

# Wild Juvenile Salmonid Monitoring Program 2022 Broughton Archipelago, BC

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## Summary

Beach seine sampling was conducted on behalf of MOWI Canada West and Cermaq Canada in the Broughton Archipelago, BC in 2022. Sampling was completed to monitor sea lice abundance, prevalence, and intensity on juvenile wild salmon within the Broughton Archipelago.

Sampling was conducted during two separate sampling events in April and May of 2022, selected to roughly coincide with the estimated peak outmigration period of juvenile salmonids. A total of 45 sites were selected for sampling in 2022.

Fifteen individuals from each target fish species or the total number of captured individuals from each target species (if less than 15 were captured) were collected from each of the sites during the sampling events. Total catch numbers of each species were recorded. Surface and one meter depth water temperature and salinity were recorded at each site during each sampling event.

Collected sample fish were frozen and delivered to the Center for Aquatic Health Sciences (CAHS) for laboratory analysis. Sea lice infestation data was tabulated by CAHS and provided to Mainstream Biological Consulting for reporting. Sea lice observed on the individual fish specimens during laboratory analysis were identified as either *Lepeophtheirus spp.* or *Caligus sp.* These lice are assumed to be *L. salmonis* and *C. clemensi* due to the lack of documented infestation of Pacific salmon by other species. The lice were recorded by life stage and the sex of pre-adult or adult motile lice was determined.

This data summary report documents the observed sea lice infestation rate on retained wild juvenile salmon collected in the Broughton Archipelago in 2022. A total of 708 individual samples underwent lab analysis for sea lice infestation including 330 chum salmon (*Oncorhynchus keta*), 263 pink salmon (*Oncorhynchus gorbuscha*), and 115 coho salmon (*Oncorhynchus kisutch*). No chinook salmon (*Oncorhynchus tshawytscha*), sockeye salmon (*Oncorhynchus nerka*), Atlantic salmon (*Salmo salar*) or threespine stickleback (*Gasterosteus aculeatus*) were captured during sampling in 2022.

From the total sample population, 230 individuals were infested with 415 sea lice. The calculated sea lice prevalence for the total sample population was 32.5 %, the sea lice abundance was 0.59 and the average intensity was 1.8 for the sample population collected in the Broughton Archipelago in 2022.

A total of 3559 chum salmon were captured, representing 30.7 % of all captured samples. Of the 3559 chum captured, 330 were kept for lab analysis for sea lice infestation. A total of 122 chum smolts were found to be infested with 219 lice resulting in a calculated sea lice prevalence of 37.0, an abundance of 0.66 and an average intensity of 1.8 for the chum salmon sample population.

A total of 7755 pink salmon were captured, representing 66.9 % of all captured samples. Of the 7755 pinks captured, 263 were kept for lab analysis for sea lice infestation. A total of 87 pink salmon were found to be infested with 149 lice resulting in a calculated sea lice prevalence of 33.1 %, an abundance of 0.57 and an average intensity of 1.7 for the pink salmon sample population.

A total of 274 coho salmon were captured, represent 2.4 % of all captured samples. Of the 274 coho captured 115 were kept for lab analysis for sea lice infestation. A total of 21 coho salmon were found to be infested with 47 lice resulting in a calculated sea lice

prevalence of 18.3 % and abundance of 0.41 and an average intensity of 2.2 for the coho salmon sample population.

A total of 196 *Lepeophtheirus salmonis* sea lice of various life stages were identified on 134 individuals and 219 *Caligus clemensi* sea lice were found on 142 of the samples analyzed in the lab. There were 46 samples that were infested with both *L. salmonis* and *C. clemensi* sea lice.

For the chum salmon sample population, a total of 116 *Lepeophtheirus salmonis* sea lice of various life stages were identified on 77 juvenile chum salmon and 103 *Caligus clemensi* sea lice were found on 69 of the juvenile chum salmon analyzed in the lab. There were 24 juvenile chum salmon that were infested with both *L. salmonis* and *C. clemensi* sea lice.

For the pink salmon sample population, a total of 76 *Lepeophtheirus salmonis* sea lice of various life stages were identified on 53 juvenile pink salmon and 73 *Caligus clemensi* sea lice were found on 55 of the juvenile pink salmon analyzed in the lab. There were 21 juvenile pink salmon that were infested with both *L. salmonis* and *C. clemensi* sea lice.

For the coho salmon sample population, a total of four *Lepeophtheirus salmonis* sea lice of various life stages were identified on four juvenile coho salmon and 43 *Caligus clemensi* sea lice were found on 18 of the juvenile coho salmon analyzed in the lab. There was one juvenile coho salmon that was infested with both *L. salmonis* and *C. clemensi* sea lice.

The 2022 sampling represents the seventh consecutive year of monitoring in this area. A comparison of the prevalence, abundance and average intensity of sea lice infestation by sea lice species found on chum and pink salmon was completed for sample data collected in the Broughton Archipelago between 2016 and 2022. This data is presented in the following summary tables with additional yearly comparisons of juvenile wild salmon monitoring results presented in Appendix IV.

Historical chum salmon sample infestation:

Year	Sample size	Total # of lice observed	Total # of fish infested	Prevalence (%)	Abundance	Average Intensity
2016	512	262	152	29.7	0.51	1.7
2017	562	257	131	23.3	0.46	2.0
2018	281	77	55	19.6	0.27	1.4
2019	246	122	58	23.6	0.50	2.1
2020	497	183	114	22.9	0.37	1.6
2021	249	100	64	25.7	0.40	1.6
2022	330	219	122	37.0	0.66	1.8
<b>Total</b>	<b>2677</b>	<b>1220</b>	<b>696</b>	<b>26.0</b>	<b>0.46</b>	<b>1.8</b>

Historical pink salmon sample infestation:

<b>Year</b>	<b>Sample size</b>	<b>Total # of lice observed</b>	<b>Total # of fish infested</b>	<b>Prevalence (%)</b>	<b>Abundance</b>	<b>Average Intensity</b>
2016	430	242	146	33.9	0.56	1.7
2017	411	130	77	18.7	0.32	1.7
2018	356	80	52	14.6	0.22	1.5
2019	230	101	49	21.3	0.44	2.1
2020	402	120	90	22.4	0.30	1.3
2021	309	96	71	23.0	0.31	1.4
2022	263	149	87	33.1	0.57	1.7
<b>Total</b>	2401	918	572	23.8	0.38	1.6

## Table of Contents

<b>Summary.....</b>	<b>ii</b>
<b>Table of Contents.....</b>	<b>v</b>
<b>List of Figures .....</b>	<b>vi</b>
<b>List of Tables.....</b>	<b>vii</b>
<b>1.0 Introduction.....</b>	<b>1</b>
<b>2.0 Methods.....</b>	<b>3</b>
2.1 Site Locations .....	3
2.2 Field Procedures.....	6
2.3 Laboratory Procedures .....	7
2.4 Data Analysis.....	7
<b>3.0 Results .....</b>	<b>9</b>
3.1 Water Quality Parameters.....	9
3.2 Fish Sample Composition .....	12
3.3 Fish Sample Size Statistics.....	14
3.3.1 <i>Chum Salmon</i> .....	14
3.3.2 <i>Pink Salmon</i> .....	14
3.3.3 <i>Coho Salmon</i> .....	14
3.4 Sea Lice Infestation Rates .....	15
3.4.1 <i>Infestation Rates on Chum Salmon</i> .....	15
3.4.2 <i>Infestation Rates on Pink Salmon</i> .....	18
3.4.3 <i>Infestation Rates of Coho</i> .....	21
3.5 Infestation by Sea Lice Species .....	24
3.5.1 <i>Infestation by Sea Lice Species on Chum Salmon</i> .....	24
3.5.2 <i>Infestation by Sea Lice Species on Pink Salmon</i> .....	26
3.5.3 <i>Infestation by Sea Lice Species on Coho Salmon</i> .....	28
<b>4.0 Conclusions .....</b>	<b>30</b>
<b>5.0 References .....</b>	<b>32</b>
<b>Appendix I – Field Data .....</b>	<b>I</b>
<b>Appendix II – Capture and Collection Sample Totals .....</b>	<b>III</b>
<b>Appendix III – Sea Lice Analysis Data .....</b>	<b>V</b>
<b>Appendix IV - 2016 – 2022 Comparisons .....</b>	<b>XVIII</b>

## List of Figures

Figure 1:	An overview map showing the location of the Broughton Archipelago northeast of Port McNeill, BC. ....	2
Figure 2:	The approximate locations of beach seine sites (red stars) in the Broughton Archipelago. ....	5
Figure 3:	The number of sea lice per chum salmon specimen graphed as a percentage of the total chum sample population collected in the Broughton Archipelago in 2022. ....	16
Figure 4:	The number of sea lice per pink salmon specimen graphed as a percentage of the total pink salmon sample population collected in the Broughton Archipelago in 2022.....	19
Figure 5:	The number of sea lice per coho salmon specimen graphed as a percentage of the total coho salmon sample population collected in the Broughton Archipelago in 2022.....	22

## List of Tables

Table 1:	The name and location of the beach seine sampling sites where fish were collected for sea lice analysis in the Broughton Archipelago in 2022. ....	4
Table 2:	Surface water quality parameters collected at beach seine sites in the Broughton Archipelago in 2022. ....	10
Table 3:	One meter water quality parameters collected at beach seine sites in the Broughton Archipelago in 2022. ....	11
Table 4:	The total of collected individuals of each fish species captured in the Broughton Archipelago, BC during sampling periods in 2022, and the percentage of the total capture population that they represent. ....	12
Table 5:	The number of captured fish (Capture Total) and the number of individual fish collected (Sample Total) from sample sites in the Broughton Archipelago, BC in 2022. ....	13
Table 6:	Average weights and lengths summarized by month of chum, pink and coho salmon collected in the Broughton Archipelago in 2022.....	14
Table 7:	Results of analysis for sea lice infestation on salmonid smolts collected by beach seine in the Broughton Archipelago, BC in 2022.....	15
Table 8:	The number of sea lice, prevalence, abundance, and intensity of infestation on chum salmon collected in the Broughton Archipelago in 2022 summarized by site. Individual sites that did not have any chum captured during either of the sample periods were excluded. ....	17
Table 9:	The number of sea lice, prevalence, abundance, and intensity of infestation on pink salmon collected in the Broughton Archipelago in 2022 summarized by site. Individual sites that did not have any pink captured during either of the sample periods were excluded. ....	20
Table 10:	The number of sea lice, prevalence, abundance, and intensity of infestation on coho salmon collected in the Broughton Archipelago in 2022 summarized by site. Individual sites that did not have any coho captured during either of the sample periods were excluded. ....	23
Table 11:	The number of sea lice in each life stage by species identified on the chum salmon sample population from the Broughton Archipelago in 2022. LEP = <i>Lepeophtheirus salmonis</i> CAL = <i>Caligus clemensi</i> .....	24
Table 12:	The species of sea lice found on chum salmon collected in the Broughton Archipelago in 2022 summarized by site. Sites with a total capture of more than 10 chum salmon are shown. Individual sites that did not have any chum captured during either of the sample periods were excluded. LEP = <i>Lepeophtheirus salmonis</i> CAL = <i>Caligus clemensi</i> .....	25

Table 13:	The number of sea lice in each life stage by species identified on the pink salmon sample population from the Broughton Archipelago in 2022. LEP = <i>Lepeophtheirus salmonis</i> CAL = <i>Caligus clemensi</i> .....	26
Table 14:	The species of sea lice found on pink salmon collected in the Broughton Archipelago in 2022 summarized by site. Sites with a total capture of more than 10 pink salmon are shown. Individual sites that did not have any pink captured during either of the sample periods were excluded. LEP = <i>Lepeophtheirus salmonis</i> CAL = <i>Caligus clemensi</i> .....	27
Table 15:	The number of sea lice in each life stage by species identified on the coho salmon sample population from the Broughton Archipelago in 2022. LEP = <i>Lepeophtheirus salmonis</i> CAL = <i>Caligus clemensi</i> .....	28
Table 16:	The species of sea lice found on coho salmon collected in the Broughton Archipelago in 2022 summarized by site. Individual sites that did not have any coho captured during either of the sample periods were excluded. LEP = <i>Lepeophtheirus salmonis</i> CAL = <i>Caligus clemensi</i> .....	29



## 1.0 Introduction

During the spring of 2022, Mainstream Biological Consulting conducted beach seine sampling at sites in the Broughton Archipelago, BC to capture wild juvenile salmon (Figure 1). Sampling was completed on behalf of MOWI Canada West and Cermaq Canada. Sample collection occurred on April 26, 27, 28 and May 25, 26, 27, 2022. These dates were selected to roughly coincide with estimated peak outmigration period of juvenile salmonids.

Parasitic copepods from the family Caligidae (sea lice) found in the coastal waters of British Columbia are divided into two genera: *Lepeophtheirus* and *Caligus*. Eleven species of *Lepeophtheirus* have been identified infesting fish in the Pacific Ocean, while only one species of *Caligus* (*Caligus clemensi*) has been identified (Margolis and Arthur 1979; McDonald and Margolis, 1995). *Caligus clemensi* infest an extremely wide range of natural hosts in the marine environment including salmonids and non-salmonids; while *L. salmonis* natural hosts on the Pacific coast have been found to include Pacific salmon, threespine stickleback and Pacific herring. *Lepeophtheirus spp.* sea lice found on salmonid specimens were assumed to be *L. salmonis* due to the lack of documented infestations of Pacific salmon by other *Lepeophtheirus* lice species (Jones and Nemec, 2004).

Both these Caligidae genera have similar life histories and developmental stages (Kabata, 1972; Johnson and Albright, 1991a). Sea lice hatch from eggs and go through two free-swimming naupili stages before developing into an infectious free-swimming copepodid. At this point, the sea lice attach to their host and develop through several chalimus stages. The chalimus are non-motile and attach to their host by a frontal filament. The final chalimus stage terminates as the sea lice become motile and detach from their host. The sea lice move freely on the fish as they develop through a pre-adult stage before becoming reproductively viable adults.

Water temperature and salinity are two environmental variables that influence sea lice development, growth, survival, and reproductive rate. In British Columbia, surface seawater temperatures range from approximately 6 °C to 13 °C. Research on sea lice abundance conducted in the Broughton Archipelago and elsewhere on the coast of British Columbia indicates that surface water temperature during the winter months does not appear to hinder the seasonal abundance of *L. salmonis* (Saksida et al. 2007a, b). The rate of development and the generation times for *C. elongates* are strongly temperature dependent (Tully 1992) and although this research has not been conducted, similar relationships with temperature are to be expected for *C. clemensi* (Jones and Johnson, 2015). Survival and development of *L. salmonis* is optimal in high salinity seawater. Under laboratory conditions copepodid survival was limited to conditions where salinity was greater than 10 ppt (Johnson and Albright, 1991b).

This data summary report documents the observed sea lice infestation rates on retained juvenile salmonids collected in the Broughton Archipelago in 2022.



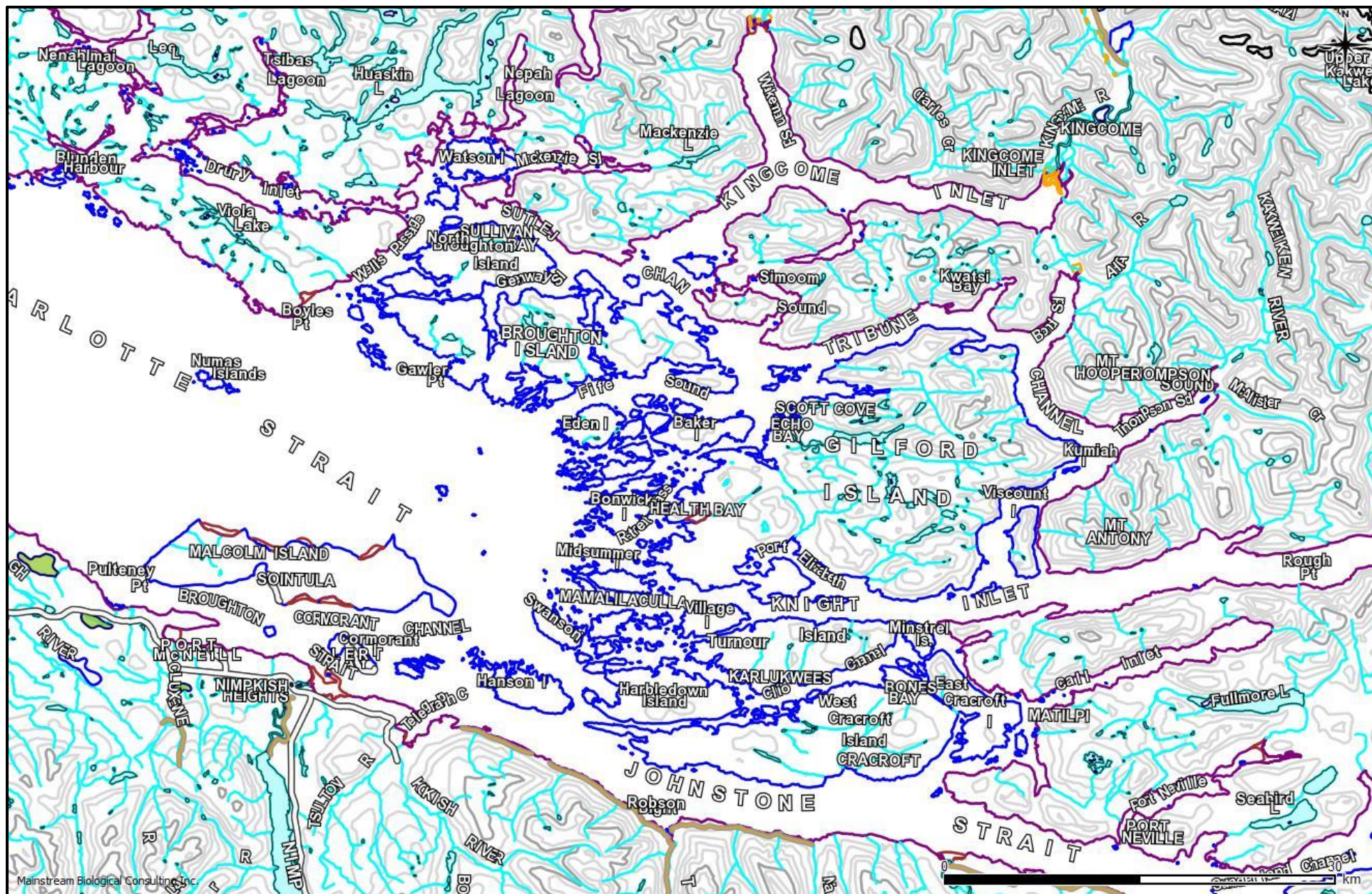


Figure 1: An overview map showing the location of the Broughton Archipelago northeast of Port McNeill, BC.



## **2.0 Methods**

The fish inspected for sea lice infestation were collected from sampling sites in the Broughton Archipelago, BC adapted from a series of sites originally sampled in 2010-2012 (Figure 2). For the 2022 sampling year, sites were chosen based on their locations relative to existing aquaculture sites in the area operated by MOWI Canada West and Cermaq Canada, as well as on consultation with local First Nations. Sampling was completed at 45 sites

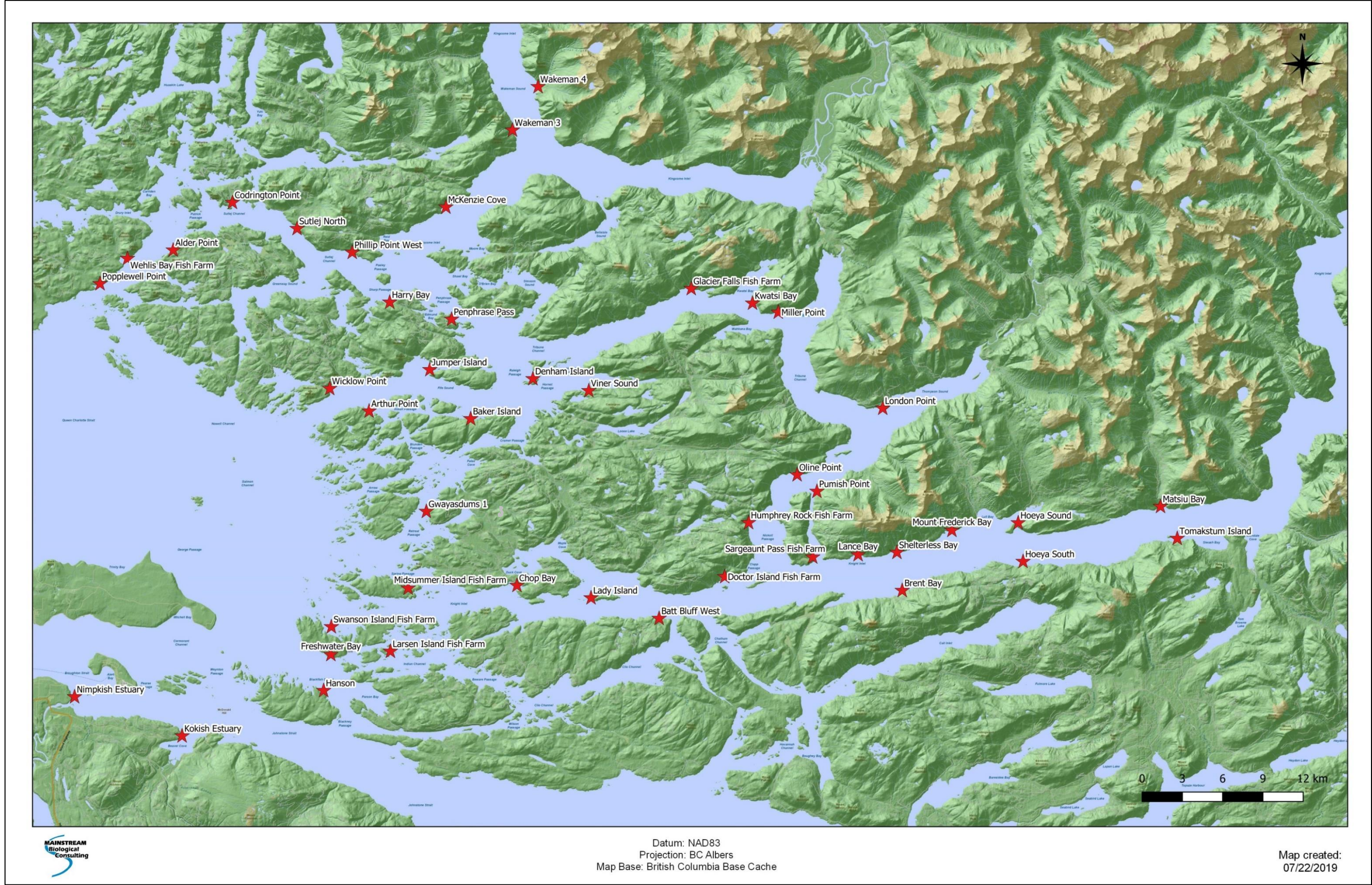
### **2.1 Site Locations**

The approximate locations of the sampling sites are shown in Figure 2. GPS coordinates collected in the field for the sites are presented in Table 1 as well as the dates when sampling was completed at each site.

