NEW BRUNSWICK SOUTH WATER QUALITY REPORT

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1 Introduction

The New Brunswick Department of Agriculture, Aquaculture, and Fisheries (DAAF) measures essential ocean variables around the coast of New Brunswick through their Coastal Monitoring Program. This Program is a collaboration between DAAF, the Centre for Marine Applied Research (CMAR), Fisheries and Oceans Canada Gulf Region, and several third-party field contractors.

This document presents deployment details and summary figures of Water Quality data collected in the **South** region of the province (Figure 1 and Figure 2). The data are available for download from the New Brunswick Open Data Portal.

This document should be considered as a guide only, since data collection and retrieval are ongoing. The information may be revised pending ongoing data collection and analyses.

Figure 1: New Brunswick South sampling region (red box).

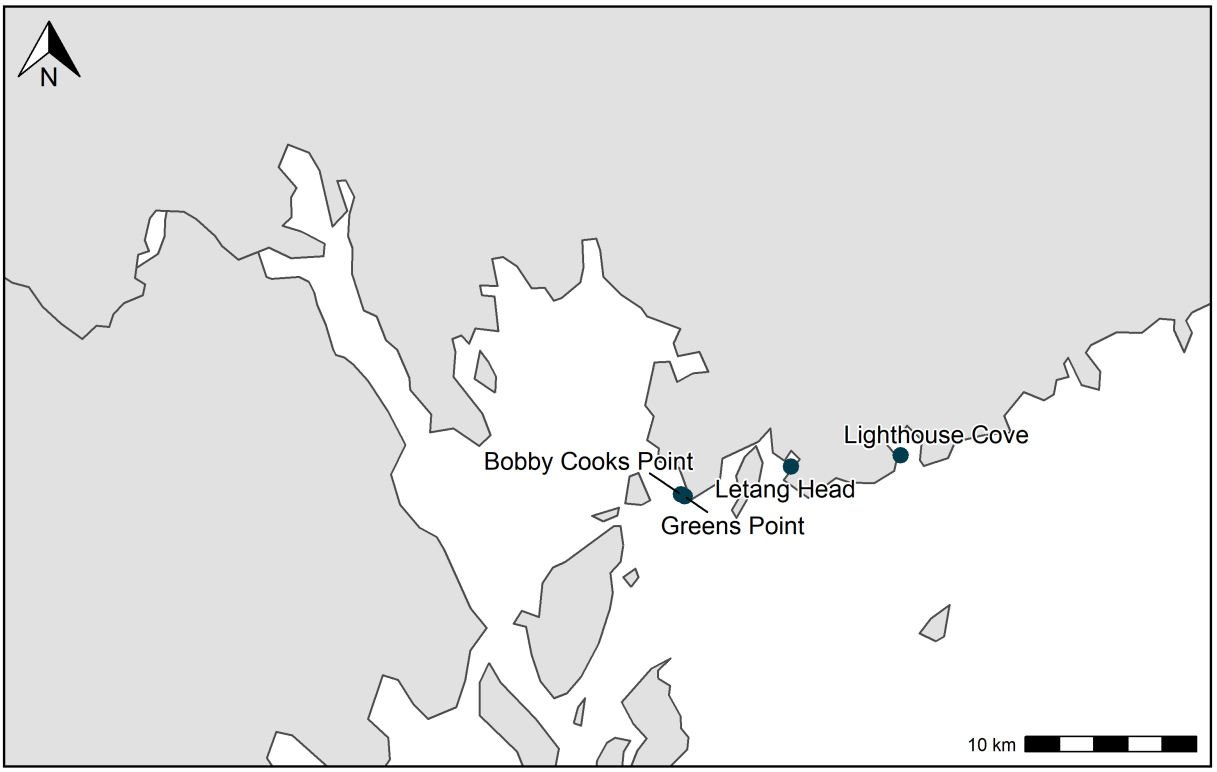

Figure 2: Sampling stations in the New Brunswick South sampling region.

1.1 Data Collection

DAAF collects temperature, pH, dissolved oxygen, and salinity data following CMAR Coastal Monitoring Program procedures. Stationary moorings called "sensor strings" are deployed at a station for several months to a year. A typical sensor string consists of a rope attached to the seafloor by an anchor and suspended by a sub-surface buoy, with sensors attached at various depths (Figure 3). Data are logged every 10 minutes to 1 hour, depending on the sensor and settings. Sensors must be retrieved to offload the data. Sensors are typically retrieved by triggering an acoustic release.

