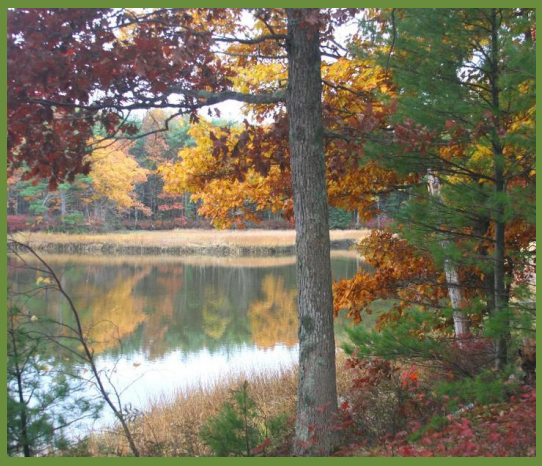
PRESERVING NATURAL DOVER

A Framework for Conservation and Open Space in Dover








City of Dover Master Plan

Adopted January 14, 2025

ACKNOWLEDGMENTS

Thank you to all the people who have contributed to the creation of this Master Plan chapter, especially the Conservation and Open Space Steering Committee. Their contribution and commitment to the future of open space protection and conservation in Dover is applaudable. Special thanks are also given to City staff and the consulting team for providing critical support and guidance through the completion of the chapter, as well as the public who further informed the chapter's direction.

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1. INTRODUCTION

Dover's diverse natural resources and conservation lands contribute to the quality of life, health, ecology, and identity of our city. Protecting the forests, fields, rivers, wetlands, and wildlife are an integral part of Dover's efforts to become a more resilient place to live.

PURPOSE

The Conservation and Open Space Chapter of Dover's Master Plan is meant to guide future land conservation activity over the next 10 years. This chapter will also inform natural resource protection efforts, and steer improvements to existing open space such as enhancing public access, stewardship, and amenities. It reflects the City's evolving land protection and resilience priorities, and incorporates best practices in open space and natural resource management.

Dover's protected natural lands are some of the most beloved places in the City - the Community Trail, the Cochecho River, Great Bay, Willand Pond, the Bellamy River Wildlife Sanctuary, and various public parks. These are places community members visit, recreate at, and enjoy as part of their day-to-day life. Aside from protected land, there are still tracts of undeveloped land in the city that are not protected with important natural resources present. Dover's natural lands ensure clean water and air, serve as habitat for wildlife, and increase Dover's resilience to natural hazard events. Conserving the most important unprotected land will protect sensitive natural resources from development and other potential impacts. This chapter prioritizes the most significant areas of the city identified for conserving, (informed by an analysis of open space resources and public outreach), and outlines other open space protection and enhancement efforts beyond land conservation to pursue over the next 10+ years.

DEFINITIONS

Conservation land has a clear definition and is strictly guided according to federal and state law, while open space is often a generic term with ambiguous meaning. Although further nuance exists with both terms, the definitions on the following page can be used to help in understanding the broad similarities and differences between them.

"We are a City with an emerging urban vibrancy, guided by intentional growth to create connected neighborhoods, attractive streetscapes, and accessible open space, while maintaining what makes Dover distinct."

A core pillar of the Distinctly Dover Vision

OPEN SPACE broadly refers to undeveloped public and private land offering scenic, natural, recreational, agricultural, or historical benefits. However, open space lands can be developed at any time, which would likely harm or reduce the benefits provided as open space.

OWNERSHIP - Open space lands can be publicly or privately owned.

LEVEL OF PROTECTION - Open space lands have no legal agreement prohibiting future development.

CONSERVATION LAND is property that has a legal agreement prohibiting future development by protecting its conservation values including water quality, wildlife habitat, recreational offerings, scenic views, agricultural resources, and more.

OWNERSHIP - Conservation lands can be publicly or privately owned.

LEVEL OF PROTECTION - Conservation lands are legally and permanently protected forever.

PLANNING PROCESS

Dover developed the Conservation and Open Space Chapter with a consultant, Resilience Planning and Design, in a collaborative effort led by City staff and guided by a steering committee. The main phases of this project included:

ANALYZING EXISTING CONDITIONS

A separate Existing Conditions Summary (Appendix A) was created to summarize what was learned about Dover's existing open space network including primary land holders, types of open space, accomplishments in conservation, and the level of public access of existing open spaces. Many documents were reviewed and researched to compile this summary, which then served as a basis for the creation of this chapter. The Natural Resource Inventory, compiled by the Strafford Regional Planning Commission, informed this chapter greatly, inventorying all natural resources throughout the city. This chapter is focused on the actions associated with land protection and improvements to Dover's open space.

STEERING COMMITTEE GUIDANCE

The Steering Committee provided input throughout the planning process, including determining the future land protection priorities.

DEVELOPING A CO-OCCURRENCE ANALYSIS

The areas determined as priorities for conservation were mapped. By overlapping these layers, the City identified areas with greater numbers of co-benefits that connect to the identified priorities the City laid out - **groundwater protection, hazard mitigation, and wildlife habitat.** If multiple priority resources are found in an area, the greater conservation value that area has. This process of mapping the distribution of different resources

"The bottom line is that conserved land is open space, but open space is not necessarily conserved because it lacks formal protection. There is a chance open space lands get developed and, if so, they are gone forever. The added formal protection of conserved land is critical if we want to keep special open spaces around for the future."

- Conservation and Open Space Master Plan Chapter Committee Member

and looking at where they overlap is called a co-occurrence analysis. This type of strategic resource prioritizing is helpful for cities looking to make intentional and targeted conservation efforts.

REACHING OUT TO THE COMMUNITY

Dover needs public input to ensure that future planning for land conservation and open space protection aligns with community priorities. The city coordinated several outreach activities to ensure residents and community members were able to give input on future conservation efforts including

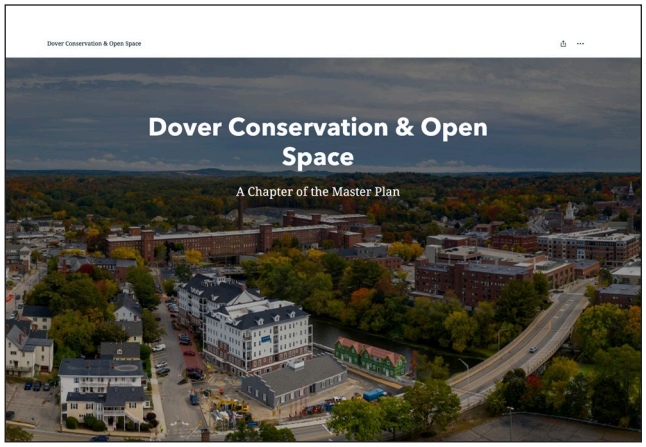
- **In-Person Outreach Event**
  This event was coordinated in conjunction with Strafford Regional Planning Commission and the Natural Resource Inventory project that was also underway to collect feedback on important open spaces and natural resources to focus protection efforts on.

- **Online StoryMap Survey**
  A StoryMap survey was developed to tell the story of Dover's conservation legacy and get feedback on preliminary conservation focus areas through a short embedded survey.

- **Polco Survey**
  A brief survey hosted on Polco was developed to learn what Dover community members loved about our city's open space.

- **First Five Minutes Announcement**
  A project announcement was read at all municipal board/committee meetings at the start of the project.

- **Physical Display in City Hall**
  A map and poster advertising the project were on display in City Hall.



