

Mainland Enhancement of Salmonoid Species Society

M.E.S.S.S. Report - Rotation 1
DFO Area 12 Stock Assessment 2024

Enumeration Period: August 18-23, 2024
Stream Technicians: Ian Clevenger, Abby Tinsley

1. 2024 Stream Escapement and Biosample Data

Stream	Date mm.dd	PK	CM	CO	JK	SK/MH	20 Min	Morts PK/CM/CO	Air Temp (°C)	H2O Temp (°C)	pH	DO mg/L
Hada	08/19	13320/ 17293	28/ 35	23/ 29	1	4/5	0	0/0/ 24	16	14.2	6.06	12.92
Wahkana	08/19	0	0	0	0	0	0	0/0/0	19	14.4	6.15	11.46
Viner	8/23	122/ 188	8/12	4/6	0	0	2	1/0/1	18	12.9	6.63	14.02
Shoal	08/23	0	4/16	8/32	0	0	4	0/0/0	16	15.5	6.14	12.51
Scott Cove	08/21	0	0	0	0	0	0	0/0/0	17	17.7	6.01	10.83
Maple	08/22	0	0	0	0	0	2	0/0/0	17	12.5	N/A	13.75
Carriden	08/20	0	0	0	0	0	4	0/0/0	16	15.4	6.30	6.67
Embley	08/20	328/ 547	0	2/3	0	0	15k	3/0/0	19	17.5	6.47	7.77

Table 1. Area 12 systems escapement and biosample data. Observed numbers (non-bold) represent salmon observed. **Bolded** numbers represent estimates expanded factoring observer efficiency.

Abbreviations: Pink Salmon (PK), Chum (CM), Coho (CO), Jacks (JK), Sockeye (Sk), 20 minute estuary survey (20 min)

1. Escapement Records for Rotation #1

Stream	2023			2022			2021					
	Date	PK	CM	CO	Date	PK	CM	CO	Date	PK	CM	CO
Hada	08/15	836/ 1025	5/6	16/20	08/13	2055/ 2999	0/0	44/73	08/20	316/ 397	1/2	4/8
Viner	08/19	13/1 8	1/1	0	08/14	0/0	0/0	0/0	08/19	0/0	0/0	0/0
Shoal	08/19	0	0	0	08/14	0/0	0/0	0/0	08/21	0/0	0/0	0/0
Scott Cove	08/14	0	0	0	08/15	0/0	0/0	0/0	08/21	0/0	0/0	0/0
Wahkana	08/15	0	0	0	08/13	0/0	0/0	0/0	08/20	0/0	0/0	0/0
Embley	8/15	1/1	0	0	08/12	4/5	0/0	0/0	08/17	0/0	0/0	1/3
Maple	08/17	0	0	0	08/16	0/0	0/0	0/0	08/18	0/0	0/0	0/0
Carriden	08/16-	0	0	0	08/17	0/0	0/0	0/0	08/17	0/0	0/0	0/0

Stream	2020			2019			2018					
	Date	PK	CM	CO	Date	PK	CM	CO	Date	PK	CM	CO
Hada	08/20	16/ 255	0/0	0/0	08/13	254/ 272	11/ 12	0/0	08/14	1252/ 1319	4/5	5/7
Viner	08/16	5/6	0/0	0/0	08/14	0/0	0/0	0/0	08/22	0/0	0/0	0/0
Shoal	08/17	5/6	0/0	0/0	08/16	0/0	0/0	0/0	08/22	0/0	0/0	0/0
Scott Cove	08/16	0/0	0/0	3/26	08/14	0/0	0/0	0/0	08/22	0/0	1/2	1/3
Wahkana	08/20	0/0	0/0	0/0	08/13	0/0	0/0	0/0	08/25	0/0	0/0	0/0
Embley	08/18	113/ 161	0/0	0/0	08/19	0/0	0/0	0/0	08/24	38/ 56	1/2	0/0
Maple	08/19	1/2	0/0	0/0	08/15	0/0	0/0	0/0	08/14	2/4	0/0	0/0
Carriden	08/18	0/0	0/0	0/0	08/19	0/0	0/0	0/0	09/02	0/0	0/0	0/0

Table 2 & 3. Escapement records by MESSS from past rotation 2 surveys spanning 2016-2021. Area 12 pink salmon spawn on a fixed two year cycle with a stronger even year, chum salmon run on a 3, 4 and 5 year cycle and coho salmon on a 3 year cycle generally. *Surveys taken from different rotation reports to provide a better representation based on more similar dates.

