



Quality Plan for the WIN Section

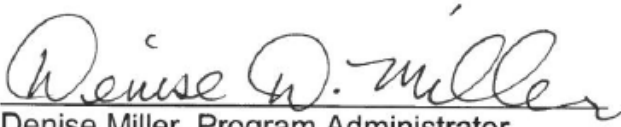
Watershed Services Program
Division of Environmental Assessment and Restoration
Florida Department of Environmental Protection

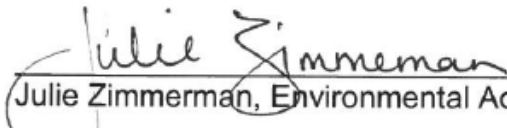
Florida Department of Environmental Protection

August 29, 2019

Signature Page

The undersigned have read and understood this Quality Plan, are charged with managing and improving the quality system and are responsible for ensuring that all staff properly execute the procedures discussed in the plan.

 8/29/2019
Denise Miller, Program Administrator Date

 8/29/2019
Julie Zimmerman, Environmental Administrator Date

 August 29, 2019
Lisa Schwenning, Quality Assurance Officer Date

1. Introduction

The Florida Department of Environmental Protection (FDEP) Quality Assurance (QA) program involves the implementation of a management system (planning, review, training, and assessment) to ensure that data collection, generation, interpretation, reporting, evaluation and archiving are of sufficient quality to support Department decisions. The effectiveness of FDEP's QA program is dependent upon the actions of all FDEP staff, from "front line" employees to management, meaning QA is a function distributed throughout our organization. One aspect of our program is to ensure that Department QA activities are carried out according to commitments made to the Environmental Protection Agency as enumerated in the FDEP Quality Management Plan (QAMP) Revision 6/24/09.

In 2017, the Watershed Services Program (WSP) launched a new data repository and submission interface to replace the outdated Florida STORET (STOrage and RETrieval) system. The new system, Watershed Information Network (WIN), is now the sole water quality data submission interface for FDEP for data providers for non-regulatory data. Though data loading to the Florida STORET system has been retired, water quality data continue to be housed in the Florida STORET warehouse and can be retrieved through the public access website, STORET Public Access (SPA). For this reason, the Florida STORET system remains relevant in the WIN section Quality Plan.

In order to execute the components of the FDEP QA Directive, the WIN section has developed a quality plan, the purpose of which is to ensure the implementation of a quality system. This document describes the steps the WIN section takes to ensure the scientific and legal defensibility of environmental data we manage. It describes the process of training, assessment and corrective action we undertake to ensure that environmental data meet our established quality criteria.

The FDEP Secretary is committed to implementation of the quality assurance requirements in the QAMP and as authorized at Section 403.0623 Florida Statutes (F.S.) and Chapter 62-160 Florida Administrative Code (F.A.C.) (the FDEP Quality Assurance rule). It is the Secretary's intent to carry out these obligations and requirements as described in the Department's QA Directive (Directive 972, September 2009, at <https://floridadep.gov/dear/quality-assurance/documents/dep-qa-directive-and-qa-rule>).

2. Basic Elements of the WIN Quality Plan

We expect all staff to read, understand and follow the procedures and criteria as discussed in this plan, and to carry out their assigned responsibilities for effective utilization of our quality system. This Quality Plan explains both the process and criteria by which the quality systems for the WIN and Florida STORET data

repositories are managed. The plan is utilized as an instrument of internal communication to inform our staff of current and future quality assurance activities. It describes how specific QA duties are assigned to responsible staff. We will revise our Quality Plan as needed, and will ensure the consistent application of procedures and criteria for the management of environmental data. The Quality Plan will also be used as a training document for new staff and as a reference for experienced personnel. The Quality Plan and its revisions also serve as an archival record of our formal quality system.

The elements of our plan are consistent with the Department's QAMP, QA Directive and QA Rule (Chapter 62-160, F.A.C.). Our plan addresses all activities associated with management of environmental data, including data receipt, review and storage.

2.1 Policy Statement

It is the policy of the WIN section to:

- Develop and implement the Quality System described in this document.
- Adaptively manage our Quality System to be consistent with provisions of the FDEP Quality Assurance Management Plan.
- Ensure that each staff is properly trained to execute their assigned functions.
- Implement procedures to evaluate the quality of the data we manage and to implement corrective actions when data do not meet our Data Quality Objectives.
- Perform a yearly systematic assessment of our quality assurance activities, including any corrective actions, with the findings submitted to the FDEP QA Coordinator for use in compiling the FDEP QA Report to the Secretary.

3. Ethics

All employees of the FDEP WIN section are held to high professional ethical standards in the performance of their duties. All employees are required to read, understand and sign an 'Ethics Statement' attesting to their commitment to honesty and integrity in performance of their duties. In addition, all employees are required to attend an annual ethics training class. Improper, unethical or illegal actions will be dealt with according to the published Administrative Directives of the FDEP.

4. Organization and Responsibilities

The WIN section resides within the Watershed Services Program (WSP) of the Division of Environmental Assessment and Restoration (DEAR).

The organization of the WIN section within WSP is as follows:

- Denise Miller: Program Administrator, WSP
- Julie Zimmerman: Environmental Administrator, WSP, Watershed Information Network (WIN) section
- Lisa Schwenning: WIN Administrator; WIN Quality Assurance Officer, WQX Coordinator
- Justin Nelson: WIN QA Coordinator; WIN Coordinator (Southeast, Northwest and Northeast Districts)
- Thomas Adams: WIN Coordinator (Southwest, South and Central Districts and interim for Statewide organizations)
- Vacant Position: WIN Coordinator (Statewide organizations in training)

Through WIN and Florida STORET, the WIN section implements Florida statutory requirements, FDEP rule requirements and U.S. EPA requirements for management of environmental (non-regulatory) data for the state. We manage data from both internal data providers (e.g., FDEP data providers) and external data providers (e.g., Water Management Districts (WMDs), Counties, local governments). Those data are provided to users of the data through the publicly available STORET Public Access (SPA) website, through the Florida STORET Warehouse, and the publicly available WIN Reports Module, through the WIN Data Warehouse. The SPA website and WIN Reporting Module are maintained by the FDEP Office of Technology & Information Services (OTIS) in collaboration with the WIN section. WIN section management of the data includes working with data providers to assist them with loading data to WIN, training WIN data providers (e.g., on data maintenance, quality assurance and data migration), and addressing quality assurance issues of both WIN and Florida STORET. WIN section also uploads the data to the U.S. EPA Water Quality Exchange (WQX) per federal requirements. Additionally, our WIN coordinators assist with database-related inquiries.

WIN section staff perform the following duties:

- Act as Data Provider Coordinators for FDEP (WIN Coordinators), working with water quality monitoring agencies in assigned FDEP District areas to facilitate loading of data to WIN;
- Work with water quality agencies statewide to coordinate Florida WIN training and implementation needs;
- Coordinate with the FDEP program staff, Water Management District staff, and other Data Providers to support the management of data in Florida STORET and WIN;
- Evaluate quality of data and ensure quality control of data migration to WIN;

- Coordinate with the FDEP Office of Technology & Information Services (OTIS) on database issues to ensure that Florida STORET and WIN data management needs are met.
- Coordinate with the FDEP OTIS to design, implement, improve, and maintain database interfaces to provide for STORET and WIN data retrievals;
- Respond to requests regarding Florida STORET and WIN data retrievals;
- Provide data to U.S. EPA WQX, ensuring quality control of data uploads, and coordinate with U.S. EPA WQX staff;
- Assist with research and resolution of database related inquiries, including data quality and verification inquiries;
- Develop, implement and provide training on standards and procedures for management and quality assurance of data in WIN
- Provide feedback to the WIN section Quality Assurance Officer (QAO) for improving the program quality system.

Staff evaluate program data using Data Quality Objectives (DQOs) and Data Quality Indicators (DQIs) to implement corrective actions as directed by the QAO. A list of our DQOs and DQIs for WIN is provided in Table 1, and for Florida STORET is provided in Table 2.

Responsibilities of the WIN section Quality Assurance Officer (QAO), Lisa Schwenning, include:

- Coordinates and participates in the quality evaluation of data managed by the section;
- Provides oversight of staff performance of assigned QA functions;
- Ensures corrective actions are implemented for data non-conformance as determined by evaluation of the data against WIN and Florida STORET Data Quality Objectives;
- Assists program managers in the development of the Quality System and other logistical aspects of its implementation, such as coordinating training needs;
- Coordinates data reviews and documents all program QA activities, including training, data management processes, developing data quality rules, data assessments and corrective actions, and uses this information to provide reports to FDEP management, including providing information to the FDEP QA Section for use in compiling the FDEP QA Report to the Secretary.

Our QAO documents all program QA activities, including training, data management processes, developing data quality rules, data verification and corrective actions.

Responsibilities of the WIN QA Coordinator, Justin Nelson, include:

- Effectively manages data corrections to the Florida STORET (STOrage and RETrieval) and WIN databases.

- Identifies and logs issues, assign tasks, reviews and submits correction requests to appropriate party.
- Manages a consistent and reasonable QA workload across all staff.
- Verifies that data correction issues are resolved before they are closed out.

The Environmental Administrator of the WIN section, Julie Zimmerman, ensures that this quality system is fully operational within our program and provides general oversight. Lisa Schwenning is the designated WIN section Quality Assurance Officer. These two individuals also designate the WIN section Data Quality Objectives and Data Quality Indicators (see Tables 1 and 2) to ensure they meet our program's needs, and periodically evaluate the effectiveness of staff's data quality activities, including reviewing audit results. They evaluate corrective action policies and procedures to be implemented when data do not meet program DQOs. Our Environmental Administrator reviews and, as necessary, discusses routine data evaluation reports with the QAO, reviews the annual Quality Assurance Report to be submitted to the FDEP QA Coordinator for inclusion in the FDEP QA Report to the Secretary, and discusses findings of the report with the QAO.

5. Training

All personnel are properly trained to perform their duties. WIN section management annually assesses whether our staff performance conforms with the policies and procedures of our section.

