

2023

THE MARION STODDART Greenway Protection Action Plan

NASHUA RIVER
WATERSHED
ASSOCIATION



592 Main Street, Groton, MA 01450
www.NashuaRiverWatershed.org

Photo by Sherry Anders

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Photo by Sherry Anders

INTRODUCTION

When Nashua River Watershed Association founder and environmental activist Marion Stoddart became inspired to clean up the Nashua River, her vision did not stop at addressing its polluted state. Marion understood that the permanent protection of riparian areas along primary rivers, tributaries, and headwaters in the Nashua River watershed was the key to sustaining the long-term health of the river, and the vital fish and wildlife habitat it supports. She envisioned a “ribbon of green” winding through the watershed; an artery of ecological and recreational vitality, buffering our rivers and streams from pollution, runoff, and erosion in perpetuity. Marion founded the Nashua River Watershed Association (NRWA) in 1969, and the Greenway began to gain traction. Today, over 174 miles of riverfront have been permanently protected in Massachusetts and New Hampshire.

As the NRWA looks toward the future of land protection in the Nashua River watershed, the expansion of the

Marion Stoddart Greenway is foremost in its operational goals. Conservation has only grown more complex as undeveloped land in New England becomes increasingly expensive and limited, but the NRWA is uniquely positioned to take on this challenge. The organization’s deep understanding of land and water resources, strong relationships with landowners and conservation partners, and ability to work across geographic boundaries will be integral to the expansion of the Greenway.

This Greenway Protection Action Plan will outline the history and current state of the greenway, the NRWA’s strategic approach to identifying and prioritizing remaining unprotected parcels for protection, and the process of working with local partners to complete fee simple acquisitions and conservation restrictions. Through these efforts, the NRWA and our regional partners will work together to continue bringing Marion’s vision of a contiguous ribbon of green to life.

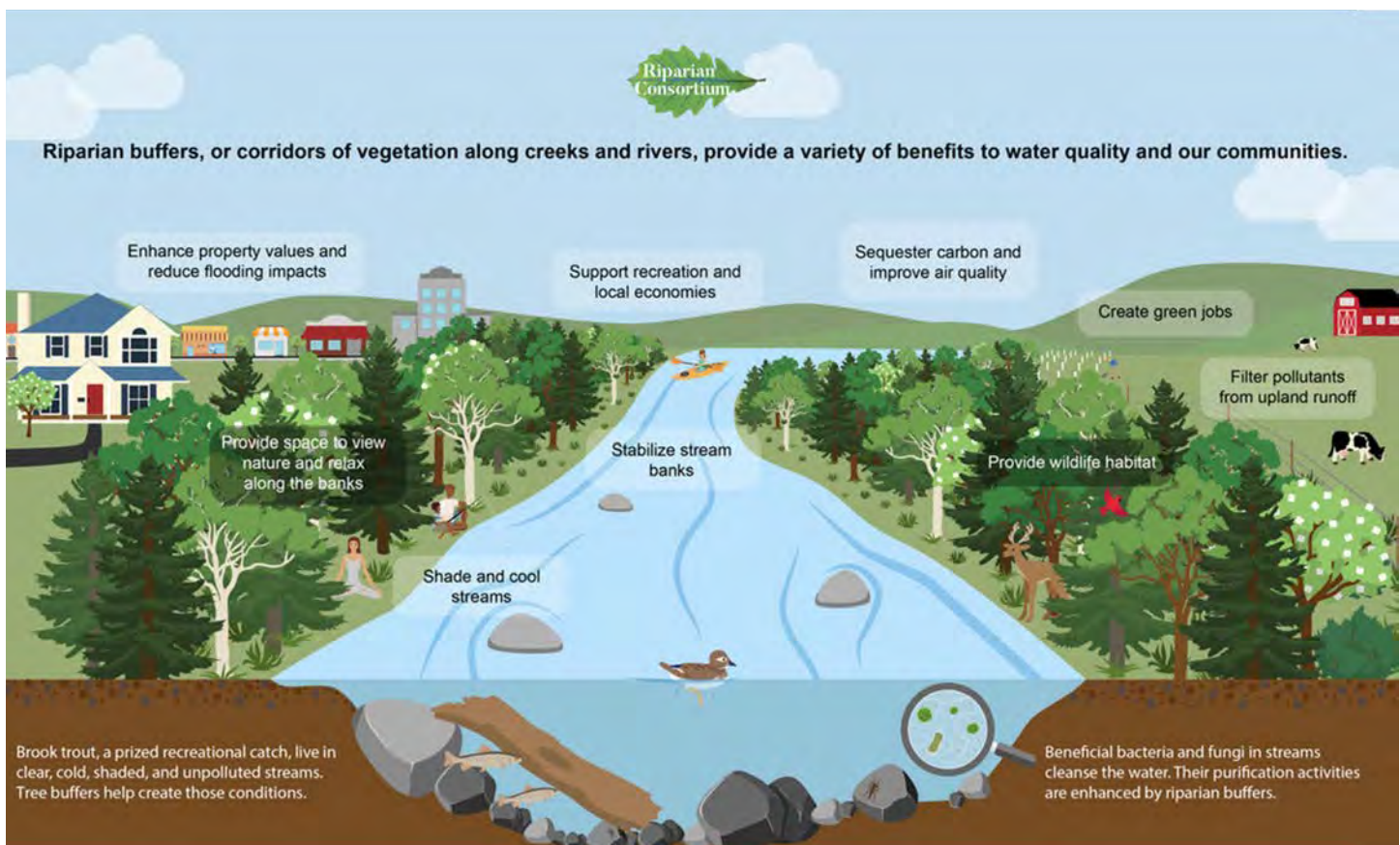


Photo by Sherry Anders

GREENWAY OVERVIEW

Greenways are corridors of land, water, and the natural, cultural, and recreational resources they connect. Greenways can vary in size, ownership, and function, but they all are united by a common approach to protecting valuable resources. Some greenways focus on connecting existing parks and open spaces to increase recreational opportunities, while others promote economic benefits like downtown revitalization. The Marion Stoddart Greenway is focused specifically on protecting land that falls within a 300-foot-wide buffer of land along all rivers, tributaries, and headwaters in our watershed.

The transitional zone between fully terrestrial and aquatic systems, known as riparian areas, are complex and serve a variety of essential ecological functions. Streambanks, floodplains, wetlands and other systems that neighbor bodies of water are all examples of riparian areas, and they provide benefits ranging from flood mitigation to nonpoint source pollution filtration. The Marion Stoddart Greenway project recognizes the essential role of riparian areas, and seeks to protect these sensitive ecological zones in perpetuity using a suite of land protection tools and techniques.



Graphic courtesy of the Upper & Middle James Riparian Consortium and GreenFin Studio

THE NASHUA RIVER WATERSHED

The Nashua River watershed covers a geographic area of 538 square miles across north-central Massachusetts and southeastern New Hampshire, encompassing 32 communities. The mainstem of the Nashua River runs approximately 56 miles from Lancaster, Massachusetts to Nashua, New Hampshire, where it joins the Merrimack River. The watershed can be divided into five major watersheds: the Wachusett Reservoir (which includes the Quinapoxet and Stillwater Rivers), the North Nashua River, the Nashua River Mainstem (including the South Nashua River), the Squannacook River, and the Nissitissit River.

