |
| Tree | -40489 | 40525 | 0 | 6804 | -6803 | 0 | 38 |
| Term101 | 0 | 0 | 0 | 5236 | 0 | 0 | 5236 |
| Term103 | 0 | 0 | 0 | 0 | 12995 | 0 | 12995 |
| Dist105 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Term108 | 0 | 0 | -1650 | 0 | 0 | 0 | -1650 |
| Total Catch | -28745 | 148134 | -1499 | 39641 | -72944 | 0 | 84586 |
| Escapement | 101773 | 20314 | 0 | -6302 | -36775 | 0 | 79010 |
| Total Run | 73028 | 168448 | -1499 | 33339 | -109719 | 0 | 163596 |
| Expl Rate | -2.5 | 6.1 | -1.3 | 11.6 | -3.6 | 0.0 | 0.0 |

* Differences are the revised analysis minus the comparable estimate from Gazey and English 2000.

**Appendix E.9 Sockeye catch by stock 1990. Differences between the revised analysis and results presented in Gazey and English 2000.**

| | Difference* | | | | | | |
|---|---|---|---|---|---|---|---|
| **Fishery** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** |
| Langara | 4944 | -222 | 0 | 1282 | -140 | 233 | 6098 |
| 1Troll | 240 | 455 | 0 | -775 | 327 | -233 | 14 |
| 3A | -145 | -430 | 0 | 1242 | -141 | 0 | 526 |
| 3B | -3488 | 1857 | 0 | 4402 | -2519 | 0 | 252 |
| 3C | -1498 | 1307 | 0 | 0 | 0 | 0 | -191 |
| 3D | 0 | 195 | 0 | 0 | 0 | 0 | 195 |
| 3E | 0 | 36 | 0 | 0 | 0 | 0 | 36 |
| 4W | 13131 | -5544 | 0 | 0 | -1004 | 0 | 6582 |
| 4X | 1073 | -1450 | 0 | 0 | -292 | 0 | -669 |
| 4Y | -9198 | 0 | 0 | 0 | 0 | 0 | -9198 |
| 4Z | 9353 | 0 | 0 | 0 | 0 | 0 | 9353 |
| Area 5 | -1672 | 2542 | 0 | 0 | -243 | 0 | 627 |
| Noyes | -6339 | 0 | 0 | -12902 | 8914 | 0 | -10327 |
| Dall | 0 | 0 | 0 | -2451 | 2452 | 0 | 1 |
| Cordova | -49 | 49 | 0 | -642 | 643 | 0 | 0 |
| Sumner | 36 | 376 | 199 | 10955 | -10890 | 0 | 677 |
| U-Clar | 126 | 838 | 443 | 6502 | -6493 | 0 | 1417 |
| M-Clar | -131 | 130 | 0 | -3057 | 3057 | 0 | 0 |
| L-Clar | 9606 | 19443 | 0 | 14176 | 10557 | 0 | 53782 |
| Revilla | 7334 | 8231 | 0 | 9103 | -18532 | 0 | 6136 |
| Union | 0 | 0 | 0 | 0 | 1299 | 0 | 1299 |
| Tree | 111 | 8 | 0 | 1664 | -1642 | 0 | 140 |
| Term101 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Term103 | 0 | 0 | 0 | 0 | 10340 | 0 | 10340 |
| Dist105 | 7 | 1 | 7 | 4 | 48 | 0 | 66 |
| Term108 | 0 | 0 | 533 | 0 | 0 | 0 | 533 |
| Total Catch | 23442 | 27822 | 1181 | 29501 | -4259 | 0 | 77688 |
| Escapement | 71864 | 26770 | 0 | -7084 | -119874 | 0 | -28324 |
| Total Run | 95306 | 54592 | 1181 | 22417 | -124133 | 0 | 49364 |
| Expl Rate | -1.1 | -0.6 | 1.3 | 6.8 | 9.7 | 0.0 | 1.3 |

* Differences are the revised analysis minus the comparable estimate from Gazey and English 2000.