The raw sensor data is sent to CMAR for processing. CMAR generates summary reports of the data (e.g., this document) and sends the final datasets to the New Brunswick Open Data Portal for publication. CMAR also hosts links to the published reports and datasets on their Data Access Map.

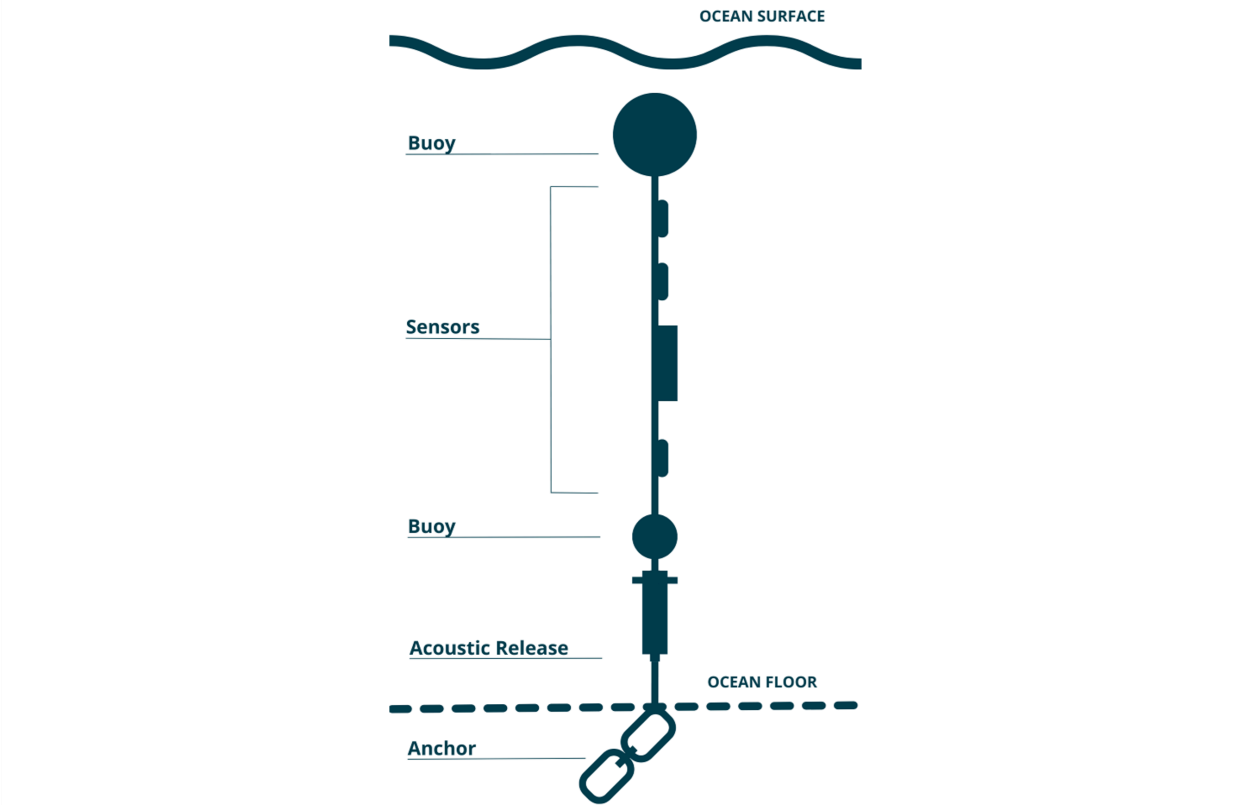

Figure 3: Example sensor string configuration (not to scale).

1.2 Quality Control

CMAR applied an automated Gross Range test to the data to identify outlying and unexpected values. For consistency with the CMAR Water Quality data, each data point was assigned a flag of "Pass", "Fail", or "Suspect/Of Interest" (IOOS, 2020).

Observations flagged as "Pass" were within the measurement range listed in the sensor specifications sheet. These observations are shown in the figures below. Observations flagged as "Fail" were outside of the measurement range and are not shown in the figures. "Suspect/Of Interest" flags highlight unusual events or poor quality data and are shown in the figures. All flags were reviewed by human experts.

Note that quality control was not applied to flag sensor drift or data spikes in this version of the report, but may be in future versions.

2 New Brunwick South Water Quality Data

Water Quality data is presented by waterbody. For each waterbody, there is a table of deployment details followed by figures showing the data at each station. Note the differences in scales between figures (x-axis, y-axis, and colour).