The land within the watershed is primarily forested, with the land use of the area categorized as 62% forested, 13% residential, and 12% agricultural. However, as a largely rural and exurban watershed in close proximity to the greater Boston area, development pressure and urban sprawl have resulted in the loss of open space at an increasingly rapid rate.

The watershed is rich in biodiversity, as evidenced by three designated Areas of Environmental Concern (ACECs): the Squannassit, the Petapawag, and the Central Nashua River Valley. ACECs are unique areas that receive special recognition and protection due to the quality and significance of their natural and cultural resources. The specific geology, hydrology, climate, and land use history within the three ACECs in our watershed have converged to support exceptional species richness, including concentrations of rare and endangered species.

The watershed's exceptional biological and cultural resources were further recognized when the 'Nashua Wild and Scenic Rivers Act' was signed into law on March 12, 2019, designating parts of the Nashua, Squannacook, and Nissitissit Rivers as Partnership Wild and Scenic Rivers through the National Park Service. This designation helps ensure that these waterways will be preserved in their free-flowing condition,



Photo by Arthur Wikimedia Commons

THE NASHUA RIVER WATERSHED

provides protection against bank or channel alterations that adversely affect river values, and prevents oil, gas, and mineral development along riverfront public lands.

The Nashua River watershed also supplies drinking water to over 2 million people in New Hampshire and Massachusetts, according to the National Wild and Scenic River Stewardship Council. Therefore, the overall health and quality of watershed resources can significantly impact local communities. Currently, the leading threats to drinking water in the water-

shed are Combined Sewer Overflows (CSOs), E. coli contamination, nonpoint source pollution (e.g., high phosphorous levels from fertilizer runoff), PFAS, and warming water temperatures. These stressors will be exacerbated by climate change, as the watershed experiences more intense rain events, rising temperatures, and more frequent droughts. Continued development in the watershed will create more impervious surfaces, which will compound the warming and negative stormwater effects of climate change.

Map 1. The Nashua River Watershed and its 32 Communities



THE HISTORY OF THE MARION STODDART GREENWAY PROJECT

When Marion Stoddart moved to Groton, Massachusetts in 1956, she was shocked by the state of the Nashua River. At the time, it was nationally renowned as one of the ten most polluted rivers in the United States; decades of industrial pollution from local mills and raw sewage effluent had left the river thick, odorous, and discolored. Marion had developed an interest in water resource management as a member of the League of Women Voters, so she resolved to spearhead efforts to restore and protect the Nashua River.

In 1962, Marion formed an advocacy group called the Nashua River Cleanup Committee, which focused on educating citizens across all 32 watershed communities about the need to restore the river. Her goals were always more holistic than simply improving water quality; from the outset of her work,

she recognized the importance of permanently protecting Greenway parcels along rivers, streams, and headwaters in the watershed to ensure any advocacy and restoration efforts would be sustained for years to come.

Marion envisioned a Greenway corridor winding through the watershed, comprised of permanently protected land to support ecological and recreational values alike. In order to achieve this goal, Marion developed an early interest in organizing and supporting local land trusts, and she encouraged them to focus on properties along the Nashua, Squannacook, and Nissitissit Rivers. In 1969 Marion and her partners founded the NRWA, and the organization got to work improving the health of the river and advocating for Greenway land conservation.



An iconic before-and-after image of the Nashua River in Fitchburg, MA.

THE HISTORY OF THE MARION STODDART GREENWAY PROJECT

The NRWA published its first regional plan for a Nashua River Greenway in 1970. To support this effort, every town and city within the watershed was asked to form a greenway committee, and monthly meetings were held at the original NRWA headquarters in Fort Devens, MA. Advocates and professionals would gather, celebrate their progress, report information on properties of interest, and share parcel information like current ownerships and assessed property values. The progress towards land acquisition was initially slow due to a paradox created by the river conditions: the land along the Nashua River was very inexpensive because the river was so polluted, but it was difficult to acquire because conservation organizations preferred to focus their efforts on larger, cleaner tracts of land with more upfront ecological value. However, Marion knew that as the river became cleaner, the value of that land would increase and development along its banks would be at a premium – and if the banks were developed, there would be an adverse effect on the water quality she was working so hard to improve.

The protection of Mine Falls Park in Nashua, NH is notable as the first successful acquisition under the NRWA's Greenway initiative. Mine Falls was historically a polluted area; prior to its restoration, wastewater from the city of Nashua would flow into a 3-mile canal that was dug into the property before emptying into the Nashua River. A collaboration between the NRWA, the New England River Basin Commission, and a local philanthropist helped raise funding to transfer wastewater from Nashua to a treatment plant, making it possible to restore and ultimately protect the Mine Falls property in 1969. Today, Mine Falls Park is a popular 325-acre property that connects an urban community to the Nashua River.

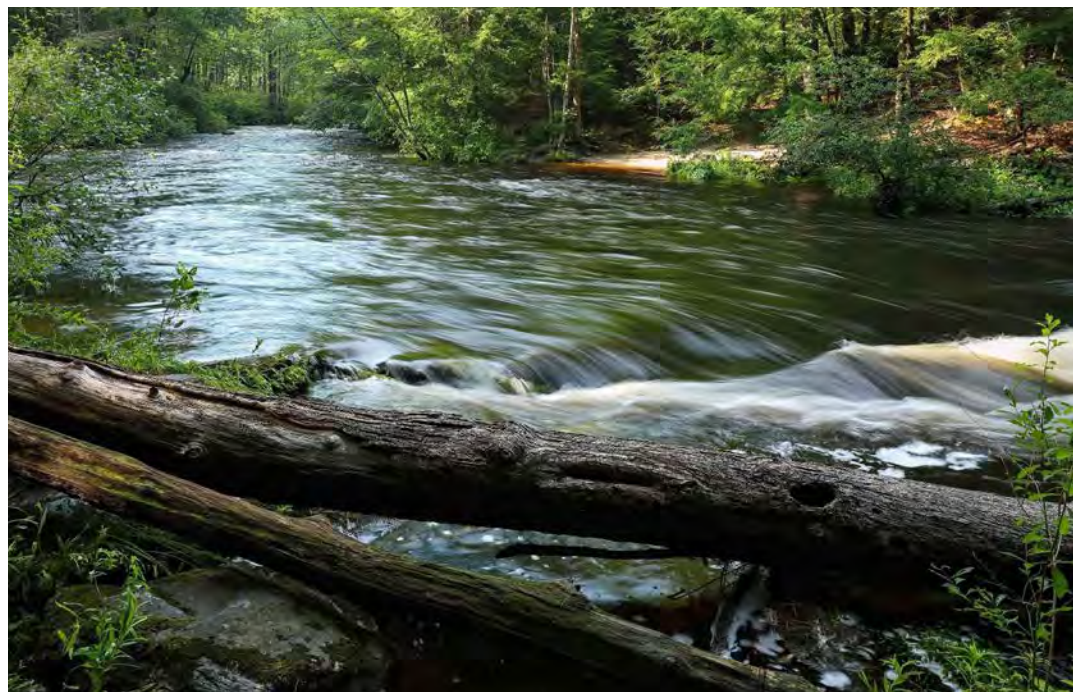
Through the dedication of Marion and conservation partners like Peter Bertozzi, Benton McKaye, William

Wharton, and many more, the Greenway continued to grow as land was gifted, transferred, and purchased in-fee.