**Appendix E.10 Sockeye catch by stock 1991. Differences between the revised analysis and results presented in Gazey and English 2000.**

| | Difference* | | | | | | |
|---|---|---|---|---|---|---|---|
| **Fishery** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** |
| Langara | 4478 | -2881 | 0 | 899 | -357 | -12 | 2128 |
| 1Troll | 445 | -327 | 0 | -286 | 155 | 12 | -1 |
| 3A | 16861 | -11074 | 0 | 5320 | -1329 | 0 | 9778 |
| 3B | 33942 | -27440 | 0 | 5522 | -9198 | 0 | 2825 |
| 3C | 4821 | -15218 | 0 | 0 | 0 | 0 | -10397 |
| 3D | 0 | 1109 | 0 | 0 | 0 | 0 | 1109 |
| 3E | 0 | 933 | 0 | 0 | 0 | 0 | 933 |
| 4W | 20868 | -18509 | 0 | 0 | -2653 | 0 | -295 |
| 4X | 3546 | -2584 | 0 | 0 | -966 | 0 | -4 |
| 4Y | -7264 | 0 | 0 | 0 | 0 | 0 | -7264 |
| 4Z | 10036 | 0 | 0 | 0 | 0 | 0 | 10036 |
| Area 5 | -4881 | 5671 | 0 | 0 | -638 | 0 | 152 |
| Noyes | -3155 | -619 | 0 | -4627 | 71 | 0 | -8330 |
| Dall | 828 | 2 | 0 | 11772 | -11770 | 0 | 832 |
| Cordova | -40 | 47 | 0 | 599 | -599 | 0 | 7 |
| Sumner | 339 | 2069 | 325 | 10203 | -10191 | 0 | 2746 |
| U-Clar | 259 | 1141 | 385 | 7882 | -7876 | 0 | 1790 |
| M-Clar | -22 | 22 | 0 | -186 | 185 | 0 | -1 |
| L-Clar | 7623 | 12571 | 0 | 27796 | -4436 | 0 | 43554 |
| Revilla | 6975 | 10546 | 0 | 15585 | -30242 | 0 | 2864 |
| Union | 0 | 0 | 0 | 0 | 2565 | 0 | 2565 |
| Tree | 27 | -399 | 0 | 6789 | -6156 | 0 | 261 |
| Term101 | 0 | 0 | 0 | -1751 | 0 | 0 | -1751 |
| Term103 | 0 | 0 | 0 | 0 | 13796 | 0 | 13796 |
| Dist105 | 118 | 97 | 356 | 416 | 910 | 0 | 1898 |
| Term108 | 0 | 0 | -6374 | 0 | 0 | 0 | -6374 |
| Total Catch | 95802 | -44846 | -5306 | 85935 | -68729 | 0 | 62855 |
| Escapement | 159346 | 36157 | 0 | -21571 | -381418 | 0 | -207486 |
| Total Run | 255148 | -8689 | -5306 | 64364 | -450147 | 0 | -144631 |
| Expl Rate | -1.6 | -4.1 | -2.5 | 15.1 | 18.4 | 0.0 | 2.5 |

* Differences are the revised analysis minus the comparable estimate from Gazey and English 2000.

**Appendix E.11 Sockeye catch by stock 1992. Differences between the revised analysis and results presented in Gazey and English 2000.**

