



## Detroit River Corridor Preliminary Assessment of Land Use Change

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The spatial history of land use change and shoreline development along the Detroit River corridor is being studied in a geographic analysis of the area. Historical maps, remotely sensed data, and related geographic information are all used to reconstruct a temporal land use and land cover GIS database. Parcel level information will be collected in selected areas to characterize the land use changes associated with the development of brownfields along the river.

Analysis of land use change in the Detroit River area is focused on urban growth - especially industrialization - of Detroit, Michigan and Windsor, Ontario. Island and shoreline infilling are being documented through time to illustrate this change. Loss of wetlands is a related issue that can be better understood by looking at such change through time. Loss and degradation of aquatic habitat due to contaminated river sediments is also of major concern.

The Detroit River is part of the Great Lakes-St. Lawrence Seaway and the busiest port in the Great Lakes. Forty percent of all commerce between Canada and the United States takes place in its waters. The river is also a major source of industrial and drinking water, serving some four million people in nearly 100 communities. Detroit River water is also used for processing and cooling industrial operations at several locations within the corridor. The shorelines and lands adjacent to the Detroit River have been intensely developed, however, the corridor continues to provide important habitat to fish and waterfowl.

While Native Americans inhabited the Detroit River corridor for thousands of years and Europeans traded and settled in the area, it was not until completion of the Erie Canal in 1812 that urban growth in the Detroit-Windsor area began to take place. Arrival of railways in the 1850s increased the flow of settlers. Preliminary findings indicate that agricultural land use replaced the natural forest and wetlands following early European settlement. Agriculture peaked around 1880-1900, and has decreased since 1910 as population growth and land use intensity

accelerated due to industrial development. In recent decades urban growth on both sides of the river has consumed most of the remaining farmlands and wetlands, leaving only 3% of the original wetlands intact. The river shoreline and its islands have changed dramatically due to infilling, channelization, and bulkheads.

The Detroit River is one of 42 Areas of Concern in the Great Lakes Ecosystem. This work provides scientists and modelers with the information needed for a remedial action plan to restore fish and wildlife habitat in the Detroit River. Designation as an American Heritage River highlights the importance of providing the local community with scientific information to revitalize this important water way.

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## Research Activities

- ◆ [Project News & Updates](#)
- ◆ Land Use and Reconstruction
  - [Timeline of Historical Events](#)
  - Urban Land Use Data
  - [Agriculture Land Use Data](#)
- ◆ Population History
  - [Census Data](#)
- ◆ [Source Materials](#)
- ◆ Methods
- ◆ Metadata

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## Project Collaborators



Geography Department



U.S. Department of the Interior  
U.S. Geological Survey  
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