Table 1: The name and location of the beach seine sampling sites where fish were collected for sea lice analysis in the Broughton Archipelago in 2022.

Site Name	Sampled April 26-28	Sampled May 25-27	Latitude	Longitude
Alder Point	✓	✓	50 52.354	126 52.430
Arthur Point	✓	✓	50 45.976	126 39.898
Baker Island	✓	✓	51 45.714	126 33.461
Batt Bluff West	✓	✓	50 37.676	126 22.971
Brent Bay	✓	✓	50 38.879	126 06.102
Chop Bay	✓	✓	50 39.048	126 30.429
Codrington Point	✓	✓	50 54.292	126 48.714
Denham Island	✓	✓	50 47.314	126 29.517
Doctor Islets	✓	✓	50 39.378	126 17.233
Freshwater Bay	✓	✓	50 36.197	126 42.102
Glacier Falls Fish Farm	✓	✓	50 50.952	126 19.467
Gwayasdums	✓	✓	50 42.235	126 35.561
Hanson Island	✓	✓	50 34.551	126 43.290
Harry Bay	✓	✓	50 50.342	126 38.638
Hoeya Sound	✓	✓	50 41.601	125 58.730
Hoeya South	✓	✓	50 39.865	125 58.870
Humphrey Rock	✓	✓	50 41.615	126 15.786
Jumper Island	✓	✓	50 47.667	126 36.033
Kokish Estuary	✓	✓	50 32.930	126 51.420
Kwatsi Point	✓	✓	50 50.416	126 15.577
Lady Islets	✓	✓	50 38.581	126 25.742
Lance Bay	✓	✓	50 40.324	126 09.127
Larsen Island Fish Farm	✓	✓	50 36.331	126 38.343
London Point	✓	✓	50 46.190	126 07.319
Matsui	✓	✓	50 42.259	125 49.700
McKenzie Cove	✓	✓	50 54.175	126 35.137
Midsummer Island Fish Farm (Potts Bay)	✓	✓	50 38.863	126 37.310
Miller Point	✓	✓	50 50.033	126 13.767
Mount Frederick	✓	✓	50 41.349	126 02.808
Nimpkish Estuary	✓	✓	50 33.588	126 56.688
Oline Point	✓	✓	50 43.530	126 12.713
Penphrase Pass	✓	✓	50 49.691	126 39.680
Phillip Point West	✓	✓	50 52.330	126 41.065
Poppelwell Point	✓	✓	50 50.955	126 57.049
Pumish Point	✓	✓	50 42.869	126 11.464
Sargeaunt Pass	✓	✓	50 40.221	126 11.732
Shelterless Point	✓	✓	50 40.418	126 06.432
Sutlej North	✓	✓	50 53.278	126 44.567
Swanson Island Fish Farm	✓	✓	50 37.240	126 42.035
Tomakstum Island	✓	✓	50 40.946	125 48.689
Viner Sound	✓	✓	50 46.827	126 26.070
Wakeman 3	✓	✓	50 59.012	126 29.318
Wakeman 4	✓	✓	50 57.328	126 30.848
Whelis Bay Fish Farm	✓	✓	50 51.985	126 55.239
Wicklow Point	✓	✓	50 46.831	126 42.296







## 2.2 Field Procedures

Procedures used by Mainstream Biological Consulting during 2022 sampling were adapted from procedures for beach seining, fish collection and field data recording utilized by the Department of Fisheries and Oceans (DFO).

An 18 ft Boston Whaler powered by a 70 horsepower outboard motor was used to access the beach seine sites. A 150 ft (45.7 m) long by 12 ft (3.7 m) deep beach seine net was used to capture specimens. The net was constructed in three 50 ft (15.2 m) sections, with the centre bunt section consisting of one-quarter inch diameter diamond mesh, and two side panels (wings) consisting of half-inch diameter diamond mesh. Floats were attached every 30 cm along the top-line and a lead line provided weight along the bottom of the net.

A three person crew conducted the beach seine sets. All beaches were approached slowly by boat and one crewmember was put ashore with one end of the net towline. The onshore crewmember held the towline at one side of the sample site, while the second crewmember ensured the net deployed smoothly off the bow or side of the boat as the third crewmember backed the boat in a wide semicircle towards the opposite side of the sample site. When the net was fully deployed, the second crewmember stepped into the shallow water with the towline or tossed it to the awaiting crewmember on shore. A slow retrieval of the net began immediately.

As the net was slowly retrieved, surface and one meter water quality data was collected for water salinity, temperature and dissolved oxygen using a YSI Pro Quatro meter.

Crewmembers retrieved the net evenly from opposite ends, ensuring that the lead line remained as close to the bottom as possible. Retrieved netting was piled on the beach above the water level. As the retrieval reached the net bunt, the lead line was retrieved at a faster rate than the floats to allow the netting of the bunt to form a bag under any captured fish. The lead line was then pulled up onto the beach above the water level. One crewmember worked their way around the outside of the net in the shallow water to ensure the floats stayed above the surface of the water. In this manner a small, shallow bag formed from the bunt of the net contained the captured fish in the water so that they could be sampled.

The third crew member anchored the boat and the entire crew participated in the collection of individual fish from the bunt to ensure that captured fish remained in the net for as short a period of time as possible. The net was manipulated as necessary in response to changing tides to ensure the captured fish remained in sufficient water to minimize contact with the net or with other fish.

Where possible, a total of 15 individuals from each target species were retained for sea lice infestation analysis. If less than 15 individuals of a target species were captured, all the captured fish were retained. Individual fish were randomly “swam” into an appropriately sized Whirl-Pak bag. Handling of fish was kept to a minimum.

When all the fish for retention were collected, a total catch number for each species was recorded. The fish remaining in the net were counted out of the seine net, or an estimate of the remaining fish was made (estimates were used when it appeared that more than 500 individuals from any given species remained in the net). The total of fish remaining in the net was added to the number of retained individuals to calculate a total capture number for a given species.

A standardized field form was used to record the following information for each beach seine set:

- Site name;
- Date;
- Time at the end of the individual fish collection;
- Comments on weather and oceanic conditions;
- Total capture and retained fish numbers for each specimen group;
- Water temperature (°C), salinity (ppt), and dissolved oxygen (mg/L) to one decimal place;
- GPS coordinates; and
- The number of salmonid mortalities

The retained fish from each site were packaged separately in re-sealable bags and labelled with the site name, the date and sample numbers and species. Site sample bags were stored in a cooler with ice packs. The sample bags were transferred to a freezer on the support boat as soon as possible.

Following each set the net was reloaded onto the bow of the boat. Crewmembers scanned the net for obvious holes, which were repaired immediately if found. Sampling procedures were repeated at each sample site.

## 2.3 Laboratory Procedures

Collected sample fish were frozen and delivered to the Center for Aquatic Health Sciences (CAHS) for laboratory analysis. Sea lice observed on the individual fish specimens during laboratory analysis were identified as either non-motile chalimus, or motile pre-adults and adults. Lice were identified as one of two chalimus stages for *Lepeophtheirus salmonis* (Hamre et al., 2013) or four chalimus stages for *Caligus clemensi*. Motile lice, either pre-adults or adults, were identified as either *Lepeophtheirus salmonis* or *Caligus clemensi* and the sex of the louse was determined. Sea lice infestation data was tabulated by CAHS and provided to Mainstream Biological Consulting for reporting.

Data provided by CAHS also included measured fork length in millimetres and weight (recorded to the nearest tenth of a gram). Lengths and weights were recorded with the specimen's corresponding sea lice analysis results.

## 2.4 Data Analysis

Surface and one meter water quality data collected for temperature, salinity and dissolved oxygen was summarized to report the minimum and maximum values as well as the calculated averages for each sample period.

Beach seine fish sample composition was summarized by species and site for each sampling period. The recorded fork lengths and weights of the juvenile chum, pink and coho salmon sample populations were summarized to present minimum and maximum values as well as calculated averages. Sea lice infestation rates, including the number of infested fish and the number of sea lice identified, were determined for the sample

population. Prevalence, as defined as the number of host fish found to have one or more sea lice compared to the total number of host fish examined, was determined for the sample population and for chum, pink and coho salmon. Abundance, as defined as the total number of sea lice observed compared to the total number of host fish examined, was also determined for the sample population and chum, pink and coho salmon. The intensity of sea lice infestation, as described by the number of sea lice found on a single salmon was summarized. Average intensity was calculated by dividing the total number of sea lice identified by the number of infested fish.

Statistical analysis of the spatial and temporal distribution of sea lice was not conducted. Spatial and temporal analysis has been limited to the simple presentation and discussion of the number of sea lice found on fish specimens collected from each site during each of the sampling events.



### 3.0 Results

The following sections outline results of beach seine collection and subsequent sea lice infestation analysis of juvenile salmonids collected from the Broughton Archipelago, BC, in 2022. Water quality field data is presented in Appendix I, beach seine fish capture data is included in Appendix II and data on the sample population including sea lice lab analysis results provided by CAHS are in Appendix III.

#### 3.1 Water Quality Parameters

Surface measurements of water temperature, salinity and dissolved oxygen data collected during 2022 beach seining are presented in Table 2. The field data recorded at each site is included in Appendix I.

Recorded surface water temperatures ranged from a low of 7.8 °C recorded at Brent Bay in April 2022, to a high of 11.8°C recorded at Phillip Point West in May 2022 (Table 2; Appendix I). Calculated average surface water temperatures increased from 8.5 °C in April 2022, to 10.2°C in May 2022.

Recorded surface water salinity ranged from a low of 6.0 ppt recorded at Wakeman 4 in May 2022, to a high of 31.3 ppt recorded at Hanson Island and Midsummer Island in May, 2022 (Table 2; Appendix I). The calculated weekly average surface water salinity decreased during the sampling period from 27.8 ppt in April 2022 to 24.9 ppt in May, 2022.

Recorded surface dissolved oxygen ranged from a low of 7.9 mg/ L recorded at Freshwater Bay in April 2022, to a high of 13.6 mg/ L recorded at London Point in April 2022 (Table 2; Appendix I). The calculated weekly average surface dissolved oxygen decreased slightly during the sampling period from 11.1 mg/ L in April 2022 to 11.0 mg/L in May 2022.

Recorded one meter water temperatures ranged from a low of 7.8 °C recorded at Brent Bay and Swanson Island in April, 2022, to a high of 11.5 °C recorded at Codrington Point and Penphrase Pass in May 2022 (Table 3; Appendix I). Calculated average one meter water temperatures increased from 8.3 °C in April 2022, to 9.9°C in May 2022.

Recorded one meter water salinity ranged from a low of 11.2 ppt recorded at Wakeman 3 in May 2022, to a high of 31.3 ppt recorded at Hanson Island and Midsummer Island in May 2022 (Table 3; Appendix I). The calculated weekly average one meter water salinity decreased during the sampling period from 28.6 ppt in April 2022 to 26.2 ppt in May 2022.

Recorded one meter dissolved oxygen ranged from a low of 8.2 mg/ L recorded at Midsummer Island in April 2022, to a high of 13.5 mg/ L recorded at Harry Bay in April 2022 (Table 3; Appendix I). The calculated weekly average one meter dissolved oxygen decreased slightly during the sampling period from 11.1 mg/ L in April 2022 to 10.9 mg/L in May 2022.

Table 2: Surface water quality parameters collected at beach seine sites in the Broughton Archipelago in 2022.

Site Name	April 26-28, 2022			May 25-27, 2022		
	Salinity (ppt)	Temp. (°C)	DO (mg/L)	Salinity (ppt)	Temp. (°C)	DO (mg/L)
Alder Point	30.1	8.3	9.1	28.2	9.7	9.3
Arthur Point	30.8	9.0	11.4	30.3	9.9	12.3
Baker Island	29.0	9.8	12.7	23.7	11.7	11.4
Batt Bluff West	29.7	8.1	11.0	30.0	8.9	10.3
Brent Bay	28.9	7.8	11.0	29.5	9.0	10.2
Chop Bay	30.1	8.2	10.4	30.5	9.1	10.3
Codrington Point	27.7	8.7	11.4	17.6	11.5	11.8
Denham Island	29.3	9.1	11.5	25.3	11.2	11.3
Doctor Islets	28.9	8.2	11.6	28.6	9.7	11.6
Freshwater Bay	30.2	8.2	7.9	30.5	9.0	9.3
Glacier Falls Fish Farm	30.2	8.2	11.1	28.5	9.9	10.6
Gwayasdums 1	30.8	9.1	10.8	30.7	10.4	10.9
Hanson Island	30.8	8.0	8.0	31.3	8.6	8.7
Harry Bay	23.4	9.1	12.8	15.9	11.4	11.7
Hoeya Sound	27.7	8.0	11.3	23.0	10.1	12.1
Hoeya South	26.7	7.9	11.3	24.1	10.2	11.9
Humphrey Rock	28.8	8.2	11.8	28.9	9.8	11.6
Jumper Island	30.1	10.7	12.2	27.4	11.2	11.8
Kokish Estuary	31.1	8.1	9.6	13.6	10.0	11.1
Kwatsi Point	30.0	8.3	12.3	28.7	10.0	10.5
Lady Islets	29.7	8.7	11.9	30.0	10.1	10.6
Lance Bay	26.0	8.0	12.5	27.7	10.5	11.8
Larsen Island Fish Farm	30.8	8.2	8.7	31.1	9.0	9.2
London Point	27.0	8.0	13.6	21.9	9.4	11.2
Matsui	26.6	8.1	11.6	18.9	11.0	11.7
McKenzie Cove	21.3	9.2	13.0	13.0	10.7	11.7
Midsummer Island Fish Farm (Potts Bay)	31.1	7.9	8.4	31.3	9.0	10.7
Miller Point	28.3	9.4	12.0	26.6	10.1	11.3
Mount Frederick	26.6	8.1	11.4	25.8	10.0	11.8
Nimpkish Estuary	20.8	8.9	11.5	26.0	11.6	10.8
Oline Point	29.0	8.1	11.4	28.5	9.8	11.6
Penphrase Pass	25.8	9.4	12.4	21.6	11.7	11.4
Phillip Point West	22.4	8.5	11.8	16.8	11.8	10.4
Poppelwell Point	30.1	8.0	8.9	28.3	9.7	10.0
Pumish Point	29.3	8.1	11.4	22.0	9.6	12.0
Sargeaunt Pass	25.7	8.3	11.2	27.6	10.0	11.8
Shelterless Point	27.3	8.2	12.2	26.8	10.7	12.5
Sutlej North	26.0	8.9	12.0	17.2	11.4	10.6
Swanson Island Fish Farm	31.1	7.9	8.5	31.2	8.5	8.9
Tomakstum Island	27.3	7.9	9.2	21.2	10.6	9.1
Viner Sound	28.5	8.8	12.5	27.8	10.7	11.6
Wakeman 3	19.6	9.0	12.1	10.8	10.8	11.7
Wakeman 4	14.5	8.7	12.1	6.0	10.0	12.5
Whelis Bay Fish Farm	30.1	8.2	8.8	28.4	9.6	10.0
Wicklow Point	30.5	8.5	11.9	29.0	10.0	11.7
Average	27.8	8.5	11.1	24.9	10.2	11.0

Table 3: One meter water quality parameters collected at beach seine sites in the Broughton Archipelago in 2022.

Site Name	April 26-28, 2022			May 25-27, 2022		
	Salinity (ppt)	Temp. (°C)	DO (mg/L)	Salinity (ppt)	Temp. (°C)	DO (mg/L)
Alder Point	30.1	8.3	9.1	28.2	9.7	9.3
Arthur Point	31.0	8.2	10.7	30.9	9.0	10.7
Baker Island				29.4	10.0	10.9
Batt Bluff West	29.9	8.1	11.1	30.2	8.9	10.1
Brent Bay	29.0	7.8	11.5	29.5	9.0	10.1
Chop Bay	30.3	8.2	10.7	30.6	9.1	9.9
Codrington Point	28.0	8.7	12.2	17.6	11.5	11.8
Denham Island						
Doctor Islets	29.1	8.2	11.8	28.9	9.4	11.4
Freshwater Bay	31.2	8.0	8.3			
Glacier Falls Fish Farm	30.3	8.1	10.9	28.6	9.8	10.6
Gwayasdums 1	31.1	8.9	12.1	30.7	10.4	11.2
Hanson Island				31.3	8.6	8.5
Harry Bay	24.4	9.3	13.5	15.9	11.4	11.8
Hoeya Sound	28.5	8.0	11.4	25.2	10.2	12.0
Hoeya South	27.4	7.9	11.4	24.5	10.1	11.8
Humphrey Rock	28.8	8.2	11.7	29.0	9.7	11.8
Jumper Island						
Kokish Estuary	31.1	8.0	9.0			
Kwatsi Point	30.0	8.2	11.4	28.6	9.9	10.2
Lady Islets	29.6	8.7	12.4	30.0	9.9	10.5
Lance Bay	27.4	8.1	12.8	27.7	10.3	12.0
Larsen Island Fish Farm	30.8	8.2	9.3	31.1	9.0	9.3
London Point	27.7	8.0	13.1	26.8	9.5	10.8
Matsui	26.8	8.1	12.0	19.3	10.9	11.6
McKenzie Cove	21.7	9.2	13.0	13.1	10.7	11.7
Midsummer Island Fish Farm (Potts Bay)	31.1	8.0	8.2	31.3	8.8	10.2
Miller Point	29.0	8.7	11.9	27.6	9.9	10.7
Mount Frederick	29.2	8.1	9.8	26.6	9.7	11.3
Nimpkish Estuary						
Oline Point	28.9	8.1	11.4	28.5	9.7	11.5
Penphrase Pass	25.8	9.2	11.9	23.5	11.5	10.8
Phillip Point West						
Poppelwell Point	30.1	8.0	8.6	28.3	9.6	9.9
Pumish Point	29.4	8.1	11.4	28.8	9.6	11.5
Sargeaunt Pass				28.0	10.0	11.8
Shelterless Point	27.8	8.0	11.8	27.2	10.2	12.7
Sutlej North	26.5	9.0	12.5	18.0	11.4	10.6
Swanson Island Fish Farm	31.1	7.8	8.7	31.2	8.5	8.7
Tomakstum Island						
Viner Sound	29.8	8.5	12.6	28.5	10.3	11.5
Wakeman 3				11.2	11.0	11.7
Wakeman 4	15.3	8.8	11.7	13.3	10.6	12.3
Whelis Bay Fish Farm	30.1	8.1	8.6	28.4	9.6	10.1
Wicklow Point	30.5	8.3	11.7	29.6	10.0	11.7
Average	28.6	8.3	11.1	26.2	9.9	10.9

### 3.2 Fish Sample Composition

A total of 11588 fish were captured during beach seine sampling conducted in the Broughton Archipelago in 2022. Of those, 708 individual fish (6.1 %) were collected as sample specimens and underwent analysis for sea lice infestation (Table 4). The collection totals and percentage for each species are presented in Table 4. Pink salmon were the most common species captured during sampling in 2022. Of the 7755 pink salmon captured, 263 individuals (3.4 %) were retained and underwent lab analysis. Of the 3559 chum salmon captured, 330 individuals (9.3 %) were retained and underwent lab analysis. Of the 274 coho salmon captured, 115 individuals (42.0 %) were retained and underwent lab analysis. No chinook salmon, sockeye salmon, or Atlantic salmon were captured during sampling in 2022.

A summary of the total number of fish captured and collected as specimens at each site over the collection period can be found in Table 5. Totals of fish captured and collected specimens at each site over the entire collection period can be found in Appendix II. There were 11 sites where no fish were captured during 2022 sampling (Table 5).

Table 4: The total of collected individuals of each fish species captured in the Broughton Archipelago, BC during sampling periods in 2022, and the percentage of the total capture population that they represent.

Common Name	Capture Totals (% of total capture population)	Collection Totals	Collection %
chum salmon	3559 (30.7 %)	330	9.3%
pink salmon	7755 (66.9 %)	263	3.4%
coho salmon	274 (2.4 %)	115	42.0%
<b>All species</b>	<b>11588</b>	<b>708</b>	<b>6.1%</b>

Table 5: The number of captured fish (Capture Total) and the number of individual fish collected (Sample Total) from sample sites in the Broughton Archipelago, BC in 2022.