Over the course of the next three decades, the Greenway expanded from only 2 miles of protected riverfront to 84 miles. In the past decade, that figure has more than doubled to over 174 miles of protected shoreline.



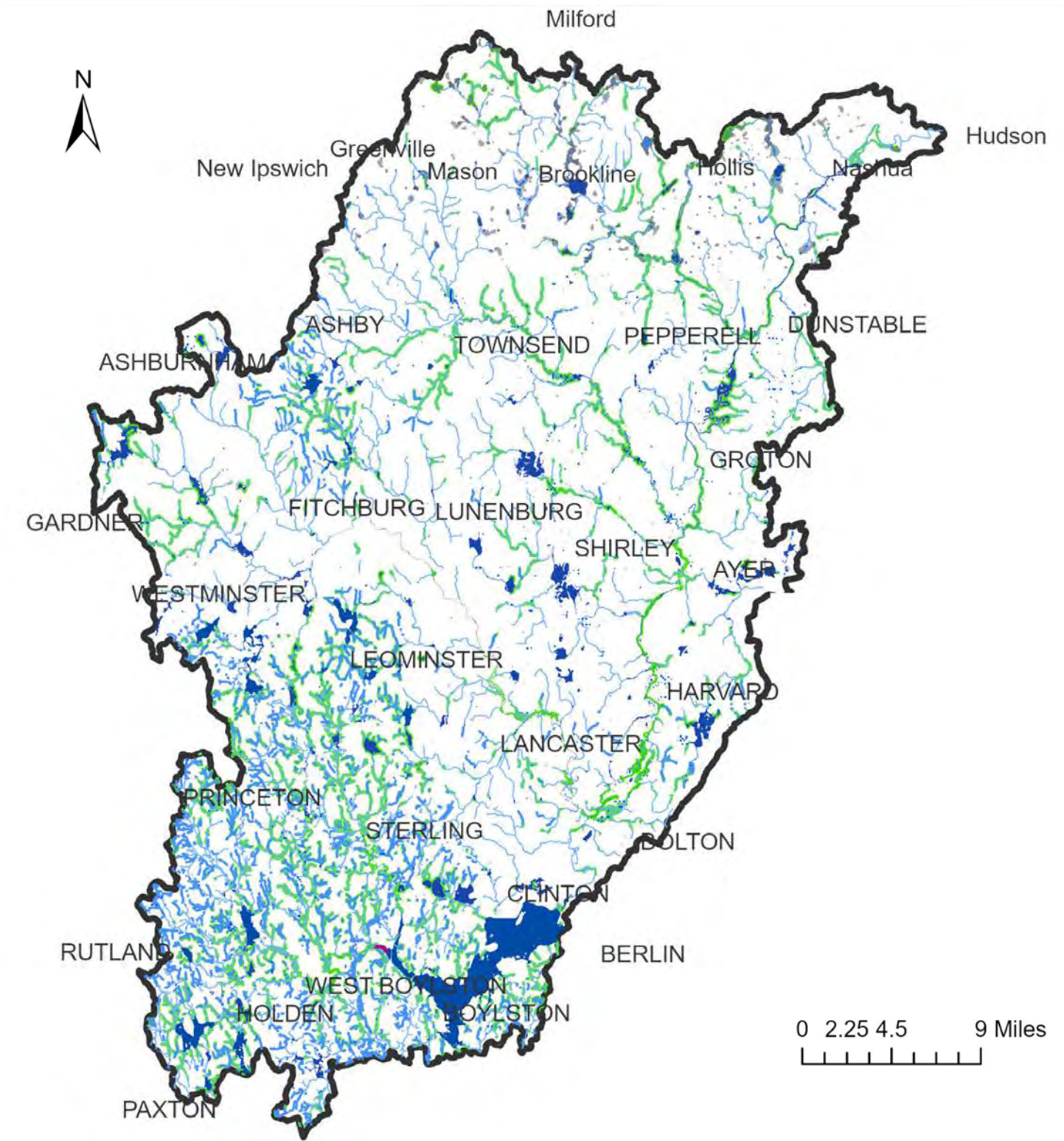
A restored Mine Falls Park in Nashua, NH.
Photo by Jessica DeSantis.



The Bertozzi Wildlife Management Area in Groton, MA is named in honor of local conservationist Peter E. Bertozzi. Photo by Sherry Anders

THE HISTORY OF THE MARION STODDART GREENWAY PROJECT

Map 2. Permanently Protected Greenway Properties, as of October 2023



THE MARION STODDART GREENWAY PROTECTION ACTION PLAN

In order to continue the expansion of the Greenway throughout the Nashua River watershed, the Marion Stoddart Greenway Project will follow a targeted, strategic approach to land protection through fee simple acquisitions or conservation restrictions. The project will be executed through the following phases: Spatial Analysis, Prioritization, Implementation, and Closing the Deal.

Spatial Analysis

Spatial analysis will entail a thorough review of the current status of protected land throughout the Nashua River watershed using geographic information system (GIS) software. The analysis will produce updated greenway statistics that accurately reflect the current state of greenway protection, land ownership, and existing conservation restrictions. In addition to these statistics, the analysis will also examine other significant land use changes on a landscape scale. The resulting maps will be essential to the public outreach and partnership engagement phase of the project by providing a visual representation of the status and progress of greenway protection. The analysis of existing wildlife corridors, gaps in connectivity, and the overall matrix of developed and undeveloped land throughout the region will guide strategic greenway decision-making for years to come.

Prioritization

Prioritization is essential to developing any land protection strategy. The aspirations of conservation organizations can be limited by constraints of time, resources, and an increasingly competitive market for available land, so the NRWA will use the following methodology to strategically identify and rank priority parcels that are best-suited for permanent Greenway protection. This careful prioritization will maximize the positive impact of land protection, ensuring the most ecologically valuable parcels receive priority consideration and possible funding.

For the Marion Stoddart Greenway Project, the NRWA will prioritize unprotected parcels within 300 feet of rivers, tributaries, and headwaters in the Nashua River watershed. In addition to practical considerations such as landowner willingness, cost, and clear title, the NRWA and its partners will rank projects based on factors like habitat contiguity, parcel size, climate resiliency, and the presence of wetlands and waterways. Existing datasets such as BioMap 3 and The Nature



A heron hunting on the Squannacook River, a coldwater fisheries resource. Photo by Sherry Anders

THE MARION STODDART GREENWAY PROTECTION ACTION PLAN

Conservancy’s (TNCs) Resilient Land Mapping tool will be incorporated to address factors ranging from rare species habitat to carbon sequestration and climate resiliency. The NRWA will use the prioritization map to inform project selection, select appropriate funding sources, and guide our strategies for interacting with and helping landowners. Prioritization is a tool that will guide strategic and effective land conservation decision making, but is not intended to supersede acquisition opportunities that organically arise from circumstance or landowner interest.