1. Rotation 1 Highlights

Weather:

- Heavy rain mid-rotation led to high stream levels and limited visibility in later parts of survey.

Water Levels/Quality:

- High water levels due to heavy rain event delayed surveys of Viner River and Shoal Harbour Creek until end of rotation.

Visibility:

- Limited visibility across most smaller streams, best vis. in Hada, with most reduced vis. in Wahkana.
- Heavily tannic water reduced visibility in smaller creeks.

Notes:

- High salmon presence in Hada River and Embley Lagoon.
- Increase in pink salmon from peak survey estimations in 2023.
- Pink salmon staging at base of fish ladder in Embley Lagoon.
- No bears seen, but bear presence detected in most systems.
- Wolf sign in Hada, Carriden, and Scott Cove

1. Stream Enumeration Notes

Hada River August 19, 2024 Enumerated by Ian Clevenger, Abby Tinsley



Photo 1 – Pink salmon in Hada River

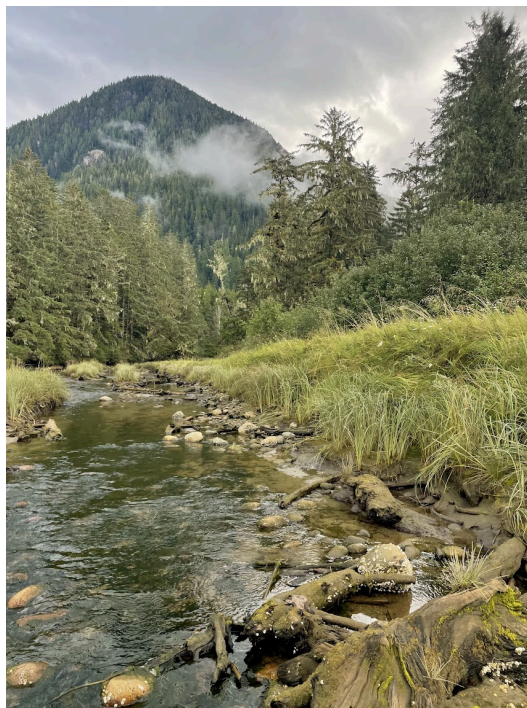


Photo 2 - Hada side channel

Estuary Survey

- 0 jumpers.
- 2 Belted kingfishers.
- Wolf prints in sand.

River

- Good counting conditions for the entire river.
- Most fish above log jam.
- River full at falls with many jumpers.
- Primarily Pinks with significant Coho and Chum presence, along with a few Sockeye.
- Large schools throughout upper reaches.
- Bear sign (prints, scat, salmon tails/guts on bank).
- Turkey vultures and Bald eagles.

Viner River August 23, 2024 Enumerated by Abby Tinsley, Ian Clevenger



Photo 3 – A small pink redd at the end of a pool in the middle section of the lower reach of Viner.

Estuary Survey

- 2 sea lions
- 2 jumpers

River Survey

- Pinks and Chum seen schooling and moving up the river.
- Little evidence of spawning and prespawn mortality. Fish looking clean and healthy.

Shoal Harbour Creek August 23, 2024 Enumerated by Ian Clevenger, Abby Tinsley



Photo 4- A small group (5) of coho salmon holding in a log jam on Shoal Harbour Creek.

Estuary Survey

- 4 jumpers
- 1 seal

River Survey

- Post flood conditions, fairly high and dark water.
- Lots of woody debris and log jams.
- Coho seen moving up through the system

Scott Cove Creek August 21, 2024 Enumerated by Ian Clevenger, Abby Tinsley



Photo 5- Taking water quality measurements at Scott Cove Creek.

Estuary Survey

- Low tide, no fish seen.
- No seals seen.

River Survey

- Surveyed during heavy rain event.
- Falls jumper count, more of a presence absence survey than a population estimate.