| | Difference* | | | | | | |
|---|---|---|---|---|---|---|---|
| **Fishery** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** |
| Langara | 4200 | -1206 | 0 | 972 | -289 | -3639 | 37 |
| 1Troll | 351 | -418 | 0 | -750 | 93 | 819 | 95 |
| 3A | -2443 | -970 | 0 | 4908 | -848 | 0 | 647 |
| 3B | 1884 | 972 | 0 | 8613 | -5748 | 0 | 5720 |
| 3C | 530 | 632 | 0 | 0 | 0 | 0 | 1162 |
| 3D | 0 | -994 | 0 | 0 | 0 | 0 | -994 |
| 3E | 0 | -4236 | 0 | 0 | 0 | 0 | -4236 |
| 4W | 44617 | -29895 | 0 | 0 | -6066 | 0 | 8657 |
| 4X | 8319 | -4564 | 0 | 0 | -1546 | 0 | 2210 |
| 4Y | 7908 | 0 | 0 | 0 | 0 | 0 | 7908 |
| 4Z | -3826 | 0 | 0 | 0 | 0 | 0 | -3826 |
| Area 5 | -6278 | 6993 | 0 | 0 | -719 | 0 | -4 |
| Noyes | 1164 | 160 | 0 | 1698 | -2029 | 0 | 994 |
| Dall | 1972 | 305 | 0 | -7258 | 7258 | 0 | 2277 |
| Cordova | 45 | -45 | 0 | -1659 | 1659 | 0 | 0 |
| Sumner | 1168 | 9 | 2510 | 11036 | -11011 | 0 | 3712 |
| U-Clar | 211 | 0 | 1653 | 4158 | -4148 | 0 | 1874 |
| M-Clar | 60 | 0 | 0 | -1847 | 1845 | 0 | 58 |
| L-Clar | 3311 | 15417 | 0 | 12051 | 26386 | 0 | 57165 |
| Revilla | 7276 | 10141 | 0 | 22014 | -33626 | 0 | 5805 |
| Union | 0 | 0 | 0 | 0 | 6506 | 0 | 6506 |
| Tree | 167 | 26 | 0 | 23316 | -23257 | 0 | 252 |
| Term101 | 0 | 0 | 0 | -1 | 0 | 0 | -1 |
| Term103 | 0 | 0 | 0 | 0 | 1423 | 0 | 1423 |
| Dist105 | 1 | 1 | 4 | 2 | 14 | 0 | 23 |
| Term108 | 0 | 0 | -117 | 0 | 0 | 0 | -117 |
| Total Catch | 70636 | -7672 | 4050 | 77254 | -44106 | -2820 | 97341 |
| Escapement | 33967 | 44331 | 0 | -46039 | -282028 | 0 | -249769 |
| Total Run | 104603 | 36659 | 4050 | 31215 | -326134 | -2820 | -149609 |
| Expl Rate | 0.1 | -1.6 | 1.1 | 19.7 | 9.7 | 0.0 | 2.5 |

* Differences are the revised analysis minus the comparable estimate from Gazey and English 2000.

**Appendix E.12 Sockeye catch by stock 1993. Differences between the revised analysis and results presented in Gazey and English 2000.**

| | Difference* | | | | | | |
|---|---|---|---|---|---|---|---|
| **Fishery** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** |
| Langara | 11321 | -3682 | 0 | 5764 | -204 | -13961 | -763 |
| 1Troll | 18986 | 4976 | 0 | 1475 | 966 | 10406 | 36809 |
| 3A | 1172 | -24589 | 0 | 7687 | -427 | 0 | -16156 |
| 3B | 89809 | 67638 | 0 | 22966 | -3699 | 0 | 176713 |
| 3C | 30576 | 30980 | 0 | 0 | 0 | 0 | 61557 |
| 3D | 0 | -48341 | 0 | 0 | 0 | 0 | -48341 |
| 3E | 0 | -173553 | 0 | 0 | 0 | 0 | -173553 |
| 4W | 75078 | -73683 | 0 | 0 | -2461 | 0 | -1066 |
| 4X | 37559 | -12702 | 0 | 0 | -992 | 0 | 23864 |
| 4Y | 2080 | 0 | 0 | 0 | 0 | 0 | 2080 |
| 4Z | -14279 | 0 | 0 | 0 | 0 | 0 | -14279 |
| Area 5 | -4446 | 5421 | 0 | 0 | -354 | 0 | 622 |
| Noyes | -31049 | -575 | 0 | -20135 | 12498 | 0 | -39261 |
| Dall | -1818 | 513 | 0 | 4321 | -2808 | 0 | 208 |
| Cordova | 156 | -93 | 0 | -6952 | 6891 | 0 | 2 |
| Sumner | 229 | -1 | 5543 | 228 | -164 | 0 | 5835 |
| U-Clar | 0 | 1 | 4159 | 2165 | -2108 | 0 | 4217 |
| M-Clar | 0 | 0 | 0 | -2032 | 2068 | 0 | 36 |
| L-Clar | -2732 | -17739 | 0 | 37694 | 63565 | 0 | 80789 |
| Revilla | 13809 | 12548 | 0 | 27520 | 28756 | 0 | 82632 |
| Union | 0 | 0 | 0 | 0 | 43597 | 0 | 43597 |
| Tree | 57 | 23 | 0 | 7443 | -7263 | 0 | 260 |
| Term101 | 0 | 0 | 0 | 50926 | 0 | 0 | 50926 |
| Term103 | 0 | 0 | 0 | 0 | 41425 | 0 | 41425 |
| Dist105 | 4364 | 1494 | 5900 | 2639 | 19532 | 0 | 33928 |
| Term108 | 0 | 0 | 6563 | 0 | 0 | 0 | 6563 |
| Total Catch | 230871 | -231365 | 22165 | 141710 | 198816 | -3555 | 358641 |
| Escapement | 147831 | -10329 | 0 | -163121 | -158404 | 0 | -184023 |
| Total Run | 378702 | -241694 | 22165 | -21411 | 40412 | -3555 | 178173 |
| Expl Rate | 0.4 | -2.3 | 4.3 | 30.4 | 17.1 | 0.0 | 3.0 |

* Differences are the revised analysis minus the comparable estimate from Gazey and English 2000.