Prioritization Methodology

The Marion Stoddart Greenway prioritization will use GIS analysis to assess the habitat value, ecosystem services, natural resiliency, and recreational value of all currently unprotected

land parcels within the Nashua River watershed that are located within 300 feet of the Nashua River, its headwaters, and its tributaries. Using various relevant datasets from MassGIS, NH GRANIT, The Nature Conservancy, Mass Audubon, and more, this analysis will examine where unprotected greenway parcels overlap desirable landscape characteristics. The total number of desirable characteristics overlapping a given parcel will be symbolized with a gradation of shades, in order to visually represent the parcels with the greatest concentration of desirable natural features or characteristics. All datasets included in this analysis are outlined below (Tables 1-3). Of note, there are some discrepancies between the available datasets in Massachusetts and New Hampshire. Data for parcels in New Hampshire will be included whenever possible, but this situation may lead to some discrepancies.

Table 1. Ecosystem Services and Climate Considerations

This category focuses on the presence or absence of ecosystem services, such as carbon storage, water quality protection, drinking water supply, and flood storage capacity.

DATASET	SOURCE	REASON FOR INCLUSION	NOTES
Assessor’s Parcels	MassGIS; NH GRANIT	Land ownership boundaries to assess conservation opportunities.	
Aquifers	MassGIS; NH GRANIT	Aquifers provide a critical source of freshwater for the public drinking water supply.	
FEMA National Flood Hazard Layer (NFHL)	MassGIS; NH GRANIT	This dataset represents current effective flood risk as calculated by the Federal Emergency Management Agency (FEMA).	Data are a compilation of effective Flood Insurance Rate Maps and any Letters of Map Revision that have been issued against those databases since their publication date.
Potential Forest Ecosystem Carbon Sequestration (2010-2050)	TNC	According to the U.S. Forest Service, America’s forests sequester 866 million tons of carbon a year. Conserving forest land, and in particular, conserving areas with mature forests, helps to maintain the natural carbon cycle.	Estimates of carbon stock were determined by examining the attributes for all forested 30-m pixels in the continental United States. A forest carbon cycle model trained to match Forest Inventory and Analysis data was used to predict carbon stocks for 2010 based on site-level attributes of forest type group, years since disturbance, and site productivity class.
Outstanding Resource Waters	MassGIS	The locations of waters protected under MA Surface Water Quality Standards, including public water supplies, wetlands, and other waters with outstanding recreational and ecological values.	Waters designated according to 314 CMR 4.04(3). These areas are determined using MassGIS data including Surface Water Supply Watersheds and Areas of Critical Environmental Concern (ACEC), as well as additional watershed information created from USGS elevation data
Resilient Sites	TNC	A site’s Resilience Score estimates its capacity to maintain species diversity and ecological function as the climate changes.	Resilience is determined by evaluating and quantifying physical characteristics that foster resilience, such as landscape diversity and local connectedness.

THE MARION STODDART GREENWAY PROTECTION ACTION PLAN

Table 2. Habitat and Landscape Connectivity

This category focuses on the presence or absence of significant blocks of aquatic, wetland, vernal pool, and forest habitat, priority natural communities, and rare and endangered species habitat. It also considers connectivity between parcels and proximate undeveloped and conserved lands.

DATASET	SOURCE	REASON FOR INCLUSION	NOTES
Areas of Critical Environmental Concern (ACEC)	MassGIS	ACECs are places in Massachusetts that receive special recognition because of the quality, uniqueness and significance of their natural and cultural resources.	ACECs within the Nashua River watershed are the Squannassit, Petapawag, and the Central Nashua River Valley.
BioMap3 Core Habitat: Forest Core; Rare Species Core; Priority Natural Communities; Wetland Core; Aquatic Core; and Vernal Pool Core	MassGIS	Core Habitat identifies areas critical for the long-term persistence of rare species, exemplary natural communities, and resilient ecosystems.	The Core Habitat element is made up of a collection of 6 feature classes/shapefiles. BioMap is the outcome of an ongoing collaboration between MassWildlife and the MA Chapter of TNC.
BioMap3 Critical Natural Landscape: Landscape Blocks; Aquatic Buffers; and Wetland Buffers	MassGIS	Critical Natural Landscape identifies large landscapes minimally impacted by development and buffers to core habitats and coastal areas, both of which enhance connectivity and resilience	The Critical Natural Landscape element is made up of a collection of 5 feature classes/shapefiles. BioMap is the outcome of an ongoing collaboration between MassWildlife and the MA Chapter of TNC. Coastal Adaptation Areas and Tern Foraging Habitat are omitted due to irrelevance.
BioMap Local Components: Local Landscapes; Local Wetlands; Local Wetland Buffers; Local Rare Species; Local Aquatic Habitats; Local Aquatic Habitat Buffers; and Local Vernal Pools	MassGIS	Habitats are assessed and prioritized from the perspective of individual cities and towns, which provide municipalities and local land trusts with additional information to support local decisions.	These components are intended to be used only at local scales.
BioMap Regional Components: Regional Connectivity and Regional Rare Species	MassGIS	Habitats that are important for regional conservation, and the connections that are critical for conservation success across the Northeast.	
Certified Vernal Pools	MassGIS	The location of all vernal pools that have been certified by the Natural Heritage and Endangered Species Program (NHESP).	These vernal pools were certified according to the Guidelines for the Certification of Vernal Pool Habitat (MA Division of Fisheries & Wildlife, 2009).
Coldwater Fisheries Resource (CFR) in MA; Freshwater Fisheries in NH	MassGIS; NH GRANIT	CFRs are important habitat for a number of coldwater species, which are typically more sensitive than other species to alterations to stream flow, water quality and temperature within their aquatic habitat.	Presence by town or city.
Existing Open Space Adjacency	MassGIS; NH GRANIT	Conserving parcels adjacent to existing open space contributes to landscape connectivity.	Parcel is included if within 100 feet of a permanently protected area.
Highest Ranked Wildlife Habitat	NH GRANIT	The relative rank of wildlife habitat by ecological condition within NH.	Analysis was completed for the NH Wildlife Action Plan.
Parcel Size	MassGIS; NH GRANIT	The conservation of larger parcels can have a greater positive ecological benefit than smaller parcels.	Based on assessor's parcel data.
Priority Habitats of Rare Species	MassGIS	The geographic extent of habitats of state-listed rare species in MA based on observations documented within the last 25 years.	Data sourced from database of the Natural Heritage & Endangered Species Program.

THE MARION STODDART GREENWAY PROTECTION ACTION PLAN

Table 3. Recreation and Community Considerations

This category focuses on the presence or absence of recreational amenities supported by natural resources, as well as community-centered considerations such as serving the needs of environmental justice communities.