Our training procedures consist of:

- Training WIN Coordinator staff on the differences between Florida STORET (FLASTORET, FDEP STORET, the Florida STORET Warehouse and STORET Public Access (SPA)), U.S. EPA STORET, U.S. EPA Legacy STORET, U.S. EPA WQX, and Doppler SBIO (FDEP Statewide Biological Database);
- Training WIN Coordinator staff about the DEAR LIMS (Laboratory Information Management System) and the Data Merge Tool (DMT) relative to WIN;
- Training WIN Coordinator staff and WIN data providers on creating, formatting, and converting data files for the WIN import and migration process.
- Training WIN Coordinator staff on conducting data QA activities;
- Training WIN Coordinator staff on the application of WIN and Florida STORET DQIs and DQOs;
- Training WIN Coordinator staff on use of and recommended corrective actions relative to the WIN import process and system errors;
- Training WIN Coordinator staff how to document QA activities when encountered;

- Training WIN Coordinator staff about applicable FDEP rules, program area data requirements and federal reporting data requirements;
- Training WIN Coordinator staff how to use the SPA website and the process for any QA updates made to data in the Florida STORET Warehouse;
- Training WIN Coordinator staff and WIN users on how to use the WIN website to access and retrieve water quality data;
- Review of ethics policy with the QAO;
- Periodic refresher trainings or delivery of updated information, when needed;
- Cross-training staff on specifically assigned tasks and responsibilities, and
- External professional development courses related to data management and quality assurance, and technological advancements.

Staff are evaluated by reviewing their performance to determine effectiveness of training. For example, after training by experienced staff, new staff are observed by experienced staff during coordination activities with data providing agencies before they continue with coordination independently. Refresher training and evaluations also are conducted for experienced staff. Cross-training and evaluations also are conducted when staff exchange ideas and assist one another in troubleshooting and brainstorming sessions.

We develop and maintain a library of training SOPs for WIN section staff, a list of which is provided in Section 11. References.

6. Data Management

The WIN section staff understand the need to manage and evaluate the quality and usefulness of environmental data to be used in environmental assessments. We conduct the following data management procedures relative to the collection, evaluation, storage and reporting of data in WIN and Florida STORET. Data evaluation procedures are based on our established Data Quality Objectives and Data Quality Indicators. Tables 1 and 2 provide a list of the routine data quality checks for Florida STORET and WIN, respectively. Staff evaluate data using those DQOs and DQIs and implement corrective actions as directed by the QAO.

The WIN system is an intelligent web-based system that identifies and tracks data quality along the data loading process. If the data do not meet WIN's minimum data quality standards (MDQS), the violated rule(s) will be flagged by the system and an opportunity is available to correct the violation within the staging tables before the data can be migrated to production.

WIN section staff assist data providers in formatting and loading quality data to WIN. During the data formatting process, all WIN MDQS are implemented into the data provider's formatting and WIN import configuration. Data are then loaded into a set of staging tables and evaluated for quality before migration to

production. The system activates a different set of data quality checks based upon the file type that is being loaded; Projects, Monitoring Locations, or Activities & Results. For example, each new monitoring location loaded to the WIN system must undergo a visual verification process by the data provider to ensure the correct latitude and longitude are represented in the WIN system for associated data. WIN has a front-end system of data quality rules (see Table 1) and checks that prevent data from being migrated to production until they meet WIN MDQS. Any data quality issues that may not be caught by the front-end quality engine of WIN can be revealed through back end reports and flagged as anomalies. These anomalies are reviewed by the data provider for resolution in the WIN system. This data loading process is described in depth in the document titled WIN_User_Manual.docx.

The WIN system is dynamic in that it can accommodate updates and new requests regarding WIN's MDQS, allowable standard values, and changes to rules governing data quality.

The Data Merge Tool (DMT) is a feature integrated in the FDEP LIMS application for use by FDEP data providers to WIN. DMT is used to perform an automatic merge of Sampling Field with Lab data and create a text file that can be loaded into the WIN system. The DMT process is described in detail in the documents DMT_User_Guide - November 2017.pdf and DMT-WIN_Help_Guide.docx., which are available to DMT users supported by the FDEP Central Laboratory.

WIN section staff ensure quality control of data uploaded to the U.S. EPA WQX database. A set of data checks has been developed to ensure WIN data meet the data quality rules set forth by EPA. The data checks are run on each dataset prior to uploading data to WQX. The errors are identified and archived in an MS Excel spreadsheet that is sent to the assigned WIN Coordinator. The WIN Coordinator works with the data provider to correct issues that would prohibit the data from being uploaded to WQX. Once all issues are resolved, the data are uploaded to U.S. EPA WQX.

WIN Coordinators assist in research and resolution of dataset related inquiries prioritized by the QAO. Data generators and consumers sometimes have questions about the data in WIN and in Florida STORET. All questions are researched by the assigned WIN Coordinator. Resolution typically is dependent upon the data provider to answer questions about their data. The WIN Coordinator thoroughly investigates the inquiry until a resolution is determined or all known resources for inquiry are exhausted.

The WIN section maintains a library of training documents accessible to data providers through a web link (<http://publicfiles.dep.state.fl.us/DEAR/WIN>). These documents are available for new Data Provider initiation, and upon request. A list of documents is provided in Section 11. References.

WIN is the successor to Florida STORET. As such, Florida STORET is now closed to new data imports. However, there are occasions where data owners will request updates or corrections to data housed within Florida STORET. These requests are fulfilled through coordination between the WIN Coordinator and the FDEP database administrator who will run the corrective scripts directly on the relevant database, followed by a data refresh in the STORET Warehouse.

7. Documentation

WIN Documentation:

Accurate documentation is an important factor for determining the success of QA activities. The WIN system provides the following internal record-keeping procedures to ensure appropriate documentation of QA activities.

- Standard Values Requests: Requests for new standard values, or requests for changes to existing standard values, are recorded in the WIN system. Once a request is submitted, users can search through all SVL requests and track the progress and resolution of each request.
- Dataset History: WIN automatically moves the Migrated data to the Warehouse on a pre-set schedule. The status of imported data remains on the Dataset List screen as 'Migrated' for 8 days after which it is purged. Data that are purged by WIN, deleted, or migrated by a data loader are eliminated from the Dataset List screen. There is a history of previously uploaded files and their statuses available by accessing the "H" icon in the upper right corner of the Dataset List screen within WIN.
- Data Audits: This sub-menu option is available to all WIN users with a role. Selection of this option navigates you to the screen used to search and list Audits recorded within WIN. From the qualifying list of audits, you can individually select each audit to see the detailed characteristics of the audit and the list of results which may be censored by DEAR for one or more uses based on the findings of the Audit.
- Data Anomalies: This sub-menu option is available to all WIN users with a role. Selection of this option navigates you to the screen used to search and list Anomalies by data type for a given organization. Internal DEP users may initiate an anomaly on a record when they need clarification or if the data point contains information that suggests it may be in error. From the qualifying list of anomalies, one can individually select each anomaly to see the detailed characteristics of the anomaly including the reason for initiating the anomaly (Findings), the response, and the resolution. In an effort to share findings and reduce the number of redundant questions, all anomalies are visible to internal DEP analysts.
- QC Reports: There are several reports that the WIN system generates on a staggered static schedule highlighting data that may have QC issues. These reports are reviewed by WIN Coordinators and resolutions are applied if needed. The reports are stored on a FDEP network drive and are backed up nightly.
 - Referential Integrity Report
 - QC Reports
 - MDQS Reports
 - Duplicate Data Report

- DEP Rounding Issue Report

WQX Documentation

- All STORET WQX export logs and processing reports have been archived on a FDEP network drive that is backed up nightly.
- All data XML files submitted to U.S. EPA WQX are archived on a FDEP network drive that is backed up nightly.

STORET Documentation

As WIN is the successor to Florida STORET, and Florida STORET is closed to new data uploads, documentation of QA activities for Florida STORET is limited to data updates and corrections. WSP, WIN section, will preserve historical STORET documentation but will now focus on newly requested updates and corrections.

Current updates and corrections:

- All data provider requests for updates and/or corrections are stored on a FDEP network drive that is backed up nightly.
- All SQL Scripts that are developed to initiate updates and/or corrections are stored on a FDEP network that is backed up nightly.

Historical data import and exports:

- All Data Provider import logs have been archived on a FDEP network Drive that is backed up nightly
- All STORET Data.dmp files and export logs have been archived on a FDEP network drive that is backed up nightly;
- The Florida STORET, FDEP STORET, and STORET Warehouse databases are refreshed and backed up upon request on FDEP network servers.

Historical data review (checks of database entries):

- All Data Checker reports have been archived by the assigned Coordinator;
- Historical counts of flagged data corrected and/or verified have been archived on a FDEP network drive that is backed up nightly;

Document control:

- All data repository documents produced by the WIN section are maintained and archived on a FDEP network drive that is backed up nightly.

8. Contract Management

The WIN section ensures that the FDEP contracts we administer are properly developed and managed to assure appropriate data quality. We ensure that contract development includes appropriate provisions of the FDEP OTIS and, if applicable to the contract, provisions of the FDEP QA Rule (Chapter 62-160) and

DEP-QA-002/02. WIN section information technology (IT)/data management-related contracts are contracted through and/or reviewed by OTIS, and, if applicable, are reviewed by the FDEP QA Section prior to execution of the contract. Contract managers assure that the work is properly planned and executed, is consistent with department IT standards and requirements, and, as relevant, is consistent with the FDEP QA Rule.

9. Audits and Corrective Actions

WIN section staff conduct data assessments serving the purpose of audits throughout our data management process, resulting in data verifications and/or data corrections and reporting as described under Section 6. Data Management and Section 7. Documentation. Data assessments are an integral part of the WIN section data management process for WIN and Florida STORET. The results of this integral data assessment are captured in quarterly and annual data quality reporting.

10. Report Compilation

To provide the Secretary with information regarding FDEP's ongoing QA efforts, the WIN section will prepare a WIN and STORET-specific QA report that describes and compiles the results of all appropriate QA activities, and will provide the report to the FDEP QA Coordinator for inclusion in the Department-wide annual QA Report to the Secretary.

