SEHAB 20250203: Sunshine Coast Roundtable Report

Summary – Autumn 2024 proved on the Sunshine Coast, like elsewhere on the Salish Sea, to be a good year for salmon returning as evidenced by the groups reporting below. Pinks, although supposedly an off-year, began returning in early August; they were followed by very good numbers of Chum and Coho returning in some locations as late as early December. Although fortuitous rain events allowed the salmon to enter the creeks, it appears that there was a definite increase in marine survival that allowed all the species to return in higher numbers than seen in recent years.

The hatchery and stewardship groups have kept busy over the winter with incubation/ rearing and infrastructure repairs/completion for the former and a variety of projects for the latter. Highlighted locations show the breadth of activities on the lower Sunshine Coast. Many of the projects involve other science groups/programs (e.g. forage fish egg sampling) and other levels of government such as Squamish Nation, the provincial Ministry of Transit & Transportation and with local governments (Sunshine Coast Regional District). Multi-party projects are complex, slow-moving, frequently punctuated by unexpected expenses and require a huge amount of community perseverance.

Thanks are given to the Pacific Salmon Foundation for monies granted to the various projects and as always our CA Jim Wilson is much appreciated for his advice and support.

Group Reports -

<u>Sunshine Coast Salmon Enhancement Society</u>:

- 2024 **Chapman Creek** Adults Returns,
    - Pink – roughly 2,000 returned to the creek. They started arriving Aug 4th this year, numbers peaked in Sept. The return tally in 2022 was 9 fish total. None of these were sorted at our fish trap as water levels leaving the hatchery were minimal during their return. We do not enhance Pink in even returning years as per the DFO production plan for the hatchery.
    - Coho - 745 were sorted from our fish trap, most of these were returned to the creek to spawn naturally. We estimate over 2,000 fish in total returned to the creek this season, this number includes the hatchery returns. The run started in early Sept., the last few were seen in early Dec. A large portion of these returns were adipose fin clipped.
    - Chinook - 9 adults were seen spawning in the creek and a few others were caught and taken by anglers. None of these returned to our fish trap.
    - Chum – 70 were estimated to be spawning in the creek between Oct 7th and Nov 7th. We angled for broodstock as none of these fish returned to the hatchery adult trap. We managed to capture 7 males and 2 females of which we spawned only 1 female.
    - **Angus Creek** Chum – This stock on our production plan. On Oct 24th CA Jim Wilson and a couple of our volunteers managed to collect eggs and milt from 1 female and 2 males, they returned these to Chapman to fertilize and incubate here. Angus Creek Chum returns have been minimal in recent years.
- Incubation, 2024 Brood total numbers currently on hand
    - Coho – 56,627

- Chinook – 69,629 – These were transported here as eyed eggs on Nov 18th from the Chilliwack Hatchery, thanks to our CA, Jim Wilson.
- Chum - 1,776
- Angus Creek Chum - 2,383 - these Chum will be reared here then returned to Angus creek for release in the spring.

● Rearing,
  - Coho, 2023 brood juveniles – currently holding 18,414, to be released in spring 2025.

● Projects,
  - The backup generator project is fully completed. The installation of a new breaker panel, new breakers and upgraded wiring for our incubation room and domestic well pump finished this project off. This work took place in mid-November.
  - Education building upgrades - two items for this project were completed in the fall, a broken window was replaced (thanks Steve from Sechelt Glass for this donation of window and installation) and the gutters and downspouts on the building were repaired or upgraded.

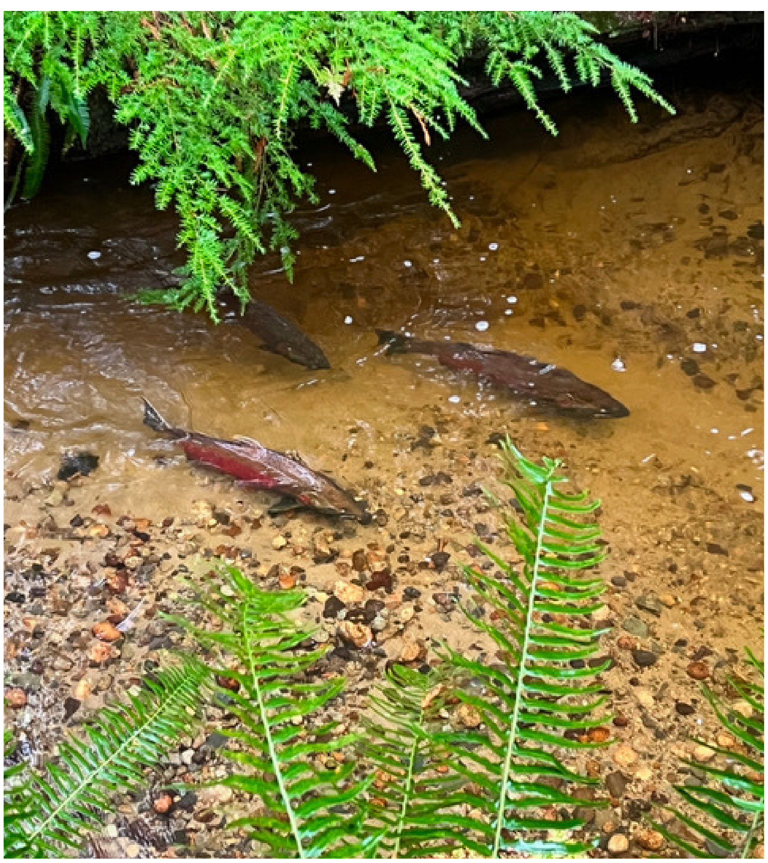
● Volunteer hours were high this reporting period, Coho juvenile fin clipping in late Oct and spawning in Oct, Nov and early Dec saw very good turnouts.

