

Restoring Natural Flows in the Clinton River Watershed

INTEGRATED ASSESSMENT



BACKGROUND

The 80-mile long Clinton River has its headwaters in rural and urbanizing areas and then flows through heavily urbanized sections of southern Oakland and Macomb counties before eventually draining into Lake St. Clair in southeast Michigan. Although water quality in the Clinton River has improved over the last 30 years, the river faces a number of environmental challenges, including extreme fluctuation of water flow.

Twenty one separate impoundments – or dammed lakes – along the upper reaches of the river interrupt natural flows and block fish movement within the watershed. A majority of the lakes created by

the impoundments have a court-authorized water level that is set independently of other lakes in the system and the downstream receiving waters. When lake control structures at the impoundments are adjusted, the result is a sudden, drastic change of water flow in the river. Although regulatory agencies are legally required to make these water level adjustments, the resulting abrupt changes in river flow adversely impact fish and wildlife habitat as well as recreational opportunities. Additionally, the presence of the impoundments puts many constituents on opposite sides of the issues; residents often have contrasting opinions about lake level control and river water use depending on where they are located in the watershed.

Project Description

This project will evaluate ecologically and economically sound approaches to managing the Clinton River. Researchers will use stakeholder input, a variety of existing data sources, and hydrologic and economic models to assess the causes, consequences and possible solutions for the current flow regime. The project will evaluate the impact of existing and potential river regulation policies on:

- Water quality
- Fish and wildlife habitat
- Recreational opportunities in and along the river
- Flood control and flow stabilization
- Property values, property rights, and insurance costs
- Taxes, wages and business income
- The influence of lake level control on adjoining lakes
- The effect on lake level control on the watershed
- Operational mechanics

Expected Outcomes

The overall goal is to develop a more comprehensive, holistic approach to water-level management. The project will develop tools and metrics that can be used by policy makers to identify, evaluate and build consensus for revised flow management policies. A more natural flow regime has the potential to create long-term benefits like, improved water quality and environmental health, increased recreational opportunities, reduced user conflicts, improved regional economic viability and lower operational costs associated with lake level controls.

Get Involved

The project team will gather input from all concerned stakeholders including landowners, lake-owner and riparian owner associations, municipal governments, county agencies, watershed managers, permit agencies, businesses and recreational users. For more information about the project and upcoming public meetings, visit the website, www.ltu.edu/IAclintonriverwatershed, or contact Dr. Sanjiv Sinha.



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