11. References

General References:

- Chapter 62-160, Florida Administrative Code. Quality Assurance. Florida Department of Environmental Protection Quality Assurance Rule for Water, Waste and Resource Management. April 16, 2018.
- Chapter 62-303, Florida Administrative Code. Identification of Impaired Surface Waters. Florida Department of Environmental Protection. July 26, 2016.
- EAS 01-01. Data Quality Assessment Elements for Identification of Impaired Surface Waters. Florida Department of Environmental Protection, Environmental Assessment Section (EAS). April 3, 2001.
- DEP-SOP-001/01. General Sampling Procedures. Florida Department of Environmental Protection. April 16, 2018.
- DEP-QA-002/02. Requirements for Field and Analytical Work Performed for The Department of Environmental Protection under contract. Florida Department of Environmental Protection. April 15, 2002.
- Water Quality Exchange. Flow Configuration Document Version 2.0. Environmental Information Exchange Network. U.S. EPA. June 30, 2008.

Training Documents for WSP WIN staff:

WIN Deliverables:

- WIN ERD Migrated Data.pdf (21/7/2017)
- WIN ERD Warehouse.pdf (21/7/2017)
- WIN Import Warehouse Tables.xlsx (21/7/2017)

WIN Example Files:

- WIN Example Files.xlsx (7/8/2019)

WIN FAQs:

- WIN FAQs.docx (7/27/2018)
- WIN FAQs.pdf (7/27/2018)

WIN MDQS:

- 1_Project_WIN_Standards.xlsx (9/19/2017)
- 2_Surface_Water_Location_WIN_Standards.xlsx (7/8/2019)
- 3_Ground_Water_Location_WIN_Standards.xlsx (6/28/2019)
- 4_Activity_Result_WIN_Standards.xlsx (5/17/2019)
- Approved Methods (5/17/2019)

WIN Presentations/Training Videos:

- WIN General Information 04012019.pptx
- WIN Import and Migration Video 2018-03-05.mp4 (3/5/2018)
- 2018-04-12 14.01 WIN_DMT Demo.mp4 (4/16/2018)
- Deleting_Anomaly_24.mp4 (11/6/2017)
- Field_Blank_Association_Correction.mp4 (3/30/2018)
- WIN Import and Migration Video 2018-03-05 (3/5/2018)

WIN User Manuals:

- WIN Quick Start Guide V2.docx (1/9/2018)
- WIN User Manual 2.01.docx (5/29/2019)
- WIN User Manual 2.01.pdf (5/29/2019)
- WIN Upload Import Process.pdf
- DMT-WIN_Help_Guide.docx
- LIMS Browser SOP.pdf

STORET Public Access (SPA)

- How to query Stations and Results (STORET/_Walkthrough_nomap.doc)
- How to query Stations, Results, and Search Stations by Map (STORET _Walkthrough_map.doc)

WIN Training documents accessible to data providers:

WIN Deliverables:

- WIN ERD Migrated Data.pdf (21/7/2017)
- WIN ERD Warehouse.pdf (21/7/2017)
- WIN Import Warehouse Tables.xlsx (21/7/2017)

WIN Example Files:

- WIN Example Files.xlsx (7/8/2019)

WIN FAQs:

- WIN FAQs.docx (7/27/2018)
- WIN FAQs.pdf (7/27/2018)

WIN MDQS:

- 1_Project_WIN_Standards.xlsx (9/19/2017)
- 2_Surface_Water_Location_WIN_Standards.xlsx (7/8/2019)
- 3_Ground_Water_Location_WIN_Standards.xlsx (6/28/2019)
- 4_Activity_Result_WIN_Standards.xlsx (5/17/2019)
- Approved Methods (5/17/2019)

WIN Presentations/Training Videos:

- WIN General Information 04012019.pptx
- WIN Import and Migration Video 2018-03-05.mp4 (3/5/2018)

WIN User Manuals:

- WIN Quick Start Guide V2.docx (1/9/2018)
- WIN User Manual 2.01.docx (5/29/2019)
- WIN User Manual 2.01.pdf (5/29/2019)

STORET Public Access (SPA)

- How to query Stations and Results (STORET/_Walkthrough_nomap.doc)
- How to query Stations, Results, and Search Stations by Map (STORET/_Walkthrough_map.doc)

20 Elements:

- 20 Elements Instructions and Definitions
- Data Quality Assessment Elements for Identification of Impaired Surface Waters (DEP EAS-0101)
- Field Analytical Methods crosswalk
- Potential discrepancy in Chlorophyll A and B Results
- Value Qualifier Help Document

Table 1. Data Quality Objectives and Data Quality Indicators used by the Watershed Services Program WIN section for WIN. DQOs and DQIs are modified as necessary to meet the requirements and objectives of WIN for the FDEP programs and projects for which we manage data and to meet federal reporting requirements.

RULE Number	RULE NAME	RULE DESCRIPTION
1	Illogical Project Dates	The Project Start Date must be less than or equal to the Project End Date, if provided.
2	Project ID must be unique within an Organization.	The Project ID must be unique within an Organization
3	Land Surface Elevation Datum is required	Land Surface Elevation Datum is required if Land Surface Elevation (ft) is provided.
4	Land Surface Elevation Method is required	Land Surface Elevation Method is required if Land Surface Elevation (ft) is provided.
5	Primary Secondary Type Combination	Primary and Secondary Type combination must be valid.
6	Monitoring Location Description is required	Monitoring Location Description is required if Secondary Type in ('Other-Surface Water', 'Other-Spring')
8	Waterbody Name is required for Secondary Type	Waterbody Name is required if Secondary Type in ("Spring Run", "Spring Boil").
9	Duplicate Monitoring Location ID in import dataset	The Monitoring Location ID must be unique within the import dataset.
10	The Org Decimal Latitude is out of range	The Org Decimal Latitude must be in the range +23.000000000 through +31.000000000.
11	The Org Decimal Longitude is out of range	The Org Decimal Longitude must be in the range +79.000000000 through +87.000000000.
12	The Org Latitude Degrees is out of Range	The Org Latitude Degrees must be in the range +23 through +31.

RULE Number	RULE NAME	RULE DESCRIPTION
13	The Org Latitude Minutes is out of Range	The Org Latitude Minutes must be in the range +00 through +59.
14	The Org Latitude Seconds is out of range	The Org Latitude Seconds must be in the range +00.0000 through +59.9999.
15	The Org Longitude Degrees is out of Range	The Org Longitude Degrees must be in the range +79 through +87.
16	The Org Longitude Minutes is out of Range	The Org Longitude Minutes must be in the range +00 through +59.
17	The Org Longitude Seconds is out of range	The Org Longitude Seconds must be in the range +00.0000 through +59.9999.
18	Primary Elevation Value (ft) is required	Primary Elevation Value (ft) is required if the Primary Elevation Reference is provided
19	Secondary Elevation Value (ft) is required	Secondary Elevation Value (ft) is required if the Secondary Elevation Reference is provided
20	Primary Elevation Reference is required	Primary Elevation Reference is required if Primary Elevation Value (ft) is provided.
21	Primary Elevation Datum is required	Primary Elevation Datum is required if Primary Elevation Value (ft) is provided.
22	Primary Elevation Method is required	Primary Elevation Method is required if Primary Elevation Value (ft) is provided.
23	Secondary Elevation Reference is required	Secondary Elevation Reference is required if Secondary Elevation Value (ft) is provided.
24	Secondary Elevation Datum is required	Secondary Elevation Datum is required if Secondary Elevation Value (ft) is provided.
25	Secondary Elevation Method is required	Secondary Elevation Method is required if Secondary Elevation Value (ft) is provided.
26	Primary Secondary Type Combination	Primary and Secondary Type combination must be valid.

RULE Number	RULE NAME	RULE DESCRIPTION
27	Monitoring Location Description Conditional Requirement	Monitoring Location Description is required if Secondary Type is "Other-Ground Water".
28	Waterbody Name Conditional Requirement	Waterbody Name is required if Primary Type = "Ground Water".
29	Well Type is required	Well Type is required when Secondary Type = "Well".
30	Well Construction Method Explanation is required	Well Construction Method Explanation is required if Well Construction Method = "Multiple".
31	Well Screen Open Hole Begin Depth (ft) is required	If Well Finish is either "Gravel-Pack, With Screen" or "Screen", then Well Screen Open Hole Begin Depth (ft) is required.
32	Well Screen Open Hole End Depth (ft) is required	If Well Finish is either "Gravel-Pack, With Screen" or "Screen", then Well Screen Open Hole End Depth (ft) is required.
33	Well Casing Depth (ft) must be less than or equal to Well Total Depth (ft)	Well Casing Depth (ft) must be <= Well Total Depth (ft).
34	Well Screen Diameter (in) must be a positive number	If Well Screen Diameter (in) is provided, then Well Screen Diameter (in) must be >= 0.
35	Well Casing Diameter (in) must be a positive number	If Well Casing Diameter (in) is provided, then Well Screen Diameter (in) must be >= 0.
36	Well Screen Open Hole Begin Depth (ft) must be a positive number	If Well Screen Open Hole Begin Depth is provided, then Well Screen. Diameter (in) must be >= 0.
37	Well Screen Open Hole End Depth (ft) must be a positive number	If Well Screen Open Hole End Depth (ft) is provided, then Well Screen Open Hole End Depth (ft) must be >= 0.
38	Well Screen Open Hole Begin Depth (ft) must be <= Well Screen Open Hole End Depth (ft)	If Well Screen Open Hole Begin Depth (ft) is provided and If Well Screen Open Hole End Depth (ft) is provided, Well Screen Open Hole Begin Depth (ft) <= Well Screen Open Hole End Depth (ft)