2.1 Greens Cove

Table 2: Deployment details for Greens Cove.

Station	Deployment Date	Retrieval Date	Latitude	Longitude	Configuration	Variables Measured
Bobby Cooks Point	2024-11-07	2025-05-05	45.0433	−66.8953	sub-surface buoy	depth dissolved oxygen (% sat) pH salinity temperature

2.1.1 Bobby Cooks Point

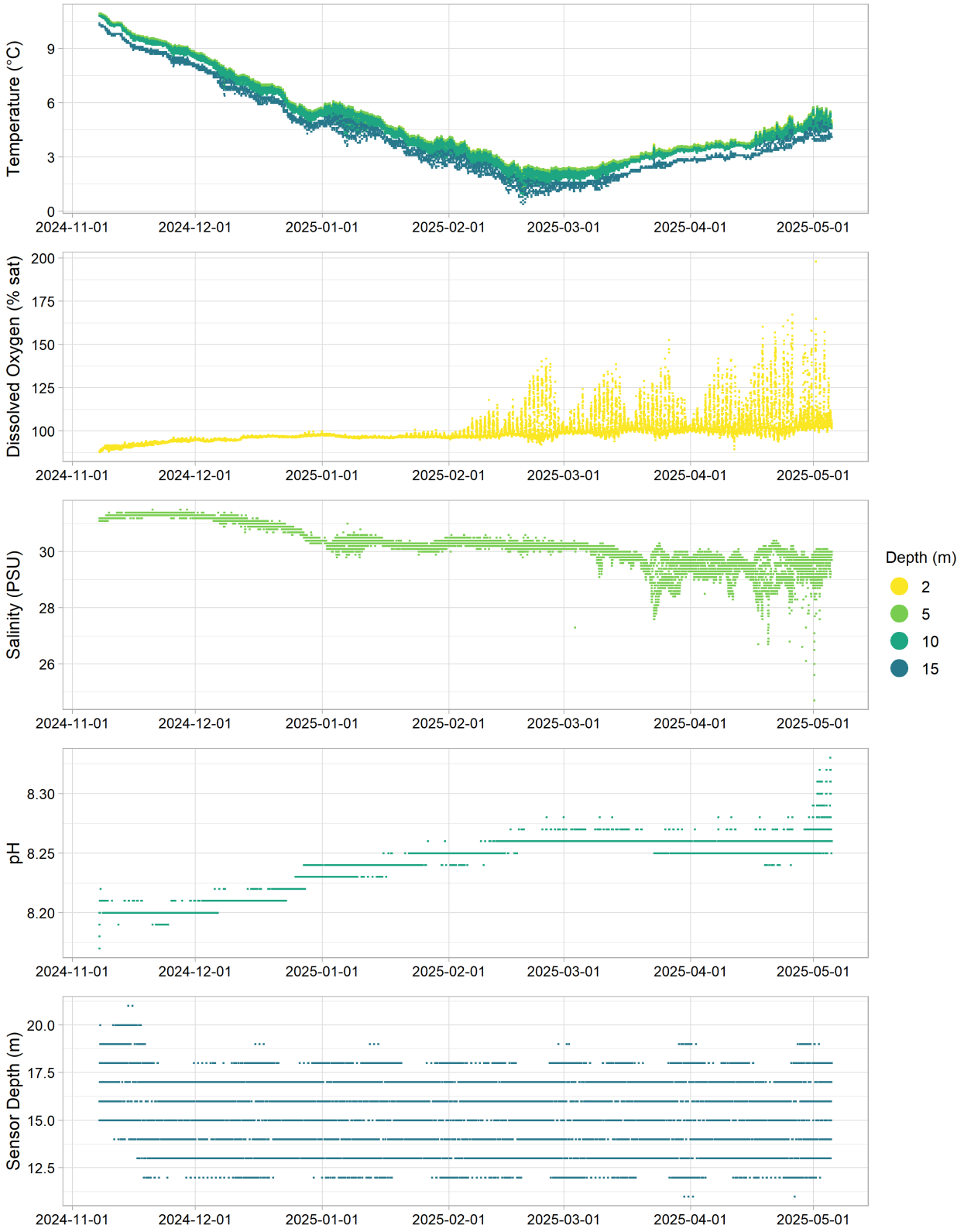

Figure 4: Bobby Cooks Point water quality data.

2.2 Kellys Cove

Table 3: Deployment details for Kellys Cove.