● Visitor numbers were high through this reporting period, mainly many anglers. Numbers have dropped off with the end of the fishing season and the onset of winter.

- Bill Krause, Manager, Chapman Creek Hatchery, Sunshine Coast Salmonid Enhancement Society

Sargeant Bay Streamkeepers:

This was the first year for salmon returns with the new fish ladder that was installed in August 2024 Colvin Creek/Lake. No one really knew what to expect but of course Sargeant Bay Streamkeepers and DFO were all hoping the new aluminum fish ladder would function well.



The first indication that the new ladder would work well was the very first morning after the installation of the ladder, in early August, we had a Pink salmon enter the ladder. This was great as there had never been a recorded Pink salmon run before. Historically just Coho and Chum salmon entered the Colvin Creek system.

The new fish ladder was designed to allow salmon to enter Colvin Lake from the ocean through an underwater pipe located at the lake end of the fish ladder. Alternatively,

fish could also choose to jump over the last chamber of the fish ladder into the lake during high rain events.
Of course the most important thing was that the salmon actually found it and navigated it easily. We saw salmon going through the pipe and jumping over the last ladder chamber into the lake at higher water flow such as high tide periods. It appeared that Coho preferred the pipe-inlet and Chum liked to jump over the last chamber of the ladder. In the end we had a total of 53 salmon return: 16 Chum, 36 Coho and 1 Pink. The Sargeant Bay Streamkeepers conducted daily monitoring. In the end I am happy to report that we had the 2nd highest salmon returns on this system for the last 35 years!
With this efficient and modern fish ladder we would predict these return numbers to grow in the coming years.
One positive spin off of the new fish ladder project was that we also received some local funding and Sargeant Bay Society was able to build and install a new wheelchair accessible, mobility friendly viewing platform over the fish ladder.
Also, throughout November a pair of Eagles chose to build a nest above Colvin Lake where they had not done before. We did find numerous salmon in the area that had been predated on by birds. There is a good chance this new local abundance of salmon in the area influenced the eagles to nest above Colvin Lake and Creek.
All the best in 2025 to everyone and here is hoping for healthy streams and salmon returns this year!

-Dave Spicer, Director

Sunshine Coast Streamkeepers Society:

1) Total-To-Date 2024 SCSS Spawning Salmon Surveys – Four of the creeks we perform salmon surveys had exceptional numbers!
    a) **Roberts Creek**: 4,594 live (2,932 pink/1,651chum/29 coho); 1,128 dead (871pink/296 chum/1 coho). This year's numbers surpassed previous high (2023) by over 3,000 of all three species.
    b) **Chaster Creek**: 303 live (295 chum/8 coho; 69 dead (61 chum/8 coho
    c) **Hutchinson Creek**: 77 live chum; 4 dead chum
    d) **Ouellet Creek**: 60 live chum; 5 dead chum

    See: https://sunshinecoaststreamkeepers.com/spawning-counts-for-creeks/
2) Honorary Scholarship for our Streamkeeper Youth - We are instituting a Youth Scholarship to hardworking student(s) that volunteer with us to enable them to pursue future goals upon graduation.
3) **Malcolm Creek** Culvert Replacement Update - The Malcolm Creek culvert at Metcalfe Road & Roy Rd. in Roberts Creek needs to be replaced as soon as possible as the culvert bottom is totally rusted out and a barrier to fish passage due to bedrock at the entrance of the culvert. This replacement seems to be held up due to a backlog of projects by MoTT. We recently had a site visit attended by representatives of Squamish Nation, DFO and MoTT. DFO accompanied us on this site visit to assess whether this culvert would be a candidate for a fish ladder pilot project. We also discussed the option of a culvert liner to enable safe passage by both spawning coho and their smolts after spending time in the upper reaches above the culvert.

