



South Coast Salmon West Coast of Vancouver Island Stock Assessment November 10, 2023: Escapement Bulletin #7 – all salmon species

SUMMARY: This bulletin details the current in-season escapement information for salmon returning to assessed river systems on the West Coast of Vancouver Island (WCVI) in 2023. The WCVI area extends from the San Juan River to Quatsino Sound. Estimates reported here are preliminary and should be interpreted with caution.

Average Timing:

| Species | Arrival in Stream | Typical Peak Count | Typical Dates of Spawning | | |
|-----------------|-------------------|--------------------|---------------------------|-----------|-----------|
| | | | Start | Peak | End |
| Chinook | Early Sep | Early Oct | Late Sep | Early Oct | Late Oct |
| Coho | Early Sep | Late Oct | Late Oct | Mid Nov | Mid Dec |
| Chum | Late Sep | Mid-Late Oct | Early Oct | Mid Oct | Early Nov |
| Clemens Sockeye | Early Sep | Mid-Late Oct | Early Oct | Early Nov | Mid Nov |

Environmental Conditions: There was little rain in the South Coast throughout the summer and into late September, leaving river water levels and flow low to exceptionally low, especially smaller creeks that are not fed by lakes. Substantial fall rains arrived in late September, raising the river flows and aiding in salmon migration in most systems. Periods of heavy rain over the last month brought many rivers up to flood conditions, delaying some surveys. Additional rain events are predicted for the coming week.

Operations: The Stamp Falls cameras were pulled from the fishway Oct 17 as of 9am ahead of the forecasted Oct 17-18th storm. The cameras were reinstalled Wed Oct 25 and fish continue to move through, but updated are not yet available. The Carnation fence has been operational for some time, counts are current though Nov 9. Annual periodic visual surveys in most systems are winding down over the next week but we will continue to monitor a few coho systems.

2023 PRE-SEASON EXPECTATIONS:

Chinook: Terminal Chinook returns of Conuma, Nitinat, and smaller WCVI indicator stocks are forecast to be average in 2023. The forecast of aggregate terminal abundance (sum of all hatchery and wild indicator stocks, including RCH) is 214 000 adults (range: 151 000–278 000), significantly higher than the long-term average of 160 000 (1980–2021). The overall expected adult age composition of the WCVI aggregate terminal run is 16% age-3, 68% age-4, and 16% age-5, with an expected sex ratio of 47% female. After a period of modest increase of wild populations, escapements have been decreasing over the last five years for many wild stocks. Spawner levels in the South West Vancouver Island (SWVI) Conservation Unit (CU) remain below upper biological benchmarks with fewer than 100 spawners observed in some rivers in recent years. Wild WCVI Chinook therefore remains a stock of concern

Coho: The outlook for WCVI Coho is ‘moderate’ returns in 2023 based on forecasted marine survival of Robertson Creek Hatchery (RBT) Coho and Carnation Creek wild Coho. The marine survival for Robertson Hatchery (brood 2020, ocean entry year 2022, returning in 2023) is forecast at 7.1%, a slight (4%) decrease relative to the 2022 return. The marine survival for the wild indicator at Carnation Creek is forecast to be 2.5%, a 140% increase over last year.

Pink: No formal forecast of pink populations on the West Coast of Vancouver Island.

Chum: In 2022 we saw improvements in survival of some of the monitored populations (Barkley and Kyuquot) but keep in mind weak 2019 brood year (4-year-olds returning in 2023). Forecast performance of the hatchery dominated populations was poor in 2022, it is recommended that we approach 2023

forecast with caution. Median (50%P) forecasts continue to be below the lower fishery reference point in all PFMAAs, and we anticipate a strong 3-year-old composition in the 2023 return.

Somass Sockeye: For 2023 fishery management purposes, the Area 23 Roundtable has agreed to begin fisheries in the “Moderate” zone corresponding to an expected return of 500000–700000 adult Sockeye. The recommended management outlook for Henderson Sockeye is the “Low” zone for harvest management, corresponding to an expected return of 15000–25000 Sockeye. Spawner abundances in the main contributing brood years were near the historical median of 13000 (12000 Sockeye in 2018, 13500 Sockeye in 2019). Based on positive ocean indicators and data from incomplete brood years, marine survivals are expected to be high. Therefore, expectations are for a near average Henderson sockeye return in 2023.

2023 OBSERVATIONS TO DATE:

Chinook: Chinook brood collection was mostly successful with sufficient numbers returning to enhanced systems, and low water keeping the returned Chinook holding in pools accessible to hatchery staff. With the increased water levels, Chinook were able to get in, and distributed through their usual areas.

Chum: Returns to many of the smaller systems have improved relative to the last couple of years.

ESCAPEMENT MONITORING FRAMEWORK:

There are records of spawning salmon populations in over 170 streams or rivers across the West Coast of Vancouver Island (DFO Statistical Areas 20 to 27, roughly Port Renfrew to Quatsino Sound). Indicator stocks are used to monitor the status of populations across the area. Many groups participate in the annual WCVI escapement survey, including First Nations, DFO-contracted survey crews and local stewardship groups.

Where escapement counts or surveys are conducted, the estimates are classed to one of three categories:

1. True Abundance – Indicator Systems

Full quantitative escapement assessments of indicator streams or other complete escapement counts are classified as True Abundance; fish are counted as they move upstream past a fixed location. The type of count for these systems is cumulative. The number reported in the tables below is the total number of fish that have migrated past the fixed point enumeration site as of the count date. These are generally assessed through counting operations at fishways or fences, using video recordings or sonar counting systems (e.g. DIDSON), although mark-recapture is an alternative method. Some indicator stocks are marked (e.g. using coded-wire tags or thermally-marked otoliths) and recovery of marks in fisheries and escapement allows survival, distribution, and exploitation rate parameters to be estimated.

Estimate Classifications: Type-1, True, high resolution; Type-2, True, medium resolution

Planned Data Quality: Level 1 (High Quality)

True abundance estimates for Somass Chinook, Somass Sockeye, and Carnation Creek Coho are reported, as cumulative escapement to date, in these bulletins.

