

Cermaq Newfoundland Ltd.



**Placentia Bay Atlantic Salmon Aquaculture Project:
Environmental Effects Monitoring
2025 Annual Report**

31 March 2026

Suggested format for citation:

Cermaq Newfoundland Ltd., 2026. Placentia Bay Atlantic Salmon Aquaculture Project: Environmental Effects Monitoring Annual Report. 65 p. + appendix.

This report reflects Grieg Seafood Newfoundland (GSNL) operations in 2025. This report is submitted and published by Cermaq NL which acquired GSNL on December 29th, 2025.

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Summary

This document is Grieg Seafood Newfoundland's (2025 Annual Environmental Effects Monitoring Report for the Placentia Bay Atlantic Salmon Aquaculture Project. Eight Environmental Effects Monitoring Plans (EEMPs) were required as a condition of Environmental Impact Statement (EIS) release for the Project, which detailed follow-up monitoring and mitigation for effects of the Project on wild Atlantic salmon, lumpfish, benthic habitat, and marine wildlife as well as documenting sea cage performance, climate/weather, groundwater use, and the performance of the all-female sterile Atlantic salmon. In 2025, Project activities included the operation of the RAS Hatchery in Marystown, completion of harvest, and continued operation of sea cage sites in Placentia Bay. In addition, counting fences were operational on the Come-By-Chance and Bay de l'Eau rivers. Apart from the Groundwater EEMP, all EEMPs apply to activities in the marine environment.

Two groundwater wells have been established for the RAS Hatchery—a main well and monitoring/back-up well. Water quality and quantity were measured throughout 2025. Water use from the main well did not exceed 300 L/minute. The provincial Water Resource Management Division's (WRMD) real-time water quality and quantity findings for Grieg's monitoring well concluded that there was no indication of any external factors, other than water use by Grieg and handling of the instrumentation in the well, influencing the water quality and quantity parameters. Collection of additional data will strengthen the baseline dataset for water quality parameters. In addition to the real-time water quality and quantity data, Grieg conducted quarterly sampling of additional water quality parameters including inorganics, anions, and metals from both its main and monitoring wells. Annual sampling for hydrocarbons was also conducted. Overall, in 2025, there were no issues identified with water quality relative to the health and welfare of the salmon at the RAS Hatchery.

In late spring and summer 2025, Grieg monitored upstream migration of adult, wild Atlantic salmon on the Come-by-Chance River and the Bay de l'Eau River. The counting fence and trap were fully operational for 51 days during May 25 to August 15 at Come-by-Chance and at Bay de l'Eau River for 47 days during May 28 to August 15. Due to high temperatures and low precipitation, DFO requested the counting fences to remain open from mid-July to August (approx. 30 days). Data collection protocols followed the "DFO Salmonids Section Field Sampling Protocols". A total of 62 wild Atlantic salmon were counted in the fence trap at Come-by-Chance River: 7 large salmon and 55 grilse. While in Bay de l'Eau River, there was a total of 368 Atlantic salmon: 3 large salmon, 1 kelt, and 364 grilse. No escaped farmed salmon were expected nor detected by river monitors on the Come-by-Chance River or Bay de l'Eau River. Overall, the objectives of the EEMP were met and Grieg is well-positioned to continue monitoring the Come-by-Chance and Bay de l'Eau rivers for adult, wild Atlantic salmon and potential farmed Atlantic salmon in the future.

Between 2019 and 2021, genomic analyses were conducted on lumpfish tissue collected at numerous locations around Newfoundland as well as in Nova Scotia, Gulf of St. Lawrence, and Maine (USA). At present, it is unclear whether a monitoring component that focuses on potential genetic introgression between Grieg cleaner lumpfish and wild lumpfish is required. The assessment process is still ongoing since 2023; Lumpfish are being considered for addition to the list of wildlife species at

risk under the *Species at Risk Act* (SARA). If lumpfish are officially listed by DFO as threatened, the prohibitions of SARA would immediately come into effect in Canadian waters. The prohibitions would mean that it would be illegal to kill, harm, harass, capture, possess, buy, sell, or trade lumpfish. Grieg will continue to consult with DFO on both genetic introgression as well as status under SARA pertaining to lumpfish. In 2025, there was no use of Lumpfish at any Grieg sites.

Trained Grieg marine personnel conducted periodic systematic watches for marine mammals and sea turtles (as well as sightings of large fish, e.g., shark) from the primary feed barge onsite. Systematic surveys were conducted when adequate survey conditions permit. The predominant species observed during systematic surveys at Rushoon AMA (950 (93%)), and Red Island AMA (117 (51%)) were different gull species. Other birds observed at both AMAs included bald eagles, common murre, and petrels. Marine mammals observed at both AMAs included dolphin species unidentified seals, and minke whales. Sharks were also occasionally observed at the Rushoon AMA. Opportunistic sightings were recorded as daily operations permitted. Opportunistic sightings predominately occurred while crew were travelling to and from site. No strikes, entanglements, or strandings of marine fauna occurred in 2025 at the Rushoon AMA or the Red Island AMA sea cage or barges. No Aquatic Invasive Species were detected.

In compliance with the Aquaculture Activities Regulations (AAR) Monitoring standard 2018, visual monitoring was performed at the three Rushoon sites in fall 2025. This monitoring was completed at a time close to peak feeding for each site. As detailed in the AAR, indicators are used to determine if thresholds have been exceeded. Paradise Sound and Gilberts Cove were well below the threshold of 70%, while Jude Island is exceeding the limit and will have to be resampled prior to stocking. No antibiotics were used at the sea cage sites in 2025. SLICE treatments were administered on Jude Island sea cage site. The treatments were done under the direction of the Grieg veterinarians.

Meteorological and physical oceanographic data for 2025 was collected at the AMAs using Innovasea's aquaMeasure Sensors¹. Additional sea cage site or cage specific ocean temperature data within both AMAs were collected using a digital handheld YSI ODO/CT meter. Weather stations in Placentia Bay collected air temperature, wind speed, wind direction, and atmospheric pressure data during the reporting period (January - December 2025).

Data were collected on three primary components (health, growth, and survival) of the all-female sterile Atlantic salmon performance at the active sea cages. In 2025, there were no issues with fish health and sea lice abundance during 2025 for G24 ranged from 0.00-1.93 (0.67 at the end of the year) and G25 ranged from 0.00-0.10 (0.00 at the end of the year). In 2025, fitness (K) of the salmon at sea varied as expected depending on life stage and other factors (age, sex, season, stage of maturation, and fullness of gut). The condition factor of farmed Atlantic salmon increases with the size of the fish and can show variation depending on life stage as well as season. The observed fitness for G24 fish during 2025 either met or exceeded expected condition factor values. The average Fitness (K) for farmed salmon at active sea cages during summer after transfer of G25 to sea was approximately 1.39

¹<https://www.innovasea.com/aquaculture-intelligence/environmental-monitoring/wireless-sensors>

and was on par with expected benchmarks. Survival of the salmon was higher than predicted during all phases of operations (post transfer, summer months and winter months).

The Scale AQ Midgard Systems (formerly Aqualine) were used in Placentia Bay as the sea cage system. Components of this system include moorings, floating collar, a sinker ring and nets. Inspections were conducted immediately after installation, routinely after prescribed intervals, and immediately after extreme weather events for relevant components on a prescribed schedule as recommended by the manufacturer as well as in compliance with Provincial recommendations in the Code of Containment (DFFA 2025). Inspections were conducted by Grieg personnel as well as independent third-party contractors knowledgeable in the Scale AQ Midgard System and its components. Visual inspections occurred with Remote Operated Vehicles (ROVs).

1.0 Introduction

In 2018, Grieg Seafood Newfoundland (formerly Grieg NL) submitted an Environmental Impact Statement (EIS) for its Placentia Bay Atlantic Salmon Aquaculture Project (LGL 2018). The EIS was prepared pursuant to the Newfoundland and Labrador *Environmental Protection Act* and was subject to Grieg following established EIS Guidelines and an extensive review by provincial and federal agencies as well as other stakeholders. As a condition of EIS release, eight Environmental Effects Monitoring Plans (EEMPs) were required, which detailed follow-up monitoring and mitigation for effects of the Project on wild Atlantic salmon, lumpfish, benthic habitat, and marine wildlife as well as documenting sea cage performance, climate/weather, groundwater use, and the performance of the all-female sterile Atlantic salmon. These eight EEMPs underwent government review and final approval by the provincial Minister of the Department of Environment and Climate Change. All eight EEMPs require an annual report to be submitted by the end of March. This document is Grieg's fifth annual Environmental Effects Monitoring (EEM) report and presents findings from January through December 2025. Each of the eight EEMPs are addressed in separate sections (Sections 2 through 9).

In 2025, project activities included the operation of the RAS Hatchery in Marystown, completion of harvest on two sea cage sites, continued operation of three sea cage sites in Placentia Bay, mooring installation at one sea cage site in Placentia Bay, and the startup operation of two sea cage sites in Placentia Bay. In addition, counting fences were operational on the Come-By-Chance and Bay de L'Eau rivers. An overview of Project activities is provided below.

1.1 Project Activities

During May - August 2025, Grieg continued to receive all-female sterile Atlantic salmon eggs and reared the fish in the RAS Hatchery located in Marystown. Water for the RAS Hatchery continued to be provided by a main groundwater well (and associated backup/monitoring groundwater well) in Marystown. Seven sea cage sites were active for a period in 2025; two sites were stocked with salmon in the Red Island AMA, three sites in the Rushoon AMA were in the grow-out phase, and two sites in the Merasheen AMA were harvested. Scale AQ Midgard sea cages and mooring systems were used at all sites. These cages and mooring systems were specifically designed based on a site's physical and oceanographic characteristics. Beginning in May through to August 2025, approximately three million all-female sterile Atlantic salmon were transferred to 19 sea cages. The first harvest of the salmon at the Merasheen AMA started in fall of 2024 and concluded in March of 2025. As detailed in Sections 2-9, required mitigation and monitoring procedures as per the EEMPs were conducted throughout 2024.

1.2 Location of EEM

In 2025, all-female sterile Atlantic salmon were transferred from the RAS Hatchery in Marystown to the Buttler Island and Red Island Sea cage sites located within the Red Island AMA, Placentia Bay. Operations continued in the Merasheen AMA with sea cages that had been stocked in 2024 at the Valen Island and St. Leonard Sea cage sites. A counting fence was active on both the Come-By-Chance and Bay de L'Eau rivers and monitoring occurred at the groundwater wells in Marystown. Opportunistic marine wildlife data was also collected along the crew transfer route from various crew change sites (Southern Harbour and Swift Current.) to the sea cage sites and by crew at the sea cage sites.

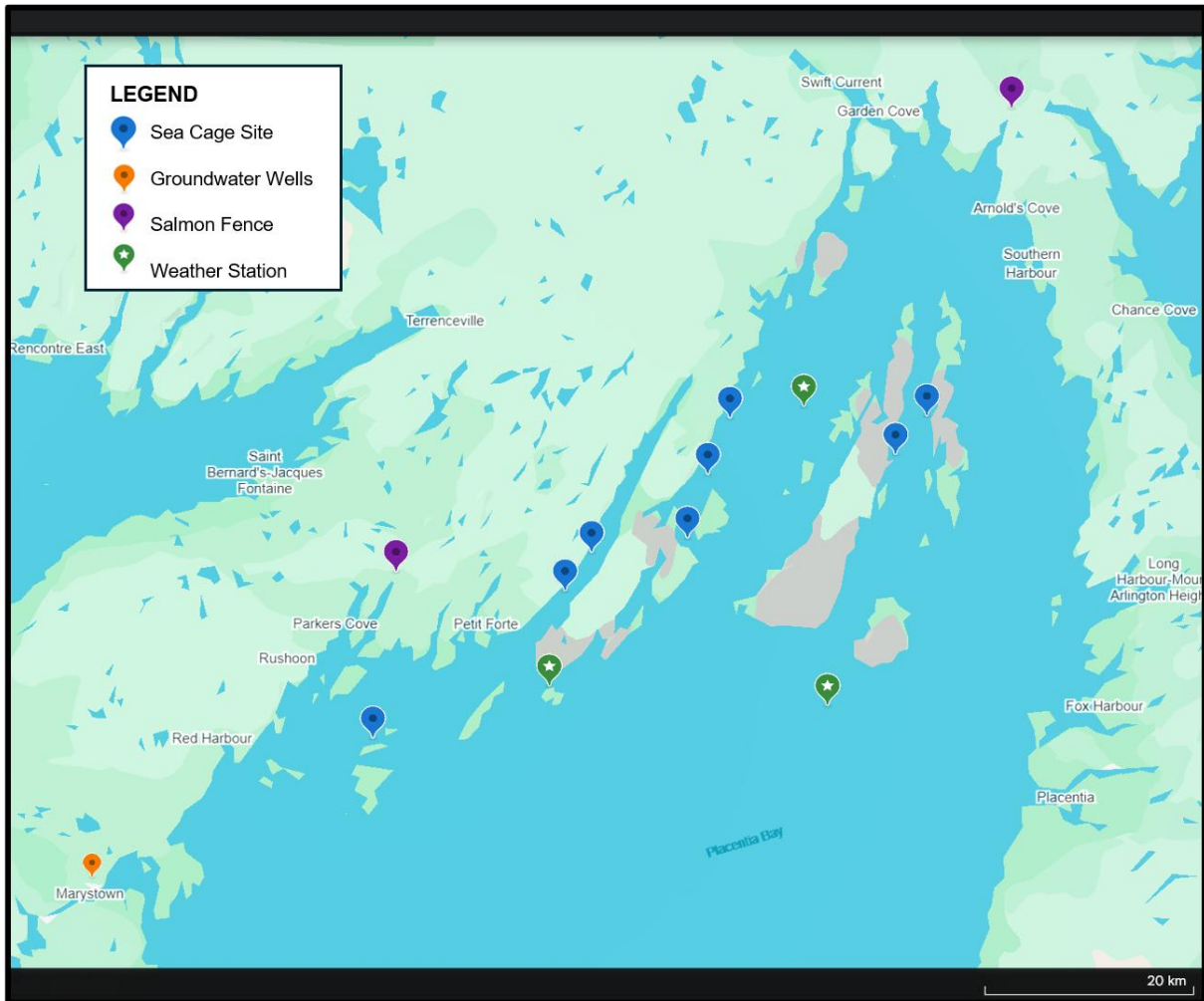


Figure 1.1. Locations of the sites where EEM occurred in 2025.

2.0 Groundwater Quantity and Quality at the Hatchery

The EEMP for Groundwater Quantity and Quality at the Hatchery (LGL 2020c) was designed to monitor water quality and water levels of the RAS Hatchery main well. The overall objective of the EEMP is to ensure that a robust monitoring program of water levels and water quality of Grieg’s groundwater source for its RAS Hatchery is in place. The implementation of the EMMP was designed in collaboration with the provincial Water Resource Management Division (WRMD) as an early warning system in the event that issues with the groundwater supply arise during the Project.

2.1 Monitoring Procedures

Two groundwater wells have been established for the RAS Hatchery—the main well and monitoring/back-up well (Figure 2.1). Water quality and quantity data are collected from both wells with the monitoring well serving as the primary source of information. The province’s real-time water quality and quantity monitoring network began collecting data in November 2020. Hourly water quality parameters and water level data were collected on a continuous basis from the monitoring well as described in Sections 3.3.2 and 3.3.3 of the Groundwater EEMP (LGL 2020c). These data are displayed in real-time on a publicly available website maintained by the WRMD of the DECC². The WRMD have managed the data for archival and public dissemination purposes throughout 2025.



Figure 2.1. Locations of monitoring/back-up well and main well for the RAS Hatchery.

² https://www.mae.gov.nl.ca/wrmd/ADRS/v6/Template_Station.asp?station=NLGWGA01

In addition to the real-time water quality and quantity data, Grieg conducted quarterly sampling of additional water quality parameters including inorganics, anions, and metals from both its main and monitoring wells. Annual sampling for hydrocarbons was also conducted. Water samples were analyzed for required water quality parameters by AGAT Laboratories located in St. John's, NL (see Appendix A for testing standards). Groundwater samples were analyzed and compared to Health Canada's Guidelines for the Government of Canada Drinking Water Quality (CDWQ)³ and to the Canadian Council of Ministers of Environment Water Quality (CCMEWQ) Guidelines for the protection of freshwater and marine aquatic life.

Since July 2022, the main well has been recording water level data. In August 2023, water level data (12 months of measurements) were provided to WSP E&I Canada Limited to re-evaluate the wellhead protection area model that was developed in July 2020 prior to operations commencing. A second pressure-transducer in the monitoring well was recommended by WSP to observe changes in both wells over time and was installed in the monitoring well. The wellhead protection model will be revisited when sufficient data have been collected as determined by the personnel designated to conduct the modelling.

2.2 Results

2.2.1 Real-time Water Quality and Quantity Program

The real-time water quality and quantity findings for Grieg's monitoring are published in quarterly and annual reports⁴. The 2025 annual report (see Clinton 2025 for details) includes data from December 3, 2024, to March 13, 2025, and presents results for the following measured parameters: water temperature (°C), pH, specific conductivity (µS/cm), total dissolved solids (g/L), Oxidation Reduction Potential (ORP in mV), and water elevation (m). For the 2025 reporting cycle, the most recent WRMD annual report includes data up to March 13, 2025. WRMD's maintenance and calibration records note ongoing **communication issues at the back-up well**, which persisted through **August 21, 2025**, and were still under investigation at that time. As a result, data availability beyond March 13 may be limited until the communication issues are fully resolved.

2.2.2 Additional Water Quality Findings

A summary of the findings for water quality quarterly tests conducted by Grieg is provided for the main (Table 2.1) and monitoring (Table 2.2) wells (see Appendix A for details). The results show that the water samples satisfy both CDWQ and CCMEWQ guidelines with some exceptions. As described below, there were no water quality concerns for the health and welfare of Atlantic salmon in the RAS Hatchery.

³ Note that the groundwater is not intended for use as potable water.

⁴ <https://www.gov.nl.ca/ecc/waterres/watermonitoring/rtwq/csdr/#Grieg>

- Fluoride concentration values in 2025 ranged from <0.12 to 0.26 mg/L and <0.12 to 0.15mg/L in the main and monitoring wells, respectively. These values are similar to 2024 values. Values exceeded the CCME guideline of 0.12 mg/L for freshwater in Q2-Q3 for the main well and monitoring well. Fluoride concentrations typically leach from igneous and sedimentary strata, such as found in Marystown, and may bioaccumulate in fish (CCME 2002). Baseline fluoride concentrations measured in both the main well (0.305 mg/L) and monitoring well (0.30 mg/L and 0.36 mg/L) shortly after the wells were drilled, also exceeded the CCME guideline (LGL 2020c). This issue was raised during regulatory review of the EIS conditions of release and the EEMP was amended to include: (from Section 3.2.1) *“Should the health and welfare of the salmon at the hatchery be deemed at risk by health officials because of water quality concerns, Grieg NL will implement a plan to ensure the water quality (including fluoride levels) is adequate to support the growth of the salmon in the RAS Hatchery.”* As in previous years, Grieg’s veterinarian reviewed the fluoride monitoring results and concluded there is no risk to salmon health or welfare at the hatchery.
- The turbidity values, measured in Nephelometric Turbidity Units (NTU), regularly exceeded the CDWQ maximum turbidity guideline of 0.1 NTU. Measurements ranged from 1.62 to 15.3 NTU and 1.38 to 2.10 NTU in the main and monitoring wells, respectively. The elevated turbidity levels do not pose an issue. A filtration system installed inside the Water Distribution Facility (WDF) ensures that all water is less than 0.1 NTU before distribution to the RAS facilities. The filtration consists of a drum filter (10 microns) followed by ultra-violet (UV) treatment (30 mJ/cm²) to kill any potential pathogens and to disinfect the water.
- Chloride levels were above the CCMEWQ guidelines in the main well (i.e., >120 mg/L) for Q1 but not in the monitoring well (this was also observed in previous years). Additional chloride is added to the water in the RAS facility via salt, so elevated chloride levels in the groundwater are not a concern.

Table 2.1. Summary of water quality parameters from the main well in 2025.

	Units	MAIN WELL			
		Q1 (17-03-2025)	Q2 (24-07-2025)	Q3 (23-09-2025)	Q4 (18-12-2025)
HYDROCARBON					
Benzene	mg/L			<0.001	
Ethylbenzene	mg/L			<0.001	
Toluene	mg/L			<0.001	
TPH	mg/L			<0.1	
Xylenes	mg/L			<0.002	
CALCULATED PARAMETERS					
Hardness (as CaCO ₃)	mg/L	232.00	158.00	123.00	140.00
INORGANICS					
Alkalinity (as CaCO ₃)	mg/L	112.00	133.00	123.00	140.00
Ammonia (as N)	mg/L	<0.03	<0.03	<0.03	0.58
Colour (true)	CU	<5.0	<5	<5	<5
Conductivity	µS/cm	646.00	594.00	507.00	540.00
Dissolved Organic Carbon (C)	mg/L	<0.50	<0.5	1.40	<0.5
pH	-	7.60	7.34	6.87	6.05
Total Dissolved Solids	mg/L	365.0	302.00	294.00	304.00
Total Kjeldahl Nitrogen	mg/L	<0.10	<0.1	<0.10	<0.10
Turbidity	NTU	1.97	15.30	1.62	2.21
ANIONS					
Bromide (Br ⁻)	mg/L	1.64	<0.05	0.09	0.52
Chloride (Cl ⁻)	mg/L	128.0	105.00	73.00	88.00
Fluoride (F ⁻)	mg/L	<0.12	0.26	0.16	<0.12
Nitrate (N)	mg/L	<0.05	0.34	0.37	0.48
Nitrate + Nitrite	mg/L	0.36	0.47	0.37	0.90
Nitrite (N)	mg/L	<0.05	0.13	<0.05	0.42
Sulfate	mg/L	11.00	9.00	8.00	9.00
METALS					
Aluminum (Al)	µg/L	11.00	29.00	18.00	14.00
Antimony (Sb)	µg/L	<2.0	<3.0	<2	<2
Arsenic (As)	µg/L	3.00	4.20	3.00	4.00
Barium (Ba)	µg/L	237.00	230.00	159.00	206.00
Boron (B)	µg/L	6.0	17.00	<50	<50
Cadmium (Cd)	µg/L	<0.09	<0.10	0.10	<0.09
Calcium (Ca)	µg/L	66700.0	39700.00	45000.00	49900.00
Chromium (Cr)	µg/L	<1.0	<3.0	<1	1.00
Copper (Cu)	µg/L	4.00	<2	<1	<1
Iron (Fe)	µg/L	120.0	497.00	<50	56.00
Lead (Pb)	µg/L	<0.5	<0.5	<0.5	0.60
Magnesium (Mg)	µg/L	15800.0	14400.00	11400.00	12500.00
Manganese (Mn)	µg/L	4.00	38.00	3.00	5.00
Mercury (Hg)	µg/L	<0.016	<0.016	<0.026	<0.026
Nickel (Ni)	µg/L	<2.0	<3.0	<2	<2
Phosphorus (P)	µg/L	2.40	<0.10	1.88	1.43
Potassium (K)	µg/L	1000.0	520.00	1100.00	1100.00
Selenium (Se)	µg/L	<1	1.20	<1	<1
Sodium (Na)	µg/L	73700.00	51300.00	52600.00	54800.00
Uranium (U)	µg/L	0.80	1.02	0.60	0.80
Zinc (Zn)	µg/L	23.00	34.00	<5	35.00

Note: BTEX (hydrocarbon) monitoring is performed annually (not quarterly).

Table 2.2. Summary of water quality parameters from the monitoring well in 2025.

	Units	MONITORING WELL			
		Q1 (17-03-2025)	Q2 (24-07-2025)	Q3 (23-09-2025)	Q4 (18-12-2025)
HYDROCARBON					
Benzene	mg/L			<0.001	
Ethylbenzene	mg/L			<0.001	
Toluene	mg/L			<0.001	
TPH	mg/L			<0.1	
Xylenes	mg/L			<0.002	
CALCULATED PARAMETERS					
Hardness (as CaCO ₃)	mg/L	163.00	108.00	128.00	133.00
INORGANICS					
Alkalinity (as CaCO ₃)	mg/L	115.00	122.00	128.00	133.00
Ammonia (as N)	mg/L	0.42	<0.03	<0.03	<0.03
Colour (true)	CU	<5.0	<5	<5	<5
Conductivity	µS/cm	327.00	328.00	0.81	343.00
Dissolved Organic Carbon (C)	mg/L	<0.50	<0.5	366.00	<0.5
pH	-	7.88	7.32	7.02	6.09
Total Dissolved Solids	mg/L	190.0	168.00	204.00	188.00
Total Kjeldahl Nitrogen	mg/L	<0.10	<0.1	<0.10	<0.10
Turbidity	NTU	1.92	2.10	1.92	1.38
ANIONS					
Bromide (Br ⁻)	mg/L	<0.05	<0.05	0.09	1.07
Chloride (Cl ⁻)	mg/L	32.0	33.00	35.00	32.00
Fluoride (F ⁻)	mg/L	<0.12	0.15	0.14	<0.12
Nitrate (N)	mg/L	<0.05	0.30	0.16	0.38
Nitrate + Nitrite	mg/L	0.21	0.36	0.16	0.89
Nitrite (N)	mg/L	<0.05	0.06	<0.05	0.51
Sulfate	mg/L	4.00	4.00	4.00	4.00
METALS					
Aluminum (Al)	µg/L	13.00	21.90	16.00	13.00
Antimony (Sb)	µg/L	<2.0	<3.0	<2	<2
Arsenic (As)	µg/L	<2.0	<3.0	<2	<2
Barium (Ba)	µg/L	93.00	93.20	84.00	97.00
Boron (B)	µg/L	19.0	17.00	<50	<50
Cadmium (Cd)	µg/L	<0.09	<0.10	0.09	<0.09
Calcium (Ca)	µg/L	44000.0	26600.00	37300.00	40000.00
Chromium (Cr)	µg/L	<1	<3.0	<1	1.00
Copper (Cu)	µg/L	1.00	<2	<1	<1
Iron (Fe)	µg/L	<50	<50	<50	<50
Lead (Pb)	µg/L	<0.5	<0.5	<0.5	22.00
Magnesium (Mg)	µg/L	13000.0	10100.00	11500.00	11400.00
Manganese (Mn)	µg/L	2.00	<2.0	<2	<2
Mercury (Hg)	µg/L	<0.016	<0.016	<0.026	<0.026
Nickel (Ni)	µg/L	<2.0	<3.0	<2	<2
Phosphorus (P)	µg/L	2.40	<0.10	2.00	1.45
Potassium (K)	µg/L	600.0	<500	700.00	800.00
Selenium (Se)	µg/L	<1.0	2.30	<1	<1
Sodium (Na)	µg/L	25700.00	19100.00	22200.00	22600.00
Uranium (U)	µg/L	0.200	<0.50	0.20	0.20
Zinc (Zn)	µg/L	8.00	<20	8.00	<5

Note: BTEX (hydrocarbon) monitoring is performed annually (not quarterly).