4) Invasive Plant Removal & Native Plant Planting - The next scheduled Invasive Plant Removal and Native Planting event is planned for Saturday, March 15, 2025. We were able to purchase the following native plants: including ferns, Oregon grape, cedar and red twig dogwood. This was made possible from a Community Salmon Program grant from PSF.

5) Climate Change and Salmonid Temperature Loggers Project Report -With the amazing support again of the Pacific Salmon Foundation Community Salmon Program, we were able to update and replace 10 temperature loggers currently in the field in 6 creeks - Roberts, **Langdale,** Malcolm, **Wilson**, Chaster and Chapman Creek. Some of the older loggers stopped recording and we wanted to update the air temperature loggers so we could download the data using the Tidbit HoBo App instead of taking a laptop into the field. The creek's air and water temperatures data we have been collecting is now on the DataStream Platform, so it is available for the public. This data is showing the temperature highs of the creeks during the summer hottest months and drought periods here on the Sunshine Coast. See our data here: https://datastream.org/en-ca/dataset/aed02d78-47ab-48f5-920d-0de8f8b55a0f

   We are also making plans to submit all our water quality Module 3 assessments to the DataStream platform as well. This will make this data accessible to the public as well.

6) Update on SCSS Campaign - "Stop the cut blocks in the **Roberts Creek** Watershed/Save Roberts Creek Salmon" -We are continuing our campaign to stop the logging by BCTS cut blocks located in the headwaters of Roberts Creek. We believe that removing large areas of forest will change the natural hydrology of the upper tributaries. It is just too great a risk to salmon and their habitat in the lower reaches including the spawning grounds of pink, chum and coho. We are planning a site visit to Block A94817on February 19, 2025, with BCTS staff.

   -Shirley Samples, President, Sunshine Coast Streamkeepers Society

The Loon Foundation;

Salmon Escapement – We completed creek walks in **Anderson and Myers Creeks** from September to December. There were low flows throughout the beginning of September in Anderson Creek with the creek being disconnected. The first chum returned to the creek on September 4 within the lower reaches and by the end of September, the creek was charged and chum could enter. We counted a total of 3600 chum salmon and 85 coho in Anderson Creek and 1093 Chum and 161 Coho in Myers over the season. During the wind and rain storms at the end of September, a large log jam had formed above the highway in Anderson Creek. It is unknown if this is causing a barrier to fish passage at this time.

Forage fish – Forage fish surveys continued throughout 2024. Our first detection of Pacific sand lance winter spawning was on December 6, 2024 at **Sunset Cove Beach**. Spawning was later this year than other years and may have been due to the series of high wind storms at the end of November. Since 2017 we have identified 13 spawning beaches on the lower Sunshine Coast and 7 on the upper Sunshine Coast.

Invasive species – We continue to monitor for European green crab (EGC). We did not catch any in our traps this year. However, a photograph taken in **Oyster Bay** estuary appeared to show a hooded merganser with a juvenile EGC in its beak. Loon Foundation set traps following the detection in January and DFO responded in the late spring. No EGC were identified in Oyster Bay during the trapping. Another adult male EGC was caught during a low tide event at Sargeant Bay in July 2024. Again, the Loon Foundation responded and set out traps but did not catch any further EGC.

Juvenile salmon – We had a total of 5931 juvenile salmon (51 chinook, 5931 chum, 20 coho, 986 pink salmon) identified at **Irvines Landing** and 3239 juvenile salmon (3 chinook, 2336 chum, 1 coho, 898 pink salmon and 1 unidentified salmon) at **Gerrans Bay**. Monitoring started on February 26 and the first salmon was observed at Irvines Landing on March 8. Many northern anchovy and juvenile lingcod were observed throughout 2024.

Seagrass – One Seagrass Leaf Area Index Survey was completed at **Thormanby Island** in July. Seagrass bed mapping was completed at **Baker Beach** and at the **Skardon Islands**.

Larval Crab Monitoring – We continue monitoring larval Dungeness crabs using a light trap designed by the Pacific Northwest Crab Research Group and the Hakai Institute's Sentinels of Change. Larval Dungeness were seen earlier and for a longer duration this year, compared to the last 2 years of monitoring. In addition to Dungeness, we have partnered with DFO to collect eDNA samples for EGC. One sample was collected per week from April to September.