- **Project Webpage and Advertising Materials**
  A project webpage on the City's website provided information on the project. Images were created and shared on social media and printed to advertise all the ways for the public to get involved.

CREATING AN ACTION PLAN

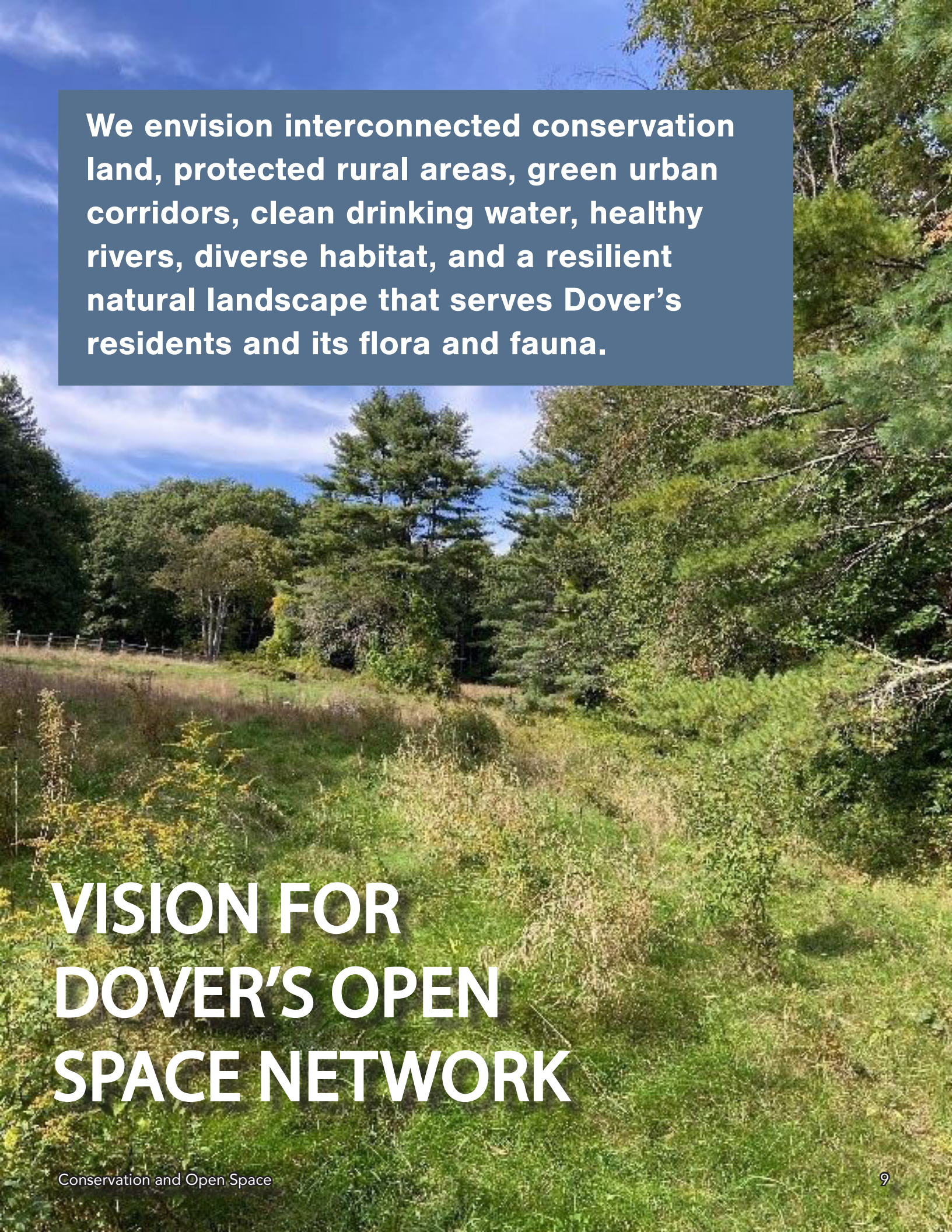
Guided by City staff and the Steering Committee, an action plan was created to guide future efforts, policy changes, conservation initiatives, and more. This will ensure the chapter does not "sit on a shelf" and that a clear plan for implementing the framework is articulated. These actions, along with the public feedback and the research conducted, informed the creation of this chapter.

The Implementation section outlines these actions in a matrix with categories for responsible parties, level or priority, and others. This will help the city track actions in a coordinated way. The primary implementation teams of this chapter will be city staff, the Open Lands Committee, the Conservation Commission, and the Planning Board in partnership with other land protection agencies and organizations, volunteer groups, and property owners.

Dover's Conservation and Open Space Protection Action Plan

To achieve a well-connected open space network in the city, actions fall under the following themes:

- Conservation Priorities
- Connectivity Efforts
- Stewardship and Amenities
- Regulatory Initiatives
- Relationship Building
- Communication
- Data Analysis



We envision interconnected conservation land, protected rural areas, green urban corridors, clean drinking water, healthy rivers, diverse habitat, and a resilient natural landscape that serves Dover's residents and its flora and fauna.

VISION FOR DOVER'S OPEN SPACE NETWORK

GUIDING PRINCIPLES

Dover will aim to:

CREATE a well-connected open space network by conserving parcels adjacent to already protected lands, and protecting river corridors and green roadways to serve as connectors between larger open space areas.

PROTECT ecosystems that provide critical services including clean water, clean air, carbon sequestration, flood protection, and habitat.

ENSURE every Dover resident can access open space within a 10-minute walk from their home.

COMMUNICATE Dover's conservation priorities to the public, property owners, and land protection partners.

BUILD public access into future conservation efforts and expand public access at existing open spaces, where appropriate.

FORGE strong relationships with conservation partners.

EXPAND public knowledge of Dover's existing open spaces to the public to encourage their use, stewardship, and connection to nature.

INCREASE our resilience to existing and potential climate change impacts, including flooding, by strategically conserving land.

OPPORTUNITIES AND CHALLENGES

As Dover plans for strategic land conservation, greater stewardship, and improved public access of its important open spaces, there needs to be a thorough understanding of the opportunities and challenges the city faces to reach this goal.

INCREASING PUBLIC ACCESS AND KNOWLEDGE OF DOVER'S OPEN SPACES

Public access to protected lands is important. Access to nature is linked with better community health and wellbeing. Dover also needs its residents to truly care about its open space, since its so important to the character and livelihood of the city. A greater connection with these spaces is one way to promote that connection. Currently, one-third of all permanently protected land in Dover allow full public access. Increasing public access will allow more opportunities for community members to utilize the open space assets currently available in Dover. Additionally, some parcels that allow full public access need improvements related to signage, wayfinding, amenities, and public education as to appropriate use of the land.

BALANCING LAND PROTECTION AND DEVELOPMENT

The tension between protecting open space and allowing development has been a reality in New Hampshire for quite some time. Development is necessary and important to meet the housing, economic development, and human service needs of our community. However, some development can have negative consequences if not well-planned, such as harming the natural ecology of a site or impacting quality of natural resources. There are concerns from community members about Dover's quantity and quality of its groundwater as development continues in the City.

Dover also has pressing affordable housing needs that will have to be addressed now and in the future. The increase in homelessness across New Hampshire, including Dover, has been driven by rising housing costs, limited affordable housing options, and a number of other issues. These issues do not need to work against each other. Well-coordinated development backed with appropriate land use regulations and in conjunction with strategic land conservation is a balancing act, but can ensure that all goals are met in a way that preserves the rural character of the city and its environmental resources.

