

Clayoquot Sound Weather Station Field Report

(CruiseID: 2026-071)

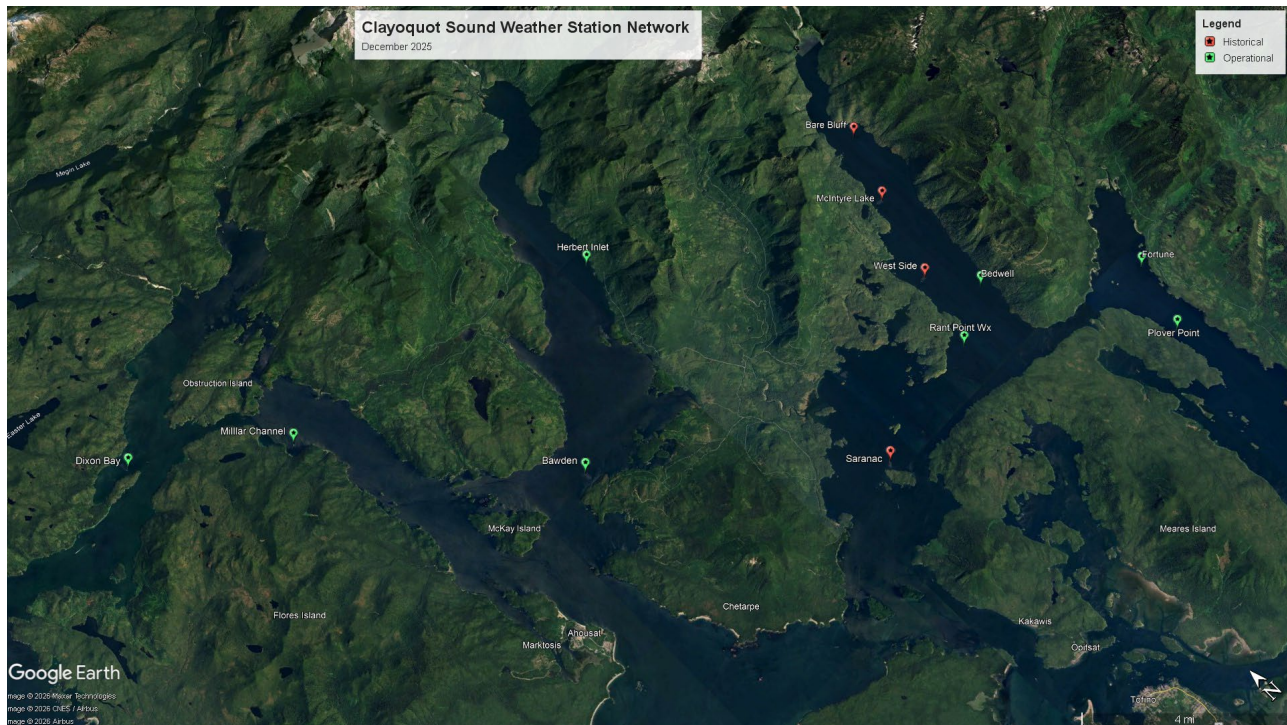
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Overview:

In collaboration with Cermaq, a meteorological network was established in the Clayoquot Sound in December of 2017, and stations were last serviced in December 2025. Figure 1 shows the operational weather station site status as of the December 2025, as well as historical weather station sites.

In collaboration with researching scientist Stephane Gauthier, we visited the region from May 29th to June 6th to perform critical servicing of all the operational weather stations, recover abandoned weather station equipment, collect physical oceanographic data and to deploy 3 acoustic moorings, using the OSD small vessel Doug Anderson.

Figure 1: Operational and Historical Ocean Science Division weather station sites in Clayoquot Sound.



Field Objectives:

1. Deploy Stephane Gauthier's acoustic moorings.
2. Service and download internally logged data from Herbert Inlet land-based weather station.

3. Perform maintenance and repairs on all the Northern and Southern region farm weather stations.
4. Recover weather station equipment from farm sites that are being shut down or fallowed.
5. Collect physical oceanographic data at Dr. Cheryl Greengrove's (University of Washington Tacoma) historical sampling sites using an RBR CTD with a dissolved oxygen, and turbidity sensor.

