



2021 ALPINE Summer Institute Project Proposals

Eric Boyer

A Trail Proposal in Plymouth, MA

The “Plymouth Wishbone Trail” (PWT) is an existing 14-mile trail that starts at the headquarters of Myles Standish State Forest (MSSF) and ends on the beaches of Ellisville Harbor State Park. The (PWT) was a project envisioned and implemented by Eagle Scout Alex Cavallo back in 2007.

Recently members of the Town of Plymouth Trails Committee, Friends of Myles Standish State Forest, and local trail guru Malcolm MacGregor, have been discussing the possibility of establishing a second leg of the trail which would start at the Plymouth Rock in downtown Plymouth on the waterfront. This concept 14-mile leg would travel through a corridor of undeveloped land and finish at the headquarters of MSSF. Some portions of this proposed trail will require the construction of new trails and which will require permission from property owners to allow for public access.

A 28-mile trail that starts in historic downtown Plymouth, has a halfway point that allows for camping in MSSF, and ends on the shores of Cape Cod Bay would be an incredible asset for outdoor recreation in Southeastern MA. This trail would travel through areas of both historical and ecological significance. These efforts also would be expected to further push land protection efforts in the area.

Clare Brown

Expansion challenges for the Woonasquatucket River Watershed

I propose to examine a “large landscape challenge” from my employer: the Woonasquatucket River Watershed Council (WRWC). The WRWC is a non-profit, headquartered in Providence, RI. They have transformed 5 parks in the city and facilitated the construction of a now 7-mile greenway, starting in Providence and ending at the Johnston town line. In Providence, this greenway is owned by RI-DOT and the watershed council’s team of “River Rangers” are responsible for the maintenance of the path. This maintenance is funded by RI-DOT. Providence Park’s Department is the party responsible for maintenance of the parks along the greenway – though this most often falls on the ranger team. These parks experience a lot of vandalism, littering, and other mistreatment, and the nature of the unionized Park’s Department has led to a neglect in maintaining these spaces.

Here is the situation:

The Woonasquatucket River Watershed encompasses Cranston, Providence, North Providence, Johnston, Smithfield, Glocester, and North Smithfield. As an organization, though, the WRWC can’t seem to expand its reach out of Providence. Most all of the organization’s events happen in the city, the greenway does not extend out of the city and with no physical presence elsewhere, the council is not very well known outside of Providence. They have been trying to extend the bike path from where it ends at the Johnston line, along the Woonasquatucket River and into Smithfield. The council has already conducted a feasibility plan, contacted residents and property owners in Johnston (including the Mayor) and held a public meeting about this initiative. The initiative seemed to be widely supported by

residents, though the council experienced pushback from the Mayor. (Of which I currently do not have many details).

There are a number of challenges for this bike path extension that make it different from the path in Providence. A portion of the greenway will be on the Providence/Worcester railroad, which is currently owned by National Grid. National Grid wants to sell this land for the greenway. There are also parcels of private property of which easements will need to be negotiated with the owners. For the private property owners along the Providence greenway, RI-DOT handled all of those transactions, so the council has no experience conducting these sorts of agreements. There is also a problem of illegal encroachment on some parcels of land.

The questions that arise from the council are:

Should we take ownership of the land from National Grid? What sorts of challenges will arise from ownership compared to our previous role as managers? Are there benefits to ownership? How will we negotiate easements with private property owners? Whom do we hire? How do we approach a town where we have already experienced pushback? What exactly are the reasons we experienced pushback? I would like to examine the best approach for the council to extend their bike path. The greenway is an important resource in Providence and the extension is important to connect the watershed.

Ana Teresa Colón García

A Coastal Conservation Project for Puerto Rico

In the wake of the climate crisis, coastal ecosystems are more vulnerable than ever. Maritza Barreto, a geomorphologist and professor at the University of Puerto Rico, has studied the state of the coasts in Puerto Rico and has been able to document that virtually all beaches in Puerto Rico are significantly impacted with coastal erosion.

Puerto Rico has 799 miles of coastline and approximately 1,225 beaches in 44 coastal municipalities (Barreto 2020). Beach length and width, elevation and sediment composition vary along the coastline. According to the National Oceanic and Atmospheric Administration (NOAA), sea level has risen by 0.6 inches per decade in San Juan since 1961 (2019).

