



Great Lakes Tributary Model

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG®

Issue: Soil erosion and nonpoint pollution are among the priority issues facing the Great Lakes and a focus area of the Administration's Great Lakes Restoration Initiative. Loadings of eroded soils and diffuse pollution have adverse environmental and economic impacts. As a major source of nutrients, it is increasing algae blooms and dead zones in the Lakes. As the major source of sediments, it is reducing water depths in harbors and shipping channels, causing groundings and unsafe conditions, and increasing the need for dredging and the costs to navigation users.

Authority: The Great Lakes Tributary Model (GLTM) program was established through Section 516(e) of the Water Resources Development Act of 1996. This authority enables the U.S. Army Corps of Engineers (USACE) to develop sediment transport models to assist state and local agencies with the planning and implementation of measures for soil conservation and nonpoint source pollution prevention. Models can be developed at all tributaries to the Great Lakes that discharge to federal navigation channels or Areas of Concern (AOCs). The ultimate goal of this program is to reduce the loading of sediments and pollutants to tributaries in order to enhance Great Lakes water quality, delist Great Lakes AOCs, and reduce the need for navigation dredging.

Funding: The USACE' base funding for the GLTM program is through the annual Energy & Water Appropriations. Recent funding from this source included \$1.08 million in FY 2012. The President's Budget request for FY 2013 includes \$1.08 million for this program. The optimal funding for this program would be \$1.5 million in FY 2013 and FY 2014.

Coordination: This program is being implemented in close coordination with the Great Lakes states through cooperation with the Great Lakes Commission. Tributary models are developed in partnership with representatives of agencies and organizations from the watershed, including Soil and Water Conservation Districts, Remedial Action Plans committees, municipal and regional planning agencies, navigation interests, state and federal resource agencies. These partnerships guide the scope and focus for the model to meet individual watershed needs.

Accomplishments: Models have already been completed at more than 30 tributaries and are being used by local, state and federal agencies for watershed and ecosystem planning, forestry management, navigation maintenance planning, and water quality compliance evaluations. State and county agencies are also using models to identify the most effective locations for buffer strips or wetland restoration projects and assess impacts of urban sprawl on sedimentation. A partial list of ongoing models with a few examples of completed models is provided on the attached table.

Points of Contact: Contact the following USACE POCs for models at tributaries in these states:

New York, PA and Ohio

Brent Laspada
Buffalo District
716-879-4409
brent.r.laspada@usace.army.mil

Michigan, MN and WI

Martin Kuhn
Detroit District
313-226-2283
martin.t.kuhn@usace.army.mil

Illinois and Indiana

David Bucaro
Chicago District
312-846-5552
david.f.bucaro@usace.army.mil

For More Information: Information on tributary models and reports are available online at:
www.glc.org/tributary/

Partial List of Projects under the Great Lakes Tributary Model Program

State	Tributary	Status	Uses of Model
Illinois	Waukegan River	Completed	Reduce bank erosion and plan options for restoration of urban river
	Calumet River	Under development	Evaluate options for reducing urban nonpoint loadings
Indiana	Burns Ditch/Trail Creek	Completed	Land-use planning and conservation to reduce nonpoint pollution
Michigan	Clinton River	Completed	Urban stormwater management and bank erosion options in AOC
	Ontonagon River	Completed	Sediment budget to evaluate impacts of forestry BMPs
	River Raisin	Under development	Intensive training for local stakeholders on use of web-based tools
	Jordan River	Under development	Sediment budget to evaluate impacts of agricultural BMPs/water withdrawals
Minnesota	Knife River	Completed	Guide reforestation efforts to reduce hydrologic response
	Nemadji River	Completed	Compare impacts of forestry practices on bank erosion
	Knowlton Creek	Under development	Evaluate sources of sediments to AOC
New York	Buffalo River	Completed	Planning pollution prevention and sediment cleanup options in AOC
	Cattaraugus Creek	Completed	Reduce impacts of urban development on erosion/nonpoint pollution
	Canaseraga Creek	Completed	Evaluate sources of sediments and effectiveness of BMPs
	Grasse River	Under development	Evaluate impacts of agricultural BMPs
Ohio	Auglaize River	Completed	Prioritizing sites for buffer strips and other conservation measures
	Blanchard River	Completed	Prioritize agricultural BMPs and wetlands restoration options
	Tiffin River	Under development	Evaluate agricultural BMPs
	Maumee River	Under development	Estimate sedimentation rates in navigation channel under various scenarios
Pennsylvania	Mill and Cascade Creeks	Completed	Reducing nonpoint loadings to AOC
Wisconsin	Fox River	Under development	Evaluate effectiveness of agricultural BMPs in AOC
	Manitowoc River	Completed	Compare and prioritize agricultural BMPs
	Upper East River	Under development	Intensive training for local stakeholders on use of web-based tools