

Fort Wayne Riverbank Restoration

Fort Wayne, Indiana



Erosion in front of old fort along the Saint Mary's River



Stabilized bank in front of old fort along the Saint Mary's River

The confluence of the St. Joseph, St. Mary's and Maumee Rivers, located at the geographic center of Fort Wayne, was once the heart of the city's life, economy, and culture. Over past decades, however, these river systems had become underutilized and disconnected from the surrounding landscape as levees were installed. In an effort to reestablish the rivers as the

centerpiece of Fort Wayne and a world-class riverfront destination, the City of Fort Wayne launched a Riverfront Development Study, which led to the development of a conceptual plan for revitalization, recreation, and stewardship along more than two miles of riverfront.

Recognizing that thriving riverfronts require healthy riparian corridors, the city turned to

Fort Wayne's new riparian management plan helps guide and fund the restoration of 425 linear feet of unstable banks on the St. Mary's River in downtown Fort Wayne.

Biohabitats, a member of the Study team, to develop a riparian management plan for the study area. As part of the management plan Biohabitats identified two severely unstable sections of streambank and helped the City receive funding from IDNR's Lake and River Enhancement Program for design and construction.

The St. Mary's watershed has had a steady increase in development and agriculture over time, which has resulted in increased impervious surfaces, the reduction of forests and wetlands, and a shift in the hydrology of the channel to an increasingly flashy, urbanized condition. Increased development has also directly impacted the channel through armoring the channel slopes and through the hydraulic impacts created by the Hosey Dam located downstream.

To inform the stream restoration design process, Biohabitats performed an evaluation of the

project corridor, including a literature review for site conditions, examination of hydraulic conditions using existing studies and information, geomorphic analysis, and limited ecological parameters including wetlands and vegetation. These conditions are considered in the creation of design drawings and documentation by establishing a basis on which to design streambank stabilization techniques and riparian vegetation. The design aims to stabilize eroded streambank using natural materials, while also protecting existing cottonwood trees and infrastructure. The design focused on establishing a boulder toe followed with a series of soil lifts and live branch layering.

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