



# MassDEP

**Massachusetts Department of Environmental Protection  
Bureau of Water Resources  
Division of Watershed Management  
Watershed Planning Program**

## STANDARD OPERATING PROCEDURE

### WPP Data Use Guidelines

**CN 000.83c**

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**Prepared and  
Approved by:**

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**Date:** 7/18/25

**Approved by:**

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**Date:** 7/21/25



List of Revisions

Revision Date	Revision	Pages #s	CN/ (Old CN if applicable)	Initials
2007	Original		000.83b	
7/18/25	Removal of appendix C, general updates, change from DWM to WPP	All	000.83c	JS



## **WPP Data Use Guidelines (by project-based QC Status):**

The following guidelines shall be applied to all WPP activities related to the use and transmission of draft and final data. All WPP data are categorized into five levels, reflecting the status of review and validation (finalization).

### **Notes:**

- 1) The preferred QC Status for use and/or release of WPP data is QC Status 5.
- 2) Although not recommended, all levels (QC1-5) can be shared with others if requested (e.g. for Freedom of Information Act purposes) with the appropriate disclaimers based on the QC status of the data. See Appendix B for example disclaimer language to accompany DRAFT data.
- 3) WPP technical memoranda (e.g., technical memorandum, interim report, etc.) containing QC1-QC3 data awaiting formal WPP data validation must incorporate a disclaimer, except in cases where a report and associated data have been reviewed and approved by a formal, documented WPP review committee (e.g., biological data).

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### **QC Status 1:**

Raw data. Generally not suitable for use or transmission to other parties, but can be transmitted to other parties upon request provided data are sent as “DRAFT” with standard disclaimers, as in Appendix B to this SOP (no technical or project-level review).

### **QC Status 2:**

Draft data that has been entered into the appropriate WPP database and for which data entry QC has taken place. Generally not suitable for use or transmission to other parties, but can be transmitted to other parties upon request provided data are sent as “DRAFT” with standard disclaimers, as in Appendix B (no project-level review).

### **QC Status 3:**

Draft data for which technical QA/QC review (e.g. QC sample results, outlier identification, comparison to project QAPP DQOs, etc.) has taken place. Generally not suitable for use or transmission to other parties, but can be transmitted to other parties upon request provided data are sent as “DRAFT” with standard disclaimers, as in Appendix B.

### **QC Status 4:**

Final Data. This level of data reflects project-level review by appropriate staff for reasonableness, completeness and acceptability. These data can be freely used and cited in documents without caution or caveat (reviewed and approved by all appropriate WPP staff).

The following guidelines pertain to receipt and use of QC Status 4 data:

- a) When using, analyzing, presenting or transmitting QC4 data, do not make any changes affecting CONTENT, including symbols and qualifiers used, censoring decisions, etc.
- b) When presenting data, provide KEY to symbols and qualifiers used.

### **QC Status 5:**

Final data in a published, citable report. The QC Status 4 guidelines stated above apply to the data contained in a report. (Reviewed and approved by all appropriate WPP staff).



## APPENDIX A

### Symbols and Qualifiers Used for WPP Data

The following data qualifiers or symbols are used in the MassDEP/WPP database for qualified and censored water quality and multi-probe data. Decisions regarding censoring vs. qualification for specific, problematic data are made based on a thorough review of all pertinent information related to the data.

#### General Symbols (applicable to all types):

“ ## ” = Censored data (i.e., data that has been discarded for some reason; check qualifier symbol for cause(s)).

“ \*\* ” = Missing data (i.e., data that should have been reported, but were not for any reason other than no water).

“ -- ” = No data (i.e., data not collected nor intended)

“ ^^ ” = No water (i.e., a special case of missing data due to dry/no water conditions)

\* = Analysis performed by Laboratory OTHER than DEP’s Wall Experiment Station (WES)

[ ] = A result reported inside brackets has been “censored”, but is shown for informational purposes (e.g., high blank results).

#### Multi-probe-specific Qualifiers:

“ i ” = inaccurate readings from Multi-probe likely; may be due to significant pre-survey calibration problems, post-survey checks outside typical acceptance ranges for the low ionic and deionized water checks, lack of calibration of the depth sensor prior to use, or to checks against laboratory analyses. Where documentation on unit pre-calibration is lacking, but SOPs at the time of sampling dictated pre-calibration prior to use, then data are considered potentially inaccurate.

#### Qualification Criteria for Depth (i):

##### General Depth Criteria: Apply to each OWMID#

- Clearly erroneous readings due to faulty depth sensor: Censor (i)
- Negative depth readings: Censor (i)
- 0.0 m depth readings: Qualify (i)
- Positive depth readings: Accept without qualification

“ m ” = method not followed; one or more protocols contained in the WPP Multi-probe SOP not followed, ie. operator error (eg. less than 3 readings per station (rivers) or per depth (lakes), or instrument failure not allowing method to be implemented.

“ s ” = field sheet recorded data were used to accept data (i.e., not data electronically recorded in a data logger or in cases where data logging is not possible (e.g., single-probes)).

“ u ” = unstable readings, due to lack of sufficient equilibration time prior to final readings, non-representative location, highly-variable water quality conditions, etc. See Section 4.1 for acceptance criteria.



“ c ” = unit not calibrated for a particular parameter and/or greater than calibration standard used for pre-calibration, or outside the acceptable range about the calibration standard. Typically used for conductivity (>718, 1,413, 2,760, 6,668 or 12,900 uS/cm) or turbidity (>10, 20 or 40 NTU). It can also be used for TDS and Salinity calculations based on qualified (“c”) conductivity data, or that the calculation was not possible due to censored conductivity data ( TDS and Salinity are calculated values and entirely based on conductivity reading).