This impact was even more significant after Hurricanes Irma and Maria in 2017. So much so that the mouth of the Río Grande de Manatí in Barceloneta, for example, lost 60 percent of its sediment. While during the same natural event other beaches located in the metropolitan area were severely affected by storm surges and erosion caused by strong swells. Additionally, it is estimated that the Puerto Rican archipelago lost around 31 million trees as a result of the 2017 hurricane season (Feng 2018).

Around 62% of the Puerto Rican population resides in coastal municipalities, as well as 25% of its structures, including critical infrastructure: electricity plants (7), state roads (249kms), airports (7), hospitals (15), ports (12) and hotels (121) (DRNA 2017).

Many communities have already begun to tackle coastal resilience in the form of vulnerability assessments, dune restoration, and reforestation. In order to adapt to climate change from a small archipelago in the Caribbean, we are going to have to reimagine our relationship with the coast and implement these adaptation strategies at a national level.

An approach that might allow for stronger holistic approaches for coastal resilience is to think about developing strategies for the entire coastline. A way of getting everybody on the same page might be to connect every beach in Puerto Rico through a **coastal trail**.

This trail would pass through all 44 coastal municipalities. The trail-beach distance will depend on erosion and sea level rise predictions. As part of this effort, areas adjacent to the trail will be reforested and in some cases dune restoration will take place as well. In some cases, the trail would take the form of a boardwalk so as to not disturb the sand dune regeneration process.

Para la Naturaleza, a nonprofit unit of the Conservation Trust of Puerto Rico, would be an ideal entity to lead this project, as it would require collaboration from the government agencies, other NGOs, academia, schools, volunteers, communities, landowners, other citizens, and possibly even tourists. Key partners would include the U.S Forest Service, the PR Department of Natural Resources, Vida Marina and the Center for Coastal Conservation and Restoration of the University of Puerto Rico at Aguadilla. The latter has its commitment to educate the community through the conservation and ecological restoration of the northeast coast of Puerto Rico.

Some key components of the trail will be:

- **Sand dune restoration**- in collaboration with Vida Marina (Center for Coastal Conservation and Restoration of the University of Puerto Rico at Aguadilla), a group that has been pioneering this work on the northern coast of the island.
- **Habitat connectivity**- this will be a great opportunity to create ecological corridors (when possible) between coastal natural areas and reserves. The idea is to protect either side of the trail (at least 2000 square feet on each side).
- **Reforestation**- a reforestation effort will take place according to the habitat's needs. Para La Naturaleza's Reforestation Unit can provide trees regionally.
- **Physical, mental, spiritual wellbeing**
- **Access to public spaces**- with so much coastal development, there are less and less pedestrian access points to our public beaches. This trail will be the perfect opportunity to assess points of entry to the beach and enable them when necessary and possible.
- **Ongoing Trail Maintenance**- tree monitoring and replacement events will take place, as well as beach cleanups. Trail maintenance will be done in collaboration between PLN employees, volunteers, and local community members.

This project would require a two-year planning phase, and around three to five for implementation. The cost of the project could be funded by local agencies (natural resources, tourism) as well as federal grants already funding Vida Marina's dune restoration efforts.

Key to this trail system will be the cross-sectoral collaboration. The idea is to promote and enable healthy ecosystems that people can have access to for recreation, spirituality, health, etc. This will be key in developing a sense of belonging to these coastal areas and expose citizens to both their vulnerability and their resilience. Communities, individuals, or local businesses could eventually adopt a section of the trail-boardwalk and the adjacent beach(es).

The trail could become a meeting point for artistic and recreational group activities that continue to develop the ecological culture that we wish to see in Puerto Rico in the coming years. Lastly, it could be an important strategy to promote an ecological model of tourism, creating new employment opportunities in a secure and sustainable environment where the cultural diversity along the coast would be at the center of the conservation plan.

This project seeks to promote coastal resilience and community conservation strategies to ensure the health of our planet and of generations to come.

Christopher Dana Dunsmore

A carbon aggregation and land justice project in the Berkshires, MA

The idea I've been chewing on is a carbon aggregation and land justice project here in the Berkshires stewarded by BNRC, TNC, Pittsfield impact investment group Mill Town Capital, Williams College, the Staying Connected Initiative, and the Stockbridge-Munsee Mohicans. I'm not sure about the details; mostly just trying to migrate and line up some of the Cold Hollow Carbon project partners with regional equivalents here and imagine something similar. Talking to a colleague at BNRC about it tomorrow.