Site Name	Pink		Chum		Coho		Total	
	Capture Total	Sample Total	Capture Total	Sample Total	Capture Total	Sample Total	Capture Total	Sample Total
Alder Point	0	0	0	0	0	0	0	0
Arthur Point	0	0	6	6	0	0	6	6
Baker Island	253	30	652	31	0	0	905	61
Batt Bluff West	1	1	0	0	0	0	1	1
Brent Bay	0	0	1	1	5	5	6	6
Chop Bay	480	16	55	14	0	0	535	30
Codrington Point	45	15	76	16	4	4	125	35
Denham Island	453	17	396	31	1	1	850	49
Doctor Island Fish Farm	0	0	1	1	0	0	1	1
Freshwater Bay	14	14	2	2	0	0	16	16
Glacier Falls Fish Farm	1100	16	151	15	0	0	1251	31
Gwayasdums	0	0	0	0	0	0	0	0
Hanson Island	420	15	60	15	7	7	487	37
Harry Bay	0	0	0	0	0	0	0	0
Hoeya Sound	0	0	96	19	0	0	96	19
Hoeya South	0	0	0	0	2	2	2	2
Humphrey Rock	0	0	0	0	0	0	0	0
Jumper Island	30	18	61	20	1	1	92	39
Kokish Estuary	0	0	0	0	27	15	27	15
Kwatsi Point	59	15	42	15	0	0	101	30
Lady Island	4032	30	823	30	0	0	4855	60
Lance Bay	0	0	1	1	4	4	5	5
Larsen Island Fish Farm	8	8	0	0	0	0	8	8
London Point	0	0	0	0	73	15	73	15
Matsiu Bay	0	0	0	0	14	14	14	14
McKenzie Cove	5	5	92	15	12	12	109	32
Midsummer Island Fish Farm	31	14	1	1	0	0	32	15
Millar Point	0	0	0	0	0	0	0	0
Mount Frederick Bay	0	0	0	0	0	0	0	0
Nimpkish Estuary	1	1	2	0	65	15	68	16
Oline Point	0	0	0	0	0	0	0	0
Penphrase Pass	750	15	750	15	0	0	1500	30
Phillip Point West	13	13	121	14	0	0	134	27
Poppelwell Point	2	2	0	0	0	0	2	2
Pumish Point	0	0	0	0	0	0	0	0
Sargeaunt Pass	0	0	1	1	3	3	4	4
Shelterless Bay	0	0	0	0	0	0	0	0
Sutlej North	56	16	56	16	1	1	113	33
Swanson Island Fish Farm	0	0	0	0	0	0	0	0
Tomakstum	0	0	0	0	1	1	1	1
Viner Sound	1	1	32	16	0	0	33	17
Wakeman 3	0	0	53	16	54	15	107	31
Wakeman 4	0	0	28	19	0	0	28	19
Wehlis Bay Fish Farm	1	1	0	0	0	0	1	1
Wicklow Point	0	0	0	0	0	0	0	0
TOTAL	7755	263	3559	330	274	115	11588	708

### 3.3 Fish Sample Size Statistics

Summary statistics for the sample population of juvenile salmonids were completed for weight and fork length.

#### 3.3.1 Chum Salmon

The weight of 330 chum smolts collected during the two sampling events in the Broughton Archipelago in 2022 ranged from 0.26 g to 13.79 g and averaged 1.84 g (SD = 2.09). The fork length of the chum smolts ranged from 30 mm to 104 mm and averaged 50 mm (SD = 15). Chum salmon weight and length data was summarized by sampling period which shows an increase in both parameters in the sample population from April to May 2022 (Table 6).

#### 3.3.2 Pink Salmon

The weight of 263 pink smolts collected during the two sampling events in the Broughton Archipelago in 2022 ranged from 0.18 g to 5.90 g and averaged 1.24 g (SD = 1.22). The fork length of the pink smolts ranged from 28 mm to 84 mm and averaged 45 mm (SD = 13). Pink salmon weight and length data was summarized by sampling period which shows the increase in both parameters in the sample population from April to May 2022 (Table 6).

#### 3.3.3 Coho Salmon

The weight of the 115 coho salmon smolts collected during the two sampling events in the Broughton archipelago in 2022 ranged from 1.00 g to 25.23 g and averaged 10.38 g (SD = 4.41). The fork length of the coho salmon smolts ranged from 67 mm to 126 mm and averaged 93 mm (SD = 13). Coho salmon weight and length data was summarized by sampling period which shows the increase in both parameters in the sample population from April to May 2022 (Table 6).

Table 6: Average weights and lengths summarized by month of chum, pink and coho salmon collected in the Broughton Archipelago in 2022.

Species	Average Weight (g)		Average Length (mm)	
	April 26-28	May 25-27	April 26-28	May 25-27
chum	1.00	2.43	43	54
pink	0.57	2.26	38	57
coho	7.57	12.06	85	98

### 3.4 Sea Lice Infestation Rates

The results of the laboratory analysis for the presence of sea lice on the sample population collected in the Broughton Archipelago in 2022 are presented in Table 7. The data recorded for each fish in the sample population during lab analysis is included in Appendix III. A total of 708 samples were collected during sampling in the Broughton Archipelago in 2022. A total of 230 individuals in the sample population were found to be infested with 415 sea lice (Table 7). A total of 122 chum, 87 pink and 21 coho salmon were found to be infested with sea lice. This data reflects the identification of sea lice of either species (*L. salmonis* and *C. clemensi*) on inspected juvenile salmon.

The sea lice prevalence in the sample population collected in the Broughton Archipelago in 2022 was 32.5 % and the abundance was 0.59 (Table 7). Sea lice counts of both species observed (*L. salmonis* and *C. clemensi*) were added together for the prevalence and abundance calculations.

The intensity of sea lice infestation, as defined as the number of sea lice on a single infested salmon, ranged from one louse found on 127 individuals to a maximum of eight lice found on two individuals. The average intensity (1.8) was calculated by dividing the total number of sea lice by the number of infested fish of each species (Table 7).

Table 7: Results of analysis for sea lice infestation on salmonid smolts collected by beach seine in the Broughton Archipelago, BC in 2022.

Species	Sample size (n)	Total number of lice observed	Total number of fish infested	Prevalence (%)	Abundance	Average Intensity
chum	330	219	122	37.0	0.66	1.8
pink	263	149	87	33.1	0.57	1.7
coho	115	47	21	18.3	0.41	2.2
<b>Total</b>	<b>708</b>	<b>415</b>	<b>230</b>	<b>32.5</b>	<b>0.59</b>	<b>1.8</b>

#### 3.4.1 Infestation Rates on Chum Salmon

A total of 122 chum salmon were found to be infested with 219 sea lice (Table 7). The results of the laboratory analysis for sea lice infestation for the chum salmon sample population are presented by site in Table 8. Individual sites that did not have any chum captured during either of the sample periods were excluded.

Sea lice counts of both sea lice species observed (*L. salmonis* and *C. clemensi*) were added together for the presentation of sea lice infestation, prevalence and abundance on the chum salmon sample population (Table 7 and 8). For the chum salmon sample population (n=330), 47 chum salmon were found to be infested with sea lice in April while 75 were found in May (Table 8).

A total of 122 chum salmon were found to be infested with at least one sea louse. The prevalence of sea lice on the chum salmon sample population (n=330) collected in the Broughton Archipelago in 2022 was 37.0 %. Sea lice prevalence on chum salmon was highest during the May sampling period. The highest sea lice prevalence at an individual site (100.0 %) was at Freshwater Bay, and Jumper Island during the May sample period

in 2022. Sea lice prevalence calculated by site for the total chum sample population was highly variable with the lowest prevalence of 0.0 % at Brent Bay, Doctor Island, Lance Bay, Midsummer Island, Seargeaunt Pass, Wakeman 3 and Wakeman 4 and the highest 83.9 % at Baker Island. (Table 8).

A total of 219 sea lice were identified during laboratory analysis of retained chum salmon. The abundance of sea lice on the chum salmon sample population (n=330) collected in the Broughton Archipelago in 2022 was 0.66. Sea lice abundance was calculated by week and by site and is presented in Table 8. Sea lice abundance on chum salmon was highest during the April sampling period (0.69). The highest sea lice abundance at an individual site (2.47) was at Baker Island in April 2022. Sea lice abundance calculated by site for the total chum sample population was also highly variable ranging from 0.00 at Brent Bay, Doctor Island, Lance Bay, Midsummer Island, Seargeaunt Pass, Wakeman 3 and Wakeman 4 to a high of 1.94 at Baker Island (Table 8).

The percentage of the chum salmon sample population with the number of sea lice per sample was graphed and is presented in Figure 3. As shown in the graph, 63.0 % of the chum sample population were not infested with sea lice. For the chum salmon sample population infested with sea lice, 19.7 % were infested with one louse, 10.6 % of the chum salmon sample population were infested with two lice, 3.6 % were infested with three lice, 1.2 % were infested with four lice, 1.5% were infested with five lice, and 0.3 % were infested with 7 (Figure 3).

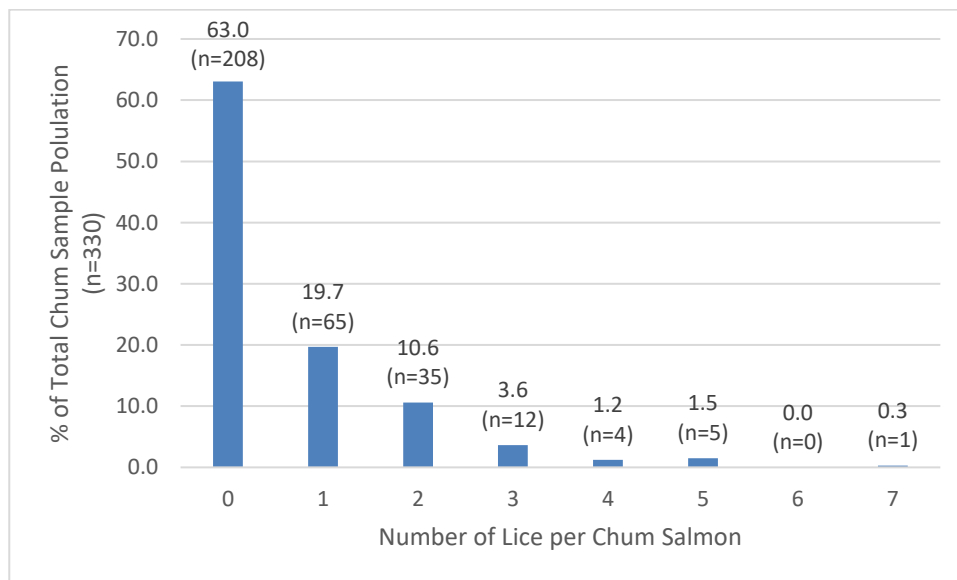


Figure 3: The number of sea lice per chum salmon specimen graphed as a percentage of the total chum sample population collected in the Broughton Archipelago in 2022.



Table 8: The number of sea lice, prevalence, abundance, and intensity of infestation on chum salmon collected in the Broughton Archipelago in 2022 summarized by site. Individual sites that did not have any chum captured during either of the sample periods were excluded.

Site	Sample Week (2022)															Total Chum Sample Population		
	April 26-28							May 25-27										
	# of Chum Analyzed	# of Infested Chum	Average Weight of Chum (g)	# of Lice	Prevalence (%)	Abundance	Average Intensity	# of Chum Analyzed	# of Infested Chum	Average Weight of Chum (g)	# of Lice	Prevalence (%)	Abundance	Average Intensity	Prevalence (%)	Abundance	Average Intensity	
Arthur Point	0	0	-	-	-	-	-	6	4	0.8	5	66.7	0.83	1.3	66.7	0.83	1.3	
Baker Island	15	12	1.55	37	80.0	2.47	3.1	16	14	1.17	23	87.5	1.44	1.6	83.9	1.94	2.3	
Brent Bay	1	0	0.41	0	0.0	0.00	-	0	0	-	-	-	-	-	0.0	0.00	-	
Chop Bay	0	0	-	-	-	-	-	14	9	3.17	14	64.3	1.00	1.6	64.3	1.00	1.6	
Codrington Point	1	0	0.35	0	0.0	0.00	-	15	4	5.13	10	26.7	0.67	2.5	25.0	0.63	2.5	
Denham Island	16	4	0.78	6	25.0	0.38	1.5	15	7	0.75	13	46.7	0.87	1.9	35.5	0.61	1.7	
Doctor Island Fish Farm	1	0	0.32	0	0.0	0.00	-	0	0	-	-	-	-	-	0.0	0.00	-	
Freshwater Bay	1	0	0.6	0	0.0	0.00	-	1	1	1.45	1	100.0	1.00	1.0	50.0	0.50	1.0	
Glacier Falls Fish Farm	1	0	0.32	0	0.0	0.00	-	14	8	1.5	16	57.1	1.14	2.0	53.3	1.07	2.0	
Hanson Island	15	3	1.59	3	20.0	0.20	1.0	0	0	-	-	-	-	-	20.0	0.20	1.0	
Hoeya Sound	4	0	0.43	0	0.0	0.00	-	15	3	1.18	3	20.0	0.20	1.0	15.8	0.16	1.0	
Jumper Island	15	11	1.29	24	73.3	1.60	2.2	5	5	0.45	6	100.0	1.20	1.2	80.0	1.50	1.9	
Kwatsi Point	15	2	0.51	2	13.3	0.13	1.0	0	0	-	-	-	-	-	13.3	0.13	1.0	
Lady Island	15	3	0.43	3	20.0	0.20	1.0	15	9	2.03	20	60.0	1.33	2.2	40.0	0.77	1.9	
Lance Bay	1	0	1.21	0	0.0	0.00	-	0	0	-	-	-	-	-	0.0	0.00	-	
McKenzie Cove	0	0	-	-	-	-	-	15	1	7.76	1	6.7	0.07	1.0	6.7	0.07	1.0	
Midsummer Island Fish Farm	1	0	0.67	0	0.0	0.00	-	0	0	-	-	-	-	-	0.0	0.00	-	
Penphrase Pass	15	10	1.63	16	66.7	1.07	1.6	0	0	-	-	-	-	-	66.7	1.07	1.6	
Phillip Point West	14	2	0.66	2	14.3	0.14	1.0	0	0	-	-	-	-	-	14.3	0.14	1.0	
Sargeaunt Pass	0	0	-	-	-	-	-	1	0	4.66	0	0.0	0.00	-	0.0	0.00	-	
Sutlej North	1	0	0.36	0	0.0	0.00	-	15	4	2.46	6	26.7	0.40	1.5	25.0	0.38	1.5	
Viner Sound	1	0	0.35	0	0.0	0.00	-	15	6	0.98	8	40.0	0.53	1.3	37.5	0.50	1.3	
Wakeman 3	1	0	0.81	0	0.0	0.00	-	15	0	1.34	0	0.0	0.00	-	0.0	0.00	-	
Wakeman 4	1	0	0.46	0	0.0	0.00	-	18	0	2.87	0	0.0	0.00	-	0.0	0.00	-	
Grand Total	135	47	1.42	93	34.8	0.69	2.0	195	75	1.73	126	38.5	0.65	1.7	37.0	0.66	1.8	

### **3.4.2 Infestation Rates on Pink Salmon**

A total of 87 pink salmon were found to be infested with 149 sea lice (Table 6). The results of the laboratory analysis for sea lice infestation for the pink salmon sample population are presented by site in Table 9. Individual sites that did not have any pink captured during either of the sample periods were excluded.

Sea lice counts of both sea lice species observed (*L. salmonis* and *C. clemensi*) were added together for the presentation of sea lice infestation, prevalence and abundance on the pink salmon sample population (Table 7 and 9). For the pink salmon sample population (n=263) 49 pink salmon were found to be infested with sea lice in April while 38 were found in May (Table 9).

A total of 87 pink salmon were found to be infested with at least one sea louse. The prevalence of sea lice on the pink salmon sample population (n=263) collected in the Broughton Archipelago in 2022 was 33.1 %. Sea lice prevalence on pink salmon was highest in May during the 2022 sampling period. The highest sea lice prevalence at an individual site (87.5 %) was at Baker Island in April 2022 (Table 9). Sea lice prevalence calculated by site for the total pink sample population was highly variable ranging from 0.0 % at Batt Bluff West, Freshwater Bay, Larsen Island, McKenzie Cove, Nimpkish Estuary, Poppelwell Point, Viner South, and Wehlis Bay to a high of 76.7 % at Baker Island (Table 9).

A total of 87 sea lice were identified during laboratory analysis of retained pink salmon. The abundance of sea lice on the pink salmon sample population (n=263) collected in the Broughton Archipelago in 2022 was 0.57. Sea lice abundance was calculated by week and by site and is presented in Table 9. Sea lice abundance on pink salmon was highest (0.63) in May 2022. The highest sea lice abundance at an individual site (3.00) was at Jumper Island in May 2022. Sea lice abundance calculated by site for the total pink sample population was also highly variable ranging from 0.00 at Batt Bluff West, Freshwater Bay, Larsen Island, McKenzie Cove, Nimpkish Estuary, Poppelwell Point, Viner South, and Wehlis Bay to a high of 2.17 at Jumper Island (Table 9).

The percentage of the pink salmon sample population with the number of sea lice per sample was graphed and is presented in Figure 4. As shown in the graph, 66.9 % of the pink salmon sample population were not infested with sea lice. For the pink salmon infested with sea lice, 19.4 % were infested with one louse, 8.4 % of the sample population were infested with two, 2.7 % were infested with three, 1.9 % were infested with four, 0.4 % were infested with five and 0.4% were infested with eight (Figure 4).

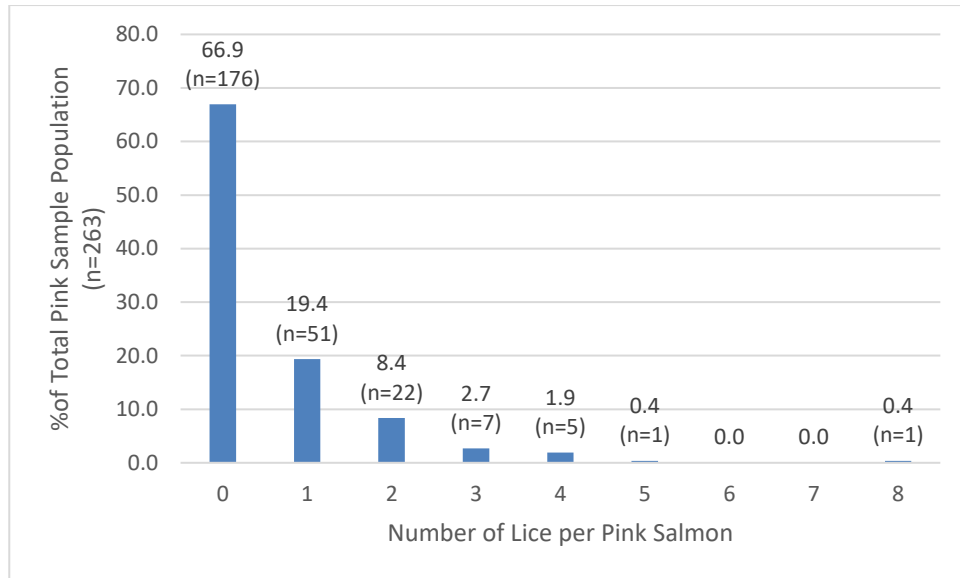


Figure 4: The number of sea lice per pink salmon specimen graphed as a percentage of the total pink salmon sample population collected in the Broughton Archipelago in 2022.

Table 9: The number of sea lice, prevalence, abundance, and intensity of infestation on pink salmon collected in the Broughton Archipelago in 2022 summarized by site. Individual sites that did not have any pink captured during either of the sample periods were excluded.

Site	Sample Week (2022)														Total Pink Sample Population		
	April 26-28							May 25-27							Prevalence (%)	Abundance	Average Intensity
	# of Pink Analyzed	# of Infested Pink	Average Weight of Pink (g)	# of Lice	Prevalence (%)	Abundance	Average Intensity	# of Pink Analyzed	# of Infested Pink	Average Weight of Pink (g)	# of Lice	Prevalence (%)	Abundance	Average Intensity			
Baker Island	16	14	1.17	26	87.5	1.63	1.9	14	9	1.24	16	64.3	1.14	1.8	76.7	1.40	1.8
Batt Bluff West	0	0	-	-	-	-	-	1	0	0.89	0	0.0	0.00	-	0.0	0.00	-
Chop Bay	0	0	-	-	-	-	-	16	3	1.90	6	18.8	0.38	2.0	18.8	0.38	2.0
Codrington Point	0	0	-	-	-	-	-	15	2	3.11	5	13.3	0.33	2.5	13.3	0.33	2.5
Denham Island	14	9	0.63	10	64.3	0.71	1.1	3	2	1.23	2	66.7	0.67	1.0	64.7	0.71	1.1
Freshwater Bay	14	0	0.27	0	0.0	0.00	-	0	0	-	-	-	-	-	0.0	0.00	-
Glacier Falls Fish Farm	0	0	-	-	-	-	-	16	10	1.53	15	62.5	0.94	1.5	62.5	0.94	1.5
Hanson Island	15	2	0.50	2	13.3	0.13	1.0	0	0	-	-	-	-	-	13.3	0.13	1.0
Jumper Island	15	13	0.82	30	86.7	2.00	2.3	3	2	0.86	9	66.7	3.00	4.5	83.3	2.17	2.6
Kwatsi Point	15	2	0.32	3	13.3	0.20	1.5	0	0	-	-	-	-	-	13.3	0.20	1.5
Lady Island	15	1	0.44	2	6.7	0.13	2.0	15	9	2.53	11	60.0	0.73	1.2	36.7	0.43	1.2
Larsen Island Fish Farm	8	0	0.32	0	0.0	0.00	-	0	0	-	-	-	-	-	0.0	0.00	-
McKenzie Cove	0	0	-	-	-	-	-	5	0	5.23	0	0.0	0.00	-	0.0	0.00	-
Midsummer Island Fish Farm	14	3	0.58	5	21.4	0.36	1.7	0	0	-	-	-	-	-	21.4	0.36	1.7
Nimpkish Estuary	1	0	0.38	0	0.0	0.00	-	0	0	-	-	-	-	-	0.0	0.00	-
Penphrase Pass	15	3	0.71	4	20	0.27	1.3	0	0	-	-	-	-	-	20.0	0.27	1.3
Phillip Point West	13	2	0.44	2	15.4	0.15	1.0	0	0	-	-	-	-	-	15.4	0.15	1.0
Poppelwell Point	2	0	0.25	0	0.0	0.00	-	0	0	-	-	-	-	-	0.0	0.00	-
Sutlej North	1	0	0.28	0	0.0	0.00	-	15	1	2.81	1	6.7	0.07	1.0	6.3	0.06	1.0
Viner Sound	0	0	-	-	-	-	-	1	0	3.12	0	0.0	0.00	-	0.0	0.00	-
Wehlis Bay Fish Farm	1	0	0.24	0	0.0	0.00	-	0	0	-	-	-	-	-	0.0	0.00	-
Total	159	49	0.82	84	30.8	0.53	1.7	104	38	1.71	65	36.5	0.63	1.7	33.1	0.57	1.7

### 3.4.3 Infestation Rates of Coho

A total of 115 coho salmon were found to be infested with 47 sea lice (Table 7). The results of the laboratory analysis for sea lice infestation for the coho salmon sample population are presented by site in Table 10. Individual sites that did not have any coho captured during either of the sample periods were excluded.

