



Match-E-Be-Nash-She-Wish
Band of the Pottawatomi Tribe



National Oceanic and
Atmospheric Administration



State of Michigan
Department of Natural Resources



State of Michigan
Department of Environmental Quality



State of Michigan
Department of the Attorney General



Nottawaseppi Huron
Band of the Pottawatomi Tribe



U.S.
Department of the Interior

Kalamazoo River Oil Spill Restoration

Fish passage project in tributary of the Kalamazoo River first project implemented from oil spill restoration plan

On July 25, 2010, Enbridge’s Lakehead Line 6B, a 30-inch diameter pipeline, ruptured near Marshall, Michigan, and discharged crude oil into a wetland adjacent to Talmadge Creek in Calhoun County, Michigan. The oil flowed down Talmadge Creek and into the Kalamazoo River which was in floodstage at the time (Figure 1). Oil flowed down the Kalamazoo River and through the river floodplain for approximately 38 miles to Morrow Lake. Numerous species of wildlife and their habitats, and their related services, were injured as a result of this spill which remains the Nation’s largest inland oil spill.



Figure 1. Talmadge Creek in August, 2010 depicting the on-going cleanup.

The Natural Resource Trustees working to restore the Kalamazoo River following the 2010 Enbridge Oil Spill include the Michigan Department of Environmental Quality, Michigan Department of Natural Resources, and the Michigan Department of the Attorney General, U.S. Fish &

Wildlife Service, the National Oceanic and Atmospheric Administration, Match-E-Be-Nash-She-Wish Band of the Pottawatomi Tribe, and the Nottawaseppi Huron Band of the Pottawatomi Tribe. The Trustees completed the Damage Assessment and Restoration Plan in October, 2015. The Natural Resource Trustees recently announced the completion of a fish passage project on Pigeon Creek, a tributary of the Kalamazoo River, in Calhoun County, Michigan.



Figure 2. The culvert system at E Drive on Pigeon Creek, a tributary of the Kalamazoo River, prior to restoration of fish passage.

This aquatic passage project represents the first implemented project from the restoration plan for the 2010 Enbridge Oil Spill on the Kalamazoo River. Prior to replacement, the stacked five-culvert system inhibited the passage of aquatic organisms and did not adequately accommodate seasonal floods associated with storm events (Figure 2).



Figure 3. New culvert installation on Pigeon Creek, Calhoun County, Michigan.

The Calhoun Conservation District, led by Director Tracy Bronson and Project Manager Brett Riser, directed the replacement of the inadequate structure with a single bottomless culvert (Figures 3 and 4). The Conservation District partnered locally with the Calhoun County Road Department, Civil Engineers, Inc. of Battle Creek, Michigan, and Sebastian Trucking and Excavating, Inc. of Springport, Michigan to plan, design, and install the new culvert.

To facilitate fish passage and use by other aquatic organisms, the new culvert was designed to use a bottom of natural cobble. To further improve fish passage, an in-stream rock ramp (Figure 4) was incorporated to dissipate the force of water flowing through the culvert. Within a week of completion, fish were observed moving through the new culvert system. The Conservation District has already collected several years of data to characterize the fish communities above and below the E drive crossing. They will now

begin monitoring to compare the fish community above and below the culvert following installation.



Figure 4. Rock ramp structure below the new culvert on Pigeon Creek.

In addition to improving habitat, the new culvert is sized to accommodate seasonal flooding.

The Calhoun Conservation District will implement two additional aquatic restoration projects on behalf of the Natural Resource

Trustees and the public over the next two years. This includes replacement of an additional undersized culvert to improve sediment transport in Rice Creek, another tributary to the Kalamazoo River. The Conservation District will also lower a berm along Rice Creek to reconnect the creek to its historic floodplain. This will improve habitats in an area of bottomland hardwood forest, one of the natural resources substantially injured as a result of the 2010 Enbridge Kalamazoo River Oil Spill.

Documentation related to the 2010 Enbridge Oil Spill on the Kalamazoo River, additional information on the Damage Assessment and Restoration Plan, and the progress of implementation, may be found at <https://www.fws.gov/midwest/es/ec/nrda/MichiganEnbridge/>.

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September 2016
