

## Mainland Enhancement of Salmonoid Species Society

M.E.S.S.S. Report - Rotation 5  
 DFO Area 12 Stock Assessment 2024

Enumeration Period: September 27 - October 3, 2024

Stream Technicians: Ian Clevenger, Abby Tinsley, Robin Bennett

### 1. 2024 Stream Escapement and Biosample Data

Stream	Date m.dd	PK	CM	CO	JK	SK/ MH	20 Min	Morts PK/CM/CO	Air Temp (°C)	H2O Temp (°C)	pH	DO mg/L
Hada	9/27	-	-	-	-	-	0	-	15	12.0	-	-
Wahkana	9/27	2/20	0	0	0	0	0	0/0/0	13	11.4	-	-
Viner	10/02	18/ 45	2019/ 5048	0	0	0	0	27/229/0	11	10.0	5.87	15.04
Shoal	9/30	<b>0/0</b>	1132 /1487	1/1	0	0	0	0/226/0	11.4	11.4	-	-
Scott Cove	10/01	0	0	<b>21</b>	10	0	0	0/0/0	10.8	13.6	-	-
Maple	9/30	5/7	0	0	0	0	0	1/0/0	11	10	-	-
Carriden	9/29	9/14	0	0	0	0	0	0/0/0	10	14.0	-	-
Embley	9/29	195/ 342	24/44	7/13	3	0	0	0/0/0	11	15	-	-
Minihump	10/03	0	0	0	0	0	0	0/0/0	10.8	12.7	5.56	13.63
Simoom	10/01	-	-	-	-	-	-	-	-	-	-	-

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 #5

Stream	2023			2022			2021					
	Date	PK	CM	CO	Date	PK	CM	CO	Date	PK	CM	CO
<b>Hada</b>	<b>10/5</b>	1979/ 5392	20/ 63	15/ 38	<b>10/3</b>	5531/ 6570	34/53	5/7	<b>10/4</b>	57/ 221	27/132	1/2
<b>Viner</b>	<b>10/5</b>	13/ 29	56/ 109	20/ 62	<b>10/6</b>	2/2	17/35	1/1	<b>10/5</b>	5/8	334/ 440	1/2
<b>Shoal</b>	<b>10/2</b>	4/13	18/3 7	0/0	<b>10/4</b>	0/0	1/11	0/0	<b>10/7</b>	0/0	68/ 176	0/0
<b>Scott Cove</b>	<b>10/1</b>	0/0	0/0	33/ 670	<b>10/4</b>	0/0	0/0	1/16	<b>10/2</b>	0/0	0/0	4/37
<b>Wahkana</b>	<b>10/5</b>	0/0	0/0	0/0	<b>10/3</b>	0/0	0/0	0/0	<b>10/4</b>	0/0	1/2	0/0
<b>Embley</b>	<b>10/1</b>	0/0	7/ 11	11/ 21	<b>10/2</b>	200/ 212	0/0	7/15	<b>10/3</b>	0/0	0/0	0/0
<b>Maple</b>	<b>10/3</b>	0/0	0/0	0/0	<b>10/5</b>	0/0	0/0	0/0	<b>10/7</b>	0/1	0/0	0/0
<b>Carriden</b>	<b>10/1</b>	0/0	0/0	0/0	<b>09/26</b>	0/0	0/0	0/0	<b>10/3</b>	0/0	0/0	0/0
<b>Simoom</b>	<b>10/7</b>	0/0	0/0	0/0	<b>09/25</b>	0/0	0/0	0/0	<b>09/26</b>	0/0	0/0	2/4
<b>Minihump</b>	<b>10/7</b>	35/ 58	0/0	0/0	<b>10/4</b>	0/0	0/0	0/0	<b>10/8</b>	763/ 1,272	0/0	0/0

