



Addendum 1 to Quality Assurance Monitoring Plan:

Marine Waters Long-Term Monitoring, Water Column Program, 2025

By

Suzan Pool

For the

Environmental Assessment Program

Washington State Department of Ecology

Olympia, Washington

September 2026, Publication 26-03-117

Publication Information

This Quality Assurance Project Plan Addendum is on the Department of Ecology's website at <https://apps.ecology.wa.gov/publications/SummaryPages/2603117.html>. This is an addition to an original Quality Assurance Project Plan (QAPP). It is not a correction (errata) to the original plan.

This QAMP addendum was approved to begin work in January 2026. It was finalized and approved for publication in September 2026.

Suggested citation for this addendum:

Pool, S. S. 2026. Addendum 1 to Quality Assurance Monitoring Plan: Marine Waters Long-Term Monitoring, Water Column Program, 2025. Publication 26-03-117. Washington State Department of Ecology, Olympia. <https://apps.ecology.wa.gov/publications/SummaryPages/2603117.html>.

Data for this project will be available on Ecology's Environmental Information Management (EIM) website at [EIM Database](#).¹ Search Study ID MarineWater.

Activity Tracker code:

Ecology's Activity Tracker code for this addendum is 01-800.

Original Quality Assurance Monitoring Plan:

Pool, S. S., C. Krembs, and A. Fisher. 2025. Quality Assurance Monitoring Plan: Marine Waters Long-Term Monitoring, Water Column Program, 2025. Publication 25-03-101. Washington State Department of Ecology, Olympia. <https://apps.ecology.wa.gov/publications/SummaryPages/2503101.html>.

Any use of product or firm names in this publication is for descriptive purposes only and does not imply endorsement by the author or the Department of Ecology.

Contact Information

Publications Coordinator
Environmental Assessment Program
Washington State Department of Ecology
P.O. Box 47600
Olympia, WA 98504-7600
Phone: 564-669-3028

Washington State Department of Ecology — ecology.wa.gov

Headquarters, Olympia	360-407-6000
Northwest Regional Office, Shoreline	206-594-0000
Southwest Regional Office, Olympia	360-407-6300
Central Regional Office, Union Gap	509-575-2490
Eastern Regional Office, Spokane	509-329-3400

The Department of Ecology is committed to providing people with disabilities access to our information and services by meeting or exceeding the requirements of state and federal laws.

To request an ADA accommodation, email EAPpubs@ecy.wa.gov, call (564)-669-3028, or call Ecology through the Washington Telecommunication Relay for services, including text telephone (TTY) at 711 or through your preferred relay service provider. Visit <https://ecology.wa.gov/accessibility> for more accessibility information.

¹ <https://www.ecology.wa.gov/Research-Data/Data-resources/Environmental-Information-Management-database>

Addendum 1 to Quality Assurance Monitoring Plan: Marine Waters Long-Term Monitoring, Water Column Program, 2025

by Suzan Pool
September 2026

QAMP Approval Signatures

Signature: _____ Date: _____

Suzan Pool, Author, Marine Monitoring Scientist, EAP

Signature: _____ Date: _____

Julianne Ruffner, Author's Unit Supervisor, EAP

Signature: _____ Date: _____

Stacy Polkowske, Author's Section Manager, EAP

Signature: _____ Date: _____

Robert Waldrop, Director, Manchester Environmental Lab, EAP

Signature: _____ Date: _____

Christina Frans, Ecology Quality Assurance Officer, EAP

EAP: Environmental Assessment Program

Signatures are not available on the Internet version.

1.0 Table of Contents

1.0 Table of Contents	2
List of Tables	3
5.0 Organization and Schedule	4
5.5 Budget and Funding	4
7.0 Study Design	5
7.2 Field data collection	5

Note: The numbered headings in this document correspond to the headings in the original QAMP. Only relevant sections are included here; therefore, some numbered headings may be missing.

List of Tables

Table 1. Estimated project budget and funding for contract costs in 2026 calendar year.....	4
---	---

Table 2. Estimated external laboratory budget details for samples in 2026 calendar year.....	4
--	---

5.0 Organization and Schedule

5.5 Budget and Funding

We estimated the 2026 budget for vertical profiling instruments, non-Ecology research vessels, and laboratory analyses. We assume that the annual budget for the remainder of the five-year monitoring plan will fluctuate.

Table 1 shows the 2026 estimates for contract costs. WET Labs, Inc. is one of several companies under Sea-Bird Scientific's umbrella. Therefore, we moved the costs of "WET Labs equipment" to the "Sea-Bird Scientific equipment" category in the budget estimates.

Table 2 shows the 2026 estimates for external laboratory analyses for nutrients and salinity of discrete samples as well as ocean acidification samples (total alkalinity and dissolved inorganic carbon).

The budget estimates are only part of the program cost as they exclude items such as staffing, Ecology's research vessels, internal laboratory samples and supplies, and field equipment (e.g., repairs and administrative costs).

Table 1. Estimated project budget and funding for contract costs in 2026 calendar year.

Provider	Cost (\$)
Sea-Bird Scientific equipment	\$22,389.00
RBR Global equipment	\$3,450.00
WWU Shannon Point Marine Center research vessel use	\$36,340.00
Total	\$62,179.00

WWU: Western Washington University

Table 2. Estimated external laboratory budget details for samples in 2026 calendar year.

Parameter	Number of Samples	Number of QA Samples	Total Number of Samples	Cost per Sample	Cost Subtotal	Overhead charge (15.6 %)	Cost Total
Nutrients ¹	1,548	144	1,692	\$23.00	\$38,916.00	\$6,070.90	\$44,986.90
Salinity ¹	7	3	10	\$22.50	\$225.00	\$35.10	\$260.10
TA/DIC ²	488	114	602	\$145.00	\$87,290.00	\$0.00	\$87,290.00
Totals	2,043	261	2,304	varies	\$126,431.00	\$6,106.00	\$132,537.00

¹University of Washington Oceanography Department's Marine Chemistry Laboratory

²U.S. National Oceanic and Atmospheric Administration Pacific Marine Environmental Laboratory

QA: Quality Assurance

TA/DIC: Total alkalinity and dissolved inorganic carbon

7.0 Study Design

7.2 Field data collection

7.2.2 Field parameters and laboratory analytes to be measured

For 2025 sampling, we added a deepwater target depth for collections of total alkalinity and dissolved inorganic carbon and their concurrent salinity and nutrient samples. The samples are from 10 m above the bottom to evaluate deepwater ocean acidification conditions. However, we had issues with research vessel availability through 2025 and, thus, did not collect sufficient samples to evaluate these conditions. Therefore, we will continue to collect deepwater samples until June or July 2026, depending on when we reach the desired total number of deepwater samples.