#5

COMPLETE

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Q1

Chapter Number & Name (Example: 123 - Smith Creek Chapter)

328 - Sebago Chapter & 697 - Mollyockett Chapter

Q2

State

Maine

Q3

First Name

Matt

Q4

Last Name

Streeter

Q5

Email Address

mstreeter@tumaine.org

Q6

Phone Number

207-337-2611

Q7

Chapter Volunteer Role

Board member/Conservation Committee Member, Sebago Chapter

Q8

Project Title

Phen Hill Road – Cole Brook Culvert Replacement

Q9

Project Location (stream, watershed, GPS coordinates if possible)

Cole Brook, Shepards River Sub-Watershed within the Saco River Watershed, Brownfield Maine, 43.89101, -70.97102

Q10

Salmonid Species Impacted and Threatened/Endangered Status (if applicable)

Native and Wild Brook Trout

Q11

Please indicate which conservation strategy your project best fits:

Reconnect (Barrier to fish passage removal, in-stream flow enhancement etc…)

Q12

Amount Requested from Embrace A Stream

10,000

Q13

Project Timeline

Anticipated Start Date **07/15/2024**
Anticipated Completion Date **12/31/2025**

Q14

Has chapter received EAS funds before?

Yes

Q15

In 300 words or less, please note the project name and location, name of the applicant to chapter or council, amount requested, matching funds available, background or purpose of the project, goals and objectives, proposed actions or methods, anticipated scope of impact, and partners. The executive summary should be brief and to the point. The EAS committee will refer to it frequently during the review process.

The Sebago and Mollyockett chapters submit this funding request for the Phen Hill Road – Cole Brook Culvert Replacement Project in Brownfield Maine. This project is the fourth and culminating project of an initiative started by Sebago TU in 2014 to reconnect the entire Shepards River and its tributaries. It will reconnect 2.8 miles of habitat, for a total of 19 miles reconnected over the larger initiative. We are beginning a similar initiative for the West Branch of the Tenmile River, an adjacent sub-watershed, to create two fully reconnected sub-watersheds integrated with the main stem Saco River between them.

The budget is $254,000. We have raised $125,000, and request $10,000 in this application for construction contractor expenses, and for revegetation materials. We plan to raise an additional $119,000 from private grants. We have partnered with the town of Brownfield, the Maine Department of Inland Fisheries and Wildlife, the Maine Department of Environmental Protection, and the US Fish and Wildlife Service, for the project implementation.

The project will replace two undersized, perched, corroded steel culverts with a 21.4-foot span pre-fabricated concrete bridge, properly aligned, with natural steam bottom and sufficient height clearance to pass debris during high flows. According to Regional Biologist Jim Pellerin, MDIFW has sampled the stream extensively, and it is one of the best wild brook trout resources in Oxford County. The project will reconnect important cold water refugia, spawning and nursery habitat, and will improve gene flow for the native brook trout population. It will improve natural stream processes, including sediment and wood transport. We expect future MDIFW samplings to show a larger and more diverse wild brook trout population after project completion. The project will strengthen ties between the two TU chapters, and provide a signature project to support member recruitment, especially for the Mollyockett Chapter.

Q16

In 1000 words or less, describe the issue or opportunity being addressed. If applicable describe project location, including name of water body and salmonid species. Please show how this issue or opportunity has other regional or national significance. If the project is part of a TU national initiative, please explain the extent of coordination with TU national staff. If this project has received EAS funding in previous years, please provide a brief update on progress to date.

The impact of habitat fragmentation on native trout species and the importance of reconnecting streams, rivers and watersheds is well known to conservationists. What is unique about the Saco River in southwestern Maine is the existing health of the ecosystems in the upper drainages, and the intact nature of the native brook trout populations. This project, because it is the final of four that will connect the entire Shepards River sub-watershed, is an especially good focus for outreach and education in the local community and schools. It is also a rare opportunity to stop ecological fragmentation while the wild and native brook trout population is still strong. The focus on the watershed scale, which is almost wholly contained in the town of Brownfield, allows the local community to see the benefits of restored habitat and the fisheries opportunities that come from it. We have begun discussions for a similarly situated neighboring sub-watershed for our next initiative (the West Branch of the Tenmile River in Porter); the Shepards River initiative can provide a success story for the select board and community in Porter. Despite the severe fragmentation of the Saco River by mainstem dams upriver and downriver of these drainages, there are no barriers on the Saco between the Shepards and West Branch of the Tenmile Rivers. We hope that this initiative will help people to envision the connections among the tributaries and the mainstem (from the small intermittent tributaries of one watershed, through the mainstem, and to the upper tributaries of the neighboring watershed).