RULE Number	RULE NAME	RULE DESCRIPTION
39	Well Screen Open Hole Begin Depth (ft) Dependency Violated	If Well Screen Open Hole Begin Depth (ft) is not null, then Well Casing Depth (ft) <= Well Screen Open Hole Begin Depth (ft) <= Well Total Depth (ft).
40	Well Screen Open Hole End Depth (ft) Dependency Violated	If Well Screen Open Hole End Depth (ft) is not null, then Well Casing Depth (ft) <= Well Screen Open Hole End Depth (ft) <= Well Total Depth (ft).
41	Well Screen Diameter (in) must be less than Well Casing Diameter (in)	If Well Screen Diameter (in) AND Well Casing Diameter (in) are both provided, then Well Screen Diameter (in) <= Well Casing Diameter (in).
42	Top of Aquifer must be greater than or equal to Bottom of Aquifer	If both Top of Aquifer and Bottom of Aquifer are provided, then Top of Aquifer must be >= Bottom of Aquifer.
43	Well Total Depth (ft) must be a positive number	If Well Total Depth (ft) is provided, then Well Total Depth (ft) must be >= 0.
44	Well Casing Depth (ft) must be a positive number	If Well Casing Depth (ft) is provided, then Well Total Depth (ft) must be >= 0.
45	Duplicate Monitoring Location ID in import dataset	The Monitoring Location ID must be unique within the import dataset.
46	The Org Decimal Latitude is out of range	The Org Decimal Latitude must be in the range +23.000000000 through +31.000000000.
47	The Org Decimal Longitude is out of range	The Org Decimal Longitude must be in the range +79.000000000 through +87.000000000.
48	The Org Latitude Degrees is out of Range	The Org Latitude Degrees must be in the range +23 through +31.
49	The Org Latitude Minutes is out of Range	The Org Latitude Minutes must be in the range +00 through +59.
50	The Org Latitude Seconds is out of range	The Org Latitude Seconds must be in the range +00.0000 through +59.9999.

RULE Number	RULE NAME	RULE DESCRIPTION
51	The Org Longitude Degrees is out of Range	The Org Longitude Degrees must be in the range +79 through +87.
52	The Org Longitude Minutes is out of Range	The Org Longitude Minutes must be in the range +00 through +59.
53	The Org Longitude Seconds is out of range	The Org Longitude Seconds must be in the range +00.0000 through +59.9999.
54	Florida Unique Well ID is not formatted correctly	The first three characters of the Florida Unique Well ID must be upper case letters and the last four characters must be numbers.
55	Activity Start Date is required if the Activity End Date is provided	Activity Start Date is required if Activity End Date for the record is provided.
56	Activity Start/End Time Zone is conditionally required	If either the Activity Start Date and/or the Activity End Date are provided, the user must submit a value for the Activity Start-End Time Zone.
57	Activity Depth Unit is conditionally required	Activity Depth Unit is required if the Activity Depth is provided.
58	Activity Top/Bottom Unit is conditionally required	If either the Activity Top Depth or the Activity Bottom Depth is provided, the user must submit a value for the Activity Top-Bottom Unit.
59	Total Depth Unit is conditionally required	Total Depth Unit is required if Activity Total Depth is provided.
60	Sample Collection Equipment Name is conditionally required	Sample Collection Equipment Name is required if the Sample Equipment Type is provided.
61	Org Result Unit is conditionally required	Org Result Unit is required if the Org Result Value is numeric.
62	Preparation Time Zone is conditionally required	Preparation Time Zone is required if the Preparation Date is provided.

RULE Number	RULE NAME	RULE DESCRIPTION
63	Analysis Time Zone is conditionally required	Analysis Time Zone is required when the Analysis Date is provided.
64	Org Detection Unit is conditionally required	Org Detection Unit is required if either Org MDL or Org PQL are provided.
65	Preparation Date Time must be blank if Activity Type is "Field"	Preparation Date Time must be blank if Activity Type is "Field".
66	Value Qualifier "V" is conditionally required	For certain analytes, 'V' value qualifier missing when Method Blank Result is greater than 10% of associated Sample Result.
67	Media and Sample Collection Equipment Type combination must be valid	Media and Sample Collection Equipment Type combination must be valid
68	Analyte Name and ADaPT Analyte ID combination must be valid	Analyte Name and ADaPT Analyte ID combination must be valid
69	Analyte Name, Media and Unit combination must be valid	Analyte Name, Media and Unit combination must be valid
70	Activity Type, Sample Collection Type combination must be valid	Activity Type, Sample Collection Type combination must be valid
71	Sample Fraction and Analysis Method combination must be valid	Sample Fraction and Analysis Method combination must be valid
72	Activity Depth is conditionally required for select DEP Analyte Names	Activity Depth must be provided and Activity Top/Bottom Depth must be blank if Matrix = ('AQUEOUS-Surface Water', 'SOILS') and Primary Type is ='Surface Water' and Activity Type is in ('Field', 'Field Replicate', 'Sample', 'Sample Composite') and Sample Collection Type not equaled to 'Sample-Composite Vertical Profile' for select DEP Analyte Names and Org Result Value is not equal to 'Not Reported'.

RULE Number	RULE NAME	RULE DESCRIPTION
73	Analysis Method and Analyte Name combination must be valid	Analysis Method and Analyte Name combination must be valid
74	Sample Fraction is conditionally required	Sample Fraction is required for some Analytes AND when Media = "Water".
75	Sample Fraction must be null	Sample Fraction must be null for some Analytes.
76	Prep Date Time is conditionally required	Preparation Date Time is required for select Analysis Methods, Sample Fraction, and Media combinations and Org Result Value is not equal to 'Not Reported'.
77	Org MDL is conditionally required	Org MDL is required for select Analysis Methods and when Activity Type is anything other than 'Field' or 'Surrogate' and when Org Result Value is not equal to 'Not Reported'.
78	Org PQL is conditionally required	Org PQL is required for select Analysis Methods and when Activity Type is anything other than 'Field' or 'Surrogate' and when Org Result Value is not equal to 'Not Reported'.
79	Prep Method is conditionally required	Preparation Method is required for select Analysis Methods, Sample Fraction, and Media combinations and Org Result Value is not equal to 'Not Reported'.
82	Value Qualifier "Q" conditionally required: Holding time duration has expired	One or more of the holding time durations has expired. Holding time durations are: Sampling (Activity Start Date Time) to Preparation (Preparation Date Time) duration; Preparation (Preparation Date Time) to Analysis (Analysis Date Time); Sampling (Activity Start Date Time) to Analysis (Analysis Date Time) and Org Result Value is not equal to 'Not Reported'.
83	Value Qualifier "Q" not valid	Value Qualifier "Q" should not exist. Holding time durations were either all within required limits or there is no holding time requirement for this method, media, fraction combination and Org Result Value is not equal to 'Not Reported'.
84	Result Value Out of Range	Specific Analytes that require numeric result values must adhere to DEP Result Value Range
85	Result Value must be numeric	Specific Analytes that require numeric result values that do not have a specific range identified must be between -99999999.99999 and +99999999.99999

RULE Number	RULE NAME	RULE DESCRIPTION
86	Project must be assigned to a Project Intended Use	Project Intended Use must be assigned to this project before results may be loaded with the associated Project ID. Please contact your WIN Coordinator to request approval of this project and assignment of the Project Intended Use field.
87	Value Qualifier "A" not valid	Value Qualifier 'A' is not allowed when Activity type is 'Method Blank', 'Surrogate', 'Lab Control Sample', 'Lab Control Sample Replicate', 'Matrix Spike' or 'Matrix Spike Replicate'.
88	Value Qualifier "Y" not valid	Value Qualifier 'Y' is not allowed when Activity type is 'Method Blank', 'Lab Control Sample', 'Lab Control Sample Replicate'.
89	Dates are out of sequence	The Activity Start Date Time must be <= Activity End Date Time which must be <= Preparation Date Time which must be <= Analysis Date Time which must be <= Current Date when calculated to a common time zone for comparison.
90	Result Value is not valid for this Analyte	Result Value is not valid for this analyte. Result Data Type for each analyte is defined as: integer, numeric, or choice list. The result must be the correct data type for the associated analyte or equal 'Not Reported'.
91	Value Qualifier "T" is conditionally required	If DEP Result Value < DEP MDL, then the Value Qualifier 'T' is required
92	Value Qualifier "T" not valid	If the Value Qualifier 'T' is submitted, then DEP Result Value < DEP MDL
93	Value Qualifier "I" or "U" is conditionally required	If DEP Result Value = DEP MDL and DEP MDL < DEP PQL, then the Value Qualifier must contain either an 'I' or an 'U'
94	Value Qualifier "U" not valid	If the Value Qualifier 'U' is submitted, then DEP Result Value = DEP MDL
95	Value Qualifier "I" is conditionally required	If DEP MDL < DEP Result Value < DEP PQL, then the Value Qualifier 'I' is required'.
96	Value Qualifier cannot contain both "I" and "U"	Value Qualifier cannot contain both 'I' and 'U'.

RULE Number	RULE NAME	RULE DESCRIPTION
97	Value Qualifier "B" or "Z" not valid for this analyte	Value Qualifier 'B' or 'Z' cannot be used unless DEP Analyte Name is in the Microbiological Analyte Group
98	Value Qualifier "F" not valid for this media	Value Qualifier 'F' cannot be used unless Media is 'Tissue'.
99	Value Qualifier "H" not valid for this Activity Type	Value Qualifier 'H' cannot be used unless Activity Type is 'Field'.
100	Value Qualifier "K" not valid	Value Qualifier 'K' cannot be used unless DEP Result Value is greater than the DEP MDL
101	Value Qualifier "M" not valid	Value Qualifier 'M' cannot be used unless DEP Result Value is equal to the DEP PQL
102	Value Qualifier "O" or "*" not valid	Value Qualifier 'O' or '*' cannot be used unless DEP Result Value Text is 'Not Reported'.
103	Value Qualifier "K" not valid for this analyte	Value Qualifier 'K' cannot be used when DEP Analyte Name is in the 'Microbiological' or 'Oxygen Demand' Analyte Groups
104	Value Qualifier "D" not valid for this Activity Type	Value Qualifier 'D' cannot be used unless Activity Type is 'Field'.
105	Value Qualifier "S" not valid	Value Qualifier 'S' cannot be used unless DEP Analyte Name is 'Depth, Secchi Disk Depth' and the DEP Result Value is equal to the Total Depth. Comparison accounts for converting to a standardized unit.
106	Value Qualifier not valid for "Field" data	If Activity Type is 'Field', then the Value Qualifier cannot contain the following characters: 'I', 'K', 'L', 'M', 'N', 'T', 'U', 'V', 'Y', or '*'
107	Value Qualifier "I" not valid	Value Qualifier 'I' is not allowed when Activity Type is 'Method Blank', 'Surrogate', 'Lab Replicate', 'Lab Control Sample', 'Lab Control Sample Replicate', 'Matrix Spike', 'Matrix Spike Replicate', 'Equipment Blank', 'Trip Blank', or 'Field Blank'.
108	Value Qualifier "V" not valid	Value Qualifier 'V' is not allowed when Activity type is 'Method Blank'.
109	Value Qualifier "G" not valid	Value Qualifier 'G' is only allowed when Activity Type is 'Sample', 'Field Replicate' or 'Sample-Composite'.