Station	Deployment Date	Retrieval Date	Latitude	Longitude	Configuration	Variables Measured
Greens Point	2023-06-21	2023-09-27	45.0423	−66.8923	sub-surface buoy	depth dissolved oxygen (% sat) temperature

2.2.1 Greens Point

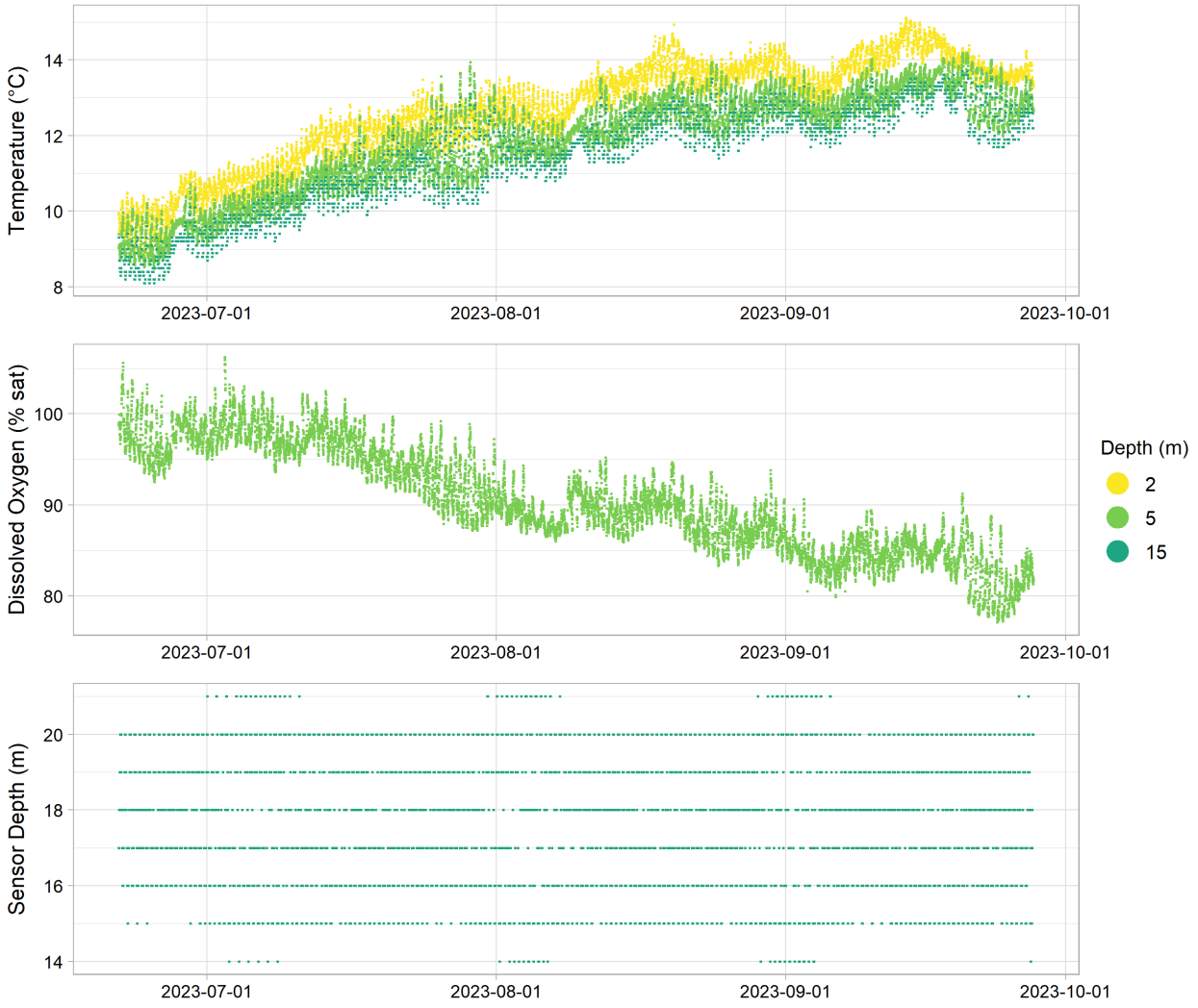

Figure 5: Greens Point water quality data.

2.3 Letang Harbour

Table 4: Deployment details for Letang Harbour.