I'd love to figure out how a carbon credit aggregation project could include some sort of restoration angle for the Mohicans. It seems like a percentage of the revenue from carbon credits should be paid to the original stewards of the land, but how to make that work in practice.

BNRC owns over 11,000 acres in fee, and then holds another 12,000 in CRs, so in theory the market could be entered with just BNRC's fee holdings. But I'm not sure about additionality on lands already under conservation...and it seems like the project would be sexier if it included large tracts of other private land in the Berkshires. Williams' Hopkins Forest, which is not under a CR, comes to mind. But again, additionality... Something I'm confused about is how much land trusts approach owners who just have the large parcels they want vs. wait for owners to come to them. If they had the \$23 Billion David mentions in W&W, I guess it would be more of the former.

Apparently, they did some research on aggregation at the land trust last year and decided against it -- so I want to better understand what that conversation was exactly. Sounded like it might have been an issue with staffing capacity to manage such a project. I don't want to make any waves at a new job though by pushing something that's already been considered. And obviously this is a visioning project not the actual thing per se, but it would be great for it to be useful for someone.

Noah Henkenius

Coldwater Stream Conservation Plan for Berkshire County, MA

Coldwater streams are important natural resources that provide essential ecological conditions for certain species of fish that are unable to survive at warmer temperatures. In addition to water temperatures that do not exceed 68°F (20°C) favorable coldwater streams will provide habitat characteristics such as pools, riffles, and intact riparian areas, maintain low levels of pollutants, and contain highly oxygenated water (Rosenfield 2003, Williams et al 2015, MA Fish & Wildlife 2018). Fish such as brook trout (which are native to Massachusetts), rainbow trout, and brown trout, are all coldwater fish species that people like to capture for consumption or catch and release (MassGOV 2021). In Berkshire County, Massachusetts many streams have been recognized by the state as Coldwater Fish Resources (CFR) and could be susceptible to warming from climate change (MassGOV 2021, Manomet Inc. and the National Wildlife Federation 2013).

Conservation Strategy

Within Berkshire County, there are several non-profit and regional watershed organizations that have a mandate to protect these resources. Regional partnerships will be necessary to ensure work is carried out throughout the entire county. There are several dams within the county that should be considered for removal; further there are many culverts which currently pose barriers to aquatic connectivity that should be replaced. Removing these obstacles alone would not only help conserve CFRs but could also

be beneficial to restoring aquatic and terrestrial connectivity for wildlife. In addition to removing barriers such as inadequate culverts and dams, restoring riparian vegetation in areas where it has been destroyed or altered by anthropogenic activities or invasive species would also help conserve CFRs as well as restore habitat for coldwater fish species. Finally, working with municipalities to conserve groundwater will help secure an adequate volume of water in streams which will help preserve their cooler temperatures. I anticipate the greatest challenges in implementing this strategy will be working with a variety of stakeholders to try and meet everyone's needs.

Colin Howe

Riparian barriers around the Oneida Lake watershed

The project that I am designing would expand existing riparian barriers around the Oneida Lake watershed in Upstate New York. The idea would be to compensate farmers for planting and expanding riparian barriers around waterways. The ultimate goal of this project would be to improve the water quality of Oneida Lake by decreasing nutrient population from agricultural run-off. I chose this project because I want to explore how targeted conservation projects can maximize limited resources and fill gaps in federal conservation projects.

I chose the Oneida Lake watershed for this project proposal for several reasons. First, I grew up near this lake and have a knowledge of the surrounding geography and political climate. Second, this lake is subjected to increasing outbreaks of toxic algae blooms which have been linked to nitrogen and phosphorus pollution. I have seen how these blooms cause fish kills, imperil drinking water, and ultimately lead to economic and environmental damage. Third, Oneida Lake's watershed is relatively small, totaling 872,000 acres, increasing the chances of this project leading to measurable improvements in water quality. Further, agriculture is concentrated around the southern half of the watershed which targets which parcels can contribute the most to an improved riparian barrier. Finally, the southern half of Oneida Lake exists partially within lands owned by the Oneida Nation.

