

WQ-WET: A Web-Based Application to Allow Local Water Quality Monitoring Projects to Submit Data for Storage in a STORET Database

James M. Porter¹, Hafiz M. Munir¹, Louise E. Hotka¹, Jennifer Oknich¹, and Akira Matoba²

¹ Minnesota Pollution Control Agency, 520 Lafayette Road North, St. Paul, MN 55155-4194

² URS Corporation, 700 Third Street South, Minneapolis, MN 55415-1199

Contact Information for Submitting Author

James M. Porter

Information Systems Section

Minnesota Pollution Control Agency

520 Lafayette Rd. N.

St. Paul, MN 55155-4194

Phone: 651-296-8859

Fax: 651-282-5446

E-mail: jim.porter@state.mn.us

Abstract

The Minnesota Pollution Control Agency's STORET database serves as a clearinghouse for ambient lake and stream water quality monitoring data collected by local monitoring projects throughout the state. Collecting the data has historically been labor intensive despite efforts to standardize data formats. To improve efficiency and accuracy, the Minnesota Pollution Control Agency developed a web-based application to allow monitoring projects to submit data as a spreadsheet and ultimately produce a STORET Interface Module (SIM) import file.

The Water Quality Web Entry Tool (WQ-WET) application will serve as a central access point for data providers. Each user will have an account referencing one or more projects. A user will be able to look up allowable STORET values or request new values while preparing result files. Upon receiving an uploaded result file, WQ-WET will validate the file and facilitate user aliasing of unrecognized field names and result values. Once the user has correctly configured the result file and aliases, WQ-WET can load the data and produce a SIM import file. Data imported to STORET are made available a short time later on the Minnesota Pollution Control Agency's separate Environmental Data Access (EDA) web site, providing quick turnaround to data providers. For security reasons, neither WQ-WET nor any user has direct access to the STORET database. The allowable value tables are rewritten nightly in a separate database. Minnesota Pollution Control Agency staff will establish new values and load SIM import files independently from the WQ-WET application.