AQUATOX Supporting Documentation

This model is being distributed, maintained and actively supported by EPA.

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User's Manual

The AQUATOX 3.1 Supporting Documents <https://epa.gov/hydrowq/aquatox-31-supporting-documents> User's Manual guides you through the use and operations of the various model capabilities, describes the model structure, and provides example applications. This file may also be accessed when running

AQUATOX by using the AQUATOX help menu or by pressing the “help” button available on most screens.

Setup Guide

The new Guidance in AQUATOX Setup and Application <https://epa.gov/hydrowq/aquatox-setup-guide> provides a "quick start" guide to introduce major model features, as well as being a type of "cookbook" to guide basic model setup, calibration, and validation.

Technical Documentation

The AQUATOX 3.1 Supporting Documents <https://epa.gov/hydrowq/aquatox-31-supporting-documents> Technical Documentation presents a detailed description of the model structure and documentation of 452 component equations in Release 3.1.

AQUATOX Release 2.1 Users' Manual for the Extension to BASINS

The AQUATOX 3.1 Supporting Documents <https://epa.gov/hydrowq/aquatox-31-supporting-documents> BASINS Extension Users' Manual guides you through the use

- What does AQUATOX do? <https://epa.gov/hydrowq/what-does-aquatox-do>
  - Potential applications to water management <https://epa.gov/hydrowq/potential-applications-aquatox>
  - Unique features and operations <https://epa.gov/hydrowq/aquatox-features-and-tools>
- Training - classes and downloadable presentation materials <https://epa.gov/hydrowq/aquatox-training-workshops>
- Frequently Asked Questions <https://epa.gov/hydrowq/aquatox-frequently-asked-questions>

and operation of the link to the BASINS GIS and watershed modeling system, including the enhancements made in Release 2.1. Note: the linkage operates in essentially the same manner under Release 3.1 as Release 2.1

Notes on linkage: The linkage from WinHSPF in BASINS 4.1 to AQUATOX 3.1 operates in essentially the same manner as to Release 2.1. However, the most recent version of BASINS (version 4.1) contains a newer version of the SWAT watershed model, with which the linkage to AQUATOX no longer works.

Model Validation Reports

Note: these model validation reports <https://epa.gov/hydrowq/aquatox-model-validation-reports> are from Release 1 and 1.1. They have not been re-done using the Release 3.1 code, so the model results would be somewhat different. The overall results and conclusions should still be valid.

- Nutrient analysis on the Onondaga Lake, New York
- Nutrient analysis of the Coralville Reservoir, Iowa
- Bioaccumulation of PCBs in Lake Ontario
- Download the entire document
- Report on the periphyton simulation and validation

Sensitivity Analysis

- AQUATOX Email Listserv <https://epa.gov/hydrowq/aquatox-listserv>
- Peer Review <https://epa.gov/hydrowq/peer-review-aquatox>
- Publications About or Referencing AQUATOX <https://epa.gov/hydrowq/selected-publications-aquatox>
- **AQUATOX Supporting Documentation**
- Modeling Periphyton with AQUATOX <https://epa.gov/hydrowq/modeling-periphyton-aquatox>
- Download the model <https://epa.gov/hydrowq/aquatox-31-download-page>
- Data sources <https://epa.gov/hydrowq/aquatox-data-sources-parameter-values>

EPA performed a AQUATOX 3.1 Supporting Documents <https://epa.gov/hydrowq/aquatox-31-supporting-documents> structured sensitivity analysis of AQUATOX. This analysis identified the model parameters that cause the most sensitivity in model output.

- Sensitivity Analysis of AQUATOX

Technical Notes

The AQUATOX 3.1 Supporting Documents <https://epa.gov/hydrowq/aquatox-31-supporting-documents> technical notes describe the parameters, requirements, sources, conditioning, and modeling water flows in AQUATOX.

- AQUATOX Technical Note 1: A Calibrated Parameter Set for Simulation of Algae in Shallow Rivers
- AQUATOX Technical Note 2: Requirements, Sources, and Conditioning of Data for AQUATOX
- AQUATOX Technical Note 3: Modeling Water Flows with AQUATOX Release 3

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