DATASET	SOURCE	REASON FOR INCLUSION	NOTES
Environmental Justice Communities	MassGIS	As a result of systemic underinvestment, low-income communities and communities of color are more vulnerable to rising temperatures, weather events, and flooding.	Data are based upon three demographic criteria developed by MA Executive Office of Energy and Environmental Affairs.
Hiking Trails (MA) and NH Recreational Trails	MassGIS; NH GRANIT	An approximation of recreational trail locations in MA and NH.	Indicates existing recreational amenities on a given property, both formal and informal.
MA Office of Fishing and Boating Access Sites; NH Access Sites to Public Waters	MassGIS; NH GRANIT	The approximate locations of formal state access sites in MA and NH.	Indicates existing river access on a given property.

As the NRWA explores unprotected parcels for conservation opportunities on an on-going basis, an open-source map of all relevant greenway parcels within the Nashua River watershed will be created and released to allow users to explore the current status and ongoing progress of the Marion Stoddart Greenway. This map will not include the NRWA's priority rankings.

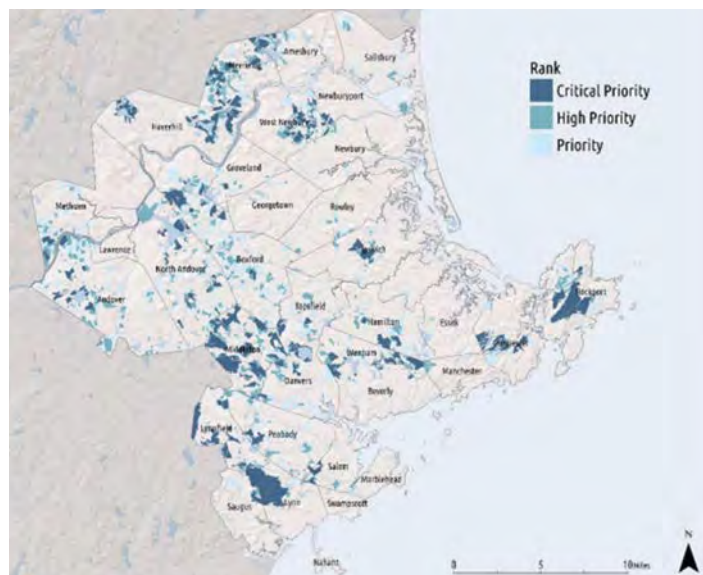
The NRWA will also produce an internal prioritization map that can be shared with conservation partners to discuss specific acquisition prospects. Due to the sensitivity of private landowner information, prioritization results will be used only for internal purposes to guide strategic discussions with land protection partners. As a non-profit that does not hold any land or conservation restrictions, the NRWA has the advantage of objectivity as staff collaborates with partners to analyze and consider land protection opportunities.

Many of NRWA's partner organizations have already completed an extensive internal prioritization process that captures their specific organizational goals. Therefore, the NRWA's prioritization for the Greenway Protection Plan will place a high value on parcels previously identified in a given partner's prioritization process, in addition to value ascribed from the methodology above.

Furthermore, many cities and towns have completed an Open Space and Recreation Plan (OSRP), which is a tool that helps communities plan for the future of their conservation and recreation resources. OSRPs often include a list of priority parcels identified by the public and/or an appointed Open Space Committee for future acquisition and, in some cases,

these priority parcels have received advanced approval for funding through a Town Meeting vote.

In addition to OSRPs, local natural resource planning occurs during the preparation of Municipal Vulnerability Preparedness grants or Hazard Mitigation Plans, which may also result in a list of priority parcels for protection. Therefore, the NRWA will prioritize parcels that have been identified in OSRPs or other municipal planning processes to ensure that the Greenway prioritization captures the stated needs of communities within the watershed.



An example prioritization map from Greenbelt, Essex County's Land Trust, displaying priority drinking water parcels in the Merrimack Valley.

ACTION PLAN: IMPLEMENTATION

The NRWA does not acquire or hold interest in land as an organization, so NRWA staff will facilitate partnerships between landowners and conservation partners and assist with the coordination and funding of fee simple acquisitions or conservation restrictions. Key partners for the project who will ultimately hold and steward newly acquired Greenway parcels include community and regional land trusts, town conservation commissions, state agencies, and others as appropriate.

Because partnerships will therefore be fundamental to the success of the Greenway, the NRWA is committed to build-

ing and maintaining strong professional relationships and collaborations with conservation organizations by promoting regular workshops, charrettes, conservation breakfasts, and other events specifically centered on land protection. These events will create a space for land protection professionals to discuss current challenges, opportunities, and strategies. The Greenway Protection Plan will also be widely distributed to all partners to help share the NRWA's mission and goals for the Marion Stoddart Greenway, along with the outcome of project components such as the prioritization and spatial analysis.



Collaborative natural resource planning events and workshops frequently occur at the NRWA's River Resource Center in Groton, MA.

ACTION PLAN: GREENWAY PARTNERSHIPS

Massachusetts has 147 active land trusts and New Hampshire has 28, 16 of which currently operate within the Nashua River watershed. Land trusts are non-profit organizations that acquire and steward fee-owned land and/or conservation restrictions, and their focus areas can be as narrow as a single community or as broad as an entire region. In addition to land trusts, local, state, and federal governments also participate in land conservation, from volunteer conservation commissions to fully-staffed agencies like the New Hampshire Fish & Game Department. Lastly, national or state-wide non-profits organizations like The Nature Conservancy or Mass Audubon also work within the Nashua River watershed, where they engage in activities ranging from land protection to education to wildlife conservation. While all of these environmental organizations are united in an overarching mission to protect and steward open spaces and natural resources, they are each guided by unique missions and priorities.

To effectively pursue land acquisition opportunities under the Marion Stoddart Greenway Project, the NRWA will strive to ensure that deals are mutually beneficial, and that available parcels are carefully matched to conservation organizations with missions that

align with the landowner's desires for the future condition and use of the property. For example, an avid angler and hunter may wish to

permanently conserve their land but also hopes to maintain public hunting and fishing rights on the property. To honor this request, the NRWA would match the landowner with a partner that supports hunting and fishing on conserved lands to ensure these uses are supported in perpetuity.

The following organizations may ultimately hold interest in permanently conserved Marion Stoddart Greenway Project properties. The profiles below describe each organization's mission, goals, interests in land acquisition, stewardship capacity, and unique characteristics.



Photo by Sherry Anders

ACTION PLAN: GOVERNMENTAL AGENCIES



U.S Fish and Wildlife Service

The U.S. Fish and Wildlife Service is a national agency within the United States Department of the Interior that is dedicated to the management of fish, wildlife, and natural habitats. The mission of the Service is “working with others to conserve, protect, and enhance fish, wildlife, plants and their habitats for the continuing benefit of the American people.” The Oxbow National Wildlife Refuge is the sole permanently protected Greenway properties owned by U.S. Fish and Wildlife Service, and it is one of eight refuges that comprise the Eastern Massachusetts National Wildlife Refuge Complex.



