

WATER QUALITY PROGRAMS DIVISION

Standard Operating Procedure for Data Correction in
Aquarius

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OKLAHOMA
Water Resources Board

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Standard Operating Procedure for Data Correction in Aquarius

1.0 General Information.

This SOP will provide general information for the data management of various parameters for real-time data. The Aquarius software is used to easily correct/control data, build rating curves, and derive statistics in real time. Data will either be collected real-time or downloaded during site visits. The following instructions are presented as guidelines but you will have to exercise considerable judgement in the software to obtain good results. Only personnel who have demonstrated adequate understanding of the data and have been granted data editing rights should perform these corrections.

2.0 Data Management

Data management is an important component of the Oklahoma Water Resources Boards (OWRB) mission of providing accurate and impartial scientific data. The majority of OWRB's continuous data is stored and managed in the Aquarius software. This section describes the subsequent steps of storing, documenting, tracking, approving, and archiving data for long-term availability to the OWRB and the public.

2.1 Aquarius Startup

Log into the Aquarius server

1. Open remote desktop server and login.
2. Launch springboard and enter credentials

2.2 Data Corrections

The Aquarius data correction application allows recorded data to be adjusted for calibration drift and fouling errors that occurred during the period between site visits. Errors occur from a variety of circumstances whether it's environmental causes or equipment error. Fouling drift and calibration drift will be corrected when the water-quality/sensor value exceeds the actual value from the site visit.

For example, if the sensor measurement for stage is 15.2ft and actual measurement is 15.0ft, the fouling error for the stage correction would be -0.2ft. The fouling correction will be added to the specific site data stream from the last visit to the current.

These data corrections are the minimum requirements for all data corrections. More stringent criteria may be needed to meet specific project objectives or hydrologic environments. Judgement will be needed to decide appropriate data correction when total errors are smaller or larger than the data correction criteria.

2.21 Fouling Drift

Fouling drift will be used when the data is off from environmental factors such as silt and weather.

2.22 Calibration Drift

Calibration drift will be used when the current data is off from the sensor

needing calibration.

2.23 Offset Correction

Offset correction is used as a way to move a selected data set vertically to account for reading error, surveying, etc.

2.24 Delete Region

Delete region is used to delete a specific value or set.

2.25 Threshold Correction/Flagging

Threshold correction/flagging is used to delete points, flag point, and delete specific data sets from a range higher or lower than the selected value.

2.26 Freehand

Freehand application allows you to freehand the data stream to “clean” sporadic data.

2.27 Copy and Paste

Copy and paste is used to add a specific data set to the data stream.

2.28 Set Notes

The Aquarius application allows you to set specific notes for the data stream. Notes can be applied to explain odd data events due to weather, equipment error, vandalism, etc.