2.2.3 Water Use

Pumping rates from the main well, calculated for each month in 2025, ranged from 28 to 72 L/min and averaged at 47 L/min for the year (Table 2.3). These values are below the maximum pumping rate of 300 L/min established for the main well. Note that the main well is rated as being able to pump at 1,208 L/min (LGL 2020c).

Table 2.3. Pumping rates (L/min) calculated for the main well.

Month (2025)	Pumping Rate (L/min) ^a
January	39
February	28
March	28
April	26
May	58
June	63
July	64
August	72
September	54
October	72
November	28
December	28
Yearly	54

^a Calculated based on data acquired from a Proline Promag W 400 HART flow rate meter installed on the inlet pipe from the main well to the water storage tank.

3.0 Genetic and Ecological Interactions of Escaped Farmed Atlantic Salmon with Wild Atlantic Salmon

The EEMP for “Genetic and Ecological Interactions of Escaped Farmed Atlantic Salmon with Wild Atlantic Salmon” is the basis for the Grieg Salmon Counting Fence monitoring study. The study was designed to monitor for escaped farmed salmon from Grieg’s Sea cages and to detect genetic and ecological interactions these farmed salmon may have with wild salmon (LGL 2020a).

This was the fifth year the Come by Chance River was monitored with 2021 serving as a baseline data collection year, 2022 designed to monitor salmon relative to the Red Island AMA, and 2023/2025 designed to monitor salmon relative to both the Red Island and Merasheen AMAs (Figure 3.1). This was the third year of operation at the Bay de l’Eau River since the Rushoon AMA was stocked with fish in spring 2024. Data collected in 2023 was a baseline. (Figure 3.2).

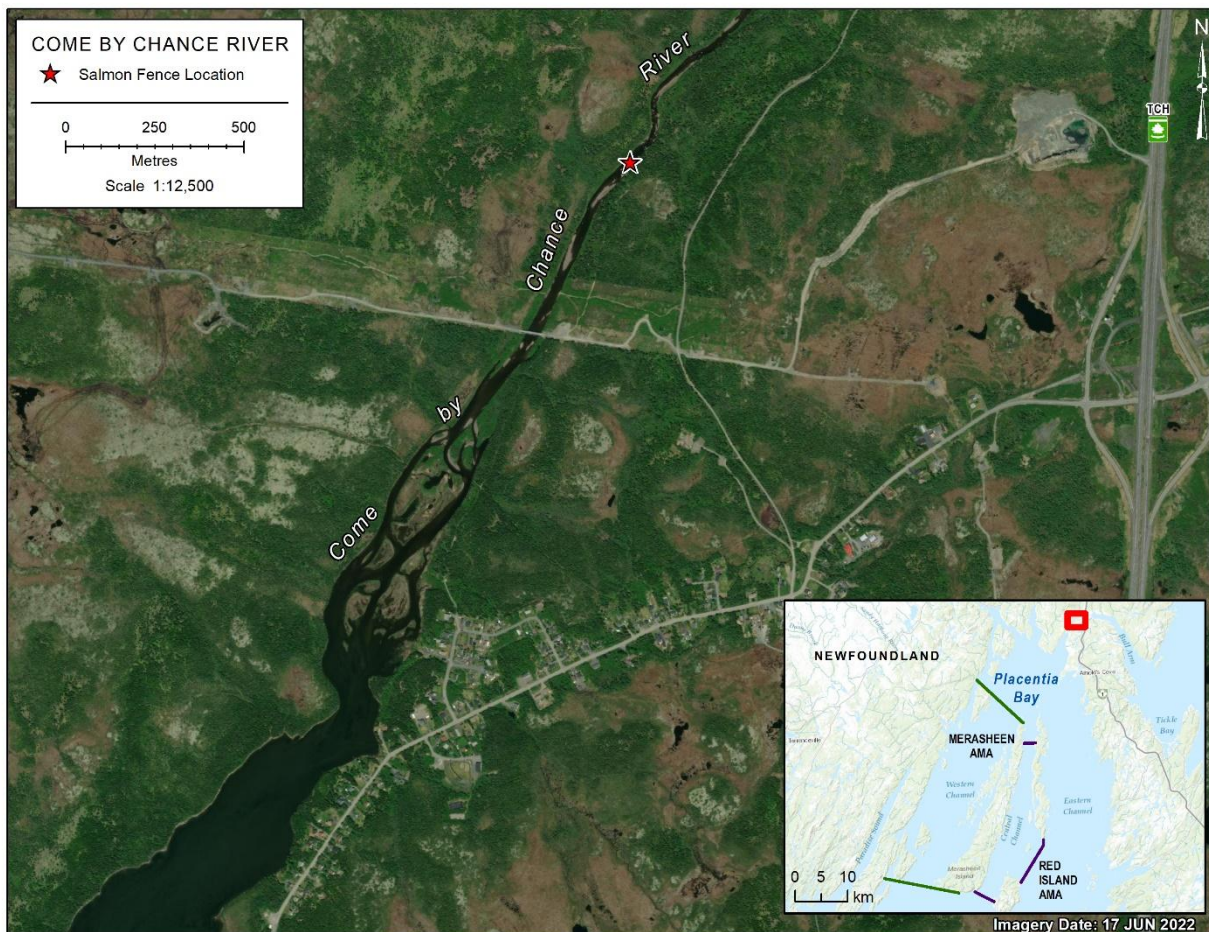


Figure 3.1 Location of the Come by Chance River counting fence in relation to the Red Island and Merasheen AMAs in Placentia Bay.

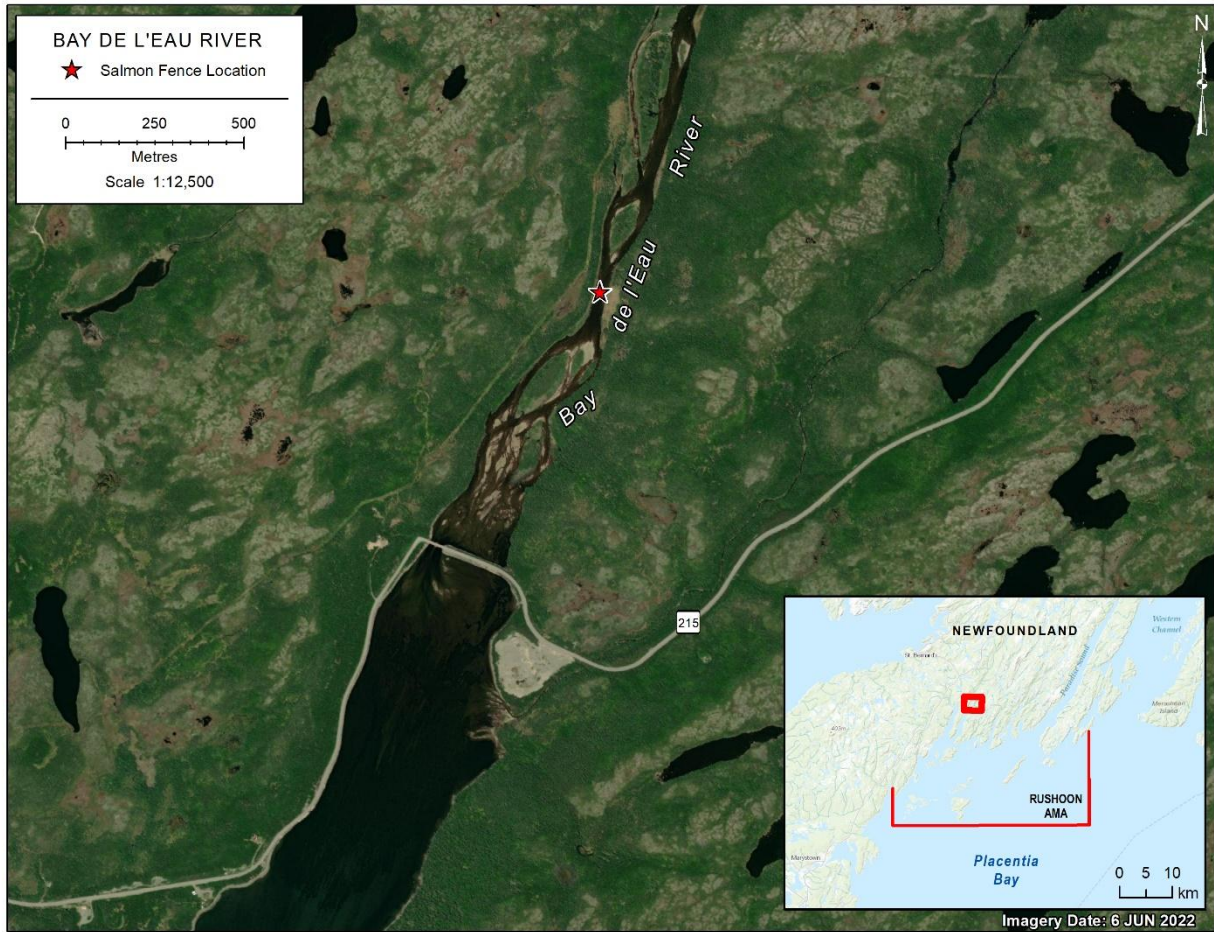


Figure 3.2 Location of the Bay de l'Eau River counting fence in relation to the Rushoon AMA in Placentia Bay.

3.1 Monitoring Procedures and Effort

3.1.1 Come by Chance River

Installation of the counting fence was completed on May 25, 2025 (Figure 3.3). Data collection protocols were based on the EEMP and followed the “DFO Salmonids Section Field Sampling Protocols”. Prior to the field program, Grieg River monitors received technical and HSE training. A field handbook (LGL 2023b) was reviewed and provided to field staff. During the 2025 season, the counting fence and trap were fully operational for 51 days during the May 25 to August 15 monitoring period. Due to elevated water temperatures and low precipitation, DFO requested that the traps be opened and remain open from July 18 to August 15 (32 days). At all times, the counting fence was staffed by at least two Grieg River monitors.



Figure 3.3 Upstream perspective of the counting fence, Come by Chance River.

3.1.2 Bay de l'Eau River

The installation of the counting fence was completed on May 28, 2025 (Figure 3.4). Data collection protocols were based on the EEMP and followed the “DFO Salmonids Section Field Sampling Protocols”. Prior to the field program, Grieg River monitors received technical and HSE training. A field handbook (LGL 2023a) was reviewed and provided to field personnel. During the 2025 season, the counting fence and trap were fully operational for 47 days during the May 28 to August 15 monitoring period. Due to elevated water temperatures and low precipitation, DFO requested that the traps be opened and remain open from July 17 to August 15 (33 days). At all times, the counting fence was staffed by at least two Grieg River monitors.



Figure 3.4 Upstream perspective of the counting fence, Bay de l'Eau River.

3.1.3 Environmental and Biological Data Collection

Environmental data (water temperature, water level and weather) were recorded manually on an hourly basis during the morning and evenings at both counting fence sites. A Stratus Precision rain gauge was mounted in an open area on both rivers for collecting precipitation levels; precipitation levels were recorded daily.

When environmental conditions were suitable, Grieg River monitors collected biological data on Atlantic salmon including fork length, whole weight, scale samples (10-20 scales), fin clips, sea lice checks, sex and external tag (if present). Additionally, river monitors conducted a visual examination of salmon for signs the fish were farmed versus wild. All sampling occurred during the early morning trap check and when water temperatures were below 20°C, as advised by DFO. Following the fish sampling and assessment, salmon were released upstream of the counting trap. All data and biological samples collected at the counting fences have been provided to DFO. DFO has provided the age of the salmon which were sampled; there are no immediate plans to conduct genetic analysis of the fin clips.

3.2 Results

Grieg river monitors recorded standard DFO environmental and fish data throughout the monitoring program.

3.2.1 Environmental Data

Come by Chance River

Water levels in the Come by Chance River ranged from 41 cm to 87 cm during the monitoring period with levels over 50 cm during 51% of the monitoring days (Table 3.1). During the monitoring period, water levels were higher from early-June to early-July (Figure 3.6). There was one day during the season when water level was >85 cm; this was after a heavy rainfall. Daily precipitation values ranged from 0 mm to 22.6 mm (June 8) (Figure 3.7).

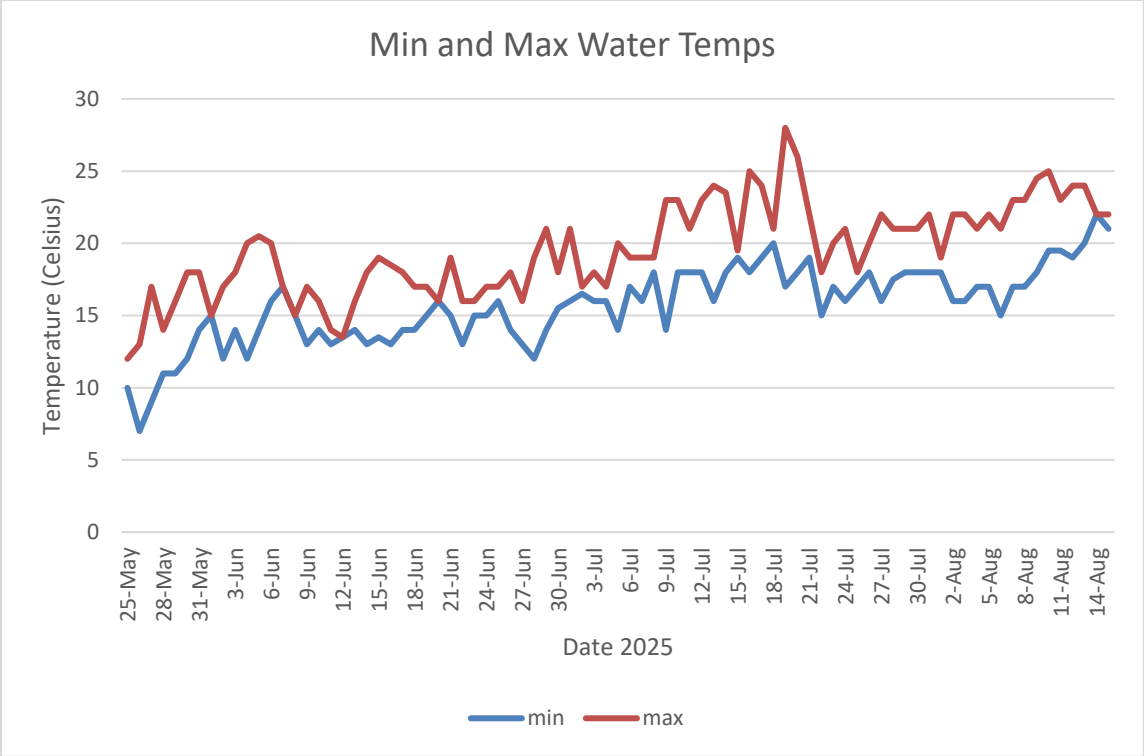


Figure 3.5 Maximum and minimum daily water temperatures recorded manually near the counting fence on the Come by Chance River (June 10 – August 28, 2024).

Table 3.1 Water levels measured near the counting fence on the Come by Chance River (May 25 – August 15, 2025).

Water Level (cm)	Number of Days	Percent of Total Days
<50 cm	41	49
50-60	31	38
>60-70	6	7
>70-85	4	5
86+	1	1

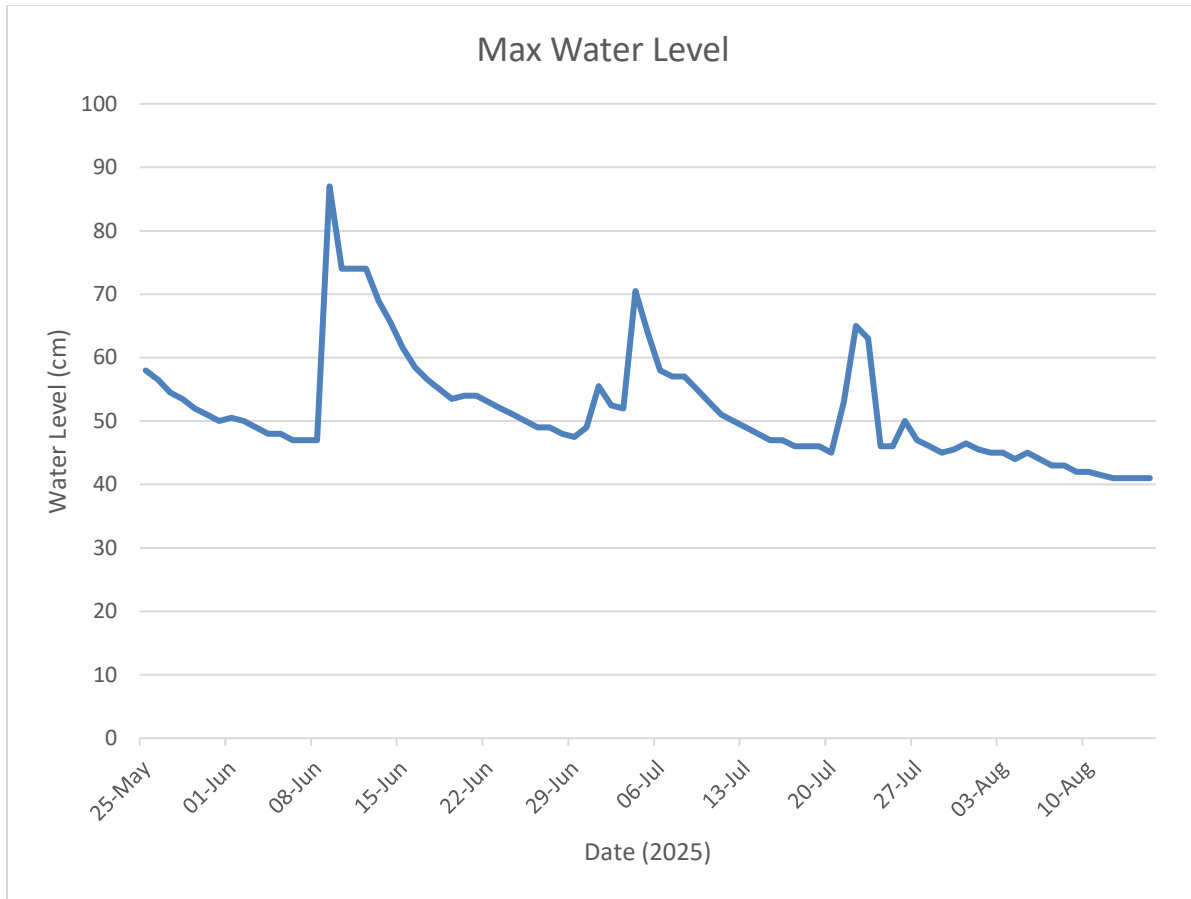


Figure 3.6 Maximum daily water levels (cm) recorded on the Come by Chance River counting fence May 25 – August 15, 2025).

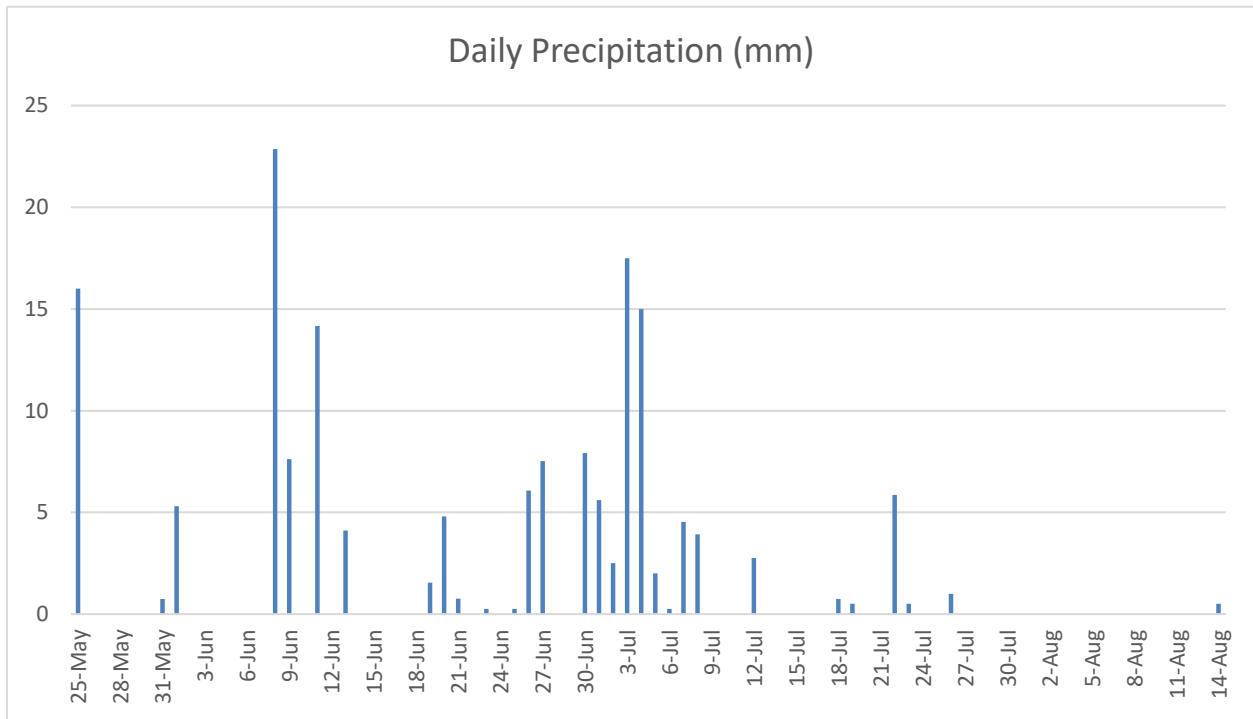


Figure 3.7 Daily precipitation levels recorded at the Come by Chance River counting fence (May 25 – August 13, 2025).

The daily maximum water temperatures that were recorded manually near the counting fence ranged from 7-28°C (Table 3.2). Comparatively, the maximum daily water temperatures in the 2023 and 2024 season ranged from 12-29°C and 8-27.5°C respectively. The lowest daily water temperature was 7 and was recorded during the first week of the monitoring period (May 25). The highest water temperature (28°C) was recorded mid-June (Figure 3.5).

Table 3.2 Daily maximum water temperatures measured (manually) near the counting fence on the Come by Chance River.

Max Daily Water Temperature (°C)	11-15°C	16-20°C	21-24°C	25-28°C
Number of Days	6	41	29	4
Range of Dates	1-Jun to 8-Jun	1-Aug to 9-Jun	1-Jul to 9-Jul	10-Aug to 20-Jul

Bay de l'Eau River

Water levels in the Bay de l'Eau River ranged from 35 cm to 88 cm during the monitoring period with levels 50 cm or over during 15% of the monitoring days (Table 3.9). There was one day during the season when the water level was >80 cm; Daily precipitation values ranged from 0 mm to 51.6 mm (June 8) (Figure 3.10).

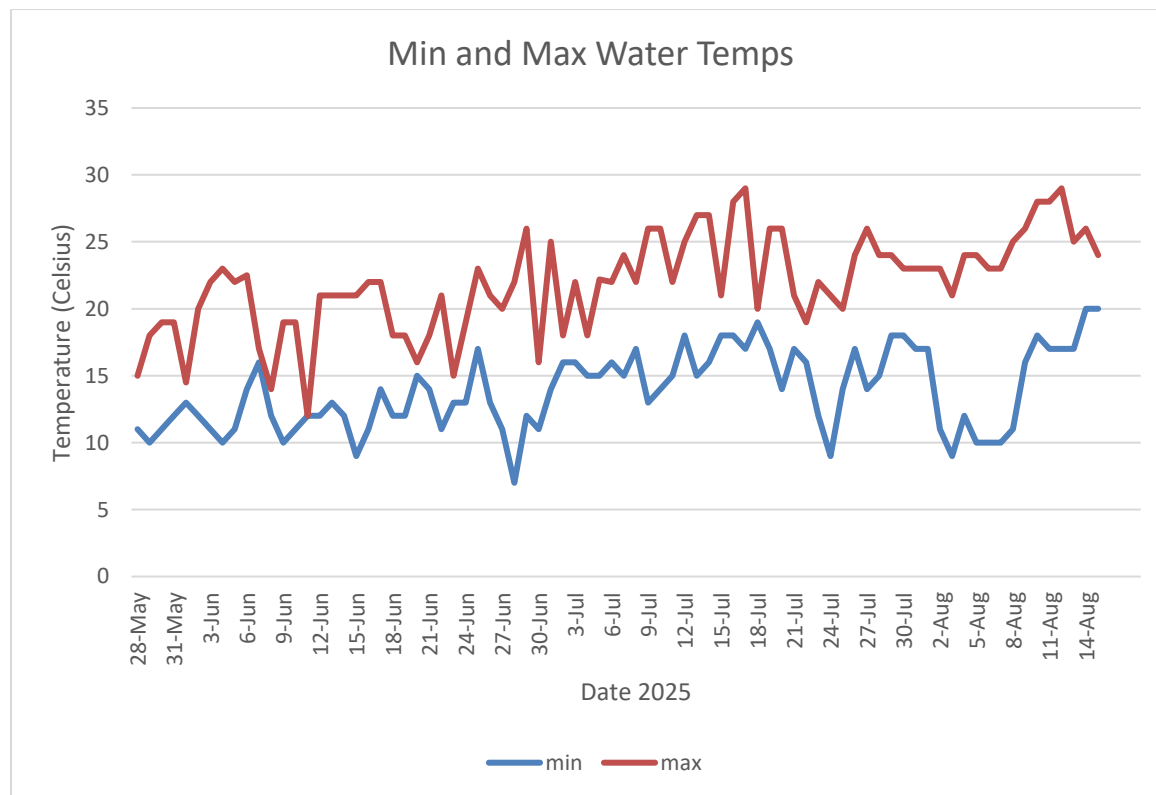


Figure 3.8 Maximum and minimum daily water temperatures recorded manually near the counting fence on the Bay de l'Eau River (May 28 – August 15, 2025).

Table 3.3 Water levels measured near the counting fence on Bay de l'Eau River (June 11 – August 26, 2024).