Objective Results:

1. Deployed Stephane Gauthier's acoustic moorings at (Figure 2):

1.1. Mooring 55158 @ 2026-05-30 19:52 UTC 49.13352° 125.72781°

1.2. Mooring 55086 @ 2026-05-30 21:48 UTC 49.26706° 125.83216°

1.3. Mooring 283149 @ 2026-07-01 15:45 UTC 49.37074° 125.08279°.

Figure 2: Deployment of Acoustic Mooring from R/V Doug Anderson.



2. Herbert Inlet remote weather station: Downloaded data and performed a quick analysis on the data and all sensors functioning. WittyPi light was blinking, and last download had occurred on May 30, 2026 @ 00:00. Replaced ISS battery, new desiccant, checked and adjusted guy wires, and cleaned solar panel. Overall, the site was in excellent condition and found the 20Ah battery to be fully charged.

3. Summary for remaining weather station sites. All anemometers were found to be orientated to True North unless otherwise noted. ISS batteries were replaced on all stations and their corresponding console batteries if required:
 - 3.1. Dixon: Replaced failed anemometer that was found to be at 342° True. Re-aligned anemometer to True North.
 - 3.2. Millar Channel: Replaced failed anemometer and reorientated to True North. Noticed that new anemometers have a little more resistance than the original and therefore take a bit more energy to start spinning.
 - 3.3. Bawden: Site is being shut down and fallowed until next fall so removed weather station and will re-install when site is active.
 - 3.4. Rant Point: Replaced failed anemometer and reorientated to True North. in good condition and performed routine maintenance.
 - 3.5. Bedwell: Station in good condition and performed routine maintenance.
 - 3.6. Fortune: Station in good condition and performed routine maintenance.
 - 3.7. Plover: Station in good condition and performed routine maintenance. Replaced console batteries as they were showing a low voltage.
4. A total of 60 CTD casts were completed (Table 1) using RBR Concerto3 CTD (s/n 241289) with a Dissolved Oxygen sensor (JFE Advantech Rinko III BT s/n 0529), Turbidity Sensor (RBR Coda Tu s/n 241289). Performed a cross-channel sampling at site Shelter 2. CTD sampling locations are based on Cheryl Greengrove's (University of Washington) sites who has been collecting both physical and chemical data from these sites since 2011.

Table 1. CTD sampling sites for cruise 2026-071.

Date (UTC)	Time (UTC)	Station Name	Latitude	Longitude
2026-05-31	17:29:30	Bedwell head	49.352244	-125.788031
2026-05-31	17:41:48	Bedwell 1	49.335820	-125.805300
2026-05-31	17:54:50	Bedwell 2	49.297667	-125.810783
2026-05-31	18:05:18	Bedwell mouth	49.270119	-125.821231
2026-05-31	18:17:48	Cypress bay	49.249524	-125.875128
2026-05-31	18:36:33	Warn Bay	49.237471	-125.757295
2026-05-31	18:54:04	Fortune channel	49.185738	-125.762525
2026-05-31	20:07:13	Tofino head 1	49.227645	-125.598314
2026-05-31	20:15:52	Tofino 1	49.208663	-125.610549
2026-05-31	20:28:03	Tofino 2	49.195844	-125.649504
2026-05-31	20:37:38	Tofino 3	49.181809	-125.647870
2026-05-31	20:49:02	Tofino 4	49.161567	-125.664612
2026-05-31	21:02:56	Tranquil head	49.196377	-125.675283