In 2010, The Nature Conservancy in Maine teamed with the US Fish and Wildlife Service Gulf of Maine Coastal Program to begin documenting the status of all road crossings in Maine. TU chapters and members volunteered across the state to contribute to this effort, which was completed successfully in 2019. In the meantime, the Maine Department of Marine Resources, Maine Department of Inland Fisheries and Wildlife, and numerous other partners started a Stream Connectivity Working Group, which meets four to six times per year to help set priorities and coordinate connectivity efforts among government agencies and NGO's. Again, TU volunteers, and the Sebago and Mollyockett chapters, have been at the table. Growing out of that effort, the Maine Department of Environmental Protection established the Municipal Stream Crossing Upgrade Grant Program, funded by a voter initiative, for municipalities to replace undersized and perched culverts that were both a threat to road infrastructure and an impediment to aquatic organism passage. Maine Audubon started training programs for environmental volunteers and for contractors to learn "Stream Smart" road crossing construction practices. Sebago TU's initiative in the Shepards River watershed has largely been funded by the MDEP municipal grants and guided by the Stream Smart principles. TU's role has been to provide expertise, communication and labor to complete the funding applications, do permitting, hire engineers and contractors, and oversee construction. We have worked together with the other NGO's and state and federal agencies noted above to accomplish this. For a town whose office is only staffed by a single person three days per week, with 1,658 residents, and whose per capita income is $26,699, it would be an otherwise unattainable luxury to complete these projects without TU's intervention.

Nationwide, TU has consistently committed to protecting and restoring native fish habitat. In this case, the emphasis is on high quality native brook trout habitat, as opposed to restoring more degraded systems. The relatively healthy and intact upper Saco River watershed, including the Shepards River drainage, is a place where with relatively little cost we can make a large impact, by completing our four-part reconnection initiative, and raising public awareness of connectivity issues in the communities most impacted. The Sebago Chapter has led the Shepards River initiative to date, but the project is located in the Mollyockett chapter's membership area, as is much of the best intact brook trout habitat in the state. Combining the forces of our two chapters with the local towns and residents, and tapping into statewide support and funding, we can have an outsized impact on the ecological health of the region's streams and rivers. As this is the largest and most costly of the four projects we have tackled in this initiative, and with the increase in construction costs over the past several years, the state funding available is not sufficient to complete this important project. We are seeking a number of grants in the amounts of 10 to 30 thousand dollars each to fill out the project budget. $10,000 from TU's Embrace A Stream program will be a critical piece of the funding puzzle, by helping to fund the construction itself and the important native revegetation of the project area. These funds will be exceptionally well-spent in finishing out this town-wide initiative, and in building support in the region for further improvements to upper Saco watershed tributaries.

Q17

In 350 words or less, briefly describe the purpose of the project, resulting benefits for cold water conservation and the TU organization, including scope of impact. Also describe any economic benefits that will result from your work. Please be sure to note: The overall goal of the project (e.g. restore critical habitat for a certain species of endangered salmonid, build a local constituency to promote protection of a certain resource, improve the scientific understanding of an issue to improve river or fishery management etc..) List the specific conservation objectives for the project (e.g. restore X amount of habitat by Y method, educate X number of people through Y means, fill X information gap through Y research methods, influence local or state governing body to adopt X policy/law to protect Y habitat or fish etc…) List the specific TU strengthening objective for the project (e.g. recruit X new leaders or members by method Y, develop an actionable plan for a conservation campaign, increase TU coverage in local media by X% etc…)

The overall goal of this project is to reconnect 2.8 miles of prime upper watershed native brook trout habitat with the rest of the Shepards River watershed and with the main stem Saco River. This will reconnect important cold water refugia, spawning and nursery habitat, and will improve gene flow for the native Brook Trout population. It will improve natural stream processes, including sediment and wood transport, contributing to the watershed's climate resiliency. To raise awareness of the project and of Trout Unlimited in the region, we will hold one public presentation and two site visits. We will post notices in gathering places around town and attain coverage in local newspapers for these events, and for the project. We will develop educational programs to present in local schools. The Project Manager, Matt Streeter, has developed such a program in other school districts affected by river restoration projects in Maine, and they have become a tradition in the town that is now carried on by local volunteers and libraries. As the culmination of a 10-year effort to re-connect the entire Shepards River drainage, the project is of unique and special interest. After completion, we will schedule a tour of all four projects in the watershed and issue a press release to local and regional outlets containing photos of all sites and maps of the re-connected area. The project will provide a unique outreach opportunity in the communities of the Mollyockett Chapter. We hope that the regional coverage will help us recruit 50 new members to the Mollyockett chapter, with 1 to 3 new leaders willing to serve on committees and/or the board of directors. We expect that the publicity surrounding the completion of this 10-year initiative will generate interest in the neighboring town of Porter, where we have begun discussions with the select board and road commissioner to continue with a similar effort in the West Branch of the Tenmile River. If successful, this will form a more broadly reconnected, integrated watershed with the Shepards River and the West Branch of the Tenmile River via the main stem Saco River.

