

Mainland Enhancement of Salmonoid Species Society

M.E.S.S.S. Report - Rotation 2
DFO Area 12 Stock Assessment 2024

Enumeration Period: August 27-31, 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	08/27	11,193/ 15,688	38/ 50	00	0	0/0	0	0/0/0	14	11.4	6.1	14.21
Wahkana	08/28	0	0	0	0	0	0	0/0/0	15	12.4	6.24	12.71
Viner	8/31	109/ 172	202/ 318	11/19	2	1	1	1/2/0	18	12.9	6.51	13.82
Shoal	08/30	0	4/16	8/32	0	0	4	0/0/0	18	14.7	5.63	12.86
Scott Cove	08/29	0	0	33	11	0	0	0/0/0	18	18.1	5.79	11.52
Maple	08/30	0	0	1/1	0	0	-	0/0/0	15	13.0	5.07	13.17
Carriden	08/28	39/58	0	0	0	0	300	0/0/0	16	15.8	6.27	10.68
Embley	08/28	1566/ 2241	1/1	0	0	0	2000	0/0/0	18	15.8	6.08	12.08

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

2023					2022				2021			
Stream	Date	PK	CM	CO	Date	PK	CM	CO	Date	PK	CM	CO
Hada	08/28	1338 /167 0	8/10	43/54	08/27	6218/ 8893	56/80	89/12 8	08/30	198/ 373	23/43	6/9
Viner	08/30	9/11	1/1	0	08/28	4/6	0/0	0/0	08/30	198/ 373	23/4 3	6/9
Shoal	08/27	0	0	0	08/28	0/0	0/0	0/0	08/31	0/0	0/0	0/0
Scott Cove	08/27	0	0	0	08/28	0/0	0/0	0/0	08/31	0/0	0/0	1/9
Wahkana	08/28	0	0	0	08/27	0/0	0/0	0/0	08/30	0/0	0/0	0/0
Embley	8/29/	0	0	0	08/24	300/3 75	0/0	0/0	08/27	0/0	0/0	2/4
Maple	08/29	0	0	0	08/29	0/0	0/0	0/0	08/28	0/0	0/0	0/0
Carriden	08/29	0	0	0	08/30	0/0	0/0	0/0	08/27	0/0	0/0	0/0

2020					2019				2018			
Stream	Date	PK	CM	CO	Date	PK	CM	CO	Date	PK	CM	CO
Hada	08/30	140/2 76	5/13	1/3	08/25	45/75	0/0	0/0	09/25	1950/ 2053	13/1 6	2/5
Viner	08/28	2/3	6/11	1/1	08/27	3/4	2/2	0/0	09/03	0/0	0/0	1/4
Shoal	08/26	0/0	2/2	0/0	08/26	0/0	0/0	0/0	09/01	0/0	0/0	0/0
Scott Cove	08/26	0/0	0/0	2/16	08/27	0/0	0/0	5/36	09/01	0/0	0/0	76/1 43
Wahkana	08/30	0/0	0/0	0/0	08/25	0/0	0/0	0/0	08/25	0/0	0/0	0/0
Embley	08/27	122/1 74	1/1	2/3	08/29	0/0	0/0	0/0	08/4	17/2 7	0/0	0/0
Maple	08/29	1/2	0/0	0/0	08/15	0/0	0/0	0/0	08/14	2/4	0/0	0/0
Carriden	08/27	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 2 Highlights

Weather:

- Mostly foggy and cool mornings, followed by sunny afternoons.

Water Levels/Quality:

- Stabilizing water levels after previous rains, water levels fell during the rotation.
- Visibility was fair at start but improved with lower water flows and sunny skies.

Notes:

- **First pinks counted in Carriden Bay Creek since 2016**
- Increase in chums in systems such as Shoal and Viner.
- Large numbers of chum compared to this time during the last four years.
- Fish largely in good health, pinks starting to spawn, chums seen paired up at times.
- No bears seen, but bear presence detected in most systems.