2. Relative Abundance – Intensive Monitoring

Estimates for most systems that are monitored for escapement are classified as relative abundance estimates, where a partial quantitative escapement assessment is conducted. The type of these survey assessments are periodic and include swim surveys, helicopter counts, bank or stream walks, tagging and index surveys. Methods are generally consistent from year to year, so relative change can be monitored. AUC estimates are calculated when the system was surveyed with good coverage of the population on a regular basis (from 4 to 10 surveys over the spawning season, covering the start, peak and end of the run)

and PL+D estimates are used when the surveys are too far apart (longer than the expected survey life of the species for that system), or there are too few surveys to calculate an AUC.

Estimate Classifications: Type-3, Relative, high resolution; Type-4, Relative, medium resolution; Type-5, Relative, low resolution

Planned Data Quality: Level 2 (Medium or Mixed Quality) or Level 3 (Low Quality). Quality depends on the level of effort and timing relative to run timing of the species of interest.

All relative abundance systems are recorded here as the PL+D estimate up to and including the most recent survey (e.g. in-season data). The PL+D counts are only a minimum index of abundance as the final escapement estimates may be corrected for observer efficiency and estimated “survey life” of spawners (via AUC analyses).

Relative abundance estimates in hatchery systems are often monitored more closely than other systems, and may include a mixed survey type (e.g. True Abundance counts of fish entering the hatchery mixed with estimates for the river via swim surveys or overflights). Salmon returns to Nitinat, Conuma, and San Juan are in this category.

3. Presence/Absence – Extensive Monitoring

This category defines the estimate when only a partial count was available, and/or the count was not representative of the entire population or habitat. These are labelled as adults present, when one or more adults were observed, or none observed, when no fish were observed during a survey. These systems are not detailed in this bulletin. Estimate Classification: Type-6, Presence or Absence; Data Quality: Level 3

DATA QUALITY: The WCVI escapement monitoring program results in escapement estimates of variable quality. While all the information is useful, not all estimates should be accorded the same weight in fisheries management decisions¹. The following guidelines were used to rank the escapement information presented in this bulletin:

Level 1 (High Quality) Estimates. These estimates are subject to quality control and peer review. Estimates of abundance are reliable and include an estimate of uncertainty.

Level 2 (Medium or Mixed Quality) Estimates. These estimates have some inherent shortcomings with regard to scientific quality (e.g. greater uncertainty, potential biases, etc.); however they are still useful for informing fishery management decisions. .

Level 3 (Low Quality) Estimates. These estimates substantially fail to meet standards of scientific quality and therefore are of limited utility for informing fishery management decisions. However, the information is still used to monitor salmon distribution, consistency of patterns throughout the region, and checks on habitat changes.

RESULTS:

In-season assessment results (raw (unexpanded), adult, peak live plus dead counts) for hatchery and non-hatchery systems are reported in Tables 1 to 5, for Chinook, Coho, Chum, Pink and Sockeye respectively. These tables include the type of survey, the group doing the surveys, total or peak count to date, week of last survey, and average escapement information. The 8 year average raw peak count is provided as well as the 12 year average historic escapements, corresponding to roughly two and three generations for most species, are also included in these tables where they are available. Averages are adult spawners. Eight year averages include years where surveys were conducted from 2015-2022. Twelve year averages include years where surveys were conducted from 2011-2022.

¹ The ranking scheme here was based on the Research and Science Information Standard for New Zealand Fisheries (NZ Ministry of Fisheries, 2011). When ranking the quality of scientific information, information is evaluated according to how well it meets the following scientific principles: methodology has been subject to peer review, data are relevant to management decision, integrity, objectivity, and reliability (i.e. repeatability) of estimate.

The data presented here are preliminary in-season observations and will be reviewed and finalized following the escapement season.

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Table 1: Chinook escapement counts to date for 2023 West Coast of Vancouver Island salmon surveys. Counts include adults only. Somass Chinook escapement target is 21,000