“ r ” = data may not be representative due to circumstances and/or conditions at the time of sampling.

“ t ” = tidal influence likely (not indicative of freshwater flow)

“ ? ” = Light interference on Turbidity sensor (Multiprobe error message). Data is typically censored.

### **Sample-Specific Qualifiers:**

“ a ” = accuracy as estimated at WES Lab via matrix spikes, PT sample recoveries, internal check standards and lab-fortified blanks did not meet project data quality objectives identified for program or in QAPP.

“ b ” = blank Contamination in lab reagent blanks and/or field blank samples (indicating possible bias high and false positives).

“ d ” = precision of field duplicates (as RPD) did not meet project data quality objectives identified for program or in QAPP. Batched samples may also be affected. “d” may also apply to lab duplicate precision.

“ e ” = not theoretically possible. Specifically, used for bacteria data where colonies per unit volume for e-coli bacteria > fecal coliform bacteria, for lake Secchi and station depth data where a specific Secchi depth is greater than the reported station depth, and for other incongruous or conflicting results.

“ f ” = frequency of quality control duplicates did not meet data quality objectives identified for program or in QAPP.

“ h ” = holding time violation (usually indicating possible bias low)

“ j ” = ‘estimated’ value; can be used for lab-related issues where certain lab QC criteria are not met and re-testing is not possible (as identified by the WES lab only). Also used to report sample data where the sample concentration is less than the ‘reporting’ limit or RDL and greater than the method detection limit or MDL ( $mdl < x < rdl$ ). Also used to note where values have been reported at levels less than the mdl. Also used for estimated ranges based on known metadata.

“ m ” = method SOP not followed, only partially implemented or not implemented at all, due to complications with sample matrix (eg. sediment in sample, floc formation), lab error (eg. cross-contamination between samples), additional steps taken by the lab to deal with matrix complications, lost/unanalyzed samples, use of expired reagents and missing data.

“ p ” = samples not preserved per SOP or analytical method requirements.

“ r ” = data may not be representative due to circumstances and/or conditions at the time of sampling, including the possibility of “outlier” data.

“ t ” = tidal influence likely (not indicative of freshwater flow)

**Survey-Condition-Specific Qualifiers:** TBD (e.g., estimated <7Q10 flows)



## APPENDIX B

### Example Disclaimers for QC1-QC3 Data

#### NOTES:

- 1) **All data transmittals must be well documented** in paper form (e.g., paper copy of letter sent, paper copy of email sent, etc.) AND secured electronic format (e.g., e-copy of letter sent, e-copy of email sent, e-file of data file sent, etc.).
- 2) WPP technical memoranda (e.g., technical memorandum, interim report, etc.) containing QC1-QC3 data awaiting formal WPP data validation must incorporate a disclaimer, except in cases where a report and associated data have been reviewed and approved by a formal, documented WPP review committee (e.g., biological data).

#### Example Disclaimer Letter/E-mail for Data Transmitted to Outside Parties:

“January 2, 2007

TO:

From:

RE: ***Blackstone River watershed DRAFT 2003 data***

As requested, enclosed please find DRAFT water quality monitoring data collected by MassDEP *at several stations in the Blackstone watershed in 2003.....*

NOTE: These data are currently being validated by MassDEP, Division of Watershed Management, and are considered **DRAFT**. As a result of WPP’s data validation process, some of these data may be censored or qualified. Users of these data are advised to check with WPP for the latest available and final (published) data.

If you have any questions or need additional information regarding data, please call Richard Chase at 508-767-2859.

Sincerely...”

#### Example Disclaimer “read me” File for Spreadsheet Data Transmitted to Outside Parties:

**WPP data in this directory and subdirectories are raw data intended for preliminary review by staff. These data are not suitable for publication or dissemination outside of WPP without prior documented approval by WPP senior staff.**

Data contained in this directory have been aggregated from various data repositories and/or collected from various external and internal sources, and provided in formats consistent with their original source. No data here shall be considered suitable for use beyond establishing a “proof of concept”.

#### **PLEASE NOTE:**

1. Raw data available as of October 2010 are provided “as is”. There can be no guarantee that all relevant raw data were available as of October 2010, and no effort will be made to monitor for new data that might become available. This is especially true for data from external sources.
2. The file or files in this directory contain raw, unprocessed data that have not been reviewed nor approved for inclusion in any WPP reporting of WPP data or analysis, nor shall this data be used to form or communicate any conclusions. No effort has been made to qualify or censor any of the data provided.



3. WPP's data management team is currently working to validate and finalize these data. Data validation involves a variety of activities to assemble, collate and pre-process data files, and evaluate data quality in comparison to WPP's data quality objectives and acceptance criteria. Validation may result in the qualification or censoring of data.

3. These raw data must not be modified in any way.

4. These raw data may only be used to aid in the development of models, processes, automation, test cases, analyses or other "proof of concept" efforts with the express understanding that only final/approved data may be used to generate results suitable for reporting informally or formally.

5. The contents of this directory may be removed without prior notice under the following circumstances:

Final data become available.

The contents are considered "out of date" or invalid.

Information will be provided in place of the original data that describes the status of the original request with instructions, if any, on where to obtain more current data.

**For more information, please contact Jasper Sha or Richard Chase**