

# FINAL NARRATIVE REPORT

## *Background/Overview*

1. Briefly summarize the project description as outlined in the original proposal.

The Reconnecting Black River Tributaries with Lake Huron project was initiated to restore fish passage at two sites on Haynes Creek and one site on an unnamed tributary. Both of the streams are high-quality headwater tributaries to Black River and provide essential habitat to resident native fish populations as well as playing a significant role in providing habitat to migrating fish species. By replacing the perched culverts the project allowed migrating fish and other aquatic organisms to access upstream spawning and nursery areas.

2. Was the project completed as originally intended? If not, indicate how the final outcome(s) differed from what was anticipated. Does your experience suggest that original expectations were realistic? What factors hindered or helped progress?

After beginning the planning process for the improvements the crossings on Haynes Creek at Beaton and Quick roads, Huron Pines visited the third proposed crossing location at Black River Tributary/Poor Farm Road. This visit was completed during the 2014 field season, and very little flow was passing through the existing structure. Given relatively small biological benefit to replacing a crossing on this intermittent stream, Huron Pines made the decision to work with the Alcona County Road Commission and select a higher priority crossing at another location within the watershed.

Using the prioritized road/stream crossing inventory completed for the entire watershed, Huron Pines visited four additional sites to identify a more efficient use of Great Lakes Fishery Trust funds to make the largest impact on this coastal watershed. After assessing the needs of Huron Pines and the Alcona County Road Commission, these two parties concluded that the best crossing replacement project would be at the Black River/Lavergne Road Crossing. The culvert at this location is severely undersized (14 foot diameter) and poses a velocity barrier to fish passage. Preliminary designs at this site include a bottomless arch culvert or a timber bridge. The selected structure would have a span of at least 30 feet to match the bankfull width of the Black River, which will eliminate the barrier to aquatic organisms attempting to swim upstream past this existing barrier. The cost of this site was estimated at \$150,000, posing a gap of approximately \$50,000 in the existing funding available. Haynes Township was initially interested in assisting with replacing the crossing but after leadership changes in late 2014 they ended up reprioritizing their funds to a different road project. We still feel the Black River/Lavergne Road crossing is a top priority and have completed survey work, preliminary engineering designs and cost estimate for a new structure. However, we are unable to raise the necessary funds to complete the site in 2015 and therefore need to close the project with only completing 2 of the three sites.

## **Outcomes**

1. Whether they were intended or unintended, what do you consider the most important benefits or outcomes of this habitat restoration project?

Completing the two road/stream crossings reconnected 8 river miles allowing migratory and resident fish more access to headwater spawning and nursery habitat. These replacements build upon previous efforts to “open” the watershed and by systematically removing these barriers from the watershed we are helping to improve the overall health and resiliency of the river system. In addition, by completing initial work with partners and having preliminary designs, we have positioned the Black River/Lavergne Road crossing for replacement in future years.

2. What activities were pursued in relationship to intended outcomes, and to what extent did you achieve the following intended outcomes listed in your proposal?

Prior to selecting an engineer the Alcona County Road Commission was able to meet with the Michigan Department of Environmental Quality on site to discuss the recommended BMP’s for each site including the width and length of the new structures. After completing this task, Huron Pines and the Alcona County Road Commission requested a proposal for engineering services from Huron Engineering and Surveying. Huron Engineering was able to complete a topographic survey of the two sites, designs and cost estimates. For Haynes Creek/Beaton Road the designs called for the replacement of the existing 120” x 84” x 50’ long culvert with a 142” x 91” x 92’ long pipe arch. For Haynes Creek/Quick Road the designs called for the replacement of the existing perched 120” X 84” x 50’ long culvert with a 171” X 110” x 96’ long pipe arch.

Both culverts were buried two feet into the streambed in order to eliminate the aquatic organism barrier at this site and allow natural streambed material to deposit within the structure.

The new structures were installed according to specifications of the designs. They will pass a 100-year flood event and also allow migrating fish to swim upstream through the culvert into 8 miles of Haynes Creek and its tributaries. Work was also completed on the surface of the roads to harden the approaches to the culvert and construct new ditches that will filter stormwater runoff through riparian vegetation before it enters Haynes Creek. This combination of replacing the culverts and installing road approach Best Management Practices helps to ensure long-lasting protection of the aquatic habitat and water quality with the Coastal Black River system.

3. What audience(s) were you particularly hopeful of reaching? To what extent did you reach them? Did you receive any feedback?

The two road/stream crossing projects were highlighted in the Huron Pines 2014 Annual Report, which is distributed to 4,000 in hard copy and through our electronic communications to 3,000 people. In addition, a page has been set up on our website featuring the project and funders. Although Haynes Township declined to contribute financially to the Lavergne Road/Black River crossing they did learn more about why these types of projects are important for the watershed and the community. In fact, the township is contributing \$10,000 for a road/stream crossing replacement elsewhere in their community (Au Sable River Watershed).

4. What relationships or opportunities were developed or strengthened through the work?

Over the past 12 years Huron Pines has worked very closely with the Alcona County Road Commission. We have completed ten road crossing replacements and have 6 additional crossing scheduled for replacement in 2015/2016. They have been very supportive of these types of projects and collectively have contributed over \$300,000 in match funds. In 2014, they hosted a regional roads annual meeting and asked that Huron Pines present to 20 other commission. Nearly 50 road managers and commissioners participated and learned about partnering with conservation groups in these types of efforts. This led to two presentations at the County Road Association Annual meeting in early 2015 with Huron Pines staff presenting on these projects to nearly 200 participants. Great Lakes Fishery Trust was highlighted as a partner in these presentations.