2020					2019				2018			
Stream	Date	PK	CM	CO	Date	PK	CM	CO	Date	PK	CM	CO
Hada	10/5	61/82	4/5	3/5	09/28	139/ 170	210/ 253	1/1	10/2	402/ 494	204/ 273	35/ 44
Viner	10/6	0/0	12/23	0/0	09/25	6/8	132/ 176	1/2	10/6	0/0	1609/ 2332	0/0
Shoal	10/1	0/0	1/3	0/0	09/26	0/0	6/35	0/0	10/5	0/0	18/ 47	0/0
Scott Cove	10/6	0/0	0/0	1/8	09/25	0/0	0/0	3/54	10/4	0/0	0/0	10/1 68
Wahkana	10/5	0/0	0/0	0/0	09/28	0/0	8/10	0/0	10/2	0/0	18/25	0/0
Embley	10/9	0/0	0/0	0/0	09/29	0/0	0/0	3/8	10/8	2/8	0/0	0/0
Maple	10/7	0/0	0/0	0/0	09/17	0/0	0/0	0/0	09/26	0/2	0/0	0/0
Carriden	10/9	0/0	0/0	0/0	09/25	0/0	0/0	0/0	09/29	0/0	0/0	0/0
Simoom	10/5	0/0	0/0	0/0	09/26	0/0	0/0	0/0	09/29	0/0	0/6	0/0
Minihump	10/7	835/ 1045	0/0	0/1	09/25	0/0	0/0	0/0	10/4	290/ 414	0/0	0/0

Table 2 & 3. Escapement records by MESSS from past rotation 2 surveys spanning 2018-2023. 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 5 Highlights

### Weather:

- Hada/Wahkana - Cold morning, sun, large rain event in past 24hrs
- Embley/Carriden - Clear surveying conditions, large rain event within 48hrs
- Maple/Shoal Harbour- On and off light precipitation
- Scott Cove/Simoom Sound - Clear morning after a large rain event.
- Viner - Drizzly morning after on and off rain. Large rain event 72hrs before survey.
- Minihump - Calm overcast survey conditions.

### Water Levels/Quality:

- High water at the start of the rotation. Water levels fell for two days then a large rain event occurred the night of Sept 30.
- Streams running at bankful and above bankful in some systems.

### Notes:

- Large number of chum spawning in Shoal Harbour creek, making it further up river due to high flows.
- Pinks observed spawning in Carriden Bay creek.
- Water sampling equipment malfunctions prevented some DO and pH reading from being taken. The issue is now fixed.

## 1. Stream Enumeration Notes

**Hada River** September 27, 2024

Enumerated by Ian Clevenger, Abby Tinsley



Photo 1.1 – Rushing waterfall at Hada River.

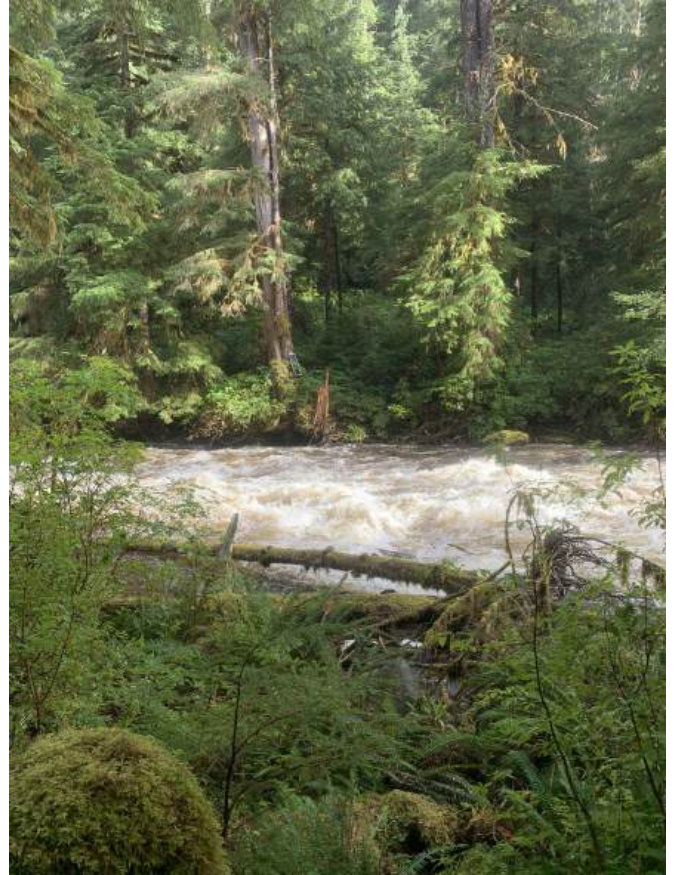


Photo 1.2 - High flows in the rock garden below the Hada falls.

