**Overview text – version 1 (6/16/2021)**

The ContDataQC Shiny app is a free R-based tool to QC, combine, and summarize continuous data files in a standardized way without having to download any programs to your computer. It also has a function that allows users to download USGS gage data for desired time periods. The table at the bottom of this page shows how the website is structured.

To date, ContDataQC has been used primarily on continuous temperature and hydrologic data but can also be used for conductivity, pH, turbidity and chlorophyll-a. Users can add other parameters as well but this requires more advanced R skills.

This Shiny app is linked to the ContDataQC R package, which was developed by Erik W. Leppo from Tetra Tech ([Erik.Leppo@tetratech.com](mailto:Erik.Leppo@tetratech.com)) and is available on GitHub (<https://github.com/leppott/ContDataQC>).

Development of the ContDataQC R tools has been funded by the United States Environmental Protection Agency (EPA) Office of Research and Development (ORD) as part of a larger project to establish Regional Monitoring Networks (RMNs) for freshwater streams and inland lakes (USEPA 2016, USEPA 2021; lead EPA scientist: Britta Bierwagen). The RMNs are a volunteer, collaborative effort in which entities collect long-term continuous temperature and hydrologic data at targeted sites to detect changes over time. The R package and Shiny app were developed with the following objectives in mind: ensure that a certain (minimum) level of QC is being performed on the continuous RMN data; standardize and speed up data QC and reduce missed errors; standardize data for further analysis; and facilitate data sharing.

Overview of how the website is structured [insert Overview table - in Excel]

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| --- | --- | --- |
| **Main tab** | **Sub tabs** | **Description** |
| Overview |  | Purpose, funding, main uses to date |
| Data preparation | Organizing files | Recommended folder and organizational scheme |
| Naming files | Recommended file naming scheme |
| Formatting files | Formatting requirements for input files (comma delimited (.csv), column headings) |
| QC Thresholds | Default | Default thresholds for the four flag tests (gross, spike, rate of change, and flat line); these are based on eastern coolwater streams |
| Customize | Instructions on how to evaluate and adjust QC test thresholds |
| Main functions | Run functions | Drop-down menus for running the three main functions: QCRaw (which generates QC reports), Aggregate (which merges QC'd data files from the same site and different time periods together) and SummaryStats (which generates summary statistics and time series plots) |
| Check input file | Summary table showing what parameters are in the uploaded files; user should ensure all the desired parameters are present |
| Outputs | Examples of QC reports, aggregated data files and SummaryStats outputs |
| Download USGS gage data |  | Download USGS gage data for desired sites and time periods |
| Console |  | Shows messages output by R during the QC, aggregating, summarizing, and USGS data retrieval processes |
| Test Data | Streams | Test data files for streams (temperature, sensor depth, water level, water pressure, barometric pressure); sensors are deployed at a single depth at each site |
| Lakes | Test data files for lakes (temperature, DO and water level); sensors are deployed at multiple depths at each site |
| FAQ |  | Frequently asked questions |
| Status |  | ContDataQC is continually being improved; this page provides a status report and 'wish list' items that will be addressed as resources permit |