**Appendix E.13 Sockeye catch by stock 1994. Differences between the revised analysis and results presented in Gazey and English 2000.**

| | Difference* | | | | | | |
|---|---|---|---|---|---|---|---|
| **Fishery** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** |
| Langara | 18395 | 2405 | 0 | 999 | -45 | -21778 | -25 |
| 1Troll | 19698 | 3304 | 0 | 457 | 112 | 8083 | 31655 |
| 3A | -1790 | -588 | 0 | 922 | -191 | 0 | -1647 |
| 3B | 10118 | -10945 | 0 | 5088 | -1847 | 0 | 2413 |
| 3C | 2209 | -3913 | 0 | 0 | 0 | 0 | -1704 |
| 3D | 0 | 1141 | 0 | 0 | 0 | 0 | 1141 |
| 3E | 0 | 825 | 0 | 0 | 0 | 0 | 825 |
| 4W | 12306 | -10680 | 0 | 0 | -1709 | 0 | -83 |
| 4X | 1940 | -206 | 0 | 0 | -363 | 0 | 1370 |
| 4Y | 2679 | 0 | 0 | 0 | 0 | 0 | 2679 |
| 4Z | -3782 | 0 | 0 | 0 | 0 | 0 | -3782 |
| Area 5 | -5182 | 5583 | 0 | 0 | -400 | 0 | 1 |
| Noyes | 2795 | -616 | 0 | -6082 | 3814 | 0 | -88 |
| Dall | 204 | -339 | 0 | 6605 | -6470 | 0 | 0 |
| Cordova | 429 | -389 | 0 | -5243 | 5244 | 0 | 40 |
| Sumner | 1467 | 121 | 937 | 6029 | -5980 | 0 | 2573 |
| U-Clar | 1517 | 210 | 510 | 1441 | -1389 | 0 | 2288 |
| M-Clar | 551 | 29 | 0 | -885 | 881 | 0 | 577 |
| L-Clar | 24597 | 8419 | 0 | 7345 | 515 | 0 | 40876 |
| Revilla | 6032 | 5125 | 0 | 4606 | -10779 | 0 | 4985 |
| Union | 0 | 0 | 0 | 0 | 8914 | 0 | 8914 |
| Tree | 328 | 1429 | 0 | 4415 | -5716 | 0 | 456 |
| Term101 | 0 | 0 | 0 | -115 | 0 | 0 | -115 |
| Term103 | 0 | 0 | 0 | 0 | 5323 | 0 | 5323 |
| Dist105 | 13 | 6 | 50 | 19 | 128 | 0 | 216 |
| Term108 | 0 | 0 | -1120 | 0 | 0 | 0 | -1120 |
| Total Catch | 94522 | 922 | 376 | 25601 | -9960 | -13695 | 97768 |
| Escapement | 128975 | -278 | 0 | -11969 | -66155 | 0 | 50573 |
| Total Run | 223497 | 644 | 376 | 13632 | -76115 | -13695 | 162035 |
| Expl Rate | -0.8 | 0.1 | 0.1 | 7.7 | 3.9 | 0.0 | 0.6 |

* Differences are the revised analysis minus the comparable estimate from Gazey and English 2000.

