



Great Lakes Tributary Model

U.S. ARMY CORPS OF ENGINEERS

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Issue: Soil erosion and nonpoint pollution are one of 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 and increasing the need for dredging and the costs to navigation users.

Authority: In 1996, Congress created the Great Lakes Tributary Model program 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 goals of this program is to reduce the loading of sediments and pollutants to tributaries in order to enhance Great Lakes water quality, help delist Great Lakes AOCs, and reduce the need for navigation dredging.

Funding: The Great Lakes Tributary Model program received \$1,140K in funding in FY 2010. The President's Energy and Water Budget request for FY 2011 includes \$1.2 million for this program. The optimal funding for this program in FY 2012 would be \$2.0 million.

Coordination: This program is being implemented in close coordination with the Great Lakes states. 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 20 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 list of ongoing models with a few examples of completed models is provided on the attached table.

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

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Partial List of Projects under the Great Lakes Tributary Model Program

State	Tributary	Status	Uses of Model
Illinois	Waukegan River	Under development	Evaluate bank erosion and restoration of urban river
Indiana	Burns Ditch/Trail Creek	Completed	Land-use planning and conservation to reduce nonpoint pollution
Michigan	Clinton River	Completed	Evaluate urban stormwater management and bank erosion options
	Ontonagon River	Completed	Prepare sediment budget to evaluate forestry BMPs
	River Raisin	Under development	Prepare sediment budget to evaluate agricultural BMPs
	Rouge River	Completed	Assess impacts of dam removal on sediment erosion and transport
Minnesota	Knife River	Under development	Manage bank erosion from historic logging activities
	Nemadji River	Completed	Evaluate impacts of forestry practices on bank erosion
	Miller/Coffee/Knowlton Creeks	Under development	Evaluate sources of sediments to AOC
New York	Buffalo River	Completed	Evaluate pollution prevention and sediment cleanup options
	Cattaraugus Creek	Completed	Evaluate impacts of urban development on erosion/nonpoint pollution
	Cayuga Creek	Completed	Evaluate impacts of urban development on erosion/nonpoint pollution
	Oak Orchard Creek	Completed	Evaluate buffer strips and other BMPs
Ohio	Auglaize River	Completed	Prioritizing sites for buffer strips and other conservation measures
	Blanchard River	Completed	Evaluate agricultural BMPs and wetlands restoration
	Cuyahoga River	Completed	Prioritize areas for focusing soil conservation efforts
	Lower Maumee River	Completed	Link together results of several models of Maumee watershed
Pennsylvania	Mill and Cascade Creeks	Completed	Plan stream restoration and other actions for AOC delisting
Wisconsin	Fox River	Under development	Evaluate effectiveness of agricultural BMPs
	Manitowoc River	Under development	Evaluate effectiveness of agricultural BMPs
	Siskiwit River (Cornucopia)	Completed	Evaluate watershed management to reduce harbor shoaling
	Whittlesey Creek	Completed	Restoring flow and fishery access in high value stream