1. Stream Enumeration Notes

Hada River August 27, 2024 Enumerated by Ian Clevenger, Abby Tinsley



Photo 1 – High water at falls in

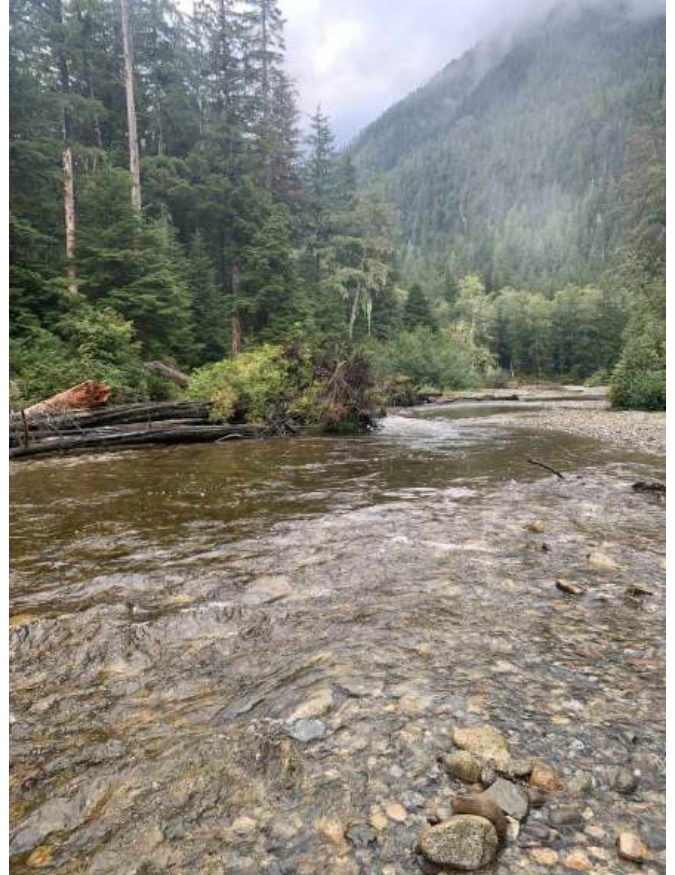


Photo 2 - Hada River above the log jam, looking upstream.

River Survey

- The stream was difficult to survey due to high water levels after the rain event.
- Some sections were unsurveyable.
- Many places where salmon are typically seen were rapids, making it difficult to differentiate species.

Viner River August 31, 2024 Enumerated by Rob Heschler, Abby Tinsley, Ian Clevenger



Photo 3 – A male and female chum, holding in Viner River, before spawning. Photos by R. Heschler.

Estuary Survey

- 1 Jumper.
- 1 Sea lion.
- 1 Harbour seal.

River Survey

- Pink redds seen, large amount appear to have spawned.
- Large increase in chum numbers, seen throughout first reach, at tributary pool.
- Many fish were seen holding in deep pools.

Shoal Harbour Creek August 30, 2024 Enumerated by Ian Clevenger, Abby Tinsley



Photo 4- Chum morts in log jam in Shoal Harbour Creek.

Estuary Survey

- 2 jumpers

River Survey

- Large amounts of bear predation in areas with high chum concentration.
- Many chum stuck below major log jam, possible that chum may have restricted access to upper pools.
- Approximately five dead chum found in log jam, likely stuck in debris.

Scott Cove Creek August 29, 2024 Enumerated by Ian Clevenger, Abby Tinsley



Photo 5– The lower falls at Scott Cove creek, formerly the broodstock pool, where many jumping coho were seen.

Estuary Survey

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

River Survey

- Surveyed during heavy rain event.
- Unable to survey upper Scott Cove falls due to overgrown vegetation obstructing vision.
- The falls jumper count is more of a presence absence survey than a population estimate.