I recognize that this program is similar to programs offered by the Federal government, notably the Conservation Reserve Program (CRP) run by the USDA. However, federal programs are limited in their ability to complete the mission of riparian barrier conservation due to finite funds, complicated application/approval processes, and minimum acreage requirements. I envision this program working to fill the gaps in CRP and offer a more flexible alternative.

Additionally, I want to use watershed maps compiled by the NYSDEC (located at <http://www.cnyrpdb.org/oneidalake/gis-maps.asp>) to identify and focus on areas of particular conservation value. For example, putting more effort towards areas with fragile or waterlogged soils.

One aspect of this project that I am still search for a solution to is how to fund this project most effectively. I would love to talk with the group about innovative funding structures for a project like this.

Samantha Meyer

Appalachian Old-Growth (Mosaic) Forest Management Network

Background and problem statement

Old-growth and late-successional forests provide numerous ecological benefits including storing high amounts of carbon and providing habitat for a diversity of plants and wildlife. These forests, which are already rare across the Northeast, are threatened due to climate change (invasive pests, pathogens, and extreme weather events), land conversion, and fragmentation. This calls for a unified movement to protect and thoughtfully manage these forests to sustain the benefits they provide into the future. Many conservation organizations' missions include protecting old-growth forests (i.e., Mass Audubon) or restoring old-growth forests characteristics (i.e., [TNC central Appalachians forest restoration](#) in Maryland). However, there lacks a unified vision across the Eastern U.S. to preserve and restore old-growth forest characteristics through active management.

The diversity of species and structures in these forests are especially crucial in fostering rich benefits, calling for conservation strategies that protect a connected mosaic of forests with different ages species composition, resulting in a diversity of species and structural characteristics (i.e., ages and sizes of trees) across the landscape. Ongoing stewardship should focus on promoting these characteristics across the landscape as well.

Approach and end goal

This project seeks to identify candidate old-growth/late-successional forest parcels around the Appalachian corridor from Virginia up to Maine, prioritize parcels not yet permanently protected, and recommend conservation and stewardship action on this network of lands. Specifically, I will identify areas across the Northern and Central Appalachian region with old-growth forest characteristics using USFS Forest Inventory and Analysis data and openspace GIS data. I will then prioritize areas for protection or for specific forest stewardship on existing protected lands across the Appalachian landscape. Ideally, field verification would be done by landowners or using citizen science to confirm old-growth characteristics on the ground and move forward in the prioritization process. Though old-growth forests will be the keystone priority of forest conservation in this project, forested parcels surrounding these forests may also be strategically targeted for conservation and active management for enhanced carbon sequestration. This would both provide forest connectivity and diversity, and help to finance the project through the selling of carbon credits.

This initiative will leverage existing conservation networks (i.e., the Appalachian Trail) to shape priority areas, utilize cross-sector partnerships for a unified conservation and stewardship vision, and tap into carbon markets to assist in financing. Conservation prioritization will occur in conjunction with existing regional landscape networks to promote connectivity. These parcels should be continuously monitored and stewarded to promote a diverse species composition, forest structure, and maintain old-growth characteristics amidst global change.

Additional details

If much of the identified old-growth/late-successional forests are already protected, then the goal of this initiative would shift to protect forested parcels surrounding these old-growth forests and manage them with active forest management practices that enhance old-growth characteristics while also having patches that enhance carbon sequestration. This is the "mosaic" idea in the title.

Financing and stewardship will include a regional old-growth management network partnership which helps to aggregate the finances and distribute them to local partners throughout the Northern/Central Appalachian region, who will help to locally protect and steward the land. Carbon markets will be used as a financing tool, given that the initiative meets additionality requirements.

The initiative should include distribution of educational materials about benefits of these forests, and tools for conserving them aimed towards private/state/local landowners, as well as recommendations for stewardship including forest vulnerability assessments (see [NECASC](#) resources) and forest management strategies to enhance old-growth characteristics in these areas (D'Amato and Catanzaro 2007).