RULE Number	RULE NAME	RULE DESCRIPTION
111	Monitoring Location is conditionally required	Monitoring Location is required if Activity Type is 'Field', 'Field Replicate', 'Sample' or 'Sample Composite'.
112	Activity Start Date Time is conditionally required	Activity Start Date Time is required if Activity Type is "Field", "Field Blank", "Equipment Blank", "Trip Blank", "Field Replicate", "Sample" or "Sample Composite".
113	Activity End Date Time is conditionally required	Activity End Date Time is required if Sample Collection Type is 'Direct Grab-Time Series', 'Intermediate Grab-Time Series', 'Sample-Composite Flow Proportional', 'Sample-Composite Time', 'Sample-Composite Areal', 'Field Testing-Time Series'.
114	Sampling Agency Name is conditionally required	Sampling Agency Name is required if the Activity Type is "Field", "Field Replicate", "Sample", "Sample Composite", "Field Blank", or "Equipment Blank".
118	Analysis Date Time is conditionally required	Analysis Date/Time is required if Activity Type is not equal to 'Field' and Org Result Value is not equal to 'Not Reported'.
119	Analysis Date Time must be blank when the Activity Type is "Field"	Analysis Date Time must be blank when the Activity Type is 'Field'
120	Sample Collection Type is conditionally required	Sample Collection Type is required when the Activity Type is 'Field', 'Equipment Blank', 'Field Replicate', 'Sample' or 'Sample Composite'
121	Field Blank Batch ID is conditionally required	Field Blank Batch ID is required when the Activity Type is 'Field Blank'
122	Equipment Blank Batch ID is conditionally required	Equipment Blank Batch ID is required when the Activity Type is 'Equipment Blank'
123	Trip Blank Batch ID is conditionally required	Trip Blank Batch ID is required when the Activity Type is 'Trip Blank'.
124	Master Activity ID is conditionally required	Master Activity ID is required when the Activity Type is 'Field Replicate'.

RULE Number	RULE NAME	RULE DESCRIPTION
125	Master Activity ID must match a corresponding Activity ID	There must be an activity of type 'Sample' or 'Sample-Composite' with the corresponding Activity ID
126	Land Surface Elevation Value in the associated Monitoring Location Well is conditionally required	If the DEP Analyte Name is 'Depth to Water (from land surface elevation)', then the Land Surface Elevation Value in the associated Monitoring Location cannot be blank
127	"Top Of Casing" Elevation Value in the associated Monitoring Location Well is conditionally required	If DEP Analyte Name is 'Depth to Water (from top of casing)', then either the Primary Elevation Reference or the Secondary Elevation Reference must be 'Top Of Casing' in the associated Monitoring Location Well
128	"Bottom Of Meter Box" Elevation Value in the associated Mon. Location Well is conditionally required	If DEP Analyte Name is 'Depth to Water (from bottom of meter box)', then either the Primary Elevation Reference or the Secondary Elevation Reference must be 'Bottom Of Meter Box' in the associated Monitoring Location Well
129	"Shutoff Valve" Elevation Value in the associated Monitoring Location Well is conditionally required	If DEP Analyte Name is 'Depth to Water (from shutoff valve)', then either the Primary Elevation Reference or the Secondary Elevation Reference must be 'Shutoff Valve' in the associated Monitoring Location Well
130	Lab Accreditation Authority is conditionally required	Lab Accreditation Authority is required when the Activity Type is anything other than 'Field' and Org Result Value is not equal to 'Not Reported'.
131	Dilution is conditionally required	Dilution is required when the Activity Type is anything other than 'Field' and Org Result Value is not equal to 'Not Reported'.
132	Result Comments are conditionally required	Result Comments are required when the Value Qualifier 'J' is present
133	Error is conditionally required	Error is required when the DEP Analyte Name is in the 'Radiochemistry' Analyte Group and Activity Type is 'Field' or 'Surrogate' and Org Result Value is not equal to 'Not Reported'.

RULE Number	RULE NAME	RULE DESCRIPTION
134	Percent Moisture is conditionally required	Percent Moisture is required when Activity Type is 'Field Replicate', 'Sample' or 'Sample Composite' and the Matrix is 'SEDIMENT' or 'SOILS' and Org Result Value is not equal to 'Not Reported'.
135	Lab ID is conditionally required	Lab ID is required when the Activity Type is anything other than 'Field'.
136	Prep Method must be blank when the Activity Type is "Field"	Prep Method must be blank when the Activity Type is 'Field'.
137	Lab Sample ID is conditionally required	Lab Sample ID is required when the Activity Type is anything other than 'Field' and Org Result Value is not equal to 'Not Reported'.
138	Target Species is conditionally required	Target Species is required if the Matrix is 'TISSUE-Finfish' and Org Result Value is not equal to 'Not Reported'.
139	Finfish Size Unit is conditionally required	Finfish Size Unit is required if the Finfish Size is provided
141	Sample Collection Type may not be provided for this Activity Type	Sample Collection Type must be null if Activity Type is in ('Field Blank', 'Trip Blank', 'Lab Replicate', 'Laboratory Control Sample', 'Laboratory Control Sample Replicate', 'Surrogate', 'Matrix Spike', 'Matrix Spike Replicate', 'Method Blank')
142	Activity ID already exists in migrated with different critical activity fields (Composite)	If Activity Type is 'Sample-Composite', then the following fields must be the same for the existing Activity ID in Migrated: Organization ID, Monitoring Location ID, Activity Start Date Time, Activity End Date Time, Matrix, Activity Type, Sampling Agency Name, Activity Depth, Activity Depth Unit, ActivityTopDepth, ActivityBottomDepth, Activity Depth Top Bottom Depth Unit, Sample Collection Type. These fields cannot be updated by the import process. Updates may be accomplished by selecting the record from the migrated environment to edit. If this is not intended to be an update, please update the Activity ID in the import file to one that has not already been used by this organization.
145	Field Blank Batch ID assigned to multiple Field Blanks in import file	Multiple Field Blank Activities with different Activity IDs cannot have the same Field Blank Batch ID within an import file.

RULE Number	RULE NAME	RULE DESCRIPTION
146	Field Blank Batch ID already assigned to a migrated Field Blank	A Field Blank Activity with a different Activity ID has already been migrated with this Field Blank Batch ID. Field Blank Batch IDs must be unique for each Field Blank Activity within an Organization.
147	Equipment Blank Batch ID assigned to multiple Equipment Blanks in import file	Multiple Equipment Blank Activities with different Activity IDs cannot have the same Equipment Blank Batch ID within an import file.
148	Equipment Blank Batch ID already assigned to a migrated Equipment Blank	An Equipment Blank Activity with a different Activity ID has already been migrated with this Equipment Blank Batch ID. Equipment Blank Batch IDs must be unique for each Equipment Blank Activity within an Organization.
149	Trip Blank Batch ID assigned to multiple Trip Blanks in import file	Multiple Trip Blank Activities with different Activity IDs cannot have the same Trip Blank Batch ID within an import file.
150	Trip Blank Batch ID already assigned to a migrated Trip Blank	A Trip Blank Activity with a different Activity ID has already been migrated with this Trip Blank Batch ID. Trip Blank Batch IDs must be unique for each Trip Blank Activity within an Organization.
151	Analyte/Sample Fraction combination must be unique within an Activity in the import file	An Analyte/Sample Fraction combination can only exist one time for each Activity in the import file.
152	Analyte/Sample Fraction combination already exists for this Activity ID in Migrated	An Analyte cannot be migrated more than once within an Activity unless it has a different sample fraction.
153	Critical Activity fields within an Activity ID in the import file must be consistent (Field/Sample)	If Activity Type is "Field" or "Sample", then the following fields must be consistent for each result for that Activity ID in the import file: Organization ID, Monitoring Location ID, Activity Start Date Time, Maxtrix, Activity Type, Sampling Agency Name, Activity Depth, Activity Depth Unit, Sample Collection Type.

