Healthy Waters, Healthy Communities

Modeling Support Tools

Clean water: Great for PA
Good for the Bay

Modeling Support Tools are free resources that provide individuals, organizations, and government agencies critical information and insights for cleaning up local waters. These tools can be useful for modeling solutions for reducing water pollution and predicting long-term impacts of planned or current efforts. The maps and visualizations help communicate predicted results to stakeholders. Any questions about the tools should be directed to the organization that developed the tool.

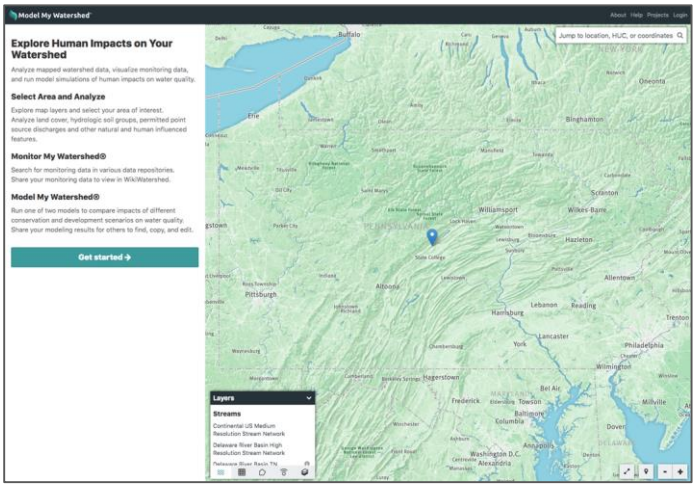
Model My Watershed

https://modelmywatershed.org

Model My Watershed is a watershed modeling web application that enables citizens, conservation practitioners, municipal decision-makers, educators, and students to:

- Analyze real land use and soil data in their neighborhoods and watersheds
- Model stormwater runoff and water quality impacts using professional-grade models
- Compare how different conservation or development scenarios could modify runoff and water quality*

Main Users: Public, County Coordinators
Source Data: Stroud Water Research Center
User Restrictions: None



Explore mapped layers, such as streams, land cover, soils, boundaries and observations, using the layer selector in the lower left of the map.

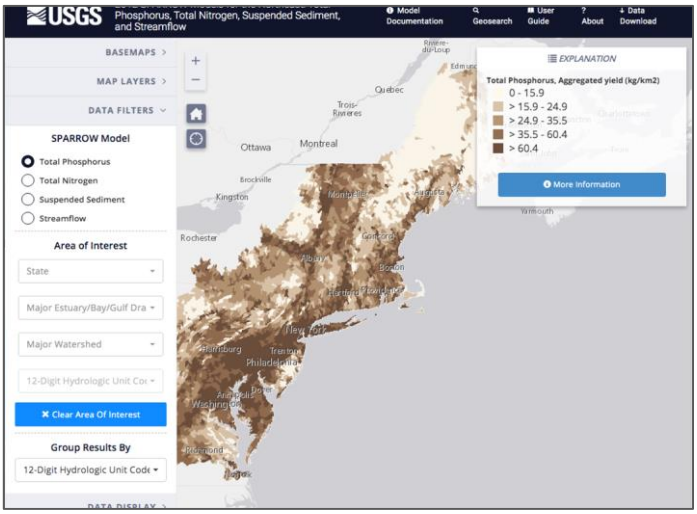
**** MMW calculates load reductions that differ from the CAST model used by the Chesapeake Bay Program. This tool should be used as a planning tool and not for official load reduction numbers for the TMDL.***

Northeast SPARROW Mapper

https://sparrow.wim.usgs.gov/sparrow-northeast-2012

Spatially Referenced Regression On Watershed attributes (SPARROW) models were developed to quantify and improve the understanding of the sources, fate, and transport of nitrogen, phosphorus, and suspended sediment in the northeastern United States. Excessive nutrients and suspended sediment from upland watersheds and tributary streams have contributed to ecological and economic degradation of northeastern surface waters.