| Area | System | Species | Survey Type/Count Type | Surveys conducted by | Week of last survey | # of Surveys | PL+D Count | Avg Raw Peak (8yr) | Avg Esc Est (12 yr) |
|------|-----------------------|---------|------------------------|----------------------|---------------------|--------------|------------|--------------------|---------------------|
| 20 | HARRIS CREEK | Chinook | Periodic/PL+D | PFN | Oct 29-Nov4 | 1 | 23 | 90 | 90 |
| 20 | LENS CREEK | Chinook | Periodic/PL+D | PFN | Oct 29-Nov4 | 2 | 18 | 0 | 40 |
| 20 | RENFREW CREEK | Chinook | Periodic/PL+D | PFN | Nov 5-11 | 2 | 44 | 70 | 30 |
| 20 | SAN JUAN RIVER | Chinook | Mixed/PL+D | PFN/4Mile Crk | Oct 29-Nov4 | 4 | 2,642 | 700 | 1,170 |
| 20 | GORDON RIVER | Chinook | Periodic/PL+D | PFN | Oct 29-Nov4 | 2 | 90 | 80 | 60 |
| 22 | NITINAT RIVER | Chinook | Periodic/PL+D | MCWright/Nitinat | Nov 5-11 | 8 | 15,565 | 9,310 | 13,200 |
| 22 | CAMPUS CREEK | Chinook | Periodic/PL+D | Ditidaht/MCWright | Oct 22-28 | 1 | 0 | 60 | 70 |
| 22 | WORTHLESS CREEK | Chinook | Periodic/PL+D | MCWright/Nitinat | Oct 29-Nov4 | 1 | 0 | - | - |
| 23 | SOMASS SYSTEM | Chinook | Fence/Cumulative | Hup/StAD | Oct 15-21 | - | 95,964 | N/A | N/A |
| 23 | SARITA RIVER | Chinook | Periodic/PL+D | HFN | Oct 29-Nov4 | 10 | 3,609 | 1,600 | 1,850 |
| 23 | PACHENA RIVER | Chinook | Periodic/PL+D | HFN | Oct 8-14 | 1 | 0 | - | - |
| 23 | TOQUAHT RIVER | Chinook | Periodic/PL+D | TCES | Nov 5-11 | 4 | 103 | 40 | 160 |
| 23 | LITTLE MAGGIE RIVER | Chinook | Periodic/PL+D | TCES | Oct 22-28 | 1 | 1 | - | - |
| 23 | LITTLE TOQUAHT CREEK | Chinook | Periodic/PL+D | TCES | Oct 22-28 | 1 | 1 | - | - |
| 23 | PARADISE CREEK | Chinook | Periodic/PL+D | TCES | Nov 5-11 | 1 | 0 | - | - |
| 23 | CLEMENS CREEK | Chinook | Periodic/PL+D | Redd | Oct 29-Nov4 | 7 | 123 | 20 | 90 |
| 23 | EFFINGHAM RIVER | Chinook | Periodic/PL+D | TCES | Oct 22-28 | 3 | 6 | 10 | 20 |
| 23 | NAHMINT RIVER | Chinook | Periodic/PL+D | Redd | Oct 29-Nov4 | 6 | 648 | 440 | 430 |
| 24 | BEDWELL RIVER | Chinook | Periodic/PL+D | TSES | Oct 29-Nov4 | 4 | 234 | 220 | 440 |
| 24 | MEGIN RIVER | Chinook | Periodic/PL+D | TSES | Oct 1-7 | 2 | 64 | 30 | 40 |
| 24 | MOYEHA RIVER | Chinook | Periodic/PL+D | TSES | Oct 29-Nov4 | 3 | 205 | 70 | 70 |
| 24 | CYPRE RIVER | Chinook | Periodic/PL+D | TSES | Oct 22-28 | 3 | 11 | 80 | 970 |
| 24 | WARN BAY CREEK | Chinook | Periodic/PL+D | TSES | Oct 15-21 | 2 | 3 | 0 | 20 |
| 24 | TRANQUIL CREEK | Chinook | Periodic/PL+D | TSES | Oct 29-Nov4 | 6 | 43 | 120 | 230 |
| 24 | KENNEDY RIVER (UPPER) | Chinook | Periodic/PL+D | TSES | Oct 29-Nov4 | 3 | 2 | 0 | 10 |
| 25 | CHUM CREEK | Chinook | Periodic/PL+D | EFN/Wildcoast | Oct 22-28 | 1 | 1 | 0 | 10 |
| 25 | LITTLE ZEBALLOS RIVER | Chinook | Periodic/PL+D | EFN/Wildcoast | Oct 22-28 | 1 | 2 | 30 | 30 |
| 25 | ZEBALLOS RIVER | Chinook | Periodic/PL+D | EFN/Wildcoast | Oct 8-14 | 1 | 67 | 70 | 240 |
| 25 | ESPINOSA CREEK | Chinook | Periodic/PL+D | Wildcoast | Oct 22-28 | 1 | 0 | 60 | 40 |
| 25 | HAMMOND CREEK | Chinook | Periodic/PL+D | EFN/Wildcoast | Oct 22-28 | 1 | 0 | 0 | 0 |
| 24 | ESCALANTE RIVER | Chinook | Periodic/PL+D | Redd | Oct 22-28 | 1 | 1 | 0 | - |
| 25 | BURMAN RIVER | Chinook | Periodic/PL+D | MMFN | Oct 1-7 | 3 | 4,500 | 1,120 | 3,730 |
| 25 | CANTON CREEK | Chinook | Periodic/PL+D | MMFN | Sep 3-9 | 3 | 0 | 610 | 2,320 |
| 25 | CONUMA RIVER | Chinook | Periodic/PL+D | MMFN/Conuma | Oct 8-14 | 5 | 15,026 | 9,730 | 18,540 |
| 25 | LEINER RIVER | Chinook | Periodic/PL+D | Ecofish | Oct 8-14 | 4 | 443 | 540 | 760 |
| 25 | TAHSIS RIVER | Chinook | Periodic/PL+D | Ecofish | Oct 8-14 | 4 | 1,015 | 770 | 620 |
| 25 | GOLD RIVER | Chinook | Periodic/PL+D | Ecofish | Oct 1-7 | 3 | 10,362 | 4,620 | 2,740 |
| 25 | MUCHALAT RIVER | Chinook | Periodic/PL+D | MMFN | Sep 3-9 | 1 | 0 | 290 | - |
| 25 | OKTWANCH RIVER | Chinook | Periodic/PL+D | MMFN | Oct 1-7 | 2 | 3 | 90 | 90 |
| 25 | TSOWWIN RIVER | Chinook | Periodic/PL+D | MMFN | Sep 24-30 | 1 | 0 | 10 | 30 |
| 26 | ARTLISH RIVER | Chinook | Periodic/PL+D | KCFN/LGL | Aug 27-Sep2 | 1 | 7 | 130 | 320 |
| 26 | KAOUK RIVER | Chinook | Periodic/PL+D | KCFN/LGL | Oct 8-14 | 4 | 312 | 280 | 360 |
| 26 | MALKSOPE RIVER | Chinook | Periodic/PL+D | KCFN/LGL | Oct 1-7 | 1 | 78 | 10 | 20 |
| 26 | TAHSISH RIVER | Chinook | Periodic/PL+D | KCFN/LGL | Oct 22-28 | 3 | 904 | 760 | 810 |
| 26 | CHAMISS CREEK | Chinook | Periodic/PL+D | KCFN | Oct 8-14 | 1 | 12 | 10 | - |
| 27 | CAYEGHLE SYSTEM | Chinook | Periodic/PL+D | Wildcoast/Quatsino | Oct 29-Nov4 | 5 | 112 | 200 | 360 |
| 27 | MARBLE RIVER | Chinook | Periodic/PL+D | Wildcoast/Quatsino | Oct 8-14 | 5 | 2,873 | 1,580 | 2,840 |

Table 2: **Coho** escapement counts to date for 2023 West Coast of Vancouver Island salmon surveys. Adults only reported here.