Massachusetts Department of Conservation and Recreation

The Massachusetts Department of Conservation and Recreation (DCR) manages state parks and currently oversees more than 450,000 acres, making it the largest landowner in the state. The Department’s mission is to “protect, promote and enhance our common wealth of natural, cultural and recreational resources for the well-being of all.” Mass DCR currently oversees a mixture of reserves, or unmanaged land, and actively managed land. Permanently protected Greenway properties owned by Mass DCR include:

- › Ashburnham State Forest
- › J. Harry Rich State Forest (Pepperell, MA)
- › Johnny Appleseed State Park (Leominster, MA)
- › Lancaster State Forest
- › Leominster State Forest
- › Nashua River Rail Trail (Ayer, Dunstable, Groton, Pepperell MA)
- › Pearl Hill State Park (Townsend, MA)
- › Squannacook Brook State Forest (Townsend, MA)
- › Townsend State Forest
- › Wachusett Mountain State Reservation (Princeton, MA)
- › Westminster State Forest
- › Whalom Lake Access (Leominster, MA)
- › Willard Brook State Forest (Ashby & Townsend, MA)



Massachusetts Division of Fisheries and Wildlife

The Massachusetts Division of Fisheries and Wildlife, known as MassWildlife, is responsible for the conservation of freshwater fish and wildlife across the state of Massachusetts, including endangered plants and animals. The agency's mission is to "restore, protect, and manage land for wildlife to thrive and for people to enjoy." MassWildlife owns or manages several different types of properties in the watershed, which provide a variety of functions and benefits as described below:

- **Wildlife Management Areas (WMAs)** – WMAs provide space for wildlife-related recreation, including hunting, fishing, trapping, nature observation, boating, and hiking. Most WMAs include unmarked trails or woods roads and have simple, unpaved parking lots.
- **Wildlife Conservation Easements (WCEs)** – WCEs are properties where the agency has acquired conservation rights and public recreational access rights in the form of a conservation restriction. In this situation, a private landowner agrees to manage the property in specific ways to avoid significant impairment of the conservation values as detailed in a recorded legal document. Forestry and agriculture, conducted in accordance with a management plan, are often allowed uses. WCE landowners have agreed to allow public access on all or most of their property, and the land is typically open for all wildlife-related forms of recreation including hunting, fishing and trapping.
- **Access Areas** – These properties are primarily managed to offer recreational access to a waterbody or to a publicly accessible conservation property owned by a third party.
- **Wildlife Sanctuaries** – These properties are usually donated to MassWildlife under the condition that they be protected under Massachusetts General Law Chapter 131, Sections 7-10 and 321 CMR 7.00. Public access is permitted, but fishing, hunting and trapping are prohibited.
- **Wildlife Conservation Restrictions (WCRs)** – WCRs are properties where MassWildlife has acquired conservation rights to protect a property, but unlike a WCE, there are no public access rights. State ownership of WCRs is often the result of donations of easements on property adjacent to a WMA or WCE. WCRs help prevent unwanted development and protect wildlife habitat.
- **Installations** – This category includes facilities such as MassWildlife offices and fish hatcheries. Availability for recreational access is site specific.

Permanently protected Greenway properties owned by MassWildlife include:

- | | |
|---------------------------------------|---|
| › Ashburnham WMA (Ashburnham, MA) | › Nissitissit River WMA (Pepperell, MA) |
| › Ayer Game Farm (Ayer, MA) | › Poutwater Pond WMA (Holden, MA) |
| › Bare Hill Pond Access (Harvard, MA) | › Quinapoxet River Access (Holden, MA) |
| › Bolton Flats WMA (Bolton, MA) | › Savage Hill WMA (Princeton, MA) |
| › Clinton Bluff WMA (Clinton, MA) | › Scripture Hill WMA (Ashby & Fitchburg, MA) |
| › High Ridge WMA (Westminster, MA) | › South Meadow Pond Access (Clinton, MA) |
| › Hunting Hills WMA (Townsend, MA) | › Squannacook River WMA (Groton & Townsend, MA) |
| › Mossy Pond Access (Clinton, MA) | › Susan B. Minns Sanctuary (Princeton, MA) |
| › Mulpus Brook WMA (Shirley, MA) | › Townsend Hill WMA (Townsend, MA) |
| › Nashua River Access (Dunstable, MA) | › Trapfall Brook WMA (Ashby, MA) |
| › Nashua River Access (Groton, MA) | › Unkety Brook WMA (Pepperell, MA) |
| › Nashua River Access (Pepperell, MA) | |
| › Nashua River Access (Shirley, MA) | |

ACTION PLAN: GOVERNMENTAL AGENCIES



New Hampshire Fish and Game Department

The New Hampshire Fish and Game Department is responsible for the state's fish, wildlife, and marine resources. In partnership with the public, the agency works to conserve, manage and protect natural resources and habitats, inform and educate the public about these resources, and provide the public with opportunities to use and appreciate these resources. Permanently protected Greenway properties owned by the NH Fish and Game Department include a permanently protected parcel abutting Lake Potanipo, the headwaters of the Nissitissit River.

Municipalities and Conservation Commissions

According to Massachusetts General Law Chapter 40 Section 8C, municipal conservation commissions may receive land donations or acquire land through purchases, leases, tax takings, or conservation restrictions. This land is held in trust by the conservation commission on behalf of the inhabitants of said town or city. Only under unusual circumstances will a conservation commission own land in other communities. Select Boards or other municipal boards and departments may also hold land for conservation purposes. The following municipalities hold land in trust for conservation purposes within the Greenway, representing over 440 parcels:

- › Town of Ashburnham
- › Town of Ashby
- › Town of Ayer
- › Town of Bolton
- › Town of Boylston
- › Town of Brookline
- › Town of Clinton
- › Town of Dunstable
- › Town of Groton
- › Town of Harvard
- › Town of Holden
- › Town of Hollis
- › Town of Lancaster
- › Town of Lunenburg
- › Town of Mason
- › Town of Paxton
- › Town of Pepperell
- › Town of Princeton
- › Town of Rutland
- › Town of Shirley
- › Town of Sterling
- › Town of Townsend
- › Town of West Boylston
- › Town of Westminster

ACTION PLAN: NON-GOVERNMENTAL AGENCIES



The Nature Conservancy (TNC)

The Nature Conservancy is a global nonprofit organization with three offices in Massachusetts. Their mission is to “conserve the lands and waters on which all life depends.” TNC does not currently own any Greenway property within the Nashua River watershed.



The New England Forestry Foundation (NEFF)

NEFF is a nonprofit organization that works throughout New England to conserve and manage forestland. Their mission is to “help the people of New England to sustain their way of life, protect forest wildlife habitat and ecosystem services, and mitigate and adapt to climate change.” As an organization, NEFF supports working lands and sustainable forestry, using their land for demonstration and educational forests. Permanently protected Greenway properties owned by NEFF include:

- › Confarm Forest (Lancaster, MA)
- › Groton Place (Groton, MA)
- › Parker Family Woods (Lancaster, MA)
- › Sabine Woods (Groton, MA)
- › Thayer Forest (Lancaster, MA)
- › Wharton Plantation (Groton, MA)



The Trustees of Reservations (the Trustees)

The Trustees is one of the first land trusts to be established in the United States. The organization works across the state of Massachusetts, with a mission to “To preserve, for public use and enjoyment, properties of exceptional scenic, historic, and ecological value in Massachusetts.” The Trustees do not currently own any property along the Greenway, but do own 207 acres of protected land within the Nashua River watershed.