Sea lice counts of both sea lice species observed (*L. salmonis* and *C. clemensi*) were added together for the presentation of sea lice infestation, prevalence, and abundance on the pink salmon sample population (Table 7 and 10). For the coho salmon sample population (n=115) 13 coho salmon were found to be infested with sea lice in April while 8 were found in May (Table 10).

A total of 21 coho salmon were found to be infested with at least one sea louse. The prevalence of sea lice on the coho salmon sample population (n=115) collected in the Broughton Archipelago in 2022 was 18.3 %. Sea lice prevalence on coho salmon was highest in April during the 2022 sampling period. The highest sea lice prevalence at an individual site (100 %) was at Jumper Island in May 2022 (Table 10). Sea lice prevalence calculated by site for the total coho sample population was highly variable ranging from 0.0% at Denham Island, Hanson Island, Hoeya South, McKenzie Cove, Nimpkish Estuary, Suttlej North, Tomakstum, and Wakeman 3 to a high of 100 % at Jumper Island (Table 10).

A total of 47 sea lice were identified during laboratory analysis of retained coho salmon. The abundance of sea lice on the coho salmon sample population (n=115) collected in the Broughton Archipelago in 2022 was 0.41. Sea lice abundance was calculated by week and by site and is presented in Table 10. Sea lice abundance on coho salmon was highest (0.63) in April 2022. The highest sea lice abundance at an individual site (2.25) was at Lance Bay in May 2022. Sea lice abundance calculated by site for the total coho sample population was also highly variable ranging from 0.00 at Denham Island, Hanson Island, Hoeya South, McKenzie Cove, Nimpkish Estuary, Suttlej North, Tomakstum, and Wakeman 3 to a high of 2.25 at Lance Bay (Table 10).

The percentage of the coho salmon sample population with the number of sea lice per sample was graphed and is presented in Figure 4. As show in the graph, 81.7 % of the coho salmon sample population were not infested with sea lice. For the coho salmon infested with sea lice, 8.7 % were infested with one louse, 10.4 % of the sample population were infested with two, 0.9 % were infested with three, 0.9 % were infested with four, 1.7 % were infested with five and 0.9% were infested with 8 (Figure 5).

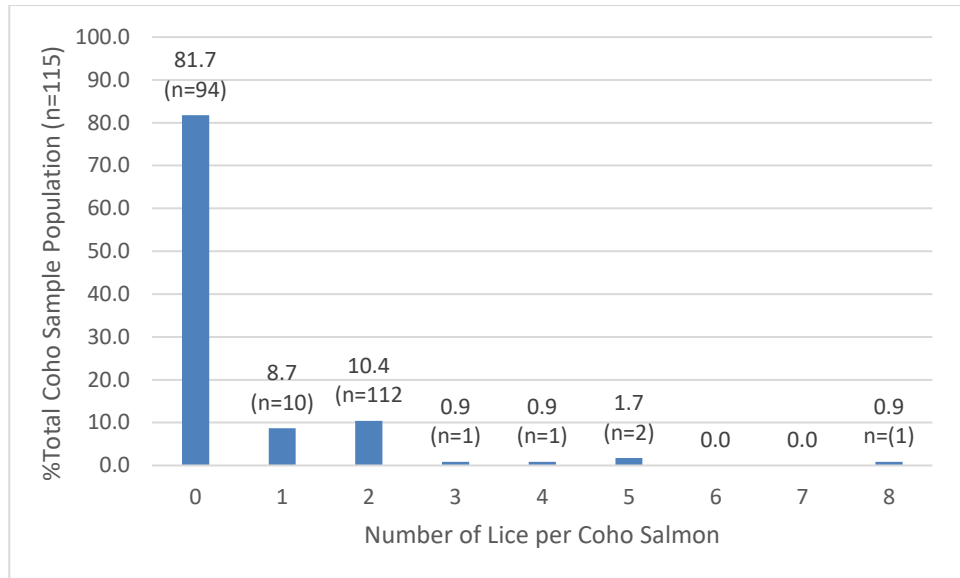


Figure 5: The number of sea lice per coho salmon specimen graphed as a percentage of the total coho salmon sample population collected in the Broughton Archipelago in 2022.

Table 10: The number of sea lice, prevalence, abundance, and intensity of infestation on coho salmon collected in the Broughton Archipelago in 2022 summarized by site. Individual sites that did not have any coho captured during either of the sample periods were excluded.

Site	Sample Week (2022)														Total Coho Sample Population		
	April 26-28							May 25-27							Prevalence (%)	Abundance	Average Intensity
	# of Coho Analyzed	# of Infested Coho	Average Weight of Coho (g)	# of Lice	Prevalence (%)	Abundance	Average Intensity	# of Coho Analyzed	# of Infested Coho	Average Weight of Coho (g)	# of Lice	Prevalence (%)	Abundance	Average Intensity			
Brent Bay	5	3	8.11	10	60.0	2.00	3.3	0	0	-	-	-	-	-	60.0	2.00	3.3
Codrington Point	0	0	-	-	-	-	-	4	2	13.23	6	50.0	1.50	3.0	50.0	1.50	3.0
Denham Island	0	0	-	-	-	-	-	1	0	14.50	0	0.0	0.00	-	0.0	0.00	-
Hanson Island	7	0	10.81	0	0.0	0.00	-	0	0	-	-	-	-	-	0.0	0.00	-
Hoeya South	2	0	5.8	0	0.0	0.00	-	0	0	-	-	-	-	-	0.0	0.00	-
Jumper Island	0	0	-	-	-	-	-	1	1	8.15	2	100.0	2.00	2.0	100.0	2.00	2.0
Kokish Estuary	0	0	-	-	-	-	-	15	2	15.51	2	13.3	0.13	1.0	13.3	0.13	1.0
Lance Bay	0	0	-	-	-	-	-	4	2	13.40	9	50.0	2.25	4.5	50.0	2.25	4.5
London Point	15	9	7.42	16	60.0	1.07	1.8	0	0	-	-	-	-	-	60.0	1.07	1.8
Matsiu Bay	14	1	6.16	1	7.1	0.07	1.0	0	0	-	-	-	-	-	7.1	0.07	1.0
McKenzie Cove	0	0	-	-	-	-	-	12	0	14.86	0	0.0	0.00	-	0.0	0.00	-
Nimpkish Estuary	0	0	-	-	-	-	-	15	0	10.55	0	0.0	0.00	-	0.0	0.00	-
Sargeaunt Pass	0	0	-	-	-	-	-	3	1	12.01	1	33.3	0.33	1.0	33.3	0.33	1.0
Sutlej North	0	0	-	-	-	-	-	1	0	10.24	0	0.0	0.00	-	0.0	0.00	-
Tomakstum	0	0	-	-	-	-	-	1	0	4.87	0	0.0	0.00	-	0.0	0.00	-
Wakeman 3	0	0	-	-	-	-	-	15	0	7.92	0	0.0	0.00	-	0.0	0.00	-
Total	43	13	7.57	27	30.2	0.63	2.1	72	8	12.06	20	11.1	0.28	2.5	18.3	0.41	2.2

### 3.5 Infestation by Sea Lice Species

A total of 196 *Lepeophtheirus salmonis* sea lice of various life stages were identified on 134 individuals and 219 *Caligus clemensi* sea lice were found on 142 individuals analyzed in the lab (Appendix III). There were 46 samples that were infested with both *L. salmonis* and *C. clemensi* sea lice.

#### 3.5.1 Infestation by Sea Lice Species on Chum Salmon

An analysis of the species of sea lice identified on the 330 chum salmon collected in the Broughton Archipelago is presented in Table 11. A total of 116 *Lepeophtheirus salmonis* sea lice of various life stages were identified on 77 juvenile chum salmon and 103 *Caligus clemensi* sea lice were found on 69 of the juvenile chum salmon analyzed in the lab (Appendix III). There were 24 juvenile chum salmon that were infested with both *L. salmonis* and *C. clemensi* sea lice. The sea lice species identified on chum salmon are also presented by site by week in Table 12. Individual sites that did not have any chum captured during either of the sample periods were excluded.

For the chum salmon sample population infested with *Caligus clemensi* sea lice (n=69) there were 46 samples infested with one louse, 16 samples infested with two sea lice, four samples with three lice, two samples with four lice and one sample with five lice. For the chum salmon sample population infested with *Lepeophtheirus salmonis* sea lice (n=77) there were 46 samples infested with one louse, 25 with two lice, five samples were infested with three lice, and one sample with five lice.

Table 11: The number of sea lice in each life stage by species identified on the chum salmon sample population from the Broughton Archipelago in 2022.  
LEP = *Lepeophtheirus salmonis* CAL = *Caligus clemensi*

Life Stage <sup>1</sup>	April 26-28	May 25-27	Total
LEP Co	3	22	25
LEP C1	18	25	43
LEP C2	16	18	34
LEP PAM	1	8	9
LEP PAF	4	0	4
LEP AM	0	1	1
LEP AF	0	0	0
<b>TOTAL LEP</b>	<b>42</b>	<b>74</b>	<b>116</b>
CAL Co	2	7	9
CAL C1	34	30	64
CAL C2	8	5	13
CAL C3	0	7	7
CAL C4	2	2	4
CAL PAM	0	1	1
CAL PAF	1	0	1
CAL AM	4	0	4
CAL AF	0	0	0
<b>TOTAL CAL</b>	<b>51</b>	<b>52</b>	<b>103</b>



Table 12: The species of sea lice found on chum salmon collected in the Broughton Archipelago in 2022 summarized by site. Sites with a total capture of more than 10 chum salmon are shown. Individual sites that did not have any chum captured during either of the sample periods were excluded. LEP = *Lepeophtheirus salmonis* CAL = *Caligus clemensi*

Site	Sample Week (2022)								TOTAL		
	April 26-28				May 25-27						
	# of Chum Analyzed	# of Infested Chum	# of LEP	# of CAL	# of Chum Analyzed	# of Infested Chum	# of LEP	# of CAL	# of Chum Analyzed	# of Infested Chum	# of Lice
Arthur Point	0	0	0	0	6	4	5	0	6	4	5
Baker Island	15	12	21	16	16	14	21	2	31	26	60
Brent Bay	1	0	0	0	0	0	0	0	1	0	0
Chop Bay	0	0	0	0	14	9	4	10	14	9	14
Codrington Point	1	0	0	0	15	4	4	6	16	4	10
Denham Island	16	4	4	2	15	7	10	3	31	11	19
Doctor Island Fish Farm	1	0	0	0	0	0	0	0	1	0	0
Freshwater Bay	1	0	0	0	1	1	0	1	2	1	1
Glacier Falls Fish Farm	1	0	0	0	14	8	11	5	15	8	16
Hanson Island	15	3	2	1	0	0	0	0	15	3	3
Hoeya Sound	4	0	0	0	15	3	3	0	19	3	3
Jumper Island	15	11	9	15	5	5	1	5	20	16	30
Kwatsi Point	15	2	1	1	0	0	0	0	15	2	2
Lady Island	15	3	1	2	15	9	9	11	30	12	23
Lance Bay	1	0	0	0	0	0	0	0	1	0	0
McKenzie Cove	0	0	0	0	15	1	1	0	15	1	1
Midsummer Island Fish Farm	1	0	0	0	0	0	0	0	1	0	0
Penphrase Pass	15	10	4	12	0	0	0	0	15	10	16
Phillip Point West	14	2	0	2	0	0	0	0	14	2	2
Sargeaunt Pass	0	0	0	0	1	0	0	0	1	0	0
Sutlej North	1	0	0	0	15	4	5	1	16	4	6
Viner Sound	1	0	0	0	15	6	0	8	16	6	8
Wakeman 3	1	0	0	0	15	0	0	0	16	0	0
Wakeman 4	1	0	0	0	18	0	0	0	19	0	0
Total	135	47	42	51	195	75	74	52	330	122	219

### 3.5.2 Infestation by Sea Lice Species on Pink Salmon

An analysis of the species of sea lice identified on the 263 pink salmon collected in the Broughton Archipelago is presented in Table 13. A total of 76 *Lepeophtheirus salmonis* sea lice of various life stages were identified on 53 juvenile pink salmon and 73 *Caligus clemensi* sea lice were found on 55 of the juvenile pink salmon analyzed in the lab (Appendix III). There were 21 juvenile pink salmon that were infested with both *L. salmonis* and *C. clemensi* sea lice. The sea lice species identified on pink salmon are also presented by site and week in Table 14. Individual sites that did not have any pink captured during either of the sample periods were excluded.

For the pink salmon sample population infested with *Caligus clemensi* sea lice (n=55) there were 40 samples infested with one louse, 13 samples with two lice, one sample with three lice and one sample with four. For the pink salmon sample population infested with *Lepeophtheirus salmonis* sea lice (n=53) there were 37 samples infested with one louse, 12 samples with two lice, three samples with three lice, and one sample with six lice.

Table 13: The number of sea lice in each life stage by species identified on the pink salmon sample population from the Broughton Archipelago in 2022.  
LEP = *Lepeophtheirus salmonis* CAL = *Caligus clemensi*

Life Stage <sup>1</sup>	April 26-28	May 25-27	Total
LEP Co	16	9	25
LEP C1	21	7	28
LEP C2	0	5	5
LEP PAM	3	8	11
LEP PAF	0	5	5
LEP AM	0	2	2
LEP AF	0	0	0
<b>TOTAL LEP</b>	<b>40</b>	<b>36</b>	<b>76</b>
CAL Co	8	4	12
CAL C1	29	18	47
CAL C2	3	0	3
CAL C3	1	6	7
CAL C4	2	0	2
CAL PAM	0	0	0
CAL PAF	0	0	0
CAL AM	1	1	2
CAL AF	0	0	0
<b>TOTAL CAL</b>	<b>44</b>	<b>29</b>	<b>73</b>

<sup>1</sup> Lice life stage codes: Co = copepodid, C1-4 = chalimus 1-4, PAM = pre-adult male, PAF = pre-adult female, AM = adult male, AF = adult female.

Table 14: The species of sea lice found on pink salmon collected in the Broughton Archipelago in 2022 summarized by site. Sites with a total capture of more than 10 pink salmon are shown. Individual sites that did not have any pink captured during either of the sample periods were excluded. LEP = *Lepeophtheirus salmonis* CAL = *Caligus clemensi*

Site	Sample Week (2022)								TOTAL		
	April 26-28				May 25-27				# of Pink Analyzed	# of Infested Pink	# of Lice
	# of Pink Analyzed	# of Infested Pink	# of LEP	# of CAL	# of Pink Analyzed	# of Infested Pink	# of LEP	# of CAL			
Baker Island	16	14	8	18	14	9	9	7	30	23	42
Batt Bluff West	0	0	0	0	1	0	0	0	1	0	0
Chop Bay	0	0	0	0	16	3	5	1	16	3	6
Codrington Point	0	0	0	0	15	2	0	5	15	2	5
Denham Island	14	9	7	3	3	2	1	1	17	11	12
Freshwater Bay	14	0	0	0	0	0	0	0	14	0	0
Glacier Falls Fish Farm	0	0	0	0	16	10	7	8	16	10	15
Hanson Island	15	2	1	1	0	0	0	0	15	2	2
Jumper Island	15	13	14	16	3	2	6	3	18	15	39
Kwatsi Point	15	2	2	1	0	0	0	0	15	2	3
Lady Island	15	1	2	0	15	9	7	4	30	10	13
Larsen Island Fish Farm	8	0	0	0	0	0	0	0	8	0	0
McKenzie Cove	0	0	0	0	5	0	0	0	5	0	0
Midsummer Island Fish Farm	14	3	4	1	0	0	0	0	14	3	5
Nimpkish Estuary	1	0	0	0	0	0	0	0	1	0	0
Penphrase Pass	15	3	2	2	0	0	0	0	15	3	4
Phillip Point West	13	2	0	2	0	0	0	0	13	2	2
Poppelwell Point	2	0	0	0	0	0	0	0	2	0	0
Sutlej North	1	0	0	0	15	1	1	0	16	1	1
Viner Sound	0	0	0	0	1	0	0	0	1	0	0
Wehlis Bay Fish Farm	1	0	0	0	0	0	0	0	1	0	0
<b>Total</b>	<b>159</b>	<b>49</b>	<b>40</b>	<b>44</b>	<b>104</b>	<b>38</b>	<b>36</b>	<b>29</b>	<b>263</b>	<b>87</b>	<b>149</b>

### 3.5.3 Infestation by Sea Lice Species on Coho Salmon

An analysis of the species of sea lice identified on the 115 coho salmon collected in the Broughton Archipelago is presented in Table 15. A total of four *Lepeophtheirus salmonis* sea lice of various life stages were identified on four juvenile coho salmon and 43 *Caligus clemensi* sea lice were found on 18 of the juvenile coho salmon analyzed in the lab (Appendix III). There was one juvenile coho salmon that was infested with both *L. salmonis* and *C. clemensi* sea lice. The sea lice species identified on coho salmon are also presented by site and week in Table 16. Individual sites that did not have any coho captured during either of the sample periods were excluded.

For the coho salmon sample population infested with *Caligus clemensi* sea lice (n=18) there were seven samples infested with one louse, six samples with two lice, one sample with three lice one sample with four lice, two samples with five lice, and one sample with 7. For the coho salmon sample population infested with *Lepeophtheirus salmonis* sea lice (n=4) all samples were infested with one louse.

Table 15: The number of sea lice in each life stage by species identified on the coho salmon sample population from the Broughton Archipelago in 2022.

LEP = *Lepeophtheirus salmonis* CAL = *Caligus clemensi*

Life Stage <sup>1</sup>	April 26-28	May 25-27	Total
LEP Co	1	0	1
LEP C1	1	0	1
LEP C2	0	1	1
LEP PAM	0	1	1
LEP PAF	0	0	0
LEP AM	0	0	0
LEP AF	0	0	0
<b>TOTAL LEP</b>	<b>2</b>	<b>2</b>	<b>4</b>
CAL Co	5	1	6
CAL C1	9	12	21
CAL C2	4	5	9
CAL C3	5	0	5
CAL C4	1	0	1
CAL PAM	0	0	0
CAL PAF	0	0	0
CAL AM	1	0	1
CAL AF	0	0	0
<b>TOTAL CAL</b>	<b>25</b>	<b>18</b>	<b>43</b>

Table 16: The species of sea lice found on coho salmon collected in the Broughton Archipelago in 2022 summarized by site. Individual sites that did not have any coho captured during either of the sample periods were excluded. LEP = *Lepeophtheirus salmonis* CAL = *Caligus clemensi*

Site	Sample Week (2022)								TOTAL		
	April 26-28				May 25-27						
	# of Coho Analyzed	# of Infested Coho	# of LEP	# of CAL	# of Coho Analyzed	# of Infested Coho	# of LEP	# of CAL	# of Coho Analyzed	# of Infested Coho	# of Lice
Brent Bay	5	3	1	9	0	0	0	0	5	3	10
Codrington Point	0	0	0	0	4	2	1	5	4	2	6
Denham Island	0	0	0	0	1	0	0	0	1	0	0
Hanson Island	7	0	0	0	0	0	0	0	7	0	0
Hoeya South	2	0	0	0	0	0	0	0	2	0	0
Jumper Island	0	0	0	0	1	1	0	2	1	1	2
Kokish Estuary	0	0	0	0	15	2	1	1	15	2	2
Lance Bay	0	0	0	0	4	2	0	9	4	2	9
London Point	15	9	0	16	0	0	0	0	15	9	16
Matsiu Bay	14	1	1	0	0	0	0	0	14	1	1
McKenzie Cove	0	0	0	0	12	0	0	0	12	0	0
Nimpkish Estuary	0	0	0	0	15	0	0	0	15	0	0
Sargeaunt Pass	0	0	0	0	3	1	0	1	3	1	1
Sutlej North	0	0	0	0	1	0	0	0	1	0	0
Tomakstum	0	0	0	0	1	0	0	0	1	0	0
Wakeman 3	0	0	0	0	15	0	0	0	15	0	0
<b>Total</b>	<b>43</b>	<b>13</b>	<b>2</b>	<b>25</b>	<b>72</b>	<b>8</b>	<b>2</b>	<b>18</b>	<b>115</b>	<b>21</b>	<b>47</b>

## 4.0 Conclusions

This report presents the data from the seventh consecutive year of wild juvenile salmonid beach seining and sea lice analysis conducted for ASC certification purposes in the Broughton Archipelago, BC. This report is limited to the summary and presentation of the data collected in 2022 on behalf of MOWI Canada West and Cermaq Canada. A tabular comparison of sea lice infestation data for chum and pink salmon from 2016 through 2022 is presented in Appendix IV.

In 2022, a total of 708 individual samples underwent lab analysis for sea lice infestation including 330 chum salmon, 263 pink salmon, and 115 coho salmon. From the total sample population 230 individuals were infested with 415 sea lice. The calculated sea lice prevalence for the total sample population was 32.5 %, the sea lice abundance was 0.59 and the average intensity was 1.8 for the sample population collected in the Broughton Archipelago in 2022.

A total of 3559 chum salmon were captured, representing 30.7 % of all captured samples. Of the 3559 chum captured, 330 were kept for lab analysis for sea lice infestation. A total of 122 chum smolts were found to be infested with 219 lice resulting in a calculated sea lice prevalence of 37.0, an abundance of 0.66 and an average intensity of 1.8 for the chum salmon sample population.

A total of 7755 pink salmon were captured, representing 66.9 % of all captured samples. Of the 7755 pinks captured, 263 were kept for lab analysis for sea lice infestation. A total of 87 pink salmon were found to be infested with 149 lice resulting in a calculated sea lice prevalence of 33.1 %, an abundance of 0.57 and an average intensity of 1.7 for the pink salmon sample population.

A total of 274 coho salmon were captured, represent 2.4 % of all captured samples. Of the 274 coho captured 115 were kept for lab analysis for sea lice infestation. A total of 21 coho salmon were found to be infested with 47 lice resulting in a calculated sea lice prevalence of 18.3 % and abundance of 0.41 and an average intensity of 2.2 for the coho salmon sample population.

A total of 196 *Lepeophtheirus salmonis* sea lice of various life stages were identified on 134 individuals and 219 *Caligus clemensi* sea lice were found on 142 of the samples analyzed in the lab. There were 46 samples that were infested with both *L. salmonis* and *C. clemensi* sea lice.

