**What’s new in AQUATOX Release 3.2?**

**AQUATOX 3.2 includes the following interface enhancements:**

* Update to AQUATOX Database Management System: The paradox database management system (used in previous versions) has been replaced with SQLite databases.
* Capability to save all inputs and outputs to a text file: AQUATOX now can write all model inputs and outputs in ASCII format by saving files with a “\*.txt” extension. This allows users to view and change model inputs without using the graphical user interface.
* Command Line Version: Users may now execute and manipulate the model using a DOS command prompt.
* For information about how to use each of these interface updates, please see the Release 3.2 *User’s Manual.*

In addition to the changes discussed above, changes were made to the model to represent the “nearshore marine environment” as discussed here.

**Nearshore Marine Environment**

AQUATOX Release 3.2 was designed to extend the existing AQUATOX estuarine version to include improved capabilities for situations encountered in the nearshore marine environment. Several changes were required to model food webs in the marine environment. The most notable updates include:

* Additional equations to model the physical complexity of oyster reefs and the marsh-edge environment.
* The capability to model size-classes of oysters and crabs within the model.
* New invertebrate-modeling capabilities including allometric bioenergetics equations and burrowing refuge from predation.
* To better represent marine-biology conventions, the guilds used by AQUATOX to characterize these state variables were reorganized.
* Four new nearshore-marine studies are included in this version representing “marsh edge,” “exposed beach,” “soft bottom,” and “oyster reef” habitats. Numerous nearshore-marine animal- and plant-parameter records have been added to the AQUATOX databases.

**Differences from Release 3.1 plus**

Most model simulations created in Release 3.1 and Release 3.1 plus produce identical or nearly-identical results in Release 3.2. A few differences are visible in some studies, however. Nutrient quantities may be slightly different because of a change in the animal-respiration equation. This can have some ripple effects, especially in systems with long retention times. Other changes to the process code that could affect model results follow:

* The BCF equation (382) has been changed to take into account metabolism of organic chemicals.
* A bug was fixed when the user has selected the “Calculate BCF” option (alternative chemical uptake mode given a user entered “K1” and “K2”).
* Carrying capacity was not utilized as a parameter for benthic invertebrates previously, but now is considered a hard cap based on habitat limitations.
* For full details about these changes please see the AQUATOX Release 3.2 *Technical Documentation.*