

Clean Water /Healthy Trout Sugar Hill Brief Summary Report (DRAFT)

Background: The Clean Water/Healthy Trout project conducted a feasibility study during the summer and fall months of 2014. Based on voluntary participation of private landowners, the purpose of this study was to gauge the viability of local stewardship efforts pertaining to waterway and riparian conservation. A novel strategy is necessary for protecting vital habitat on private property. To best protect and steward critical water resources, conservation efforts need to happen on a local scale and be willing to work with many small landowners. Conservation efforts within the built environment face many challenges. This work requires a nuanced approach that can balance the demands of people and requirements for sound eco-system function.

This multifaceted project required efforts in outreach, planning, communication, field assessment, monitoring, analysis and follow-up action. The feasibility stage has been supported by contributions from Easton, Franconia, and Sugar Hill conservation commissions. Additional support was provided by Plymouth State University, New Hampshire Fish and Game, and Trout Unlimited Ammonoosuc Chapter. Ammonoosuc Conservation Trust was the catalysts for the project with funding support through the Mitigation and Enhancement fund.

Effective conservation of a shared resource, such as the Ham Branch and Salmon Hole Brook, which are not confined to a political boundary, requires collaboration across communities. Ultimately, this project aspires to scale up and implement this strategy across the Ammonoosuc Watershed. Working on a community scale proved to have multiple advantages, not the least of which is the building of shared values and setting the stage for collaborative action.

Approach: The initial stage of this project focused on working with willing landowners to explore a new course to restoration and conservation action. During this feasibility phase, the geographical scope was limited to the Ham Branch and the Salmon Hole Brooks, located in Easton, Franconia and Sugar Hill, NH.

Parcels were selected for assessment based on a number of conditions that signal high conservation value. A significant factor in the parcel selection was the willingness of the Landowners to participate. Within this criteria, every effort was made to select parcels that would provide a representative sampling of sites within the study area. Both social factors, such as recreational uses and aesthetic value, and physical factors, such as accessibility, size, and history of land use, were considered during this process.

Criteria for assessment:

- Landowner willingness (voluntary)
- Area of active river corridor
- Proximity to protected lands
- Continuity of reach
- Connectivity to watershed (tributaries)

- Social Value (recreation, scenic, historic...)
- Vulnerability
- Diversity of habitat
- Potential for supporting Eastern Brook Trout populations

Initial outreach activities include a mailed invitation to participate in the study to riparian parcel owners, small local gatherings, and a kickoff public outreach event. Site visits were scheduled with selected Landowners. At follow-up meetings Landowners were provided a packet of relevant information to further explain scientific underpinnings of Eastern Brook Trout as an indicator species, share site specific findings and introduce riparian Landowners to best stewardship practices and possible conservation actions. (Note this will be conducted during Nov 2014.)

Methodology for assessments was constructed for compatibility with larger research and conservation efforts. The methodology for field assessments built upon the efforts of the following organizations:

- Eastern Brook Trout Joint Venture Protocol
- NH Stream Crossings Assessment Program
- VT Rivers Conservancy Corridor Easement Program
- ACT Baseline Assessment

This approach ensured that the data collection would not only inform this project, but could have broader impacts by contributing to the work of additional conservation organizations.

Findings: Of all landowners contacted, nearly all (one exception) were willing to explore the idea and allow assessments to be conducted on their property. We think this receptivity stemmed in part from the grassroots nature of the project and the familiarity of project volunteers with the local residents. Two landowners expressed concerns about liability or public disclosure of findings, but allowed the assessments to precede once assured of professionalism and release of liability. Many Landowners actively participated in the field assessments, which served as a platform for informal education and a valuable source of information to the study team. Landowners had rich perspective on the historic use of the land and the vision for the future of the land.

One drawback of working with only the “willing” means we did not necessarily target the areas of highest concern. Despite this apparent shortcoming, our approach can help build a widespread stewardship ethic, and cultivate support for grassroots regional conservation. At the very least this project raised awareness of parcel scale land management and best practices for stewardship on the individual level. This type of social capital building can be a catalyst for deep change, and does not rely on regulation or enforcement, but rather community empowerment. We feel strongly that a voluntary program will result in a deeper level of commitment and stewardship with lasting impacts.

Salmon Hole is contained within sixty-five private parcels, of which four were assessed. In total 30,056 feet of stream corridor was assessed; 10,056 on Salmon Hole. Eastern Brook Trout (EBT) were present in the Salmon Hole Brook. Particular sites have more suitable habitats features than others, but overall Salmon Hole Brook provides the needed diversity and connectivity to support these key indicators. The

importance of the stream corridors to wildlife extended beyond EBT as evidence by the presence of diverse and abundant wildlife including Slimy Sculpin, Spotted Turtles, Beaver, Monarchs and other pollinating insects, and numerous birds (Chestnut sided warbler, Downy Wood pecker, Heron, Hawks.).

This study underscored the importance of small tributaries, which are often underappreciated for the critical role they play in supporting sound ecosystem function and critical habitat for wildlife across life stages and seasonal variations. Of the sites assessed, small tributaries held young-of-the-year EBT. Young-of-the-year (YOY) provides evidence of reproducing wild populations. The fact that YOY make use of these small streams is indicative of the important role they play in sound ecosystem function. These are often the most vulnerable of waterways; as protections through state and federal program do not extend to these small streams. Connectivity between these small streams and the main stem should be considered highly important.

Next Steps and Recommendations: Several landowners have indicated a willingness to learn more about specific conservation and remediation action that can be applied on their land. Assessment of the Salmon Hole Brook found prime habitats that should be protected to maintain current integrity. Many sites assessed could benefit from remediation, restoration and/or preservation activity. The appropriate action range from invasive species removal to litter clean-up, and bank stabilization to riparian area conservation easements. As noted, each site is unique in its use, condition and landowner attitudes towards land use. Therefore recommendation action/improvements are site specific.

Although education and outreach were components of this work, more can be done. Education and outreach can and should continue through additional public events, small community gathers and more formalized connections to local schools. It is important to maintain the momentum and level of interest established during this initial feasibility stage.

If this work continues, long term monitoring (abiotic: temp, turbidity, conductivity, biotic: species richness and abundance) would be informative. Monitoring change over time in response to implementation/actions would provide a way to measure of effectiveness of the program and encourage continued community engagement.