RULE Number	RULE NAME	RULE DESCRIPTION
154	Critical Activity fields within an Activity ID in the import file must be consistent (Composite)	If Activity Type is 'Sample-Composite', then the following fields must be consistent for each result for that Activity ID in the import file: Organization ID, Monitoring Location ID, Activity Start Date Time, Activity End Date Time, Matrix, Activity Type, Sampling Agency Name, Activity Depth, Activity Depth Unit, ActivityTopDepth, ActivityBottomDepth, Activity Depth Top Bottom Depth Unit, Sample Collection Type.
155	Duplicate Value Qualifier	Individual Value Qualifier codes must exist only one time per Result record
156	Critical fields must be consistent between Master Activity ID and associated Activity IDs	Master Activity ID and associated Activity ID must have the same Activity Start Date, Monitoring Location ID, and Sampling Agency Name
157	Activity Depth must be greater than 0	Activity Depth must be > 0
158	Activity Top Depth must be greater than or equal to 0	Activity Top Depth must be > 0
159	Activity Bottom Depth must be greater than 0	Activity Bottom Depth must be > 0
160	Activity Total Depth must be greater than 0	Activity Total Depth must be > 0
161	Activity Depth Unit and Total Depth Unit must match	Activity Depth Unit and Total Depth Unit must match
162	Activity Top Bottom Depth Unit and Total Depth Unit must match	Activity Top Bottom Depth Unit and Total Depth Unit must match
163	Activity Total Depth must be greater than Activity Depth	Activity Total Depth must be greater than Activity Depth
164	Activity Bottom Depth must be greater than Activity Top Depth	Activity Bottom Depth must be greater than Activity Top Depth

RULE Number	RULE NAME	RULE DESCRIPTION
165	Activity Type must be "Field"	If the Dep Analyte is in the Analyte Group 'Field Observation', then the Activity Type must be 'Field'.
166	Org Detection Unit must match the Org Unit	Org Detection Unit must match the Org Unit
167	Value Qualifer is not a standard value	Each individual character must be a valid Value Qualifier
168	Org MDL must be greater than 0	Org MDL must be greater than 0
169	Org MDL must be less than or equal to the Org PQL	Org MDL must be less than or equal to the Org PQL
170	Percent Recovery must be "DIL", "INT" or "NS" or a number	Percent Recovery must be 'DIL', 'INT' or 'NS' or a number
171	Finfish Size Unit must be "in", "cm" or "mm"	Finfish Size Unit must be 'in', 'cm' or 'mm'.
172	Activity Depth Unit must be "in", "ft" or "m"	Activity Depth Unit must be 'in', 'ft' or 'm'.
173	Activity Top Bottom Depth Unit must be "in", "ft" or "m"	Activity Top Bottom Depth Unit must be 'in', 'ft' or 'm'.
174	Total Depth Unit must be "in", "ft" or "m"	Total Bottom Depth Unit must be 'in', 'ft' or 'm'.
175	Activity Total Depth must be greater than Activity Bottom Depth	Activity Total Depth must be greater than Activity Bottom Depth
176	Org PQL must be greater than 0	Org PQL must be greater than 0
181	Duplicate Project ID in import dataset	The Project ID must be unique within the import dataset.
183	Source Map Scale must be non-negative	The Source Map Scale must be a non-negative number.

RULE Number	RULE NAME	RULE DESCRIPTION
184	Source Map Scale must be non-negative	The Source Map Scale must be a non-negative number.
189	Activity ID already exists in migrated with different critical activity fields (Field/Sample)	If Activity Type is "Field" or "Sample", then the following fields must be the same for the existing Activity ID in Migrated: Organization ID, Monitoring Location ID, Activity Start Date Time, Matrix, Activity Type, Sampling Agency Name, Activity Depth, Activity Depth Unit, Sample Collection Type. These fields cannot be updated by the import process. Updates may be accomplished by selecting the record from the migrated environment to edit. If this is not intended to be an update, please update the Activity ID in the import file to one that has not already been used by this organization.
190	Activity Top/Bottom Depth is conditionally required for select DEP Analyte Names	Activity Top/Bottom Depth must be provided and Activity Depth must be blank if Matrix = ('AQUEOUS-Surface Water', 'SOILS', 'SEDIMENT') and Primary Type is ='Surface Water' and Activity Type = 'Sample Composite' and Sample Collection Type = 'Sample-Composite Vertical Profile' for select DEP Analyte Names and Org Result Value is not equal to 'Not Reported'.
191	Land Surface Elevation Datum is required	Land Surface Elevation Datum is required if Land Surface Elevation (ft) is provided.
192	Land Surface Elevation Method is required	Land Surface Elevation Method is required if Land Surface Elevation (ft) is provided.
193	Monitoring Location must exist in migrated if provided	Monitoring Location must be in the migrated area if a Monitoring Location ID is provided
194	Result Value Type Name is conditionally required	Result Value Type Name is required when Org Result Value is not equaled to 'Not Reported'.

RULE Number	RULE NAME	RULE DESCRIPTION
195	Activity ID already exists in migrated with different critical activity fields (Field Replicate)	If Activity Type is "Field Replicate", then the following fields must be the same for the existing Activity ID in Migrated: Activity Start Date Time, Matrix, Activity Type, Sampling Agency Name, Activity Depth, Activity Depth Unit, Sample Collection Type, Monitoring Location ID, Organization ID, and Master Activity ID. These fields cannot be updated by the import process. Updates may be accomplished by selecting the record from the migrated environment to edit. If this is not intended to be an update, please update the Activity ID in the import file to one that has not already been used by this organization.
196	Activity ID already exists in migrated with different critical activity fields (Field Blank)	If Activity Type is "Field Blank", then the following fields must be the same for the existing Activity ID in Migrated: Activity Start Date Time, Matrix, Activity Type, Sampling Agency Name, Organization ID, and Field Blank Batch ID. These fields cannot be updated by the import process. Updates may be accomplished by selecting the record from the migrated environment to edit. If this is not intended to be an update, please update the Activity ID in the import file to one that has not already been used by this organization.
197	Activity ID already exists in migrated with different critical activity fields (Equipment Blank)	If Activity Type is "Equipment Blank", then the following fields must be the same for the existing Activity ID in Migrated: Activity Start Date Time, Matrix, Activity Type, Sampling Agency Name, Sample Collection Type, Organization ID, and Equipment Blank Batch ID. These fields cannot be updated by the import process. Updates may be accomplished by selecting the record from the migrated environment to edit. If this is not intended to be an update, please update the Activity ID in the import file to one that has not already been used by this organization.
198	Activity ID already exists in migrated with different critical activity fields (Trip Blank)	If Activity Type is "Trip Blank", then the following fields must be the same for the existing Activity ID in Migrated: Activity Start Date Time, Matrix, Activity Type, Organization ID, and Trip Blank Batch ID. These fields cannot be updated by the import process. Updates may be accomplished by selecting the record from the migrated environment to edit. If this is not intended to be an update, please update the Activity ID in the import file to one that has not already been used by this organization.

RULE Number	RULE NAME	RULE DESCRIPTION
199	Critical Activity fields in an Activity ID in the import file must be consistent (Field Replicate)	If Activity Type is "Field Replicate", then the following fields must be consistent for each result for that Activity ID in the import file: Activity Start Date Time, Matrix, Activity Type, Sampling Agency Name, Activity Depth, Activity Depth Unit, Sample Collection Type, Monitoring Location ID, Organization ID, and Master Activity ID.
200	Critical Activity fields in an Activity ID in the import file must be consistent (Field Blank)	If Activity Type is "Field Blank", then the following fields must be consistent for each result for that Activity ID in the import file: Activity Start Date Time, Matrix, Activity Type, Sampling Agency Name, Organization ID, and Field Blank Batch ID.
201	Critical Activity fields in an Activity ID in the import file must be consistent (Equipment Blank)	If Activity Type is "Equipment Blank", then the following fields must be consistent for each result for that Activity ID in the import file: Activity Start Date Time, Matrix, Activity Type, Sampling Agency Name, Sample Collection Type, Organization ID, and Equipment Blank Batch ID.
202	Critical Activity fields in an Activity ID in the import file must be consistent (Trip Blank)	If Activity Type is "Trip Blank", then the following fields must be consistent for each result for that Activity ID in the import file: Activity Start Date Time, Matrix, Activity Type, Organization ID, and Trip Blank Batch ID.
203	Monitoring Location ID already exists in migrated	Monitoring Location ID already exists in migrated
204	Monitoring Location ID already exists in migrated	Monitoring Location ID already exists in migrated
205	"Measuring Point" Elevation Value in the associated Mon. Location Well is conditionally required	If DEP Analyte Name is "Depth to Water (from measuring point)", then either the Primary Elevation Reference or the Secondary Elevation Reference must be "Measuring Point" in the associated Monitoring Location Well.
207	Org Latitude and Org Longitude must be provided in a consistent format	Both Org Latitude and Org Longitude must be provided in the same format. Either Degrees, Minutes, and Seconds must all be provided for both the Latitude and Longitude or Decimal Degrees must be provided for both the Latitude and Longitude

RULE Number	RULE NAME	RULE DESCRIPTION
208	Org Latitude and Org Longitude must be provided in a consistent format	Both Org Latitude and Org Longitude must be provided in the same format. Either Degrees, Minutes, and Seconds must all be provided for both the Latitude and Longitude or Decimal Degrees must be provided for both the Latitude and Longitude
209	Master Activity ID must be null	Master Activity ID must be null when Activity Type in ('Sample', 'Sample-Composite')
210	Method Batch ID is conditionally required	Method Batch ID is required when Activity Type in ('Method Blank', 'Surrogate', 'Laboratory Control Sample', 'Laboratory Control Sample Replicate', 'Matrix Spike', 'Matrix Spike Replicate', 'Lab Replicate')
211	Analytical Batch ID is conditionally required	Analytical Batch ID is required when Activity Type in ('Method Blank', 'Surrogate', 'Laboratory Control Sample', 'Laboratory Control Sample Replicate', 'Matrix Spike', 'Matrix Spike Replicate', 'Lab Replicate')
212	Lab QC result must be associated to at least one sampled result for same DEP Analyte Name	When Method Batch ID is provided for a given Lab QC result, there must be at least one activity with Activity Type in ('Sample', 'Sample-Composite', 'Field Replicate', 'Trip Blank', 'Equipment Blank', OR 'Field Blank') that contains the same Method Batch ID and has a Result for the same DEP Analyte Name in either the import file or in migrated
213	Field Blank must contain only one value in Field Blank Batch ID	Field Blank must contain only one value in Field Blank Batch ID. The presence of a forward slash (/) is not allowed in this field
214	Equipment Blank must contain only one value in Equipment Blank Batch ID	Equipment Blank must contain only one value in Equipment Blank Batch ID. The presence of a forward slash (/) is not allowed in this field
215	Multiple Trip Blank Batch IDs are not allowed	Only one value may exist in Trip Blank Batch ID field. The presence of a forward slash (/) is not allowed in this field.
216	Activity Type, Equipment Name combination must be valid	Activity Type, Equipment Name combination must be valid.
217	Value Qualifier "V" is conditionally required (Microbiological)	"V" value qualifier missing when Method Blank Result is greater than Method Blank MDL.

