

# Chesapeake Bay Program Monitoring Data Deliverable Guidance

# Contents

Introduction.....	1
Purpose .....	1
Audience .....	1
Scope .....	1
Monitoring Data Guidelines and Requirements .....	1
Universal Requirements for Monitoring Data Submissions .....	1
Chesapeake Bay Program Data Resource Deliverable Guidance.....	2
Data and Metadata Submission Schedules .....	2
Metadata Requirements .....	2
24-hour Time Guidelines.....	2
Common Station Name Guidelines .....	3
Common Method Code Guidelines .....	3
Error Correction Requirements .....	3
Documentation Retention Requirements .....	3
Program-Specific Requirements .....	3
Water Quality Monitoring Programs .....	3
Data Delivery Requirements.....	4
Reporting Below-Detection and Quantitation Limit Data .....	4
Living Resources Monitoring Programs .....	5
Data Delivery Requirements.....	5
Taxonomic Nomenclature Requirements .....	5

# Introduction

## Purpose

These requirements and guidelines are intended to assist contractors and grantees in submitting monitoring data to the Chesapeake Bay Program Office (CBPO). Recipients of Chesapeake Bay Program funding for monitoring programs shall comply with these requirements and guidelines unless otherwise negotiated and documented with the relevant Chesapeake Bay Program representatives and Data Managers. For more information about the requirements and procedures outlined in this document, please contact the CBPO Water Quality Data Manager and the CBPO Habitat and Living Resources Data Manager at [datamanagers@chesapeakebay.net](mailto:datamanagers@chesapeakebay.net).

## Audience

The primary audience for this document includes all providers of monitoring data (stored in the Chesapeake Environmental Data Repository) funded by CBPO, including grantees and contractors, as well as CBPO Monitoring Data Managers, stewards, analysts, and publishers.

## Scope

The requirements described in this document pertain to all monitoring data resources maintained in the Chesapeake Environmental Data Repository (CEDR) that are delivered to the CBPO via grants, and all data resources that are funded by the CBPO whether direct CBPO funding or matching funds.

# Monitoring Data Guidelines and Requirements

The following guidelines and requirements must be followed by all contractors and grantees (“data providers”) who submit monitoring data to the CEDR. This includes data for CBPO’s water quality monitoring programs (shallow water, tidal, and nontidal) and living resources monitoring programs (i.e., tidal benthic, tidal plankton, and fluorescence).

In addition to the Universal Monitoring Data Submission Guidance, which applies to all monitoring data submitted to CEDR, data providers must also adhere to program-specific guidance relevant to their specific monitoring effort. Requirements may differ between water quality and living resources programs, so it is essential to consult all sets of guidance before submitting data.

## Universal Requirements for Monitoring Data Submissions

The following requirements and guidance apply to all monitoring data submitted to CEDR regardless of program type. These standards must be followed by data providers for both water quality and living resources monitoring programs.

## Chesapeake Bay Program Data Resource Deliverable Guidance

Data requirements and guidelines for data resources and information submitted to the Chesapeake Bay Program Office are outlined in [2025 Chesapeake Bay Program Data Resource Deliverable Guidance](#). Data providers submitting monitoring data should specifically follow the guidance outlined in the following sections of that document:

- **Geospatial Data Requirements:** Describes requirements for submitting data that contains geospatial coordinates.
- **CBPO Metadata Specification:** Describes requirements for data documentation.
- **Numeric Data Reporting Guideline:** Describes requirements for reporting numeric information, including value precision, true zeros, missing data, and parameters not sampled.
- **Date and Datetime Guideline:** Describes requirements for reporting date and time information.
  - Note: See below for additional guidance regarding 24-hour time formatting.

### Data and Metadata Submission Schedules

Monitoring data and metadata must be submitted to the Water Quality or Habitat and Living Resources Data Manager according to the schedules outlined in grant or contract work plans, as agreed upon by the data provider and the CBPO Grant/Contract Project Officer.

### Metadata Requirements

All metadata shall adhere to the requirements described in the [2025 CBPO Metadata Specification](#) and to submission schedules outlined in grant or contract work plans. Because all monitoring data are spatially referenced, data providers are expected to produce metadata that meet the **Level 3** metadata minimal requirements.

Data providers are required to submit metadata files in .txt or .xlsx format to the appropriate CBPO Data Manager (Water Quality or Habitat and Living Resources) via email, with the CBPO Grant/Contract Project Officer and the Chesapeake Bay Monitoring Coordinator copied on the correspondence.

CBPO minimum metadata requirements require the inclusion of at least one CBPO Theme Keyword in the metadata. At a minimum, data providers should include “Monitoring” and either “Water Quality” or “Living Resources” as Theme Keywords in each metadata submission.

### 24-hour Time Guidelines

All time data submitted must use the 24-hour time format. Times should be zero-padded and follow the HH:MM (e.g., 08:05) or HH:MM:SS (e.g., 08:05:30) format.

## Common Station Name Guidelines

The Chesapeake Bay Program requires that all monitoring data generated, collected for, or submitted to CBPO use a consistent set of common station names, to the extent possible, when identifying and reporting monitoring station locations. It is the responsibility of data providers to comply with this policy.

Existing project-specific station names can be accessed at the DataHub website (<https://datahub.chesapeakebay.net>) in “Station Information” data files. Station names should be consulted regularly to ensure consistent station naming.