For the chum salmon sample population, a total of 116 *Lepeophtheirus salmonis* sea lice of various life stages were identified on 77 juvenile chum salmon and 103 *Caligus clemensi* sea lice were found on 69 of the juvenile chum salmon analyzed in the lab. There were 24 juvenile chum salmon that were infested with both *L. salmonis* and *C. clemensi* sea lice.

For the pink salmon sample population, a total of 76 *Lepeophtheirus salmonis* sea lice of various life stages were identified on 53 juvenile pink salmon and 73 *Caligus clemensi* sea lice were found on 55 of the juvenile pink salmon analyzed in the lab. There were 21 juvenile pink salmon that were infested with both *L. salmonis* and *C. clemensi* sea lice.

For the coho salmon sample population, a total of four *Lepeophtheirus salmonis* sea lice of various life stages were identified on four juvenile coho salmon and 43 *Caligus clemensi* sea lice were found on 18 of the juvenile coho salmon analyzed in the lab.

There was one juvenile coho salmon that was infested with both *L. salmonis* and *C. clemensi* sea lice.

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## Appendix I – Field Data

Date	Site Name	Surface			One meter		
		Salinity (ppt)	Temp. (°C)	DO (mg/ L)	Salinity (ppt)	Temp. (°C)	DO (mg/ L)
2022-04-28	Alder Point	30.1	8.3	9.1	30.1	8.3	9.1
2022-04-27	Arthur Point	30.8	9.0	11.4	31.0	8.2	10.7
2022-04-27	Baker Island	29.0	9.8	12.7			
2022-04-26	Batt Bluff West	29.7	8.1	11.0	29.9	8.1	11.1
2022-04-26	Brent Bay	28.9	7.8	11.0	29.0	7.8	11.5
2022-04-26	Chop Bay	30.1	8.2	10.4	30.3	8.2	10.7
2022-04-28	Codrington Point	27.7	8.7	11.4	28.0	8.7	12.2
2022-04-27	Denham Island	29.3	9.1	11.5			
2022-04-26	Doctor Island Fish Farm	28.9	8.2	11.6	29.1	8.2	11.8
2022-04-26	Freshwater Bay	30.2	8.2	7.9	31.2	8.0	8.3
2022-04-27	Glacier Falls Fish Farm	30.2	8.2	11.1	30.3	8.1	10.9
2022-04-27	Gwayasdums	30.8	9.1	10.8	31.1	8.9	12.1
2022-04-26	Hanson Island	30.8	8.0	8.0			
2022-04-28	Harry Bay	23.4	9.1	12.8	24.4	9.3	13.5
2022-04-27	Hoeya Sound	27.7	8.0	11.3	28.5	8.0	11.4
2022-04-27	Hoeya South	26.7	7.9	11.3	27.4	7.9	11.4
2022-04-26	Humphrey Rock	28.8	8.2	11.8	28.8	8.2	11.7
2022-04-27	Jumper Island	30.1	10.7	12.2			
2022-04-28	Kokish Estuary	31.1	8.1	9.6	31.1	8.0	9.0
2022-04-27	Kwatsi Point	30.0	8.3	12.3	30.0	8.2	11.4
2022-04-26	Lady Island	29.7	8.7	11.9	29.6	8.7	12.4
2022-04-27	Lance Bay	26.0	8.0	12.5	27.4	8.1	12.8
2022-04-26	Larsen Island Fish Farm	30.8	8.2	8.7	30.8	8.2	9.3
2022-04-27	London Point	27.0	8.0	13.6	27.7	8.0	13.1
2022-04-27	Matsiu Bay	26.6	8.1	11.6	26.8	8.1	12.0
2022-04-28	McKenzie Cove	21.3	9.2	13.0	21.7	4.2	13.0
2022-04-26	Midsummer Island Fish Farm	31.1	7.9	8.4	31.1	8.0	8.2
2022-04-27	Millar Point	28.3	9.4	12.0	29.0	8.7	11.9
2022-04-27	Mount Frederick Bay	26.6	8.1	11.4	29.2	8.1	9.8
2022-04-28	Nimpkish Estuary	20.8	8.9	11.5			
2022-04-26	Oline Point	29.0	8.1	11.4	28.9	8.1	11.4
2022-04-28	Penphrase Pass	25.8	9.4	12.4	25.8	9.2	11.9
2022-04-28	Phillip Point West	22.4	8.5	11.8			
2022-04-28	Poppelwell Point	30.1	8.0	8.9	30.1	8.0	8.6
2022-04-26	Pumish Point	29.3	8.1	11.4	29.4	8.1	11.4
2022-04-26	Sargeaunt Pass	25.7	8.3	11.2			
2022-04-27	Shelterless Bay	27.3	8.2	12.2	27.8	8.0	11.8
2022-04-28	Sutlej North	26.0	8.9	12.0	26.5	9.0	12.5
2022-04-26	Swanson Island Fish Farm	31.1	7.9	8.5	31.1	7.8	8.7
2022-04-27	Tomakstum	27.3	7.9	9.2			
2022-04-27	Viner Sound	28.5	8.8	12.5	29.8	8.5	12.6
2022-04-28	Wakeman 3	19.6	9.0	12.1			
2022-04-28	Wakeman 4	14.5	8.7	12.1	15.3	8.8	11.7
2022-04-28	Wehlis Bay Fish Farm	30.1	8.2	8.8	30.1	8.1	8.6
2022-04-27	Wicklow Point	30.5	8.5	11.9	30.5	8.3	11.7

Date	Site Name	Surface			One meter		
		Salinity (ppt)	Temp. (°C)	DO (mg/ L)	Salinity (ppt)	Temp. (°C)	DO (mg/ L)
2022-05-27	Alder Point	28.2	9.7	9.3	28.2	9.7	9.3
2022-05-26	Arthur Point	30.3	9.9	12.3	30.9	9.0	10.7
2022-05-26	Baker Island	23.7	11.7	11.4	29.4	10.0	10.9
2022-05-25	Batt Bluff West	30.0	8.9	10.3	30.2	8.9	10.1
2022-05-25	Brent Bay	29.5	9.0	10.2	29.5	9.0	10.1
2022-05-25	Chop Bay	30.5	9.1	10.3	30.6	9.1	9.9
2022-05-27	Codrington Point	17.6	11.5	11.8	17.6	11.5	11.8
2022-05-26	Denham Island	25.3	11.2	11.3			
2022-05-25	Doctor Island Fish Farm	28.6	9.7	11.6	28.9	9.4	11.4
2022-05-25	Freshwater Bay	30.5	9.0	9.3			
2022-05-26	Glacier Falls Fish Farm	28.5	9.9	10.6	28.6	9.8	10.6
2022-05-26	Gwayasdums	30.7	10.4	10.9	30.7	10.4	11.2
2022-05-25	Hanson Island	31.3	8.6	8.7	31.3	8.6	8.5
2022-05-27	Harry Bay	15.9	11.4	11.7	15.9	11.4	11.8
2022-05-26	Hoeya Sound	23.0	10.1	12.1	25.2	10.2	12.0
2022-05-26	Hoeya South	24.1	10.2	11.9	24.5	10.1	11.8
2022-05-25	Humphrey Rock	28.9	9.8	11.6	29.0	9.7	11.8
2022-05-26	Jumper Island	27.4	11.2	11.8			
2022-05-27	Kokish Estuary	13.6	10.0	11.1			
2022-05-26	Kwatsi Point	28.7	10.0	10.5	28.6	9.9	10.2
2022-05-25	Lady Island	30.0	10.1	10.6	30.0	9.9	10.5
2022-05-25	Lance Bay	27.7	10.5	11.8	27.7	10.3	12.0
2022-05-25	Larsen Island Fish Farm	31.1	9.0	9.2	31.1	9.0	9.3
2022-05-26	London Point	21.9	9.4	11.2	26.8	9.5	10.8
2022-05-26	Matsiu Bay	18.9	11.0	11.7	19.3	10.9	11.6
2022-05-27	McKenzie Cove	13.0	10.7	11.7	13.1	10.7	11.7
2022-05-25	Midsummer Island Fish Farm	31.3	9.0	10.7	31.3	8.8	10.2
2022-05-26	Millar Point	26.6	10.1	11.3	27.6	9.9	10.7
2022-05-26	Mount Frederick Bay	25.8	10.0	11.8	26.6	9.7	11.3
2022-05-27	Nimpkish Estuary	26.0	11.6	10.8			
2022-05-25	Oline Point	28.5	9.8	11.6	28.5	9.7	11.5
2022-05-27	Penphrase Pass	21.6	11.7	11.4	23.5	11.5	10.8
2022-05-27	Phillip Point West	16.8	11.8	10.4			
2022-05-27	Poppelwell Point	28.3	9.7	10.0	28.3	9.6	9.9
2022-05-25	Pumish Point	22.0	9.6	12.0	28.8	9.6	11.5
2022-05-25	Sargeaunt Pass	27.6	10.0	11.8	28.0	10.0	11.8
2022-05-25	Shelterless Bay	26.8	10.7	12.5	27.2	10.2	12.7
2022-05-27	Sutlej North	17.2	11.4	10.6	18.0	11.4	10.6
2022-05-25	Swanson Island Fish Farm	31.2	8.5	8.9	31.2	8.5	8.7
2022-05-26	Tomakstum	21.2	10.6	9.1			
2022-05-26	Viner Sound	27.8	10.7	11.6	28.5	10.3	11.5
2022-05-27	Wakeman 3	10.8	10.8	11.7	11.2	11.0	11.7
2022-05-27	Wakeman 4	6.0	10.0	12.5	13.3	10.6	12.3
2022-05-27	Wehlis Bay Fish Farm	28.4	9.6	10.0	28.4	9.6	10.1
2022-05-26	Wicklow Point	29.0	10.0	11.7	29.6	10.0	11.7

Appendix II – Capture and Collection Sample Totals

Date	Site Name	Tide Stage	Weather Comments	Pink Captured	Pink Retained	Chum Captured	Chum Retained	Coho Captured	Coho Retained
2022-04-28	Alder Point	High	Calm/Clear	0	0	0	0	0	0
2022-04-27	Arthur Point	High	Calm/Sunny	0	0	0	0	0	0
2022-04-27	Baker Island	High	Calm/Sunny	200	16	600	15	0	0
2022-04-26	Batt Bluff West	High	Choppy	0	0	0	0	0	0
2022-04-26	Brent Bay	Mid	Calm/Clear	0	0	1	1	5	5
2022-04-26	Chop Bay	High	Slight chop/Overcast	0	0	0	0	0	0
2022-04-28	Codrington Point	Low	Calm/Clear	0	0	1	1	0	0
2022-04-27	Denham Island	High	Calm/Sunny	450	14	350	16	0	0
2022-04-26	Doctor Island Fish Farm	High	Calm/Light rain	0	0	1	1	0	0
2022-04-26	Freshwater Bay	High	Calm/Clear	14	14	1	1	0	0
2022-04-27	Glacier Falls Fish Farm	High	Slight chop/Sunny	0	0	1	1	0	0
2022-04-27	Gwayasdums	High	Clear/Calm	0	0	0	0	0	0
2022-04-26	Hanson Island	Mid	Clear/Calm	420	15	60	15	7	7
2022-04-28	Harry Bay	Low	Clear/Calm	0	0	0	0	0	0
2022-04-27	Hoeya Sound	Mid	Clear/Calm	0	0	4	4	0	0
2022-04-27	Hoeya South	Low	Calm/Overcast	0	0	0	0	2	2
2022-04-26	Humphrey Rock	High	Calm/Overcast	0	0	0	0	0	0
2022-04-27	Jumper Island	High	Calm/Sunny	27	15	56	15	0	0
2022-04-28	Kokish Estuary	High	Calm/Overcast	0	0	0	0	0	0
2022-04-27	Kwatsi Point	High	Calm/Overcast	59	15	42	15	0	0
2022-04-26	Lady Island	High	Calm/Overcast	32	15	23	15	0	0
2022-04-27	Lance Bay	Mid	Slight chop	0	0	1	1	0	0
2022-04-26	Larsen Island Fish Farm	High	Calm/Overcast	8	8	0	0	0	0
2022-04-27	London Point	High	Calm/Sunny	0	0	0	0	73	15
2022-04-27	Matsiu Bay	Mid	Clear/Calm	0	0	0	0	14	14
2022-04-28	McKenzie Cove	Low	Choppy/Windy	0	0	0	0	0	0
2022-04-26	Midsummer Island Fish Farm	High	Calm/Overcast	31	14	1	1	0	0
2022-04-27	Millar Point	High	Clear/Calm	0	0	0	0	0	0
2022-04-27	Mount Frederick Bay	Mid	Calm/Sunny	0	0	0	0	0	0
2022-04-28	Nimpkish Estuary	High	Calm/Overcast	1	1	2	0	0	0
2022-04-26	Oline Point	High	No search, only one set location	0	0	0	0	0	0
2022-04-28	Penphrase Pass	Mid	Clear/Calm	750	15	750	15	0	0
2022-04-28	Phillip Point West	Low	Calm/Clear	13	13	121	14	0	0
2022-04-28	Poppelwell Point	Mid	Calm/Clear	2	2	0	0	0	0
2022-04-26	Pumish Point	High	Calm/Overcast	0	0	0	0	0	0
2022-04-26	Sargeaunt Pass	Mid	Choppy	0	0	0	0	0	0
2022-04-27	Shelterless Bay	Mid	Slight chop	0	0	0	0	0	0
2022-04-28	Sutlej North	Low	Calm/Clear	1	1	1	1	0	0
2022-04-26	Swanson Island Fish Farm	High	Calm/Overcast	0	0	0	0	0	0
2022-04-27	Tomakstum	Mid	Clear/Calm	0	0	0	0	0	0
2022-04-27	Viner Sound	High	Calm/Sunny	0	0	1	1	0	0
2022-04-28	Wakeman 3	Low	Clear/Calm	0	0	1	1	0	0
2022-04-28	Wakeman 4	Low	Slight chop/Sunny	0	0	1	1	0	0
2022-04-28	Wehlis Bay Fish Farm	Mid	Calm/Clear	1	1	0	0	0	0
2022-04-27	Wicklow Point	High	Clear/Calm	0	0	0	0	0	0
2022-05-27	Alder Point	High	Calm in bay, overcast	0	0	0	0	0	0
2022-05-26	Arthur Point	Mid	choppy, windy	0	0	6	6	0	0
2022-05-26	Baker Island	High	Choppy, overcast	53	14	52	16	0	0
2022-05-25	Batt Bluff West	High	Choppy, overcast	1	1	0	0	0	0
2022-05-25	Brent Bay	Low	Choppy, overcast	0	0	0	0	0	0
2022-05-25	Chop Bay	High	Calm in bay, overcast	480	16	55	14	0	0
2022-05-27	Codrington Point	Mid	Really choppy	45	15	75	15	4	4
2022-05-26	Denham Island	Mid	windy, choppy	3	3	46	15	1	1

Date	Site Name	Tide Stage	Weather Comments	Pink Captured	Pink Retained	Chum Captured	Chum Retained	Coho Captured	Coho Retained
2022-05-25	Doctor Island Fish Farm	High	Overcast, Calm	0	0	0	0	0	0
2022-05-25	Freshwater Bay	Mid	Choppy, overcast	0	0	1	1	0	0
2022-05-26	Glacier Falls Fish Farm	High	Overcast, Calm	1100	16	150	14	0	0
2022-05-26	Gwayasdums	High	slight chop in bay	0	0	0	0	0	0
2022-05-25	Hanson Island	High	Overcast, Calm	0	0	0	0	0	0
2022-05-27	Harry Bay	High	Calm in bay, overcast	0	0	0	0	0	0
2022-05-26	Hoeya Sound	Mid	calm, sunny	0	0	92	15	0	0
2022-05-26	Hoeya South	Low	calm, light overcast	0	0	0	0	0	0
2022-05-25	Humphrey Rock	High	choppy	0	0	0	0	0	0
2022-05-26	Jumper Island	Mid	calm at site	3	3	5	5	1	1
2022-05-27	Kokish Estuary	Mid	slight chop at site	0	0	0	0	27	15
2022-05-26	Kwatsi Point	High	Overcast, Calm	0	0	0	0	0	0
2022-05-25	Lady Island	High	Overcast, Calm	4000	15	800	15	0	0
2022-05-25	Lance Bay	Mid	Choppy, overcast	0	0	0	0	4	4
2022-05-25	Larsen Island Fish Farm	High	Choppy, overcast	0	0	0	0	0	0
2022-05-26	London Point	High	Overcast, Calm	0	0	0	0	0	0
2022-05-26	Matsiu Bay	Mid	calm in bay	0	0	0	0	0	0
2022-05-27	McKenzie Cove	Low	Overcast, Calm	5	5	92	15	12	12
2022-05-25	Midsummer Island Fish Farm	High	Overcast, Calm	0	0	0	0	0	0
2022-05-26	Millar Point	High	calm, sunny	0	0	0	0	0	0
2022-05-26	Mount Frederick Bay	Mid	slight chop at site	0	0	0	0	0	0
2022-05-27	Nimpkish Estuary	Mid	choppy at site	0	0	0	0	65	15
2022-05-25	Oline Point	High	slight chop, sunny	0	0	0	0	0	0
2022-05-27	Penphrase Pass	High	choppy in bay	0	0	0	0	0	0
2022-05-27	Phillip Point West	Low	Overcast, Calm	0	0	0	0	0	0
2022-05-27	Poppelwell Point	Mid	choppy	0	0	0	0	0	0
2022-05-25	Pumish Point	Mid	calm, sunny	0	0	0	0	0	0
2022-05-25	Sargeaunt Pass	Mid	Choppy, overcast	0	0	1	1	3	3
2022-05-25	Shelterless Bay	Mid	Choppy, overcast	0	0	0	0	0	0
2022-05-27	Sutlej North	Mid	chop at site	55	15	55	15	1	1
2022-05-25	Swanson Island Fish Farm	High	Calm in lee of island	0	0	0	0	0	0
2022-05-26	Tomakstum	Mid	choppy, partial overcast	0	0	0	0	1	1
2022-05-26	Viner Sound	High	Overcast, Calm	1	1	31	15	0	0
2022-05-27	Wakeman 3	Low	calm, light rain	0	0	52	15	54	15
2022-05-27	Wakeman 4	Low	slight chop at site	0	0	27	18	0	0
2022-05-27	Wehlis Bay Fish Farm	Mid	choppy	0	0	0	0	0	0
2022-05-26	Wicklow Point	High	heavy chop	0	0	0	0	0	0

Appendix III – Sea Lice Analysis Data

Date Collected (yyyy-mm-dd)	Site Name	Fish Species	Fish #	Length (mm)	Weight (g)	LEP Co	LEP C1	LEP C2	LEP PAM	LEP PAF	LEP AM	LEP AF	LEP Total	Cal Co	Cal C1	Cal C2	Cal C3	Cal C4	CAL PAM	CAL PAF	CAL AM	CAL AF	CAL Total	Comments
2022-04-27	Lance Bay	Chum	1000	48	1.21								0										0	
2022-04-28	Codrington Point	Chum	1001	34	0.35								0										0	
2022-04-27	Glacier Falls Fish Farm	Chum	1002	36	0.32								0										0	
2022-04-28	Wehlis Bay Fish Farm	Pink	1003	31	0.24								0										0	
2022-04-27	Viner Sound	Chum	1004	37	0.35								0										0	
2022-04-28	Sutlej North	Chum	1005	35	0.36								0										0	
2022-04-28	Sutlej North	Pink	1006	34	0.28								0										0	
2022-04-28	Poppelwell Point	Pink	1007	35	0.28								0										0	
2022-04-28	Poppelwell Point	Pink	1008	31	0.21								0										0	
2022-04-27	Hoeya South	Coho	1009	77	5.63								0										0	No clip
2022-04-27	Hoeya South	Coho	1010	76	6.04								0										0	No clip
2022-04-28	Wakeman 3	Chum	1011	43	0.81								0										0	
2022-04-28	Wakeman 4	Chum	1012	38	0.46								0										0	
2022-04-28	Nimpkish Estuary	Pink	1013	36	0.38								0										0	
2022-04-27	Hoeya Sound	Chum	1016	34	0.40								0										0	
2022-04-27	Hoeya Sound	Chum	1017	40	0.63								0										0	
2022-04-27	Hoeya Sound	Chum	1018	34	0.34								0										0	
2022-04-27	Hoeya Sound	Chum	1019	34	0.34								0										0	
2022-04-26	Lady Island	Pink	1020	34	0.42								0										0	
2022-04-26	Lady Island	Pink	1021	39	0.50								0										0	
2022-04-26	Lady Island	Pink	1022	32	0.36								0										0	
2022-04-26	Lady Island	Pink	1023	35	0.40								0										0	
2022-04-26	Lady Island	Pink	1024	34	0.39								0										0	
2022-04-26	Lady Island	Pink	1025	30	0.28								0										0	
2022-04-26	Lady Island	Pink	1026	33	0.26								0										0	
2022-04-26	Lady Island	Pink	1027	41	0.66								0										0	
2022-04-26	Lady Island	Pink	1028	32	0.30								0										0	
2022-04-26	Lady Island	Pink	1029	43	0.78								0										0	
2022-04-26	Lady Island	Pink	1030	33	0.35								0										0	
2022-04-26	Lady Island	Pink	1031	36	0.37								0										0	
2022-04-26	Lady Island	Pink	1032	36	0.46								0										0	
2022-04-26	Lady Island	Pink	1033	34	0.35								0										0	
2022-04-26	Lady Island	Pink	1034	44	0.72	2							2										0	
2022-04-26	Lady Island	Chum	1035	33	0.35								0										0	
2022-04-26	Lady Island	Chum	1036	36	0.54								0										0	
2022-04-26	Lady Island	Chum	1037	32	0.29								0										0	
2022-04-26	Lady Island	Chum	1038	33	0.31								0										0	
2022-04-26	Lady Island	Chum	1039	37	0.45								0										0	
2022-04-26	Lady Island	Chum	1040	35	0.37								0										0	
2022-04-26	Lady Island	Chum	1041	35	0.45								0										0	
2022-04-26	Lady Island	Chum	1042	39	0.65								0		1								1	
2022-04-26	Lady Island	Chum	1043	43	0.80		1						1										0	
2022-04-26	Lady Island	Chum	1044	32	0.38								0										0	
2022-04-26	Lady Island	Chum	1045	36	0.42								0										0	
2022-04-26	Lady Island	Chum	1046	34	0.38								0		1								1	
2022-04-26	Lady Island	Chum	1047	33	0.34								0										0	
2022-04-26	Lady Island	Chum	1048	33	0.44								0										0	
2022-04-26	Lady Island	Chum	1049	34	0.33								0										0	
2022-04-28	Hanson Island	Chum	1050	50	1.37								0										0	
2022-04-28	Hanson Island	Chum	1051	38	0.46								0										0	
2022-04-28	Hanson Island	Chum	1052	60	1.80								0										0	
2022-04-28	Hanson Island	Chum	1053	59	1.82								0										0	
2022-04-28	Hanson Island	Chum	1054	44	0.82								0										0	