Station	Deployment Date	Retrieval Date	Latitude	Longitude	Configuration	Variables Measured
Letang Head	2023-06-21	2023-09-27	45.0578	−66.8133	sub-surface buoy	depth dissolved oxygen (% sat) temperature
Letang Head	2024-11-06	2025-05-01	45.0579	−66.8141	sub-surface buoy	depth dissolved oxygen (% sat) pH salinity temperature

2.3.1 Letang Head

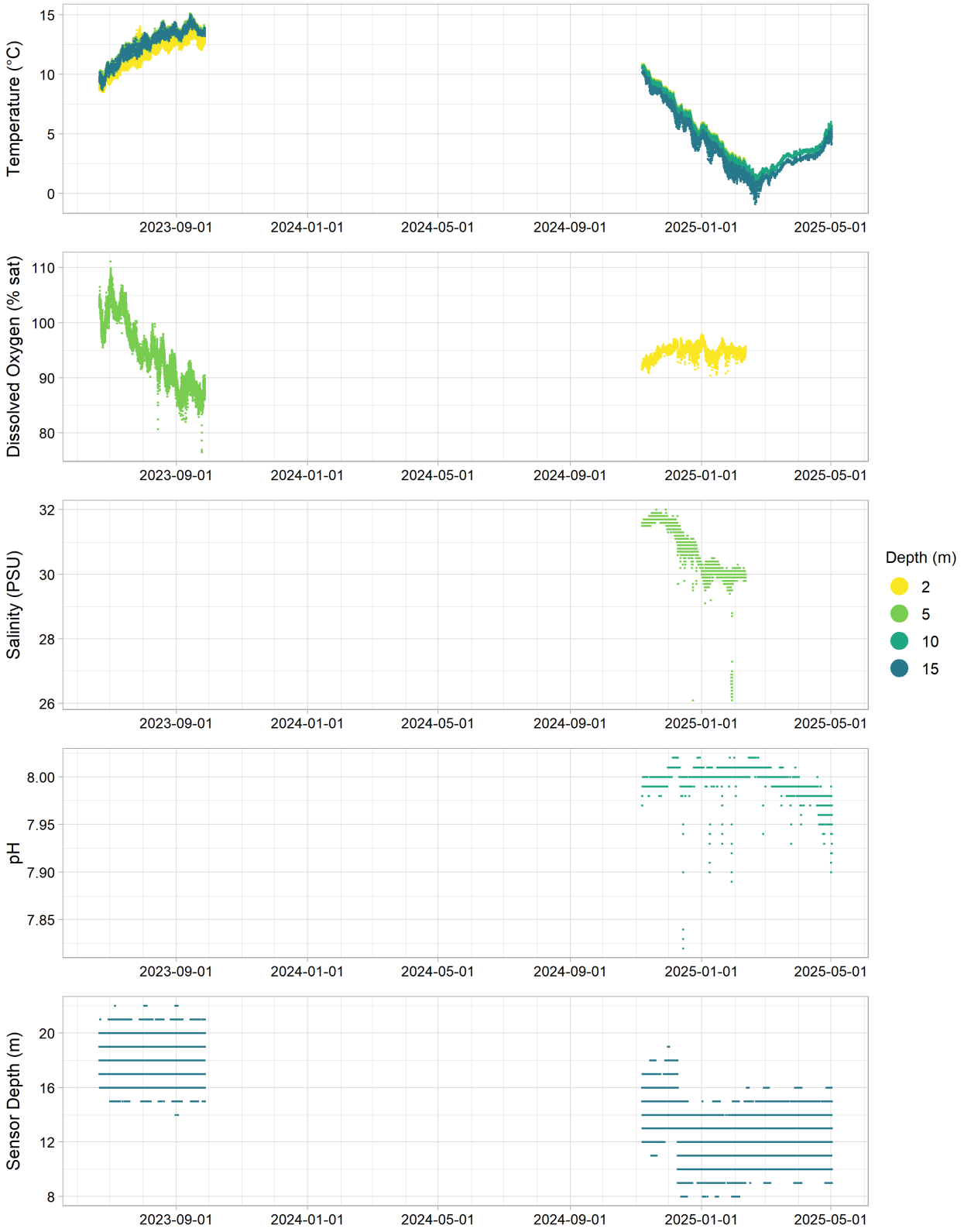

Figure 6: Letang Head water quality data.

2.4 Lighthouse Cove

Table 5: Deployment details for Lighthouse Cove.