**Appendix E.14 Sockeye catch by stock 1995. Differences between the revised analysis and results presented in Gazey and English 2000.**

| | Difference* | | | | | | |
|---|---|---|---|---|---|---|---|
| **Fishery** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** |
| Langara | 11971 | -9848 | 0 | 851 | -652 | -1451 | 871 |
| 1Troll | 43093 | 4394 | 0 | 547 | 529 | 1451 | 50014 |
| 3A | 29285 | -14380 | 0 | 4566 | -1264 | 0 | 18207 |
| 3B | 19037 | -20552 | 0 | 5230 | -5609 | 0 | -1894 |
| 3C | 4583 | -7738 | 0 | 0 | 0 | 0 | -3155 |
| 3D | 0 | -1027 | 0 | 0 | 0 | 0 | -1027 |
| 3E | 0 | -3332 | 0 | 0 | 0 | 0 | -3332 |
| 4W | 30828 | -30588 | 0 | 0 | -2195 | 0 | -1955 |
| 4X | 9890 | -3030 | 0 | 0 | -929 | 0 | 5930 |
| 4Y | 10996 | 0 | 0 | 0 | 0 | 0 | 10996 |
| 4Z | 12103 | 0 | 0 | 0 | 0 | 0 | 12103 |
| Area 5 | -4632 | 4179 | 0 | 0 | -412 | 0 | -864 |
| Noyes | 3720 | -1116 | 0 | -11085 | 9346 | 0 | 864 |
| Dall | 8945 | -375 | 0 | -15041 | 14648 | 0 | 8177 |
| Cordova | 46 | -45 | 0 | -1595 | 1595 | 0 | 0 |
| Sumner | 1214 | 52 | 2854 | -3130 | 3325 | 0 | 4316 |
| U-Clar | 1487 | 0 | 2858 | -2061 | 2063 | 0 | 4348 |
| M-Clar | 887 | -1651 | 0 | -9132 | 9919 | 0 | 22 |
| L-Clar | 29481 | 26762 | 0 | 915 | 26896 | 0 | 84054 |
| Revilla | 22705 | 12486 | 0 | 6628 | -27530 | 0 | 14289 |
| Union | 0 | 0 | 0 | 0 | 7969 | 0 | 7969 |
| Tree | 1471 | -138 | 0 | 2751 | -2595 | 0 | 1489 |
| Term101 | 0 | 0 | 0 | -7432 | 0 | 0 | -7432 |
| Term103 | 0 | 0 | 0 | 0 | 7447 | 0 | 7447 |
| Dist105 | 8817 | 1742 | 3306 | 1468 | 9104 | 0 | 24436 |
| Term108 | 0 | 0 | 623 | 0 | 0 | 0 | 623 |
| Total Catch | 245925 | -44205 | 9641 | -26519 | 51655 | 0 | 236497 |
| Escapement | 172942 | -8547 | 0 | -7577 | 71676 | 0 | 228494 |
| Total Run | 418867 | -52752 | 9641 | -34096 | 123331 | 0 | 464991 |
| Expl Rate | -0.1 | -0.4 | 2.3 | -2.1 | -2.9 | 0.0 | -0.7 |

* Differences are the revised analysis minus the comparable estimate from Gazey and English 2000.