Table 2. Data Quality Objectives and Data Quality Indicators used by the Watershed Services Program WIN Section for Florida STORET.

Data Quality Assessment Category	CheckID	Data Quality Assessment Explanation	Source of Data Quality Check
20 Elements	1	Unit of Measurement Required for these Results - Element #4	Chapter 62-160.240/62-160.340
20 Elements	2	Activity Start Time Required - Element #7	Chapter 62-160.240
20 Elements	3	Analysis Date Required for these Characteristics - Element #9	Chapter 62-160.340
20 Elements	4	Analysis Time Required for these Characteristics - Element #9	Chapter 62-160.340
20 Elements	5	Analytical Method Required for these Characteristics - Element #10	Chapter 62-160.340
20 Elements	9	Lab ID is required - Element #13	Chapter 62-160.340
20 Elements	11	No MDL Value - Element #15	Chapter 62-160.340
20 Elements	12	No PQL Value - Element #16	Chapter 62-160.340
20 Elements	23	"I", "U", or "T" Value Qualifier is present with a sample result, with a NULL MDL value	Chapter 62-160.340
Date Checks	1	Activity Start or Stop Date Reported After Data Entry Date	Data Entry Error
Date Checks	2	Analysis Dates Reported After Data Entry Date	Data Entry Error
Date Checks	3	Analysis Dates that are between Years 0001 and 1969	Data Entry Error
Date Checks	4	Activity Dates that are between Years 0001 and 1969	Data Entry Error
Date Checks	5	Activity Date Reported After Analysis Date	Data Entry Error
Date Checks	6	Activities with a Start Date that is greater than the Stop Date	Data Entry Error
Date Checks	8	Activity Occurred after 10:00 P.M.	Data Entry Error
Date Checks	9	Prep_Date Reported Before Activity Start Date	Data Entry Error
Date Checks	10	Prep_Date Reported After Analysis Date	Data Entry Error

Data Quality Assessment Category	CheckID	Data Quality Assessment Explanation	Source of Data Quality Check
Date Checks	11	Prep_Date Reported After Data Entry Date	Data Entry Error
Date Checks	13	Invalid Prep_Date	Data Entry Error
Date Checks	14	Activity Start Time Recorded After Activity Stop Time	Data Entry Error
Other Data Checks	1	'0' values are not allowed for these Characteristics	Based on sample Methodology (Method/Analytical)
Other Data Checks	2	Negative values reported	Based on sample Methodology (Method/Analytical)
Other Data Checks	3	Results with value "*Non-detect" without a MDL	Chapter 62-160.340
Other Data Checks	4	Results with value "*Present <QL" without a PQL	EAS 01-01
Other Data Checks	5	Results with value "*Present >QL" without a UQL	EAS 01-01
Other Data Checks	6	A station must have a Name and Valid Latitudes and/or Longitudes	Chapter 62-160.240
Other Data Checks	7	Results with a value less than or equal to Zero without a MDL	EAS 01-01
Other Data Checks	8	MDL and PQL cannot equal Zero for these Characteristics	EAS 01-01
Other Data Checks	13	Records where the result value equals '999','9999','99999',or '999999'	Data Entry Error
Other Data Checks	18	Field characteristics incorrectly reported as Lab Samples	Data Entry Error
Other Data Checks	19	Lab characteristics incorrectly reported as Field	Data Entry Error
Other Data Checks	20	These temperature characteristics should not have a medium = Water	Data Entry Error
Other Data Checks	23	Misuse of '*Non-detect', '*Present <QL', '*Present >QL', '*Present', '*Not Reported', '*Text'	EAS 01-01

Data Quality Assessment Category	CheckID	Data Quality Assessment Explanation	Source of Data Quality Check
Other Data Checks	24	These temperature characteristics should not have a medium = Air	Data Entry Error
Other Data Checks	27	Invalid UQL, PQL, or MDL values	EAS 01-01
Other Data Checks	28	MDL greater than the PQL Value	Data Entry Error
Other Data Checks	29	Relative Depth populated and the Activity Depth is NULL, Negative or Zero	Data Entry Error
Unit of Measure Checks	1	Check field characteristics for correct units	Chapter 62-160.240
Unit of Measure Checks	2	Check nutrients for correct units	Chapter 62-160.340
Unit of Measure Checks	3	Check bacteria data for correct units	Chapter 62-160.340
Unit of Measure Checks	4	Check metals for correct units	Chapter 62-160.340
Unit of Measure Checks	5	Units of measure for result and mdl do not match	Data Entry Error
Unit of Measure Checks	6	Check characteristics for correct units	Chapter 62-160.240/62-160.340
Unit of Measure Checks	7	Check pesticide characteristics for correct units	Chapter 62-160.340
Unit of Measure Checks	8	Ratios should not have units of measure	Data Entry Error
Unit of Measure Checks	9	Activity Depth with no Depth Units	EAS 01-01

Data Quality Assessment Category	CheckID	Data Quality Assessment Explanation	Source of Data Quality Check
Duplicates	1	Results loaded into the same Activity ID with the same Characteristic Name	Data Entry Error
Duplicates	2	Exact duplicate rWDS in the result table	Data Entry Error
Value Qualifier	1	Result is less than the MDL and the Value Qualifier not equal to "T" or "U"	Chapter 62-160.340
Value Qualifier	2	Value Qualifier "U" required for "Non-detect" results	Chapter 62-160.340
Value Qualifier	3	Result is equal to the MDL and the Value Qualifier not equal to "U" OR "I"	Chapter 62-160.340
Value Qualifier	5	Result equal to *Present>QL and Value Qualifier not equal to Z or UQL is NULL	FDEP Bureau of Laboratories & QA Section Guidance
Value Qualifier	6	Results with a Z qualifier or a comment of TNTC should have an Upper Quantification Limit	FDEP Bureau of Laboratories & QA Section Guidance
Value Qualifier	7	Bacteria Analytes over 8 hour holding time not qualified with 'Q' (using prep date minus start/activity)	DEP-SOP-001/01 (March 1, 2014)
Value Qualifier	8	Value Qualifier OR Result Comment is Z OR contains TNTC OR 'TOO NUM' and Result Value IN (100,50,10,1,0.1,0.01,0.001,0.0001)	FDEP Bureau of Laboratories & QA Section Guidance
Value Qualifier	9	Result greater than UQL, without Z in Value Qualifier field	FDEP Bureau of Laboratories & QA Section Guidance
Value Qualifier	10	Bacteria Analytes over 8 hour holding time not qualified with 'Q' (using analysis date minus start/activity date when prep date/time is NULL)	DEP-SOP-001/01 (March 1, 2014)
Value Qualifier	11	"B" Qualifier should only be used with Microbiology Characteristics	Data Entry Error

Data Quality Assessment Category	CheckID	Data Quality Assessment Explanation	Source of Data Quality Check
Value Qualifier	13	Result Value is less than or equal to the MDL with a NULL Value Qualifier Value	Chapter 62-160.340
Value Qualifier	14	"I" in Value Qualifier field and the Result Value is not between the MDL and PQL values	Chapter 62-160.340
Value Qualifier	15	'J' qualified data that does not have a Result Comment in the Result Comment field	Chapter 62-160.700
Basic WQ Outliers	1	Out of Range Check for pH with the following units: NULL, None	Chapter 62-303.320(7)
Basic WQ Outliers	2	Out of Range Check for Dissolved oxygen (DO) with the following units: mg/l, ppm	Chapter 62-303.320(7)
Basic WQ Outliers	3	Out of Range Check for Dissolved oxygen saturation with the following units: %	Chapter 62-303.320(7)
Basic WQ Outliers	4	Out of Range Check for Temperature, water with the following units: deg F, deg C	Chapter 62-303.320(7)
Basic WQ Outliers	5	Out of Range Check for Wind direction (direction from, expressed 0-360 deg) with the following units: Deg	Chapter 62-303.320(7)
Basic WQ Outliers	6	Out of Range Check for Depth, Secchi Disk Depth with the following units: ft, m, in	Chapter 62-303.320(7)
Basic WQ Outliers	7	Out of Range Check for Secchi disk depth (choice list)	Chapter 62-303.320(7)
Basic WQ Outliers	8	Law or Rule that Applies Out of Range Check for Turbidity with the following units: NTU, FTU, JTU	Chapter 62-303.320(7)
Basic WQ Outliers	9	Out of Range Check for Salinity with the following units: PSS , ppth	Chapter 62-303.320(7)

Data Quality Assessment Category	CheckID	Data Quality Assessment Explanation	Source of Data Quality Check
Basic WQ Outliers	10	Out of Range Check for Specific conductance with the following units: uS/cm, umho/cm, mho/cm, mS/cm	Chapter 62-303.320(7)
Basic WQ Outliers	11	Out of Range Check for BOD with the following units: mg/l, ppm	Chapter 62-303.320(7)
Basic WQ Outliers	12	Out of Range Check for Chemical Oxygen Demand (COD) or Chemical oxygen demand (COD) with the following units: mg/l, ppm	Chapter 62-303.320(7)
Basic WQ Outliers	13	Out of Range Check for Alkalinity, Total (total hydroxide+carbonate+bicarbonate) with the following units: mg/l, mg/l as CaCO ₃ , ppm	Chapter 62-303.320(7)
Basic WQ Outliers	14	Out of Range Check for Alkalinity, Bicarbonate as CaCO ₃ and Alkalinity, Carbonate as CaCO ₃ with the following units: mg/l, mg/l as CaCO ₃ , ppm	Chapter 62-303.320(7)
Basic WQ Outliers	15	Out of Range Check for Apparent and True Color with the following units: PCU	Chapter 62-303.320(7)
Basic WQ Outliers	16	Out of Range Check for Total Suspended Solids (TSS) with the following units: mg/l, ppm	Chapter 62-303.320(7)
Basic WQ Outliers	17	Out of Range Check for Dissolved Solids with the following units: mg/l, ppm	Chapter 62-303.320(7)
Basic WQ Outliers	18	Out of Range Check for Light attenuation coefficient and Light, underwater extinction coefficient (k) with the following units: per m	Chapter 62-303.320(7)
Basic WQ Outliers	19	Out of Range Check for Light, transmissivity and Light attenuation at measurement depth with the following units: %	Chapter 62-303.320(7)