Q18

In 500 words or less, describe the actions or methods you will use to implement your proposal. Make sure to include plans for implementing both the conservation and strengthening TU objectives. If applicable explain the scientific or technical methods utilized in the project. Note if the project uses innovative or unique solutions to address fisheries problems or if the results can be transferred elsewhere. Please also include: A timeframe or schedule of when major activities will occur, including a list of any permits that will be obtained.The role of TU leaders, volunteers, or staff in the project and the names and qualifications of key participants. EAS projects require TU volunteers have significant involvement.An outreach plan to disseminate project results to TU, project partners, and especially the general public.A description of how you will measure or evaluate project outcomes. Explain the scientific or technical methods used to evaluate project results, including the indicators (an indicator is a specific, measurable target or goal) for project success. Grant recipients will be required to evaluate the outcomes of their projects by measuring these indicators before and after their project.

We have raised $125,000 toward the project budget of $254,000. Fundraising will continue through the fall and winter of 2023 – 2024. The Final Design and Bid Package for construction were completed last year. Bidding for contractors will take place in fall 2023. Permit applications will be submitted for an MDEP NRPA permit and Army Corps of Engineers General Permit in August, 2023.

Summer and fall of 2023 outreach efforts will include press releases to local newspapers, outreach to local civic and conservation organizations, paper fliers in local venues, and a public tour of the project site and one or more other sites previously completed in the Shepards River initiative. Outreach will include nearby communities of Fryeburg, Denmark, Hiram and Porter. These communities have similar populations, high quality trout habitat and conservation concerns with low-income and low-resourced communities.

Construction is scheduled for summer, 2024 during the in-stream work window of Jul 15 – Sep 30. Volunteers will seed the site with groundcover seeds immediately after project completion, will sow a native wildflower mix in late fall, and will do bare-root/live stake shrub plantings in spring of 2025.

TU volunteers have led this initiative since 2014 by engaging with the town, coordinating with state agencies, and doing fundraising. That will continue with this project, and TU volunteers will also conduct the public outreach efforts.

We will measure success of the culvert replacement through on-site monitoring of construction to ensure all standards are met, and checking the culvert again in spring and summer of 2025. In summer and fall 2025 we will check that plantings are taking successfully, without bare spots, and invasive plants are not colonizing the site. Outreach success will be the addition of 50 new members to the Mollyockett chapter roster, engagement of 1 to 3 new active volunteers at the board or committee level, and significant increase in the chapter mailing list.

Summary/schedule

- Fundraising
  - July, 2023 – 40%
  - November, 2023 – 85%
  - March, 2024 – 100%

- Permitting
  - Notification of MHPC and native tribes – August, 2023
  - MDEP permit application submitted – August, 2023
  - Army Corps of Engineers application submitted – August, 2023

- Outreach
  - Outreach to local civic organizations and conservation groups: August, 2023
  - Press release regarding project and upcoming site tour: September, 2023
  - Fliers in local venues: September, 2023

- o Site tour: September or October, 2023
- o Volunteer ground-cover sowing – Upon project completion
- o Volunteer wildflower sowing – November, 2024
- o Volunteer shrub planting – Spring, 2025
- o Local middle school in-class event – Winter, 2024-25
- o Local middle school field trip/plantings to project site – Spring, 2025

- Engineering and construction
- o Full design and bid package – Completed 2022
- o Construction bidding – November, 2023
- o Construction: Summer, 2024
- o Construction monitoring: Summer, 2024
- o Follow-up checks of structure – spring, summer, 2025

- Revegetation
- o Sow groundcover – upon project completion
- o Sow native wildflowers, grasses, sedges – November, 2024
- o Plant native shrubs – Spring, 2025
- o Monitoring, replacement of native plants and removal of invasives – Summer, fall, 2025

Q19

List at least 3 local media outlets you will contact (print, tv, radio online, social)

- Bridgton News (print/online)
- Lewiston Sun Journal (print/online)
- Central Maine Morning Sentinel (print/online)
- Conway (NH) Daily Sun (print/online)
- Portland Press Herald (pring/online)

Q20

In 500 words or less, provide a brief outline for how the applicant will broadcast information about the project and EAS awards to their local community. A robust communications plan will include press releases, social media posts, website updates, project location signage (temporary and permanent) and more. We ask that successful applicants submit no fewer than two updates through the course of the EAS funded project to TU suitable for sharing in our social media and emails.

