

Henry Ford Estate Dam Fishway: Challenges Overcome to Provide Ecosystem Restoration

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The Henry Ford Estate dam, part of a National Historic Landmark, was built in the early 1900's by Henry Ford for the purpose of generating electricity for his home, located on the Rouge River, in Dearborn, Michigan. The construction of the dam impeded fish passage, cutting off over 160 miles the Rouge River and its tributaries from the Great Lakes system. In the early 2000's both the Rouge River Project and the USACE at different times explored dam removal, modification, and channel bypass were explored as ways to open up the river system to fish passage. Due to the historical significance of the dam, removal and modification were not feasible. Therefore, a channel bypass "fishway" was developed.

The Alliance of Rouge Communities (ARC) was awarded funding in 2015 from the GLRI, through NOAA, to develop the design for an 800 ft Fishway. Wayne County partnered with the ARC in 2017 under EPA GLRI funding to implement construction of the Henry Ford Estate Dam Fishway (a Rouge River Area of Concern (AOC) habitat restoration project). Detail of the design, which incorporated many parameters including maintaining a base level of flow over the dam to allow for hydroelectricity capabilities for the home used for historical demonstrations, while providing effective fish passage function, hydraulic function, and habitat value will be discussed. However, this project had many unique hurdles faced from the National Historic Site registration in design to construction suffering through and recovering from, two 100-year flood events and one 500-year flood event, experiencing historically high river levels, high levels of pedestrian use during the Covid-19 pandemic, and significant site access challenges. The strategies used to overcome these hurdles will be presented resulting in the successful outcome of this unique restoration project in the Great Lakes.

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