2026-05-31	21:16:00	Tranquil mouth	49.165308	-125.690785
2026-05-31	22:37:11	Tofino Browning passage 1	49.119849	-125.797375
2026-05-31	23:04:38	Tofino Browning passage 3	49.141995	-125.876260
2026-06-01	22:09:58	Sydney head	49.502519	-126.292949
2026-06-01	22:26:39	Sydney 1	49.487766	-126.284678
2026-06-01	22:37:13	Sydney 2	49.469648	-126.275387
2026-06-01	22:50:21	Sydney 3	49.437497	-126.259611
2026-06-01	23:00:21	Sydney 4	49.427948	-126.243595
2026-06-01	23:10:47	Sydney Shelter confluence	49.399496	-126.243767
2026-06-01	23:20:39	Sydney 5	49.371343	-126.244615
2026-06-01	23:31:31	Shelter mouth	49.398674	-126.215591
2026-06-01	23:45:38	Shelter 6	49.389322	-126.185379
2026-06-01	23:51:29	Shelter 5	49.393941	-126.161888
2026-06-02	00:04:46	Shelter Millar confluence	49.400577	-126.136622
2026-06-02	18:30:47	Shelter Millar confluence	49.400642	-126.137050
2026-06-02	18:40:50	Shelter 4	49.413186	-126.129891
2026-06-02	18:52:51	Shelter 3	49.423871	-126.107637
2026-06-02	19:05:28	Shelter 2a	49.420333	-126.085272
2026-06-02	19:08:44	Shelter 2b	49.422800	-126.085356
2026-06-02	19:15:58	Shelter 2	49.425182	-126.085040
2026-06-02	19:24:47	Shelter 2c	49.428080	-126.084754
2026-06-02	19:33:38	Shelter 2d	49.430707	-126.084413
2026-06-02	19:40:26	Shelter 2e	49.433403	-126.084587
2026-06-02	19:46:30	Shelter 2f	49.435992	-126.084760
2026-06-02	19:54:01	Shelter 1	49.427909	-126.054290
2026-06-02	20:03:34	Shelter head	49.439598	-126.046202
2026-06-02	20:48:10	Millar Channel North	49.379964	-126.085284
2026-06-02	21:04:18	Millar Channel South	49.336975	-126.068647
2026-06-02	22:01:51	Herbert head	49.408840	-125.907051
2026-06-02	22:13:08	Herbert 1	49.392617	-125.939018
2026-06-02	22:45:35	Herbert 2	49.360958	-125.944770
2026-06-02	23:01:17	Herbert 3	49.328220	-125.977677
2026-06-02	23:12:57	Herbert Mouth	49.312928	-126.011922
2026-06-02	23:24:25	Herbert Mouth South	49.295870	-126.035528
2026-06-02	23:37:09	Herbert sill	49.260012	-126.038168
		Herbert Russell channel		
2026-06-02	23:46:53	confluence	49.236240	-126.031982
2026-06-03	00:01:57	Hecate bay	49.235498	-125.941099
2026-06-03	16:54:09	Tofino Offshore 1	49.117110	-125.915044
2026-06-03	17:06:09	Tofino offshore 2	49.086046	-125.908160
2026-06-03	17:18:13	Tofino Offshore 1	49.117458	-125.915350
2026-06-03	17:32:33	Tofino Mouth Templar channel	49.151188	-125.915284
2026-06-03	18:02:32	Tofino 5	49.150590	-125.693419
2026-06-03	18:10:47	Tofino 6	49.134590	-125.716457
2026-06-03	18:21:21	Tofino 7	49.125854	-125.764201

2026-06-03	18:29:49	Tofino Browning passage 1	49.119765	-125.796917
2026-06-03	18:40:18	Tofino Browning passage 2	49.129618	-125.846340
2026-06-03	18:47:11	Tofino Browning passage 3	49.141776	-125.876653

Problems and Concerns:

Had issues with the new RBR Concerto CTD. The start and stop twist position were not well defined and even though the unit would indicate that it was on, it at times didn't log. We were able to define the ON and OFF positions, but the tolerance was tight and therefore easy to believe it is on but in fact it was not logging.

It is surprising the number of failed anemometers considering these sites were serviced just 6 months ago. Definitely the quality of these units is in question.

Conclusions and Acknowledgements:

Overall, the mission was successful and all objectives were achieved. Stephane and I were able to accomplish a significant amount of multidisciplinary work.

I would like to thank the Commanding Officers of the Tofino Canadian Coast Guard base for allowing us to dock our boat at their wharf. This saves us considerable amount of time not having to launch and recover the boat each day.