5. Was an evaluation included as part of this project? If so, what were the key findings? (Please attach a copy of the evaluation report).

Both of the road/stream crossing replacements were straight forward projects utilizing standard best management practices. Huron Engineering was onsite during the installation of the new structures to ensure proper placement and that the designs/permit was followed. At the end of the project they provided a letter of completion/inspection indicating construction was properly completed (letter included).

### ***Related Efforts***

6. Was this project a stand-alone effort or was there a broader effort beyond the part funded by the GLFT? Have other funders been involved either during the time of your GLFT grant or subsequently?

Projects like this are part of systematic efforts across northern Lake Huron to benefit to the Great Lakes ecosystem. Removing aquatic barriers and restoring a more natural hydrology has been identified in numerous basin-wide reports, specific watershed plans and by resource managers as one of the top priorities for improving stream and Great Lakes health, particularly in high-quality areas such as northeast Michiga.

In 2012, the \$300,000 Sucker Creek Road/Black River timber bridge was installed with investment from the Great Lakes Fishery Trust, U.S. Forest Service,

American Recovery and Reinvestment Act, U.S Fish and Wildlife Service, Great Lakes Restoration Initiative and the Alcona County Road Commission.

These two crossing replacements are part of on-going restoration efforts in the Black River Watershed. The following is the list of funders for these projects:

- National Fish and Wildlife Foundation-\$2,759.19
  - U.S. Fish and Wildlife Service-\$60,711.50
  - Great Lakes Fishery Trust-\$46,387.00
  - Alcona County Road Commission-\$53,248.56
  - Huron Engineering & Surveying-\$2,300
- Total Investment=\$165,406.25

In addition to road/stream replacements emphasis for watershed restoration has focused on invasive species removal, primarily phragmites along the outlet of the Black River and near-shore coast. Approximately 20 acres of phragmites has been treated in this area compounding the habitat benefits of work completed in the upper parts of the watershed.

7. Has there been any spin-off work or follow-up work related to this project? Did this work inspire subsequent, related restoration projects involving you or others?

We will continue to work with project partners to fund the replacement of Black River/Lavergne Road crossing. Surveys have been complete and preliminary designs and cost estimates are finished. Conversation with the road commission, township and engineer will continue. Additional funders are being sought and we are hopeful that this project will be completed in the coming years.

### **Communication/Dissemination**

8. List publications, presentations, websites, and other forms of formal dissemination of the project deliverables, tools, or results, including those that are *planned or in process*.

The two road/stream crossing projects were highlight in the Huron Pines 2014 Annual Report, which is distributed to 4,000 in hard copy and through our electronic communications to 3,000 people. In addition a page has been set up on our website featuring the project and funders.

Huron Pines 2014 Annual Report

<http://www.huronpines.org/downloads/2014annualreportweb.pdf>

Black River Watershed Restoration-Alcona County

Provides a description of the watershed and highlights the road/stream crossing completed.

<http://www.huronpines.org/projectinfo.asp?pjt=pv&pid=37>

In addition to print and web communications project staff presented about the benefit of road/stream crossing replacements at a regional road commission meeting reaching 50 managers/commissioners and at the County Road

Association Meeting reaching nearly 200 engineers/managers/commissioners. As part of the presentation an infographic on the importance and benefit of crossing replacement was created.

[http://www.huronpines.org/media/projects/media/rsx\\_infographic\\_and\\_resources\\_1.pdf](http://www.huronpines.org/media/projects/media/rsx_infographic_and_resources_1.pdf)

The PowerPoint is included as an attachment.

9. Please characterize your efforts to distribute and encourage use of products, processes, programs, etc. developed through this grant.

No products were specifically created, however, use of road/stream crossing best management practices are regularly promoted to other road commissions, engineers, supporters and the conservation community.

### **Reflections**

10. Please describe any unanticipated benefits, challenges or surprises, and/or important lessons learned over the course of the project.

Huron Pines utilizes resource inventories to guide project selection decisions. Because the inventory was completed in 2007 by volunteers the information wasn't as accurate as it could have been. When the decision was made to switch to a different third site (Lavergne Road) we should have worked more quickly to finalize the financial commitment from the township.

11. What recommendations (if any) would you make to other project directors working on similar efforts or to the GLFT?

Though we only competed two of the three sites this project was still very successful in accomplishing habitat restoration goals. Recommendations to other project directors include establishing early a good working relationship with local road commissions. We would not have been able to complete this work without the very positive relationship with Alcona County. Understanding their needs and priorities are key to successful projects. I would also suggest that partner commitments be secured early with a MOU or partnership agreement to ensure project completion.

### **Pictures**

12. Provide at least three photos of the completed project (if applicable).

Attached

13. The Great Lakes Fishery Trust requires each project it funds to have suitable permanent public acknowledgement of GLFT assistance. If applicable, the GLFT will provide a sign to you (via mail) and requires photo verification of the posting of the sign before it will process your final reimbursement request.

### **Attachments**

14. Please attach any reports or materials developed through the grant.



Left: Haynes Creek/Beaton Road before replacement  
Right: Haynes Creek/Beaton Road after replacement



Left: Haynes Creek/Quick Road before replacement  
Right: Haynes Creek/Quick Road new culvert to be installed