One of Dover's regulatory strategies used to protect valuable open space, such as wetlands, groundwater recharge zones, forested areas, and farmland, is called Transfer of Development Rights (TDR). The purpose of the TDR Ordinance is to promote more intensive development in areas served by public infrastructure that do not possess significant conservation features, and to permanently protect lands possessing significant conservation features. In its current form, the provisions of the TDR Ordinance are broadly applicable throughout the City, including in areas identified as Rural Residential. Due in part to growing awareness of the ordinance, the

City has seen an increase in development proposals within these rural areas, resulting in growing resident concern about the effects of intensification in areas beyond the walkable limits of the downtown area. Periodic review and analysis of the TDR Ordinance in relation to addressing both open space protection and development needs will be necessary to ensure its continued effectiveness over time. There is also an opportunity to strategically designate more yield (potential units/density) in some areas and less yield (potential units/density) in others through the use of a TDR.

"Resilient lands not only benefit plants and animals—they ensure clean air and water, protect communities from extreme storms and flooding, and provide open green spaces for nearby communities."

- Markelle Smith, The Nature Conservancy

CLIMATE CHANGE

As an inland coastal community, Dover is particularly susceptible to flooding in low-lying areas along the Bellamy River, Piscataqua River, at the confluence of the Cochecho River and the Salmon Falls River, and along the shores of Little Bay. Natural hazards, especially flooding, are only increasing as the impacts of climate change continue to shape our weather patterns in the northeast. Climate change is also presenting new challenges such as salt water intrusion impacting underground sources of drinking water, loss of important natural resources, and species migration. More frequent, higher volume precipitation events are occurring annually. Dover's natural lands, especially its flood protection areas, shorelines, riparian zones, and wetlands, and are critically important for their flood storage services.

DOVER'S CONSERVATION LEGACY

The history of local environmental protection, land conservation, and stewardship is well documented in Dover. In 1973, the first Open Space and Recreation Plan was developed to preserve the rural character of Dover and subsequent policies were put in place to guide development from that point. Today's network of open spaces and recreational offerings is a testament to the level of forward-thinking, dedication by the city's residents and staff for more than 50 years. This rich network of public open spaces, conservation lands, sensitive habitats, and recreational offerings sit just below the surface of people's general understanding of Dover and they are waiting to be sought out and expanded.

One of the most consequential items in Dover's 50+ years of conservation efforts was the 2000 Open Space & Recreation Chapter of the Master Plan. Among the many recommendations, some of the most significant included:

- Establish a standing Open Space Committee,
- Develop clear criteria for open space acquisition and protection,
- Prepare a detailed open space acquisition plan,
- Create a mechanism for the funding of and acquisition of property, and
- Complete an accurate inventory of currently protected open space parcels.

Between 2000 and 2012, more than 1,000 acres of conserved land was added to Dover's protected landscapes through conservation easements alone. The amount of permanently conserved land in Dover has increased 22% between 2012 and 2024. Nearly all the 672 acres added since 2012 expand on already existing conserved land and much of it is overseen by the City of Dover. Also, nearly all the land conserved since 2012 is within a quarter mile of the main stem and tributaries of the Cochecho and Bellamy Rivers, which displays the focus on those natural resources. Appendix D is the discusses the 1999 Conservation Fund, which played a major role in funding city conservation efforts over the last few decades.

WHAT DID THE COMMUNITY SAY?

Dover residents and community members weighed in and shared their thoughts on the future of open space protection in the city. Highlights of what we heard from the StoryMap survey and the Polco survey are outlined below. Appendix B and C include the raw results collected.

FUTURE PROTECTION

Survey respondents ranked their highest priorities for future open space protection. The highest priority was important wildlife habitat; the second highest priority was groundwater quality and quantity; and the third highest priority was hazard mitigation land (or land that contributes hazard mitigation functions, like flood storage).

FAVORITE EXISTING OPEN SPACES

Survey respondents identified favorite open spaces in the city. These included the Community Trail, Bellamy River Wildlife Management Area, trails along the Cochecho River, Willand Pond, Barbados Pond, Bellamy Wildlife Preserve, and the Garrison Tower area.

EXISTING OPEN SPACE IMPROVEMENTS

Survey respondents identified Bellamy Park, Bellamy River Wildlife Management Area, the athletic fields, the Community Trail, and the Berry Brook Watershed as needing improvements.

Survey respondents indicated specific improvements are needed to enhance Dover's existing conservation lands. These include: better parking, forest management, more communication about the city's conserved lands to the public, better trail maintenance, invasive species management, better wildlife assessments, and more river access for kayaks and canoes.

ACCESSIBILITY IMPROVEMENTS

Survey respondents also identified areas in the city that need increased public accessibility. These included the northwest areas of the city, County Farm, Berry Brook Watershed, and the Community Trail. Noted accessibility improvements include better winter maintenance of trails, paths and trails of higher condition, more paved paths for mobility devices, and better parking and signage.

2. FUTURE PRIORITIES

Dover's conservation landscape is changing. The dramatic expansion of protected open spaces in the late-1980's and early-1990's, and again in the mid-2000's, combined with busy periods of development activity, have forever altered the remaining land available for future conservation efforts.

At this point, Dover needs to begin taking steps to adapt to this new landscape and to protect the remaining connections between resources and open spaces that are still available. Instead of exclusively looking for large swaths of intact habitat, the City needs to be forward-thinking, creative, and deliberate in identifying the projects to focus on. To develop a targeted and strategic land conservation strategy, the City completed a co-occurrence mapping analysis to identify priority resource areas and focus future conservation efforts. This type of strategic resource prioritizing can be a helpful exercise for cities looking to make intentional and targeted conservation efforts.

The Dover Open Lands Committee, composed of local volunteers and City staff, is dedicated to protecting open space in the City of Dover and, where appropriate, making it accessible to the community. The Committee partners with willing landowners to conserve ecologically and culturally significant resources for current and future generations to enjoy. The Committee conducts regular monitoring to ensure compliance with conservation easements and address any issues. They work to balance accessibility with environmental protection by developing appropriate public access, such as trails or educational signage. The Committee also secures and recommends funding for conservation projects and infrastructure improvements and fosters community engagement by hosting events and training and coordinating volunteers.

A co-occurrence analysis maps and layers high priority natural resources to identify areas that have the greatest concentration of ecological value.

Three conservation priorities were identified based on public input, City staff, Dover's 2024 Natural Resource Inventory, and the existing priority checklist the Open Space Lands Committee uses when evaluating and ranking potential properties to protect. The determined areas of greatest conservation importance to help direct efforts over the next 8-10 years are:

GROUNDWATER QUALITY AND QUANTITY

Protecting the quality and quantity of groundwater resources, including aquifers and wellhead areas

HAZARD MITIGATION LAND

Protecting people and property from natural hazards, including sea level rise and erosion

IMPORTANT WILDLIFE HABITAT

Protecting resources that sustain wildlife populations and movements, including forests and corridors

PRIORITY RESOURCES

GROUNDWATER QUALITY AND QUANTITY

It's crucial for public health to protect the quality and quantity of Dover's existing and potential drinking water sources, particularly as the population grows over time and development continues. The co-occurrence analysis examined groundwater resources by mapping stratified drift aquifers and wellhead protection areas (which are areas under which groundwater flows to a producing well).

HAZARD MITIGATION LAND

Hazard mitigation land includes lands that are important for Dover's resilience to natural hazards including flooding, sea level rise, and erosion. As a coastal city, Dover has demonstrated its commitment to resilience. Conservation of natural lands also play a significant role when increasing resilience.