Water Level (cm)	Number of Days	Percent of Total Days
<50 cm	68	85
50-60	9	11
>60-70	2	3
>70-85	0	0
86+	1	1

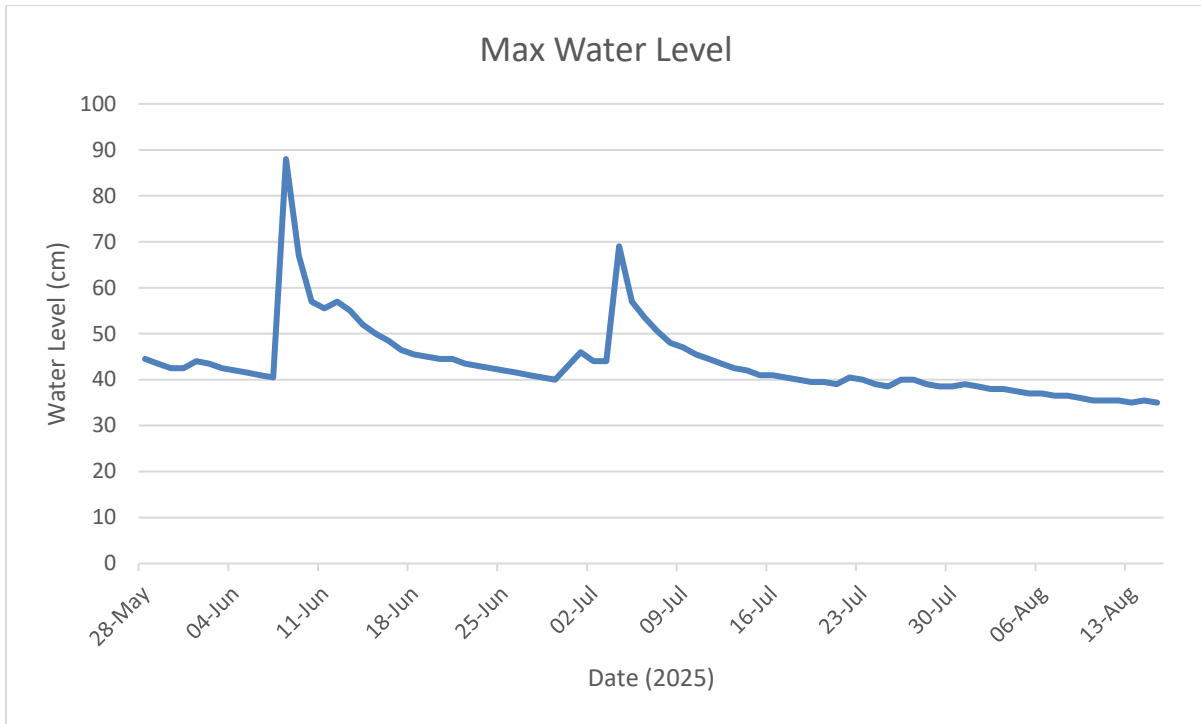


Figure 3.9 Maximum daily water levels recorded on the Bay de l’Eau River counting fence (May 28 – August 15, 2025).

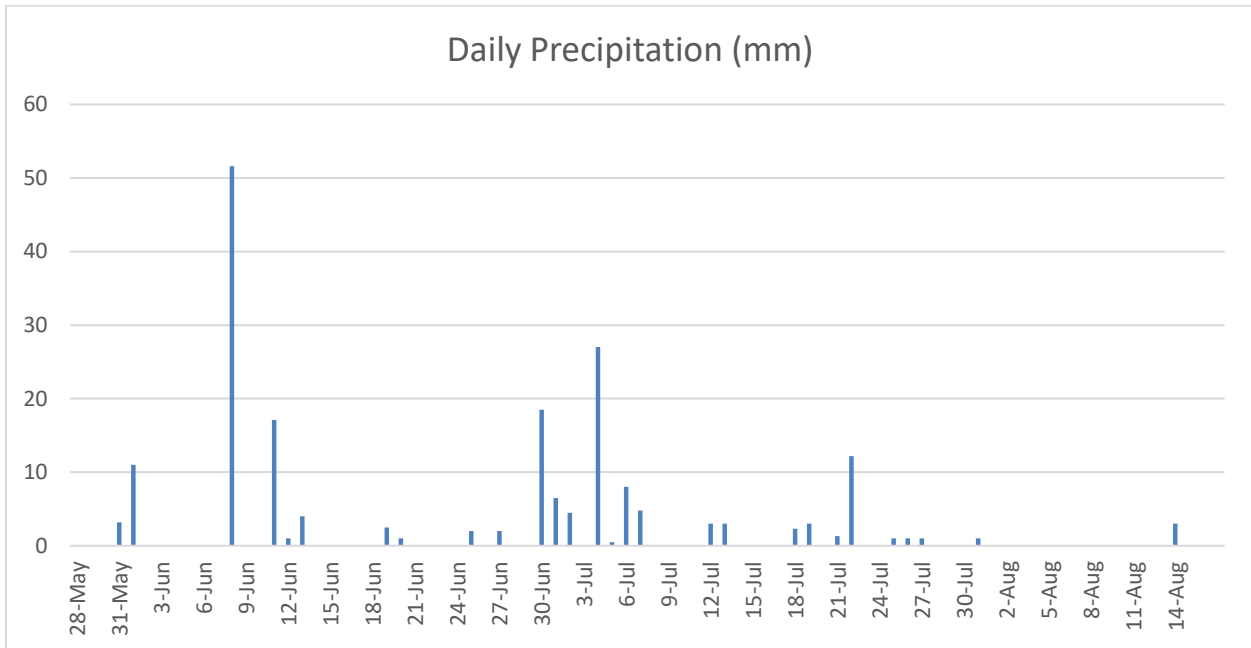


Figure 3.10 Daily precipitation levels recorded near the Bay de l’Eau River counting fence (May 28 – August 15, 2025).

Daily maximum water temperatures ranged from 12-29°C (Table 3.4). The lowest daily maximum water temperatures (12-15°C) were recorded during the first month of the monitoring period (June 11 – July 4). The highest water temperatures 25-29°C) were recorded from July 13-August 13 as well as June 20-21 (Figure 3.8).

Table 3.4 Daily maximum water temperatures measured near the counting fence on the Bay de l’Eau River.

Max Daily Water Temperature (°C)	11-15°C	16-20°C	21-24°C	25-29°C
Number of Days	5	19	37	17
Range of Dates	28 May – 23 Jun	29 May – 25 Jul	3 Jun – 15 Aug	29 Jun – 14 Aug

3.2.2 Fish

A total of five different fish species were recorded in the counting fence trap in the Come by Chance River- Atlantic salmon (*Salmo salar*), brook trout (*Salvelinus fontinalis*), brown trout (*Salmo trutta*), American shad (*Alosa sapidissima*) and smelt (*Osmerus mordax*). The totals for each species were -62 Atlantic salmon, 6 brook trout, 4 brown trout 5 American shad and 1 smelt. Two species of fish were recorded in the counting fence trap in the Bay de l'Eau River- Atlantic salmon and brook trout totaling 368, and 181 respectively.

3.2.2.1 Wild Atlantic Salmon

Come by Chance River

As previously noted, a total of 62 Atlantic Salmon were counted in the trap in the 2025 season. This included 55 grilse and 7 large salmon (Table 3.5). The first salmon (grilse) was recorded in the trap on June 21. Most of the salmon (65%) moved through the counting fence between July 4 and July 17.

Table 3.5 Atlantic salmon recorded in the Come by Chance counting fence trap (May 25 - August 14) DFO swim through count estimate (62) added August 17.

Period	Date	Large	Grilse	Smolt	Total
June	21		2		2
July	4	7	33		40
July	21		6		6
August	5		14		14
TOTAL		7	55	0	62

Only one significant rainfall event occurred early in the season on June 8, there was 22.86mm of rain. There was no washout or damage.

Morphometric data and biological samples including fin clips and scales were collected from 17 adult salmon on the Come by Chance River throughout the season. The majority of samples were collected from grilse (Table 3.6). Estimated ages based on scale samples ranged from 4-8.

Table 3.6 Morphometric data of Atlantic salmon recorded at the Come by Chance River counting fence (June 21 – July 4). Age information provided by DFO based on scale samples.

Date (2025)	Specimen No.	Fork Length (mm)	Whole Weight (g)	Age
21-Jun	1	520	1588	5
21-Jun	2	500	1361	5
4-Jul	3	610	1600	
4-Jul	4	530	1400	4
4-Jul	5	630	2300	8
4-Jul	6	410	900	6
4-Jul	7	750	3630	9
4-Jul	8	520	1360	4
4-Jul	9	540	1810	4
4-Jul	10	540	2270	6
4-Jul	11	480	1360	4
4-Jul	12	560	1360	5
4-Jul	13	560	1360	
4-Jul	14	450	900	5
4-Jul	15	510	1590	4
4-Jul	16	520	1360	4
4-Jul	17	560	1810	8

Bay de l’Eau River

In 2025, a total of 368 Atlantic salmon were counted in the Bay de l’Eau River trap. This included 364 grilse, 3 large salmon and 1 kelt (Table 3.7). The first salmon was recorded in the trap on May 29 (kelt). Most of the salmon (70%) moved through the counting fence between July 1 and July 6; with 59% of these salmon moving upstream on July 4.

Table 3.7 Atlantic salmon recorded at the Bay de l’Eau River counting fence (May 28 – August 14, 2025). DFO swim through count estimate (364) added July 18.

Period	Date	Large	Grilse	Smolt	Kelt	Total
May	29				1	1
June	8		5			5
	10		1			1
	11		1			1
	12	1	4			5
	13		5			5
	14		10			10
	15		10			10
	17		1			1
	18		2			2
	22		1			1
July	1		21			21
	4	2	215			217
	5		19			19
	6		1			1
	7		3			3
	8		2			2
	9		1			1
	11		1			1
	14		2			2
	15		4			4
	16		5			5
17		50			50	
Total		3	364	0	1	368

Morphometric data and biological samples including fin clips and scales were collected from 52 adult salmon on the Bay de l’Eau River in June and July (Table 3.8). Estimated ages based on scale samples ranged from 3-6.

Table 3.8 Morphometric data of Atlantic salmon recorded at the Bay de l’Eau River counting fence (June 11 – August 26, 2024). Age information provided by DFO based on scale samples.

Date (2025)	Specimen No.	Fork Length (mm)	Whole Weight (g)	Age
10-Jun	1	540	1500	4
11-Jun	2	550	1600	4
11-Jun	3	570	1800	3
12-Jun	4	530	1500	5
12-Jun	5	560	1700	4
12-Jun	6	730	3800	5
13-Jun	7	550	1700	3
13-Jun	8	570	1800	4
13-Jun	9	560	1800	4
14-Jun	10	575	1800	4
14-Jun	11	595	2000	4
14-Jun	12	600	2000	4
14-Jun	13	565	1600	3
14-Jun	14	560	1600	5
14-Jun	15	570	1800	4
15-Jun	16	525	1400	4
15-Jun	17	550	1600	4
15-Jun	18	610	2100	5
15-Jun	19	545	1500	4
17-Jun	20	570	1800	6
18-Jun	21	560	1700	4
22-Jun	22	530	1400	5
1-Jul	23	550	1600	4
1-Jul	24	530	1400	4
4-Jul	25	690	3500	6
4-Jul	26	525	1400	4
4-Jul	27	560	1700	4
4-Jul	28	635	2500	5
4-Jul	29	520	1400	4
4-Jul	30	550	1700	5
4-Jul	31	555	1600	5
4-Jul	32	560	1800	4
4-Jul	33	520	1400	4
4-Jul	34	530	1500	3
4-Jul	35	555	1700	5
4-Jul	36	550	1600	4
4-Jul	37	510	1200	5
4-Jul	38	540	1500	4
4-Jul	39	550	1600	4

4-Jul	40	505	1200	4
4-Jul	41	560	1600	4
4-Jul	42	560	1500	5
4-Jul	43	570	1800	5
4-Jul	44	550	1600	4
4-Jul	45	510	1300	4
5-Jul	46	570	1900	4
5-Jul	47	550	1600	5
5-Jul	48	540	1600	6
8-Jul	49	510	1300	4
9-Jul	50	580	1900	4
11-Jul	51	520	1500	
20-Jul	52	530	1100	0

3.2.2.2 Trout

Come by Chance River

A total of 10 trout were recorded on the Come by Chance River during the monitoring period from May 25 – August 15 (Table 3.9). 30% of the trout that passed through the counting fence were sea run brook trout. 30% Brown trout passed through, and resident brook trout accounted for 40% of the total number of trout observed. Most trout passed through the counting fence during July (60%). The highest daily totals of trout recorded in the counting fence were recorded on July 17 (2 sea run brook trout, 2 resident brook trout and 2 brown trout).

Table 3.9 Trout species recorded at the Come by Chance River counting fence (May 25 – August 15, 2025).

Period	Date	Sea Run Brook Trout	Resident Brook Trout	Brown Trout	Total
June	17	1			1
	21			2	2
July	7		1		1
	17	2	2	2	6
TOTAL		3	3	4	10

Bay de l’Eau River

A total of 181 trout were recorded on the Bay de l’Eau River during the monitoring period from May 28- August 15 (Table 3.10). All trout that passed through the counting fence were sea run brook trout (100%). The sea run brook trout were seen throughout the monitoring period in the months of June and July, and most passed the counting fence during July (86%). The highest daily total of sea run brook trout was recorded on July 4 (65).

Table 3.10 Trout species recorded at the Bay de l’Eau River counting fence (May 28 – August 15, 2025).

Period	Date	Sea Run Brook Trout	Total
June	18	2	2
	19	1	1
	22	1	1
	25	4	4
	29	18	18
July	1	7	7
	2	7	7
	4	65	65
	5	3	3
	8	2	2
	9	4	4
	10	14	14
	11	1	1
	12	17	17
	13	6	6
	14	11	11
	15	4	4
16	14	14	
Total		181	181

3.2.2.3 Other Fish

At the Come by Chance River, there were a total of 5 American Shad and 1 smelt recorded during the monitoring period- observed in late May and throughout June (Table 3.11). This was comparable to the amount observed in 2024 (5 American Shad) monitoring season.

Table 3.11 Other fish recorded at the Come by Chance River counting fence during May 28 – August 15, 2025.

Period	Date	Shad	Smelt	Total
May	29	1		1
June	9	1		1
	10	1	1	2
	16	1		1
	17	1		1
Total		5	1	6

3.2.3 Potential Escape of Farmed Salmon

In 2025, there were no confirmed escapes of farmed salmon from any of the sea cage sites. During routine operations as per Code of Containment (DFFA 2025) requirements, nets were inspected every 30 days with a Remote Operated Vehicle (ROV) to confirm structural integrity.

River monitors did not report any suspected farmed salmon in June – August 2025 based on their visual examination of salmon removed from the trap for sample collection nor from those salmon observed within the trap at both the Come by Chance and Bay de l’Eau rivers. As a reminder, adult farmed salmon typically have smaller heads, shorter opercula, different pigmentation, thicker bodies, more fin erosion/splitting, and more tail erosion/splitting (C. Hendry, DFO, pers. comm., March 2019). It is acknowledged that if farmed fish are small at the time of escape, then external morphological differences between the escaped and wild fish may not be obvious. DFO has received the fin clips from salmon sampled in 2025 and if required in future, can use genetic analyses to determine the origin of these fish.

4.0 Genetic and Ecological Interactions between Wild Lumpfish and Escaped Cleaner Lumpfish

The EEMP for 'Genetic and Ecological Interactions between Wild Lumpfish and Escaped Cleaner Lumpfish' was designed to evaluate potential genetic and ecological effects on the wild lumpfish population in Placentia Bay as a result of interactions with escaped cleaner lumpfish from Grieg's Sea cages (LGL 2020b).

As part of the Aquaculture Collaborative Research and Development program, DFO conducted a genetic study of lumpfish (coordinated by the Newfoundland Aquaculture Industry Association (NAIA) on behalf of finfish farmers in Newfoundland including Grieg). Genomic analyses were conducted on lumpfish tissue collected at numerous locations around Newfoundland as well as in Nova Scotia, Gulf of St. Lawrence, and Maine (USA). Available findings suggest that at broad spatial scales, the southern lumpfish populations (Maine and NS) were highly differentiated from more northern populations (NL and the Gulf). At finer spatial scales, structuring is significantly weaker (I. Bradbury, Research Scientist, DFO, pers. comm., 23 March 2022). DFO's results suggest the potential of two groups in the north cluster, one that encompassed the majority of Newfoundland and all the Gulf, and the other which encompassed predominately juveniles caught inshore Newfoundland in 2019 and 2020. DFO has concluded that further characterization of the fine geographic scale structuring (i.e., inshore Newfoundland juveniles, and isolation by distance) within Newfoundland waters is warranted. As such, it is unclear at present whether a monitoring component that focuses on potential genetic introgression between Grieg cleaner lumpfish and wild lumpfish is required.

Lumpfish are currently being considered for addition to the list of wildlife species at risk under the *Species at Risk Act* (SARA). Lumpfish were assessed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) in 2017 and their status was determined to be threatened⁵. Under SARA, a threatened species is defined as one that is likely to become endangered if threats are not addressed. If lumpfish are officially listed by DFO to be threatened, the prohibitions of SARA would immediately come into effect in Canadian waters. The prohibitions would mean that it would be illegal to kill, harm, harass, capture, possess, buy, sell, or trade lumpfish. Given the current prohibitions, the breeding, sale and use of lumpfish as cleaner fish could not continue. It would not be possible to permit a directed fishery for broodstock.

Grieg did not stock or utilize lumpfish in 2025 and does not plan to for the coming year.

⁵https://wildlife-species.canada.ca/species-risk-registry/virtual_sara/files/cosewic/sr-LumpfishGrossePouleMer-2017-e.pdf

5.0 Fish, Sea Turtles, Marine Mammals, and Seabirds

The EEMP for Fish, Sea Turtles, Marine Mammals, and Seabirds is designed to monitor and document marine wildlife, with emphasis on species at risk, in the immediate vicinity of the sea cage sites and during routine vessel transits between the sea cage sites and crew change and resupply sites. The overall objectives of the EEMP are to allow verification of predictions made in the EIS as well as determine the efficacy of mitigation measures designed to minimize project effects on marine wildlife.

5.1 Monitoring Procedures

As described in Section 3 of the EEMP (LGL 2019d), two general types of monitoring were undertaken: (1) monitoring in support of mitigation measures, and (2) systematic and opportunistic data collection. Grieg personnel undertook appropriate monitoring (see Section 3.1 of LGL 2019d) for mitigating potential vessel strikes, entanglement, bird strandings, estranged gear, and therapeutic effects as needed. Trained marine crew also collected systematic and opportunistic data on marine wildlife at the sea cage sites and during crew change transits (see Section 3.2 of LGL 2019d). The findings are presented below.

5.2 Monitoring in Support of Mitigation Measures

5.2.1 Potential Vessel Strikes

No vessel strikes with marine wildlife occurred at the Red Island, Merasheen, or Rushoon AMAs or during transit to and from the sites. Likewise, there were no reported “close calls” with wildlife and vessels.

5.2.2 Entanglement in Sea Cage Equipment

There were no instances of entanglement to report at the Red Island, Merasheen, or Rushoon AMA sea cage sites. Gulls (unidentified species) were occasionally observed landing on the rails of the sea cage; none became entangled in the bird nets or other sea cage equipment.

5.2.3 Bird Strandings

Feed barges were moored at each of the sea cage sites active in 2025. Barges on site were monitored daily that crew was on site for stranded birds. No stranded birds were observed during 2025.

5.2.4 Estranged Sea Cage Equipment

Through routine inspections (see Section 9.0) all sea cage equipment was monitored and no missing gear from sea cages or the barges were reported and therefore there was no risk to wildlife. As a condition of license, a perimeter buoy marking is required by Transport Canada (TC)

surrounding each cage site and follows the TC guide for Private buoys⁶. Some perimeter buoys were lost during 2025. It is unclear if all buoy loss was due to mechanical failure of equipment (shackles, ropes, buoy connection points) or sabotage. A monthly inspection of the perimeter along with continual inspections (minimum monthly as weather permits) of shorelines surrounding the sea cages have resulted in recovery of some missing buoys. In addition, identification labels on the buoys have prompted citizens to call and report lost buoys and provided Grieg an opportunity to retrieve the buoys from local cabin owners or fishermen. We continue to investigate buoy and connection equipment that should prevent such lost equipment in the future. To our knowledge no lost buoys have resulted in entanglement with marine wildlife. The number of perimeter buoys deployed has been reduced on the newly installed sites, in consultation with TC. This has helped reduce the possibility of entanglements and loss of equipment.

5.2.5 Use of Therapeutants

No antibiotics were used at the sea cage sites in 2025. SLICE treatment was administered on one sea cage site in 2025: one site on the Rushoon AMA (Jude Island). See Section 6.2.2 for information regarding treatment.

5.3 Systematic and Opportunistic Data

Grieg personnel trained in species identification and data collection protocols conducted periodic, systematic watches for marine mammals and sea turtles (as well as potential sightings of large fish, e.g., shark, tuna) from the primary feed barge onsite. Surveys were performed three times on a daily basis – in the early morning, mid-day, and early evening when staff were present on site and conditions permitted (i.e., visibility >1 km and Beaufort Wind Force ≤4). However, it should be recognized that effort to collect data on marine wildlife will have to be balanced with the requirements of Grieg NL personnel to conduct their primary job duties, i.e., the construction, operation, harvest, maintenance and eventual decommissioning of sea cage sites.

5.3.1 Rushoon AMA

The Jude Island, Paradise Sound, and Gilberts Cove Sea cage sites were operational throughout all of 2025. Systematic surveys were completed daily at each site, subject to safe weather conditions and site accessibility. There were many days where systematic surveys could not be completed. Due to poor weather conditions, staff departing early from site, staff arriving late on site, crew change days, and holidays. The number of missed days varied by site and was dependant on site specific logistics and visibility. For the AMA, approximately 43% of days were missed to various reasons stated above. The effort to collect data on marine wildlife must be balanced with the requirements of personnel to conduct their primary job duties and is also weather dependent. Staff are diligent in collecting mortalities as to not attract predators. Results are summarised in Table 5.1.

⁶https://tc.canada.ca/sites/default/files/2021-06/2020-2021-MARINE-06%20PRIVATE%20BUOYS%20GUIDE_EN-access.pdf

Opportunistic marine wildlife sightings mainly occurred on crew change vessels while traveling to and from sea cage sites. The opportunistic sightings observed on transits from Rushoon AMA primary feed barge to the wharves. Bald eagles were often spotted on route from Paradise Sound to Gilberts Cove, as well as the common Turr. Throughout the year, several tuna, a minke whale, and an unidentified shark species were observed.

5.3.2 Red Island AMA

In 2025, the Butler Island and Red Island sea cage sites were operational for 237, 182 days respectively. Systematic surveys in the Red Island AMA were conducted after smolt were transferred to site. There were many days where systematic surveys could not be completed. Due to poor weather conditions, staff departing early from site, staff arriving late on site, crew change days, and holidays. The number of missed days varied by site and was dependant on site specific logistics and visibility. For the AMA, approximately 74% of days were missed to various reasons stated above. The effort to collect data on marine wildlife must be balanced with the requirements of personnel to conduct their primary job duties and is also weather dependent. Results are summarised in Table 5.2.

Opportunistic marine wildlife sightings mainly occurred on crew change vessels while traveling to and from sea cage sites. The opportunistic sightings observed on transits from Red Island AMA primary feed barge to the wharves. Staff are diligent in collecting mortalities as to not attract predators.

5.4 Species at Risk

No species at risk were reported to have been observed or to have interacted with operations while travelling to/from, or at, the sea cage sites in 2025.

5.5 Aquatic Invasive Species

Grieg personnel had observed and suspected the presence of Coffin Box bryozoan (*Membranipora membranacea*) at several monitoring sites (Red Island, Oderin Island, Chamber Island, and Long Island) prior to operations commencing in 2022. Photos of the suspected AIS were taken and sent to DFO with the coordinate data and description of colonies (as per required reporting procedures). The DFO AIS team confirmed that the identified species was likely Coffin Box. This species has become common in Placentia Bay and DFO suggested washing any gear prior to movement to prevent further spread (Lynn Lush, DFO, pers comm., 5 January 2021).

If any AIS are spotted/suspected, during routine inspections conducted on the cage and net, staff will send pictures to the GSN Compliance team to send to DFO for confirmation. No AIS have been reported at sea cage sites in Placentia Bay for 2025.

Table 5.1. Numbers of birds, marine mammals, and other species recorded each week in 2025 during systematic surveys in the Rushoon AMA.

2025 Week #		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	Totals			
Seabirds	Bald Eagle				2											1																			2	1		1															7				
	Cormorant (double-crested)																																																								0
	Gull sp.	19	11	17		7	1	4	2	8	12	13		11	3	69	3	14	15	10	5	22	1	48	19	58	27	25	9	34	18	46		48	12	57	28	52	10	28	11	20	5	30	19	3		19	14	20	12	15	16	950			
	Guillemot sp.																																																							0	
	Kittiwake (black-legged)																																																						0		
	Petrel sp.																																																						0		
	Petrel (Wilson's)																																																						0		
	Puffin																																																						0		
	Seagull (Juvenile)																																																						0		
	Tern (Arctic)																																																							0	
	Tern (Common)																																																							0	
Turr (Common Murre)	9	4	3		2					2																																												20			
Marine Mammals	Dolphin sp.																																																						6	6	
	Dolphin (White Sided)																												5																												5
	River Otter															1																																								1	
	Seal sp.			1	1		1		1	2		3		1							1																																		21		
	Whale (Minke)			1																										1																									2		
	Shark sp.																																																							7	
	Totals	28	15	22	1	9	4	4	3	10	14	16	0	13	3	70	3	14	15	11	5	22	1	48	19	58	27	30	10	34	18	46	0	48	14	58	28	53	10	28	18	21	5	31	19	3	0	22	15	21	20	15	17	1019			

Table 5.2. Numbers of birds, marine mammals, and other species recorded each week in 2025 during systematic surveys in the Red Island AMA.

	2025 Week #	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	Totals				
Seabirds	Bald Eagle																																		1	1		
	Cormorant (double-crested)																																				0	
	Gull sp.	2		2				1		7		6	1	9	2	15	10	18				2	1	3			15		23							117		
	Guillemot sp.																																				0	
	Kittiwake (black-legged)																																				0	
	Petrel sp.																																				0	
	Petrel (Wilson's)												1																								1	
	Puffin																																				0	
	Seagull (Juvenile)																																				0	
	Tern (Arctic)																																					0
	Tern (Common)																																					1
	Turr (Common Murre)																																					0
Marine Mammals	Dolphin sp.															100																					100	
	Dolphin (White Sided)																																				0	
	River Otter																																				0	
	Seal sp.																																				0	
	Whale (Minke)																1										3		1		3					8		
	Shark sp.																																				0	
Totals	2	0	2	0	0	0	1	0	7	0	7	1	9	2	116	10	18	0	0	0	3	1	3	0	3	15	1	23	4	0	0	0	228					

6.0 Benthic Habitat Health

The EEMP for Benthic Habitat Health (LGL 2019a) was designed to monitor eutrophication effects on benthic habitat due to the deposition of fish feces, uneaten fish feed, and naturally occurring biofouling material from Grieg's Sea cages (i.e., biochemical oxygen demand [BOD] matter). The EEMP was written in compliance with the Aquaculture Activities Regulations (SOR/2015-177) (DFO 2019). The AAR states that sampling is to be conducted during the period of actual or predicted maximum daily quantity of feed usage during the production cycle. Monitoring occurred in fall 2025 for the Rushoon AMA

In 2025, several operational mitigation measures were taken to minimize detriment to fish and fish habitat. These measures are part of the company's provincially approved Fish Health Management Plan that helps prevent and limit the spread of disease and would reduce or eliminate the need for deposit of drugs/pest control products.

