Proposal ID: HRE 11

Little Devil Track River Restoration

Restoring stream connectivity and fish habitat for naturally occurring brook trout in the Lake Superior Basin

Project Lead:
Cook County

Project Partner:
Cook County Soil and Water Conservation District

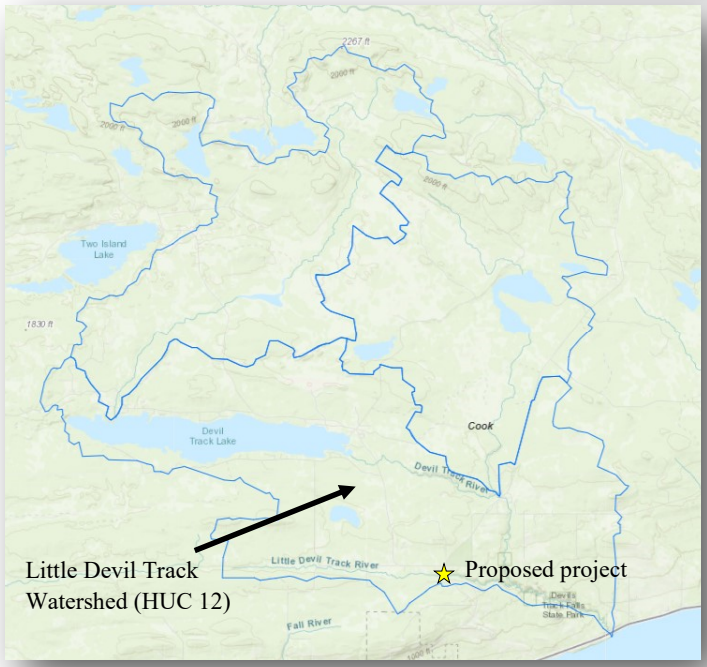
The proposed project is the first in a series of collaborative efforts as part of a watershed-focused strategy to maintain and improve habitat in the Devil Track River Watershed in Cook County. Additional projects are under development and will occur over the next 10 years.

Changes in regional precipitation patterns have led to alternating flood and drought conditions that negatively impact aquatic habitat. *It is predicted that climate change will reinforce and amplify these patterns.* Removing this fish barrier, restoring the river to bankfull condition, creating new fish habitat, and improving downstream banks will improve the watershed's climate change resiliency. By doing the improvements now, the river and aquatic habitat will have more time to revegetate and stabilize, further increasing that resiliency.

The first major intervention in the watershed begins with the proposed project. As the fish passage is improved, the project will create access to the Little Devil Track River. Seizing on this opportunity, Cook County will collaborate with Cook County Soil and Water Conservation District (Cook SWCD). Utilizing federal and state funding, Cook SWCD will restore stream banks located on private land experiencing shear bank stress caused by the undersized culvert. A natural channel design will reinforce benefits of the proposed fish passage project.

Below: Location of the complimentary bank erosion project to improve stream banks during the proposed project construction.

Below: Map of Little Devil Track River watershed and adjacent watersheds



Project Benefits

- 4.25 miles of the river will open up as an upstream, cold-water refuge for fish in the river and connecting tributaries.
- Expanded fish habitat will encourage a more diverse genetic pool and, ultimately, healthier, more resilient, fish populations.
- Increased climate resiliency through restored stream geomorphology, restored bankfull conditions, restored riparian corridor, additional riparian planting with resilient, native species, and the reduction of sedimentation.
- Complimentary project completion will decrease disturbance while providing additional habitat benefits in the river corridor.

Cook County has adopted the Lake Superior North One Watershed, One Plan. The County has been working with partners towards accomplishing activities in the plan. The project achieves the following activities in the plan:

- SC 1.2 - Based on stream network inventory results, initiate implementation of projects that remove anthropogenic barriers, with the goal of removing ten barriers within ten years
- SM 41. - Utilize culvert inventory results to update one problematic culvert per year in priority watersheds in terms of stream connectivity, aquatic organism passage, and erosion.
- SM 2.1 - Address existing erosion problems by conducting targeted erosion control projects using current natural resource engineering methodologies in order to reduce sedimentation and nutrient loading into surface waters and wetlands.

The proposed project and complimentary project are identified in the EPA adopted Nine Element Plan for the watershed .

Complimentary Project Benefits

- 21 tons/year of sediment reduction with the collaboration of the Cook SWCD project
- 108 linear feet of streambank restored with the collaboration of the Cook SWCD project

The proposed project is developed to be a permanent solution to provide fish habitat and maintain water quality.

Measurability of the project is long term. The most immediate outcome is the reconnection of 4.25 miles of the river downstream to upstream, including tributaries.

Cook SWCD is monitoring water quality for transparency and will continue to do so following the project.

Partners in the watershed have a history of collecting data on fish and aquatic invertebrates in the river. The trend to collect the data is expected and will provide information to compare before and after the project data.

Above: Vegetated section of Little Devil Track River upstream of current barrier.

Below: Native Brook Trout

Partnerships in the area are strong and ready to work together to benefit the resources, pooling together efforts, schedules, and staff. It is an opportunity that has been years in the making and may not happen again in the future.