The co-occurrence analysis examined hazard mitigation land by mapping predicted sea level rise extent (6 feet), the 100-year flood zone, a model of sea level rise projections affecting marshes, poorly drained soils, and steep slopes.

IMPORTANT WILDLIFE HABITAT

There is a desire to ensure wildlife has adequate habitat to exist in Dover, and for providing habitat for wildlife movement within Dover. This strategy requires areas of large, in-tact habitat for populations and green corridors that facilitate their movement. The co-occurrence analysis examined wildlife habitat by mapping New Hampshire Fish and Game's Wildlife Action Plan priorities, prioritized habitat blocks, wildlife corridors, forested land, conservation land, and conservation focus areas.

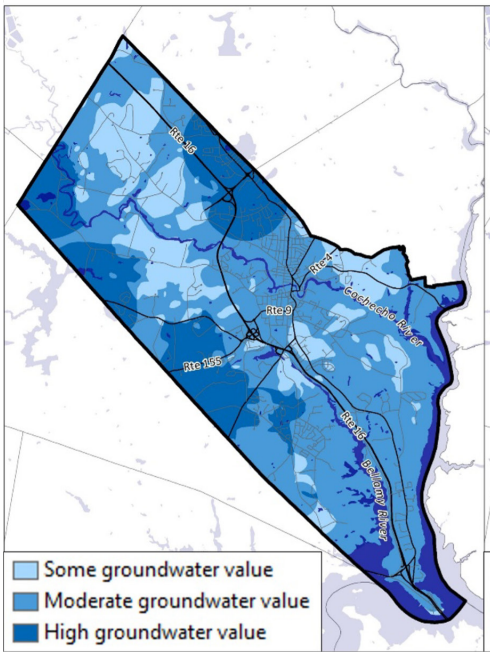
The conservation focus areas are prioritized below:

GROUNDWATER QUALITY AND QUANTITY → 1ST PRIORITY

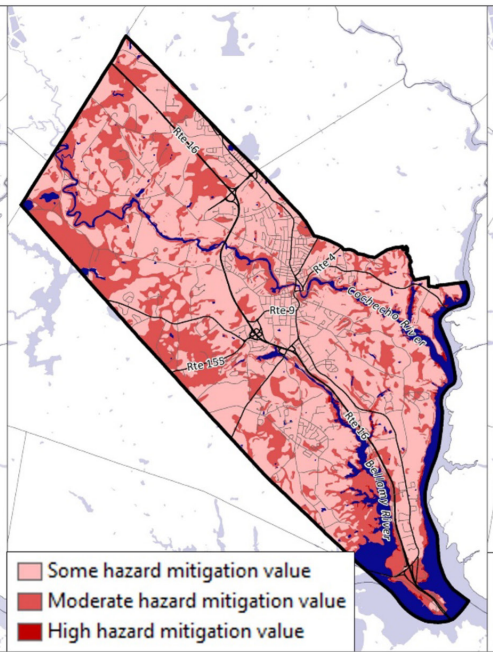
HAZARD MITIGATION LAND → 2ND PRIORITY

IMPORTANT WILDLIFE HABITAT → 3RD PRIORITY

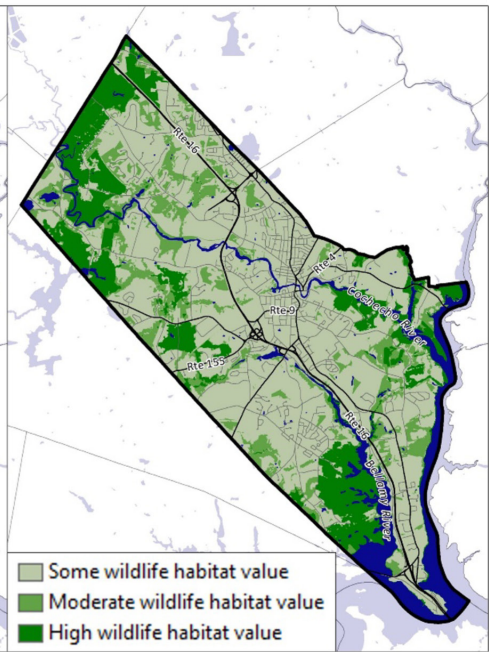
Groundwater Resources



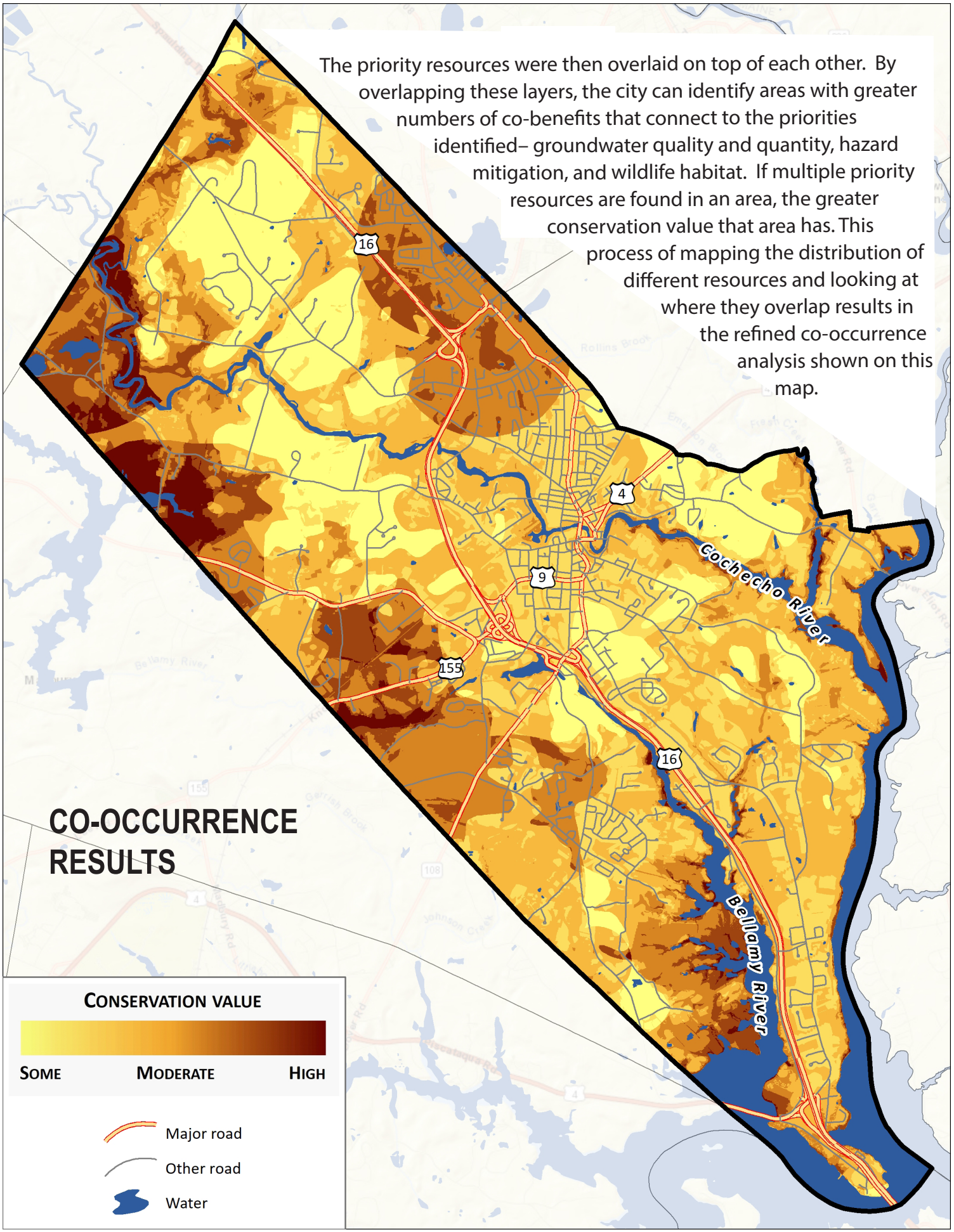
Hazard Mitigation Land



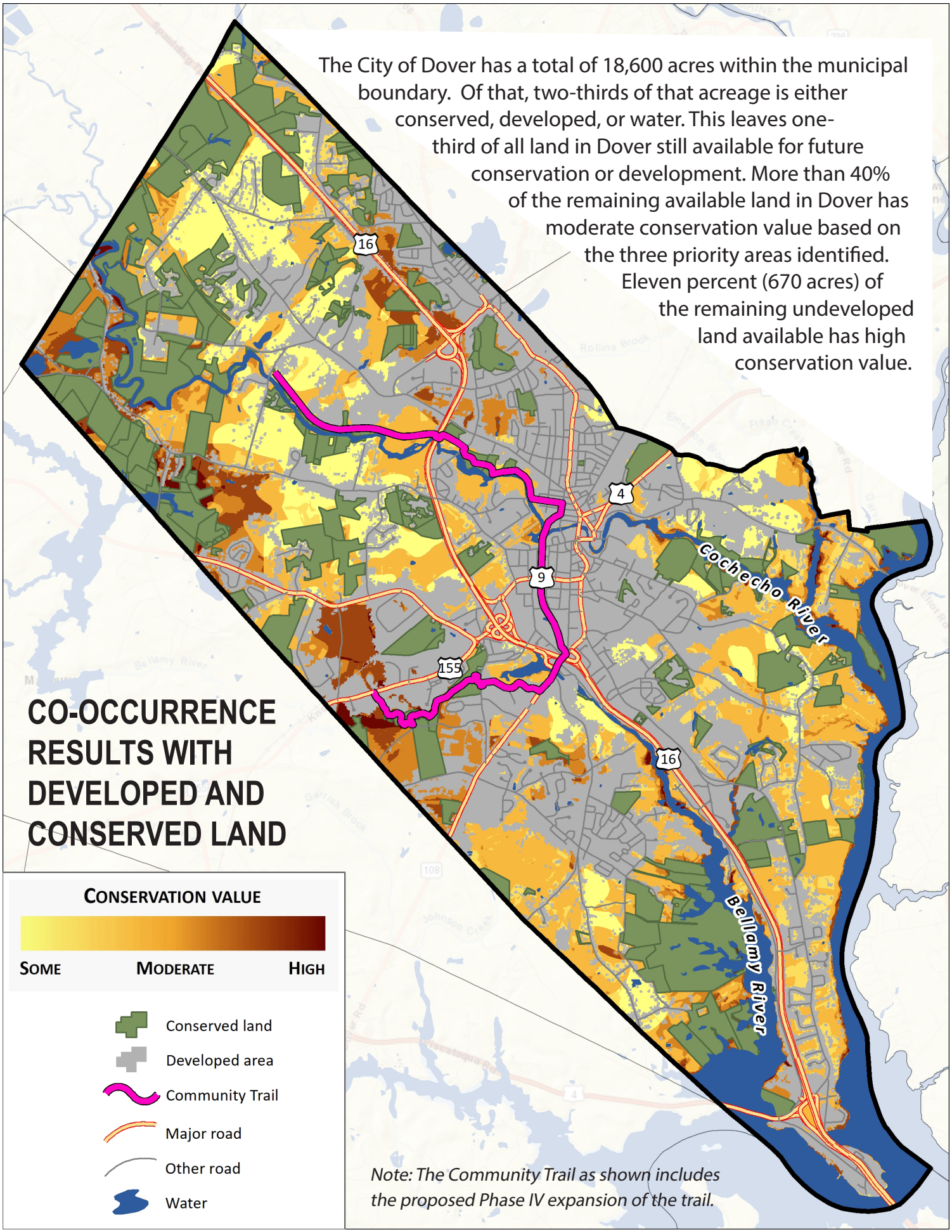
Important Wildlife Habitat



The priority resources were then overlaid on top of each other. By overlapping these layers, the city can identify areas with greater numbers of co-benefits that connect to the priorities identified– groundwater quality and quantity, hazard mitigation, and wildlife habitat. If multiple priority resources are found in an area, the greater conservation value that area has. This process of mapping the distribution of different resources and looking at where they overlap results in the refined co-occurrence analysis shown on this map.



The City of Dover has a total of 18,600 acres within the municipal boundary. Of that, two-thirds of that acreage is either conserved, developed, or water. This leaves one-third of all land in Dover still available for future conservation or development. More than 40% of the remaining available land in Dover has moderate conservation value based on the three priority areas identified. Eleven percent (670 acres) of the remaining undeveloped land available has high conservation value.



CO-OCCURRENCE RESULTS WITH DEVELOPED AND CONSERVED LAND

CONSERVATION VALUE

SOME MODERATE HIGH

- Conserved land
- Developed area
- Community Trail
- Major road
- Other road
- Water

Note: The Community Trail as shown includes the proposed Phase IV expansion of the trail.

Some key takeaways from this co-occurrence analysis are:

- There is a high amount of high conservation value land that is already protected, which is a testament to Dover's past conservation efforts.
- Most – about 70% – of the high conservation value land that remains available is northwest of Routes 155 & 4. This shows that the most significant high value conservation land exists in this part of Dover.
- Much of the high conservation value land that is southeast of Routes 155 & 4 is predominantly located within ~500 feet of the Cochecho, Bellamy, and Piscataqua Rivers.
- Two-thirds of the high conservation value land is within a quarter of a mile of the main stem and tributaries of the Cochecho and Bellamy Rivers. This shows just how significant these natural resources are for future conservation efforts in Dover.
- About 90% of the high conservation value land is also within 500 feet of existing conserved land. This provides Dover with a lot of opportunity to expand and connect existing protected areas.
- More than 40% of the remaining available land in Dover has moderate conservation value based on the three priority areas identified. Eleven percent (670 acres) of the remaining undeveloped land available has high conservation value.

USING THE CO-OCCURRENCE RESULTS FOR FUTURE CONSERVATION EFFORTS

The co-occurrence analysis is meant to serve as a tool to help guide future conservation and land investment efforts. The map and data can be used to identify areas for future conservation efforts that have the greatest potential for multiple benefits based on the three priorities set. These can be broad areas that expand or connect the existing network to achieve Dover's long-term conservation goals. From there, understanding which priority resource categories underlie the co-occurrence result will help tailor improvements and identify funding sources to make a project a reality. Determining whether the area is valuable for groundwater protection, hazard mitigation, wildlife habitat, or more than one priority conservation value, will help in this and later steps. The City should communicate these co-occurrence areas to the public to generate interest among landowners in strategic conservation and to highlight the places rich in natural resources in the city.