Wahkana Bay Creek August 19, 2024 Enumerated by Ian Clevenger, Abby Tinsley

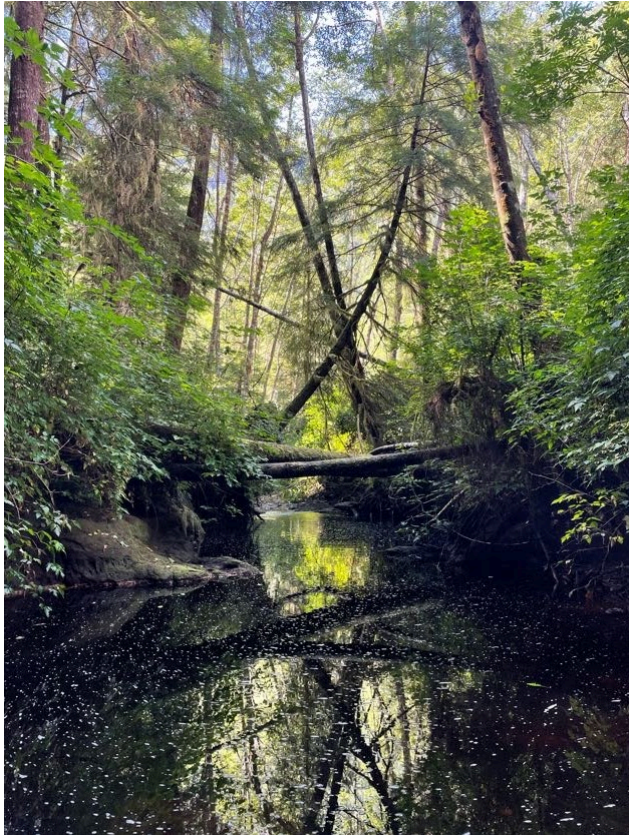


Photo 6 - Wahkana Creek with dark water and poor visibility.

Estuary Survey

- High tide (16ft)
- No jumpers seen, no seals or dolphins.

River Survey

- Dark water, poor visibility.
- Increased flow compared to this time last year.

Maple Creek August 22, 2024 Enumerated by Ian Clevenger, Abby Tinsley



Photo 7 - Water levels in Maple Creek.

Estuary Survey

- 10 Jumpers seen.
- Gulls and Geese present in estuary.

River Survey

- First count with fish seen.
- No pinks observed but two coho seen at segment 1/2 split.

Duck Cove Creek August 22, 2024 Enumerated by Ian Clevenger, Abby Tinsley



Photo 8 - Rich red water in Duck Cove Creek.

River Survey

-Surveyed due to Billy P mentioning historical pink run.

-No fish observed, water an extremely rich red hue.

Carriden Creek August 20, 2024 Enumerated by Ian Clevenger, Abby Tinsley



Photo 8 – Pools in Carriden bay creek where we encountered coho and cutthroat trout fry.

Estuary Survey

- 4 jumpers.
- 1 bald eagle, 150 gulls.

River Survey

- No fish seen
- Coho and Cutthroat trout fry seen.
- Grizzly bear and wolf sign along trail on bank.

Embley Creek August 20, 2024 Enumerated by Ian Clevenger, Abby Tinsley

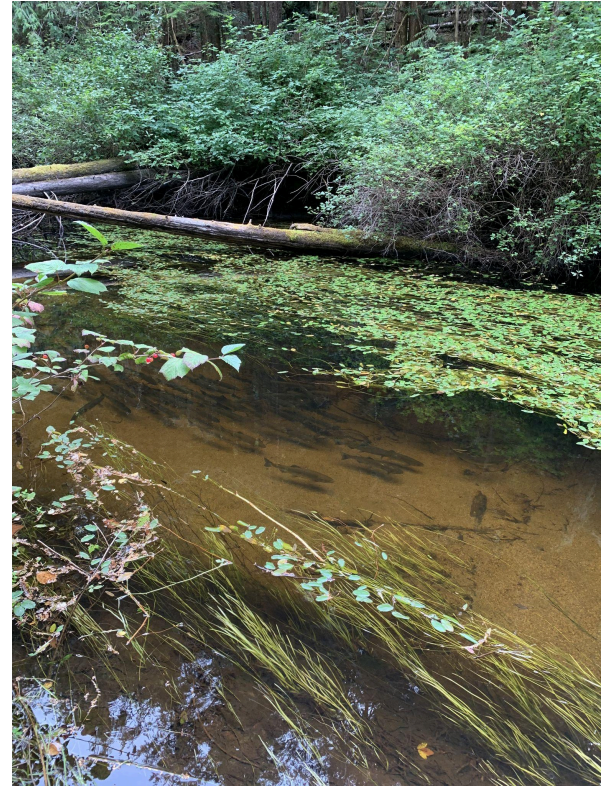


Photo 9- A pink salmon holding on a patch of gravel placed during the 2023 gravel addition project. A school of pinks holding below the beaver dam.

Estuary Survey

- 10-15,000 pinks schooling
- Approx. 2000 in front of fish ladder
- 4 harbour seals
- 2 bald eagles
- 2 red-throated loons
- Black bear fur and tracks present

River Survey

- Fish mostly observed in deeper holding areas with cover.
- Dark and poorly lit pools made estimation difficult.
- ~200 fish seen in the two pools above reach one.