- Vaccines were used to minimize use of antibiotics/ pest control products;
- Handling procedures and low stocking densities were used to minimize stress and risks of injury to fish;
- Fish were separated by year-class (only one year class in an AMA);
- Daily/frequent removal of fish mortalities from the sea cages;
- Biosecurity procedures for personnel, visitors, suppliers and equipment enforced; and
- Fallowing after a production cycle

Several measures were taken to minimize deposit of fish feces, unconsumed feed and other biochemical oxygen demand (BOD) matter including:

- Procedures for minimizing feed waste including the use of underwater cameras and hand feeding to observe when feeding by fish had slowed/stopped;
- Use of optimized feed to give better feed conversion rates;
- Feed stored in appropriate containment to prevent spillage;
- Regular removal of biofouling from infrastructure and nets to ensure that organisms are small when removed, thus creating less impact if settling to benthic habitat occurs;
- Siting of sea cages in locations with water currents deemed adequate to disperse organic material (i.e., feed, fish feces) falling from the sea cages; and
- the moorings are not located in an area important to fish habitat and minimize disturbance to submerged aquatic vegetation when securing moorings

6.1 Monitoring Design/Methodology

Visual monitoring was performed by a third-party at video stations arranged in a perpendicular transect on either side of the cage array. In addition, a reference transect was sampled 1 km away from the cage array in a location not exposed to BOD from the sites. Monitoring was conducted at the Paradise Sound (September 5, 2025), Jude Island (September 15, 2025), and Gilberts Cove (September 16, 2025) sea cage sites at a time close to peak feeding for each site and were performed in compliance with the Aquaculture Activities Regulations (ARR) Monitoring standard 2018. Follow-up monitoring for the Jude Island sea site is to be determined.

As detailed in the AAR, indicators are used to determine if thresholds have been exceeded. The presence of *Beggiatoa* species or similar bacteria, marine worms or barren substrate at more than 70% of the visual monitoring stations are indicators for threshold exceedance at hard-bottom sea cage sites such as these Grieg sites.

6.2 Results

6.2.1 Biochemical Oxygen Demand [BOD] Matter

Based on visual monitoring, there was no indication of barrenness due to aquaculture activities or off gassing was observed at any of the sites. Fauna such as sea anemones, crabs, brittle stars, shrimp, sea urchins, worms and encrusting sponges were observed at the monitoring stations. The Paradise Sound sea cage site showed presence of benthic indicators at 36% of the monitoring stations, Jude Island 92%, and Gilberts Cove 56%. Paradise Sound and Gilberts Cove were well below the threshold of 70%, while Jude Island is exceeding the limit and will have to be resampled prior to stocking.

6.2.2 Deposits of Deleterious Substances such as Drugs or Pesticides:

No antibiotics were used at sea cage sites in 2025. SLICE treatment was administered on one site in the Rushoon AMA in 2025 (Jude Island) Throughout 2025, sea lice numbers were low on all active sites. As sea lice numbers began to increase, a decision was made to treat. No increase in mortality was observed after the treatments. A sub-sample of fish were tested to ensure they were safe for human consumption prior to harvest.

The Annual Reports for the AAR have been submitted to the Regional Aquaculture Management Office for all sites operational in 2025.

Follow-up of Cumulative Effects

Grieg is committed to improving the efficiency of the feeding procedures to reduce waste and limit biological demand of the benthic substrate. Extended fallow time and the conditions observed by the follow-up monitoring are effective at reducing the benthic impact.

7.0 Climate and Weather

Meteorological and physical oceanographic data are used by Grieg personnel when making operational decisions for certain Project activities in the marine environment. The primary objectives of the 'Climate and Weather' EEMP are to monitor weather data, document its influences on relevant Project activities, and to have mechanisms in place for adaptive management procedures if required. A secondary objective is to examine collected weather data on a longer time scale to possibly ascertain if climatic changes are occurring and what influence these changes may have on Project activities and associated mitigation measures.

7.1 Monitoring Procedures

As noted earlier, the Butler Island and Red Island sea cage sites were stocked in May and July 2025 respectively; both sites are located within the Red Island AMA, two sites within the Merasheen AMA (Valen Island and St. Leonard's) completed harvest in January and March 2025 respectively and three sites within the Rushoon AMA (Gilberts Cove, Jude Island, and Paradise Sound) were operational throughout 2025 (see Figure 1.1).

7.1.1 Meteorological Data

7.1.1.1 Weather Stations

In previous years, meteorological data has been collected at the Ragged Islands KLUMI Weather Station for the Merasheen AMA (47° 35.6154' N, 54° 016.4094' W); however, the station has been offline for over a year, and no meteorological data (hourly wind speed, direction, or gusts) could be collected for that period.

Meteorological data was collected near the Rushoon AMA (47°19'42.003' N, 54°35'07.001' W) by the Marticot Island Weather station. This weather station is part of a monitoring program led by the Environment and Climate Change Canada - Meteorological Service of Canada. The station provides hourly data on average wind speed and direction as well as gust (maximum), atmospheric pressure, air temperature, among others.

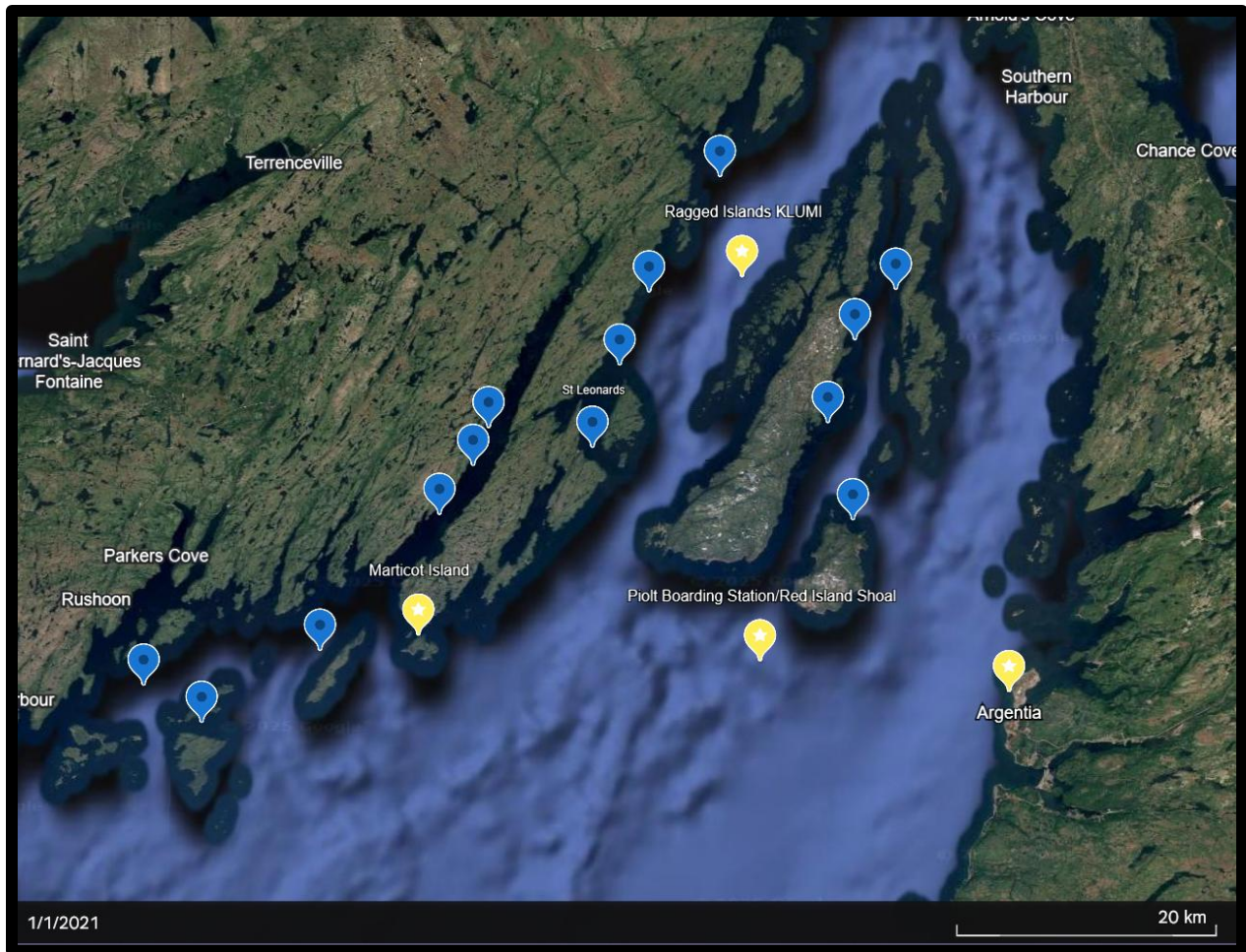


Figure 7.1 Locations of weather stations throughout Placentia Bay (Yellow) in relation to the Grieg Sea Cage Sites (Blue).

7.1.1.2 Personnel Observations

Grieg personnel located at the primary feed barge manually collected and recorded visibility (estimate in km), sea state (Beaufort Wind Force), and ice type/presence data.

7.1.1.3 Regional Meteorological Data

Grieg acquired the following meteorological data from ECCC for active weather stations in Placentia Bay: air temperature, wind speed and direction of maximum gust (km/h), and total precipitation (mm). The data were acquired for the Marystown (Winterland Branch Hill) and St. Lawrence weather stations and will be used in future climatic analysis trends. Regional data will be incorporated into a future climate analysis.

7.1.2 Physical Oceanographic Data

7.1.2.1 Automatic Data Collection

Water temperature (°C) data was recorded via sensors deployed in the sea cages at various depths between surface and 25 m. The sensors were part of the Innovasea aquaMeasure system, which transferred data automatically via wireless communications. The AquaHub, which was mounted at the sea cage sites, uploaded data in nearly real-time to the cloud for ready access by Grieg personnel located on Innovasea web platform. An ADCP was deployed in the Red Island AMA current speed (m/s), and current direction (degrees) were recorded.

7.1.1.2 Manual Data Collection

Temperature data within the Red Island, Merasheen and Rushoon AMAs were collected using a digital handheld YSI ODO/CT meter at all active sites. Data collection with YSI varied as it would be used to verify in-situ temperatures if a probe reading was considered inaccurate, during periods that sensors may be out for servicing, or due to data hubs not operating.

7.1.1.3 Regional Oceanographic Data

In 2025, data was acquired through SmartBay buoys in Placentia Bay. Data that has been collected to date (mixed buoy data since 2010) will be incorporated into the climate analysis.

7.2 Results

7.2.1 Meteorological Data

Air temperature, wind speed, wind direction, and atmospheric pressure data were collected throughout the year at the Red Island Pilot station and Marticot Island weather station (Table 7.1).

Table 7.1. Meteorological data collected at the Red Island pilot station and the Marticot Island station) in 2025. Minimum, mean, and maximum values for 2025 are provided for air temperature, wind speed, and atmospheric pressure.

	Red Island Pilot Station (near to Merasheen and Red Island AMAs)			Marticot Island (Near Merasheen and Rushoon AMAs)		
	Min.	Mean*	Max.	Min.	Mean	Max.
Air Temperature (°C)	-10.6	6.32	20.1	-11.8	6.3	23.6
Wind Speed (knots)	0.0	7.5	24.9	0.0	28.1	58.3
Atmospheric Pressure (mb/hPa) *	945	1012	1033			

*Note Atmospheric pressure for Marticot Island Station was not available for 2025.

7.2.1.1 Air Temperature

In 2025, air temperatures at the Marticot Island monitoring station closely followed expected seasonal trends with warmer temperatures occurring in late July and August (Figure 7.2). Air temperatures decreased substantially in late November through December.

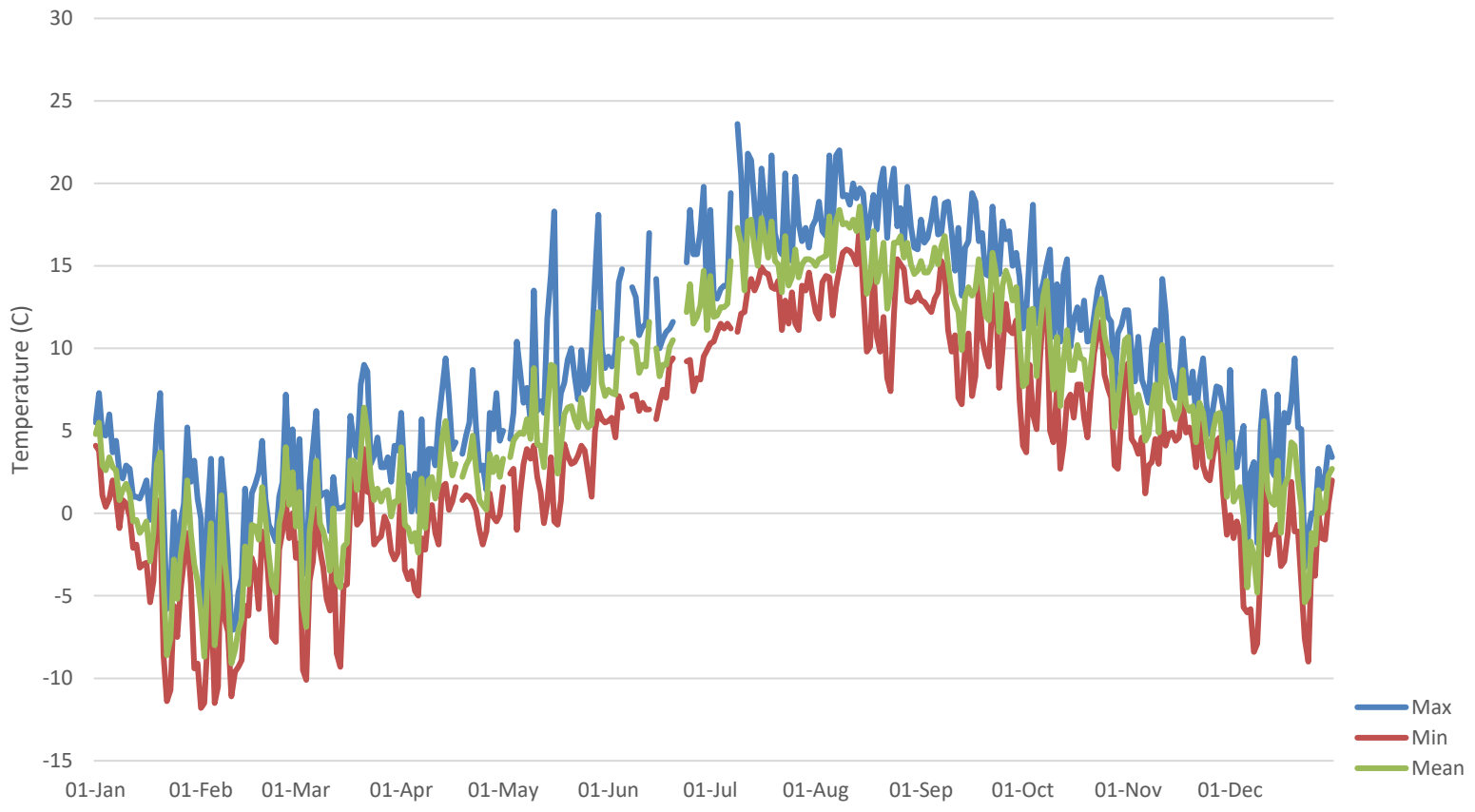


Figure 7.2 Maximum, Mean, and Minimum Air Temperatures Recorded at the Marticot Island Weather Station during 2025

7.2.1.2 Atmospheric Pressure

At the Red Island pilot station, atmospheric pressure was slightly below average sea level pressure (i.e., >1013 hPa) for much of the monitoring period.

7.2.1.3. Wind Speed and Direction

At the Marticot Island monitoring station, average wind speeds were recorded from Jan 1 to Dec 31, 2025, and ranged between 0 knots to a gust of 58.3 knots. The average wind speed during 2025 was 9.3 knots. Wind Direction was predominately SW (220 degrees).

7.2.1.5. Other variables

No sea ice was observed within the Red Island, Merasheen, or Rushoon AMAs in 2025.

7.2.2. Physical Oceanographic Data

Sea water temperature was collected at all AMAs. Data collection for the Rushoon AMA commenced once staff were on site after smolt transfers to sea (May) and data collection ended for the Merasheen AMA once the last site was harvested (March). Water temperatures ranged from 0.5°C (Jude Island) to 17.7°C (Gilberts Cove) at 10 m depth (Table 7.2). Sea temperature trends followed seasonal air temperature trends with maximum sea temperatures occurring in August - September for all sites (Figure 7.3). There were slight differences in the average water temperatures between the AMAs, but this can most likely be attributed to variations in localized currents. In 2025, water temperature data collected in the Merasheen and Red Island AMAs do not represent a full year of data and therefore, are not directly comparable to other sea cage sites (Table 7.2). Water temperatures at all sites remained above the acceptable low range for the welfare of Atlantic salmon of -0.75°C (Elliott and Elliott 2010). In addition, there was ample depth in the sea cages and warmer temperatures at depth for the salmon to move to during colder water temperature periods (i.e., when water temperature was 0.5 °C).

Throughout 2025, an ADCP was operational in the Red Island AMA to collect additional current data needed to meet the updated requirements of the NS9415 standard. Current data will be provided to the third-party certification body for review.

Table 7.2. Water temperature data collected at the Red Island (RI), Butler Island (BI), Valen Island (VI), St. Leonard (SL), Jude Island (JI), Gilbert’s Cove (GC), and Paradise Sound (PS) sea cage sites in 2025. Minimum, mean, and maximum values collected at 10 m water depth for 2025 are provided.

Area	Site	2025 Water Temperature 10m (°C)			Date Range
		Min	Mean	Max	
Red Island AMA	Butler Island	3.3	10.75	17.3	May 14 – December 31
	Red Island	3.6	11.74	16.8	July 10 – December 31
	St Leonard’s	0.6	2.4	4.9	01 January – 11 March
	Valen Island	2.7	3.73	4.7	01 January – 25 January
Rushoon AMA	Gilberts Cove	0.7	7.45	17.7	01 January – 31 December
	Jude Island	0.5	7.22	16.6	01 January – 31 December
	Paradise Sound	3.3	11.74	16.8	01 January – 31 December

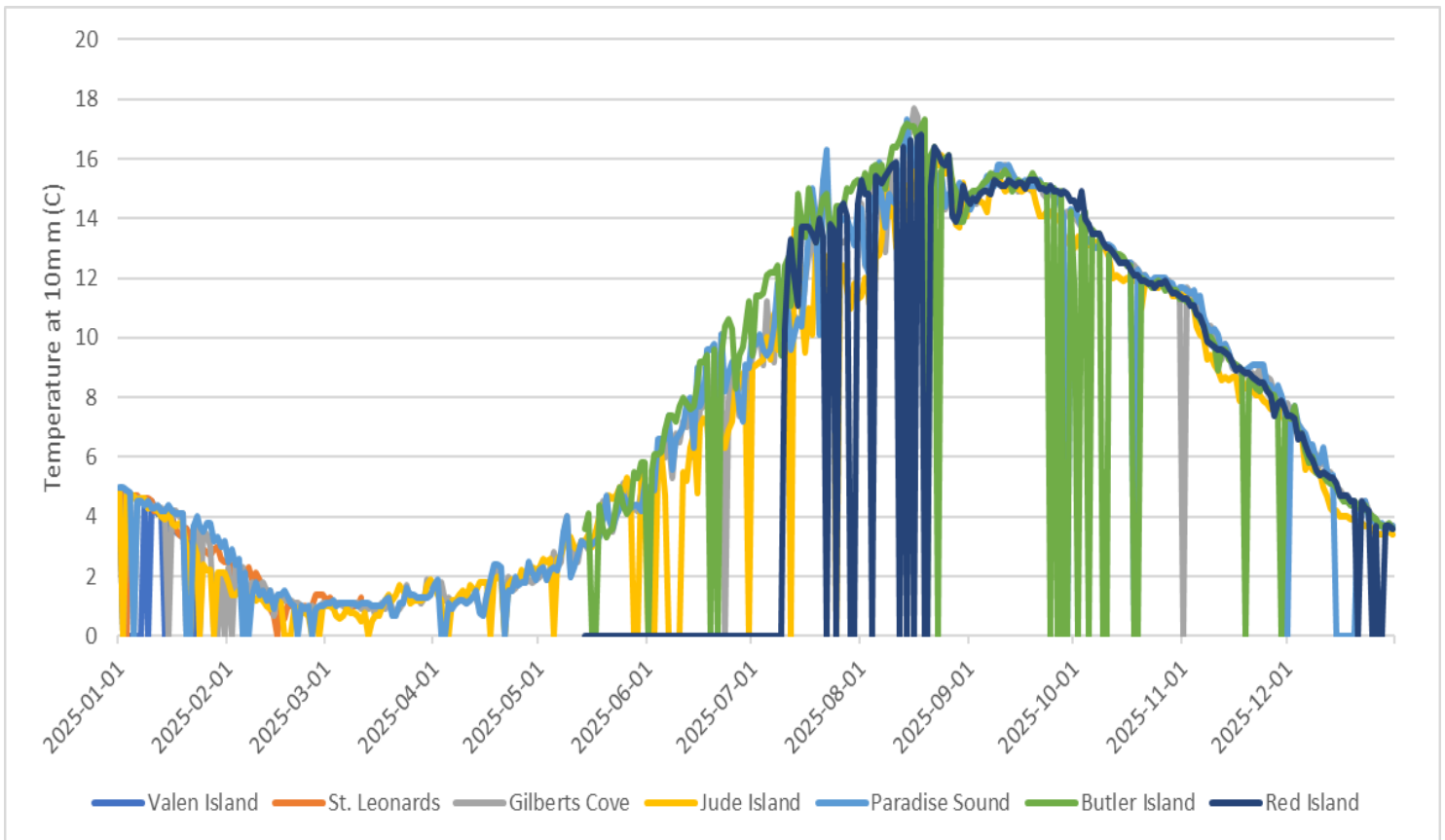


Figure 7.3 Water temperature data collected at the Red Island (RI), Butler Island (BI), Valen Island (VI), St. Leonard (SL), Jude Island (JI), Gilbert’s Cove (GC), and Paradise Sound (PS) sea cage sites in 2025. Mean temperature collected at 10 m depth during 2025.

8.0 Performance of European-strain Triploid Fish

The objective of the EEMP for 'Performance of European-strain Triploid Fish' (LGL 2019c) is to monitor the health, growth, and survival of the Atlantic salmon that Grieg Seafood Newfoundland grows at its sea cage sites in Placentia Bay. As described in the EIS, Grieg has numerous procedures in place to maintain the health of its farmed salmon which includes routine monitoring and sampling. Data summarized here encompasses the January to December 2025 period for Rushoon AMA (2024 Generation (G24)), January to March 2025 period for Merasheen AMA (2023 Generation (G23)) and the May to December 2025 period for the Red Island AMA (2025 Generation (G25)).

8.1 Monitoring Procedures

As described below, data were collected on three primary components (health, growth, and survival) of farmed salmon performance at the active sea cages (see Sections 3.1-3.3 in LGL 2019c) in 2025. Salmon were sampled at all active sea cage sites in 2025 at a frequency that was determined through consultations with Grieg's designated aquaculture veterinarian (DAV) and provincial veterinarians.

8.1.1 Health

For the purposes of documenting performance of farmed salmon, three aspects of fish health were identified as outlined in the EEMP:

- Disease (viruses and bacteria): Prior to the 2025 transfer to Red Island sea cage sites, as per Aquaculture Policy (AP) 12 (DFLR 2019), aquatic animal health checks were performed by Provincial veterinarians, and a disease risk evaluation was conducted. After approval by the Chief Aquaculture Veterinarian (CAV) and the issuance of a transfer permit, the fish were transferred to sea. Once at sea, routine sampling of the fish was performed by Grieg's fish health team with quarterly sampling by the Provincial veterinarians. The frequency of routine disease sampling was determined through consultation with Grieg's DAV and provincial veterinarians. At a minimum, samples were collected as per AP 29 every 30-45 days (weather and logistic dependent) (DFLR 2019) at both the Rushoon and Red Island sites (G24 and G25). Health samples were taken from moribund fish collected during mortality retrievals at the sea cage sites. Between 5 and 15 samples were collected for each site's health check. In addition to routine sampling for diseases, all mortalities removed from cages were visually assessed by Grieg staff. Any fish showing abnormal signs or disease symptoms would be photographed and/or retained for analysis by Grieg's DAV and/or fish health team.
- Parasites (sea lice): The frequency of parasite sampling was dependent on water temperature. Parasite sampling was conducted weekly when water temperatures were increasing in the Spring and reaching $\geq 5^{\circ}\text{C}$ at both Rushoon and Red Island AMA sea cage sites (G24 and G25).

The handling of fish did not occur when water temperatures were below 5°C at 5m depth, or when air temperatures were -5°C≥. Samples were collected from each sea cage on site using a seine to gather a subpopulation within the cage. Using a dip net, fish samples from each cage were collected, anaesthetized with tricaine (50 mg/L) and a visual inspection performed to assess presence or absence of parasites (sea lice). As per FFA's *Sea Lice Integrated Pest Management Plan*⁷, Grieg met or exceeded FFA's minimum recommendations. In conjunction, at the time of sea lice sampling, a visual assessment of the health of the fish was performed and any fish that appeared sick or diseased was retained for further assessment by the DAV and/or the fish health team.

- Fitness (K factor): Fitness sampling was conducted during the individual welfare monitoring. Samples were collected from the sea cages on site using a seine to gather a subpopulation within the cage. Fitness was measured by the condition factor (K). The condition factor, K, was calculated by using both weight and length of the fish. The K-factor was divided into a system ranging from excellent (>1.6) to poor (<0.9). The values of K can be influenced by age, sex, season, stage of maturation, and fullness of gut, but also fat reserves and the degree of muscular development. The condition factor of farmed Atlantic salmon increases with the size of the fish and can show variation depending on life stage as well as season. Following transfer to a sea cage, a K closer to 1.0 is acceptable and should increase as the fish grow/mature.

8.1.2 Growth

The economic feed conversion ratio (EFCR) describes the quantity of feed spent per kg of harvested fish. Harvesting of G23 fish commenced in October 2024 and continued into winter 2025. A final EFCR for G23 based on the completed harvest in the Red Island AMA has been calculated.

8.1.3 Survival

Dead or moribund fish were removed from the sea cages and were counted and assessed on a dewatering table. All dead fish were recorded in a software program daily. In 2018, based on available information at that time, the industry mortality rate of Atlantic salmon was estimated as 20% over the maximum 18 months that fish were planned to be at sea (see Table 2.18 in the EIS, LGL 2018).

Using industry rates for Atlantic salmon, Grieg established specific benchmarks for survival in the EEMP as:

- Mortality 24 hours post transfer to sea cages = 5%
- Monthly mortality rates during non-winter months (May - Oct) = ~0.5-1.5%

⁷ <https://www.gov.nl.ca/ffa/files/Newfoundland-and-Labrador-Sea-Lice-Integrated-Pest-Mangement-Plan.pdf>

- Monthly mortality rates during winter months (November – April) = ~2-2.5%

8.2 Results

Monitoring results for Grieg’s all-female sterile Atlantic salmon at the active sea cages in 2025 for G23, G24 and G25 are provided below.