Date Collected (yyyy-mm-dd)	Site Name	Fish Species	Fish #	Length (mm)	Weight (g)	LEP Co	LEP C1	LEP C2	LEP PAM	LEP PAF	LEP AM	LEP AF	LEP Total	Cal Co	Cal C1	Cal C2	Cal C3	Cal C4	CAL PAM	CAL PAF	CAL AM	CAL AF	CAL Total	Comments
2022-04-28	Hanson Island	Chum	1055	61	2.30								0										0	
2022-04-28	Hanson Island	Chum	1056	44	0.75								0										0	
2022-04-28	Hanson Island	Chum	1057	50	1.60		1						1										0	
2022-04-28	Hanson Island	Chum	1058	64	2.80								0										0	
2022-04-28	Hanson Island	Chum	1059	50	1.25								0										0	
2022-04-28	Hanson Island	Chum	1060	55	1.97								0										0	
2022-04-28	Hanson Island	Chum	1061	48	1.08			1					1										0	
2022-04-28	Hanson Island	Chum	1062	50	1.70								0										0	
2022-04-28	Hanson Island	Chum	1063	50	1.17								0										0	
2022-04-28	Hanson Island	Chum	1064	65	2.90								0		1								1	
2022-04-28	Hanson Island	Pink	1065	35	0.40								0										0	
2022-04-28	Hanson Island	Pink	1066	28	0.23								0										0	
2022-04-28	Hanson Island	Pink	1067	33	0.35								0										0	
2022-04-28	Hanson Island	Pink	1068	34	0.28								0										0	
2022-04-28	Hanson Island	Pink	1069	41	0.64								0										0	
2022-04-28	Hanson Island	Pink	1070	34	0.31								0										0	
2022-04-28	Hanson Island	Pink	1071	34	0.46								0										0	
2022-04-28	Hanson Island	Pink	1072	34	0.38								0										0	
2022-04-28	Hanson Island	Pink	1073	31	0.28								0										0	
2022-04-28	Hanson Island	Pink	1074	34	0.32								0	1									1	
2022-04-28	Hanson Island	Pink	1075	56	1.65								0										0	
2022-04-28	Hanson Island	Pink	1076	44	0.68		1						1										0	
2022-04-28	Hanson Island	Pink	1077	39	0.33								0										0	
2022-04-28	Hanson Island	Pink	1078	34	0.38								0										0	
2022-04-28	Hanson Island	Pink	1079	46	0.88								0										0	
2022-04-28	Hanson Island	Coho	1080	110	13.05								0										0	No clip
2022-04-28	Hanson Island	Coho	1081	93	9.84								0										0	No clip
2022-04-28	Hanson Island	Coho	1082	83	7.80								0										0	No clip
2022-04-28	Hanson Island	Coho	1083	100	10.94								0										0	No clip
2022-04-28	Hanson Island	Coho	1084	82	6.95								0										0	No clip
2022-04-28	Hanson Island	Coho	1085	115	17.05								0										0	No clip
2022-04-28	Hanson Island	Coho	1086	90	10.06								0										0	No clip
2022-04-26	Midsummer Island Fish Farm	Chum	1087	40	0.67								0										0	
2022-04-26	Midsummer Island Fish Farm	Pink	1088	38	0.57								0										0	
2022-04-26	Midsummer Island Fish Farm	Pink	1089	42	0.68								0										0	
2022-04-26	Midsummer Island Fish Farm	Pink	1090	35	0.65								0										0	
2022-04-26	Midsummer Island Fish Farm	Pink	1091	37	0.37								0										0	
2022-04-26	Midsummer Island Fish Farm	Pink	1092	40	0.70								0										0	
2022-04-26	Midsummer Island Fish Farm	Pink	1093	44	0.68								0										0	
2022-04-26	Midsummer Island Fish Farm	Pink	1094	35	0.39								0										0	
2022-04-26	Midsummer Island Fish Farm	Pink	1095	41	0.60								0										0	
2022-04-26	Midsummer Island Fish Farm	Pink	1096	40	0.62								0										0	
2022-04-26	Midsummer Island Fish Farm	Pink	1097	37	0.50								0										0	
2022-04-26	Midsummer Island Fish Farm	Pink	1098	35	0.46		1						1		1								1	
2022-04-26	Midsummer Island Fish Farm	Pink	1100	43	0.61		2						2										0	
2022-04-26	Midsummer Island Fish Farm	Pink	1101	43	0.64		1						1										0	
2022-04-26	Midsummer Island Fish Farm	Pink	1102	42	0.69								0										0	
2022-04-27	Matsiu Bay	Coho	1103	74	4.13								0										0	
2022-04-27	Matsiu Bay	Coho	1104	85	5.90	1							1										0	
2022-04-27	Matsiu Bay	Coho	1105	72	4.94								0										0	
2022-04-27	Matsiu Bay	Coho	1106	70	4.00								0										0	
2022-04-27	Matsiu Bay	Coho	1107	91	8.44								0										0	
2022-04-27	Matsiu Bay	Coho	1108	78	4.72								0										0	
2022-04-27	Matsiu Bay	Coho	1109	93	8.50								0										0	
2022-04-27	Matsiu Bay	Coho	1110	71	4.43								0										0	
2022-04-27	Matsiu Bay	Coho	1111	90	10.22								0										0	

Date Collected (yyyy-mm-dd)	Site Name	Fish Species	Fish #	Length (mm)	Weight (g)	LEP Co	LEP C1	LEP C2	LEP PAM	LEP PAF	LEP AM	LEP AF	LEP Total	Cal Co	Cal C1	Cal C2	Cal C3	Cal C4	CAL PAM	CAL PAF	CAL AM	CAL AF	CAL Total	Comments
2022-04-27	Matsiu Bay	Coho	1112	75	4.60								0										0	
2022-04-27	Matsiu Bay	Coho	1113	71	5.32								0										0	
2022-04-27	Matsiu Bay	Coho	1114	84	7.10								0										0	
2022-04-27	Matsiu Bay	Coho	1115	80	6.48								0										0	
2022-04-27	Matsiu Bay	Coho	1116	82	7.48								0										0	
2022-04-27	Baker Island	Chum	1117	52	1.83								0		2								2	
2022-04-27	Baker Island	Chum	1118	50	1.46		1						1	1	1						1		3	
2022-04-27	Baker Island	Chum	1119	47	1.63			1		1			2	1	2								3	
2022-04-27	Baker Island	Chum	1120	48	1.40		2						2		2			1					3	
2022-04-27	Baker Island	Chum	1121	51	1.77		3	1		1			5										0	
2022-04-27	Baker Island	Chum	1122	48	1.40			1					1										0	
2022-04-27	Baker Island	Chum	1123	48	1.01			1					1		1	2							3	
2022-04-27	Baker Island	Chum	1124	52	1.53	1	1						2										0	
2022-04-27	Baker Island	Chum	1125	56	2.29								0			1							1	
2022-04-27	Baker Island	Chum	1126	39	0.65								0										0	
2022-04-27	Baker Island	Chum	1127	34	0.47								0										0	
2022-04-27	Baker Island	Chum	1128	55	2.02		2						2		1								1	
2022-04-27	Baker Island	Chum	1129	55	2.17		2						2										0	
2022-04-27	Baker Island	Chum	1130	54	1.85								0										0	
2022-04-27	Baker Island	Chum	1131	53	1.83		3						3										0	
2022-04-27	Baker Island	Pink	1132	45	0.90	1							1					1					1	
2022-04-27	Baker Island	Pink	1133	61	2.34				1				1										0	
2022-04-27	Baker Island	Pink	1134	38	0.58		1						1								1		1	
2022-04-27	Baker Island	Pink	1135	37	0.58								0	1									1	
2022-04-27	Baker Island	Pink	1136	62	2.32								0										0	
2022-04-27	Baker Island	Pink	1137	46	1.10								0		1								1	
2022-04-27	Baker Island	Pink	1138	53	1.38								0		2								2	
2022-04-27	Baker Island	Pink	1139	42	0.76								0		1								1	
2022-04-27	Baker Island	Pink	1140	50	1.32								0		1								1	
2022-04-27	Baker Island	Pink	1141	54	1.68				1				1		2								2	
2022-04-27	Baker Island	Pink	1142	52	1.44	1			1				2		2		1						3	
2022-04-27	Baker Island	Pink	1143	45	0.91								0	1		1							2	
2022-04-27	Baker Island	Pink	1144	33	0.26								0										0	
2022-04-27	Baker Island	Pink	1145	32	0.37								0		2								2	one louse not collected
2022-04-27	Baker Island	Pink	1146	41	0.61								0	1									1	
2022-04-27	Baker Island	Pink	1147	59	2.22	1	1						2										0	
2022-04-26	Doctor Island Fish Farm	Chum	1148	36	0.32								0										0	
2022-04-28	Freshwater Bay	Chum	1149	40	0.60								0										0	
2022-04-28	Freshwater Bay	Pink	1150	31	0.23								0										0	
2022-04-28	Freshwater Bay	Pink	1151	31	0.33								0										0	
2022-04-28	Freshwater Bay	Pink	1152	32	0.29								0										0	
2022-04-28	Freshwater Bay	Pink	1153	31	0.24								0										0	
2022-04-28	Freshwater Bay	Pink	1154	32	0.28								0										0	
2022-04-28	Freshwater Bay	Pink	1155	31	0.30								0										0	
2022-04-28	Freshwater Bay	Pink	1156	31	0.24								0										0	
2022-04-28	Freshwater Bay	Pink	1157	32	0.28								0										0	
2022-04-28	Freshwater Bay	Pink	1158	32	0.21								0										0	
2022-04-28	Freshwater Bay	Pink	1159	34	0.33								0										0	
2022-04-28	Freshwater Bay	Pink	1160	29	0.29								0										0	
2022-04-28	Freshwater Bay	Pink	1161	31	0.23								0										0	
2022-04-28	Freshwater Bay	Pink	1162	32	0.30								0										0	
2022-04-28	Freshwater Bay	Pink	1163	32	0.23								0										0	
2022-04-27	London Point	Coho	1164	67	3.82								0	2									2	
2022-04-27	London Point	Coho	1165	85	8.28								0										0	
2022-04-27	London Point	Coho	1166	80	6.07								0	2									2	
2022-04-27	London Point	Coho	1167	76	5.44								0		2								2	



Date Collected (yyyy-mm-dd)	Site Name	Fish Species	Fish #	Length (mm)	Weight (g)	LEP Co	LEP C1	LEP C2	LEP PAM	LEP PAF	LEP AM	LEP AF	LEP Total	Cal Co	Cal C1	Cal C2	Cal C3	Cal C4	CAL PAM	CAL PAF	CAL AM	CAL AF	CAL Total	Comments
2022-04-27	London Point	Coho	1168	100	11.50								0	1							1		2	
2022-04-27	London Point	Coho	1169	102	13.04								0		1								1	
2022-04-27	London Point	Coho	1170	92	9.32								0			3							3	
2022-04-27	London Point	Coho	1171	100	10.13								0										0	
2022-04-27	London Point	Coho	1172	78	5.35								0		1								1	
2022-04-27	London Point	Coho	1173	72	4.42								0		2								2	
2022-04-27	London Point	Coho	1174	78	5.41								0										0	
2022-04-27	London Point	Coho	1175	70	4.13								0		1								1	
2022-04-27	London Point	Coho	1176	80	5.74								0										0	
2022-04-27	London Point	Coho	1177	83	6.16								0										0	
2022-04-27	London Point	Coho	1178	100	12.52								0										0	
2022-04-27	Brent Bay	Chum	1179	34	0.41								0										0	
2022-04-27	Brent Bay	Coho	1180	80	6.19								0										0	
2022-04-27	Brent Bay	Coho	1181	92	9.50								0				1						1	
2022-04-27	Brent Bay	Coho	1182	90	8.51		1						1		2		4	1					7	
2022-04-27	Brent Bay	Coho	1183	83	7.20								0			1							1	
2022-04-27	Brent Bay	Coho	1184	95	9.15								0										0	
2022-04-26	Larsen Island Fish Farm	Pink	1185	33	0.34								0										0	
2022-04-26	Larsen Island Fish Farm	Pink	1186	33	0.33								0										0	
2022-04-26	Larsen Island Fish Farm	Pink	1187	34	0.34								0										0	
2022-04-26	Larsen Island Fish Farm	Pink	1188	33	0.29								0										0	
2022-04-26	Larsen Island Fish Farm	Pink	1189	32	0.31								0										0	
2022-04-26	Larsen Island Fish Farm	Pink	1190	34	0.34								0										0	
2022-04-26	Larsen Island Fish Farm	Pink	1191	33	0.32								0										0	
2022-04-26	Larsen Island Fish Farm	Pink	1192	32	0.25								0										0	
2022-04-27	Denham Island	Chum	1193	30	0.26								0										0	
2022-04-27	Denham Island	Pink	1194	30	0.49	1							1										0	
2022-04-27	Denham Island	Pink	1195	33	0.38		1						1										0	
2022-04-27	Denham Island	Pink	1196	37	0.50								0										0	
2022-04-27	Denham Island	Pink	1197	43	0.86		1						1										0	
2022-04-27	Denham Island	Pink	1198	42	0.71								0										0	
2022-04-27	Denham Island	Pink	1199	31	0.24	1							1										0	not collected
2022-04-27	Denham Island	Pink	1200	30	0.27								0		1								1	
2022-04-27	Denham Island	Pink	1201	44	0.80	1							1										0	
2022-04-27	Denham Island	Pink	1202	45	1.11								0		1								1	
2022-04-27	Denham Island	Pink	1203	41	0.80		2						2										0	
2022-04-27	Denham Island	Pink	1204	45	1.07								0			1							1	
2022-04-27	Denham Island	Pink	1205	45	0.93								0										0	
2022-04-27	Denham Island	Pink	1206	30	0.30								0										0	
2022-04-27	Denham Island	Pink	1207	34	0.42								0										0	
2022-04-27	Denham Island	Chum	1208	32	0.40								0										0	
2022-04-27	Denham Island	Chum	1209	34	0.44								0										0	
2022-04-27	Denham Island	Chum	1210	49	1.50								0								1		1	
2022-04-27	Denham Island	Chum	1211	35	0.40								0										0	
2022-04-27	Denham Island	Chum	1212	37	0.60								0										0	
2022-04-27	Denham Island	Chum	1213	42	0.93		1	2					3										0	
2022-04-27	Denham Island	Chum	1214	38	0.51								0										0	
2022-04-27	Denham Island	Chum	1215	32	0.28								0										0	
2022-04-27	Denham Island	Chum	1216	40	0.72								0										0	
2022-04-27	Denham Island	Chum	1217	45	1.33					1			1										0	
2022-04-27	Denham Island	Chum	1218	54	2.14								0										0	
2022-04-27	Denham Island	Chum	1219	40	0.76								0										0	
2022-04-27	Denham Island	Chum	1220	34	0.36								0										0	
2022-04-27	Denham Island	Chum	1221	31	0.33								0										0	
2022-04-27	Denham Island	Chum	1222	48	1.49								0		1								1	
2022-04-28	Phillip Point West	Chum	1223	40	0.63								0										0	

Date Collected (yyyy-mm-dd)	Site Name	Fish Species	Fish #	Length (mm)	Weight (g)	LEP Co	LEP C1	LEP C2	LEP PAM	LEP PAF	LEP AM	LEP AF	LEP Total	Cal Co	Cal C1	Cal C2	Cal C3	Cal C4	CAL PAM	CAL PAF	CAL AM	CAL AF	CAL Total	Comments
2022-04-28	Phillip Point West	Chum	1224	47	1.36								0										0	
2022-04-28	Phillip Point West	Chum	1225	42	0.80								0										0	
2022-04-28	Phillip Point West	Chum	1226	39	0.55								0		1								1	
2022-04-28	Phillip Point West	Chum	1227	37	0.48								0		1								1	
2022-04-28	Phillip Point West	Chum	1228	37	0.52								0										0	
2022-04-28	Phillip Point West	Chum	1229	36	0.50								0										0	
2022-04-28	Phillip Point West	Chum	1230	38	0.55								0										0	
2022-04-28	Phillip Point West	Chum	1231	44	0.84								0										0	
2022-04-28	Phillip Point West	Chum	1232	39	0.58								0										0	
2022-04-28	Phillip Point West	Chum	1233	37	0.49								0										0	
2022-04-28	Phillip Point West	Chum	1234	38	0.52								0										0	
2022-04-28	Phillip Point West	Chum	1235	40	0.69								0										0	
2022-04-28	Phillip Point West	Chum	1236	42	0.74								0										0	
2022-04-28	Phillip Point West	Pink	1237	39	0.59								0										0	
2022-04-28	Phillip Point West	Pink	1238	40	0.68								0										0	
2022-04-28	Phillip Point West	Pink	1239	36	0.42								0										0	
2022-04-28	Phillip Point West	Pink	1240	35	0.35								0		1								1	
2022-04-28	Phillip Point West	Pink	1241	31	0.27								0										0	
2022-04-28	Phillip Point West	Pink	1242	32	0.28								0										0	
2022-04-28	Phillip Point West	Pink	1243	41	0.92								0										0	
2022-04-28	Phillip Point West	Pink	1244	30	0.23								0										0	
2022-04-28	Phillip Point West	Pink	1245	32	0.30								0										0	
2022-04-28	Phillip Point West	Pink	1246	37	0.51								0										0	
2022-04-28	Phillip Point West	Pink	1247	33	0.38								0										0	
2022-04-28	Phillip Point West	Pink	1248	33	0.35								0		1								1	
2022-04-28	Phillip Point West	Pink	1249	37	0.49								0										0	
2022-04-28	Penphrase Pass	Chum	1250	61	2.43								0		1	1							2	
2022-04-28	Penphrase Pass	Chum	1251	39	0.57								0		1						1		2	
2022-04-28	Penphrase Pass	Chum	1252	45	0.97								0										0	
2022-04-28	Penphrase Pass	Chum	1253	60	2.40								0			1							1	
2022-04-28	Penphrase Pass	Chum	1254	51	1.52					1			1		1								1	
2022-04-28	Penphrase Pass	Chum	1255	56	1.99								0										0	
2022-04-28	Penphrase Pass	Chum	1256	48	1.26								0		1								1	
2022-04-28	Penphrase Pass	Chum	1257	53	1.60								0										0	
2022-04-28	Penphrase Pass	Chum	1258	38	0.51	1							1										0	
2022-04-28	Penphrase Pass	Chum	1259	45	1.23		1						1										0	
2022-04-28	Penphrase Pass	Chum	1260	50	1.56								0										0	
2022-04-28	Penphrase Pass	Chum	1261	61	2.89								0			2							2	
2022-04-28	Penphrase Pass	Chum	1262	56	2.30					1			1								1		1	
2022-04-28	Penphrase Pass	Chum	1263	55	2.01								0			1				1			2	
2022-04-28	Penphrase Pass	Chum	1264	47	1.22								0										0	
2022-04-28	Penphrase Pass	Pink	1265	46	0.87								0										0	
2022-04-28	Penphrase Pass	Pink	1266	35	0.39								0										0	
2022-04-28	Penphrase Pass	Pink	1267	32	0.24								0										0	
2022-04-28	Penphrase Pass	Pink	1268	51	1.30								0										0	
2022-04-28	Penphrase Pass	Pink	1269	43	0.70								0										0	
2022-04-28	Penphrase Pass	Pink	1270	36	0.43	1							1										0	
2022-04-28	Penphrase Pass	Pink	1271	50	1.15								0		1								1	
2022-04-28	Penphrase Pass	Pink	1272	43	0.72								0										0	
2022-04-28	Penphrase Pass	Pink	1273	44	0.73		1						1		1								1	
2022-04-28	Penphrase Pass	Pink	1274	37	0.53								0										0	
2022-04-28	Penphrase Pass	Pink	1275	40	0.59								0										0	
2022-04-28	Penphrase Pass	Pink	1276	51	1.36								0										0	
2022-04-28	Penphrase Pass	Pink	1277	34	0.41								0										0	
2022-04-28	Penphrase Pass	Pink	1278	45	0.86								0										0	
2022-04-28	Penphrase Pass	Pink	1279	34	0.39								0										0	

