

Mainland Enhancement of Salmonoid Species Society

M.E.S.S.S. Report - Rotation 4
DFO Area 12 Stock Assessment 2023

Enumeration Period: September 19-22, 2023

Stream Technicians: Ian Clevenger , Jackson Presseau, Felix Gerz, Roxanne LeGoffe

1. 2023 Stream Escapement and Biosample Data

Stream	Date MM.DD	PK	CM	CO	JK	SK	20 min	Morts PK/CM/CO	Air °C	H2O °C	pH	DO mg/L
Ahta (4)	09.20	6846/ 10 646	49/ 80	27/ 45	2	19/ 32	4	30/1/0	13	10.9	6.77	15.11
Viner (4)	09.21	34/ 57	15/ 25	0	0	0	7	19/0/0	14	11.3	6.80	15.32
Shoal (4)	09.19	2/ 4	4/ 7	0	0	0	43	0/0/0	11	11.6	6.75	14.36
Scott Cove (4)	09.19	0	0	6/ 74	22	0	0	0/0/0	11.5	14.3	6.53	11.37
Wahkana (4)	09.20	0	0	0	0	0	0	0/0/0	14	11.2	6.80	15.32
Maple (4)	09.21	5/ 7	0	0	0	0	0	0/0/0	13.0	10.9	6.18	15.71
Carriden (4)	09.22	0	0	0	0	0	0	0/0/0	15	12.3	6.80	8.13
Simoom (1)	09.22	0	0	0	0	0	2	0/0/0	16.5	10.6	7.59	14.45

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

2017					2018				2019			
Stream	Date	Pink	Chum	Coho	Date	Pink	Chum	Coho	Date	Pink	Chum	Coho
Ahta	09/22	310/392	390/577	0/0	09/18	3129/3687	239/328	21/29	09/15	56/282	24/61	11-22
Viner	09/23	5/7	638/993	1/8	09/13	0/0	184/245	0/0	09/14	5-7	17/25	0/0
Shoal	09/17	0/0	0/0	0/0	09/12	1/3	5/13	0/0	09/13	0/0	0/0	0/0
Scott Cove	09/16	0/0	0/0	43/159	09/12	0/0	0/0	10/62	09/14	0/0	0/0	4/31
Wahkana	09/24	0/0	2/3	0/0	09/18	0/1	7/12	0/1	09/28	0/0	8/10	0/0
Maple	09/17	0/0	0/0	0/0	09/26	0/2	0/0	0/0	09/17	0/0	0/0	0/0
Carriden	09/16	0/0	0/0	0/0	09/29	0/0	0/0	0/0	09/19	0/0	0/0	0/0
Simoom	09/15	0/0	0/0	0/0	09/13	0/0	0/0	0/0	09/13	0/0	0/0	0/0

2020					2021				2022			
Stream	Date	Pink	Chum	Coho	Date	Pink	Chum	Coho	Date	Pink	Chum	Coho
Ahta	09/17	307/392	10-14	9-12	09/19	46/210	27/110	0/0	09/21	9901/11325	69/97	13/130
Viner	09/22	3-4	38/55	0/0	09/22	2/3	91/131	0/0	09/22	1/1	4/9	0/0
Shoal	09/16	0/0	0/1	2-4	09/24	0/0	92/128	7/13	09/20	0/0	0/0	2/3
Scott Cove	09/16	0/0	0/0	6/67	09/25	0/0	0/0	3/24	09/20	0/0	0/0	12/80
Wahkana	09/17	0/0	0/0	0/0	09/19	0/0	0/0	0/0	09/21	0/0	0/0	1/2
Maple	09/23	0/0	0/0	0/0	09/25	0/0	0/0	0/0	09/22	0/0	0/0	0/0
Carriden	09/25	0/0	0/0	0/0	09/23	0/0	0/0	0/1	09/26	0/0	0/0	0/0
Simoom	09/22	0/0	0/0	0/0	09/26	0/0	0/0	2/4	09/25	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 4 Highlights

Weather:

- Colder daily temperatures keeping water temperature low and dissolved oxygen high.
- Periods of significant precipitation (~30mm) between rotations.

