

Reconnecting Coldwater Habitat in Bigelow Creek

Award# 2017.1741

Awardee: Trout Unlimited, Inc. (TU)

Project Team: Trout Unlimited, USDA Forest Service, Michigan Department of Natural Resources, Newaygo County Road Commission, Muskegon River Watershed Assembly.

Contact:

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Award Amount: \$70,000.00

Time Frame: July 30, 2017 – June 01, 2019

Background:

Trout Unlimited, Inc. and partners seek to restore aquatic organism passage (AOP) and stream function at three road stream crossings as the first phase of whole-system approach to completely restore connectivity within the Bigelow Creek watershed (total of 22 miles). Local area project partners include the USDA Forest Service, Huron-Manistee National Forest (HMNF), Michigan Department of Natural Resources, Newaygo County Road Commission, Muskegon River Watershed Assembly and Trout Unlimited, Inc. Bigelow_Creek has been designated a “priority watershed” for restoring ecosystem function. The overarching goal is to restore and/or improve aquatic organism passage (AOP) and stream function at 9 road/stream crossings within the watershed through phased efforts.

Through a comprehensive planning effort, the project team has identified Phase I as the restoration of 3 undersized and impaired culverts located in the main branch and east branch of Bigelow Creek. The road/stream crossings are located in Newaygo County and include two crossings at the 40th Street (main branch and east branch Bigelow Creek), and Spruce Rd. crossing (East Branch Bigelow Creek).

In 2017-2018, Trout Unlimited, Inc. (TU) and partners restored aquatic organism passage (AOP) and stream function at the three road/stream crossings. The replacement crossings enhance and provide long-term protection for fish passage and habitat for salmonids and other coldwater species of the Lake Michigan Basin. The completion of the 40th Street and Main Branch Bigelow Creek road/stream crossing, which utilized GLFT funds, has reconnected over 5 miles of high-quality coldwater habitat in Bigelow Creek. As a result of the comprehensive, multi-partner effort, this phase of the project was completed as intended.

Outcomes:

Benefits of the project include improved aquatic organism passage in Bigelow Creek and the restoration of fundamental stream processes (e.g., <https://www.facebook.com/TUGreatLakes/videos/544775329283003/>). Trout Unlimited, Inc. with assistance from project partners collected necessary survey data to aid in the design process, acquired necessary permitting and implemented the project. As a result of these efforts, projected outcomes of

the project were achieved. The project drew attention from local land owners and other general public. In general, perception of the project and outcomes were positively received. Trout Unlimited, Inc. strengthened relationships with all project partners such as the USDA Forest Service, Newaygo County Road Commission, MI DNR and the Muskegon Rive Watershed Assembly the course of the project. Project evaluation included frequent visual monitoring of site conditions (photo points) and biological surveys. Pre/post data is currently in raw data format, but plans to compile and finalize a status report is currently in preparation.

Related Efforts:

The project is part of a multi-partner, watershed scale effort, to restore habitat and aquatic organism passage in Bigelow Creek. The project team has been in planning since 2015, has prioritized project sites, and has begun the restoration of inadequate road/stream crossings in the watershed. The road/stream crossing projects are complimentary to an overall watershed effort for restoration and enhancement. Ongoing aquatic and riparian habitat improvements are currently being conducted by members of the project team. Habitat enhancements via in-stream wood addition are continuing to be implemented throughout Bigelow Creek. Riparian restoration is being conducted, in tandem with in-stream efforts, to improve stream-forest connectivity and sustain coldwater stream processes. Additional funding for road/stream crossing improvements, in-stream and riparian habitat has come from the Great Lakes Restoration Initiative, USDA Forest Service, Newaygo County Road Commission and local donations. Ongoing work to restore and reconnect Bigelow Creek is in planning through the next 2-4 years.

Communication:

The project has been included in various presentations given by TU staff to local chapters and conservation groups. Blog posts have been written by the Muskegon River Watershed Assembly and TU about the project.

The project(s) help to serve as demonstration for best practices when replacing road/stream crossings to local communities.

Reflections:

While not unanticipated, the emphasis on the value and effectiveness of building strong partnerships to plan and implement priority stream restoration projects is key to success. From an implementation perspective, it is critical that all parties involved understand the goals, methodology and anticipated outcomes of the project. Specifically, when working with a contractor/construction crew, it is important to educate and walk through components of the restoration design that may be unfamiliar to them (i.e., construction natural stream bed through culvert). Pre construction meetings are critical to ensure all persons involved have a firm understanding of the project methods and design.