-Jenn Blancard, Field Research Supervisor

SEHAB 20250203 Sunshine Coast Conservation Association:

Ch'kw'elhp/Gibson & Malcolm Creeks Salmon Passage & Habitat Restoration Project – The SCCA continues to co-lead a multi-partnered salmon passage and habit and restoration pilot project with Skwxu'7mesh Uxwumixw (Squamish Nation), with support from MoTT, DFO, the Sunshine Coast Streamkeepers Society (SCSS) and the Town of Gibsons. Though the Sunshine Coast had a surprisingly good return of chum this year, this did not occur on **Ch'kw'elhp/Gibson Creek** despite seven weeks of spawner surveys. The singular find of the remnant chum body part offers a testament to the damaged condition of the creek, including the impassable culvert 80m upstream of the mouth.

No formal spawner surveys were conducted on Malcolm Creek; however six chum were observed by the SCSS when they visited the creek.

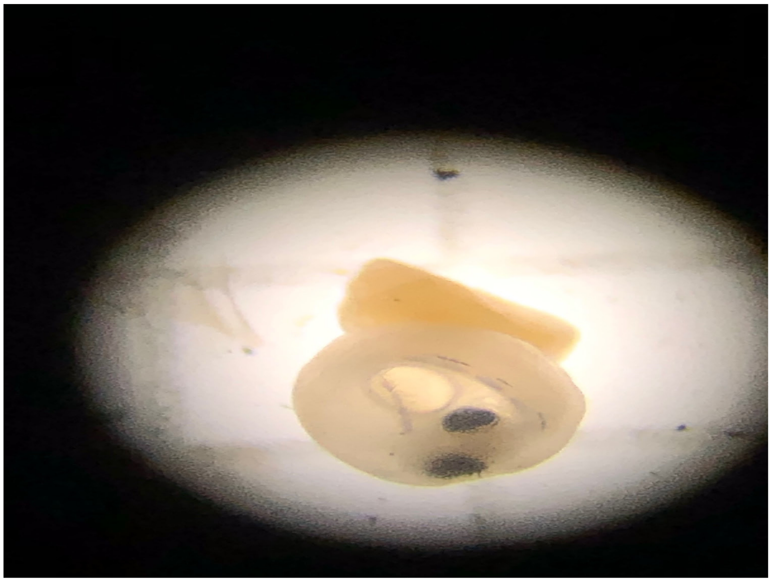
Monthly Working Group meetings continue as the culvert replacement must precede restoration efforts. The new local MoTT Area Manager toured both creeks in early December. In late January, members of the WG, including Jim Wilson, CA, spent the day with the new Skwxu'7mesh Uxwumixw (Squamish Nation) Habitat Restoration Biologist and with the A/Senior Restoration Biologist, South Coast Area (Restoration Centre of Expertise/SEP) examining the sites. The possibility of trialing a temporary half culvert complete with baffles was discussed. This sleeve would allow for fish passage (both adults and smolts) until the culverts are actually replaced.

The SCCA continues to partner with the Sunshine Coast Friends of Forage Fish & Moonstone Enterprises to deliver forage fish egg sampling and eelgrass mapping projects.

- Suzanne Senger, Executive Director

Sunshine Coast Friends of Forage Fish:

The Sunshine Coast Friends of Forage Fish volunteer group is carrying on with sampling three beaches on the lower Sunshine Coast this winter and spring. With financial assistance provided by Pacific Salmon Foundation, new volunteers have been recruited and trained. We are now sampling at **Armours Beach**, Gibsons and have a new site within Sechelt Inlet, **Delta Beach**, which looks to be a good candidate for spawning. **Trail Bay** in Sechelt is still being sampled, and at the beginning of December 2024 we celebrated the discovery of four Pacific Sand lance eggs from Trail Bay. Data collection is done using MABRRI data pages, (version: October 2018) with protocols set by Mount Arrowsmith Biosphere Region Research Institute and Vancouver Island University.



- Dianne Sanford, Coordinator

<u>Eelgrass Mapping</u>;

Mapping of Salmon and Narrows Inlets has now been completed, finishing all areas of Sechelt inlet and making the information on the whereabouts of eelgrass beds public information.
Thanks to Pacific Salmon Foundation for funding to assist with the final mapping in Sechelt Inlet.

Mapping took place in September, with volunteer involvement to provide education on eelgrass and its importance, as well as the importance of data collection. Results of the mapping are currently being compiled and will be submitted to the Sunshine Coast Regional District and the Pacific Salmon Foundation marine data center.

A report on our findings will be available by the end of March 2025. Eelgrass polygon data will be submitted to the PSF Marine Data Centre. https://marinedata.psf.ca/ https://marinedata.psf.ca/sogmrg/ as well as stored on the local open portal Sunshine Coast mapping data. https://data-myscrd.opendata.arcgis.com/datasets/

-Dianne Sanford, Moonstone Enterprises

Compiled by;

Angela Kroning

SEHAB Rep Sunshine Coast, February 01, 2025