8.2.1 Health

In 2025, no reportable diseases were detected for farmed salmon at active sea cages for G23, G24, and G25. Fish Health reports of reportable diseases are publicly available as per AP 17 (DFLR 2019). To view the reports, visit <https://aquacultureportal.ca/>.

No behavioral or physical abnormalities were observed during 2025 indicative of disease or fish health issues for G23, G24 or G5.

Sea lice abundance during 2025 for G24 ranged from 0.00-1.93 gravid females per fish (avg. 0.67 per fish at the end of the year), and G25 ranged from 0.00-0.10 (0.00 at the end of the year). Pest Management reports are publicly available as per AP 17 (DFLR 2019). To view the reports, visit https://aquacultureportal.ca.

The Fitness (K) for G24, previous to the harvest, was an average of 1.33. In 2025, the average weight of the fish at harvest was 5.6 kg. The observed condition factor for G24 fish during 2025 either met or exceeded expected condition factor values. The average Fitness (K) for farmed salmon at active sea cages during summer after transfer of G25 to sea was approximately 1.39

8.2.2 Growth

A total EFCR for G23 was calculated after all sites were harvested in March 2025. Mortalities and total feed use were tallied to calculate the quantity of feed spent per kg of harvested fish. A EFCR of 1.29 was obtained from the G23 salmon compared to a benchmark established of 1.35.

8.2.3 Survival

In 2025, the survival of the all-female sterile Atlantic salmon was higher (i.e., the mortality rate was lower) than originally predicted (Table 8.1). The total mortality for G23 from input to sea through end of harvest in March 2025 was 13.29%. The mortality for G24 from input to sea in May 2024 to December 2025 was 8.11%. For both generations, the mortality has been much lower than the original estimate for a generation at sea (16-18 months) of 20%. Mortality rate for G25 was also low from May 2025 – Dec 2025 at 2.66% (8-month period).

Table 8.1 Summary of all female sterile Atlantic salmon mortality rates at Grieg’s active sea cages in 2025 relative to established benchmarks.

Mortality Measure	Benchmark	Actual 2025	
Mortality during and post transfer to sea cages (24 hour):	5%	0.00%	
Monthly mortality rates during winter months (Jan – Apr)	~2–2.5%	Jan	0.29%
		Feb	0.26%
		Mar	0.55%
		Apr	0.28%
Monthly mortality rates during non-winter months (May -Oct):	~0.5–1.5%	May	0.34%
		Jun	0.41%
		Jul	0.39%
		Aug	0.71%
		Sep	0.69%
		Oct	0.55%
Monthly mortality rates during winter months (Jan – Apr & Nov – Dec)	~2–2.5%	Nov	0.37%
		Dec	0.31%

9.0 Sea Cage Performance

The EEMP for Sea Cage Performance (LGL 2019e) describes the systematic inspection, maintenance, and part replacement methodologies, including scheduling, for the various parts of the sea cage system. Monitoring results for sea cage performance are presented here.

9.1. Monitoring Procedures

Depending on the components and the monitoring procedure being conducted four general types of monitoring were implemented including: (1) general visual inspection (GVI); (2) close visual inspection (CVI); (3) dimensions inspection (DK); and (4) modification/replacement (MU). Inspections were conducted immediately after installation, routinely after prescribed intervals, and immediately after extreme weather events. Inspections were conducted by Grieg personnel as well as independent third-party contractors knowledgeable in the Scale AQ Midgard System (formerly Aqualine) and its components. Underwater visual inspections occurred with ROVs. Dimension checks were designed to monitor the wear on chains, shackles and other connection points susceptible to wear or breakage. Record keeping forms associated with the inspections and maintenance as described in the EEMP were maintained.

9.1.1. Moorings

The mooring system for the Scale AQ Midgard System is an integral component of the system that is designed and produced according to the Norwegian Standard (NS9415) and custom-made for each sea cage site based on many aspects of the location. The Scale AQ Midgard mooring system consists of a grid mooring with anchor lines and bridles. As per AP 2 (DFLR, 2019), the sea cage system cage components and installation were inspected and certified by third-party engineering standards following installation.

Many components such as anchors, shackles, buoys and ropes comprise the mooring system and were inspected on a routine schedule to ensure the system performed as it is designed. Inspection schedules varied depending upon the recommendation from the manufacturer for each component and ranged from daily to annually. In 2025, routine inspections were performed including third-party ROV inspections of the underwater moorings.

The Norwegian-based company FSV Group has over 10 years of experience installing and inspecting sea cage systems (including Scale AQ equipment). NL Marine Services (NLMS), a local service company, has been training alongside FSV on aspects of installation and inspection of moorings. The team of FSV and NLMS were contracted to perform the installation and inspection work and utilized an ROV to inspect the mooring system after installation to confirm that the approved mooring analysis was reflected in the installed layout. All documentation from the ROV inspection along with the required certificates of component parts were compiled from ScaleAQ and DNV has reviewed the

documentation and issued multi-year site certificates. All GSN's sea cage sites are certified by third party standards. If there are any changes/modifications to the fish farm's configuration DNV will be contacted to verify the new changes/modifications. Grieg has been in close contact with Scale AQ throughout the installation process and operation phase of the mooring systems. Any adjustments or modifications to equipment have been approved by the manufacturer and communication is ongoing.

In 2025, visual checks of surface mooring components on each site were performed weekly by Grieg personnel as per the Code of Containment requirements.

The Scale AQ System Mooring User Manual is the key guidance document for the installation and replacement procedures for components.

9.1.2 Floating Collar and Winch

The floating collar of the Scale AQ Midgard cage system is used to maintain the shape of the net, and it serves as a working platform. The cage collar consists of floater tubes and railing tubes as well as clamps for moorings and trusses, bolts, chains, and ropes. Each of these components were visually inspected on a routine basis (weekly, monthly or annually depending on the component) to ensure the integrity of the collar as well as its safety for personnel. In 2025, routine maintenance was performed according to the "Scale AQ Frøya Ring Floating Collar User Manual". This includes visual inspection of the collar tubes, mooring brackets, handrail, and associated tendons, chains, ropes, and connections.

In 2025, visual checks were performed weekly by Grieg personnel of surface floating collar components on each site as per the Code of Containment (DFFA 2025) requirements.

9.1.3 Sinker Ring

To assist in maintaining the shape, tension and rearing capacity of the net, a sinker ring is used by attaching it to the base rope at the bottom of the net. This sinker ring will also assist in harvesting procedures as winches can be used to raise the net using the sinker ring that is attached to the bottom of the net. In 2025, the sinker ring position and attachments (chain, ropes, and straps) were visually inspected regularly (i.e., monthly and quarterly as required).

9.1.4 Nets

Scale AQ's nets are designed for the Midgard system ensuring the system fits well together and works effectively to reduce the risk of fish escape to an absolute minimum. Hand-sewn cage nets are used to ensure precise apportionment of netting material to framing rope. The Code of Containment outlines equipment standards for nets and net testing. In addition, Scale AQ has developed recommended routines for net inspection, washing, and repair. An inspection routine that meets the

recommendations outlined by the Code of Containment, the Provincial Aquaculture Policy, and Procedures Manual (DFLR 2019) and Scale AQ was followed for the nets. In 2025, monthly inspections were conducted by a third-party using an ROV.

9.1.5 Extreme Weather Events

In 2025, pre- and post-storm checks were performed by Grieg personnel for any weather event that was considered significant (and may test the design limits of the system). Pre-storm checks occurred in the 24 hours preceding any predicted storm event. These checks included visual and/or camera inspections of the moorings, floating collar, and nets (including sinker ring and winches). Inspection checks included confirming that all ropes, chains, and pins were secured. A visual assessment was performed to ensure components were floating correctly and in straight lines as required. Following storm events, as soon as it was safe for personnel, the same checks were conducted on the system to assess for any damage or compromised components.

9.2 Results

9.2.1 Moorings

All mooring systems installed were functioning as intended. Minor adjustments to tension on some mooring ropes were made in consultation with the manufacturer. Throughout 2025, mooring systems were inspected and maintained regularly. At the Red Island sea cage site, the mooring grid was expanded to accommodate additional cages within the lease boundary, and the barge moorings were repositioned.

9.2.2 Floating Collar and Winch

Floating collars (collar tubes, mooring brackets, handrail, and associated tendons/chain/ropes and connections) were functioning as intended based on the inspections. The cages from the Merasheen AMA were serviced and repositioned to the Red Island AMA. Repairs were completed on winch components.

9.2.3 Sinker Ring

In 2025, the sinker ring was functioning as intended. Winch ropes were replaced in each AMA as needed. No major damage or repairs needed on the sinker rings.

9.2.4 Nets

During routine net inspections throughout 2025, inspection reports were submitted to the appropriate authorities as required, and there was no loss of fish or public reportable escape. Post harvest, nets from the Merasheen AMA were sent for cleaning, disinfection, and strength testing, before being stored or re-deployed for the next production cycle.

9.2.5 Extreme Weather Events

Post storm inspections were completed and confirmed there was no damage to any sea cage components including moorings, floating collar, sinker ring, and net due to the weather.

10.0 Acknowledgements

We would like to thank all the staff at Grieg for their hard work and due diligence that enabled us to have a very successful 2025 year. A special thanks to the Compliance and Sustainability team, specifically Laura Dwyer, for pulling all the information together and fact-checking the data for the report and for the Marine, Freshwater and Logistical staff that contributed. We acknowledge the support of DFO and the river monitors who carry out such important work for our river monitoring project. We would also like to give a special thanks to the communities that we operate in for their continued support as we would not be able to succeed without it.

11.0 References

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Personal Communications

Bradbury, I., Research Scientist, DFO, 23 March 2022.

Hendry, C., DFO, March 2019

Lush, L., DFO, 5 January 2021

Kennedy, R., DNV, 10 March 2023

Violette, G., WSP, 28 February 2024

Appendix A

Water Quality Reports



**CLIENT NAME: GRIEG NL NURSERIES LTD.
205 MCGETTIGAN BLVD
MARYSTOWN, NL A0E 2M0
709-279-3440**

ATTENTION TO: ANDREW SKANES

PROJECT:

AGAT WORK ORDER: 25K254977

WATER ANALYSIS REVIEWED BY: Kaliegh Cullen, Report Writer

DATE REPORTED: Mar 17, 2025

PAGES (INCLUDING COVER): 13

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (902) 468-8718

***Notes**

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
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- All reportable information is available on request from AGAT Laboratories, in accordance with ISO/IEC 17025:2017, ISO/IEC 17025:2005 (Quebec), DR-12-PALA and/or NELAP Standards.
- This document is signed by an authorized signatory who meets the requirements of the MELCCFP, CALA, CCN and NELAP.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.



Certificate of Analysis

AGAT WORK ORDER: 25K254977

PROJECT:

11 Morris Drive, Unit 122
Dartmouth, Nova Scotia
CANADA B3B 1M2
TEL (902)468-8718
FAX (902)468-8924
<http://www.agatlabs.com>

CLIENT NAME: GRIEG NL NURSERIES LTD.

ATTENTION TO: ANDREW SKANES

SAMPLING SITE:

SAMPLED BY:

AGAT Halifax - Anion Scan

DATE RECEIVED: 2025-03-04

DATE REPORTED: 2025-03-17

				GSF-MAIN	GSF-MONITORING
		SAMPLE DESCRIPTION:		WELL	WELL
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2025-03-03 15:00	2025-03-03 15:00
Parameter	Unit	G / S	RDL	6561005	6561020
Bromide	mg/L		0.05	1.64	<0.05

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to CCME FWAL - update 2015
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.
Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Kaleigh Cullen



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CLIENT NAME: GRIEG NL NURSERIES LTD.

ATTENTION TO: ANDREW SKANES

SAMPLING SITE:

SAMPLED BY:

AGAT Halifax - Total Phosphorous, TKN

DATE RECEIVED: 2025-03-04

DATE REPORTED: 2025-03-17

Parameter	Unit	G / S	RDL	GSF-MAIN	GSF-MONITORING
				WELL	WELL
				6561005	6561020
Total Phosphorus	mg/L	Fact Sheet	0.006	<0.006	<0.006
Total Kjeldahl Nitrogen	mg/L		0.10	<0.10	<0.10

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to CCME FWAL - update 2015
 Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.
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SAMPLING SITE:

SAMPLED BY:

DOC

DATE RECEIVED: 2025-03-04

DATE REPORTED: 2025-03-17

				GSF-MAIN	GSF-
				MONITORING	MONITORING
				WELL	WELL
				Water	Water
				2025-03-03	2025-03-03
				15:00	15:00
Parameter	Unit	G / S	RDL	6561005	6561020
Dissolved Organic Carbon	mg/L		0.50	<0.50	<0.50

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
 Analysis performed at AGAT Halifax (unless marked by *)

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CLIENT NAME: GRIEG NL NURSERIES LTD.

ATTENTION TO: ANDREW SKANES

SAMPLING SITE:

SAMPLED BY:

Mercury, Total - MWAL

DATE RECEIVED: 2025-03-04

DATE REPORTED: 2025-03-17

Parameter	Unit	G / S	RDL	GSF-MAIN	GSF-MONITORING
				WELL	WELL
				WATER	WATER
				2025-03-03 15:00	2025-03-03 15:00
				6561005	6561020
Total Mercury	ug/L	0.026	0.016	<0.016	<0.016

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to CCME FWAL - update 2015
 Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.
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Kathleen Cullen



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ATTENTION TO: ANDREW SKANES

SAMPLING SITE:

SAMPLED BY:

Standard Water Analysis + Total Metals

DATE RECEIVED: 2025-03-04

DATE REPORTED: 2025-03-17

Parameter	Unit	SAMPLE DESCRIPTION:		GSF-MAIN		GSF-MONITORING	
		G / S	RDL	WELL	RDL	WELL	RDL
				Water		Water	
				2025-03-03		2025-03-03	
				15:00		15:00	
				6561005		6561020	
pH		6.5-9.0		7.60		7.88	
Reactive Silica as SiO2	mg/L		0.5	6.0	0.5	6.4	
Chloride	mg/L	640, 120	2	128	1	32	
Fluoride	mg/L	0.12	0.12	<0.12	0.12	<0.12	
Sulphate	mg/L		4	11	2	4	
Alkalinity	mg/L		5	112	5	115	
True Color	TCU	Narrative	5	<5	5	<5	
Turbidity	NTU	Narrative	0.50	1.97	0.50	1.92	
Electrical Conductivity	umho/cm		1	646	1	327	
Nitrate + Nitrite as N	mg/L		0.05	0.36	0.05	0.21	
Nitrate as N	mg/L	550, 13	0.05	0.36	0.05	0.21	
Nitrite as N	mg/L	0.06	0.05	<0.05	0.05	<0.05	
Ammonia as N	mg/L	Fact Sheet	0.03	<0.03	0.03	0.42	
Total Organic Carbon	mg/L		0.50	0.72	0.50	<0.50	
Ortho-Phosphate as P	mg/L		0.01	<0.01	0.01	<0.01	
Total Sodium	mg/L		0.1	73.7	0.1	25.7	
Total Potassium	mg/L		0.1	1.0	0.1	0.6	
Total Calcium	mg/L		0.1	66.7	0.1	44.0	
Total Magnesium	mg/L		0.1	15.8	0.1	13.0	
Bicarb. Alkalinity (as CaCO3)	mg/L		5	112	5	115	
Carb. Alkalinity (as CaCO3)	mg/L		10	<10	10	<10	
Hydroxide	mg/L		5	<5	5	<5	
Calculated TDS	mg/L		1	365	1	190	
Hardness	mg/L			232		163	
Langelier Index (@20C)	NA			-0.17		-0.03	
Langelier Index (@ 4C)	NA			-0.49		-0.35	
Saturation pH (@ 20C)	NA			7.77		7.91	

Certified By:

Kaleigh Cullen



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Standard Water Analysis + Total Metals

DATE RECEIVED: 2025-03-04

DATE REPORTED: 2025-03-17

Parameter	Unit	G / S	RDL	GSF-MAIN		GSF-MONITORING	
				WELL	RDL	WELL	RDL
				2025-03-03 15:00		2025-03-03 15:00	
				6561005		6561020	
Saturation pH (@ 4C)	NA			8.09		8.23	
Anion Sum	me/L			6.11		3.30	
Cation sum	me/L			7.87		4.43	
% Difference/ Ion Balance	%			12.6		14.6	
Total Aluminum	ug/L	Variable	5	11	5	13	
Total Antimony	ug/L		2	<2	2	<2	
Total Arsenic	ug/L	5	2	3	2	<2	
Total Barium	ug/L		5	237	5	93	
Total Beryllium	ug/L		2	<2	2	<2	
Total Bismuth	ug/L		2	<2	2	<2	
Total Boron	ug/L	29000,	5	6	5	19	
Total Cadmium	ug/L	1.0, 0.09	0.09	<0.09	0.09	<0.09	
Total Chromium	ug/L		1	<1	1	<1	
Total Cobalt	ug/L		1	<1	1	<1	
Total Copper	ug/L	Equation	1	4	1	1	
Total Iron	ug/L	300	50	120	50	<50	
Total Lead	ug/L	Equation	0.5	<0.5	0.5	<0.5	
Total Manganese	ug/L		2	4	2	2	
Total Molybdenum	ug/L	73	2	<2	2	<2	
Total Nickel	ug/L	Equation	2	<2	2	<2	
Total Phosphorous	mg/L	Fact Sheet	0.02	2.40	0.02	2.40	
Total Selenium	ug/L	1	1	<1	1	<1	
Total Silver	ug/L	0.25	0.1	<0.1	0.1	<0.1	
Total Strontium	ug/L		5	796	5	459	
Total Thallium	ug/L	0.8	0.1	<0.1	0.1	<0.1	
Total Tin	ug/L		2	<2	2	<2	
Total Titanium	ug/L		2	<2	2	<2	

Certified By:

Kateigh Cullen



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CLIENT NAME: GRIEG NL NURSERIES LTD.

ATTENTION TO: ANDREW SKANES

SAMPLING SITE:

SAMPLED BY:

Standard Water Analysis + Total Metals

DATE RECEIVED: 2025-03-04

DATE REPORTED: 2025-03-17

Parameter	Unit	G / S	RDL	GSF-MAIN		GSF-MONITORING	
				WELL	RDL	WELL	RDL
SAMPLE DESCRIPTION:				WELL		WELL	
SAMPLE TYPE:				Water		Water	
DATE SAMPLED:				2025-03-03 15:00		2025-03-03 15:00	
				6561005		6561020	
Total Uranium	ug/L	33, 15	0.2	0.8	0.2	0.2	0.2
Total Vanadium	ug/L		2	<2	2	<2	<2
Total Zinc	ug/L	30	5	23	5	8	8

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to CCME FWAL - update 2015
 Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

6561005-6561020 % Difference / Ion Balance, Hardness, Langelier Index, Nitrate + Nitrite, Hydroxide and Saturation pH are calculated parameters. The calculated parameters are non-accredited. The component parameters of the calculations are accredited.
 pH has been analyzed past the recommended holding time of 15 minutes from sampling. Field measurement recommended for most accurate result
 Ion Balance is biased high, contributing parameters have been confirmed.

Analysis performed at AGAT Halifax (unless marked by *)

Certified By:

Kathleen Cullen

Quality Assurance

CLIENT NAME: GRIEG NL NURSERIES LTD.
AGAT WORK ORDER: 25K254977
PROJECT:
ATTENTION TO: ANDREW SKANES
SAMPLING SITE:
SAMPLED BY:

Water Analysis															
RPT Date: Mar 17, 2025			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Standard Water Analysis + Total Metals

pH	6560938		6.84	6.88	0.5%	<	101%	80%	120%	NA			NA		
Reactive Silica as SiO2	6561554		1.5	1.5	NA	< 0.5	98%	80%	120%	105%	80%	120%	104%	80%	120%
Chloride	6557540		6	6	0.1%	< 1	91%	80%	120%	98%	80%	120%	100%	70%	130%
Sulphate	6557540		3	3	NA	< 2	98%	80%	120%	99%	80%	120%	95%	70%	130%
Alkalinity	6560938		11	12	NA	< 5	95%	80%	120%	NA			NA		
True Color	6561554		7	8	NA	< 5	85%	80%	120%	103%	80%	120%	NA		
Turbidity	6565960	6565960	24.3	24.5	0.8%	< 0.5	101%	80%	120%	NA			NA		
Electrical Conductivity	6560938		2400	2400	0.0%	< 1	98%	90%	110%	NA			NA		
Ammonia as N	6561005	6561005	<0.03	<0.03	NA	< 0.03	99%	80%	120%	99%	80%	120%	93%	70%	130%
Total Organic Carbon	2		0.5	<0.5	NA	< 0.5	86%	80%	120%	NA	80%	120%	NA	80%	120%
Ortho-Phosphate as P	6561554		<0.01	<0.01	NA	< 0.01	99%	80%	120%	105%	80%	120%	102%	80%	120%
Total Sodium	6561005	6561005	73.7	70.4	4.5%	< 0.1	96%	70%	130%	102%	80%	120%	NA	70%	130%
Total Potassium	6561005	6561005	1.0	1.0	3.2%	< 0.1	97%	70%	130%	103%	80%	120%	99%	70%	130%
Total Calcium	6561005	6561005	66.7	62.0	7.3%	< 0.1	90%	70%	130%	103%	80%	120%	NA	70%	130%
Total Magnesium	6561005	6561005	15.8	15.2	4.2%	< 0.1	96%	80%	130%	101%	80%	120%	96%	70%	130%
Bicarb. Alkalinity (as CaCO3)	6560938		11	12	NA	< 5	NA	80%	120%	NA			NA		
Carb. Alkalinity (as CaCO3)	6560938		<10	<10	NA	< 10	NA	80%	120%	NA			NA		
Hydroxide	6560938		<5	<5	NA	< 5	NA	80%	120%	NA			NA		
Total Aluminum	6561005	6561005	11	12	NA	< 5	89%	70%	130%	102%	80%	120%	93%	70%	130%
Total Antimony	6561005	6561005	<2	<2	NA	< 2	90%	70%	130%	97%	80%	120%	74%	70%	130%
Total Arsenic	6561005	6561005	3	3	NA	< 2	95%	70%	130%	101%	80%	120%	91%	70%	130%
Total Barium	6561005	6561005	237	225	4.9%	< 5	87%	70%	130%	95%	80%	120%	NA	70%	130%
Total Beryllium	6561005	6561005	<2	<2	NA	< 2	96%	70%	130%	99%	80%	120%	101%	70%	130%
Total Bismuth	6561005	6561005	<2	<2	NA	< 2	93%	70%	130%	100%	80%	120%	81%	70%	130%
Total Boron	6561005	6561005	6	9	NA	< 5	78%	70%	130%	NA	80%	120%	96%	70%	130%
Total Cadmium	6561005	6561005	<0.09	<0.09	NA	< 0.09	90%	70%	130%	96%	80%	120%	77%	70%	130%
Total Chromium	6561005	6561005	<1	<1	NA	< 1	98%	70%	130%	108%	80%	120%	89%	70%	130%
Total Cobalt	6561005	6561005	<1	<1	NA	< 1	95%	70%	130%	101%	80%	120%	89%	70%	130%
Total Copper	6561005	6561005	4	4	NA	< 1	121%	70%	130%	NA	80%	120%	86%	70%	130%
Total Iron	6561005	6561005	120	109	NA	< 50	98%	70%	130%	107%	80%	120%	93%	70%	130%
Total Lead	6561005	6561005	<0.5	<0.5	NA	< 0.5	93%	70%	130%	100%	80%	120%	81%	70%	130%
Total Manganese	6561005	6561005	4	4	NA	< 2	96%	70%	130%	105%	80%	120%	92%	70%	130%
Total Molybdenum	6561005	6561005	<2	<2	NA	< 2	91%	70%	130%	95%	80%	120%	72%	70%	130%
Total Nickel	6561005	6561005	<2	<2	NA	< 2	95%	70%	130%	109%	80%	120%	89%	70%	130%
Total Phosphorous	6561005	6561005	2.40	2.14	11.5%	< 0.02	97%	70%	130%	109%	80%	120%	NA	70%	130%
Total Selenium	6561005	6561005	<1	<1	NA	< 1	98%	70%	130%	100%	80%	120%	90%	70%	130%
Total Silver	6561005	6561005	<0.1	<0.1	NA	< 0.1	91%	70%	130%	96%	80%	120%	76%	70%	130%
Total Strontium	6561005	6561005	796	762	4.4%	< 5	95%	70%	130%	100%	80%	120%	NA	70%	130%
Total Thallium	6561005	6561005	<0.1	<0.1	NA	< 0.1	92%	70%	130%	100%	80%	120%	82%	70%	130%

Quality Assurance

CLIENT NAME: GRIEG NL NURSERIES LTD.
AGAT WORK ORDER: 25K254977
PROJECT:
ATTENTION TO: ANDREW SKANES
SAMPLING SITE:
SAMPLED BY:

Water Analysis (Continued)

RPT Date: Mar 17, 2025			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	
Total Tin	6561005	6561005	<2	<2	NA	< 2	90%	70%	130%	97%	80%	120%	73%	70%	130%	
Total Titanium	6561005	6561005	<2	<2	NA	< 2	98%	70%	130%	105%	80%	120%	87%	70%	130%	
Total Uranium	6561005	6561005	0.8	0.8	NA	< 0.2	92%	70%	130%	97%	80%	120%	78%	70%	130%	
Total Vanadium	6561005	6561005	<2	<2	NA	< 2	97%	70%	130%	105%	80%	120%	92%	70%	130%	
Total Zinc	6561005	6561005	23	24	NA	< 5	128%	70%	130%	119%	80%	120%	98%	70%	130%	

Comments: If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.

DOC

Dissolved Organic Carbon	3		<0.5	<0.5	NA	< 0.5	92%	80%	120%	NA	80%	120%	NA	80%	120%
--------------------------	---	--	------	------	----	-------	-----	-----	------	----	-----	------	----	-----	------

Comments: If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.

AGAT Halifax - Total Phosphorous, TKN

Total Phosphorus	6561659		0.357	0.355	0.6%	< 0.006	97%	70%	130%	104%	80%	120%	NA	70%	130%
Total Kjeldahl Nitrogen	6564655		<0.10	<0.10	NA	< 0.10	105%	70%	130%	107%	80%	120%	113%	70%	130%

Comments: NA signifies Not Applicable.

Duplicate NA: results are under 5X the RDL and will not be calculated.

Matrix spike NA: Spike level < native concentration. Matrix spike acceptance limits do not apply and are not calculated.

AGAT Halifax - Anion Scan

Bromide	6557540		<0.05	<0.05	NA	< 0.05	101%	70%	130%	98%	80%	120%	97%	70%	130%
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Comments: NA signifies Not Applicable.

Duplicate NA: results are under 5X the RDL and will not be calculated.