OPEN SPACE INVESTMENT AND IMPROVEMENTS

Dover's existing open spaces are varied and diverse. Some need improvements to be more accessible to the public, to enhance the user experience, or to meet land management objectives. Broadly, improvements for future conservation efforts fall into several categories:

Accessibility improvements ensure residents and visitors can access the properties safely and easily. Examples include publicizing lesser-known locations, developing and installing appropriate signage, ensuring sufficient parking, and ensuring the properties are physically accessible to those that visit. This might also include inventorying trail surfaces and, where appropriate, making sure they are safe and usable for all, or removing barriers for populations with varying abilities.

Amenity improvements include infrastructure to support the visiting of a property. Examples could range from large-scale restroom facilities at more popular destinations, to installing kiosks at specific trailheads or adding more trash receptacles at appropriate locations.

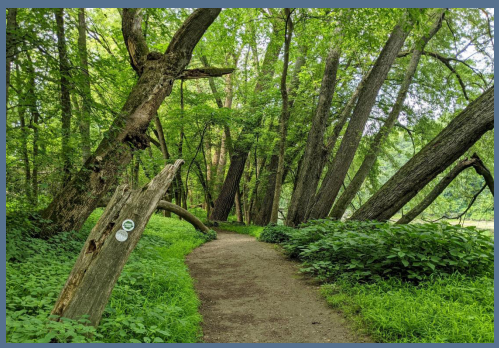
Recreation improvements include enhancing visitor enjoyment on properties supporting recreation. Examples include connecting and expanding trail networks, re-routing or elevating a trail above a wetland or developing trails that are safe for users to existing resources.

Stewardship improvements include enhancing land management techniques to promote healthy ecosystems and increase nature-based climate solutions. Examples include invasive species management, sustainable trail design to mitigate erosion, planting native vegetation, reducing mowing frequency, and sustainable forest management.

Dover's existing conserved lands and open spaces may need improvements in one or more of these categories. Developing a comprehensive improvement inventory of existing conserved lands and open spaces would be a good first step towards prioritizing projects. This should build upon the inventory of recreation facilities outlined in the Recreation Master Plan chapter. These improvement categories can also be applied to future conservation efforts, in conjunction with the co-occurrence results.

CASE STUDY: BURLINGTON WILDWAYS

The following case study is meant to inspire future wayfinding and branding efforts around Dover's open space network. **Burlington Wildways** is a partnership that operates out of the Burlington area of Vermont that connects and protects wild places and paths. As a collective, they strive to create a world-class shared trail network, conserve the plants and diverse animals of the area, and provide equitable and inviting access to the many natural areas in the city and adjacent communities. The partnership includes the city's parks and recreation department, local conservation board, city council, and key open space holders including the Intervale Center and Rock Point. The Burlington Wildway trail is a 5.5 mile trail that traverses the city and connects multiple conserved parcels. Its well-marked with personalized Burlington Wildways logo blazes and maps for easeful wayfinding and to create a cohesive personality around Burlington's shared sense of place. A unified brand for Dover's trails has the potential to cultivate community around Dover's conservation land and outdoor recreation.



TARGETED AREAS FOR OPEN SPACE IMPROVEMENTS

The following open space assets were identified for potential open space improvements. The icons that correspond to the improvement categories on the following page illustrate the types of improvements needed at each location.

BELLAMY RIVER WILDLIFE MANAGEMENT AREA

The Bellamy River Wildlife Management Area (WMA) represents a tremendous open space resource with important wildlife habitat. It also provides moderate groundwater and hazard value, and provides exceptional recreational value to the community with over 3.5 miles of walking/hiking trails. With 400 acres of contiguous, publicly accessible natural land less than 5 miles from downtown Dover, there is a lot of opportunity for the City to invest in this resource, and improve the communities' knowledge of it.

In addition to a lack of awareness of the Bellamy River WMA, it is difficult to find, and can be challenging to navigate for buses looking to bring groups. Two gates also exist on the property – one at the parking area and another ~400 feet down the gravel road. If closed, these gates offer a significant barrier to those unable to navigate around or under them to access the property. Publicizing Bellamy River WMA, increasing signage and adequate parking, and ensuring easy access around the gates are ways of improving and increasing accessibility to the property. The Bellamy River WMA is owned by NH Fish & Game; because of that, the City of Dover would need to approach the agency with any proposals for changes.

STRAFFORD COUNTY FARM

The Strafford County Farm complex consists of over 200 acres of contiguous conserved land abutting the Cochecho River. The property offers high groundwater and wildlife habitat value relative to the identified conservation priority categories, and untapped recreational opportunities. The properties are owned by Strafford County with easements held by the Society for the Protection of New Hampshire Forests (SPNHF). Both interest holders have expressed willingness to improve the land. Although some walking/hiking trails exist, they could be expanded. There is also a little-known canoe/kayak launch offering exceptional public access to the Cochecho River; however, the launch point is both difficult to find and uncomfortable given it is accessed through the County Complex parking areas behind institutional-looking buildings. Because of the limited public boat launches on the Cochecho River, providing a well-signed and safe access route to the canoe/kayak launch could be a unique opportunity for Dover. Like the Bellamy River WMA, the City of Dover does not maintain a legal interest in these properties and, thus, would need to approach Strafford County and SPNHF with proposed improvements.

DOVER COMMUNITY TRAIL

The Community Trail is Dover's most well-known stretch of open space. Since the 1990's, the City has acquired rights-of-way providing opportunities for both recreation and alternative transportation for residents and visitors. Following a former railroad bed along sections of the Cochecho and Bellamy Rivers, the Community Trail is a popular greenway linking conservation and open space lands with the urban downtown and other key locations

such as the Transportation Center Lot. Future plans for the Community Trail are already underway. These plans include exploring expansion of the trail into more rural parts of Dover and eventually connecting with trail networks in surrounding communities. A natural first step could be to extend the trail's northern terminus from its current location at the Watson Road Trailhead adjacent to the Seacoast Charter School to the Strafford County Farm complex less than 1 mile away. Other improvements could include developing a cohesive and unifying signage program for all access points along the Trail, and inventorying the trail surface quality to ensure it's safe and accessible for all residents including seniors and/or anyone requiring a mobility device. Because the City maintains the Trail and road crossings, these are actions the City could move more quickly with.

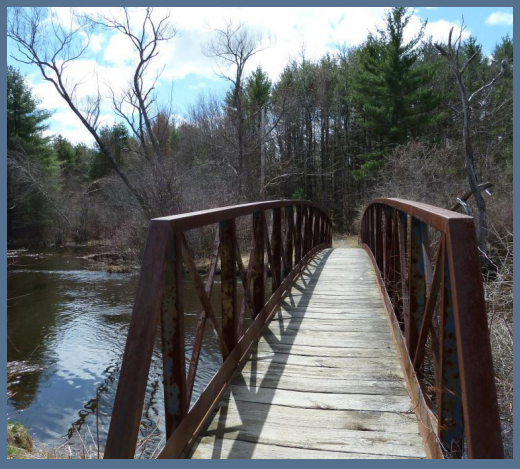
As is seen through the Community Trail, recreation can be a significant player in conservation and open space efforts. Because the Community Trail is so well-respected, it can be used as a catalyst for future conservation efforts. Finding ways to expand the trail network linearly is one approach, while developing spur trails is another. For example, the southern extent of the Community Trail terminates on Route 155 on a property the City of Dover holds a conservation easement on – New Meadows conservation easement. From that property, a more than 350-foot-wide corridor of high conservation value heads directly west to another conserved property owned by the City of Dover. Based on the resource inputs for the

co-occurrence, this area consists of high groundwater value, moderate hazard mitigation value, and moderate/high wildlife habitat value. Knowing that, funding sources could be tailored to fit the priority resource categories to expand and connect these existing conserved lands.

