|  |  |  |
| --- | --- | --- |
| Monitoring Method Guidance CN 0.73a **(October 2022)** | data submittal guidelines &EXTERNAL Data review PROCESS For Clean water act 305(b)/303(d) Integrated reporting purposesMassachusetts Department of Environmental ProtectionDivision of Watershed Management- Watershed Planning Program8 New Bond St., Worcester, MA. 01606; 508-792-7470 |   |

**Purpose**: To provide guidance to non-Massachusetts Department of Environmental Protection (MassDEP) groups regarding the submittal of quality-assured environmental monitoring data and supporting information to MassDEP, Division of Watershed Management (DWM), Watershed Planning Program (WPP), and to provide information on DWM-WPP’s review procedures for such “external” data.

**Background:**  In addition to using data collected internally, DWM-WPP may use quality-assured data from non-MassDEP groups to assess waterbody health and developing TMDLs (referred to as “external data providers”). To be considered usable by DWM-WPP for these purposes, these data must meet certain submittal requirements (as explained below) and undergo detailed review by DWM-WPP staff to evaluate the accuracy, precision, and representativeness of the data. Potential external data providers include, but are not limited to, grant recipients; local, state and/or Federal agencies; tribal nations; environmental consultants; and volunteer monitoring organizations.

**When to submit data**: For MassDEP’s Clean Water Act 305(b) and 303(d) assessment and reporting purposes, submittals of surface water quality or quantity data/information are welcome at any time, but submittal prior to set dates is required to consider the data/information in the development of the Integrated Report for each reporting cycle. Submission deadlines are listed on MassDEP’s external data web page ([www.mass.gov/guides/external-data-submittals-to-the-watershed-planning-program](http://www.mass.gov/guides/external-data-submittals-to-the-watershed-planning-program)). Data/information submitted after these dates, including during the public comment period, will not be considered in the Integrated Report for the current assessment cycle, but that data/information will be reviewed and considered in the subsequent cycle. The U.S. Environmental Protection Agency (EPA) requires Integrated Report submissions in the Spring of even-numbered years.

**What to submit**: Guidance, templates and forms identified below (in #2, #3 and #5) can be found here: <https://www.mass.gov/guides/external-data-submittals-to-the-watershed-planning-program>.

1. Cover letter or email.
2. Statement of Data Integrity (optional).
3. Data Files. Quality-assured monitoring data can be electronically submitted in two ways (or both):
	1. Using DWM-WPP’s data submittal template.
	Data files may be submitted using DWM-WPP’s data submittal Excel template, available via WPP’s external data web page (*link provided above*). Data sent using other formats may not be reviewed for usability by DWM-WPP, and external data providers should contact DWM-WPP staff for guidance if they believe the template will not work for their data/information. **Data file(s) must include quality control data**.
	2. Using EPA’s WQX online database.
	If submitting data via WQX please use the email address below to notify DWM-WPP when data was submitted. Please include with the notification email: a brief list of the data submitted, a copy of the approved QAPP (or cite title and approval date), **all quality control data that was not included in the WQX submission** (e.g., field duplicates, blanks, instrument calibration check results).
4. Copy of Approved QAPP. If the QAPP was approved by DWM-WPP, submissions can cite the **QAPP title and approval date** in the cover letter/notification email.
5. Summary Report (optional). In addition to the final data submittal, external data providers can also provide a summary report and/or a quality control (QC) summary. Suggested content for data reports can be found on the external data web page (*link provided above*).

Where to submit data: Electronic data files can be sent via e-mail to the following address: WQData.Submit@mass.gov. Contact WPP at the same address to arrange for transfer of files that are too large to submit through email. For regular mail delivery, data/information on CDs can be sent to the following address:

Massachusetts Department of Environmental Protection

BWR-DWM, Watershed Planning Program

8 New Bond St., Worcester, MA 01606

Attn: Robert Smith

**Pre-requisite guidelines for submittal of data for potential use in DWM-WPP’s waterbody assessments and TMDLs (Clean Water Act, Sections 305(b) and 303(d)):**

1. ***Monitoring data shall be collected under a MassDEP- or EPA-approved Quality Assurance Project Plan (QAPP).***

 The project QAPP shall follow applicable MassDEP and/or EPA guidance for monitoring QAPPs. Example QAPP guidance is provided here: <https://www.mass.gov/guides/environmental-monitoring-for-volunteers>. Stated project objectives should be consistent with DWM-WPP’s use of data/information for waterbody assessment and/or TMDL development purposes.