Station	Deployment Date	Retrieval Date	Latitude	Longitude	Configuration	Variables Measured
Lighthouse Cove	2024-11-06	2025-05-13	45.0637	−66.7315	sub-surface buoy	depth pH salinity temperature

2.4.1 Lighthouse Cove

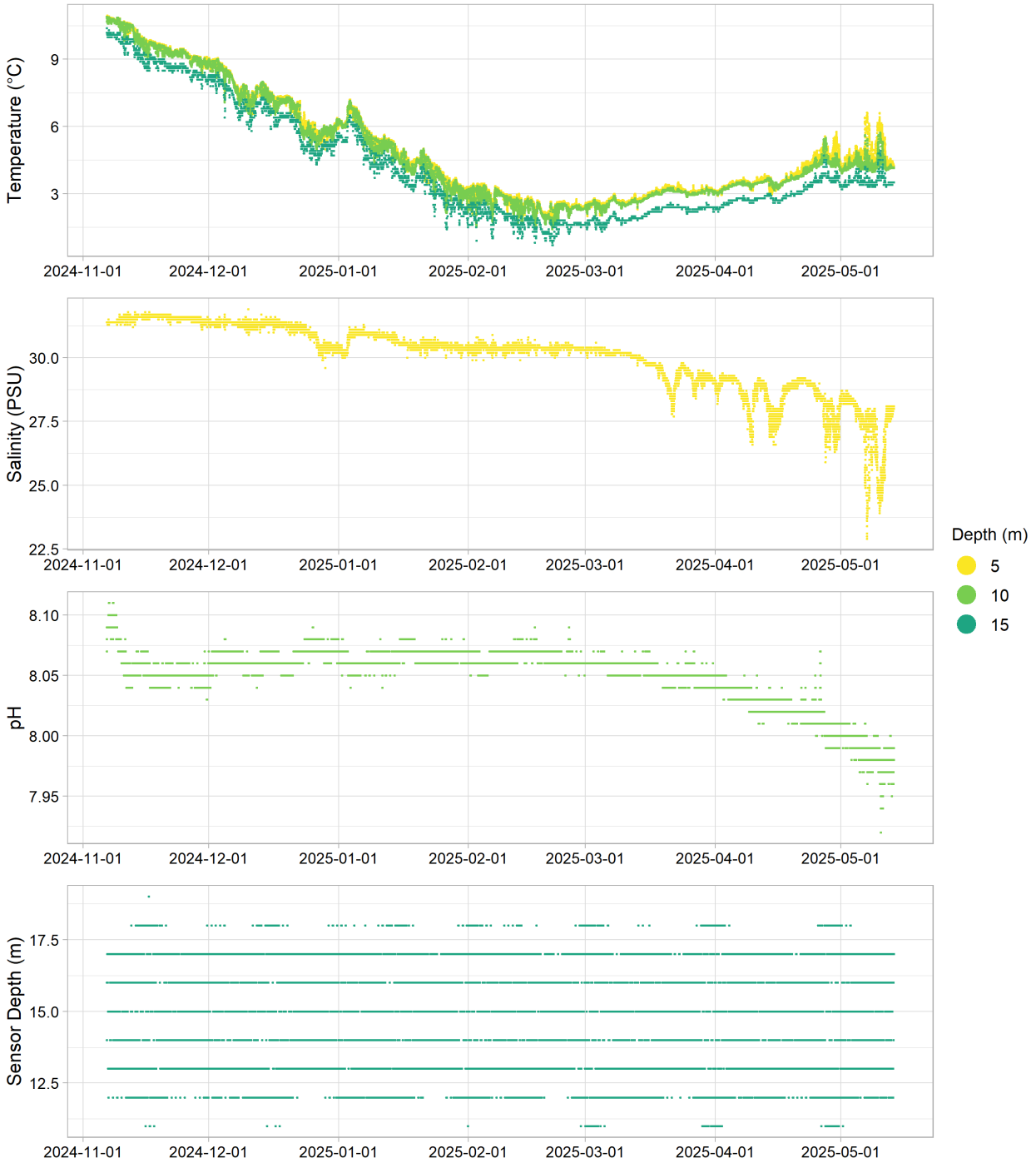

Figure 7: Lighthouse Cove water quality data.

3 Data Acknowledgement

CMAR and DAAF aim to prioritize data collection and processing efforts that best serve coastal interest holders. If you use this Coastal Monitoring Program Water Quality data in a project or for decision making, please complete our anonymous questionnaire with your feedback. Please cite the report and/or datasets used.

4 Document History

Table 6: Document history.

Version	Date	Amendments
V1	2026-04-01	New document.

References

IOOS. (2020). QARTOD manual for real-time oceanographic data quality control flags (1.2). https://cdn.ioos.noaa.gov/media/2020/07/QARTOD-Data-Flags-Manual_version1.2final.pdf