Mercury, Total - MWAL

Total Mercury	1	6556045	<0.026	<0.026	NA	< 0.016	94%	80%	120%		80%	120%	96%	70%	130%
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Certified By:


Method Summary

CLIENT NAME: GRIEG NL NURSERIES LTD.
AGAT WORK ORDER: 25K254977
PROJECT:
ATTENTION TO: ANDREW SKANES
SAMPLING SITE:
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Bromide	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Total Phosphorus	INOR-93-6022	modified from SM 4500-P B and SM 4500-P E	SPECTROPHOTOMETER
Total Kjeldahl Nitrogen	INOR-93-6048	modified from EPA 351.2 and SM 4500-NORG D	LACHAT FIA
Dissolved Organic Carbon	INOR-121-6052	SM 5310 B	TOC ANALYZER
Total Mercury	MET-121-6100 & MET-121-6107	SM 3112 B	CV/AA
pH	INOR-121-6001	SM 4500 H+B	PC TITRATE
Reactive Silica as SiO ₂	INOR-121-6027	SM 4500-SiO ₂ F	COLORIMETER
Chloride	INOR-121-6005	SM 4110 B	ION CHROMATOGRAPH
Fluoride	INOR-121-6005	SM 4110 B	ION CHROMATOGRAPH
Sulphate	INOR-121-6005	SM 4110 B	ION CHROMATOGRAPH
Alkalinity	INOR-121-6001	SM 2320 B	
True Color	INOR-121-6008	SM 2120 B	COLORIMETER
Turbidity	INOR-121-6001	SM 2130 B	PC TITRATE
Electrical Conductivity	INOR-121-6001	SM 2510 B	PC TITRATE
Nitrate + Nitrite as N	INOR-121-6005	SM 4110 B	CALCULATION
Nitrate as N	INOR-121-6005	SM 4110 B	ION CHROMATOGRAPH
Nitrite as N	INOR-121-6005	SM 4110 B	ION CHROMATOGRAPH
Ammonia as N	INOR-121-6047	SM 4500-NH ₃ H	COLORIMETER
Total Organic Carbon	INOR-121-6052	SM 5310 B	TOC ANALYZER
Ortho-Phosphate as P	INOR-121-6012	SM 4500-P G	COLORIMETER
Total Sodium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Potassium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Calcium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Magnesium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Bicarb. Alkalinity (as CaCO ₃)	INOR-121-6001	SM 2320 B	PC TITRATE
Carb. Alkalinity (as CaCO ₃)	INOR-121-6001	SM 2320 B	PC TITRATE
Hydroxide	INOR-121-6001	SM 2320 B	PC-TITRATE
Calculated TDS	CALCULATION	SM 1030E	CALCULATION
Hardness	CALCULATION	SM 2340B	CALCULATION
Langelier Index (@20C)	CALCULATION	CALCULATION	CALCULATION
Langelier Index (@ 4C)	CALCULATION	CALCULATION	CALCULATION
Saturation pH (@ 20C)	CALCULATION	CALCULATION	CALCULATION
Saturation pH (@ 4C)	CALCULATION	CALCULATION	CALCULATION
Anion Sum	CALCULATION	SM 1030E	CALCULATION
Cation sum	CALCULATION	SM 1030E	CALCULATION
% Difference/ Ion Balance	CALCULATION	SM 1030E	CALCULATION
Total Aluminum	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Antimony	MET121-6104 & MET-121-6105	SM 3125	ICP-MS
Total Arsenic	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Barium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS

Method Summary

CLIENT NAME: GRIEG NL NURSERIES LTD.
AGAT WORK ORDER: 25K254977
PROJECT:
ATTENTION TO: ANDREW SKANES
SAMPLING SITE:
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Total Beryllium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Bismuth	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Boron	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Cadmium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Chromium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Cobalt	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Copper	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Iron	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Lead	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Manganese	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Molybdenum	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Nickel	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Phosphorous	MET-121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Selenium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Silver	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Strontium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Thallium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Tin	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Titanium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Uranium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Vanadium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Zinc	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS



AGAT Laboratories



Have feedback?
Scan here for a quick survey!

Unit 1 • 57 Old Pennywell Rd
St. John's, NL
A1E 6A8
P: 709.747.8573

Chain of Custody Record

webearth.agatlabs.com • www.agatlabs.com

Report Information

Company: Grieg Seafood Newfoundland
Contact: Junayed Hossain (junayed.hossain@griegseafood.com)
Address: 205 McGettigan Blvd
P.O.Box 457, Marystown, NL.
Phone: 709-277-3069 Fax: _____

Client Project #: _____
ALGAL QUOTATION: 704430
Please Note: if quotation number is not provided client will be billed full price for analysis.

Invoice To

Company: Grieg Seafood Newfoundland
Contact: invoice.nf@griegseafood.com
Address: _____
Phone: _____ Fax: _____
PO/Credit Card#: _____

Report Information (Please print):

1. Name: Andrew Skanes
Email: andrew.skanes@griegseafood.com
2. Name: Junayed Hossain
Email: junayed.hossain@griegseafood.com

Regulatory Requirements (Check):

- List Guidelines on Report
- Do not list Guidelines on Report
- Tier 1 Res Pot Coarse
- Tier 2 Corn N/Pot Fine
- Gas Fuel Lube
- CCME CDWQ NL DOEC GW
- Industrial NL DOEC
- Commercial Res/Park NLDOEC Discharge
- Agricultural FWAL Sediment
- Other _____

Report Format

- Single Sample per page
- Multiple Samples per page
- Excel Format Included
- Export

Reg. No.: _____

Drinking Water Sample: Yes No Salt Water Sample Yes No

Laboratory Use Only

Arrival Condition: Good Poor (see notes)
Arrival Temperature: 3.6, 4.3, 5.6
Hold Time: _____

AGAT Job Number: 25K254977

Notes: _____

Turnaround Time Required (TAT)

Regular TAT 5 to 7 working days
Rush TAT Same day 1 day
 2 days 3 days

IPHA HPHHHPH'

Field Filtered/Preserved	Standard Water Analysis	Metals: <input type="checkbox"/> Total <input type="checkbox"/> Diss <input type="checkbox"/> Available	Mercury	BOD <input type="checkbox"/> CBOD	pH	TSS <input type="checkbox"/> TDS <input type="checkbox"/> VSS	TKN	Total Phosphorus	Phenols	Tier 1: TPH/BTEX (PRI) <input type="checkbox"/> low level	Tier 2: TPH/BTEX Fractionation	CMC/CWS TPH/BTEX	VOC	HAA	PAH	PCB	TC + EC <input type="checkbox"/> P/A <input type="checkbox"/> MPN <input type="checkbox"/> MF	HPC <input type="checkbox"/> Pseudomonas	Fecal Coliform <input type="checkbox"/> MPN <input type="checkbox"/> MF	Other: DOC, Bromide	Hazardous (Y/N)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Sample Requisitioned By (Print Name): Junayed Hossain	Date/Time: MAR 03, 2025/3 PM	Sample Requisitioned By (Sign): 	Date/Time: Mar 4 2025	Page <input type="checkbox"/> of <input type="checkbox"/>
Sample Requisitioned By (Print Name): Junayed Hossain	Date/Time: MAR 03, 2025/3 PM	Sample Requisitioned By (Sign): 	Date/Time: 10:10	Page <input type="checkbox"/> of <input type="checkbox"/>

**CLIENT NAME: GRIEG NL NURSERIES LTD.
205 MCGETTIGAN BLVD
MARYSTOWN, NL A0E 2M0
709-279-3440**

ATTENTION TO: Junayed Hossain

PROJECT:

AGAT WORK ORDER: 25K315052

WATER ANALYSIS REVIEWED BY: Kaliegh Cullen, Report Writer

DATE REPORTED: Jul 24, 2025

PAGES (INCLUDING COVER): 12

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (902) 468-8718

***Notes**

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information is available on request from AGAT Laboratories, in accordance with ISO/IEC 17025:2017, ISO/IEC 17025:2005 (Quebec), DR-12-PALA and/or NELAP Standards.
- This document is signed by an authorized signatory who meets the requirements of the MELCCFP, CALA, CCN and NELAP.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.



Certificate of Analysis

AGAT WORK ORDER: 25K315052

PROJECT:

11 Morris Drive, Unit 122
 Dartmouth, Nova Scotia
 CANADA B3B 1M2
 TEL (902)468-8718
 FAX (902)468-8924
<http://www.agatlabs.com>

CLIENT NAME: GRIEG NL NURSERIES LTD.

ATTENTION TO: Junayed Hossain

SAMPLING SITE:

SAMPLED BY:

DOC

DATE RECEIVED: 2025-06-27

DATE REPORTED: 2025-07-24

Parameter	Unit	G / S	RDL	GSF-MAIN	GSF-
				WELL	MONITORING
				WELL	WELL
				Water	Water
				2025-06-26 15:00	2025-06-26 15:00
				6847555	6847582
Dissolved Organic Carbon	mg/L		0.5	<0.5	<0.5

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
 Analysis performed at AGAT Halifax (unless marked by *)

Certified By:

Katiegh Cullen



Certificate of Analysis

AGAT WORK ORDER: 25K315052

PROJECT:

11 Morris Drive, Unit 122
 Dartmouth, Nova Scotia
 CANADA B3B 1M2
 TEL (902)468-8718
 FAX (902)468-8924
<http://www.agatlabs.com>

CLIENT NAME: GRIEG NL NURSERIES LTD.

ATTENTION TO: Junayed Hossain

SAMPLING SITE:

SAMPLED BY:

Mercury, Total - MWAL

DATE RECEIVED: 2025-06-27

DATE REPORTED: 2025-07-24

Parameter	Unit	G / S	RDL	GSF-MAIN	GSF-MONITORING
				WELL	WELL
				WATER	WATER
				2025-06-26 15:00	2025-06-26 15:00
				6847555	6847582
Total Mercury	ug/L	0.016	<0.016	<0.016	<0.016

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
 Analysis performed at AGAT Halifax (unless marked by *)

Certified By:

Katleigh Cullen



Certificate of Analysis

AGAT WORK ORDER: 25K315052

PROJECT:

11 Morris Drive, Unit 122
 Dartmouth, Nova Scotia
 CANADA B3B 1M2
 TEL (902)468-8718
 FAX (902)468-8924
<http://www.agatlabs.com>

CLIENT NAME: GRIEG NL NURSERIES LTD.

ATTENTION TO: Junayed Hossain

SAMPLING SITE:

SAMPLED BY:

Standard Water Analysis + Total Metals (TO) + Bromide

DATE RECEIVED: 2025-06-27

DATE REPORTED: 2025-07-24

Parameter	Unit	G / S	RDL	GSF-MAIN	GSF-
				WELL	MONITORING
				WELL	WELL
				Water	Water
				2025-06-26	2025-06-26
				15:00	15:00
				6847555	6847582
pH				7.34	7.32
Reactive Silica as SiO2	mg/L		0.5	7.1	7.0
Chloride	mg/L		1	105	33
Fluoride	mg/L		0.12	0.26	0.15
Sulphate	mg/L		2	9	4
Alkalinity	mg/L		5	133	122
True Color	TCU		5	<5	<5
Turbidity	NTU		0.50	15.3	2.1
Electrical Conductivity	umho/cm		1	594	328
Nitrate + Nitrite as N	mg/L		0.05	0.47	0.36
Nitrate as N	mg/L		0.05	0.34	0.30
Nitrite as N	mg/L		0.05	0.13	0.06
Ammonia as N	mg/L		0.03	<0.03	<0.03
Total Organic Carbon	mg/L		0.50	0.58	<0.50
Ortho-Phosphate as P	mg/L		0.01	0.01	<0.01
Total Calcium	mg/L		0.20	39.7	26.6
Total Sodium	mg/L		0.10	51.3	19.1
Total Potassium	mg/L		0.50	0.52	<0.50
Total Magnesium	mg/L		0.10	14.4	10.1
Bicarb. Alkalinity (as CaCO3)	mg/L		5	133	122
Carb. Alkalinity (as CaCO3)	mg/L		10	<10	<10
Hydroxide	mg/L		5	<5	<5
Calculated TDS	mg/L		1	302	168
Hardness (as CaCO3) (Calculated)	mg/L		0.5	158	108
Langelier Index (@20C)	NA			-0.57	-0.78
Langelier Index (@ 4C)	NA			-0.89	-1.10
Saturation pH (@ 20C)	NA			7.91	8.10

Certified By:

Kaleigh Cullen



Certificate of Analysis

AGAT WORK ORDER: 25K315052

PROJECT:

11 Morris Drive, Unit 122
 Dartmouth, Nova Scotia
 CANADA B3B 1M2
 TEL (902)468-8718
 FAX (902)468-8924
<http://www.agatlabs.com>

CLIENT NAME: GRIEG NL NURSERIES LTD.

ATTENTION TO: Junayed Hossain

SAMPLING SITE:

SAMPLED BY:

Standard Water Analysis + Total Metals (TO) + Bromide

DATE RECEIVED: 2025-06-27

DATE REPORTED: 2025-07-24

Parameter	Unit	G / S	RDL	GSF-MAIN	GSF-
				WELL	MONITORING
				WELL	WELL
				Water	Water
				2025-06-26	2025-06-26
				15:00	15:00
				6847555	6847582
Saturation pH (@ 4C)	NA			8.23	8.42
Anion Sum	me/L			5.84	3.48
Cation sum	me/L			5.43	2.99
% Difference/ Ion Balance	%			3.6	7.6
Total Aluminum	µg/L	10.0		29.0	21.9
Total Antimony	µg/L	3.0		<3.0	<3.0
Total Arsenic	µg/L	3.0		4.2	<3.0
Total Barium	µg/L	2.0		230	93.2
Total Beryllium	µg/L	1.0		<1.0	<1.0
Total Bismuth	µg/L	2.0		<2.0	<2.0
Total Boron	µg/L	10		17	17
Total Cadmium	µg/L	0.10		<0.10	<0.10
Total Chromium	µg/L	3.0		<3.0	<3.0
Total Cobalt	µg/L	0.50		<0.50	<0.50
Total Copper	µg/L	2.0		<2.0	<2.0
Total Iron	µg/L	50		497	<50
Total Lead	µg/L	0.50		<0.50	<0.50
Total Manganese	µg/L	2.0		38.0	<2.0
Total Molybdenum	µg/L	2.0		<2.0	<2.0
Total Nickel	µg/L	3.0		<3.0	<3.0
Total Phosphorus	mg/L	0.10		<0.10	<0.10
Total Selenium	µg/L	1.0		1.2	2.3
Total Silver	µg/L	0.10		<0.10	<0.10
Total Strontium	µg/L	5.0		993	340
Total Thallium	µg/L	0.30		<0.30	<0.30
Total Tin	µg/L	2.0		<2.0	<2.0
Total Titanium	µg/L	10.0		<10.0	<10.0

Certified By:

Kaleigh Cullen



Certificate of Analysis

AGAT WORK ORDER: 25K315052

PROJECT:

11 Morris Drive, Unit 122
 Dartmouth, Nova Scotia
 CANADA B3B 1M2
 TEL (902)468-8718
 FAX (902)468-8924
<http://www.agatlabs.com>

CLIENT NAME: GRIEG NL NURSERIES LTD.

ATTENTION TO: Junayed Hossain

SAMPLING SITE:

SAMPLED BY:

Standard Water Analysis + Total Metals (TO) + Bromide

DATE RECEIVED: 2025-06-27

DATE REPORTED: 2025-07-24

Parameter	Unit	G / S	RDL	GSF-MAIN	GSF-
				WELL	MONITORING
				WELL	WELL
				Water	Water
				2025-06-26 15:00	2025-06-26 15:00
				6847555	6847582
Total Uranium	µg/L		0.50	1.02	<0.50
Total Vanadium	µg/L		2.0	<2.0	<2.0
Total Zinc	µg/L		20	34	<20
Bromide	µg/L		50	<50	<50

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

6847555-6847582 % Difference / Ion Balance, Hardness, Langelier Index, Nitrate + Nitrite, Hydroxide and Saturation pH are calculated parameters. The calculated parameters are non-accredited. The component parameters of the calculations are accredited.

Metal and Cation parameters have been completed by AGAT Mississauga

pH has been analyzed past the recommended holding time of 15 minutes from sampling. Field measurement recommended for most accurate result

Analysis performed at AGAT Halifax (unless marked by *)

Certified By:

Katiegh Cullen



Certificate of Analysis

AGAT WORK ORDER: 25K315052

PROJECT:

11 Morris Drive, Unit 122
 Dartmouth, Nova Scotia
 CANADA B3B 1M2
 TEL (902)468-8718
 FAX (902)468-8924
<http://www.agatlabs.com>

CLIENT NAME: GRIEG NL NURSERIES LTD.

ATTENTION TO: Junayed Hossain

SAMPLING SITE:

SAMPLED BY:

TP and TKN in Water

DATE RECEIVED: 2025-06-27

DATE REPORTED: 2025-07-24

Parameter	Unit	G / S	RDL	GSF-MAIN	GSF-MONITORING
				WELL	WELL
				WATER	WATER
				2025-06-26 15:00	2025-06-26 15:00
				6847555	6847582
Total Phosphorus	mg/L		0.002	<0.002	<0.002
Total Kjeldahl Nitrogen	mg/L		0.10	<0.10	<0.10

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
6847555-6847582 Total Phosphorous RDL is the calculated MDL.
 Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Katleigh Cullen

Quality Assurance

CLIENT NAME: GRIEG NL NURSERIES LTD.

AGAT WORK ORDER: 25K315052

PROJECT:

ATTENTION TO: Junayed Hossain

SAMPLING SITE:

SAMPLED BY:

Water Analysis																
RPT Date: Jul 24, 2025			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	

DOC															
Dissolved Organic Carbon	6847337		0.6	0.6	NA	< 0.5	84%	80%	120%	NA	80%	120%	102%	80%	120%

Comments: If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.

TP and TKN in Water

Total Phosphorus	6847337		0.184	0.184	0.0%	< 0.002	96%	70%	130%	107%	80%	120%	NA	70%	130%
Total Kjeldahl Nitrogen	6844611		0.35	0.34	NA	< 0.10	103%	70%	130%	101%	80%	120%	116%	70%	130%

Comments: NA signifies Not Applicable.
 Duplicate NA: results are under 5X the RDL and will not be calculated.

Mercury, Total - MWAL

Total Mercury	1	6852819	0.06	0.07	NA	< 0.016	101%	80%	120%	99%	80%	120%	86%	70%	130%
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Standard Water Analysis + Total Metals (TO) + Bromide

pH	6847555	6847555	7.34	7.37	0.5%	<	101%	80%	120%	NA				NA	
Reactive Silica as SiO2	6853354		0.8	0.8	NA	< 0.5	105%	80%	120%	NA	80%	120%	106%	80%	120%
Chloride	6847575		6	6	1.9%	< 1	96%	80%	120%	NA	80%	120%	101%	70%	130%
Fluoride	6847575		<0.12	<0.12	NA	< 0.12	111%	80%	120%	NA	80%	120%	99%	70%	130%
Sulphate	6847575		2	2	NA	< 2	106%	80%	120%	NA	80%	120%	105%	70%	130%
Alkalinity	6847555	6847555	133	132	1.0%	< 5	99%	80%	120%	NA				NA	
True Color	6853354		<5	<5	NA	< 5	90%	80%	120%	96%	80%	120%	NA		
Turbidity	6847572	6847572	20.40	19.90	2.5%	< 0.5	109%	80%	120%	NA				NA	
Electrical Conductivity	6847555	6847555	594	592	0.3%	< 1	98%	90%	110%	NA				NA	
Nitrate as N	6847575		0.12	<0.05	NA	< 0.05	110%	80%	120%	NA	80%	120%	93%	70%	130%
Nitrite as N	6847575		<0.05	<0.05	NA	< 0.05	101%	80%	120%	NA	80%	120%	90%	70%	130%
Ammonia as N	6847568		<0.03	<0.03	NA	< 0.03	99%	80%	120%	100%	80%	120%	95%	70%	130%
Total Organic Carbon	6847570		1.6	1.5	NA	< 0.5	89%	80%	120%	NA	80%	120%	85%	80%	120%
Ortho-Phosphate as P	6853354		0.01	0.01	NA	< 0.01	100%	80%	120%	94%	80%	120%	93%	80%	120%
Total Calcium	6842181		1.22	1.29	5.6%	< 0.20	85%	70%	130%	84%	80%	120%	82%	70%	130%
Total Sodium	6842181		10.5	9.22	13.0%	< 0.10	96%	70%	130%	101%	80%	120%	111%	70%	130%
Total Potassium	6842181		0.57	0.52	NA	< 0.50	107%	70%	130%	95%	80%	120%	107%	70%	130%
Total Magnesium	6842181		0.53	0.61	14.0%	< 0.10	105%	70%	130%	100%	80%	120%	95%	70%	130%
Bicarb. Alkalinity (as CaCO3)	6847555	6847555	133	132	0.8%	< 5	NA	80%	120%	NA				NA	
Carb. Alkalinity (as CaCO3)	6847555	6847555	<10	<10	NA	< 10	NA	80%	120%	NA				NA	
Hydroxide	6847555	6847555	<5	<5	NA	< 5	NA	80%	120%	NA				NA	
Total Aluminum	6842181		27.1	27.7	NA	< 10.0	94%	70%	130%	90%	80%	120%	94%	70%	130%
Total Antimony	6842181		<3.0	<3.0	NA	< 3.0	101%	70%	130%	98%	80%	120%	98%	70%	130%
Total Arsenic	6842181		<3.0	<3.0	NA	< 3.0	98%	70%	130%	101%	80%	120%	101%	70%	130%
Total Barium	6842181		<2.0	<2.0	NA	< 2.0	99%	70%	130%	99%	80%	120%	101%	70%	130%
Total Beryllium	6842181		<1.0	<1.0	NA	< 1.0	102%	70%	130%	94%	80%	120%	94%	70%	130%
Total Bismuth	6842181		<2.0	<2.0	NA	< 2.0	94%	70%	130%	95%	80%	120%	95%	70%	130%

Quality Assurance

CLIENT NAME: GRIEG NL NURSERIES LTD.
AGAT WORK ORDER: 25K315052
PROJECT:
ATTENTION TO: Junayed Hossain
SAMPLING SITE:
SAMPLED BY:

Water Analysis (Continued)

RPT Date: Jul 24, 2025			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Total Boron	6842181		<10	<10	NA	< 10	97%	70%	130%	96%	80%	120%	93%	70%	130%
Total Cadmium	6842181		<0.10	<0.10	NA	< 0.10	98%	70%	130%	98%	80%	120%	92%	70%	130%
Total Chromium	6842181		<3.0	<3.0	NA	< 3.0	104%	70%	130%	98%	80%	120%	91%	70%	130%
Total Cobalt	6842181		<0.50	<0.50	NA	< 0.50	108%	70%	130%	102%	80%	120%	96%	70%	130%
Total Copper	6842181		5.2	4.2	NA	< 2.0	101%	70%	130%	98%	80%	120%	98%	70%	130%
Total Iron	6842181		<50	<50	NA	< 50	106%	70%	130%	103%	80%	120%	98%	70%	130%
Total Lead	6842181		<0.50	<0.50	NA	< 0.50	94%	70%	130%	93%	80%	120%	94%	70%	130%
Total Manganese	6842181		<2.0	<2.0	NA	< 2.0	104%	70%	130%	98%	80%	120%	88%	70%	130%
Total Molybdenum	6842181		<2.0	<2.0	NA	< 2.0	96%	70%	130%	108%	80%	120%	113%	70%	130%
Total Nickel	6842181		<3.0	<3.0	NA	< 3.0	113%	70%	130%	106%	80%	120%	99%	70%	130%
Total Phosphorus	6842181		0.62	0.27	NA	< 0.10	80%	70%	130%	98%	80%	120%	88%	70%	130%
Total Selenium	6842181		1.4	1.1	NA	< 1.0	110%	70%	130%	96%	80%	120%	101%	70%	130%
Total Silver	6842181		<0.10	<0.10	NA	< 0.10	97%	70%	130%	106%	80%	120%	109%	70%	130%
Total Strontium	6842181		7.2	6.4	NA	< 5.0	92%	70%	130%	97%	80%	120%	104%	70%	130%
Total Thallium	6842181		<0.30	<0.30	NA	< 0.30	97%	70%	130%	95%	80%	120%	96%	70%	130%
Total Tin	6842181		<2.0	<2.0	NA	< 2.0	101%	70%	130%	97%	80%	120%	92%	70%	130%
Total Titanium	6842181		<10.0	<10.0	NA	< 10.0	101%	70%	130%	114%	80%	120%	95%	70%	130%
Total Uranium	6842181		<0.50	<0.50	NA	< 0.50	101%	70%	130%	103%	80%	120%	104%	70%	130%
Total Vanadium	6842181		<2.0	<2.0	NA	< 2.0	104%	70%	130%	102%	80%	120%	95%	70%	130%
Total Zinc	6842181		119	136	13.3%	< 20	105%	70%	130%	105%	80%	120%	104%	70%	130%

Comments: If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.