**Appendix F.1 1996 and 1997 Sockeye catch by stock.**

| | 1996 Reconstruction (Available Scale Data) | | | | | | | 1997 Reconstruction (Available Scale Data) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Fishery** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** |
| Langara | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 184932 | 31380 | 0 | 15852 | 533 | 138588 |
| 1Troll | 17197 | 701 | 0 | 730 | 48 | 0 | 18677 | 78137 | 11721 | 0 | 2383 | 3886 | 22099 |
| 3A | 458663 | 17866 | 0 | 16341 | 251 | 0 | 493120 | 150347 | 12869 | 0 | 3204 | 122 | 0 |
| 3B | 200483 | 87507 | 0 | 16575 | 1064 | 0 | 305630 | 199086 | 123544 | 0 | 13562 | 1133 | 0 |
| 3C | 33277 | 19223 | 0 | 0 | 0 | 0 | 52500 | 26026 | 29718 | 0 | 0 | 0 | 0 |
| 3D | 0 | 41365 | 0 | 0 | 0 | 0 | 41365 | 0 | 13493 | 0 | 0 | 0 | 0 |
| 3E | 0 | 135644 | 0 | 0 | 0 | 0 | 135644 | 0 | 9558 | 0 | 0 | 0 | 0 |
| 4W | 814767 | 47563 | 0 | 0 | 1078 | 0 | 863407 | 247331 | 30333 | 0 | 0 | 316 | 0 |
| 4X | 601278 | 36551 | 0 | 0 | 1134 | 0 | 638964 | 139762 | 15878 | 0 | 0 | 262 | 0 |
| 4Y | 801309 | 0 | 0 | 0 | 0 | 0 | 801309 | 327713 | 0 | 0 | 0 | 0 | 0 |
| 4Z | 1115910 | 0 | 0 | 0 | 0 | 0 | 1115910 | 363671 | 0 | 0 | 0 | 0 | 0 |
| Area 5 | 194535 | 55418 | 0 | 0 | 1439 | 0 | 251392 | 11865 | 8189 | 0 | 0 | 128 | 0 |
| Noyes | 233881 | 90794 | 0 | 35159 | 70091 | 19863 | 449789 | 321603 | 164249 | 0 | 31651 | 110047 | 139778 |
| Dall | 209826 | 77226 | 0 | 38414 | 69335 | 15828 | 410629 | 206767 | 129842 | 0 | 16415 | 65862 | 58463 |
| Cordova | 0 | 130 | 0 | 3158 | 14361 | 0 | 17649 | 110 | 60 | 0 | 88 | 557 | 0 |
| Sumner | 32077 | 23384 | 52990 | 41682 | 73014 | 0 | 223148 | 19256 | 14366 | 12460 | 12653 | 59629 | 0 |
| U-Clar | 17350 | 10653 | 9671 | 23200 | 28490 | 0 | 89363 | 22745 | 4146 | 3927 | 10380 | 47002 | 0 |
| M-Clar | 2126 | 225 | 0 | 1617 | 15374 | 0 | 19342 | 1702 | 886 | 0 | 1897 | 11416 | 0 |
| L-Clar | 43550 | 19276 | 0 | 66838 | 75376 | 0 | 205040 | 16250 | 10694 | 0 | 30207 | 68599 | 0 |
| Revilla | 9898 | 5502 | 0 | 22699 | 28361 | 0 | 66460 | 2545 | 1566 | 0 | 5918 | 9687 | 0 |
| Union | 0 | 0 | 0 | 0 | 4661 | 0 | 4661 | 0 | 0 | 0 | 0 | 26336 | 0 |
| Tree | 49031 | 133218 | 0 | 19295 | 10450 | 0 | 211994 | 40265 | 94427 | 0 | 16755 | 15237 | 0 |
| Term101 | 0 | 0 | 0 | 249635 | 0 | 0 | 249635 | 0 | 0 | 0 | 40420 | 0 | 0 |
| Term103 | 0 | 0 | 0 | 0 | 6538 | 0 | 6538 | 0 | 0 | 0 | 0 | 29158 | 0 |
| Dist105 | 50 | 21 | 45 | 39 | 118 | 0 | 273 | 5070 | 598 | 3258 | 1573 | 14358 | 0 |
| Term108 | 0 | 0 | 154038 | 0 | 0 | 0 | 154038 | 0 | 0 | 92995 | 0 | 0 | 0 |
| Total Catch | 4835209 | 802268 | 216744 | 535382 | 401184 | 35691 | 6826478 | 2365181 | 707515 | 112640 | 202957 | 464269 | 358928 |
| Escapement | 2651202 | 252129 | 184400 | 61933 | 575238 | 0 | 3724902 | 1394273 | 287246 | 125657 | 68462 | 459585 | 0 |
| Total Run | 7486411 | 1054397 | 401144 | 597315 | 976422 | 35691 | 10515690 | 3759454 | 994761 | 238297 | 271419 | 923854 | 358928 |
| Expl Rate | 64.59 | 76.09 | 54.03 | 89.63 | 41.09 | 0 | 64.58 | 62.91 | 71.12 | 47.27 | 74.78 | 50.25 | 0 |