Massachusetts Audubon Society (Mass Audubon)

Mass Audubon is the largest nonprofit conservation organization in Massachusetts, with a state-wide program that focuses on protecting and restoring resilient landscapes, providing inclusive and equitable access to nature, addressing climate change, and protecting birds and wildlife. Hunting and camping are not allowed on Mass Audubon land. Permanently protected Greenway properties owned by Mass Audubon include:

- › Cheshire Pond Wildlife Sanctuary (Ashburnham, MA)
- › Eagle Lake Wildlife Sanctuary (Holden, MA)
- › Fieldstone Farm (Princeton, MA)
- › Flat Rock Wildlife Sanctuary (Fitchburg, MA)
- › Lake Wampanoag Wildlife Sanctuary (Ashburnham & Gardner, MA)
- › Laurel Woods Wildlife Sanctuary (Holden, MA)
- › Lincoln Woods (Leominster, MA)
- › Wachusett Meadow Wildlife Sanctuary (Princeton, MA)

ACTION PLAN: NON-GOVERNMENTAL AGENCIES



North County Land Trust (NCLT)

NCLT is a nonprofit organization involved in land protection on a regional scale; within our watershed, NCLT works within Ashburnham, Ashby, Ayer, Fitchburg, Gardner, Lancaster, Leominster, Lunenburg, Princeton, Shirley, Townsend, and Westminster. Their mission is to “conserve the forests, landscapes and farms that define the character of our region.” Hunting is allowed at specific properties with a permit from the trust. Permanently protected Greenway properties owned by NCLT include:

- › Crocker Conservation Area (Fitchburg, MA)
- › Sibley Conservation Area (Westminster, MA)
- › Tophet Swamp Conservation Area (Westminster, MA)
- › Legere Conservation Area (Fitchburg, MA)
- › Fisher Road Conservation Area (Fitchburg, MA)
- › North Common Road Conservation Area (Westminster, MA)
- › Smith Street Conservation Area (Gardner, MA)
- › Peabody Conservation Area (Lunenburg, MA)
- › Kirby Conservation Area (Ashburnham, MA)



Mount Grace Land Conservation Trust

Mount Grace Land Conservation Trust is a regional nonprofit organization with a service area that covers central and western Massachusetts. Within the Nashua River watershed, Mount Grace is active in Ashburnham, Gardner, and Westminster. Their mission is to “benefit the environment, the economy, and future generations by protecting significant agricultural, natural, and scenic lands and encouraging land stewardship in northern and central Massachusetts.” Most of the protected lands are open to the public for hunting and fishing. Mount Grace Land Conservation Trust does not currently own any Greenway property within the Nashua River watershed.



Piscataquog Land Conservancy (PLC)

PLC is a regional nonprofit organization dedicated to conserving the land, water and wildlife in southern New Hampshire. Within the Nashua River watershed, PLC is active in Brookline, Greenville, Hollis, Mason, Milford, Nashua, and New Ipswich. Permanently protected Greenway properties owned by PLC include:

- › Nissitissit Natural Resources Conservation Easement (Brookline, NH)
- › Nissitissit River Lot (Hollis, NH)

ACTION PLAN: NON-GOVERNMENTAL AGENCIES



Local Land Trusts

The following local land trusts work within the watershed and focus their land protection efforts on a singular town or natural feature. This gives these entities the advantage of a deep familiarity with their communities, the history of the land, and the landscape context. Local land trusts that own permanently protected Greenway properties, or are active within the watershed, include:

- › Ashburnham Conservation Trust
- › Ashby Land Trust
- › Beaver Brook Association (Brookline, Hollis, and Milford, NH)
- › Bolton Conservation Trust
- › Clinton Greenway Conservation Trust
- › Dunstable Rural Land Trust
- › Groton Conservation Trust
- › Harvard Conservation Trust
- › Lancaster Land Trust
- › Nashoba Conservation Trust (Pepperell, MA)
- › Nissitissit Land Trust (Brookline, NH and Pepperell, MA)
- › Paxton Land Trust
- › Princeton Land Trust
- › Rutland Land Trust
- › Sterling Land Trust



Photo by Sherry Anders

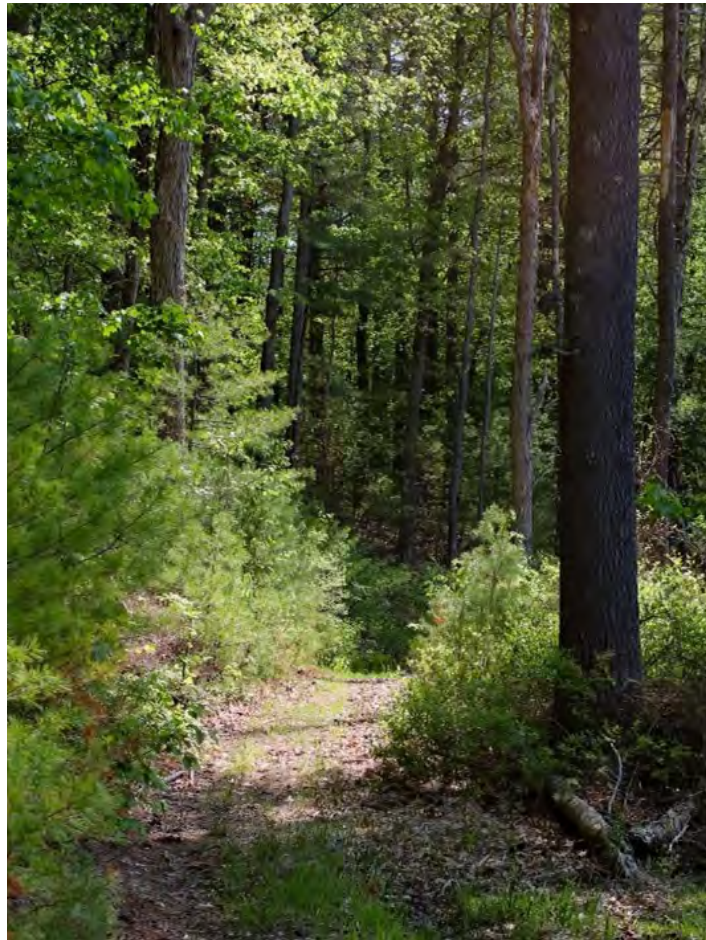
ACTION PLAN: LAND PROTECTION OPTIONS FOR GREENWAY GROWTH

The process of land protection can be as unique as each landowner and property involved. Conservation organizations understand that there is no “one size fits all” option for each landowner’s particular set of circumstances, so the NRWA and its partners will be glad to work with interested individuals to find a land protection option that best suits their wishes and specific needs. The following options summarize two general categories of land protection that result in the permanent land conservation, but within each of these categories are several customizable possibilities available to landowners interested in contributing property to the Marion Stoddart Greenway. Of note, the Marion Stoddart Greenway is committed to pursuing land protection options designed to last in perpetuity, so temporary land protection measures will not be considered or funded under this project.