Certified By: 

Method Summary

CLIENT NAME: GRIEG NL NURSERIES LTD.
AGAT WORK ORDER: 25K315052
PROJECT:
ATTENTION TO: Junayed Hossain
SAMPLING SITE:
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Dissolved Organic Carbon	INOR-121-6052	SM 5310 B	TOC ANALYZER
Total Mercury	MET-121-6100 & MET-121-6107	SM 3112 B	CV/AA
pH	INOR-121-6001	SM 4500 H+B	PC TITRATE
Reactive Silica as SiO ₂	INOR-121-6027	SM 4500-SiO ₂ F	COLORIMETER
Chloride	INORG-121-6005	SM 4110 B	ION CHROMATOGRAPH
Fluoride	INORG-121-6005	SM 4110 B	ION CHROMATOGRAPH
Sulphate	INORG-121-6005	SM 4110 B	ION CHROMATOGRAPH
Alkalinity	INOR-121-6001	SM 2320 B	
True Color	INOR-121-6008	SM 2120 B	COLORIMETER
Turbidity	INOR-121-6001	SM 2130 B	PC TITRATE
Electrical Conductivity	INOR-121-6001	SM 2510 B	PC TITRATE
Nitrate + Nitrite as N	INORG-121-6005	SM 4110 B	CALCULATION
Nitrate as N	INORG-121-6005	SM 4110 B	ION CHROMATOGRAPH
Nitrite as N	INORG-121-6005	SM 4110 B	ION CHROMATOGRAPH
Ammonia as N	INOR-121-6047	SM 4500-NH ₃ H	COLORIMETER
Total Organic Carbon	INOR-121-6052	SM 5310 B	TOC ANALYZER
Ortho-Phosphate as P	INOR-121-6012	SM 4500-P G	COLORIMETER
Total Calcium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP/MS
Total Sodium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP/MS
Total Potassium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP/MS
Total Magnesium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP/MS
Bicarb. Alkalinity (as CaCO ₃)	INORG-121-6001	SM 2320 B	PC TITRATE
Carb. Alkalinity (as CaCO ₃)	INORG-121-6001	SM 2320 B	PC TITRATE
Hydroxide	INORG-121-6001	SM 2320 B	PC-TITRATE
Calculated TDS	CALCULATION	SM 1030E	CALCULATION
Hardness (as CaCO ₃) (Calculated)	MET-93-6105	modified from EPA SW-846 6010C & 200.7 & SM 2340 B	CALCULATION
Langelier Index (@20C)	CALCULATION	CALCULATION	CALCULATION
Langelier Index (@ 4C)	CALCULATION	CALCULATION	CALCULATION
Saturation pH (@ 20C)	CALCULATION	CALCULATION	CALCULATION
Saturation pH (@ 4C)	CALCULATION	CALCULATION	CALCULATION
Anion Sum	CALCULATION	SM 1030E	CALCULATION
Cation sum	CALCULATION	SM 1030E	CALCULATION
% Difference/ Ion Balance	CALCULATION	SM 1030E	CALCULATION
Total Aluminum	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Antimony	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Arsenic	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Barium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Beryllium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Bismuth	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS

Method Summary

CLIENT NAME: GRIEG NL NURSERIES LTD.
AGAT WORK ORDER: 25K315052
PROJECT:
ATTENTION TO: Junayed Hossain
SAMPLING SITE:
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Total Boron	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Cadmium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Chromium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Cobalt	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Copper	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Iron	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Lead	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Manganese	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Molybdenum	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Nickel	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Phosphorus	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Selenium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Silver	INOR-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Strontium	INOR-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Thallium	INOR-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Tin	INOR-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Titanium	INOR-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Uranium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Vanadium	INOR-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Zinc	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Bromide	INOR-121-6005	SM 4110 B	ION CHROMATOGRAPH
Total Phosphorus	INOR-93-6022	modified from SM 4500-P B and SM 4500-P E	SPECTROPHOTOMETER
Total Kjeldahl Nitrogen	INOR-93-6048	modified from EPA 351.2 and SM 4500-NORG D	LACHAT FIA



Laboratory Use Only

Arrival Condition: Good Poor (see notes)
 Arrival Temperature: 12.1, 12.1, 13.2
 Hold Time: _____
 AGAT Job Number: 25K315052
 Notes: Missing TDS bottles

Chain of Custody Record

webearth.agatlabs.com • www.agatlabs.com

Report Information

Company: Grieg Seafood Newfoundland
 Contact: Junayed Hossain (junayed.hossain@griegseafood.com)
 Address: P.O.Box 457, Marystown, NL.
 205 McGettigan Blvd
 Phone: 709-277-3069 Fax: _____
 Client Project #: _____
 AGAT Quotation: 794498
 Please Note: If quotation number is not provided client will be billed full price for analysis.

Report Information (Please print):

1. Name: Andrew Skanes
 Email: andrew.skanes@griegseafood.com
 2. Name: Junayed Hossain
 Email: junayed.hossain@griegseafood.com

Report Format

- Single Sample per page
 Multiple Samples per page
 Excel Format Included
 Export

Regulatory Requirements (Check):

- List Guidelines on Report Do not list Guidelines on Report
 PIRI
 Tier 1 Res Pot Coarse
 Tier 2 Com N/Pot Fine
 Gas Fuel Lube
 CCME CDWQ
 Industrial NL DOEC GW
 Commercial NLDOEC Discharge
 Res/Park Agricultural
 FWAL Sediment Other _____

Turnaround Time Required (TAT)

- Regular TAT 5 to 7 working days
 Rush TAT Same day 1 day
 2 days 3 days

Date Required: _____

Drinking Water Sample: Yes No Salt Water Sample Yes No
 Reg. No.: _____

Invoice To

Same Yes / No

Company: Grieg Seafood Newfoundland
 Contact: invoice.nfl@griegseafood.com
 Address: _____
 Phone: _____ Fax: _____
 PO/Credit Card#: _____

Sample Identification	Date/Time Sampled	Sample Matrix	# Containers	Comments - Site/Sample Info. Sample Containment	Field Filtered/Preserved	Standard Water Analysis	Metals: <input type="checkbox"/> Total <input type="checkbox"/> Diss <input type="checkbox"/> Available	Mercury	<input type="checkbox"/> BOD <input type="checkbox"/> CBOD	pH	Sulfide	<input type="checkbox"/> TSS <input type="checkbox"/> TDS <input type="checkbox"/> VSS	TKN	Total Phosphorus	Phenols	Tier 1: TPH/BTEX (PIRI) <input type="checkbox"/> low level	Tier 2: TPH/BTEX Fractionation	CCME-CWS TPH/BTEX	VOC	THM	HAA	PAH	PCB	TC+EC <input type="checkbox"/> P/A <input type="checkbox"/> MPN <input type="checkbox"/> MF	<input type="checkbox"/> HPC <input type="checkbox"/> Pseudomonas	Fecal Coliform <input type="checkbox"/> MPN <input type="checkbox"/> MF	Other: Bromide	Other: DOC	Hazardous (Y/N)
GSF-Main Well	26 June, 2025/3 PM	WATER	7			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>													<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
GSF-Monitoring Well	26 June, 2025/3PM	WATER	7			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>													<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

Samples Relinquished By (Print Name):	Date/Time	Samples Received By (Print Name): <u>Katrina Al-Deir</u>	Date/Time <u>June 27</u>	Pink Copy - Client	Page <input type="text"/> of <input type="text"/>
Samples Relinquished By (Sign):	Date/Time	Samples Received By (Sign):	Date/Time <u>11:00</u>	Yellow Copy - AGAT	N ^o :
				White Copy - AGAT	



**CLIENT NAME: GRIEG NL NURSERIES LTD.
205 MCGETTIGAN BLVD
MARYSTOWN, NL A0E 2M0
709-279-3440**

ATTENTION TO: Junayed Hossain

PROJECT:

AGAT WORK ORDER: 25K382628

WATER ANALYSIS REVIEWED BY: Kaliegh Cullen, Report Writer

DATE REPORTED: Dec 18, 2025

PAGES (INCLUDING COVER): 13

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (902) 468-8718

***Notes**

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
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- This document is signed by an authorized signatory who meets the requirements of the MELCCFP, CALA, CCN and NELAP.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.



Certificate of Analysis

AGAT WORK ORDER: 25K382628

PROJECT:

11 Morris Drive, Unit 122
Dartmouth, Nova Scotia
CANADA B3B 1M2
TEL (902)468-8718
FAX (902)468-8924
<http://www.agatlabs.com>

CLIENT NAME: GRIEG NL NURSERIES LTD.

ATTENTION TO: Junayed Hossain

SAMPLING SITE:

SAMPLED BY:

DOC

DATE RECEIVED: 2025-12-09

DATE REPORTED: 2025-12-18

GSF-Monitoring

SAMPLE DESCRIPTION:	GSF-Main Well	Well
SAMPLE TYPE:	Water	Water
DATE SAMPLED:	2025-12-08 15:00	2025-12-08 15:00
	7325062	7325072

Parameter	Unit	G / S	RDL	7325062	7325072
Dissolved Organic Carbon	mg/L		0.50	<0.50	<0.50

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
Analysis performed at AGAT Halifax (unless marked by *)

Certified By:

Kateigh Cullen



Certificate of Analysis

AGAT WORK ORDER: 25K382628

PROJECT:

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CLIENT NAME: GRIEG NL NURSERIES LTD.

ATTENTION TO: Junayed Hossain

SAMPLING SITE:

SAMPLED BY:

Mercury Analysis in Water (Total)

DATE RECEIVED: 2025-12-09

DATE REPORTED: 2025-12-18

Parameter	Unit	G / S	RDL	GSF-Monitoring	
				GSF-Main Well	Well
				Water	Water
				2025-12-08 15:00	2025-12-08 15:00
				7325062	7325072
Total Mercury	ug/L		0.026	<0.026	<0.026

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
Analysis performed at AGAT Halifax (unless marked by *)

Certified By:

Katiegh Cullen



Certificate of Analysis

AGAT WORK ORDER: 25K382628

PROJECT:

11 Morris Drive, Unit 122
 Dartmouth, Nova Scotia
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CLIENT NAME: GRIEG NL NURSERIES LTD.

ATTENTION TO: Junayed Hossain

SAMPLING SITE:

SAMPLED BY:

Standard Water Analysis + Total Metals + Bromide

DATE RECEIVED: 2025-12-09

DATE REPORTED: 2025-12-18

Parameter	Unit	GSF-Monitoring			
		SAMPLE DESCRIPTION: GSF-Main Well		Well	
		SAMPLE TYPE: Water		Water	
		DATE SAMPLED: 2025-12-08 15:00		2025-12-08 15:00	
		G / S	RDL	7325062	7325072
pH	pH Units			6.05	6.09
Reactive Silica as SiO2	mg/L		0.5	5.8	6.6
Chloride	mg/L		1	88	32
Fluoride	mg/L		0.12	<0.12	<0.12
Sulphate	mg/L		2	9	4
Alkalinity	mg/L		5	140	133
True Color	TCU		5	<5	<5
Turbidity	NTU		0.5	2.21	1.38
Electrical Conductivity	umho/cm		1	540	343
Nitrate + Nitrite as N	mg/L		0.05	0.90	0.89
Nitrate as N	mg/L		0.05	0.48	0.38
Nitrite as N	mg/L		0.05	0.42	0.51
Ammonia as N	mg/L		0.03	0.58	<0.03
Total Organic Carbon	mg/L		0.50	0.83	<0.50
Ortho-Phosphate as P	mg/L		0.01	<0.01	<0.01
Total Sodium	mg/L		0.1	54.8	22.6
Total Potassium	mg/L		0.1	1.1	0.8
Total Calcium	mg/L		0.1	49.9	40.0
Total Magnesium	mg/L		0.1	12.5	11.4
Bicarb. Alkalinity (as CaCO3)	mg/L		5	140	133
Carb. Alkalinity (as CaCO3)	mg/L		10	<10	<10
Hydroxide	mg/L		5	<5	<5
Calculated TDS	mg/L		1	304	195
Hardness	mg/L			176	147
Langelier Index (@20C)	NA			-1.74	-1.80
Langelier Index (@ 4C)	NA			-2.06	-2.12
Saturation pH (@ 20C)	NA			7.79	7.89
Saturation pH (@ 4C)	NA			8.11	8.21

Certified By:

Katleigh Cullen



Certificate of Analysis

AGAT WORK ORDER: 25K382628

PROJECT:

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 Dartmouth, Nova Scotia
 CANADA B3B 1M2
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<http://www.agatlabs.com>

CLIENT NAME: GRIEG NL NURSERIES LTD.

ATTENTION TO: Junayed Hossain

SAMPLING SITE:

SAMPLED BY:

Standard Water Analysis + Total Metals + Bromide

DATE RECEIVED: 2025-12-09

DATE REPORTED: 2025-12-18

Parameter	Unit	GSF-Monitoring			
		SAMPLE DESCRIPTION: GSF-Main Well		Well	
		SAMPLE TYPE: Water		Water	
		DATE SAMPLED: 2025-12-08 15:00		2025-12-08 15:00	
		G / S	RDL	7325062	7325072
Anion Sum	me/L			5.53	3.71
Cation sum	me/L			5.98	3.94
% Difference/ Ion Balance	%			3.9	3.0
Total Aluminum	ug/L		5	14	13
Total Antimony	ug/L		2	<2	<2
Total Arsenic	ug/L		2	4	<2
Total Barium	ug/L		5	206	97
Total Beryllium	ug/L		2	<2	<2
Total Bismuth	ug/L		2	<2	<2
Total Boron	ug/L		50	<50	<50
Total Cadmium	ug/L		0.09	<0.09	<0.09
Total Chromium	ug/L		1	1	1
Total Cobalt	ug/L		1	<1	<1
Total Copper	ug/L		1	<1	<1
Total Iron	ug/L		50	56	<50
Total Lead	ug/L		0.5	0.6	22.0
Total Manganese	ug/L		2	5	<2
Total Molybdenum	ug/L		2	<2	<2
Total Nickel	ug/L		2	<2	<2
Total Phosphorous	mg/L		0.02	1.43	1.45
Total Selenium	ug/L		1	<1	<1
Total Silver	ug/L		0.1	<0.1	<0.1
Total Strontium	ug/L		5	658	404
Total Thallium	ug/L		0.1	<0.1	<0.1
Total Tin	ug/L		2	<2	<2
Total Titanium	ug/L		2	3	3
Total Uranium	ug/L		0.2	0.8	0.2
Total Vanadium	ug/L		2	<2	<2

Certified By:

Kalieg Cullen



Certificate of Analysis

AGAT WORK ORDER: 25K382628

PROJECT:

11 Morris Drive, Unit 122
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<http://www.agatlabs.com>

CLIENT NAME: GRIEG NL NURSERIES LTD.

ATTENTION TO: Junayed Hossain

SAMPLING SITE:

SAMPLED BY:

Standard Water Analysis + Total Metals + Bromide

DATE RECEIVED: 2025-12-09

DATE REPORTED: 2025-12-18

Parameter	Unit	GSF-Monitoring			
		G / S	RDL	7325062	7325072
SAMPLE DESCRIPTION: GSF-Main Well					
SAMPLE TYPE: Water					
DATE SAMPLED: 2025-12-08 15:00					
DATE SAMPLED: 2025-12-08 15:00					
Total Zinc	ug/L		5	35	<5
Bromide	mg/L		0.05	0.52	1.07

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

7325062-7325072 % Difference / Ion Balance, Hardness, Langelier Index, Nitrate + Nitrite, Hydroxide and Saturation pH are calculated parameters. The calculated parameters are non-accredited. The component parameters of the calculations are accredited. pH has been analyzed past the recommended holding time of 15 minutes from sampling. Field measurement recommended for most accurate result

Analysis performed at AGAT Halifax (unless marked by *)

Certified By:

Kathleen Cullen



Certificate of Analysis

AGAT WORK ORDER: 25K382628

PROJECT:

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<http://www.agatlabs.com>

CLIENT NAME: GRIEG NL NURSERIES LTD.

ATTENTION TO: Junayed Hossain

SAMPLING SITE:

SAMPLED BY:

TDS

DATE RECEIVED: 2025-12-09

DATE REPORTED: 2025-12-18

Parameter	Unit	GSF-Monitoring			
		G / S	RDL	GSF-Main Well	Well
				Water	Water
				2025-12-08 15:00	2025-12-08 15:00
				7325062	7325072
Total Dissolved Solids	mg/L		25	304	188

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
 Analysis performed at AGAT St John's (unless marked by *)

Certified By:

Katiegh Cullen



Certificate of Analysis

AGAT WORK ORDER: 25K382628

PROJECT:

11 Morris Drive, Unit 122
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<http://www.agatlabs.com>

CLIENT NAME: GRIEG NL NURSERIES LTD.

ATTENTION TO: Junayed Hossain

SAMPLING SITE:

SAMPLED BY:

Total Phosphorous & TKN

DATE RECEIVED: 2025-12-09

DATE REPORTED: 2025-12-18

Parameter	Unit	G / S	RDL	GSF-Monitoring	
				GSF-Main Well	Well
				Water	Water
				2025-12-08 15:00	2025-12-08 15:00
				7325062	7325072
Total Phosphorus	mg/L		0.006	0.010	0.007
Total Kjeldahl Nitrogen	mg/L		0.10	<0.10	<0.10

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Katiegh Cullen

Quality Assurance

CLIENT NAME: GRIEG NL NURSERIES LTD.
AGAT WORK ORDER: 25K382628
PROJECT:
ATTENTION TO: Junayed Hossain
SAMPLING SITE:
SAMPLED BY:

Water Analysis															
RPT Date: Dec 18, 2025			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

TDS														
Total Dissolved Solids	7334565	7334565	190	192	1.0%	< 25	99%	80%	120%					
Standard Water Analysis + Total Metals + Bromide														
pH	7325062	7325062	6.05	6.10	0.8%	<	101%	80%	120%	NA			NA	
Reactive Silica as SiO2	7324852		13.8	13.8	0.1%	< 0.5	100%	80%	120%	107%	80%	120%	NA	80%
Chloride	7311548		8	8	0.9%	< 1	97%	80%	120%	NA	80%	120%	94%	70%
Fluoride	7311548		<0.12	<0.12	NA	< 0.12	106%	80%	120%	NA	80%	120%	85%	70%
Sulphate	7311548		38	38	0.4%	< 2	95%	80%	120%	NA	80%	120%	NA	70%
Alkalinity	7325062	7325062	140	140	0.0%	< 5	115%	80%	120%	NA			NA	
True Color	7324852		<5	<5	NA	< 5	93%	80%	120%	109%	80%	120%	NA	
Turbidity	7325062	7325062	2.21	2.38	NA	< 0.5	111%	80%	120%					
Electrical Conductivity	7325062	7325062	540	544	0.7%	< 1	99%	90%	110%	NA			NA	
Nitrate as N	7311548		0.40	0.37	5.9%	< 0.05	110%	80%	120%	NA	80%	120%	87%	70%
Nitrite as N	7311548		0.39	0.36	8.1%	< 0.05	106%	80%	120%	NA	80%	120%	109%	70%
Ammonia as N	7316874		0.17	0.16	9.7%	< 0.03	104%	80%	120%	97%	80%	120%	102%	70%
Total Organic Carbon	7326504		6.4	6.3	2.7%	< 0.5	99%	80%	120%	NA	80%	120%	106%	80%
Ortho-Phosphate as P	7324852		<0.01	<0.01	NA	< 0.01	113%	80%	120%	93%	80%	120%	104%	80%
Total Sodium	7334319		14.4	14.4	0.0%	< 0.1	111%	70%	130%	113%	80%	120%	114%	70%
Total Potassium	7334319		2.8	2.7	2.7%	< 0.1	111%	70%	130%	115%	80%	120%	112%	70%
Total Calcium	7334319		7.0	6.7	4.9%	< 0.1	103%	70%	130%	111%	80%	120%	110%	70%
Total Magnesium	7334319		0.5	0.5	NA	< 0.1	109%	80%	130%	112%	80%	120%	113%	70%
Bicarb. Alkalinity (as CaCO3)	7325062	7325062	140	140	0.0%	< 5	NA	80%	120%	NA			NA	
Carb. Alkalinity (as CaCO3)	7325062	7325062	<10	<10	NA	< 10	NA	80%	120%	NA			NA	
Hydroxide	7325062	7325062	<5	<5	NA	< 5	NA	80%	120%	NA			NA	
Total Aluminum	7334319		8	8	NA	< 5	110%	70%	130%	113%	80%	120%	122%	70%
Total Antimony	7334319		3	3	NA	< 2	104%	70%	130%	105%	80%	120%	109%	70%
Total Arsenic	7334319		<2	<2	NA	< 2	107%	70%	130%	110%	80%	120%	111%	70%
Total Barium	7334319		<5	<5	NA	< 5	104%	70%	130%	107%	80%	120%	108%	70%
Total Beryllium	7334319		<2	<2	NA	< 2	108%	70%	130%	113%	80%	120%	117%	70%
Total Bismuth	7334319		<2	<2	NA	< 2	107%	70%	130%	110%	80%	120%	111%	70%
Total Boron	7334319		<50	<50	NA	< 50	106%	70%	130%	112%	80%	120%	119%	70%
Total Cadmium	7334319		<0.09	<0.09	NA	< 0.09	105%	70%	130%	105%	80%	120%	109%	70%
Total Chromium	7334319		2	1	NA	< 1	109%	70%	130%	112%	80%	120%	112%	70%
Total Cobalt	7334319		<1	<1	NA	< 1	107%	70%	130%	114%	80%	120%	112%	70%
Total Copper	7334319		<1	<1	NA	< 1	109%	70%	130%	111%	80%	120%	112%	70%
Total Iron	7334319		167	191	NA	< 50	109%	70%	130%	115%	80%	120%	114%	70%
Total Lead	7334319		<0.5	<0.5	NA	< 0.5	106%	70%	130%	108%	80%	120%	111%	70%
Total Manganese	7334319		3	3	NA	< 2	109%	70%	130%	116%	80%	120%	113%	70%
Total Molybdenum	7334319		<2	<2	NA	< 2	104%	70%	130%	105%	80%	120%	108%	70%

Quality Assurance

CLIENT NAME: GRIEG NL NURSERIES LTD.
AGAT WORK ORDER: 25K382628
PROJECT:
ATTENTION TO: Junayed Hossain
SAMPLING SITE:
SAMPLED BY:

Water Analysis (Continued)

RPT Date: Dec 18, 2025			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Total Nickel	7334319		<2	<2	NA	< 2	111%	70%	130%	116%	80%	120%	113%	70%	130%
Total Phosphorous	7334319		0.11	0.11	1.0%	< 0.02	97%	70%	130%	105%	80%	120%	106%	70%	130%
Total Selenium	7334319		<1	<1	NA	< 1	102%	70%	130%	109%	80%	120%	101%	70%	130%
Total Silver	7334319		<0.1	<0.1	NA	< 0.1	106%	70%	130%	107%	80%	120%	82%	70%	130%
Total Strontium	7334319		27	26	2.3%	< 5	108%	70%	130%	112%	80%	120%	111%	70%	130%
Total Thallium	7334319		<0.1	<0.1	NA	< 0.1	106%	70%	130%	109%	80%	120%	110%	70%	130%
Total Tin	7334319		<2	<2	NA	< 2	105%	70%	130%	104%	80%	120%	109%	70%	130%
Total Titanium	7334319		3	3	NA	< 2	108%	70%	130%	112%	80%	120%	112%	70%	130%
Total Uranium	7334319		<0.2	<0.2	NA	< 0.2	105%	70%	130%	107%	80%	120%	111%	70%	130%
Total Vanadium	7334319		<2	<2	NA	< 2	106%	70%	130%	108%	80%	120%	111%	70%	130%
Total Zinc	7334838		14	15	NA	< 5	101%	70%	130%	101%	80%	120%	107%	70%	130%
Bromide	7311548		0.49	0.48	2.6%	< 0.05	99%	80%	120%	NA	80%	120%	99%	80%	120%

Comments: If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.

Mercury Analysis in Water (Total)

Total Mercury	7331037		<0.026	<0.026	NA	< 0.026	92%	80%	120%	91%	80%	120%	94%	70%	130%
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Comments: If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.

DOC

Dissolved Organic Carbon	7325062	7325062	1.4	1.3	NA	< 0.5	98%	80%	120%	NA	80%	120%	99%	80%	120%
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Comments: If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.

Total Phosphorous & TKN

Total Phosphorus	7325062	7325062	0.010	0.010	NA	< 0.006	100%	70%	130%	98%	80%	120%	98%	70%	130%
Total Kjeldahl Nitrogen	7334980		<0.10	<0.10	NA	< 0.10	93%	70%	130%	94%	80%	120%	81%	70%	130%

Comments: NA signifies Not Applicable.

Duplicate NA: results are under 5X the RDL and will not be calculated.

Certified By: 

Method Summary

CLIENT NAME: GRIEG NL NURSERIES LTD.
AGAT WORK ORDER: 25K382628
PROJECT:
ATTENTION TO: Junayed Hossain
SAMPLING SITE:
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Dissolved Organic Carbon	INOR-121-6052	SM 5310 B	TOC ANALYZER
Total Mercury	MET-121-6107	SM 3112 B	CV/AA
pH	INOR-121-6001	SM 4500 H+B	PC TITRATE
Reactive Silica as SiO ₂	INOR-121-6027	SM 4500-SiO ₂ F	COLORIMETER
Chloride	INOR-121-6005	SM 4110 B	ION CHROMATOGRAPH
Fluoride	INOR-121-6005	SM 4110 B	ION CHROMATOGRAPH
Sulphate	INOR-121-6005	SM 4110 B	ION CHROMATOGRAPH
Alkalinity	INOR-121-6001	SM 2320 B	
True Color	INOR-121-6008	SM 2120 B	COLORIMETER
Turbidity	INOR-121-6001	SM 2130 B	PC TITRATE
Electrical Conductivity	INOR-121-6001	SM 2510 B	PC TITRATE
Nitrate + Nitrite as N	INOR-121-6005	SM 4110 B	CALCULATION
Nitrate as N	INOR-121-6005	SM 4110 B	ION CHROMATOGRAPH
Nitrite as N	INOR-121-6005	SM 4110 B	ION CHROMATOGRAPH
Ammonia as N	INOR-121-6047	SM 4500-NH ₃ H	COLORIMETER
Total Organic Carbon	INOR-121-6052	SM 5310 B	TOC ANALYZER
Ortho-Phosphate as P	INOR-121-6012	SM 4500-P G	COLORIMETER
Total Sodium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Potassium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Calcium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Magnesium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Bicarb. Alkalinity (as CaCO ₃)	INOR-121-6001	SM 2320 B	PC TITRATE
Carb. Alkalinity (as CaCO ₃)	INOR-121-6001	SM 2320 B	PC TITRATE
Hydroxide	INOR-121-6001	SM 2320 B	PC-TITRATE
Calculated TDS	CALCULATION	SM 1030E	CALCULATION
Hardness	CALCULATION	SM 2340B	CALCULATION
Langelier Index (@20C)	CALCULATION	CALCULATION	CALCULATION
Langelier Index (@ 4C)	CALCULATION	CALCULATION	CALCULATION
Saturation pH (@ 20C)	CALCULATION	CALCULATION	CALCULATION
Saturation pH (@ 4C)	CALCULATION	CALCULATION	CALCULATION
Anion Sum	CALCULATION	SM 1030E	CALCULATION
Cation sum	CALCULATION	SM 1030E	CALCULATION
% Difference/ Ion Balance	CALCULATION	SM 1030E	CALCULATION
Total Aluminum	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Antimony	MET121-6104 & MET-121-6105	SM 3125	ICP-MS
Total Arsenic	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Barium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Beryllium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Bismuth	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Boron	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS

Method Summary

CLIENT NAME: GRIEG NL NURSERIES LTD.
AGAT WORK ORDER: 25K382628
PROJECT:
ATTENTION TO: Junayed Hossain
SAMPLING SITE:
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Total Cadmium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Chromium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Cobalt	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Copper	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Iron	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Lead	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Manganese	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Molybdenum	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Nickel	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Phosphorous	MET-121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Selenium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Silver	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Strontium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Thallium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Tin	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Titanium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Uranium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Vanadium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Zinc	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Bromide	INORG-121-6005	SM 4110 B	ION CHROMATOGRAPH
Total Dissolved Solids	INOR-123-6007	Based on SM 2540 C	GRAVIMETRIC
Total Phosphorus	INOR-93-6022	modified from SM 4500-P B and SM 4500-P E	SPECTROPHOTOMETER
Total Kjeldahl Nitrogen	INOR-93-6048	modified from EPA 351.2 and SM 4500-NORG D	LACHAT FIA

**CLIENT NAME: GRIEG NL NURSERIES LTD.
205 MCGETTIGAN BLVD
MARYSTOWN, NL A0E 2M0
709-279-3440**

ATTENTION TO: JUNAYED HOSSAIN

PROJECT:

AGAT WORK ORDER: 25K342538

TRACE ORGANICS REVIEWED BY: Ashleigh Dussault, Inorganics Laboratory Supervisor

WATER ANALYSIS REVIEWED BY: Kaliegh Cullen, Report Writer

DATE REPORTED: Sep 23, 2025

PAGES (INCLUDING COVER): 17

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (902) 468-8718

***Notes**

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
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- All reportable information is available on request from AGAT Laboratories, in accordance with ISO/IEC 17025:2017, ISO/IEC 17025:2005 (Quebec), DR-12-PALA and/or NELAP Standards.
- This document is signed by an authorized signatory who meets the requirements of the MELCCFP, CALA, CCN and NELAP.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 25K342538

PROJECT:

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FAX (902)468-8924
http://www.agatlabs.com

CLIENT NAME: GRIEG NL NURSERIES LTD.