Date Collected (yyyy-mm-dd)	Site Name	Fish Species	Fish #	Length (mm)	Weight (g)	LEP Co	LEP C1	LEP C2	LEP PAM	LEP PAF	LEP AM	LEP AF	LEP Total	Cal Co	Cal C1	Cal C2	Cal C3	Cal C4	CAL PAM	CAL PAF	CAL AM	CAL AF	CAL Total	Comments
2022-04-27	Jumper Island	Chum	1280	48	1.22								0		2								2	
2022-04-27	Jumper Island	Chum	1281	53	1.70			2					2		2								2	
2022-04-27	Jumper Island	Chum	1282	32	0.29								0		2								2	not collected
2022-04-27	Jumper Island	Chum	1283	51	1.65			1					1		1								1	
2022-04-27	Jumper Island	Chum	1284	40	0.73								0		1								1	
2022-04-27	Jumper Island	Chum	1285	46	1.09								0										0	
2022-04-27	Jumper Island	Chum	1286	42	0.79								0		2								2	
2022-04-27	Jumper Island	Chum	1287	62	2.66			2					2		1								1	
2022-04-27	Jumper Island	Chum	1288	41	0.82			2					2					1					1	
2022-04-27	Jumper Island	Chum	1289	44	1.03			1					1										0	
2022-04-27	Jumper Island	Chum	1290	49	1.13								0		1								1	
2022-04-27	Jumper Island	Chum	1291	49	1.64								0										0	
2022-04-27	Jumper Island	Chum	1292	42	0.99			1					1		2								2	only one Cal c1 collected
2022-04-27	Jumper Island	Chum	1293	52	1.70								0										0	
2022-04-27	Jumper Island	Chum	1294	55	1.97								0										0	
2022-04-27	Jumper Island	Pink	1295	43	0.76								0										0	
2022-04-27	Jumper Island	Pink	1296	32	0.27								0	2									2	
2022-04-27	Jumper Island	Pink	1297	50	1.04	1							1		2								2	
2022-04-27	Jumper Island	Pink	1298	56	1.64								0		1								1	
2022-04-27	Jumper Island	Pink	1299	42	0.77		3						3		1								1	
2022-04-27	Jumper Island	Pink	1300	45	0.99								0		2								2	
2022-04-27	Jumper Island	Pink	1301	45	0.96								0										0	
2022-04-27	Jumper Island	Pink	1302	39	0.64	1							1										0	
2022-04-27	Jumper Island	Pink	1303	47	1.15	1							1		1			1					2	
2022-04-27	Jumper Island	Pink	1304	45	0.89	1	1						2		2								2	
2022-04-27	Jumper Island	Pink	1305	41	0.65		1						1										0	
2022-04-27	Jumper Island	Pink	1306	37	0.53	1	1						2			1							1	
2022-04-27	Jumper Island	Pink	1307	36	0.40	1							1										0	
2022-04-27	Jumper Island	Pink	1308	39	0.62		2						2		2								2	
2022-04-27	Jumper Island	Pink	1309	45	1.05								0	1									1	
2022-04-27	Kwatsi Point	Pink	1310	29	0.25								0										0	
2022-04-27	Kwatsi Point	Pink	1311	34	0.46								0										0	
2022-04-27	Kwatsi Point	Pink	1312	30	0.29								0										0	
2022-04-27	Kwatsi Point	Pink	1313	34	0.32								0										0	
2022-04-27	Kwatsi Point	Pink	1314	30	0.26								0										0	
2022-04-27	Kwatsi Point	Pink	1315	30	0.23								0										0	
2022-04-27	Kwatsi Point	Pink	1316	29	0.21								0										0	
2022-04-27	Kwatsi Point	Pink	1317	32	0.22								0										0	
2022-04-27	Kwatsi Point	Pink	1318	29	0.20								0										0	
2022-04-27	Kwatsi Point	Pink	1319	35	0.35	1							1	1									1	
2022-04-27	Kwatsi Point	Pink	1320	28	0.18								0										0	
2022-04-27	Kwatsi Point	Pink	1321	30	0.28								0										0	
2022-04-27	Kwatsi Point	Pink	1322	30	0.33								0										0	
2022-04-27	Kwatsi Point	Pink	1323	39	0.54								0										0	
2022-04-27	Kwatsi Point	Pink	1324	40	0.62		1						1										0	
2022-04-27	Kwatsi Point	Chum	1325	58	2.02								0		1								1	
2022-04-27	Kwatsi Point	Chum	1326	35	0.40								0										0	
2022-04-27	Kwatsi Point	Chum	1327	38	0.34								0										0	
2022-04-27	Kwatsi Point	Chum	1328	39	0.50								0										0	
2022-04-27	Kwatsi Point	Chum	1329	35	0.41								0										0	
2022-04-27	Kwatsi Point	Chum	1330	36	0.38								0										0	
2022-04-27	Kwatsi Point	Chum	1331	35	0.45								0										0	
2022-04-27	Kwatsi Point	Chum	1332	36	0.43								0										0	
2022-04-27	Kwatsi Point	Chum	1333	35	0.37								0										0	
2022-04-27	Kwatsi Point	Chum	1334	30	0.33	1							1										0	
2022-04-27	Kwatsi Point	Chum	1335	34	0.40								0										0	

Date Collected (yyyy-mm-dd)	Site Name	Fish Species	Fish #	Length (mm)	Weight (g)	LEP Co	LEP C1	LEP C2	LEP PAM	LEP PAF	LEP AM	LEP AF	LEP Total	Cal Co	Cal C1	Cal C2	Cal C3	Cal C4	CAL PAM	CAL PAF	CAL AM	CAL AF	CAL Total	Comments
2022-04-27	Kwatsi Point	Chum	1336	35	0.42								0										0	
2022-04-27	Kwatsi Point	Chum	1337	36	0.42								0										0	
2022-04-27	Kwatsi Point	Chum	1338	37	0.38								0										0	
2022-04-27	Kwatsi Point	Chum	1339	35	0.36								0										0	
2022-05-27	Wakeman 4	Chum	1340	57	1.84								0										0	
2022-05-27	Wakeman 4	Chum	1341	48	1.11								0										0	
2022-05-27	Wakeman 4	Chum	1342	39	0.53								0										0	
2022-05-27	Wakeman 4	Chum	1343	36	0.40								0										0	
2022-05-27	Wakeman 4	Chum	1344	41	0.72								0										0	
2022-05-27	Wakeman 4	Chum	1345	41	0.72								0										0	
2022-05-27	Wakeman 4	Chum	1346	54	1.48								0										0	
2022-05-27	Wakeman 4	Chum	1347	48	1.03								0										0	
2022-05-27	Wakeman 4	Chum	1348	47	0.87								0										0	
2022-05-27	Wakeman 4	Chum	1349	43	0.75								0										0	
2022-05-27	Wakeman 4	Chum	1350	42	0.65								0										0	
2022-05-27	Wakeman 4	Chum	1351	50	1.07								0										0	
2022-05-27	Wakeman 4	Chum	1352	32	0.29								0										0	
2022-05-27	Wakeman 4	Chum	1353	43	0.74								0										0	
2022-05-27	Wakeman 4	Chum	1354	89	6.95								0										0	
2022-05-27	Wakeman 4	Chum	1355	90	8.85								0										0	
2022-05-27	Wakeman 4	Chum	1356	95	10.31								0										0	
2022-05-27	Wakeman 4	Chum	1357	101	13.38								0										0	
2022-05-27	Sutlej North	Chum	1358	58	2.39								0										0	
2022-05-27	Sutlej North	Chum	1359	68	3.33		1	1					2										0	
2022-05-27	Sutlej North	Chum	1360	65	3.06								0										0	
2022-05-27	Sutlej North	Chum	1361	58	2.40								0										0	
2022-05-27	Sutlej North	Chum	1362	54	1.65								0										0	
2022-05-27	Sutlej North	Chum	1363	48	1.20		1						1				1						1	
2022-05-27	Sutlej North	Chum	1364	58	2.12								0										0	
2022-05-27	Sutlej North	Chum	1365	61	2.54		1						1										0	
2022-05-27	Sutlej North	Chum	1366	53	1.71		1						1										0	
2022-05-27	Sutlej North	Chum	1367	60	2.11								0										0	
2022-05-27	Sutlej North	Chum	1368	75	4.04								0										0	
2022-05-27	Sutlej North	Chum	1369	62	2.79								0										0	
2022-05-27	Sutlej North	Chum	1370	61	2.48								0										0	
2022-05-27	Sutlej North	Chum	1371	70	3.95								0										0	
2022-05-27	Sutlej North	Chum	1372	45	1.08								0										0	
2022-05-27	Sutlej North	Pink	1373	74	4.63								0										0	
2022-05-27	Sutlej North	Pink	1374	68	2.58								0										0	
2022-05-27	Sutlej North	Pink	1375	62	2.72								0										0	
2022-05-27	Sutlej North	Pink	1376	45	0.98								0										0	
2022-05-27	Sutlej North	Pink	1377	52	1.36			1					1										0	
2022-05-27	Sutlej North	Pink	1378	74	4.49								0										0	
2022-05-27	Sutlej North	Pink	1379	55	1.59								0										0	
2022-05-27	Sutlej North	Pink	1380	73	3.15								0										0	
2022-05-27	Sutlej North	Pink	1381	60	2.00								0										0	
2022-05-27	Sutlej North	Pink	1382	64	2.83								0										0	
2022-05-27	Sutlej North	Pink	1383	69	3.30								0										0	
2022-05-27	Sutlej North	Pink	1384	53	1.42								0										0	
2022-05-27	Sutlej North	Pink	1385	68	3.37								0										0	
2022-05-27	Sutlej North	Pink	1386	74	3.51								0										0	
2022-05-27	Sutlej North	Pink	1387	75	4.26								0										0	
2022-05-27	Sutlej North	Coho	1388	95	10.24								0										0	
2022-05-27	Kokish Estuary	Coho	1389	92	9.67								0										0	
2022-05-27	Kokish Estuary	Coho	1390	95	9.79								0										0	
2022-05-27	Kokish Estuary	Coho	1391	110	16.05								0										0	

Date Collected (yyyy-mm-dd)	Site Name	Fish Species	Fish #	Length (mm)	Weight (g)	LEP Co	LEP C1	LEP C2	LEP PAM	LEP PAF	LEP AM	LEP AF	LEP Total	Cal Co	Cal C1	Cal C2	Cal C3	Cal C4	CAL PAM	CAL PAF	CAL AM	CAL AF	CAL Total	Comments
2022-05-27	Kokish Estuary	Coho	1392	120	23.96								0										0	
2022-05-27	Kokish Estuary	Coho	1393	109	15.18								0										0	
2022-05-27	Kokish Estuary	Coho	1394	92	9.27								0										0	
2022-05-27	Kokish Estuary	Coho	1395	115	13.25								0										0	
2022-05-27	Kokish Estuary	Coho	1396	111	19.03			1					1										0	
2022-05-27	Kokish Estuary	Coho	1397	115	20.04								0										0	
2022-05-27	Kokish Estuary	Coho	1398	115	19.81								0										0	
2022-05-27	Kokish Estuary	Coho	1399	104	14.48								0			1							1	
2022-05-27	Kokish Estuary	Coho	1400	110	18.51								0										0	
2022-05-27	Kokish Estuary	Coho	1401	113	14.29								0										0	
2022-05-27	Kokish Estuary	Coho	1402	95	12.35								0										0	
2022-05-27	Kokish Estuary	Coho	1403	113	16.90								0										0	
2022-05-26	Jumper Island	Chum	1404	33	0.36								0			1							1	
2022-05-26	Jumper Island	Chum	1405	35	0.40		1						1										0	
2022-05-26	Jumper Island	Chum	1406	42	0.68								0		1								1	
2022-05-26	Jumper Island	Chum	1407	34	0.37								0	1									1	
2022-05-26	Jumper Island	Chum	1408	36	0.45								0	1	1								2	
2022-05-26	Jumper Island	Pink	1409	44	0.76	2	1	1	1	1			6	2									2	
2022-05-26	Jumper Island	Pink	1410	42	0.78								0										0	
2022-05-26	Jumper Island	Pink	1411	46	1.05								0				1						1	
2022-05-26	Jumper Island	Coho	1412	95	8.15								0			2							2	
2022-05-27	Codrington Point	Coho	1413	106	14.15								0										0	
2022-05-27	Codrington Point	Coho	1414	106	11.50								0										0	
2022-05-27	Codrington Point	Coho	1415	94	10.23				1				1										0	
2022-05-27	Codrington Point	Coho	1416	113	17.03								0		5								5	
2022-05-27	Codrington Point	Chum	1417	75	5.28								0										0	
2022-05-27	Codrington Point	Chum	1418	64	4.04		2						2		1								1	
2022-05-27	Codrington Point	Chum	1419	76	6.05								0										0	
2022-05-27	Codrington Point	Chum	1420	77	5.38								0										0	
2022-05-27	Codrington Point	Chum	1421	58	2.81	1							1		3		1						4	
2022-05-27	Codrington Point	Chum	1422	80	6.21								0										0	
2022-05-27	Codrington Point	Chum	1423	72	4.66								0										0	
2022-05-27	Codrington Point	Chum	1424	84	6.69								0										0	
2022-05-27	Codrington Point	Chum	1425	73	5.07			1					1										0	
2022-05-27	Codrington Point	Chum	1426	70	4.39								0										0	
2022-05-27	Codrington Point	Chum	1427	69	4.43								0										0	
2022-05-27	Codrington Point	Chum	1428	70	5.62								0				1						1	
2022-05-27	Codrington Point	Chum	1429	77	6.17								0										0	
2022-05-27	Codrington Point	Chum	1430	73	5.61								0										0	
2022-05-27	Codrington Point	Chum	1431	70	4.49								0										0	
2022-05-27	Codrington Point	Pink	1432	58	2.72								0		1		3						4	
2022-05-27	Codrington Point	Pink	1433	69	3.38								0										0	
2022-05-27	Codrington Point	Pink	1434	56	2.04								0										0	
2022-05-27	Codrington Point	Pink	1435	73	4.48								0										0	
2022-05-27	Codrington Point	Pink	1436	76	4.21								0										0	
2022-05-27	Codrington Point	Pink	1437	77	5.16								0										0	
2022-05-27	Codrington Point	Pink	1438	62	2.87								0										0	
2022-05-27	Codrington Point	Pink	1439	75	4.22								0										0	
2022-05-27	Codrington Point	Pink	1440	50	1.57								0		1								1	
2022-05-27	Codrington Point	Pink	1441	54	1.65								0										0	
2022-05-27	Codrington Point	Pink	1442	50	1.22								0										0	
2022-05-27	Codrington Point	Pink	1443	58	2.06								0										0	
2022-05-27	Codrington Point	Pink	1444	75	5.51								0										0	
2022-05-27	Codrington Point	Pink	1445	56	1.90								0										0	
2022-05-27	Codrington Point	Pink	1446	68	3.71								0										0	
2022-05-26	Tomakstum	Coho	1447	72	4.87								0										0	

Date Collected (yyyy-mm-dd)	Site Name	Fish Species	Fish #	Length (mm)	Weight (g)	LEP Co	LEP C1	LEP C2	LEP PAM	LEP PAF	LEP AM	LEP AF	LEP Total	Cal Co	Cal C1	Cal C2	Cal C3	Cal C4	CAL PAM	CAL PAF	CAL AM	CAL AF	CAL Total	Comments
2022-05-25	Batt Bluff West	Pink	1448	48	0.89								0										0	
2022-05-25	Freshwater Bay	Chum	1449	50	1.45								0			1							1	
2022-05-25	Arthur Point	Chum	1450	51	1.45		1						1										0	
2022-05-25	Arthur Point	Chum	1451	42	0.65								0										0	
2022-05-25	Arthur Point	Chum	1452	34	0.28								0										0	
2022-05-25	Arthur Point	Chum	1453	46	1.04		1						1										0	not collected
2022-05-25	Arthur Point	Chum	1454	36	0.40		1						1										0	
2022-05-25	Arthur Point	Chum	1455	45	0.96		2						2										0	
2022-05-25	Lance Bay	Coho	1456	90	10.41								0	1	3								4	
2022-05-25	Lance Bay	Coho	1457	100	13.50								0		3	2							5	
2022-05-25	Lance Bay	Coho	1458	96	13.71								0										0	
2022-05-25	Lance Bay	Coho	1459	102	15.98								0										0	
2022-05-25	Sargeaunt Pass	Coho	1460	108	14.44								0		1								1	
2022-05-25	Sargeaunt Pass	Coho	1461	95	10.93								0										0	
2022-05-25	Sargeaunt Pass	Coho	1462	86	10.66								0										0	
2022-05-25	Sargeaunt Pass	Chum	1463	76	4.66								0										0	
2022-05-26	Viner Sound	Chum	1464	56	2.35								0		1								1	
2022-05-26	Viner Sound	Chum	1465	39	0.57								0										0	
2022-05-26	Viner Sound	Chum	1466	42	0.87								0										0	
2022-05-26	Viner Sound	Chum	1467	40	0.67								0										0	
2022-05-26	Viner Sound	Chum	1468	37	0.55								0										0	
2022-05-26	Viner Sound	Chum	1469	38	0.74								0	2									2	
2022-05-26	Viner Sound	Chum	1470	39	0.61								0		1								1	
2022-05-26	Viner Sound	Chum	1471	43	1.03								0										0	
2022-05-26	Viner Sound	Chum	1472	52	1.78								0										0	
2022-05-26	Viner Sound	Chum	1473	41	0.98								0										0	
2022-05-26	Viner Sound	Chum	1474	41	1.02								0										0	
2022-05-26	Viner Sound	Chum	1475	43	1.00								0		1								1	
2022-05-26	Viner Sound	Chum	1476	40	0.86								0		2								2	
2022-05-26	Viner Sound	Chum	1477	42	0.86								0		1								1	
2022-05-26	Viner Sound	Chum	1478	42	0.79								0										0	
2022-05-26	Viner Sound	Pink	1479	65	3.12								0										0	
2022-05-25	Lady Island	Chum	1480	75	4.79	2		1					3		1								1	
2022-05-25	Lady Island	Chum	1481	55	2.07								0		1								1	
2022-05-25	Lady Island	Chum	1482	51	1.77	1							1			1							1	
2022-05-25	Lady Island	Chum	1483	50	1.59	1							1										0	
2022-05-25	Lady Island	Chum	1484	47	1.70				1				1										0	
2022-05-25	Lady Island	Chum	1485	51	1.78								0		1								1	
2022-05-25	Lady Island	Chum	1486	46	1.60				1				1					1					1	
2022-05-25	Lady Island	Chum	1487	58	2.79								0										0	
2022-05-25	Lady Island	Chum	1488	48	1.60								0										0	
2022-05-25	Lady Island	Chum	1489	48	1.45								0						1				1	
2022-05-25	Lady Island	Chum	1490	52	1.63								0										0	
2022-05-25	Lady Island	Chum	1491	56	2.06								0										0	
2022-05-25	Lady Island	Chum	1492	45	1.05								0										0	
2022-05-25	Lady Island	Chum	1493	64	3.00								0										0	
2022-05-25	Lady Island	Chum	1494	51	1.54	2							2	1	4								5	
2022-05-25	Lady Island	Pink	1495	50	1.38								0	1									1	
2022-05-25	Lady Island	Pink	1496	58	2.15								0										0	
2022-05-25	Lady Island	Pink	1497	62	3.28	1				1			2										0	
2022-05-25	Lady Island	Pink	1498	59	2.11								0								1		1	
2022-05-25	Lady Island	Pink	1499	56	1.84						1		1										0	
2022-05-25	Lady Island	Pink	1500	66	3.98								0										0	
2022-05-25	Lady Island	Pink	1501	56	2.41								0										0	
2022-05-25	Lady Island	Pink	1502	59	2.44								0										0	
2022-05-25	Lady Island	Pink	1503	62	2.86	1				1			2										0	



Date Collected (yyyy-mm-dd)	Site Name	Fish Species	Fish #	Length (mm)	Weight (g)	LEP Co	LEP C1	LEP C2	LEP PAM	LEP PAF	LEP AM	LEP AF	LEP Total	Cal Co	Cal C1	Cal C2	Cal C3	Cal C4	CAL PAM	CAL PAF	CAL AM	CAL AF	CAL Total	Comments
2022-05-25	Lady Island	Pink	1504	45	1.09								0		1								1	
2022-05-25	Lady Island	Pink	1505	48	1.27								0										0	
2022-05-25	Lady Island	Pink	1506	45	0.94								0										0	
2022-05-25	Lady Island	Pink	1507	56	2.46					1			1										0	
2022-05-25	Lady Island	Pink	1508	70	4.71								0		1								1	
2022-05-25	Lady Island	Pink	1509	76	5.01					1			1										0	
2022-05-27	Nimpkish Estuary	Coho	1510	92	8.50								0										0	no clip
2022-05-27	Nimpkish Estuary	Coho	1511	93	9.39								0										0	no clip
2022-05-27	Nimpkish Estuary	Coho	1512	93	8.88								0										0	no clip
2022-05-27	Nimpkish Estuary	Coho	1513	92	9.74								0										0	no clip
2022-05-27	Nimpkish Estuary	Coho	1514	92	1.00								0										0	no clip
2022-05-27	Nimpkish Estuary	Coho	1515	92	11.26								0										0	no clip
2022-05-27	Nimpkish Estuary	Coho	1516	99	11.55								0										0	no clip
2022-05-27	Nimpkish Estuary	Coho	1517	103	13.43								0										0	no clip
2022-05-27	Nimpkish Estuary	Coho	1518	86	9.70								0										0	no clip
2022-05-27	Nimpkish Estuary	Coho	1519	92	10.55								0										0	no clip
2022-05-27	Nimpkish Estuary	Coho	1520	88	9.56								0										0	no clip
2022-05-27	Nimpkish Estuary	Coho	1521	110	17.68								0										0	no clip
2022-05-27	Nimpkish Estuary	Coho	1522	100	12.50								0										0	no clip
2022-05-27	Nimpkish Estuary	Coho	1523	95	13.78								0										0	no clip
2022-05-27	Nimpkish Estuary	Coho	1524	96	10.71								0										0	no clip
2022-05-26	Hoeya Sound	Chum	1525	43	0.87	1							1										0	
2022-05-26	Hoeya Sound	Chum	1526	55	1.86								0										0	
2022-05-26	Hoeya Sound	Chum	1527	59	2.00								0										0	
2022-05-26	Hoeya Sound	Chum	1528	40	0.67								0										0	
2022-05-26	Hoeya Sound	Chum	1529	46	0.96								0										0	
2022-05-26	Hoeya Sound	Chum	1530	40	0.55								0										0	
2022-05-26	Hoeya Sound	Chum	1531	38	0.54								0										0	
2022-05-26	Hoeya Sound	Chum	1532	60	2.34		1						1										0	
2022-05-26	Hoeya Sound	Chum	1533	38	0.63								0										0	
2022-05-26	Hoeya Sound	Chum	1534	45	0.98	1							1										0	
2022-05-26	Hoeya Sound	Chum	1535	50	1.32								0										0	
2022-05-26	Hoeya Sound	Chum	1536	42	0.74								0										0	
2022-05-26	Hoeya Sound	Chum	1537	48	1.52								0										0	
2022-05-26	Hoeya Sound	Chum	1538	55	1.82								0										0	
2022-05-26	Hoeya Sound	Chum	1539	44	0.95								0										0	
2022-05-25	Chop Bay	Chum	1540	72	4.11								0				1						1	
2022-05-25	Chop Bay	Chum	1541	67	3.75						1		1										0	
2022-05-25	Chop Bay	Chum	1542	87	6.59			1					1		1								1	
2022-05-25	Chop Bay	Chum	1543	56	2.00								0			1							1	
2022-05-25	Chop Bay	Chum	1544	50	1.34								0		1	1							2	
2022-05-25	Chop Bay	Chum	1545	53	1.69								0										0	
2022-05-25	Chop Bay	Chum	1546	49	1.39								0	1									1	
2022-05-25	Chop Bay	Chum	1547	53	1.80								0										0	
2022-05-25	Chop Bay	Chum	1548	55	1.83			2					2				1						1	
2022-05-25	Chop Bay	Chum	1549	77	5.85								0										0	
2022-05-25	Chop Bay	Chum	1550	69	4.13								0										0	
2022-05-25	Chop Bay	Chum	1551	71	4.37								0				1	1					2	
2022-05-25	Chop Bay	Chum	1552	61	2.75								0										0	
2022-05-25	Chop Bay	Chum	1553	62	2.76								0				1						1	
2022-05-25	Chop Bay	Pink	1554	52	1.49								0										0	
2022-05-25	Chop Bay	Pink	1555	49	1.22								0										0	
2022-05-25	Chop Bay	Pink	1556	56	1.79								0										0	
2022-05-25	Chop Bay	Pink	1557	70	3.70								0										0	
2022-05-25	Chop Bay	Pink	1558	53	1.42		1						1										0	
2022-05-25	Chop Bay	Pink	1559	64	3.00								0										0	