Sara Pearce

Expansion of Wildlife Migration Corridors in the Greater Yellowstone Ecosystem

I am proposing to address the seemingly endless challenges that ungulates face during their seasonal migrations in the Greater Yellowstone Ecosystem, more specifically Western Wyoming. This is significant because according to recent studies, migration is a learned behavior, and the corridors in which wildlife moves do not only function as means for traveling from point A to point B - but have also been proven to be key foraging habitats, providing ungulates with the nutrients they need to survive year-round. In a larger context, the initiative works across multiple jurisdictions, boundaries, and landowners, and has the potential to provide room for changes in migration patterns in response to climate change. Ideally, this initiative would also involve land stewardship in the face of urban sprawl, but it likely faces challenges with landowners and costs.

This project has been initiated by the Wyoming Migration Initiative, who has many partners including (but not limited to): USGS, USFWS, NPS, University of Wyoming, The Wyoming Nature Conservancy, and Wyoming Game and Fish Department. This initiative has begun various studies in the mid - 2010's which are likely to be ongoing for many years, or even decades. In utilizing the data from this research, I propose that man made barriers along the ungulate migration routes be modified, while creating wildlife crossings for major highways. I propose this in hopes to ensure that the learned behavior of migration can be passed to a new generation and limit the needless mortalities to wildlife and humans alike.

The initiative is collaborative and works with state and national government organizations, as well as Wyoming universities, researchers, nonprofit organizations, and landowners. Lasting impacts due to these efforts include, reduced wildlife - vehicle collisions, increased protected areas in the face of urban sprawl, and to ensure successful ungulate migrations into the future. This fight will be ongoing and face many challenges, but by collaborating with stakeholders and educating the public on these issues there is the potential to let the wild stay the wild.

Alyssa Seibt

Mt. Hood to Three Sisters Trail

The large landscape conservation project that I came up with is the idea for a trail, approximately 100 miles long, beginning at Mt. Hood and ending at the Three Sisters Mountains, the North Sister to be specific. Although the Pacific Crest Trail already connects these two locations, the trail that I ideally would want to create would branch off of the PCT at Mt. Hood, going further west into the Santiam Forest, and then continuing south, eventually connecting back to the PCT. However, one of the most significant aspects of the trail would be that the surrounding areas, 30 miles east and west of the trail, would use forest management techniques in order to mitigate the effect that wildfires have on this region.

The Santiam Forest recently received a lot of attention from land conservation and forestry experts in Oregon, due to the wildfires within the past few years which have destroyed thousands of acres of forest in this region specifically. Many ecosystems within this forest have

also been destroyed or suffered greatly due to the fires. As each wildfire season intensifies every year, many people living in Oregon have become frustrated with the lack of proper forest management in these areas that are prone to wildfires. However, if the correct forest management was used on the surrounding regions of the trail, which goes through some of the areas of the Santiam Forest most prone to wildfire, the hope would be that this would create a wilderness corridor of sorts that would protect the ecosystems within this region from severe wildfires. Practices such as cultural burning, or cool burning, could be used in this region to reduce the risk of severe wildfires burning through this region. Even if the trail and surrounding areas do catch fire, the use of proper forest management beforehand would hopefully mitigate the effects of fire, making it burn at a cooler temperature for a shorter period of time.

Rachel Sharon

State Park Stewardship Program Pilot at Purgatory Chasm

The state parks have always been an affordable option for people trying to explore nature. From water fronts, walking trails to camping you can find it all in the Massachusetts state park system. Unfortunately, most of these places only have a full staff during the summer and conservation efforts can only accomplish so much in just one out of four seasons. The patrons of the parks care but there is no outlet for them to contribute to keeping the parks environmentally healthy. A way I think the parks could improve their habitats is through introducing an environmental stewardship program for people to get the full Walden experience, to fully immerse themselves in nature for about two weeks to a month so as to feel its spiritually calming essence but also to give back to a place that means so much to them. This is a lofty goal, and even though Walden literally is a state park, I will be focusing on Purgatory Chasm and the small network of unmanaged "boy scout trails" that have laid dormant since they stopped having the scouts come to camp in 2007. I chose this park mainly because of my inside intellect of the park and its history I have gained while working there. I also have siblings and friends who are in the scouts, in the early 2000's my male peers who were involved in the Scouts embarking on this wonderful right of passage trip when they graduated from a Webelo to a full-grown Boy Scout, the camping trip to Purgatory Chasm.

