

MISSION STATEMENT

The purpose of the Modeling Laboratory is to improve and communicate watershed and estuarine modeling to support the protection and restoration science which informs and guides management decisions in Chesapeake Bay Program Partnership

- Accelerate the translation of research into operational models and utilities
- Facilitate testing and bench marking of appropriate models for Chesapeake Bay Program operations
- Allow rapid modification of the code to improve the predictive skill of the models and foster adaptive management
- Maximize operational efficiency of the Chesapeake Bay Program Models
- Build credible open-source community modeling tools and data for stakeholders and facilitate operations for states, researchers, and other partners
- Provide a framework that would be responsive to input from major stakeholders

MODELING LABORATORY GUIDING PRINCIPLES

- 1) Research, development, and operations must all be addressed
 - a. Clear budgeting between the three components
 - b. These three components do not necessarily need to be physically located in the same place, but must have regular communication
 - c. Operations need to be connected to the Chesapeake Bay Program and Office
- 2) Sustainable dedicated core funding
- 3) Research and development is management focused
- 4) Research must be of publishable quality
- 5) Formal methods to track and openly distribute model input data and products of the data (with meta data according to current standards)
- 6) Consider both regional and local issues across the watershed and estuary
- 7) Open-source and modular
- 8) Transparency and communication should be considered in development and operations
 - a. Timely modeling documentation
 - b. Communication includes introductory operations documentation, programs, and training
- 9) Support co-development of Chesapeake Bay models
- 10) Transferability

Regional focus with the ability to expand