Water Levels/Quality:

- Precipitation events significantly affected most streams leading to increased flows and fish moving in.

Visibility:

- Changes in flow led to better visibility in most watersheds (Viner, Maple,) and decreased visibility in Ahta.

Notes:

- Fish are moving through Scott Cove creek at a high rate. Lots of successful jumpers seen at both sets of falls.
- High occurrence of spawning occurring in Ahta. Large amounts of pinks and chum on redds.
- Increased bear sign in Viner, more bear killed fish and fishy looking scats.
- First count of the season for Simoom Sound creek.

1. Stream Enumeration Notes

Ahta/Hada

September 20, 2023

Enumerated by Ian Clevenger, Felix Gerz and Roxanne LeGoffe



Photo 1 – Water levels at the Ahta falls.

Estuary Survey

- 4 jumpers seen in bay.
- 4 seals seen.

River

- Water level increase made for more difficult counting conditions.
- Increases in numbers of fish seen in holding pools and spawning compared to last rotation.
- Redds and fish actively spawning in entirety of suitable spawning area.
- Large amount of grizzly bear tracks and fish filled scats around stream.

Viner River

Enumerated by Ian Clevenger, Bogdan Kraft

September 21, 2023



Photo 2 – A stretch of Viner Creek that had chums actively spawning.

Estuary Survey

- 7 Jumpers.
- 150 gulls, 1 bald eagle.
- Increase in bear sign and kills of pinks.

River

- Continued observation of pinks spawning, increase in chums spawning and expansion of spawning to new areas.
 - Fish seen distributed through lower 500m of stream
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Shoal Harbour Creek

Enumerated by Ian Clevenger

September 19, 2023



Photo 3- Changes in flow in Shoal Harbour creek, stick marking stream levels before rain.

Estuary Survey

- 43 Jumpers.
- Mix of both coho and pinks jumping.
- 3 seals seen further out in bay.

River

- Good visibility in stream.
 - Majority of fish seen in lower 200m, but actively trying to move upstream.
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Scott Cove Creek

Enumerated by Ian Clevenger, Jackson Presseau

September 19, 2023



Photo 4 – Water levels at the lower falls on Scott Cove creek, same location where 20 min jumper survey occurs.

Estuary Survey

- Fish: 146 jumpers – extremely active at mouth of river.
- Large amount of coho seen jumping, pinks occasionally seen jumping right near mouth of creek.

River

- Three jumpers noted at lower falls.
 - 35 coho seen jumping at 1.5km falls during 20 min survey.
 - Notes: Scott Cove surveys are more beneficial for presence/absence data than population estimates because of how little of the system we are able to survey. Our numbers are largely based on jumper counts. Carrington Bridge was also assessed.
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Wahkana Bay Creek

Enumerated by Ian Clevenger, Felix Gerz, Roxanne LeGoffe

September 20, 2023



Photo 5 – Water levels on the middle section of Wahkana creek.

Estuary Survey

- No jumpers seen.
- No porpoises, eagles or bear sign.

River

- Improved water levels but still very slow moving.
 - Fry seen.
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Maple Creek

Sept 21, 2023

Enumerated by Ian Clevenger, Bogdan Kraft



Photo 6 – Improved flows seen on Maple creek.

Estuary Survey

- No fish seen.
- No fresh animal sign.

River

- First count with fish seen.
 - Majority of pinks were hiding in woody areas or under riffles.
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Carriden Creek

Sept 22, 2023

Enumerated by Ian Clevenger, Jackson Presseau



Photo 7 – Flow connectivity restored at Carriden creek

Estuary Survey

- 0 jumpers
- No seals, sign of eagles or bears

River

- 1 dead cutthroat trout found.
 - Increased flow due to recent rains.
 - Precipitation within 24hrs of survey.
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Simoom Sound Creek

Enumerated by Ian Clevenger, Felix Gerz

Sept 22, 2023



Photo 8 – Step pool section of Simoom Sound creek.

Estuary Survey

- 2 jumpers.
- 1 seal.

River

- Cutthroat trout seen in first 200m of stream.
- Stream temperature and dissolved oxygen levels very conducive to spawning and salmon rearing.