What I will focus on in this paper; a trail assessment and invasive management plan for these trails and I will attempt to come up with a plan to build a solar powered cabin people can stay in when they come to volunteer their time. I will also include a proposal for how and why it would be beneficial to bring groups back to the park in this capacity. An outline for a stewardship program, how it would be funded/ what kind of groups should be invited and aid based off of ability to pay and an engagement plan to attempt to recruit all types of people from a range of backgrounds to have an opportunity to participate. How I will accomplish these plans; I will play to my strengths, call in assistance from my mentors, dream big and try my best.

Colleen Smith

Falmouth's Wildlife Corridors: The Moraine Trail

The Moraine is a 9 mile long trail that stretches from Bourne to Woods Hole. The trail is along a designated wildlife corridor and stitches together parcels from several different land holders including the town, The 300 Committee Land Trust (T3C), and conservation easements with private landowners. The trail follows some of Falmouth's most interesting topographic features along high ridges and steep valleys carved out along the glacial path. The trail was

initially established in the early 90s by a few enthusiastic Falmouth Hikers who, while looking at a map of town openspace, decided they ought to try hiking along the wildlife corridor. T3C and volunteers later assisted the town in cutting and blazing the 9 mile trail.

With a long trail comes a lot of maintenance, and without support from the town the Moraine has gone largely neglected over the past 15 years aside from T3C's volunteer trail crew clearing more heavily used sections of path once annually. The white blazes are now few and far between as trees have died, bark has sloughed off, and weather has deteriorated the paint. Now only those who have known the Moraine trail feel confident embarking on the 9 mile journey. This leaves a vast majority of the community left out, and many do not even know of the existence of a trail of such length.

This project will focus on the revitalization and promotion of the Moraine Trail in order to make it more accessible and used by the public. In my time serving as a TerraCorps member with T3C we were contacted by an environmental firm that would like to do a project for us pro bono. After much deliberation we decided to have the firm re-map the Moraine in both pdf and interactive web based formats. There are many components to this project including re-blazing the trail, gathering media for the online map, gathering and compiling map data, planning community outreach, consulting with those who originally established the trail, working with the town, etc. This is a project with many different stakeholders and is almost equally about managing people as it is managing the land. I've found that those who are personally invested in the land have many opinions on how it would be best managed, and while these people may not have the authority to make these decisions, it is often in the best interest of the land owner/manager to listen to these community members who care. As with any project, there is potential to step on toes and this should be avoided as much as possible.

My plan for this project is to explore all the necessary steps to make the revitalization of the Moraine successful and to theorize what the future of the trail could look like. To have such a long continuous trail through our town is a blessing, and it is one that I think everyone has the right to feel comfortable enjoying. I'll detail where increased signage is necessary and discuss some of the history of the trail. I'll also determine potential funding resources. While T3C has a large pool of volunteers to pull from, the proper installation of permanent signage can be pricey. T3C is a relatively small non-profit with a staff of 3 fulltime employees, making coordinating large projects and groups of volunteers more difficult. This project is a huge undertaking, with what I consider great potential for recreation. I look forward to diving into this process a little deeper and am eager to hear any insight you may have.

Kate Sutcliff – 2 proposals

Right of First Refusal Revolving Loan Fund

Under Massachusetts law, towns and cities have a 120-day Right of First Refusal purchase option for properties being converted out of a Chapter 61 approved use. Such land frequently has significant ecological and community significance to a town that risks being lost if developed. However, the purchase option's timeframe is often too limited for towns to acquire necessary purchase funds, even when confident in their ability to raise the necessary monies in the long run. This project will explore creating a revolving loan fund specifically for Massachusetts towns and cities to use for Chapter 61 Right of First Refusal transactions, providing a source of interim funding to immediately purchase properties until grants, partnerships, or CPA funding is secured. It will:

- Establish whether a revolving loan fund would meet a true need and expand town and city's capacity for conservation

- Understand the necessary legal structure for municipalities to use the fund
- Explore initial financing and operational details (e.g., management of loan applications and disbursement of funds)

By establishing a revolving loan fund, Massachusetts municipalities can expand their capacity to react quickly to conservation opportunities and prevent Chapter 61 lands being sold for development.