1. ***Analytical data shall be provided by an analytical laboratory certified by the Commonwealth of Massachusetts in the applicable analyses or by an otherwise-qualified laboratory with a documented Laboratory Quality Assurance Plan and Standard Operating Procedures (SOPs).***

 Use of a State-certified laboratory for all sample analyses is highly recommended but is not always possible. Lab data and metadata generated through the use of non-certified labs may receive greater scrutiny than those from certified labs. A list of State-certified labs is available at: <https://www.mass.gov/certified-laboratories>.

1. ***Quality-assured data (and supporting information) shall be provided in sufficient detail to evaluate the usability of the data.***

QC data should be provided in electronic format using DWM-WPP’s standard template (<https://www.mass.gov/guides/external-data-submittals-to-the-watershed-planning-program>) or similar format. All data should include the appropriate metadata (i.e., sampling and analytical information related to the data). Graphic and textual data analyses and summaries are optional.

**DWM-WPP’s external data review process**: Quality-assured data from external data providers are reviewed by DWM-WPP using the following general criteria (as appropriate) guided by best professional judgment to evaluate the data’s potential for use by DWM-WPP. All data submissions should be citable. Submittal of data does not guarantee its use by DWM-WPP.

1. Overall clarity, organization, and detail of the data submittal.
2. Overall precision, accuracy, representativeness, comparability, and completeness of the data in comparison to QAPP data quality objectives (DQO) and DWM-WPP data quality needs.
3. Estimated accuracy of lab analyses using Quality Control/Performance Evaluation (QC/PE) samples, spiked sample matrices, and positive/negative controls (for bacteria samples), as compared to project DQOs.
4. Overall evaluation of QAPP implementation (i.e., documentation of actual QC measures to ensure data quality, such as the frequency of instrument calibration and maintenance, problem identification and response, and personnel training).
5. Method consistency/variability among project participants and over time throughout the duration of the project.
6. Evaluation of any field audit information, side-by-side sampling results, and/or inter-laboratory QC audit information, if available, to assess inter-group and/or inter-lab precision.
7. Content of personal communication with project lead(s) and/or QC officer(s), if needed and available.

DWM-WPP staff conducts the external data reviews to assess its usability for Integrated Report assessments. A preliminary review determines if sufficient information has been submitted to conduct a full review. The external data provider may be contacted for additional or missing information.

A subsequent detailed review involves examining the following, when and if available, and as appropriate:

* + Review of any QC summary by the external data provider
	+ Frequency of QC samples (blank and duplicates) taken for each survey, and compare to QAPP
	+ Field blank sample results to verify lack of contamination
	+ Field duplicate sample results to verify acceptable precision
	+ Laboratory records if available (e.g., lab notebooks, lab bench sheets, multi-probe calibration books, etc.) for potential effects on data quality
	+ Analytical holding time violations
	+ Quality control results in laboratory data reports for potential implications to data quality (based on lab accuracy and precision data), and lab analytical performance during survey period based on results of any QC/PE testing
	+ Miscellaneous documentation (training records, e-mails, phone records, pers. comms., etc.) to highlight any potential problems affecting data quality
	+ Overall quality of other data, as available (e.g., benthic macroinvertebrates, fish toxics, other “biological” data)

Based on the full review (including any follow-up), conclusions regarding the usability of the data, as a whole and/or by components, are documented on the data review form and become the basis for DWM-WPP’s use or non-use of the submitted data. Data are categorized entirely or in part as Level 1, 2 or 3 to represent usability for assessments or other purposes. Data classified as Level 3 (potentially suitable for use in waterbody assessments) may be used for integrated Report and other decisions at the discretion of WPP staff.