SAMPLING SITE:

ATTENTION TO: JUNAYED HOSSAIN

SAMPLED BY:

Atlantic RBCA Tier 1 Hydrocarbons in Water (Version 3.1)

DATE RECEIVED: 2025-09-09

DATE REPORTED: 2025-09-23

Parameter	Unit	G / S	RDL	SAMPLE DESCRIPTION:		GSF MAIN		GSF MONITORING	
				WELL	WATER TYPE	WELL	WELL	WELL	WELL
Benzene	mg/L		0.001	<0.001	Water	2025-09-08 15:54	7038973	7039008	<0.001
Toluene	mg/L		0.001	<0.001	Water	2025-09-08 15:48	7038973	7039008	<0.001
Ethylbenzene	mg/L		0.001	<0.001	Water	2025-09-08 15:48	7038973	7039008	<0.001
Xylene (Total)	mg/L		0.002	<0.002	Water	2025-09-08 15:48	7038973	7039008	<0.002
C6-C10 (less BTEX)	mg/L		0.01	<0.01	Water	2025-09-08 15:48	7038973	7039008	<0.01
>C10-C16 Hydrocarbons	mg/L		0.05	<0.05	Water	2025-09-08 15:48	7038973	7039008	<0.05
>C16-C21 Hydrocarbons	mg/L		0.05	<0.05	Water	2025-09-08 15:48	7038973	7039008	<0.05
>C21-C32 Hydrocarbons	mg/L		0.1	<0.1	Water	2025-09-08 15:48	7038973	7039008	<0.1
Modified TPH (Tier 1)	mg/L		0.1	<0.1	Water	2025-09-08 15:48	7038973	7039008	<0.1
Sediment					Water	2025-09-08 15:48	7038973	7039008	
Resemblance Comment					Water	2025-09-08 15:48	7038973	7039008	
Return to Baseline at C32					Water	2025-09-08 15:48	7038973	7039008	
Surrogate	Unit		Acceptable Limits						
Isobutylbenzene - EPH	%		70-130	78					80
Isobutylbenzene - VPH	%		70-130	95					92
n-Dotriacontane - EPH	%		70-130	82					82

Ashleigh Drussalt

Certified By:



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SAMPLING SITE:

ATTENTION TO: JUNAYED HOSSAIN

SAMPLED BY:

Atlantic RBCA Tier 1 Hydrocarbons in Water (Version 3.1)

DATE RECEIVED: 2025-09-09

DATE REPORTED: 2025-09-23

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

7038973-7039008 Modified TPH, Xylene(Total)and C6-C10(less BTEX) are calculated parameters. The calculated parameter is non-accredited. The component parameters of the calculation are accredited.

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Resemblance Comment Key:

- GF - Gasoline Fraction
- WGF - Weathered Gasoline Fraction
- GR - Product in Gasoline Range
- FOF - Fuel Oil Fraction
- WFOF - Weathered Fuel Oil Fraction
- FR - Product in Fuel Oil Range
- LOF - Lube Oil Fraction
- LR - Lube Range
- UC - Unidentified Compounds
- NR - No Resemblance
- NA - Not Applicable

Analysis performed at AGAT Halifax (unless marked by *)

*Ashleigh
Dressalt*

Certified By:



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CLIENT NAME: GRIEG NL NURSERIES LTD.

SAMPLING SITE:

ATTENTION TO: JUNAYED HOSSAIN

SAMPLED BY:

DOC	
DATE RECEIVED: 2025-09-09	DATE REPORTED: 2025-09-23

Parameter	Unit	SAMPLE DESCRIPTION:		GSF MAIN		GSF MONITORING	
		G / S	RDL	WELL	WELL	WELL	WELL
Dissolved Organic Carbon	mg/L		0.50	1.4	0.81		
				2025-09-08 15:54	2025-09-08 15:48	2025-09-08 15:54	2025-09-08 15:48
				7038973	7039008	7039008	7039008

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
Analysis performed at AGAT Halifax (unless marked by *)

Certified By:

Kaleigh Cullen



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AGAT WORK ORDER: 25K342538

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CLIENT NAME: GRIEG NL NURSERIES LTD.

SAMPLING SITE:

ATTENTION TO: JUNAYED HOSSAIN
SAMPLED BY:

Mercury Analysis in Water (Total) DATE RECEIVED: 2025-09-09 DATE REPORTED: 2025-09-23

Parameter	Unit	SAMPLE DESCRIPTION:		GSF MAIN		GSF MONITORING	
		G / S	RDL	WELL	WELL	WELL	WELL
Total Mercury	ug/L		0.026	2025-09-08 15:54	7038973	2025-09-08 15:48	7039008
					<0.026		<0.026

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
Analysis performed at AGAT Halifax (unless marked by *)

Certified By:

Kaleigh Cullen



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AGAT WORK ORDER: 25K342538

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CLIENT NAME: GRIEG NL NURSERIES LTD.

SAMPLING SITE:

ATTENTION TO: JUNAYED HOSSAIN

SAMPLED BY:

Standard Water Analysis + Total Metals + Bromide

DATE RECEIVED: 2025-09-09

DATE REPORTED: 2025-09-23

Parameter	Unit	G / S	RDL	SAMPLE DESCRIPTION:		GSF	
				WELL	MONITORING WELL	WELL	MONITORING WELL
	pH Units						
Reactive Silica as SiO2	mg/L	6.4	0.5	6.4	7.4	6.87	7.02
Chloride	mg/L	73	1	73	35		
Fluoride	mg/L	0.12	0.12	0.16	0.14		
Sulphate	mg/L	8	2	8	4		
Alkalinity	mg/L	123	5	123	128		
True Color	TCU	<5	5	<5	<5		
Turbidity	NTU	1.62	0.50	1.62	1.92		
Electrical Conductivity	umho/cm	507	1	507	366		
Nitrate + Nitrite as N	mg/L	0.37	0.05	0.37	0.16		
Nitrate as N	mg/L	0.37	0.05	0.37	0.16		
Nitrite as N	mg/L	<0.05	0.05	<0.05	<0.05		
Ammonia as N	mg/L	<0.03	0.03	<0.03	<0.03		
Total Organic Carbon	mg/L	0.99	0.50	0.99	0.52		
Ortho-Phosphate as P	mg/L	<0.01	0.01	<0.01	<0.01		
Total Sodium	mg/L	52.6	0.1	52.6	22.2		
Total Potassium	mg/L	1.1	0.1	1.1	0.7		
Total Calcium	mg/L	45.0	0.1	45.0	37.3		
Total Magnesium	mg/L	11.4	0.1	11.4	11.5		
Bicarb. Alkalinity (as CaCO3)	mg/L	123	5	123	128		
Carb. Alkalinity (as CaCO3)	mg/L	<10	10	<10	<10		
Hydroxide	mg/L	<5	5	<5	<5		
Calculated TDS	mg/L	267	1	267	188		
Hardness	mg/L	159		159	140		
Langelier Index (@20C)	NA	-1.02		-1.02	-0.92		
Langelier Index (@4C)	NA	-1.34		-1.34	-1.24		
Saturation pH (@20C)	NA	7.89		7.89	7.94		

Certified By:

Kaleigh Cullen



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CLIENT NAME: GRIEG NL NURSERIES LTD.

SAMPLING SITE:

ATTENTION TO: JUNAYED HOSSAIN

SAMPLED BY:

Standard Water Analysis + Total Metals + Bromide

DATE RECEIVED: 2025-09-09

DATE REPORTED: 2025-09-23

Parameter	Unit	G / S	RDL	SAMPLE DESCRIPTION:		GSF MAIN		MONITORING	
				WELL	WATER TYPE	WELL	WELL	WELL	WELL
Saturation pH (@ 4C)	NA			8.21				8.26	
Anion Sum	me/L			4.71				3.64	
Cation sum	me/L			5.50				3.79	
% Difference/ Ion Balance	%			7.7				2.0	
Total Aluminum	ug/L		5	18				16	
Total Antimony	ug/L		2	<2				<2	
Total Arsenic	ug/L		2	3				<2	
Total Barium	ug/L		5	159				84	
Total Beryllium	ug/L		2	<2				<2	
Total Bismuth	ug/L		2	<2				<2	
Total Boron	ug/L		50	<50				<50	
Total Cadmium	ug/L		0.09	0.10				0.09	
Total Chromium	ug/L		1	<1				<1	
Total Cobalt	ug/L		1	<1				<1	
Total Copper	ug/L		1	<1				<1	
Total Iron	ug/L		50	<50				<50	
Total Lead	ug/L		0.5	<0.5				<0.5	
Total Manganese	ug/L		2	3				<2	
Total Molybdenum	ug/L		2	<2				<2	
Total Nickel	ug/L		2	<2				<2	
Total Phosphorous	mg/L		0.02	1.88				2.00	
Total Selenium	ug/L		1	<1				<1	
Total Silver	ug/L		0.1	<0.1				<0.1	
Total Strontium	ug/L		5	487				352	
Total Thallium	ug/L		0.1	<0.1				0.1	
Total Tin	ug/L		2	<2				<2	
Total Titanium	ug/L		2	5				9	

Kaleigh Cullen

Certified By:



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AGAT WORK ORDER: 25K342538

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CLIENT NAME: GRIEG NL NURSERIES LTD.

SAMPLING SITE:

ATTENTION TO: JUNAYED HOSSAIN
SAMPLED BY:

Standard Water Analysis + Total Metals + Bromide

DATE RECEIVED: 2025-09-09

DATE REPORTED: 2025-09-23

Parameter	Unit	G / S	RDL	GSF MAIN		MONITORING	
				WELL	Water	WELL	Water
Total Uranium	ug/L		0.2	0.6			GSF 7039008
Total Vanadium	ug/L		2	3		2	
Total Zinc	ug/L		5	<5		8	
Bromide	mg/L		0.05	0.09		0.09	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

7038973-7039008 % Difference / Ion Balance, Hardness, Langelier Index, Nitrate + Nitrite, Hydroxide and Saturation pH are calculated parameters. The calculated parameters are non-accredited. The component parameters of the calculations are accredited.

pH has been analyzed past the recommended holding time of 15 minutes from sampling. Field measurement recommended for most accurate result
Analysis performed at AGAT Halifax (unless marked by *)

Certified By:

Kaleigh Cullen



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 25K342538

PROJECT:

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CLIENT NAME: GRIEG NL NURSERIES LTD.

SAMPLING SITE:

ATTENTION TO: JUNAYED HOSSAIN
SAMPLED BY:

TDS	
DATE RECEIVED: 2025-09-09	DATE REPORTED: 2025-09-23

Parameter	Unit	SAMPLE DESCRIPTION:		GSF MAIN		GSF MONITORING	
		G / S	RDL	WELL	WELL	WELL	WELL
Total Dissolved Solids	mg/L		25	2025-09-08 15:54	7038973	2025-09-08 15:48	7039008
					294		204

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
Analysis performed at AGAT St John's (unless marked by *)

Certified By:

Kaleigh Cullen



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 25K342538

PROJECT:

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CLIENT NAME: GRIEG NL NURSERIES LTD.

SAMPLING SITE:

ATTENTION TO: JUNAYED HOSSAIN
SAMPLED BY:

TKN & Total Phosphorous (Water)

DATE RECEIVED: 2025-09-09

DATE REPORTED: 2025-09-23

Parameter	Unit	SAMPLE DESCRIPTION:		GSF MAIN		GSF MONITORING	
		G / S	RDL	WELL	WELL	WELL	WELL
Total Kjeldahl Nitrogen	mg/L		0.10	2025-09-08 15:54	2025-09-08 15:54	Water	Water
Total Phosphorus	mg/L		0.006	7038973	7039008		
				<0.10	<0.10		
				0.043	0.037		

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Kaleigh Cullen

Quality Assurance

CLIENT NAME: GRIEG NL NURSERIES LTD.

AGAT WORK ORDER: 25K342538

PROJECT:

ATTENTION TO: JUNAYED HOSSAIN

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis

RPT Date: Sep 23, 2025			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Atlantic RBCA Tier 1 Hydrocarbons in Water (Version 3.1)															
Benzene	1	7038378	< 0.001	< 0.001	NA	< 0.001	99%	70%	130%	111%	70%	130%			
Toluene	1	7038378	< 0.001	< 0.001	NA	< 0.001	104%	70%	130%	105%	70%	130%			
Ethylbenzene	1	7038378	< 0.001	< 0.001	NA	< 0.001	96%	70%	130%	96%	70%	130%			
Xylene (Total)	1	7038378	< 0.002	< 0.002	NA	< 0.002	99%	70%	130%	91%	70%	130%			
C6-C10 (less BTEX)	1	7038378	< 0.01	< 0.01	NA	< 0.01	99%	70%	130%	86%	70%	130%	101%	70%	130%
>C10-C16 Hydrocarbons	1	7029714	< 0.05	< 0.05	NA	< 0.05	82%	70%	130%	80%	70%	130%	77%	70%	130%
>C16-C21 Hydrocarbons	1	7029714	0.20	0.21	NA	< 0.05	95%	70%	130%	80%	70%	130%	77%	70%	130%
>C21-C32 Hydrocarbons	1	7029714	< 0.1	< 0.1	NA	< 0.1	126%	70%	130%	80%	70%	130%	77%	70%	130%

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution. Matrix spike performed on a different sample than the duplicate.
 If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.

Certified By:

Ashleigh Dussalt

Quality Assurance

CLIENT NAME: GRIEG NL NURSERIES LTD.

AGAT WORK ORDER: 25K342538

PROJECT:

ATTENTION TO: JUNAYED HOSSAIN

SAMPLING SITE:

SAMPLED BY:

Water Analysis

RPT Date: Sep 23, 2025			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	

TDS														
Total Dissolved Solids	7038694	7038694	198	200	1.0%	< 25	104%	80%	120%					
Standard Water Analysis + Total Metals + Bromide														
pH	7038042		6.29	6.32	0.5%	<	101%	80%	120%	NA			NA	
Reactive Silica as SiO2	7052644		<0.5	<0.5	NA	< 0.5	107%	80%	120%	111%	80%	120%	114%	80%
Chloride	7039008	7039008	35	35	0.2%	< 1	84%	80%	120%	NA	80%	120%	NA	70%
Fluoride	7039008	7039008	0.14	0.12	NA	< 0.12	95%	80%	120%	NA	80%	120%	88%	70%
Sulphate	7039008	7039008	4	4	NA	< 2	93%	80%	120%	NA	80%	120%	93%	70%
Alkalinity	7038042		37	37	1.0%	< 5	99%	80%	120%	NA			NA	
True Color	7052644		<5	<5	NA	< 5	101%	80%	120%	103%	80%	120%	NA	
Turbidity	7038998	7038998	5.33	5.96	11.2%	< 0.5	116%	80%	120%	NA			NA	
Electrical Conductivity	7038042		145	145	0.3%	< 1	99%	90%	110%	NA			NA	
Nitrate as N	7039008	7039008	0.16	0.15	NA	< 0.05	95%	80%	120%	NA	80%	120%	107%	70%
Nitrite as N	7039008	7039008	<0.05	<0.05	NA	< 0.05	95%	80%	120%	NA	80%	120%	77%	70%
Total Organic Carbon	7043916		2.1	2.0	NA	< 0.5	109%	80%	120%	NA	80%	120%	113%	80%
Ortho-Phosphate as P	7052644		<0.01	<0.01	NA	< 0.01	101%	80%	120%	101%	80%	120%	98%	80%
Total Sodium	7038994		32.3	36.9	13.2%	< 0.1	120%	70%	130%	119%	80%	120%	NA	70%
Total Potassium	7038994		1.9	2.1	10.3%	< 0.1	118%	70%	130%	120%	80%	120%	119%	70%
Total Calcium	7038994		43.5	49.9	13.7%	< 0.1	108%	70%	130%	106%	80%	120%	NA	70%
Total Magnesium	7038994		6.6	7.4	12.3%	< 0.1	119%	80%	130%	119%	80%	120%	128%	70%
Bicarb. Alkalinity (as CaCO3)	7038042		37	37	1.0%	< 5	NA	80%	120%	NA			NA	
Carb. Alkalinity (as CaCO3)	7038042		<10	<10	NA	< 10	NA	80%	120%	NA			NA	
Hydroxide	7038042		<5	<5	NA	< 5	NA	80%	120%	NA			NA	
Total Aluminum	7038994		9	9	NA	< 5	112%	70%	130%	114%	80%	120%	116%	70%
Total Antimony	7038994		<2	<2	NA	< 2	94%	70%	130%	93%	80%	120%	97%	70%
Total Arsenic	7038994		5	6	NA	< 2	101%	70%	130%	101%	80%	120%	103%	70%
Total Barium	7038994		84	94	11.2%	< 5	94%	70%	130%	94%	80%	120%	105%	70%
Total Beryllium	7038994		<2	<2	NA	< 2	116%	70%	130%	120%	80%	120%	120%	70%
Total Bismuth	7038994		<2	<2	NA	< 2	100%	70%	130%	100%	80%	120%	101%	70%
Total Boron	7038994		<50	<50	NA	< 50	113%	70%	130%	117%	80%	120%	126%	70%
Total Cadmium	7038994		0.09	0.10	NA	< 0.09	97%	70%	130%	97%	80%	120%	99%	70%
Total Chromium	7038994		<1	<1	NA	< 1	110%	70%	130%	107%	80%	120%	110%	70%
Total Cobalt	7038994		<1	<1	NA	< 1	107%	70%	130%	107%	80%	120%	109%	70%
Total Copper	7038994		<1	<1	NA	< 1	106%	70%	130%	105%	80%	120%	106%	70%
Total Iron	7038994		411	458	10.9%	< 50	107%	70%	130%	107%	80%	120%	109%	70%
Total Lead	7038994		<0.5	<0.5	NA	< 0.5	101%	70%	130%	101%	80%	120%	102%	70%
Total Manganese	7038994		260	295	12.8%	< 2	106%	70%	130%	106%	80%	120%	NA	70%
Total Molybdenum	7038994		<2	<2	NA	< 2	100%	70%	130%	98%	80%	120%	102%	70%
Total Nickel	7038994		<2	<2	NA	< 2	107%	70%	130%	107%	80%	120%	107%	70%

Quality Assurance

CLIENT NAME: GRIEG NL NURSERIES LTD.

AGAT WORK ORDER: 25K342538

PROJECT:

ATTENTION TO: JUNAYED HOSSAIN

SAMPLING SITE:

SAMPLED BY:

Water Analysis (Continued)

RPT Date: Sep 23, 2025			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Total Phosphorous	7038994		3.16	3.66	14.5%	< 0.02	110%	70%	130%	109%	80%	120%	NA	70%	130%
Total Selenium	7038994		<1	<1	NA	< 1	103%	70%	130%	96%	80%	120%	101%	70%	130%
Total Silver	7038994		<0.1	<0.1	NA	< 0.1	100%	70%	130%	99%	80%	120%	100%	70%	130%
Total Strontium	7038994		381	429	11.7%	< 5	99%	70%	130%	99%	80%	120%	NA	70%	130%
Total Thallium	7038994		<0.1	<0.1	NA	< 0.1	101%	70%	130%	101%	80%	120%	102%	70%	130%
Total Tin	7038994		<2	<2	NA	< 2	96%	70%	130%	93%	80%	120%	99%	70%	130%
Total Titanium	7038994		5	7	NA	< 2	110%	70%	130%	110%	80%	120%	110%	70%	130%
Total Uranium	7038994		<0.2	<0.2	NA	< 0.2	94%	70%	130%	93%	80%	120%	94%	70%	130%
Total Vanadium	7038994		<2	<2	NA	< 2	109%	70%	130%	109%	80%	120%	111%	70%	130%
Total Zinc	7038994		7	<5	NA	< 5	119%	70%	130%	120%	80%	120%	118%	70%	130%

Comments: If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.

DOC

Dissolved Organic Carbon	7024753		19	20	1.5%	< 0.5	103%	80%	120%	NA	80%	120%	97%	80%	120%
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Comments: If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.

Mercury Analysis in Water (Total)

Total Mercury	7038973	7038973	<0.026	<0.026	NA	< 0.026	82%	80%	120%	86%	80%	120%	119%	70%	130%
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Comments: If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.

TKN & Total Phosphorous (Water)

Total Kjeldahl Nitrogen	7041062		4.66	4.67	0.2%	< 0.10	103%	70%	130%	100%	80%	120%	113%	70%	130%
Total Phosphorous	7033967		0.039	0.039	0.0%	< 0.006	101%	70%	130%	98%	80%	120%	98%	70%	130%

Comments: NA signifies Not Applicable.
 Duplicate NA: results are under 5X the RDL and will not be calculated.

Certified By: 

Method Summary

CLIENT NAME: GRIEG NL NURSERIES LTD.
AGAT WORK ORDER: 25K342538
PROJECT:
ATTENTION TO: JUNAYED HOSSAIN
SAMPLING SITE:
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Benzene	VOL-120-5013	Atlantic RBCA Guidelines for Laboratories Tier 1	GC/MS
Toluene	VOL-120-5013	Atlantic RBCA Guidelines for Laboratories Tier 1	GC/MS
Ethylbenzene	VOL-120-5013	Atlantic RBCA Guidelines for Laboratories Tier 1	GC/MS
Xylene (Total)	VOL-120-5013	Atlantic RBCA Guidelines for Laboratories Tier 1	GC/MS
C6-C10 (less BTEX)	VOL-120-5013	Atlantic RBCA Guidelines for Laboratories Tier 1	GC/MS
>C10-C16 Hydrocarbons	ORG-120-5101	Atlantic RBCA Guidelines for Laboratories Tier 1	GC/FID
>C16-C21 Hydrocarbons	ORG-120-5101	Atlantic RBCA Guidelines for Laboratories Tier 1	GC/FID
>C21-C32 Hydrocarbons	ORG-120-5101	Atlantic RBCA Guidelines for Laboratories Tier 1	GC/FID
Modified TPH (Tier 1)	ORG-120-5101	Atlantic RBCA Guidelines for Laboratories Tier 1	CALCULATION
Sediment			GC/MS/FID
Resemblance Comment	ORG-120-5101	Atlantic RBCA Guidelines for Laboratories Tier 1	GC/MS/FID
Return to Baseline at C32	ORG-120-5101	Atlantic RBCA Guidelines for Laboratories Tier 1	GC/FID
Isobutylbenzene - EPH	ORG-120-5101	Atlantic RBCA Guidelines for Laboratories Tier 1	GC/FID
Isobutylbenzene - VPH	VOL-120-5013	Atlantic RBCA Guidelines for Laboratories Tier 1	GC/MS
n-Dotriacontane - EPH	ORG-120-5101	Atlantic RBCA Guidelines for Laboratories Tier 1	GC/FID

Method Summary

CLIENT NAME: GRIEG NL NURSERIES LTD.

AGAT WORK ORDER: 25K342538

PROJECT:

ATTENTION TO: JUNAYED HOSSAIN

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Dissolved Organic Carbon	INOR-121-6052	SM 5310 B	TOC ANALYZER
Total Mercury	MET-121-6107	SM 3112 B	CV/AA
pH	INOR-121-6001	SM 4500 H+B	PC TITRATE
Reactive Silica as SiO ₂	INOR-121-6027	SM 4500-SiO ₂ F	COLORIMETER
Chloride	INOR-121-6005	SM 4110 B	ION CHROMATOGRAPH
Fluoride	INOR-121-6005	SM 4110 B	ION CHROMATOGRAPH
Sulphate	INOR-121-6005	SM 4110 B	ION CHROMATOGRAPH
Alkalinity	INOR-121-6001	SM 2320 B	
True Color	INOR-121-6008	SM 2120 B	COLORIMETER
Turbidity	INOR-121-6001	SM 2130 B	PC TITRATE
Electrical Conductivity	INOR-121-6001	SM 2510 B	PC TITRATE
Nitrate + Nitrite as N	INOR-121-6005	SM 4110 B	CALCULATION
Nitrate as N	INOR-121-6005	SM 4110 B	ION CHROMATOGRAPH
Nitrite as N	INOR-121-6005	SM 4110 B	ION CHROMATOGRAPH
Ammonia as N	INOR-121-6047	SM 4500-NH ₃ H	COLORIMETER
Total Organic Carbon	INOR-121-6052	SM 5310 B	TOC ANALYZER
Ortho-Phosphate as P	INOR-121-6012	SM 4500-P G	COLORIMETER
Total Sodium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Potassium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Calcium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Magnesium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Bicarb. Alkalinity (as CaCO ₃)	INOR-121-6001	SM 2320 B	PC TITRATE
Carb. Alkalinity (as CaCO ₃)	INOR-121-6001	SM 2320 B	PC TITRATE
Hydroxide	INOR-121-6001	SM 2320 B	PC-TITRATE
Calculated TDS	CALCULATION	SM 1030E	CALCULATION
Hardness	CALCULATION	SM 2340B	CALCULATION
Langelier Index (@20C)	CALCULATION	CALCULATION	CALCULATION
Langelier Index (@ 4C)	CALCULATION	CALCULATION	CALCULATION
Saturation pH (@ 20C)	CALCULATION	CALCULATION	CALCULATION
Saturation pH (@ 4C)	CALCULATION	CALCULATION	CALCULATION
Anion Sum	CALCULATION	SM 1030E	CALCULATION
Cation sum	CALCULATION	SM 1030E	CALCULATION
% Difference/ Ion Balance	CALCULATION	SM 1030E	CALCULATION
Total Aluminum	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Antimony	MET121-6104 & MET-121-6105	SM 3125	ICP-MS
Total Arsenic	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Barium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Beryllium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Bismuth	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Boron	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS

Method Summary

CLIENT NAME: GRIEG NL NURSERIES LTD.

AGAT WORK ORDER: 25K342538

PROJECT:

ATTENTION TO: JUNAYED HOSSAIN

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Total Cadmium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Chromium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Cobalt	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Copper	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Iron	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Lead	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Manganese	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Molybdenum	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Nickel	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Phosphorous	MET-121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Selenium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Silver	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Strontium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Thallium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Tin	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Titanium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Uranium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Vanadium	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Total Zinc	MET121-6104 & MET-121-6105	modified from SM 3125/SM 3030 B/SM 3030 D	ICP-MS
Bromide	INORG-121-6005	SM 4110 B	ION CHROMATOGRAPH
Total Dissolved Solids	INOR-123-6007	Based on SM 2540 C	GRAVIMETRIC
Total Kjeldahl Nitrogen	INOR-93-6048	modified from EPA 351.2 and SM 4500-NORG D	LACHAT FIA
Total Phosphorus	INOR-93-6022	modified from SM 4500-P B and SM 4500-P E	SPECTROPHOTOMETER