Landscape-Level MVP Planning in the North Quabbin

The Municipal Vulnerability Preparedness (MVP) program provides funding for municipalities across the Commonwealth to implement nature-based solutions to climate change and increase local resiliency. Nature-based solutions are likely to be most effective (in terms of both reducing costs and improving resiliency) at the landscape level, but most communities in the the North Quabbin Regional Landscape Partnership (NQRLP) have conducted their planning at the individual town or city level. This project will analyze the existing MVP plans of communities in the NQRLP, identify overlapping priorities and potential cross-town-boundary projects, and build a pipeline of landscape-scale conservation projects in preparation for the next round of MVP action grant funding.

Projects that consider resiliency at a landscape level can have greater impact: for example, nature-based solutions for flood control implemented at the watershed scale will benefit more towns than individual culvert replacement. However, cross-town projects require significantly more coordination to plan. Having a ready pipeline of potential projects makes submission of landscape-scale projects more likely. These types of projects also reduce central planning costs by sharing them across towns, a key benefit for smaller towns struggling to provide required matching funds.

Deana Thomas

Conservation plan for 12 acres in Scituate, RI

The Scituate Reservoir provides almost half of Rhode Island's public water supply. The watershed includes 60,000 acres. 60% of that land is privately owned. The population of Scituate is aging; large tracts of land are being sold, divided, and developed. New construction has damaged nearby wells, causing fragmentation of well-established forests and development adds risk of run off into the State's water supply.

I will work with the Northern Rhode Island Conservation District to conserve my 12 acres of land through the state's Farm, Forest, and Open Space program. The land will be used for scientific research, farming, recreation, and education. This will be funded privately and with the help of a grant provided by the NRICD. This is a long-term project that has already begun and will continue throughout my lifetime.

Fungi are understudied and under documented. No species of fungi are listed as invasive, threatened, or endangered in RI. As indicators of the health of landscapes, they must be studied. I will formally establish The Rhode Island Mycological Society. Partnering with local Land trusts and the public I hope to conduct biodiversity surveys. Technology will be used to bring opportunities to learn and explore the outdoors to ALL.

Sophie Traficonte

Lake Champlain Basin, Monkton Landowner Conservation

The Lake Champlain Basin is the entire drainage area for Lake Champlain. Any precipitation that falls on the watershed will eventually reach Lake Champlain and flow north to the Richelieu River and on to the

St. Lawrence River and Atlantic Ocean¹. Ninety percent of the water that enters Lake Champlain flows through the Lake's drainage basin before it reaches the Lake. Approximately 200,000 people, or about 35% of the Basin population, depend on Lake Champlain for drinking water. Within this watershed is Monkton, VT, which includes another significant water resource, Monkton's Pond Brook Watershed. Pond Brook Watershed is a 19,000 acre area of northern white cedar swamps, oak-covered ridgetops, and prime agricultural soils. Over 95% of the Pond Brook Watershed is in private ownership and the town has prioritized the conservation of this area because it is an essential part of protecting the ecologically significant habitats of Monkton.²

Due to the fact that healthy watersheds provide many ecosystem services that are essential to our social, environmental and economic well-being, it can be concluded that land protection in this region is vital to the health of the area. Recently, a group of 5 landowners with approximately 470 acres in Monkton have come forward hoping to conserve their land. There are also an additional 3 landowners that may be convinced of joining this effort, which would bring the total acreage to 750. The focus of this project will be to identify potential challenges to a land deal with multiple landowners and to find solutions for these challenges so that this large scale conservation can occur successfully. The strategy going into this project is to bring in a diverse group of partners including private, public, and educational institutions. Multiple partners will allow us to use collaborative efforts and maximize the collective resources available to the project. Another project tool will be identifying funding. Not all landowners will be able to donate conservation easements on their land and so it will be essential to find grants and funding sources to assist in project costs.

The success of this project may allow for further conservation in this ecologically important area. Landowners in Morristown, VT are also reaching out about conserving their land and so we can expand this conservation effort throughout the Champlain Basin if this project proves to be successful.

¹ *Watersheds*. Lake Champlain Basin Atlas. (2019, February 11). <https://atlas.lcbp.org/nature-environment/watersheds-and-tributaries>.

² Brennan, Lyra D., "Master's Project: An Ecological Inventory and Assessment of the Pond Brook Region in Monkton, Vermont" (2017). Rubenstein School Masters Project Publications. 16. <https://scholarworks.uvm.edu/rsmpp/16>