Fee Simple Acquisitions

This traditional conveyance of land involves transferring the complete ownership of land without conditions, limitations, or restrictions. For landowners interested in donating their land, or selling it to a conservation organization at a bargain, market, or appraised value, the process will, in many ways, mirror a traditional real estate transaction. Fee simple acquisitions are considered the strongest level of land protection, and are a good option for landowners who wish to protect their property for conservation purposes but need to generate some income from the process. The sale may consist of the entire property, smaller portions of the parcel, or with retained rights or easements for the owner, their successors, and/or their heirs. Due to the limited resources of many conservation organizations, external grants or funding may be necessary to close the deal, which can take additional time, coordination, and effort. Landowners may need to exercise patience and understand that the sale price may be restricted to appraised, rather than perceived, value. The NRWA understands the complexities of navigating any real estate deal, and will be available to assist landowners and conservation organizations in completing the fee simple acquisition process to the mutual satisfaction of all parties.

Donating land to a public or private conservation organization is considered the most straightforward method of permanently protecting land. Land may be donated during the owner’s lifetime or donated upon their death as directed in a will. As with a fee simple transfer of land, a donation



Valley Farm Conservation Area in Shirley, MA is a private property protected by a conservation restriction. Photo by Sherry Anders

ACTION PLAN: LAND PROTECTION OPTIONS FOR GREENWAY GROWTH

may consist of the entire property, smaller portions of the parcel, or with retained rights or easements for the owner, their successors, and/or their heirs. Land donation can be a good option for landowners who have a strong commitment to permanently protecting their land for the common good or to preserve its ecological values, as well as for those individuals whose property value would result in high capital gains taxes or who are seeking a reduction in their estate tax burden. If a donor wishes to impose restrictions on the use of the donated land without losing any charitable deduction, they have the option to donate a conservation restriction on the property to a conservation organization, and then deed the property in fee to a second organization.

For landowners interested in donating or selling their land to the Marion Stoddart Greenway, the NRWA would be glad to guide them through the many customizable options available, and help connect them to a conservation organization with shared values and an interest in holding the land in perpetuity.

Conservation Restrictions

Permanent conservation restrictions are an ideal option for landowners who are interested in protecting their proper-

ty from development while still retaining full ownership. This ownership can still be sold or conveyed by deed or will through a gift or sale, but the property will always be subject to the terms of the original restriction. Conservation restrictions are sometimes called “conservation easements,” and they can include various types of restrictions including Agricultural Preservation Restrictions (APRs) and Historic Preservation Restrictions. Although Marion’s vision for the Greenway included unrestricted public access, the NRWA understands that every landowner’s situation is unique, and the ultimate priority is riverfront protection in perpetuity. Conservation restrictions can be written to specifically reflect the wishes of the owner, and public access or use does not necessarily need to be permitted in order to contribute to the Marion Stoddart Greenway. Some conservation restrictions can be written to be limited to a specific term, or number of years, but most conservation organizations will not accept non-permanent conservation restrictions, and term-limited restrictions do not qualify as a tax-deductible gift.

The NRWA is glad to work with interested landowners to help write conservation restriction documentation, match landowners with conservation organizations, and navigate the legal intricacies of this land protection option.



Photo by Sherry Anders

ACTION PLAN: STEWARDSHIP CONSIDERATIONS

While there are many benefits to collaborating with a variety of land protection partners to conserve land, there are some important considerations that should be factored into any regional, multi-organizational conservation effort. In general, the landscape across Massachusetts and New Hampshire is characterized by a patchwork of ownerships for both protected and unprotected parcels. This has resulted in a mosaic of conservation land comprised of small parcels managed and stewarded by several different organizations. Because each organization can have distinct goals and approaches to land management, the stewardship strategies for a given parcel may occasionally be in conflict with those of abutting parcels. For example, one common scenario is for a landowner to allow bicycle use on a property's trails, but an adjacent property owner with adjoining trails may prohibit this specific type of recreation.

For the Marion Stoddart Greenway project, the NRWA is cognizant both of our partner's individual management strategies and the importance of discussing cohesive stewardship of the Greenway. Ultimately, the primary impetus of the Greenway is to protect water quality, wildlife habitat, and the recreational amenities supported by healthy riparian buffers. Therefore, in order to qualify for land protection under the Marion Stoddart Greenway, any future uses of protected land must not be in direct conflict with these core values.

To address this highly nuanced and site-specific subject of cohesive stewardship, the NRWA will help conservation organizations and landowners analyze each potential parcel's land use history, unique characteristics, rare species, and wetland resources, and more, in addition to the specific intent and motivation of the owner. Some landowners may wish for their land to remain actively farmed or as a working forest, while others may wish for their property to be conserved as unmanaged wildlands in perpetuity. These considerations will be integral to shaping future stewardship and management decisions, and will be formally incorporated into deeds and conservation restriction documentation wherever necessary or appropriate.

CLOSING THE DEAL

Through the generosity of the donors that contributed to the Marion Stoddart Greenway fund, the NRWA is able to



Photo by Nancy Karuzis

provide some funds for acquisition-related costs – including surveys, appraisals, and legal fees – to help facilitate a land deal. Furthermore, the NRWA will leverage the donation of pro-bono and low-bono professional services to minimize these costs. These funds may be pivotal to, but will not necessarily guarantee, the permanent protection of a greenway parcel. In addition to closing and other associated acquisition costs, NRWA may contribute funds towards stewardship or monitoring of conservation restrictions that contribute to the Marion Stoddart Greenway, or a modest contribution toward other costs as necessary.

The NRWA will play a pivotal facilitating role in seeking additional funding or applying for grants to ensure successful Greenway deals whenever possible. Funding may come from a variety of sources, and may be tailored specifically to address the type of acquisition in question, or the natural resource values being protected by a given deal.

ACTION PLAN: STEWARDSHIP CONSIDERATIONS

Public Outreach

The NRWA is passionate about keeping community members informed and engaged on land protection initiatives that impact the natural resources surrounding them. All updated maps and statistics on Greenway properties in Massachusetts and New Hampshire will be published and distributed to members, the general public, and conservation partners. Each organization has differing regulations regarding proprietary acquisition or conservation restriction information, but the NRWA will strive for transparency and public education whenever possible throughout the

Marion Stoddart Greenway protection process. Marion herself founded the NRWA on the principle that each individual has the power to make a difference, so NRWA staff channels this ethos through all aspects of its work. By sharing the progress of the Greenway and celebrating the value of each newly conserved parcel along the river, the NRWA hopes to engage the watershed community in the critical act of protecting Greenway land for the benefit and enjoyment of future generations. Outreach will include free educational seminars, land protection informational sessions, site walks, and newsletter updates.



Photo by Sherry Anders

FINAL WORDS

As conservation organizations endeavor to keep pace with rapid development, land use conversion, and the impacts of climate change in New England, the Marion Stoddart Greenway project will be instrumental in guiding and accelerating the NRWA's land protection efforts. The NRWA is proud to operate in a region that has been shaped by the grassroots protection of land along its waterways, with individuals like Marion Stoddart accomplishing "the work of a thousand" through dedication, tenacity, and collaboration. Together with dedicated conservation partners and landowners across the Nashua River watershed, the NRWA is passionate about bringing Marion's vision of a protected, contiguous ribbon of green to fruition for the benefit of humans and wildlife alike.



Photo by Sherry Anders