### Estuary Survey

- Gulls eating fish bits and eggs getting washed in estuary

### River Survey

- Stream flooding to bankful, unsurveyable conditions.
- Spawned out fish seen holding in the stream margins.



**Wahkana Bay Creek** September 27, 2024  
Enumerated by Ian Clevenger, Abby Tinsley



Photo 2 - High water in Wahkana creek, running just below the vegetation line.

Estuary Survey

- 1 harbour seal, 2 porpoises seen.
- No fish seen.

River Survey

- High flows made for poor surveying conditions. 100% bankful flow.
- Bank walked with two pinks seen spawning in a low gradient section.

**Embley Creek** September 29, 2024

Enumerated by Ian Clevenger, Abby Tinsley, Robin Bennett



Photo 3- Volunteer Robin Bennett surveying and trail clearing in Embley River.

Estuary Survey

- No schools of fish seen in estuary
- 4 Bald eagles seen.

River Survey

- First and second segment surveyed up to river bend/habitat change.
- Fish seen holding in mixed species groups, in dark corner pools and deep troughs.



**Carriden Bay Creek** September 29, 2024

Enumerated by Ian Clevenger, Abby Tinsley, Robin Bennett



Photo 4 – The substrate where pinks were spawning in Carriden Bay Creek.

Estuary Survey

- 3 Gulls seen by stream mouth.

River Survey

- Fish seen paired up and spawning on the little available spawning substrate.
- Spawners observed 300m up from tidal influence.



## **Viner River** October 2, 2024

Enumerated by Abby Tinsley, Ian Clevenger



Photo 5 – Chum salmon spawning in Viner River.

### Estuary Survey

- Spawned out pink and chum seen in estuary.
- Large amount of eagles, ravens, crows and gulls eating salmon and salmon eggs.

### River Survey

- Only one segment (approx half the system) surveyed due to high flows and safety concerns.
- Majority of chum seen paired up on redds.

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



Photo 6- Chum in Shoal Harbour Creek.

Estuary Survey

- Chum seen moving through estuary, into stream.
- Chum seen spawning just above tidal influence.

River Survey

- Large increase in chum spawning in second segment
- Chum seen spawning in third segment and 50m up Mt Worthington creek.

**Scott Cove Creek** October 1, 2024  
Enumerated by Ian Clevenger, Abby Tinsley



Photo 7– High water flow in Scott Cove Creek.

River Survey

- 21 coho and 10 jacks observed jumping between both falls.
- Very high flows due to a rainstorm occurring the previous night.
- Fish observed attempting to jump the falls and staging below.
- The falls jumper count is more of a presence absence survey than a population estimate.



**Maple Cove Creek** September 30, 2024  
Enumerated by Ian Clevenger, Abby Tinsley



Photo 8 - A pink salmon lower jawbone found in Maple Cove creek, near where fish were spawning last survey.

Estuary Survey

- 3 Bald eagles seen.
- No fish observed.

River Survey

- Pinks observed spawning throughout the first segment.
- 12 redds in first segment, potentially spawned on between surveys.
- No redds seen in second segment.



**Minihump Creek** October 3, 2024  
Enumerated by Ian Clevenger, Abby Tinsley



Photo 9 - Minihump creek at the bend where flows increase and substrate turns from small gravel to larger gravel.

River Survey

- No minihump or coho salmon seen in the stream.
- High flow and tannic water made for very poor surveying conditions. Approximately 15% of stream confidently surveyed.
- No sign of great blue herons or mergansers, the most common predators of minihump salmon.

**Simoom Sound Creek** October 1, 2024  
Enumerated by Ian Clevenger, Abby Tinsley



Photo 9 - High flows in Simoom Sound Creek near the estuary.

Estuary Survey

- One seal seen. No fish seen in the estuary.

River Survey

- Stream unsurveyable due to high water. Bank walked to the first tributary.