**Appendix F.2 1998 and 1999 Sockeye catch by stock.**

| | 1998 Reconstruction (Available Scale Data) | | | | | | | 1999 Reconstruction (Available Scale Data) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Fishery** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** |
| Langara | 0 | 0 | 0 | 0 | 0 | 11 | 11 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1Troll | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3A | 1647 | 567 | 0 | 94 | 5 | 0 | 2314 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3B | 15246 | 34568 | 0 | 1221 | 189 | 0 | 51224 | 10228 | 35853 | 0 | 2790 | 101 | 0 |
| 3C | 6769 | 25136 | 0 | 0 | 0 | 0 | 31905 | 9244 | 73516 | 0 | 0 | 0 | 0 |
| 3D | 0 | 31379 | 0 | 0 | 0 | 0 | 31379 | 0 | 113567 | 0 | 0 | 0 | 0 |
| 3E | 0 | 37740 | 0 | 0 | 0 | 0 | 37740 | 0 | 166388 | 0 | 0 | 0 | 0 |
| 4W | 19512 | 6401 | 0 | 0 | 58 | 0 | 25971 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4X | 16091 | 3611 | 0 | 0 | 41 | 0 | 19744 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4Y | 18372 | 0 | 0 | 0 | 0 | 0 | 18372 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4Z | 30037 | 0 | 0 | 0 | 0 | 0 | 30037 | 5507 | 0 | 0 | 0 | 0 | 0 |
| Area 5 | 1371 | 1997 | 0 | 0 | 35 | 0 | 3403 | 0 | 0 | 0 | 0 | 0 | 0 |
| Noyes | 63789 | 77376 | 0 | 12448 | 28569 | 182654 | 364836 | 24621 | 22001 | 0 | 18651 | 21747 | 15626 |
| Dall | 32181 | 40006 | 0 | 7294 | 14329 | 28594 | 122404 | 16760 | 13706 | 0 | 12990 | 14782 | 3977 |
| Cordova | 388 | 170 | 0 | 878 | 2242 | 0 | 3678 | 0 | 0 | 0 | 47 | 52 | 0 |
| Sumner | 15731 | 11508 | 1995 | 16287 | 33338 | 0 | 78859 | 640 | 7091 | 13163 | 20862 | 30970 | 0 |
| U-Clar | 8486 | 5414 | 467 | 11224 | 16996 | 0 | 42587 | 412 | 2939 | 5651 | 12391 | 13398 | 0 |
| M-Clar | 968 | 703 | 0 | 1544 | 4608 | 0 | 7822 | 667 | 475 | 0 | 4066 | 5312 | 0 |
| L-Clar | 12888 | 19974 | 0 | 17822 | 17304 | 0 | 67988 | 4799 | 17394 | 0 | 31181 | 20722 | 0 |
| Revilla | 3156 | 6011 | 0 | 6072 | 4582 | 0 | 19821 | 1679 | 3900 | 0 | 14100 | 8954 | 0 |
| Union | 0 | 0 | 0 | 0 | 6512 | 0 | 6512 | 0 | 0 | 0 | 0 | 14844 | 0 |
| Tree | 40172 | 104000 | 0 | 11128 | 4755 | 0 | 160055 | 15054 | 129794 | 0 | 12835 | 2186 | 0 |
| Term101 | 0 | 0 | 0 | 20719 | 0 | 0 | 20719 | 0 | 0 | 0 | 35224 | 0 | 0 |
| Term103 | 0 | 0 | 0 | 0 | 13777 | 0 | 13777 | 0 | 0 | 0 | 0 | 7857 | 0 |
| Dist105 | 379 | 329 | 630 | 558 | 1433 | 0 | 3329 | 30 | 158 | 106 | 650 | 853 | 0 |
| Term108 | 0 | 0 | 22009 | 0 | 0 | 0 | 22009 | 0 | 0 | 36070 | 0 | 0 | 0 |
| Total Catch | 287183 | 406890 | 25100 | 107290 | 148773 | 211259 | 1186495 | 89643 | 586783 | 54991 | 165786 | 141777 | 19603 |
| Escapement | 715689 | 304893 | 90459 | 57501 | 157807 | 0 | 1326349 | 838601 | 256024 | 65879 | 89608 | 160201 | 0 |
| Total Run | 1002872 | 711783 | 115559 | 164791 | 306580 | 211259 | 2301585 | 928244 | 842807 | 120870 | 255394 | 301978 | 19603 |
| Expl Rate | 28.64 | 57.16 | 21.72 | 65.11 | 48.53 | 0 | 42.37 | 9.66 | 69.62 | 45.5 | 64.91 | 46.95 | 0 |