In the same area, north of the Community Trail trailhead on the north side of Route 155 lies a ~160-acre block of mostly moderate conservation value land according to the co-occurrence results. This has the potential to expand the network of existing conserved lands. Additionally, it is natural to consider extending the Community Trail through this area to Littleworth Road.

CASE STUDY: EXETER TRAIL PASSPORT

The following case study is meant to inspire future wayfinding and branding efforts around Dover's open space network. **The Exeter Trail Passport Program** is a way for local youth in Exeter to experience the trails in town. The passport is a booklet that highlights four short-distance trail areas to explore. Passport rubbing stations are set up at each of the trails that can mark where you have been in each person's passport. Completing at least three sites makes you eligible for a prize that can be picked up at the Planning Department. This is a program that could be replicated in Dover to engage youth and promote Dover's trail system.



3. EXISTING OPEN SPACE

Dover's existing open space network consists of many types of properties including traditional conservation land, subdivision set aside land, current use land, farms, pocket parks, and green roadways planted with street trees. While not all are technically conserved, each of these open spaces, whether small or large, contribute to the natural ecology and resilience of Dover.

CONSERVATION LAND IN DOVER

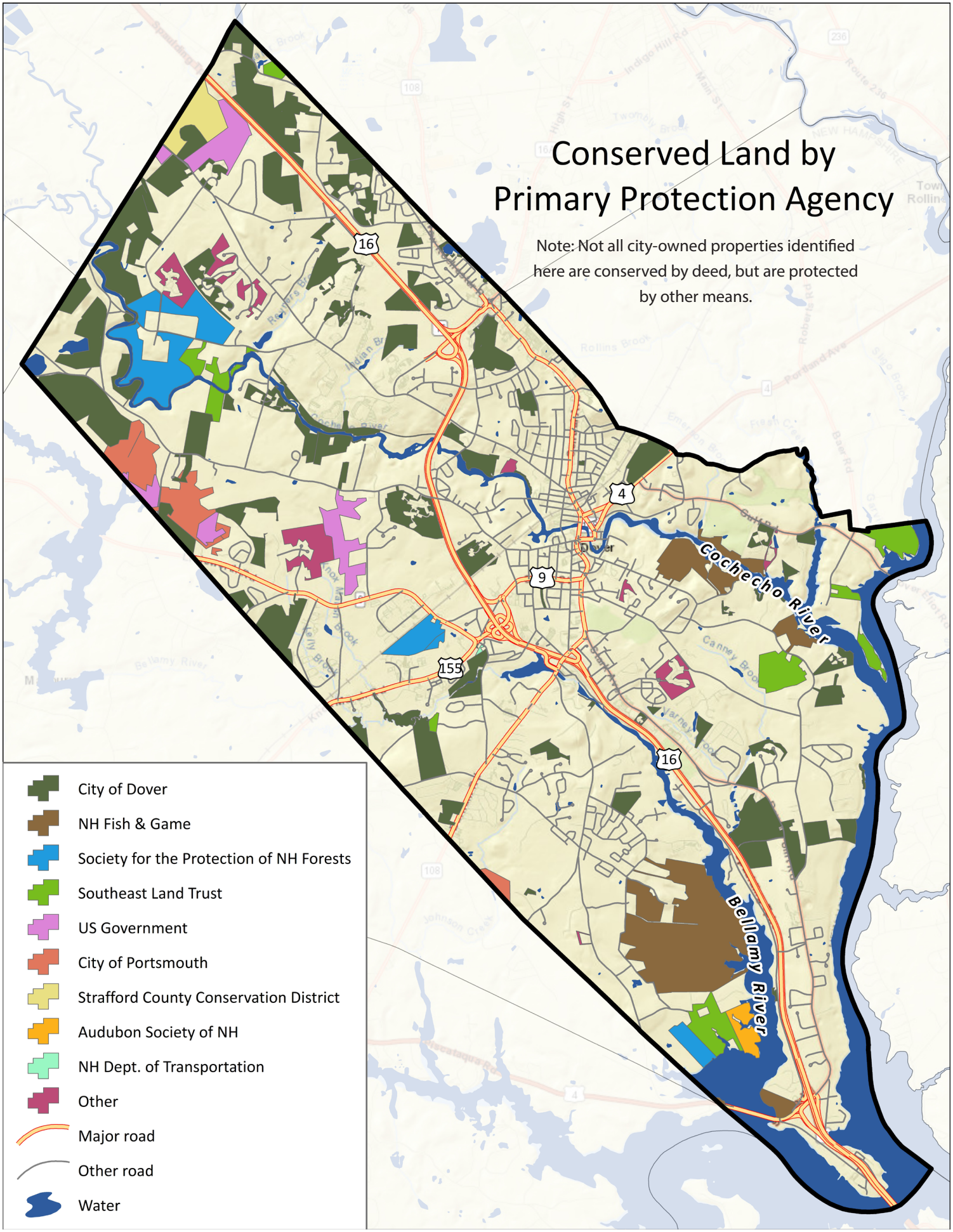
There are approximately 3,700 acres of permanently conserved land in Dover. This is 22% of Dover's land area. The City of Dover oversees nearly half of all existing conserved lands. Other conservation organizations oversee the remaining lands (see Table 1). About two-thirds of conserved lands are northwest of Routes 4 and 155, in the more rural parts of our city. Nearly 90% of all conserved lands are within a quarter of a mile of the main stem and tributaries of the Cochecho and Bellamy Rivers. Dover's conservation lands include wildlife management areas, subdivision set aside land, and state-owned open space, among others. Map 1 on the following page shows the distribution of conserved land throughout the city by primary protection agency. The primary protection agency is the entity that is most directly responsible for management and protection of the property.

Between 2000 and 2012, more than 1,000 acres of conserved land was added to Dover's protected landscapes through conservation easements alone, expanding Dover's conservation profile significantly. The City of Dover, along with many partners – including City of Portsmouth, Strafford County, the State of New Hampshire, the US Government, Strafford River Conservancy, the Audubon Society, the Society for the Protection of NH Forests, and the Southeast Land Trust – played vital roles in orchestrating a deliberate and effective campaign to dramatically expand the conservation and open space network in Dover during this time period. Since 2012, the amount of permanently conserved land in Dover has increased by 22%. Nearly all the 672 acres added since 2012 were adjacent to already existing conserved land, and many of them are overseen by the City of Dover. The Conservation Commission and Dover's Open Lands Committee have been vital to much of this progress

Since 2012, the City has also dramatically expanded and linked recreational offerings. This was primarily through the Community Trail that the City began actively planning and acquiring rights-of-way for in the mid-1990's. Following a former railroad bed through much of the City, it provides public access to protected greenways along the Cochecho and Bellamy Rivers. Currently, the Trail's northern terminus is at the Watson Road Trailhead adjacent to the Seacoast Charter School. Heading south along the Cochecho River, the Trail connects to the Whittier Street Trailhead before connecting to Beckwith Park nearby. Phase IV of the Trail is in the design phase and will connect from the current Rutland Street trailhead to the middle and high school campuses and out to Knox Marsh Road through Bellamy Park. Expansions beyond that are only in the idea phase but could include connections with surrounding communities.