Date Collected (yyyy-mm-dd)	Site Name	Fish Species	Fish #	Length (mm)	Weight (g)	LEP Co	LEP C1	LEP C2	LEP PAM	LEP PAF	LEP AM	LEP AF	LEP Total	Cal Co	Cal C1	Cal C2	Cal C3	Cal C4	CAL PAM	CAL PAF	CAL AM	CAL AF	CAL Total	Comments
2022-05-25	Chop Bay	Pink	1560	47	1.26								0										0	
2022-05-25	Chop Bay	Pink	1561	65	3.02								0										0	
2022-05-25	Chop Bay	Pink	1562	67	3.24						1		1										0	
2022-05-25	Chop Bay	Pink	1563	66	3.12								0										0	
2022-05-25	Chop Bay	Pink	1564	46	1.12								0										0	
2022-05-25	Chop Bay	Pink	1565	51	1.38								0										0	
2022-05-25	Chop Bay	Pink	1566	50	1.18								0										0	
2022-05-25	Chop Bay	Pink	1567	42	0.91			1	2				3				1						1	
2022-05-25	Chop Bay	Pink	1568	54	1.69								0										0	
2022-05-25	Chop Bay	Pink	1569	43	0.81								0										0	
2022-05-26	Glacier Falls Fish Farm	Pink	1570	55	1.65								0										0	
2022-05-26	Glacier Falls Fish Farm	Pink	1571	52	1.32				1				1		1								1	
2022-05-26	Glacier Falls Fish Farm	Pink	1572	63	2.73								0										0	
2022-05-26	Glacier Falls Fish Farm	Pink	1573	58	2.20	1							1		1								1	
2022-05-26	Glacier Falls Fish Farm	Pink	1574	56	1.99	1							1		1								1	
2022-05-26	Glacier Falls Fish Farm	Pink	1575	46	0.91								0										0	
2022-05-26	Glacier Falls Fish Farm	Pink	1576	44	0.87	1							1										0	
2022-05-26	Glacier Falls Fish Farm	Pink	1577	46	0.97								0		1								1	
2022-05-26	Glacier Falls Fish Farm	Pink	1578	48	1.18								0										0	
2022-05-26	Glacier Falls Fish Farm	Pink	1579	54	1.60								0										0	
2022-05-26	Glacier Falls Fish Farm	Pink	1580	49	1.36								0		1								1	
2022-05-26	Glacier Falls Fish Farm	Pink	1581	55	1.91								0										0	
2022-05-26	Glacier Falls Fish Farm	Pink	1582	48	1.11								0	1									1	
2022-05-26	Glacier Falls Fish Farm	Pink	1583	42	0.83	1							1										0	
2022-05-26	Glacier Falls Fish Farm	Pink	1584	58	2.12								0		2								2	
2022-05-26	Glacier Falls Fish Farm	Pink	1585	53	1.70			1	1				2										0	
2022-05-26	Glacier Falls Fish Farm	Chum	1586	54	2.06								0										0	
2022-05-26	Glacier Falls Fish Farm	Chum	1587	50	1.43								0										0	
2022-05-26	Glacier Falls Fish Farm	Chum	1588	44	1.07	1	1						2		1								1	
2022-05-26	Glacier Falls Fish Farm	Chum	1589	52	1.46			1					1										0	not collected
2022-05-26	Glacier Falls Fish Farm	Chum	1590	48	1.29		1	1					2										0	
2022-05-26	Glacier Falls Fish Farm	Chum	1591	45	0.91	1		1					2										0	
2022-05-26	Glacier Falls Fish Farm	Chum	1592	60	2.15		1						1										0	
2022-05-26	Glacier Falls Fish Farm	Chum	1593	36	0.48								0										0	
2022-05-26	Glacier Falls Fish Farm	Chum	1594	45	0.99			1					1										0	
2022-05-26	Glacier Falls Fish Farm	Chum	1595	55	1.57				1				1		4								4	
2022-05-26	Glacier Falls Fish Farm	Chum	1596	38	0.61								0										0	
2022-05-26	Glacier Falls Fish Farm	Chum	1597	42	0.88	1							1										0	
2022-05-26	Glacier Falls Fish Farm	Chum	1598	60	2.56								0										0	
2022-05-26	Glacier Falls Fish Farm	Chum	1599	66	3.52								0										0	
2022-05-26	Denham Island	Pink	1600	45	1.21				1				1										0	
2022-05-26	Denham Island	Pink	1601	47	1.31								0		1								1	
2022-05-26	Denham Island	Pink	1602	48	1.16								0										0	
2022-05-26	Denham Island	Chum	1603	35	0.45								0										0	
2022-05-26	Denham Island	Chum	1604	39	0.59								0										0	
2022-05-26	Denham Island	Chum	1605	34	0.44								0										0	
2022-05-26	Denham Island	Chum	1606	35	0.47								0										0	
2022-05-26	Denham Island	Chum	1607	48	1.74			1					1	1	1								2	
2022-05-26	Denham Island	Chum	1608	33	0.42	2							2										0	
2022-05-26	Denham Island	Chum	1609	40	0.76	1	1	1					3										0	
2022-05-26	Denham Island	Chum	1610	40	0.89				1				1										0	
2022-05-26	Denham Island	Chum	1611	37	0.57			2					2										0	
2022-05-26	Denham Island	Chum	1612	39	0.71								0										0	
2022-05-26	Denham Island	Chum	1613	39	0.70								0										0	
2022-05-26	Denham Island	Chum	1614	39	0.70								0										0	
2022-05-26	Denham Island	Chum	1615	43	1.00								0		1								1	



Date Collected (yyyy-mm-dd)	Site Name	Fish Species	Fish #	Length (mm)	Weight (g)	LEP Co	LEP C1	LEP C2	LEP PAM	LEP PAF	LEP AM	LEP AF	LEP Total	Cal Co	Cal C1	Cal C2	Cal C3	Cal C4	CAL PAM	CAL PAF	CAL AM	CAL AF	CAL Total	Comments
2022-05-26	Denham Island	Chum	1616	47	1.59		1						1										0	
2022-05-26	Denham Island	Chum	1617	33	0.29								0										0	
2022-05-26	Denham Island	Coho	1618	92	14.50								0										0	no clip
2022-05-26	Baker Island	Chum	1619	42	0.87								0		1								1	
2022-05-26	Baker Island	Chum	1620	40	0.88				2				2										0	
2022-05-26	Baker Island	Chum	1621	43	1.22		1						1										0	
2022-05-26	Baker Island	Chum	1622	43	1.02			1					1										0	
2022-05-26	Baker Island	Chum	1623	47	1.27	2	1						3										0	
2022-05-26	Baker Island	Chum	1624	41	0.88	1							1										0	
2022-05-26	Baker Island	Chum	1625	55	2.32								0										0	
2022-05-26	Baker Island	Chum	1626	43	1.06	1			1				2										0	
2022-05-26	Baker Island	Chum	1627	39	0.62			2					2										0	
2022-05-26	Baker Island	Chum	1628	55	2.01								0		1								1	
2022-05-26	Baker Island	Chum	1629	40	0.79	2							2										0	
2022-05-26	Baker Island	Chum	1630	44	1.15		1		1				2										0	
2022-05-26	Baker Island	Chum	1631	42	0.91		1						1										0	
2022-05-26	Baker Island	Chum	1632	47	1.28		1	1					2										0	
2022-05-26	Baker Island	Chum	1633	52	2.11	1	1						2										0	
2022-05-26	Baker Island	Chum	1634	34	0.36								0										0	
2022-05-26	Baker Island	Pink	1635	50	1.44				1				1										0	
2022-05-26	Baker Island	Pink	1636	55	1.90								0										0	
2022-05-26	Baker Island	Pink	1637	47	1.07	1							1										0	
2022-05-26	Baker Island	Pink	1638	50	1.17								0										0	
2022-05-26	Baker Island	Pink	1639	37	0.52		2						2		1								1	
2022-05-26	Baker Island	Pink	1640	48	1.20								0										0	
2022-05-26	Baker Island	Pink	1641	52	1.42		1	1	1				3										0	
2022-05-26	Baker Island	Pink	1642	51	1.70								0										0	
2022-05-26	Baker Island	Pink	1643	44	0.88		1						1		1								1	
2022-05-26	Baker Island	Pink	1644	42	0.82								0		1								1	
2022-05-26	Baker Island	Pink	1645	55	1.80								0		1								1	
2022-05-26	Baker Island	Pink	1646	47	1.26								0		1								1	
2022-05-26	Baker Island	Pink	1647	50	1.26								0										0	
2022-05-26	Baker Island	Pink	1648	42	0.90		1						1		1		1						2	
2022-05-27	Wakeman 3	Chum	1649	53	1.52								0										0	
2022-05-27	Wakeman 3	Chum	1650	47	1.15								0										0	
2022-05-27	Wakeman 3	Chum	1651	44	0.83								0										0	
2022-05-27	Wakeman 3	Chum	1652	43	0.85								0										0	
2022-05-27	Wakeman 3	Chum	1653	48	1.21								0										0	
2022-05-27	Wakeman 3	Chum	1654	38	1.13								0										0	
2022-05-27	Wakeman 3	Chum	1655	58	2.26								0										0	
2022-05-27	Wakeman 3	Chum	1656	56	1.98								0										0	
2022-05-27	Wakeman 3	Chum	1657	40	0.71								0										0	
2022-05-27	Wakeman 3	Chum	1658	67	3.83								0										0	
2022-05-27	Wakeman 3	Chum	1659	48	1.14								0										0	
2022-05-27	Wakeman 3	Chum	1660	46	0.68								0										0	
2022-05-27	Wakeman 3	Chum	1661	43	0.96								0										0	
2022-05-27	Wakeman 3	Chum	1662	45	0.95								0										0	
2022-05-27	Wakeman 3	Chum	1663	43	0.85								0										0	
2022-05-27	Wakeman 3	Coho	1664	94	9.90								0										0	
2022-05-27	Wakeman 3	Coho	1665	82	7.10								0										0	
2022-05-27	Wakeman 3	Coho	1666	84	6.88								0										0	
2022-05-27	Wakeman 3	Coho	1667	80	6.95								0										0	
2022-05-27	Wakeman 3	Coho	1668	90	9.58								0										0	
2022-05-27	Wakeman 3	Coho	1669	95	9.03								0										0	
2022-05-27	Wakeman 3	Coho	1670	81	7.00								0										0	
2022-05-27	Wakeman 3	Coho	1671	89	9.93								0										0	

Date Collected (yyyy-mm-dd)	Site Name	Fish Species	Fish #	Length (mm)	Weight (g)	LEP Co	LEP C1	LEP C2	LEP PAM	LEP PAF	LEP AM	LEP AF	LEP Total	Cal Co	Cal C1	Cal C2	Cal C3	Cal C4	CAL PAM	CAL PAF	CAL AM	CAL AF	CAL Total	Comments
2022-05-27	Wakeman 3	Coho	1672	84	6.64								0										0	
2022-05-27	Wakeman 3	Coho	1673	79	5.99								0										0	
2022-05-27	Wakeman 3	Coho	1674	82	7.09								0										0	
2022-05-27	Wakeman 3	Coho	1675	87	9.27								0										0	
2022-05-27	Wakeman 3	Coho	1676	88	7.48								0										0	
2022-05-27	Wakeman 3	Coho	1677	82	7.70								0										0	
2022-05-27	Wakeman 3	Coho	1678	85	8.25								0										0	
2022-05-27	McKenzie Cove	Pink	1679	84	5.19								0										0	
2022-05-27	McKenzie Cove	Pink	1680	78	4.95								0										0	
2022-05-27	McKenzie Cove	Pink	1681	83	5.40								0										0	
2022-05-27	McKenzie Cove	Pink	1682	84	5.90								0										0	
2022-05-27	McKenzie Cove	Pink	1683	72	4.72								0										0	
2022-05-27	McKenzie Cove	Chum	1684	83	5.65								0										0	
2022-05-27	McKenzie Cove	Chum	1685	81	7.36								0										0	
2022-05-27	McKenzie Cove	Chum	1686	74	5.50		1						1										0	
2022-05-27	McKenzie Cove	Chum	1687	90	7.85								0										0	
2022-05-27	McKenzie Cove	Chum	1688	86	7.50								0										0	
2022-05-27	McKenzie Cove	Chum	1689	85	7.29								0										0	
2022-05-27	McKenzie Cove	Chum	1690	80	6.88								0										0	
2022-05-27	McKenzie Cove	Chum	1691	100	10.30								0										0	
2022-05-27	McKenzie Cove	Chum	1692	88	6.80								0										0	
2022-05-27	McKenzie Cove	Chum	1693	85	7.52								0										0	
2022-05-27	McKenzie Cove	Chum	1694	84	7.03								0										0	
2022-05-27	McKenzie Cove	Chum	1695	104	13.79								0										0	
2022-05-27	McKenzie Cove	Chum	1696	72	3.84								0										0	
2022-05-27	McKenzie Cove	Chum	1697	90	8.70								0										0	
2022-05-27	McKenzie Cove	Chum	1698	95	10.38								0										0	
2022-05-27	McKenzie Cove	Coho	1699	108	11.98								0										0	
2022-05-27	McKenzie Cove	Coho	1700	126	25.23								0										0	
2022-05-27	McKenzie Cove	Coho	1701	110	15.42								0										0	
2022-05-27	McKenzie Cove	Coho	1702	99	13.27								0										0	
2022-05-27	McKenzie Cove	Coho	1703	100	13.68								0										0	
2022-05-27	McKenzie Cove	Coho	1704	100	12.42								0										0	
2022-05-27	McKenzie Cove	Coho	1705	102	14.83								0										0	
2022-05-27	McKenzie Cove	Coho	1706	109	14.05								0										0	
2022-05-27	McKenzie Cove	Coho	1707	100	12.60								0										0	
2022-05-27	McKenzie Cove	Coho	1708	113	17.69								0										0	
2022-05-27	McKenzie Cove	Coho	1709	100	13.12								0										0	
2022-05-27	McKenzie Cove	Coho	1710	104	14.06								0										0	

## Appendix IV - 2016 – 2022 Comparisons

A comparison of sea lice infestation rates on chum and pink salmon collected in the Broughton Archipelago between 2016 and 2022.

Historical chum salmon sample infestation:

Year	Sample size	Total # of lice observed	Total # of fish infested	Prevalence (%)	Abundance	Average Intensity
2016	512	262	152	29.7	0.51	1.7
2017	562	257	131	23.3	0.46	2.0
2018	281	77	55	19.6	0.27	1.4
2019	246	122	58	23.6	0.50	2.1
2020	497	183	114	22.9	0.37	1.6
2021	249	100	64	25.7	0.40	1.6
2022	330	219	122	37.0	0.66	1.8
<b>Total</b>	<b>2677</b>	<b>1220</b>	<b>696</b>	<b>26.0</b>	<b>0.46</b>	<b>1.8</b>

Historical pink salmon sample infestation:

Year	Sample size	Total # of lice observed	Total # of fish infested	Prevalence (%)	Abundance	Average Intensity
2016	430	242	146	33.9	0.56	1.7
2017	411	130	77	18.7	0.32	1.7
2018	356	80	52	14.6	0.22	1.5
2019	230	101	49	21.3	0.44	2.1
2020	402	120	90	22.4	0.30	1.3
2021	309	96	71	23.0	0.31	1.4
2022	263	149	87	33.1	0.57	1.7
<b>Total</b>	<b>2401</b>	<b>918</b>	<b>572</b>	<b>23.8</b>	<b>0.38</b>	<b>1.6</b>

The number of sea lice in each life stage by species identified on the chum salmon sample population from the Broughton Archipelago between 2016 and 2022.

LEP = *Lepeophtheirus salmonis* CAL = *Caligus clemensi*

Life Stage <sup>1</sup>	Number of Lice						
	2016	2017	2018	2019	2020	2021 <sup>2</sup>	2022 <sup>2</sup>
LEP Co	16	21	11	5	22	17	25
LEP C1	21	28	13	27	7	13	43
LEP C2	39	29	8	7	14	23	34
LEP PAM	8	2	0	5	2	5	9
LEP PAF	4	1	0	1	3	1	4
LEP AM	6	0	0	5	1	1	1
LEP AF	4	0	0	3	0	0	0
<b>TOTAL LEP</b>	<b>98</b>	<b>81</b>	<b>32</b>	<b>53</b>	<b>49</b>	<b>60</b>	<b>116</b>
CAL Co	7	27	9	2	15	8	9
CAL C1	111	103	22	50	74	15	64
CAL C2	15	33	5	9	18	6	13
CAL C3	8	9	4	4	15	4	7
CAL C4	11	2	2	2	2	3	4
CAL PAM	0	0	0	0	1	1	1
CAL PAF	0	0	1	0	0	1	1
CAL AM	3	1	1	0	8	1	4
CAL AF	9	1	1	2	1	1	0
<b>TOTAL CAL</b>	<b>164</b>	<b>176</b>	<b>45</b>	<b>69</b>	<b>134</b>	<b>40</b>	<b>103</b>

<sup>1</sup> Lice life stage codes: Co = copepodid, C1-4 = chalimus 1-4, PAM = pre-adult male, PAF = pre-adult female, AM = adult male, AF = adult female

<sup>2</sup> A maximum of 15 individual were captured at each sample location instead of the usual maximum of 30.

The number of sea lice in each life stage by species identified on the pink salmon sample population from the Broughton Archipelago between 2016 and 2022.

LEP = *Lepeophtheirus salmonis* CAL = *Caligus clemensi*

Life Stage <sup>1</sup>	Number of Lice						
	2016	2017	2018	2019	2020	2021 <sup>2</sup>	2022 <sup>2</sup>
LEP Co	11	13	9	9	16	23	25
LEP C1	17	11	7	18	9	12	28
LEP C2	51	12	5	9	6	9	5
LEP PAM	7	0	0	1	4	9	11
LEP PAF	2	1	1	2	4	4	5
LEP AM	7	0	0	9	2	0	2
LEP AF	8	0	0	8	2	0	0
<b>TOTAL LEP</b>	<b>103</b>	<b>37</b>	<b>22</b>	<b>56</b>	<b>43</b>	<b>57</b>	<b>76</b>
CAL Co	1	8	4	2	16	3	12
CAL C1	74	50	43	35	36	19	47
CAL C2	26	21	9	6	6	2	3
CAL C3	16	6	2	1	8	5	7
CAL C4	6	3	0	0	3	5	2
CAL PAM	0	0	0	0	1	0	0
CAL PAF	0	2	0	0	3	1	0
CAL AM	5	3	0	1	3	3	2
CAL AF	12	0	0	0	1	1	0
<b>TOTAL CAL</b>	<b>140</b>	<b>93</b>	<b>58</b>	<b>45</b>	<b>77</b>	<b>39</b>	<b>73</b>

<sup>1</sup> Lice life stage codes: Co = copepodid, C1-4 = chalimus 1-4, PAM = pre-adult male, PAF = pre-adult female, AM = adult male, AF = adult female

<sup>2</sup> A maximum of 15 individual were captured at each sample location instead of the usual maximum of 30.

A comparison of the results of analysis for sea lice infestation on samples collected by beach seine in the Broughton Archipelago between 2016 and 2022.

Species	Sample size (n)							Total # of fish infested							Prevalence (%)						
	2016	2017	2018	2019	2020	2021	2022	2016	2017	2018	2019	2020	2021	2022	2016	2017	2018	2019	2020	2021	2022
chum	512	562	281	246	497	249	330	152	131	55	58	114	64	122	29.7	23.3	19.6	23.6	22.9	25.7	37.0
pink	430	411	356	230	402	309	263	146	77	52	49	90	71	87	34.0	18.7	14.6	21.3	22.4	23.0	33.1
Total	942	973	637	476	899	558	593	298	208	107	107	204	135	209	31.6	21.4	16.8	22.5	22.7	24.2	35.2

Species	Sample size (n)							Total # of lice observed							Abundance						
	2016	2017	2018	2019	2020	2021	2022	2016	2017	2018	2019	2020	2021	2022	2016	2017	2018	2019	2020	2021	2022
chum	512	562	281	246	497	249	330	262	257	77	122	183	100	219	0.51	0.46	0.27	0.50	0.37	0.40	0.66
pink	430	411	356	230	402	309	263	242	130	80	101	120	96	149	0.56	0.32	0.22	0.44	0.30	0.31	0.57
Total	942	973	637	476	899	558	593	504	387	157	223	303	196	368	0.54	0.40	0.25	0.47	0.34	0.35	0.62

Species	Total # of fish infested							Total # of lice observed							Intensity						
	2016	2017	2018	2019	2020	2021	2022	2016	2017	2018	2019	2020	2021	2022	2016	2017	2018	2019	2020	2021	2022
chum	152	131	55	58	114	64	122	262	257	77	122	183	100	219	1.72	1.96	1.40	2.10	1.61	1.56	1.80
pink	146	77	52	49	90	71	87	242	130	80	101	120	96	149	1.66	1.69	1.54	2.06	1.33	1.35	1.71
Total	298	208	107	107	204	135	209	504	387	157	223	303	196	368	1.69	1.86	1.47	2.08	1.49	1.45	1.80