Requests to update or add monitoring stations must be coordinated with the CBPO Water Quality Data Manager and the CBPO Habitat and Living Resources Data Manager.

## Common Method Code Guidelines

The Chesapeake Bay Program requires that all data generated, collected for, or submitted to the CBPO utilize standardized CBPO method codes. It is the responsibility of the data provider to comply with this policy.

Data providers should reference the method codes published in the lookup tables available on the DataHub website (<https://datahub.chesapeakebay.net>).

Requests from data providers to update or add CBPO method codes must be coordinated with the CBPO Water Quality Data Manager, the CBPO Habitat and Living Resources Data Manager, and the CBPO Quality Assurance Coordinator. The development of new method codes should maintain maximum compatibility with existing CBPO method codes.

## Error Correction Requirements

Data providers are responsible for correcting any errors found by the CBPO Data Managers. If a data provider discovers errors in a previously submitted dataset, they must correct the errors at no additional cost for a period of five years following the sample collection date.

## Documentation Retention Requirements

Data providers shall retain hardcopy records and source documents related to sampling events and laboratory analyses for a period of five years following the sample collection date.

## Program-Specific Requirements

### Water Quality Monitoring Programs

The following water quality program-specific requirements apply to:

- Tidal Water Quality Monitoring Projects
- Nontidal Water Quality Monitoring Projects
- Shallow Water Monitoring Projects

### *Data Delivery Requirements*

Data providers are required to submit quality-assured and quality-controlled (QA/QC) water quality monitoring data to CBPO using the Data Upload and Evaluation Tool (DUET). For technical instructions, data providers should refer to the “[Data Upload and Evaluation Tool \(DUET\) User Guide, Version 3.0](#)”.

Submitted data must be formatted as Microsoft Access database files (.accdb or .mdb, Microsoft Access 2003 or later). Template files and data dictionaries can be obtained by contacting the CBPO Water Quality Data Manager.

Each DUET submission must include seven standardized tables. While not all tables are required to contain data, all seven tables must be present in the submission file, even if some are left empty.

The submitted data package must include all field measurements, analytical results, and applicable quality control data from all stations sampled during the cruise or monitoring event.

Once submitted through DUET, the data will undergo additional QA/QC review by the CBPO Water Quality Data Manager. The Water Quality Data Manager will make the final determination on whether the data meet all requirements and is suitable for upload to CEDR.

After the data have been uploaded to CEDR, data providers will receive a file-acceptance email with an attached signoff form. Data providers must complete the form and submit it via email to the Water Quality Data Manager, with the CBPO Grant/Contract Project Officer and the Chesapeake Bay Monitoring Coordinator copied on the correspondence.

### *Reporting Below-Detection and Quantitation Limit Data*

All numeric values submitted to the CBPO must accurately reflect laboratory results and follow consistent procedures for handling below-detection data and results that fall between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL). The QUALIFIER field in the WQ\_DATA table must be used to indicate data values that fall below analytical thresholds. The following rules apply:

- Values below the Method Detection Limit (MDL) must be reported with a less-than (“<”) qualifier in the QUALIFIER field. These values must be censored to the MDL, such that the MDL value itself should be reported in the VALUE field.
- Uncensored below-detection values (i.e., actual measured values below the MDL) must be reported in the WQ\_DATA\_BMDL table. These raw values are available only to approved Chesapeake Bay Program data analysts and are not part of the public CEDR dataset. This dual reporting structure helps preserve data transparency while maintaining consistent data use for analytical purposes.
- Values between the MDL and the Practical Quantitation Limit (PQL, also referred to as the reporting limit) must be flagged with a “G” qualifier in the QUALIFIER field. These values represent detectable concentrations and should be reported as-is in the VALUE field.

## Living Resources Monitoring Programs

The following living resources program-specific requirements apply to:

- Tidal Benthic Monitoring Projects
- Tidal Plankton (Phytoplankton/Picoplankton) Monitoring Projects
- Fluorescence Monitoring Projects

### *Data Delivery Requirements*

Data providers are required to submit quality-assured and quality-controlled (QA/QC) living resources monitoring data to the CBPO Habitat and Living Resources Data Manager via email, with the CBPO Grant/Contract Project Officer and the Chesapeake Bay Monitoring Coordinator copied on the correspondence.

Acceptable file formats include:

- Comma-separated values (.csv)
- Microsoft Excel (.xlsx) files

Template files, lookup tables, and data dictionaries can be obtained by contacting the CBPO Habitat and Living Resources Data Manager.

The submitted data package must include all field measurements, analytical results, and applicable quality control (QC) data from all stations sampled during the cruise or monitoring event.

Once submitted, the data will undergo additional QA/QC review by the Habitat and Living Resources Data Manager. The Habitat and Living Resources Data Manager will make the final determination on whether the data meet all requirements and is suitable for upload to CEDR.

### *Taxonomic Nomenclature Requirements*

The Chesapeake Bay Program requires that all monitoring data generated, collected for, or submitted to the Chesapeake Bay Program use the Integrated Taxonomic Information System (ITIS) [<https://itis.gov>] for reporting taxonomic names and taxonomic serial numbers (TSNs). It is the responsibility of the data providers to comply with this policy.

Each submitted dataset must include the following for every taxon:

- The scientific name (as listed in ITIS)
- The TSN
- The taxon code used by the organization or laboratory (e.g., SPEC\_CODE, SPECCODE)

If no TSN exists for a given taxon, the data provider should assign the TSN a value of “0”.