**Appendix F.3 2000 and 2001 Sockeye catch by stock.**

| | 2000 Reconstruction (Available Scale Data) | | | | | | | 2001 Reconstruction (Available Scale Data) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Fishery** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** | **Total** | **Skeena** | **Nass** | **Stikine** | **US McD** | **US Other** | **Fraser** |
| Langara | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1Troll | 902 | 56 | 0 | 33 | 0 | 0 | 992 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3B | 56817 | 38087 | 0 | 2095 | 46 | 0 | 97045 | 44222 | 23783 | 0 | 1763 | 177 | 0 |
| 3C | 33421 | 38469 | 0 | 0 | 0 | 0 | 71890 | 26854 | 20705 | 0 | 0 | 0 | 0 |
| 3D | 0 | 38750 | 0 | 0 | 0 | 0 | 38750 | 0 | 25425 | 0 | 0 | 0 | 0 |
| 3E | 0 | 97619 | 0 | 0 | 0 | 0 | 97619 | 0 | 29266 | 0 | 0 | 0 | 0 |
| 4W | 106945 | 5380 | 0 | 0 | 22 | 0 | 112347 | 65132 | 3582 | 0 | 0 | 36 | 0 |
| 4X | 542491 | 20661 | 0 | 0 | 134 | 0 | 563286 | 627155 | 26686 | 0 | 0 | 305 | 0 |
| 4Y | 758124 | 0 | 0 | 0 | 0 | 0 | 758124 | 339230 | 0 | 0 | 0 | 0 | 0 |
| 4Z | 559567 | 0 | 0 | 0 | 0 | 0 | 559567 | 506559 | 0 | 0 | 0 | 0 | 0 |
| Area 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11035 | 2432 | 0 | 0 | 51 | 0 |
| Noyes | 57227 | 8451 | 0 | 19766 | 15592 | 7925 | 108961 | 271903 | 53788 | 0 | 10562 | 53597 | 0 |
| Dall | 61977 | 8877 | 0 | 20570 | 17247 | 9407 | 118078 | 100495 | 20314 | 0 | 3956 | 22019 | 0 |
| Cordova | 263 | 1013 | 0 | 3421 | 4515 | 0 | 9212 | 273 | 83 | 0 | 107 | 643 | 0 |
| Sumner | 8529 | 5794 | 3092 | 19570 | 20792 | 0 | 57777 | 7674 | 15454 | 13704 | 11943 | 50424 | 0 |
| U-Clar | 6157 | 2969 | 1102 | 12834 | 11369 | 0 | 34432 | 5722 | 9361 | 2128 | 13715 | 41536 | 0 |
| M-Clar | 491 | 213 | 0 | 1351 | 2204 | 0 | 4258 | 4813 | 1610 | 0 | 1530 | 5553 | 0 |
| L-Clar | 60623 | 9876 | 0 | 26715 | 12595 | 0 | 109810 | 53305 | 40228 | 0 | 26976 | 64595 | 0 |
| Revilla | 14370 | 2980 | 0 | 11117 | 4856 | 0 | 33322 | 5733 | 5768 | 0 | 3592 | 9420 | 0 |
| Union | 0 | 0 | 0 | 0 | 7024 | 0 | 7024 | 0 | 0 | 0 | 0 | 56888 | 0 |
| Tree | 31592 | 46305 | 0 | 14590 | 2132 | 0 | 94619 | 13929 | 55096 | 0 | 7937 | 2977 | 0 |
| Term101 | 0 | 0 | 0 | 35811 | 0 | 0 | 35811 | 0 | 0 | 0 | 29797 | 0 | 0 |
| Term103 | 0 | 0 | 0 | 0 | 7412 | 0 | 7412 | 0 | 0 | 0 | 0 | 25854 | 0 |
| Dist105 | 30 | 14 | 36 | 36 | 75 | 0 | 191 | 47 | 50 | 193 | 144 | 1424 | 0 |
| Term108 | 0 | 0 | 15826 | 0 | 0 | 0 | 15826 | 0 | 0 | 594 | 0 | 0 | 0 |
| Total Catch | 2299525 | 325514 | 20057 | 167909 | 106015 | 17332 | 2936351 | 2084081 | 333633 | 16618 | 112022 | 335497 | 0 |
| Escapement | 2392719 | 300469 | 56354 | 90624 | 137389 | 0 | 2977555 | 2300594 | 246985 | 50000 | 42767 | 318000 | 0 |
| Total Run | 4692244 | 625983 | 76411 | 258533 | 243404 | 17332 | 5896574 | 4384675 | 580618 | 66618 | 154789 | 653497 | 0 |
| Expl Rate | 49.01 | 52 | 26.25 | 64.95 | 43.56 | 0 | 49.5 | 47.53 | 57.46 | 24.95 | 72.37 | 51.34 | 0 |