Wahkana Bay Creek August 29, 2024 Enumerated by Ian Clevenger, Abby Tinsley

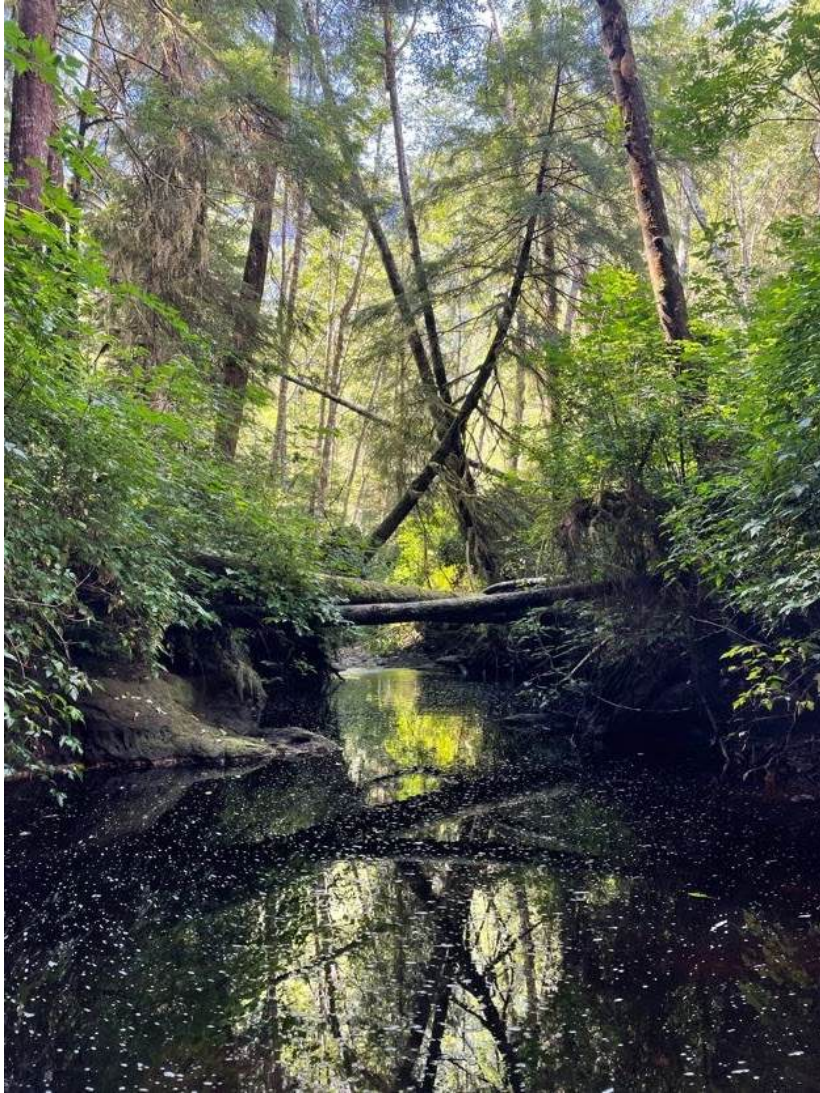


Photo 6 - Wahkana Creek with dark water and poor visibility.

Estuary Survey

- No jumpers seen.
- No seals or dolphins.

River Survey

- Dark water, poor visibility.
- Increased flow due to rain.

Maple Creek August 30, 2024 Enumerated by Ian Clevenger, Abby Tinsley

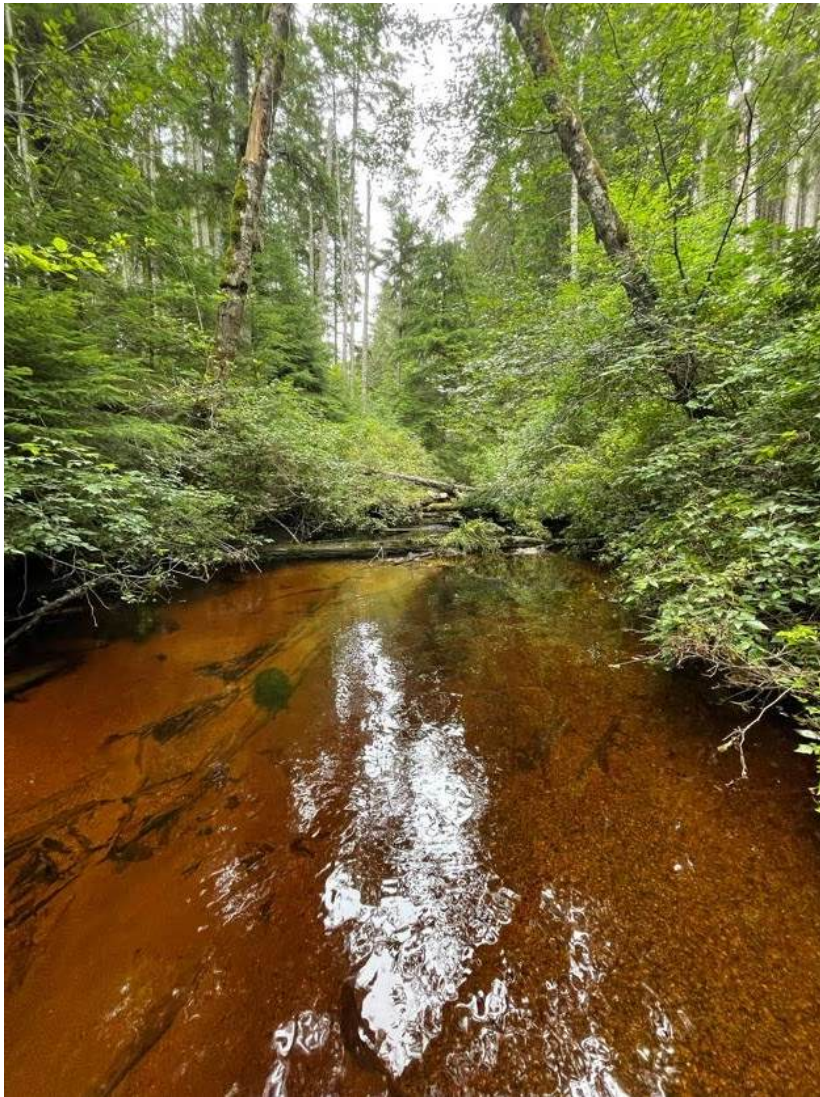


Photo 7 - Water levels in Maple Creek.

River Survey

- One coho seen at end of segment 1, holding in a pool.

Carriden Creek August 28, 2024 Enumerated by Ian Clevenger, Abby Tinsley



Photo 8 – Pinks seen holding below a stick jam. The jam was recently formed and partially cleared with intent for fish passage.

Estuary Survey

- 1 Harbour seal.
- 1 200-300 pinks schooling in estuary.

River Survey

- First pinks seen since 2016
- Fish in first 100m of stream, holding below a stick jam (later cleared).

Embley Creek August 28, 2024 Enumerated by Ian Clevenger, Abby Tinsley



Photo 9- A pink salmon holding in the first reach of Embley River.

Estuary Survey

- 2,000 pinks in the estuary.
- Large amount of predation morts near fish ladder entrance.

River Survey

- Increase in total fish seen, large amount staging above fish ladder.
- Increased fish passage due to rains and increased stream flow.
- 283 pinks seen in second reach.
- Dark and poorly lit pools made estimation difficult.