Final Narrative Report for GLFT Grant Number #2016.1661

Thunder Bay River Watershed Inventories

Huron Pines

January 16, 2019

Background/Overview

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

   The major scope items of this project are to 1) complete a comprehensive inventory of road/stream crossings throughout the Thunder Bay River Watershed, 2) upload collected road/stream crossing data to the publicly accessible website northernmichiganstreams.org and 3) upload Thunder Bay River Watershed streambank erosion and invasive species inventory data (collected through matching funds from Eagle Creek Renewable Energy) to northernmichiganstreams.org and the Midwest Invasive Species Information Network website (www.misin.msu.edu/), respectively. The resulting inventory information allows resource managers to objectively prioritize restoration work to maximize positive benefits and cost-effectiveness of future on-the-ground restoration projects.

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?
   Yes, all aspects of this project have been completed as originally intended. This was a fairly straight-forward project and Huron Pines had significant experience conducting resource inventories, so we knew what this project would entail going in and there were no major surprises. A positive factor that we certainly appreciated was having excellent leadership in this effort by our Huron Pines AmeriCorps members, which helped make great progress completing a significant portion of the field work in the 2017 field season.

Outcomes

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

   The intent of completing these resource inventories was to fill knowledge gaps regarding road/ stream crossings, erosion sites and invasive species throughout the Thunder Bay River Watershed in order to help resource managers make cost-effective and impactful decisions regarding future restoration work. An important outcome was that Huron Pines

has secured funding from NOAA-GLRI (and in-kind labor/equipment commitments from the Montmorency County Road Commission) for the restoration of five of the highest-priority sites (based on the data collected through this GLFT-supported project) in the Thunder Bay River Watershed. These sites will be restored in 2020-2022 and collectively reconnect 89 miles of upstream aquatic habitat to benefit brook trout and other aquatic species in two of the highest-quality tributaries in the Thunder Bay River Watershed. The specific sites, which are all anticipated to be timber bridge projects, are Gilchrist Creek at Carter Road, Harwood Road and Greasy Creek Road; Thunder Bay River at Hall Road; and Hunt Creek at Schmallers Road. Approximately $1,250,000 of the secured NOAA-GLRI grant will support restoration work at these five sites (of the $3,038,000 total grant award; the remaining funds of which will help support nine additional restoration projects in northwest Michigan in partnership with sub-awardee Conservation Resource Alliance).

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

   Road/stream crossings throughout the Thunder Bay River Watershed were inventoried. Erosion sites were inventoried on the main branch Thunder Bay River both east and west of Hillman as part of an existing agreement with Eagle Creek Renewable Energy (ECRC funded the inventory, GLFT funds supported upload of data to the web). Invasive species were monitored along the Thunder Bay River, Hubbard Lake, Fletcher Pond, and the Alpena Wildlife Sanctuary in Alpena (likewise, ECRC funded field work and GLFT funds supported staff/AmeriCorps time to upload data to the MISIN website). All aspects of this project have been successfully completed, and resource managers are already using the inventory data collected in this project to prioritize project sites and to secure funding for restoration.

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

   Huron Pines is working with a variety of project partners to prioritize sites and implement restoration activities at high-priority sites using the inventory data collected through this project. Audiences include other resource professionals (USFWS, Michigan DNR, local watershed groups, and other nonprofit organizations), the local county road commissions, and funding sources. Huron Pines has shared the inventory data with appropriate partners, and has already secured support for restoration based on this inventory data from NOAA-GLRI and the Montmorency County Road Commission. Huron Pines has also shared the inventory data with Eagle Creek Renewable Energy. Finally, the data is online and fully available to the general public, and therefore anyone with an interest in viewing the data.

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

   Through the NOAA-GLRI grant for support of restoration of several priority projects in the Thunder Bay River Watershed, this project has strengthened our relationship with the Montmorency County Road Commission, Conservation Resource Alliance, the USFWS (Huron Pines led a project tour of the five sites for USFWS staff in August 2018), and NOAA. Through this work, we expect to connect with additional partners, landowners and members of the community.

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

   The project is inherently an evaluation of resource issues in the Thunder Bay River Watershed and the data can be viewed online at www.northernmichiganstreams.org and www.misin.msu.edu/.

Related Efforts

8. Was this project a standalone 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?

   This project was the last major step in our cumulative effort to inventory all road/stream crossing sites in the Huron Pines service area (Northeast Michigan). With the Thunder Bay River Watershed inventory complete, Huron Pines and partners now have fairly complete inventory data of road/stream crossings throughout Northern Lower Michigan. Eagle Creek Renewable Energy provided funding to conduct field inventories of erosion and invasive plant species, adding additional value to this effort and filling another gap in knowledge. Collectively this inventory work is crucial for informing project site selection at the regional level, maximizing ecological and socioeconomic benefits for the best cost.

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

   As described above, the data collected in this project was used to prioritize sites for future restoration. Huron Pines has already secured significant NOAA-GLRI funds and in-kind match commitment from the local road commission to support restoration of five priority crossings in the Thunder Bay River Watershed.

Communication/Dissemination

10. 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 inventory data is online at northernmichiganstreams.org and www.misin.msu.edu/. These sites are the primary mechanism for sharing the data with partners and the public. There are no formal publications for this project, although Huron Pines has highlighted the project work and acknowledged Great Lakes Fishery Trust via social media posts.

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

    The online inventory data has already been shared with Eagle Creek Renewable Energy, USFWS staff, NOAA, Conservation Resource Alliance, the Montmorency County Road Commission, and has been publicly viewable to anyone else that may have looked for it. Huron Pines plans to intentionally share this information with other road commissions, local watershed groups, and other agency partners in the near future.

Reflections

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

    See responses to questions 3 and 4 above. One surprise was that of the approximately 600 road/stream crossings identified in the watershed based on GIS desk analysis (intersects of hydrology and road shapefiles), many were non-existent or intermittent drainages. Every pre-mapped site was visited in the field, and a total of 248 were fully inventoried following the Great Lakes Road/Stream Crossing Inventory Protocol. Hundreds of additional potential sites were visited but not fully inventoried due to 1) duplicate points on the GIS map or other mapping error, 2) no crossing identified in the field, or 3) located on dry runs, small intermittent streams, road ditches, or seasonal farm drainages with no/negligible potential restoration benefits. The 248 inventoried sites are located on perennial stream reaches, many of which are designated coldwater trout streams. Of these, a few dozen top priorities have been added to the Huron Pines Priority Megalist.

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

    We would recommend ensuring high quality and standardization of data collected, as it is used to make important decisions regarding use of limited resources for restoration.

Pictures

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

    Five photographs are attached – one for each of the five NOAA-GLRI funded sites that will be replaced with timber bridges in 2020-2022.

15. The GLFT 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.

    This is a resource inventory project and therefore installation of on-site signage is not planned. However, Huron Pines will mention GLFT support in social media posts, press-releases, and partner meetings related to this project.

Attachments

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

    Please find the following attachments:

    - Project Profile for GLFT Grant Number #2016.1661
    - Final Financial Report form for GLFT Grant Number #2016.1661
    - Supporting financial documentation
    - Project photographs (one photograph each of the five sites selected for restoration)
    - Also see northernmichiganstreams.org/thunderbayrsx.asp for full inventory data.