

## **Let the River Flow: Free-Spanning the Maple**

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<http://naturechange.org/2017/02/01/let-the-river-flow-free-spanning-the-maple/>

Since the first big timber cut over 150 years ago, northern Michigan's rivers have been constricted and polluted by many human activities. Today, small dams and culverts under roadways continue to disrupt stream flows and damage fish and wildlife habitat. This is a story about efforts to reverse the damage and restore a whole river system – the Maple River Watershed.

As CRA Project Manager, Chris Pierce explains the watershed has some interesting history. A number of returning civil war veterans were given 40-acre parcels to settle. They clear cut a lot of the area and attempted to farm the land, installing low-head dams and other structures. Unfortunately, these and many other land and water use activities that followed degraded water quality, adding sediment and disrupting the natural stream flows.

Pierce says that six road-stream crossings have been replaced and a number of projects have improved in-stream habitat for fish and wildlife, but there is more work to do. Additional stream crossings repairs and habitat improvement efforts are scheduled.

### **Topics Covered**

Ecology; History; Biology; Habitat; Fish; Deforestation

### **Next Generation Science Standards**

- 2-LS4-1. Make observations of plants and animals to compare the diversity of life in different habitats.
- 3-LS4-3. Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.
- 4-ESS3-1. Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.
- MS-LS1-5. Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms.
- HS-LS4-5. Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.
- HS-ESS2-7. Construct an argument based on evidence about the simultaneous coevolution of Earth's systems and life on Earth.