| Area | System | Species | Survey Type/Count Type | Surveys conducted by | Week of last survey | # of Surveys | PL+D Count | Avg Raw Peak (8yr) | Avg Esc Est (12 yr) |
|------|------------------------|---------|------------------------|----------------------|---------------------|--------------|------------|--------------------|---------------------|
| 20 | HARRIS CREEK | Coho | Periodic/PL+D | PFN | Oct 29-Nov4 | 1 | 1,140 | 1,060 | 1,100 |
| 20 | LENS CREEK | Coho | Periodic/PL+D | PFN | Oct 29-Nov4 | 2 | 408 | 630 | 680 |
| 20 | RENFREW CREEK | Coho | Periodic/PL+D | PFN | Nov 5-11 | 2 | 462 | 630 | 730 |
| 20 | SAN JUAN RIVER | Coho | Mixed/PL+D | PFN/4Mile Crk | Oct 29-Nov4 | 4 | 1,640 | 1,800 | 4,500 |
| 20 | GORDON RIVER | Coho | Periodic/PL+D | PFN | Oct 29-Nov4 | 2 | 830 | 790 | 680 |
| 22 | NITINAT RIVER | Coho | Periodic/PL+D | MCWright/Nitinat | Nov 5-11 | 7 | 1,228 | 1,100 | 3,540 |
| 22 | CAMPUS CREEK | Coho | Periodic/PL+D | Didtaht/MCWright | Oct 22-28 | 1 | 30 | 30 | 40 |
| 22 | HOBITON CREEK | Coho | Periodic/PL+D | Didtaht/MCWright | Oct 29-Nov4 | 3 | 0 | 0 | 20 |
| 23 | SOMASS SYSTEM | Coho | Fence/Cumulative | Hup/StAD | Oct 15-21 | - | 23,189 | N/A | N/A |
| 23 | CARNATION CREEK | Coho | Fence/Cumulative | BC | Nov 5-11 | - | 56 | 70 | 110 |
| 23 | SARITA RIVER | Coho | Periodic/PL+D | HFN | Oct 29-Nov4 | 10 | 375 | 170 | 580 |
| 23 | PACHENA RIVER | Coho | Periodic/PL+D | HFN | Oct 8-14 | 1 | 6 | 100 | 160 |
| 23 | Rousseau Creek | Coho | Periodic/PL+D | HFN | Oct 22-28 | 1 | 163 | 200 | - |
| 23 | TOQUAHT RIVER | Coho | Periodic/PL+D | TCES | Nov 5-11 | 4 | 307 | 570 | 670 |
| 23 | CAMPSITE CREEK | Coho | Periodic/PL+D | TCES | Oct 29-Nov4 | 2 | 6 | - | - |
| 23 | DRAW CREEK | Coho | Periodic/PL+D | TCES | Nov 5-11 | 2 | 54 | 290 | - |
| 23 | LITTLE MAGGIE RIVER | Coho | Periodic/PL+D | TCES | Oct 22-28 | 1 | 24 | - | - |
| 23 | LITTLE TOQUAHT CREEK | Coho | Periodic/PL+D | TCES | Oct 22-28 | 1 | 6 | 20 | 20 |
| 23 | PARADISE CREEK | Coho | Periodic/PL+D | TCES | Nov 5-11 | 1 | 17 | 200 | - |
| 23 | TWIN RIVERS EAST CREEK | Coho | Periodic/PL+D | TCES | Nov 5-11 | 3 | 7 | 20 | 40 |
| 23 | CLEMENS CREEK | Coho | Periodic/PL+D | Redd | Oct 29-Nov4 | 7 | 536 | 450 | 1,520 |
| 23 | EFFINGHAM RIVER | Coho | Periodic/PL+D | TCES | Oct 22-28 | 3 | 95 | 240 | 300 |
| 23 | SMITH CREEK | Coho | Periodic/PL+D | TCES | Oct 22-28 | 1 | 0 | 0 | 70 |
| 23 | NAHMINT RIVER | Coho | Periodic/PL+D | Redd | Oct 29-Nov4 | 6 | 88 | 150 | 370 |
| 24 | BEDWELL RIVER | Coho | Periodic/PL+D | TSES | Oct 29-Nov4 | 4 | 556 | 780 | 1,350 |
| 24 | MEGIN RIVER | Coho | Periodic/PL+D | TSES | Oct 1-7 | 2 | 774 | 1,110 | 1,210 |
| 24 | MOYEHA RIVER | Coho | Periodic/PL+D | TSES | Oct 29-Nov4 | 3 | 904 | 620 | 1,430 |
| 24 | CYPRE RIVER | Coho | Periodic/PL+D | TSES | Oct 22-28 | 3 | 747 | 470 | 1,040 |
| 24 | WARN BAY CREEK | Coho | Periodic/PL+D | TSES | Oct 15-21 | 2 | 64 | 30 | 50 |
| 24 | TRANQUIL CREEK | Coho | Periodic/PL+D | TSES | Oct 29-Nov4 | 6 | 283 | 460 | 830 |
| 24 | FUNDY CREEK | Coho | Periodic/PL+D | TSES | Oct 15-21 | 2 | 0 | 0 | - |
| 24 | KENNEDY LAKE BEACHES | Coho | Periodic/PL+D | Redd | Oct 15-21 | 1 | 0 | - | 220 |
| 24 | KENNEDY RIVER (UPPER) | Coho | Periodic/PL+D | TSES | Oct 29-Nov4 | 3 | 1,218 | 830 | 960 |
| 25 | CHUM CREEK | Coho | Periodic/PL+D | EFN/Wildcoast | Oct 22-28 | 1 | 10 | 10 | 40 |
| 25 | LITTLE ZEBALLOS RIVER | Coho | Periodic/PL+D | EFN/Wildcoast | Oct 22-28 | 1 | 146 | 60 | 330 |
| 25 | ZEBALLOS RIVER | Coho | Periodic/PL+D | EFN/Wildcoast | Oct 8-14 | 1 | 375 | 100 | 330 |
| 25 | ELIZA CREEK | Coho | Periodic/PL+D | EFN/Wildcoast | Oct 22-28 | 1 | 2 | 10 | 10 |
| 25 | ESPINOSA CREEK | Coho | Periodic/PL+D | Wildcoast | Oct 22-28 | 1 | 10 | 40 | 90 |
| 25 | HAMMOND CREEK | Coho | Periodic/PL+D | EFN/Wildcoast | Oct 22-28 | 1 | 25 | 20 | 30 |
| 24 | ESCALANTE RIVER | Coho | Periodic/PL+D | Redd | Oct 22-28 | 1 | 104 | 0 | - |
| 25 | BURMAN RIVER | Coho | Periodic/PL+D | MMFN | Oct 1-7 | 3 | 263 | 270 | 830 |
| 25 | CANTON CREEK | Coho | Periodic/PL+D | MMFN | Sep 3-9 | 3 | 0 | 290 | 550 |
| 25 | CONUMA RIVER | Coho | Periodic/PL+D | MMFN/Conuma | Oct 8-14 | 5 | 2,332 | 1,960 | 2,680 |
| 25 | LEINER RIVER | Coho | Periodic/PL+D | Ecofish | Oct 8-14 | 4 | 317 | 330 | 950 |
| 25 | TAHSIS RIVER | Coho | Periodic/PL+D | Ecofish | Oct 8-14 | 4 | 590 | 610 | 1,270 |
| 25 | GOLD RIVER | Coho | Periodic/PL+D | Ecofish | Oct 1-7 | 3 | 1,680 | 1,670 | 2,780 |
| 25 | MUCHALAT RIVER | Coho | Periodic/PL+D | MMFN | Sep 3-9 | 1 | 0 | 50 | - |
| 25 | OKTWANCH RIVER | Coho | Periodic/PL+D | MMFN | Oct 1-7 | 2 | 0 | 50 | 80 |
| 25 | TSOWWIN RIVER | Coho | Periodic/PL+D | MMFN | Sep 24-30 | 1 | 0 | 50 | 220 |
| 26 | ARTLISH RIVER | Coho | Periodic/PL+D | KCFN/LGL | Aug 27-Sep2 | 1 | 0 | 1,010 | 1,830 |
| 26 | KAOUK RIVER | Coho | Periodic/PL+D | KCFN/LGL | Oct 8-14 | 4 | 777 | 1,460 | 2,810 |
| 26 | MALKSOPE RIVER | Coho | Periodic/PL+D | KCFN/LGL | Oct 1-7 | 1 | 655 | 590 | 1,850 |
| 26 | TAHSISH RIVER | Coho | Periodic/PL+D | KCFN/LGL | Oct 22-28 | 3 | 1,020 | 1,680 | 3,360 |
| 26 | CHAMISS CREEK | Coho | Periodic/PL+D | KCFN | Oct 8-14 | 1 | 52 | 90 | 80 |
| 27 | CAYEGHLE SYSTEM | Coho | Periodic/PL+D | Wildcoast/Quatsino | Oct 29-Nov4 | 5 | 425 | 690 | 1,000 |
| 27 | MARBLE RIVER | Coho | Periodic/PL+D | Wildcoast/Quatsino | Oct 8-14 | 5 | 669 | 440 | 1,240 |