Main Users: Public, County Coordinators
Source Data: USGS
User Restrictions: None



The SPARROW model results displayed here represent mean daily streamflow and average annual total nitrogen, total phosphorus, and suspended sediment load in streams of the Northeast.

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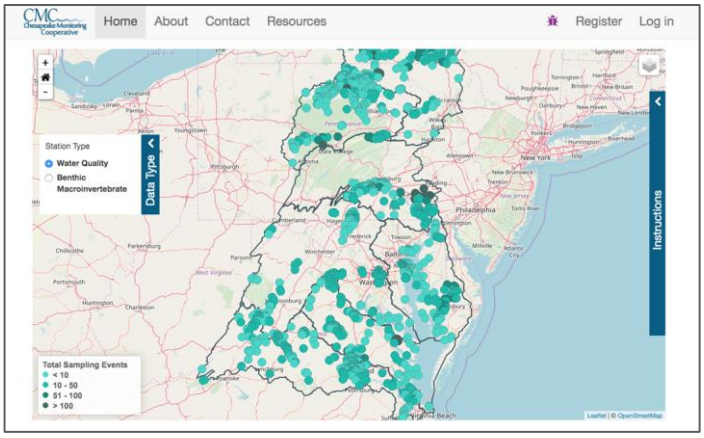
Chesapeake Data Explorer

https://cmc.vims.edu/#/home

The Chesapeake Data Explorer is a tool for storing and sharing data collected by a network of water quality and benthic macroinvertebrate monitors working with the Chesapeake Monitoring Cooperative. These data are publicly accessible and are shared directly with the Chesapeake Bay Program and other data users. Information found in the county toolboxes are generated with the same information found in the Chesapeake Data Explorer.

Main Users: Public and County Coordinators
Source Data: Data collected by all sources and accepted by the Chesapeake Bay Program
User Restrictions: None



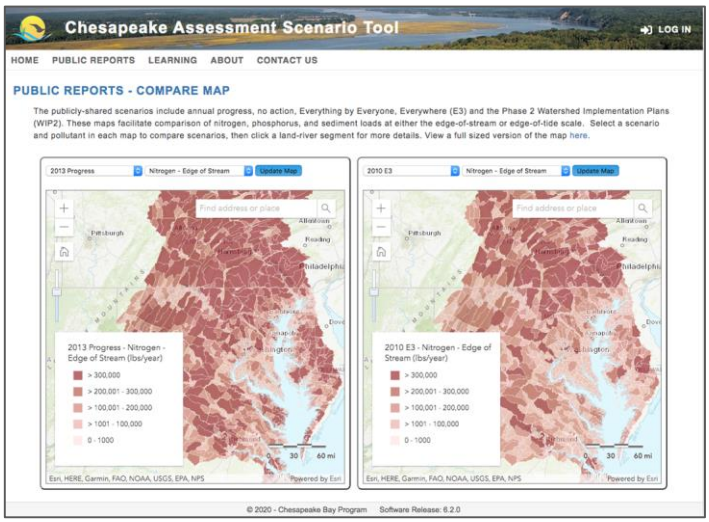
Analyze land cover, hydrologic soil groups, permitted point source discharges and other natural and human influenced features.

Chesapeake Assessment Scenario Tool

https://cast.chesapeakebay.net/PublicReports/CompareMap

The Chesapeake Assessment Scenario Tool (CAST) is a web-based nitrogen, phosphorus, and sediment load estimator tool that streamlines environmental planning. Users specify a geographical area, and then select best management practices (BMPs) to apply on that area. CAST builds the scenario and provides estimates of nitrogen, phosphorus, and sediment load reductions. The estimated cost of a scenario is also provided so that users may select the most cost-effective practices to reduce pollutant loads.

Main Users: Scientists, Susquehanna River Basin Commission, DEP, EPA
Source Data: Chesapeake Bay Program
User Restrictions: None



Downloadable Phase 6 Map Viewer and Source Data, includes cost profiles, TDML reports, and BMP scenario calculations.