Brownfield, Maine is a small rural community with a population of 1,658. Brownfield is surrounded by a number of similar small towns, including Fryeburg, Denmark (where Brownfield children attend school), Hiram and Porter. Our communication strategy will include outreach to these surrounding communities, as they share much community life with Brownfield. Print news sources come from further afield, from Bridgton, Lewiston, Portland, and Conway NH. Our “broadcast” strategy will involve sending at least two press releases on the project and the broader Shepards River initiative to the print/online news sources listed above, before and after completion. These press releases will address a wider Maine audience, as well as Brownfield and nearby towns, and will emphasize concepts around connectivity, and the rarity and value of reconnecting an otherwise healthy whole watershed. At these times, we will generate posts to our chapter websites and Facebook and Instagram pages, and to the Maine Council website, and will share these with Embrace A Stream. We will place more targeted versions of these posts to local Facebook pages such as the pages of the Town of Brownfield, “Brownfield Maine Matters”, the Brownfield Lions Club, and the Fryeburg Fish and Game Association. We will contact the Brownfield Recreation Department and the Junior Guide Summer Program of the Burnt Meadow Guide Service, to reach young families with children. We will seek Facebook and Instagram pages and organizations in the neighboring towns. Finally, we will hold a number of community volunteer opportunities and informational events (detailed below), and will publicize these locally, both before and after the events. We will share posts with photos, as well as any press generated by the above activities to our chapter Facebook and Instagram pages, and in updates to our chapter email lists.

Q21

In 500 words or less, provide a brief description of community awareness and education events the chapter will host at the project site or related to the project. Examples of community awareness and engagement events include: A public site visit before and/or after construction A Zoom program with partners inviting the public to learn more about the work and the resource being restored PowerPoint presentations made to local civic organizations such as garden clubs, land trusts, Kiwanis, Rotary, Lions and others etc

Since Brownfield and the surrounding towns are small, rural communities, in-person activities will be especially important for the one on one opportunities that they afford. The promotion and reporting of these on local Facebook and Instagram pages and other venues will also be an important part of our outreach. We plan to do events both for local schools and for the community at large.

In the local schools, we will be looking to connect to the middle school science curriculum. First, we will offer to provide one day of in-class presentations on stream connectivity, migration and nature corridors, native brook trout, and the importance of native plant communities. We'll include a hands-on activity of sowing native wildflower seeds in pots, which will grow over the summer and be planted at the site the following fall. Second, we will offer a site visit field trip/river walk, where we will cover in greater detail the connectivity issues and why the local native trout populations are important, the importance of riparian areas and native wildflowers, shrubs and trees to streamside ecology. We will have the kids work in groups of four to plant native shrubs in the disturbed area along the stream bank. This program, though ambitious, is closely modeled on one that was successfully implemented by Matt Streeter for Maine Rivers in their China Lake Alewife Restoration Initiative.

For events aimed at the community at large, we plan both before and after site visits/river walks where we will discuss the importance of stream and river connectivity, and the unique opportunity with the Shepards River to reconnect the whole watershed. We will have one stop at the Phen Hill Road site, and one or more stops at other road crossings that have been completed as part of the larger initiative. We will seek to engage the county NRCS office to present at these events, and share with the public opportunities for funding of private road crossing improvements. In addition to the site visits, we plan an indoor slideshow and Q&A session on the project and on stream connectivity in general during the winter before the project. Finally, after completion of construction we will have volunteer opportunities to help with sowing native wildflower seeds and with planting native bare root and/or live stake shrubs and trees.

Each of the above events will provide an opportunity to broadcast communication through news sources and social media, as well as old fashioned posting of paper notifications at venues around town such as the library, town offices, local pub and market, etc. Emails to leaders of local civic organizations such as the Lions Club and the Fryeburg Fish and Game Association to generate word-of-mouth will also be an important part of this community outreach.

Q22

Upload Your EAS Budget (Budget template available at www.tu.org/eas - be sure to save your final budget as a PDF before uploading.)

2-Embrace-A-Stream-2023-Budget-Phen%20Hill%20Road.pdf (46.6KB)

Q23

Letters of Support (Upload all letters of support as one merged PDF file. At the LEAST you MUST have a letter of support from 1) the chapter president, 2) the council chair, 3) the sponsoring professional, 4) the landowner of the property where the work is taking place. Chapters are encouraged to have letters of support from partner organizations, state and local agency partners and TU staff involved in the project.)

Letters%20and%20Signature%20Page.pdf (2.4MB)

Q24

Supporting Documents (Upload all supporting documents as one combined PDF file. These may include site images and descriptions, final or conceptual project plans etc...)

Supporting%20Documents%20Final%20072823.pdf (7MB)