Table 3: Chum escapement counts to date for 2023 West Coast of Vancouver Island salmon surveys.

| Area | System | Species | Survey Type/Count Type | Surveys conducted by | Week of last survey | # of Surveys | PL+D Count | Avg Raw Peak (8yr) | Avg Esc Est (12 yr) |
|------|------------------------|---------|------------------------|----------------------|---------------------|--------------|------------|--------------------|---------------------|
| 20 | HARRIS CREEK | Chum | Periodic/PL+D | PFN | Oct 29-Nov4 | 1 | 1 | 0 | 10 |
| 20 | LENS CREEK | Chum | Periodic/PL+D | PFN | Oct 29-Nov4 | 2 | 1 | 300 | 10 |
| 20 | RENFREW CREEK | Chum | Periodic/PL+D | PFN | Nov 5-11 | 2 | 95 | 70 | 290 |
| 20 | SAN JUAN RIVER | Chum | Mixed/PL+D | PFN/4Mile Crk | Oct 29-Nov4 | 4 | 409 | 100 | 680 |
| 20 | GORDON RIVER | Chum | Periodic/PL+D | PFN | Oct 29-Nov4 | 2 | 381 | 180 | 170 |
| 22 | NITINAT RIVER | Chum | Periodic/PL+D | MCWright/Nitinat | Nov 5-11 | 8 | 13,700 | 33,600 | 135,420 |
| 22 | CAMPUS CREEK | Chum | Periodic/PL+D | Ditidaht/MCWright | Oct 22-28 | 1 | 801 | 1,160 | 1,480 |
| 22 | HOBITON CREEK | Chum | Periodic/PL+D | Ditidaht/MCWright | Oct 29-Nov4 | 3 | 2,094 | 490 | 3,500 |
| 22 | WORTHLESS CREEK | Chum | Periodic/PL+D | MCWright/Nitinat | Oct 29-Nov4 | 1 | 0 | - | - |
| 23 | CARNATION CREEK | Chum | Periodic/PL+D | BC | Nov 5-11 | - | 1 | - | 170 |
| 23 | SARITA RIVER | Chum | Periodic/PL+D | HFN | Oct 29-Nov4 | 10 | 5,173 | 2,690 | 9,440 |
| 23 | PACHENA RIVER | Chum | Periodic/PL+D | HFN | Oct 8-14 | 1 | 0 | 20 | 40 |
| 23 | Rousseau Creek | Chum | Periodic/PL+D | HFN | Oct 22-28 | 1 | 21 | 10 | - |
| 23 | TOQUAHT RIVER | Chum | Periodic/PL+D | TCES | Nov 5-11 | 4 | 9,428 | 3,340 | 2,510 |
| 23 | CAMPSITE CREEK | Chum | Periodic/PL+D | TCES | Oct 29-Nov4 | 2 | 24 | - | - |
| 23 | DRAW CREEK | Chum | Periodic/PL+D | TCES | Nov 5-11 | 2 | 0 | - | - |
| 23 | LITTLE MAGGIE RIVER | Chum | Periodic/PL+D | TCES | Oct 22-28 | 1 | 39 | - | - |
| 23 | LITTLE TOQUAHT CREEK | Chum | Periodic/PL+D | TCES | Oct 22-28 | 1 | 7,336 | 2,240 | 1,980 |
| 23 | PARADISE CREEK | Chum | Periodic/PL+D | TCES | Nov 5-11 | 1 | 0 | - | - |
| 23 | TWIN RIVERS EAST CREEK | Chum | Periodic/PL+D | TCES | Nov 5-11 | 3 | 1,162 | 180 | 170 |
| 23 | CLEMENS CREEK | Chum | Periodic/PL+D | Redd | Oct 29-Nov4 | 7 | 52 | 20 | 110 |
| 23 | EFFINGHAM RIVER | Chum | Periodic/PL+D | TCES | Oct 22-28 | 3 | 3,966 | 710 | 680 |
| 23 | SMITH CREEK | Chum | Periodic/PL+D | TCES | Oct 22-28 | 1 | 2,770 | 1,040 | 1,640 |
| 23 | NAHMINT RIVER | Chum | Periodic/PL+D | Redd | Oct 29-Nov4 | 6 | 10,595 | 2,440 | 8,570 |
| 24 | BEDWELL RIVER | Chum | Periodic/PL+D | TSES | Oct 29-Nov4 | 4 | 2,032 | 1,240 | 2,980 |
| 24 | MEGIN RIVER | Chum | Periodic/PL+D | TSES | Oct 1-7 | 2 | 183 | 50 | 890 |
| 24 | MOYEHA RIVER | Chum | Periodic/PL+D | TSES | Oct 29-Nov4 | 3 | 4,083 | 580 | 4,580 |
