

Transition from a Centralized EPA WQSDB to a Distributed Set of State Databases

I. Introduction

A. Purpose

In 2005 EPA re-evaluated its goals and objectives as well as its approach to making Water Quality Standards (WQS) information more readily accessible to the public. EPA re-affirms that there is a federal interest in ensuring that: (1) the public can easily access accurate information on WQS for waters within a particular state, territory or within tribal lands; and (2) governmental officials federally as well as in other states, territories, and tribes can easily access accurate information on WQS for waters within a particular state, territory, or within tribal lands.

The 2009 operation plan for EPA Office of Water incorporates these objectives: States, Territories, and authorized Tribes should make their water quality standards accessible to the public on the Internet in a systematic format; and users should be able to identify the current EPA-approved standards that apply to each waterbody, for example by referencing tables and maps of designated uses and related criteria. EPA has developed the Water Quality Standards Database (WQSDB) for this purpose. EPA will provide a copy of the database for a State, Territory, or Tribe to populate, operate, and maintain locally if it does not have its own database. You may request a copy of the WQSDB and guidance for its installation and use at

<http://www.epa.gov/waterscience/standards/wqshome/> . The FY 2009 EPA Office of Water National Program Guidance document is available at:

http://www.epa.gov/ocfo/npmguidance/owater/2009/final_ow_2009_guidance.pdf.

EPA believes that the best approach to making this happen sooner is to work with individual states, territories and tribes to provide them with a database tool to populate with their own WQS data; make that data publicly accessible through their Websites; and finally for EPA and other states, tribes, and territories to have the capability to “exchange” data among their individual systems on an as needed basis through a Web-based system. This document will provide you with more information on this process.

B. Background

Water Quality Standards (WQS) are goals for protecting water quality and uses (e.g., fishing, swimming, public water supply, etc.). WQS include the use, the criteria (concentration of pollutants that should not be exceeded), and policies needed to administer the program. Direct access to such information has many benefits, including more informed public participation in the WQS process as envisioned by the Clean Water Act. It also aids states, tribes, and territories ("states") and EPA staff in developing and applying appropriate water quality goals in Clean Water Act regulatory programs.

EPA has developed a Water Quality Standards Database (WQSDB) that organizes and displays state, tribal, and territorial water quality standards information for surface waters in the U.S. The WQSDB enables states to make tables and maps of surface water quality standards data available to the public. The WQSDB provides a template that displays the unique features of a WQS program in a nationally compatible structure. This provides each state with an efficient tool to display, in table and map form, their WQS and criteria, and to show how new or revised WQS may affect or be affected by an adjacent state. The WQSDB template also allows all states to see how other states develop their WQS program, and, in the future, adopt similar standards for their own state.

EPA currently provides public access to the WQSDB at <http://www.epa.gov/waterscience/standards/wqshome/>. The database contains regulations for all states, tables of uses for 54 states, and maps for 30 states. Maps can be viewed on EPA's EnviroMapper Web site at: <http://www.epa.gov/waters/enviromapper/>. The online repository containing WQS documents for states, tribes and territories at can be found at: <http://www.epa.gov/waterscience/standards/wqslibrary/>.

EPA is assisting interested states in establishing and operating state-level Water Quality Standards Databases that provide easy access to Water Quality Standards information. EPA offers this assistance to those and other interested states by providing a database template for them to populate with their own WQS data. Future assistance may include providing all states with the capability to exchange data among these individual systems and EPA.

In order to implement this transition to make copies of the WQSDB available to the States to enable display and sharing of data nationally, EPA is planning the following steps:

- **Develop** a pilot template of the WQSDB for operation locally by a single state; begin transition to a distributed database structure (e.g., maintained by states); and document and archive the Internet version of the WQSDB.
- **Complete** work with a pilot state to transition to the distributed database; complete the Template WQSDB (standard outreach, training, and installation package) for operation locally by a state; and begin to work with additional volunteer states.
- **Work with individual states** to transition to the distributed database structure, and that want to adopt a WQSDB Template rather than designing their own database

You may request a copy of the WQSDB and guidance for its installation and use at <http://www.epa.gov/waterscience/standards/wqshome/> or by contacting Bill Kramer at kramer.bill@epa.gov or by calling 202-566-0385.

II. EPA Response to Request for a Copy of the WQSDB and Guidance for Installation

A. Introductory Conference Call

Once you have requested a copy of the WQSDB, an EPA representative will contact you to set up an introductory conference call. An example of what this introductory conference call entails is given below.

Introductions	All
Background - EPA's Goal	EPA (review of Fact Sheet content)
Overview	Contractor (walk through on-line use of reports, including criteria and mapping examples)
Questions and Answers	State Participants
Next Steps	All
Contacts	All
Preliminary Schedule	All

B. Websites with Additional Information

If you would like additional information please visit the WQSDB website at:
<http://www.epa.gov/wqsdatabase/>

If you would like additional information on NHD and geo-referencing please visit this website: <http://www.epa.gov/owow/monitoring/georef/RIT.htm>

If you would like additional information on the role of WQS in the Waters Architecture please visit this website: <http://www.epa.gov/waters/about/geography.html>

C. Follow-up

After the initial conference call a second follow-up call may be scheduled. The purpose of the second call will be to answer any questions that states may have on the operation of the WQSDB. EPA is also available to provide technical assistance to the states to answer questions on use of materials in State IT environment at any time.

III. Example Questions and Answers from States

- 1) Are we able to use our existing SQL Server environment to store our copy of the WQSDB?

Yes, exports of the current EPA Oracle WQSDB are available in multiple formats, including .csv and .dmp files, and easily importable to most state databases.

- 2) In our first meeting someone from your team mentioned that you had developed SOPs for the WQSDB. If so, will we receive these with the database?

Yes, a complete package of SOP's detailing data updates, and reporting processes is available to interested states.

- 3) It would be helpful to us if we could receive the source code for the WQSDB reporting interface. Will we receive this information with the database?

Yes, the source code will be provided to you from EPA.

IV. Case Studies and Additional State Contacts [hold for future versions of this document]

V. Link to data standards and XML tools for WQS [hold for updates on the Water Quality Conditions and Integrated Reporting Data Standard]

The EPA Office of Environmental Information is currently considering the development of a water quality conditions and integrated reporting exchange network data standard. This standard is intended to streamline the reporting capabilities, and improve the comprehension, of water quality data reported by Exchange Network partners. The proposed standard would act as a data transfer standard based largely on existing data elements reported to the Agency. It will facilitate the usability of water quality information across the water community without placing any additional reporting burden on Exchange partners. Any direct effect to existing applications and databases [including the Water Quality Standards Database (WQSDB), the Assessment Data Base (ADB), and the National TMDL Tracking System (NTTS)] is believed to be negligible as the standard will eventually support the xml flow of existing data elements through the Exchange Network.

This proposed standard setting activity is tentatively scheduled to begin in the Fall of 2008.