Data Quality Assessment Category	CheckID	Data Quality Assessment Explanation	Source of Data Quality Check
Basic WQ Outliers	20	Out of Range Check for Light, underwater incident with the following units: uE/m2/sec	Chapter 62-303.320(7)
Basic WQ Outliers	21	Activity Depth is less than or equal to Zero	Chapter 62-303.320(7)
Biological Outliers	1	Out of Range Check for Fecal Coliform, Enterococcus Group Bacteria, Total Coliform, Fecal Streptococcus Group Bacteria, Escherichia coli with the following units: #/100ml, CFU, MPN, MPN/100ml, cfu/100ml	Chapter 62-303.320(7)
Biological Outliers	2	Out of Range Check for Chlorophyll a with the following units: None, ug/L, ppb, mg/m3	Chapter 62-303.320(7)
Biological Outliers	3	Out of Range Check for Chlorophyll b and Chlorophyll c with the following units: mg/m3, ug/L, ppb	Chapter 62-303.320(7)
Biological Outliers	4	Out of Range Check for Pheophytin-a with the following units: mg/m3, ug/L, ppb	Chapter 62-303.320(7)
Nutrient Outliers	1	Out of Range Check for Nitrogen, mixed forms (NH3)+(NH4)+organic+(NO2)+(NO3) with the following units: mg/l, ppm, ug/L, ppb, mg/m3, umol.	Chapter 62-303.320(7)
Nutrient Outliers	2	Out of Range Check for Nitrogen, Nitrite (NO2) as N with the following units: mg/l, ppm, ug/L, ppb, mg/m3, umol.	Chapter 62-303.320(7)
Nutrient Outliers	3	Out of Range Check for Nitrogen, ammonia (NH3) as NH3 with the following units: mg/l, ppm, ug/L, ppb, mg/m3, umol.	Chapter 62-303.320(7)
Nutrient Outliers	4	Out of Range Check for Nitrogen, organic with the following units: mg/l, ppm, umol, ug/L, ppb, mg/m3.	Chapter 62-303.320(7)
Nutrient Outliers	5	Out of Range Check for Nitrogen, Nitrite (NO2) as NO2 with the following units: mg/l, ppm, umol, ug/L, ppb, mg/m3.	Chapter 62-303.320(7)

Data Quality Assessment Category	CheckID	Data Quality Assessment Explanation	Source of Data Quality Check
Nutrient Outliers	6	Out of Range Check for Nitrogen, ammonia (NH3) + ammonium (NH4) with the following units: mg/l, ppm, umol, ug/L, ppb, mg/m3.	Chapter 62-303.320(7)
Nutrient Outliers	7	Out of Range Check for Nitrogen, Nitrate (NO3) as NO3 with the following units: mg/l, ppm, umol, ug/L, ppb, mg/m3.	Chapter 62-303.320(7)
Nutrient Outliers	8	Out of Range Check for Nitrogen, Nitrite (NO2) + Nitrate (NO3) as N with the following units: mg/l, ppm, umol, ug/L, ppb, mg/m3.	Chapter 62-303.320(7)
Nutrient Outliers	9	Out of Range Check for Nitrogen, ammonia as N with the following units: mg/l, ppm, ug/L, ppb, mg/m3, umol.	Chapter 62-303.320(7)
Nutrient Outliers	10	Out of Range Check for Nitrogen, Nitrate (NO3) as N with the following units: mg/l, ppm, ug/L, ppb, mg/m3, umol.	Chapter 62-303.320(7)
Nutrient Outliers	11	Out of Range Check for Nitrogen, inorganic with the following units: mg/l, ppm, umol, ug/L, ppb, mg/m3.	Chapter 62-303.320(7)
Nutrient Outliers	12	Out of Range Check for Nitrogen, ammonium (NH4) as NH4 with the following units: mg/l, ppm, umol, ug/L, ppb, mg/m3.	Chapter 62-303.320(7)
Nutrient Outliers	13	Out of Range Check for Ammonia, unionized with the following units: mg/l, ppm, umol, ug/L, ppb, mg/m3.	Chapter 62-303.320(7)
Nutrient Outliers	14	Out of Range Check for Nitrogen, Kjeldahl with the following units: mg/l, ppm, ug/L, ppb, mg/m3, umol.	Chapter 62-303.320(7)
Nutrient Outliers	15	Out of Range Check for Phosphorus, phosphate (PO4) as P with the following units: mg/l, ppm, umol, ug/L, ppb, mg/m3.	Chapter 62-303.320(7)
Nutrient Outliers	16	Out of Range Check for Phosphorus, organic as P with the following units: mg/l, ppm, umol, ug/L, ppb, mg/m3.	Chapter 62-303.320(7)

Data Quality Assessment Category	CheckID	Data Quality Assessment Explanation	Source of Data Quality Check
Nutrient Outliers	17	Out of Range Check for Phosphorus, phosphate (PO4) as PO4 with the following units: mg/l, ppm, umol, ug/L, ppb, mg/m3.	Chapter 62-303.320(7)
Nutrient Outliers	18	Out of Range Check for Phosphorus, orthophosphate as P with the following units: mg/l, ppm, ug/L, ppb, mg/m3, umol.	Chapter 62-303.320(7)
Nutrient Outliers	19	Out of Range Check for Phosphorus as P with the following units: mg/l, ppm, ug/L, ppb, mg/m3, umol.	Chapter 62-303.320(7)
Nutrient Outliers	20	Out of Range Check for Phosphorus as PO4 with the following units: mg/l, ppm, umol, ug/L, ppb, mg/m3.	Chapter 62-303.320(7)
Nutrient Outliers	21	Out of Range Check for Phosphorus, orthophosphate as PO4 with the following units: mg/l, ppm, umol, ug/L, ppb, mg/m3.	Chapter 62-303.320(7)
Nutrient Outliers	22	Out of Range Check for Sulfur, sulfate (SO4) as SO4 with the following units: mg/l, ppm, ug/L, ppb, mg/m3.	Chapter 62-303.320(7)
Nutrient Outliers	23	Out of Range Check for Total Organic Carbon (TOC) with the following units: mg/l, ppm, ug/L, ppb, mg/m3, umol.	Chapter 62-303.320(7)
WQX Checks	1	Value Type is required for numeric result values	Water Quality Exchange
WQX Checks	2	Characteristic Name must be reported when there is a Result Value	Water Quality Exchange
WQX Checks	3	Horizontal Collection Method is 'Interpolation-Map' and the Source Map Scale value is NULL	Water Quality Exchange
WQX Checks	4	Characteristic Name and Status Identifier can not be NULL when there is a Result Value	Water Quality Exchange
WQX Checks	5	Vertical Measure reported, but unit, method and datum IS NULL	Water Quality Exchange
WQX Checks	6	ActivityTypeCode contains the word 'Sample', and the SampleCollectionMethod is NULL	Water Quality Exchange

Data Quality Assessment Category	CheckID	Data Quality Assessment Explanation	Source of Data Quality Check
WQX Checks	7	Detection Limit is reported, and the Unit is NULL	Water Quality Exchange
WQX Checks	8	Activity Media is 'Tissue' and the Biological Intent must also be 'Tissue' (and visa-versa)	Water Quality Exchange
WQX Checks	9	ActivityTypeCode contains the word 'Logger', and the Data Logger Line Name is NULL	Water Quality Exchange
WQX Checks	10	Monitoring Location IS NULL for these Activity Types	Water Quality Exchange
WQX Checks	11	The Value Type & Unit can not be NULL for Numeric Results	Water Quality Exchange
WQX Checks	12	Duplicate Station ID's	Water Quality Exchange
WQX Checks	13	Duplicate Project ID's	Water Quality Exchange
WQX Checks	14	Sample Collection Equipment Name doesn't match the type of equipment used	Water Quality Exchange
WQX Checks	15	Analytical Method Context does not match a valid domain list value	Water Quality Exchange
WQX Checks	16	Method Identifier does not match a value from the Analytical Method domain list (query 1 of 11)	Water Quality Exchange
WQX Checks	17	Method Identifier does not match a value from the Analytical Method domain list (query 2 of 11)	Water Quality Exchange
WQX Checks	18	Method Identifier does not match a value from the Analytical Method domain list (query 3 of 11)	Water Quality Exchange
WQX Checks	19	Method Identifier does not match a value from the Analytical Method domain list (query 4 of 11)	Water Quality Exchange
WQX Checks	20	Method Identifier does not match a value from the Analytical Method domain list (query 5 of 11)	Water Quality Exchange

Data Quality Assessment Category	CheckID	Data Quality Assessment Explanation	Source of Data Quality Check
WQX Checks	21	Method Identifier does not match a value from the Analytical Method domain list (query 6 of 11)	Water Quality Exchange
WQX Checks	22	Method Identifier does not match a value from the Analytical Method domain list (query 7 of 11)	Water Quality Exchange
WQX Checks	23	Method Identifier does not match a value from the Analytical Method domain list (query 8 of 11)	Water Quality Exchange
WQX Checks	24	Method Identifier does not match a value from the Analytical Method domain list (query 9 of 11)	Water Quality Exchange
WQX Checks	25	Method Identifier does not match a value from the Analytical Method domain list (query 10 of 11)	Water Quality Exchange
WQX Checks	26	Method Identifier does not match a value from the Analytical Method domain list (query 11 of 11)	Water Quality Exchange
WQX Checks	27	Method Identifier does not match a value from the Analytical Method domain list (query 12 of 11)	Water Quality Exchange
RI Checks	NA	Multiple Checks are in the database but will not be listed here since they are all the same. These checks ensure referential integrity.	Referential Integrity