| 24 | CYPRE RIVER | Chum | Periodic/PL+D | TSES | Oct 22-28 | 3 | 1,511 | 450 | 1,580 |
| 24 | WARN BAY CREEK | Chum | Periodic/PL+D | TSES | Oct 15-21 | 2 | 1,267 | 260 | 1,280 |
| 24 | TRANQUIL CREEK | Chum | Periodic/PL+D | TSES | Oct 29-Nov4 | 6 | 5,482 | 2,080 | 6,420 |
| 24 | CONE CREEKS (2) | Chum | Periodic/PL+D | TSES | Oct 29-Nov4 | 1 | 24 | 110 | 80 |
| 24 | FUNDY CREEK | Chum | Periodic/PL+D | TSES | Oct 15-21 | 2 | 8 | 0 | 10 |
| 24 | KENNEDY LAKE BEACHES | Chum | Periodic/PL+D | Redd | Oct 15-21 | 1 | 0 | - | - |
| 24 | KENNEDY RIVER (UPPER) | Chum | Periodic/PL+D | TSES | Oct 29-Nov4 | 3 | 7 | 0 | - |
| 24 | Sharp Creek | Chum | Periodic/PL+D | TSES | Oct 29-Nov4 | 2 | 160 | 80 | - |
| 24 | SUTTON MILL CREEK | Chum | Periodic/PL+D | TSES | Oct 15-21 | 2 | 117 | 20 | 50 |
| 25 | CHUM CREEK | Chum | Periodic/PL+D | EFN/Wildcoast | Oct 22-28 | 1 | 866 | 160 | 1,620 |
| 25 | LITTLE ZEBALLOS RIVER | Chum | Periodic/PL+D | EFN/Wildcoast | Oct 22-28 | 1 | 2,620 | 570 | 2,560 |
| 25 | ZEBALLOS RIVER | Chum | Periodic/PL+D | EFN/Wildcoast | Oct 8-14 | 1 | 1,272 | 1,470 | 5,980 |
| 25 | ELIZA CREEK | Chum | Periodic/PL+D | EFN/Wildcoast | Oct 22-28 | 1 | 86 | 30 | 1,170 |
| 25 | ESPINOSA CREEK | Chum | Periodic/PL+D | Wildcoast | Oct 22-28 | 1 | 1,958 | 850 | 1,780 |
| 25 | HAMMOND CREEK | Chum | Periodic/PL+D | EFN/Wildcoast | Oct 22-28 | 1 | 473 | 20 | 290 |
| 24 | ESCALANTE RIVER | Chum | Periodic/PL+D | Redd | Oct 22-28 | 1 | 27 | 0 | - |
| 25 | BURMAN RIVER | Chum | Periodic/PL+D | MMFN | Oct 1-7 | 3 | 608 | 850 | 3,920 |
| 25 | CANTON CREEK | Chum | Periodic/PL+D | MMFN | Sep 3-9 | 3 | 0 | 780 | 2,110 |
| 25 | CONUMA RIVER | Chum | Periodic/PL+D | MMFN/Conuma | Oct 8-14 | 5 | 11,115 | 4,690 | 9,010 |
| 25 | LEINER RIVER | Chum | Periodic/PL+D | Ecofish | Oct 8-14 | 4 | 422 | 530 | 2,380 |
| 25 | TAHSIS RIVER | Chum | Periodic/PL+D | Ecofish | Oct 8-14 | 4 | 266 | 650 | 3,490 |
| 25 | GOLD RIVER | Chum | Periodic/PL+D | Ecofish | Oct 1-7 | 3 | 49 | 20 | - |
| 25 | OKTWANCH RIVER | Chum | Periodic/PL+D | MMFN | Oct 1-7 | 2 | 0 | 110 | - |
| 25 | TSOWWIN RIVER | Chum | Periodic/PL+D | MMFN | Sep 24-30 | 1 | 0 | 180 | 1,040 |
| 26 | ARTLISH RIVER | Chum | Periodic/PL+D | KCFN/LGL | Aug 27-Sep2 | 1 | 0 | 1,300 | 4,770 |
| 26 | KAOUK RIVER | Chum | Periodic/PL+D | KCFN/LGL | Oct 8-14 | 4 | 2,049 | 1,280 | 6,110 |
| 26 | MALKSOPE RIVER | Chum | Periodic/PL+D | KCFN/LGL | Oct 1-7 | 1 | 756 | 1,960 | 5,750 |
| 26 | TAHSISH RIVER | Chum | Periodic/PL+D | KCFN/LGL | Oct 22-28 | 3 | 2,356 | 2,800 | 4,870 |
| 26 | CHAMISS CREEK | Chum | Periodic/PL+D | KCFN | Oct 8-14 | 1 | 205 | 350 | 2,380 |
| 27 | CAYEGHLE SYSTEM | Chum | Periodic/PL+D | Wildcoast/Quatsino | Oct 29-Nov4 | 5 | 1,542 | 1,440 | 8,210 |

Table 4: **Pink** escapement counts to date for 2023 West Coast of Vancouver Island salmon surveys

| Area | System | Species | Survey Type/Count Type | Surveys conducted by | Week of last survey | # of Surveys | PL+D Count | Avg Raw Peak (8yr) | Avg Esc Est (12 yr) |
|------|---------------------|---------|------------------------|----------------------|---------------------|--------------|------------|--------------------|---------------------|
| 20 | SAN JUAN RIVER | Pink | Mixed/PL+D | PFN/4Mile Crk | Oct 29-Nov4 | 4 | 1 | 0 | 40 |
| 20 | GORDON RIVER | Pink | Periodic/PL+D | PFN | Oct 29-Nov4 | 2 | 0 | 0 | - |
| 22 | NITINAT RIVER | Pink | Periodic/PL+D | MCWright/Nitinat | Nov 5-11 | 7 | 3 | 0 | 20 |
| 22 | CAMPUS CREEK | Pink | Periodic/PL+D | Ditidaht/MCWright | Oct 22-28 | 1 | 0 | - | - |
| 22 | HOBITON CREEK | Pink | Periodic/PL+D | Ditidaht/MCWright | Oct 29-Nov4 | 3 | 0 | - | - |
| 22 | WORTHLESS CREEK | Pink | Periodic/PL+D | MCWright/Nitinat | Oct 29-Nov4 | 1 | 0 | - | - |
| 23 | SOMASS SYSTEM | Pink | Fence/Cumulative | Hup/StAD | Oct 15-21 | - | 32 | N/A | N/A |
| 23 | CARNATION CREEK | Pink | Periodic/PL+D | BC | Nov 5-11 | - | 0 | - | - |
| 23 | SARITA RIVER | Pink | Periodic/PL+D | HFN | Oct 29-Nov4 | 10 | 20 | 0 | 10 |
| 23 | PACHENA RIVER | Pink | Periodic/PL+D | HFN | Oct 8-14 | 1 | 0 | - | - |
| 23 | TOQUAHT RIVER | Pink | Periodic/PL+D | TCES | Nov 5-11 | 4 | 0 | 0 | 40 |
| 23 | LITTLE MAGGIE RIVER | Pink | Periodic/PL+D | TCES | Oct 22-28 | 1 | 0 | - | - |
| 23 | PARADISE CREEK | Pink | Periodic/PL+D | TCES | Nov 5-11 | 1 | 0 | - | - |
| 23 | CLEMENS CREEK | Pink | Periodic/PL+D | Redd | Oct 29-Nov4 | 7 | 2 | 0 | - |
| 23 | NAHMINT RIVER | Pink | Periodic/PL+D | Redd | Oct 29-Nov4 | 6 | 6 | 0 | 10 |
| 24 | BEDWELL RIVER | Pink | Periodic/PL+D | TSES | Oct 29-Nov4 | 4 | 3 | 10 | 40 |
| 24 | MEGIN RIVER | Pink | Periodic/PL+D | TSES | Oct 1-7 | 2 | 14 | 0 | 30 |
| 24 | MOYEHA RIVER | Pink | Periodic/PL+D | TSES | Oct 29-Nov4 | 3 | 14 | 0 | 10 |
| 24 | CYPRE RIVER | Pink | Periodic/PL+D | TSES | Oct 22-28 | 3 | 1 | 0 | 10 |
| 24 | TRANQUIL CREEK | Pink | Periodic/PL+D | TSES | Oct 29-Nov4 | 6 | 1 | 0 | - |
| 25 | ZEBALLOS RIVER | Pink | Periodic/PL+D | EFN/Wildcoast | Oct 8-14 | 1 | 0 | 0 | 40 |
| 25 | ESPINOSA CREEK | Pink | Periodic/PL+D | Wildcoast | Oct 22-28 | 1 | 0 | 0 | 10 |
| 24 | ESCALANTE RIVER | Pink | Periodic/PL+D | Redd | Oct 22-28 | 1 | 1 | 0 | - |
| 25 | BURMAN RIVER | Pink | Periodic/PL+D | MMFN | Oct 1-7 | 3 | 0 | 0 | 20 |
| 25 | CONUMA RIVER | Pink | Periodic/PL+D | MMFN/Conuma | Oct 8-14 | 5 | 3 | 0 | 0 |
| 25 | LEINER RIVER | Pink | Periodic/PL+D | Ecofish | Oct 8-14 | 4 | 7 | 0 | 0 |
| 25 | TAHSIS RIVER | Pink | Periodic/PL+D | Ecofish | Oct 8-14 | 4 | 4 | 0 | 0 |
| 25 | GOLD RIVER | Pink | Periodic/PL+D | Ecofish | Oct 1-7 | 3 | 30 | 0 | - |
| 25 | MUCHALAT RIVER | Pink | Periodic/PL+D | MMFN | Sep 3-9 | 1 | 0 | - | - |
| 26 | ARTLISH RIVER | Pink | Periodic/PL+D | KCFN/LGL | Aug 27-Sep2 | 1 | 0 | 0 | - |
| 26 | KAOUK RIVER | Pink | Periodic/PL+D | KCFN/LGL | Oct 8-14 | 4 | 0 | 0 | 10 |
| 26 | MALKSOPE RIVER | Pink | Periodic/PL+D | KCFN/LGL | Oct 1-7 | 1 | 0 | 0 | - |
| 26 | TAHSISH RIVER | Pink | Periodic/PL+D | KCFN/LGL | Oct 22-28 | 3 | 0 | 0 | 10 |
| 27 | CAYEGHLE SYSTEM | Pink | Periodic/PL+D | Wildcoast/Quatsino | Oct 29-Nov4 | 5 | 0 | 0 | 10 |
| 27 | MARBLE RIVER | Pink | Periodic/PL+D | Wildcoast/Quatsino | Oct 8-14 | 5 | 0 | 0 | 10 |

Table 5: **Sockeye** escapement counts to date or 2023 West Coast of Vancouver Island salmon surveys. Somass escapement target is 343,750 this year based on the current run size and the management table.

| Area | System | Species | Survey Type/Count Type | Surveys conducted by | Week of last survey | # of Surveys | PL+D Count | Avg Raw Peak (8yr) | Avg Esc Est (12 yr) |
|------|-----------------------|---------|------------------------|----------------------|---------------------|--------------|------------|--------------------|---------------------|
| 20 | RENFREW CREEK | Sockeye | Periodic/PL+D | PFN | Nov 5-11 | 2 | 1 | 20 | 30 |
| 20 | SAN JUAN RIVER | Sockeye | Mixed/PL+D | PFN/4Mile Crk | Oct 29-Nov4 | 4 | 68 | 0 | 150 |
| 20 | GORDON RIVER | Sockeye | Periodic/PL+D | PFN | Oct 29-Nov4 | 2 | 6 | 20 | 20 |
| 22 | NITINAT RIVER | Sockeye | Periodic/PL+D | MCWright/Nitinat | Nov 5-11 | 7 | 320 | 70 | 330 |
| 22 | HOBITON CREEK | Sockeye | Periodic/PL+D | Ditidaht/MCWright | Oct 29-Nov4 | 3 | 203 | 0 | 4,280 |
| 23 | SOMASS SYSTEM | Sockeye | Fence/Cumulative | Hup/STAD | Oct 15-21 | - | 245,596 | N/A | N/A |
| 23 | SARITA RIVER | Sockeye | Periodic/PL+D | HFN | Oct 29-Nov4 | 10 | 23 | 10 | 50 |
| 23 | TOQUAHT RIVER | Sockeye | Periodic/PL+D | TCES | Nov 5-11 | 4 | 25 | 10 | 60 |
| 23 | LITTLE MAGGIE RIVER | Sockeye | Periodic/PL+D | TCES | Oct 22-28 | 1 | 0 | - | - |
| 23 | PARADISE CREEK | Sockeye | Periodic/PL+D | TCES | Nov 5-11 | 1 | 0 | - | - |
| 23 | CLEMENS CREEK | Sockeye | Periodic/PL+D | Redd | Oct 29-Nov4 | 7 | 7,680 | 6,820 | 12,800 |
| 23 | EFFINGHAM RIVER | Sockeye | Periodic/PL+D | TCES | Oct 22-28 | 3 | 9 | 20 | - |
| 23 | NAHMINT RIVER | Sockeye | Periodic/PL+D | Redd | Oct 29-Nov4 | 6 | 1,790 | 380 | 750 |
| 24 | BEDWELL RIVER | Sockeye | Periodic/PL+D | TSES | Oct 29-Nov4 | 4 | 127 | 70 | 330 |
| 24 | MEGIN RIVER | Sockeye | Periodic/PL+D | TSES | Oct 1-7 | 2 | 101 | 1,230 | 1,320 |
| 24 | MOYEHA RIVER | Sockeye | Periodic/PL+D | TSES | Oct 29-Nov4 | 3 | 123 | 160 | 220 |
| 24 | CYPRE RIVER | Sockeye | Periodic/PL+D | TSES | Oct 22-28 | 3 | 1 | 10 | 40 |
| 24 | TRANQUIL CREEK | Sockeye | Periodic/PL+D | TSES | Oct 29-Nov4 | 6 | 17 | 20 | 280 |
| 24 | KENNEDY LAKE BEACHES | Sockeye | Periodic/PL+D | Redd | Oct 15-21 | 1 | 0 | 460 | 3,330 |
| 24 | KENNEDY RIVER (UPPER) | Sockeye | Periodic/PL+D | TSES | Oct 29-Nov4 | 3 | 1,823 | 1,620 | 3,450 |
| 25 | CHUM CREEK | Sockeye | Periodic/PL+D | EFN/Wildcoast | Oct 22-28 | 1 | 0 | 0 | 0 |
| 25 | LITTLE ZEBALLOS RIVER | Sockeye | Periodic/PL+D | EFN/Wildcoast | Oct 22-28 | 1 | 0 | 20 | 60 |
| 25 | ZEBALLOS RIVER | Sockeye | Periodic/PL+D | EFN/Wildcoast | Oct 8-14 | 1 | 61 | 440 | 1,360 |
| 25 | ESPINOSA CREEK | Sockeye | Periodic/PL+D | Wildcoast | Oct 22-28 | 1 | 0 | 20 | 30 |
| 25 | HAMMOND CREEK | Sockeye | Periodic/PL+D | EFN/Wildcoast | Oct 22-28 | 1 | 0 | 0 | 0 |
| 24 | ESCALANTE RIVER | Sockeye | Periodic/PL+D | Redd | Oct 22-28 | 1 | 0 | 0 | - |
| 25 | BURMAN RIVER | Sockeye | Periodic/PL+D | MMFN | Oct 1-7 | 3 | 136 | 180 | 730 |
| 25 | CANTON CREEK | Sockeye | Periodic/PL+D | MMFN | Sep 3-9 | 3 | 0 | 10 | 50 |
| 25 | CONUMA RIVER | Sockeye | Periodic/PL+D | MMFN/Conuma | Oct 8-14 | 5 | 14 | 90 | 180 |
| 25 | LEINER RIVER | Sockeye | Periodic/PL+D | Ecofish | Oct 8-14 | 4 | 91 | 380 | 830 |
| 25 | TAHSIS RIVER | Sockeye | Periodic/PL+D | Ecofish | Oct 8-14 | 4 | 29 | 290 | 430 |
| 25 | GOLD RIVER | Sockeye | Periodic/PL+D | Ecofish | Oct 1-7 | 3 | 167 | 570 | - |
| 25 | MUCHALAT RIVER | Sockeye | Periodic/PL+D | MMFN | Sep 3-9 | 1 | 0 | 50 | - |
| 25 | OKTWANCH RIVER | Sockeye | Periodic/PL+D | MMFN | Oct 1-7 | 2 | 130 | 570 | 510 |
| 25 | TSOWWIN RIVER | Sockeye | Periodic/PL+D | MMFN | Sep 24-30 | 1 | 0 | 10 | 20 |
| 26 | ARTLISH RIVER | Sockeye | Periodic/PL+D | KCFN/LGL | Aug 27-Sep2 | 1 | 0 | 10 | 10 |
| 26 | KAOUK RIVER | Sockeye | Periodic/PL+D | KCFN/LGL | Oct 8-14 | 4 | 4 | 10 | 60 |
| 26 | MALKSOPE RIVER | Sockeye | Periodic/PL+D | KCFN/LGL | Oct 1-7 | 1 | 0 | 0 | 10 |
| 26 | TAHSISH RIVER | Sockeye | Periodic/PL+D | KCFN/LGL | Oct 22-28 | 3 | 0 | 20 | 80 |
| 27 | CAYEGHLE SYSTEM | Sockeye | Periodic/PL+D | Wildcoast/Quatsino | Oct 29-Nov4 | 5 | 4 | 0 | 10 |
| 27 | MARBLE RIVER | Sockeye | Periodic/PL+D | Wildcoast/Quatsino | Oct 8-14 | 5 | 0 | 0 | - |

Table 6: Survey participants

Nitinat = Nitinat Hatchery Staff
Redd = Redd Fish Restoration Society
EFN = Ehattesaht First Nation
HFN = Huu-ay-aht First Nation
Hup = Hupacasath First Nation
StAD = DFO Stock Assessment Division
KCFN = Ka:'uy:'k't'h'/ Che:k'tles7et'h' First Nation
LGL = LGL Limited - Environmental Research Associates
MMFN = Mowachat/Muchalaht First Nation
NTC = Nuuchahnulth Tribal Council
PFN = Pacheedaht First Nation
4Mile Crk = 4 Mile Creek Enhancement Society
TSES = Tofino Salmon Enhancement Society
TCES = Thornton Creek Enhancement Society
MC Wright = MC Wright and Associates: Biological Consulting
TFN = Tla-o-qui-aht First Nation
MHSS = Maaqutusiis Hahoulthee Stewardship Society