TABLE 1 - Conserved Land by Primary Protection Agency

Organization	Acres	Percent of Conserved Land
City of Dover *not all of city-owned land is conserved by deed	1,805	49%
NH Fish & Game	607	17%
Society for the Protection of NH Forests	299	8%
Southeast Land Trust	273	7%
City of Portsmouth	189	5%
US Government	205	5%
Strafford County Conservation District	82	2%
Audubon Society of NH	38	1%
NH Dept of Transportation	1	0.03%
Other	174	5%
TOTAL	**3,673**	


Conserved Land by Primary Protection Agency
Note: Not all city-owned properties identified here are conserved by deed, but are protected by other means.
Cochecho River
Bellamy River
Dover
16
4
9
155
City of Dover
NH Fish & Game
Society for the Protection of NH Forests
Southeast Land Trust
US Government
City of Portsmouth
Strafford County Conservation District
Audubon Society of NH
NH Dept. of Transportation
Other
Major road
Other road
Water

CONSERVATION TOOLS

Nearly 90% of conserved lands in Dover are protected through conservation easements and fee ownership – these are by far the most common types of conservation mechanisms in New Hampshire and throughout New England. Other conservation tools include flowage rights and protective easements which help protect water supply resources, while set asides and deed restrictions provide other creative regulatory ways of building the network of conservation and open spaces. The open space subdivision set aside areas are common lands overseen by the City of Dover, while being part of privately owned developments. The following conservation mechanisms are used to conserve land in Dover:

CONSERVATION EASEMENT

A conservation easement is a legally binding agreement between a landowner (the Grantor) and an eligible conservation organization or agency (the Grantee) that permanently restricts future development of a property. In total, 1,723 acres are conserved by a conservation easement.

FEE OWNERSHIP

This is when a conservation organization or public agency purchases the land outright from a seller. In these situations, the land and all rights transfer to the conservation organization or public agency, which becomes the landowner. In total, 1,518 acres in Dover are conserved by fee ownership.

FLOWAGE EASEMENTS

Flowage easement land is non-federal land on which the United States Government has acquired certain perpetual rights, including the right to overflow, flood and submerge the land, the right to prohibit structures for human habitation, and the right to approve all other structures proposed for construction within the flowage easement. In total, 116 acres are conserved by flowage easements.

PROTECTIVE EASEMENT FOR WATER SUPPLY LANDS

These are protective easements specific to primary wellhead protection areas. There are three protective easements for water supply lands overseen by the City of Dover. In total, 11 acres are conserved by protective easements.

SET ASIDE OPEN SPACE AREAS

Open Space Subdivisions (OSS) are required to set aside areas for open space and habitat protection. These lands play an important role in Dover's open space network by codifying the development community's involvement and inclusion in conservation efforts. The amount of OSS set aside lands has increased 64% since 2012 to a total of 342 acres.

DEED RESTRICTION

A deed restriction is a legally binding restriction placed on the use of the property that limits certain activities on the property. These can vary widely and can be used to accomplish diverse goals including land conservation and open space protection. Example conditions include a requirement that the parcel be left as open land in perpetuity, or that usage of all or a portion of the land be restricted to certain uses such as forestry, wildlife habitat, or passive recreation. 56 acres are conserved by deed restriction.

TRANSFER OF DEVELOPMENT RIGHTS

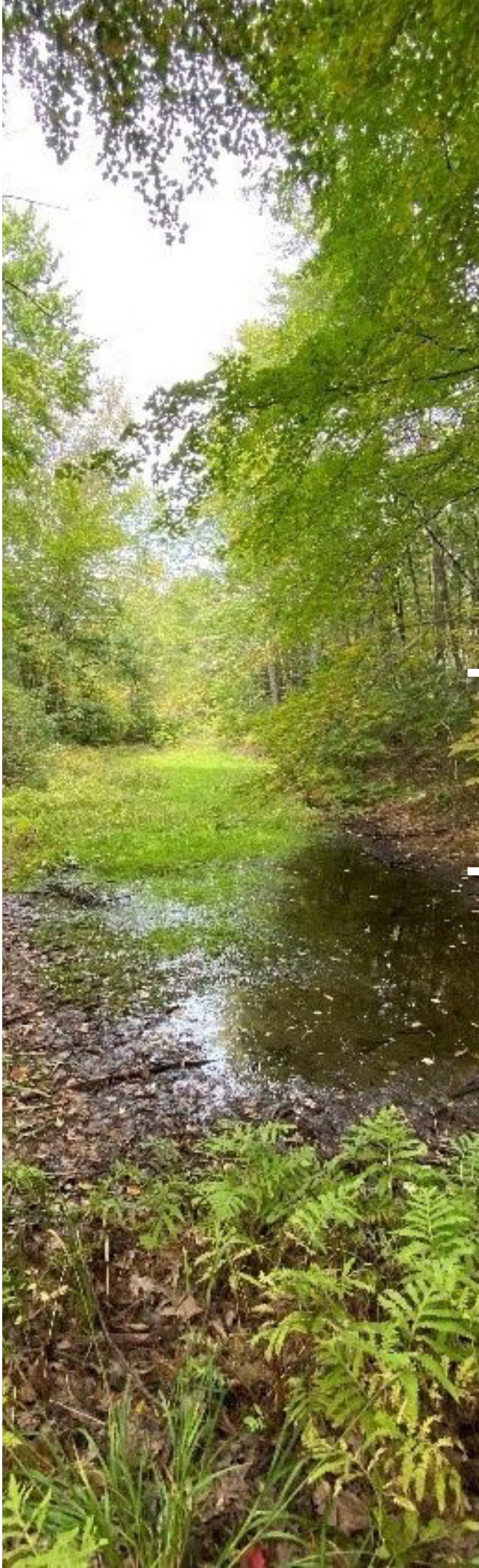
The purpose of the Transfer of Development Rights Ordinance is to promote more intensive development in areas served by public infrastructure that do not possess significant conservation value. This increased intensity can be granted in exchange for real property or monetary contributions to support the City's conservation and resilience goals. Since amending the ordinance in 2018, the City has collected over $1.7 million for the Conservation Fund, with nearly $1 million more anticipated from projects at various stages of approval. Since 2018, these funds have allowed the City to secure 62 acres in Conservation Easements.

CURRENT USE

This is privately owned, undeveloped land that the owner has committed to leaving in its current use as farm or forest land, and in doing so, the state taxes the land at a much lower rate. If the landowner decides to remove the land from current use, they must pay a Change of Use fee, which the City of Dover puts directly into a fund for financing conservation efforts. According to city data, 4,297 acres are in current use as of 2024, which is a ~200 acre decrease since 2012.

PUBLIC ACCESS

One-third of all permanently protected lands in Dover allow full public access. Another 16% allow restricted access, which means that over half of all conserved lands allow for some type of public access. The amount of restricted access and lands with no access has remained consistent since 2012. Restrictions vary considerably from property to property and the deed should be consulted for specifics. Expanding safe, public access and recreation opportunities of city-owned conserved land as much as possible, including as a criteria for new land acquisitions, is a significant future priority for Dover.



4. ACTION PLAN

WHAT'S NEXT?

The following action plan will help Dover implement the vision and priorities of this Master Plan Chapter over the next 8-10 years. The action matrix includes a set of actions organized under six themes. Each action has a responsible party(s) assigned to it, identifies the level of priority, and a timeframe. These actions were developed collaboratively with City staff and the Conservation and Open Space Chapter Steering Committee, and informed by the general public.

The action plan themes include:

- **Conservation Priorities**
  Actions that guide future conservation and land protection efforts in the city.

- **Connectivity Efforts**
  Actions that support a well-connected open space network for people and wildlife.

- **Stewardship and Amenities**
  Actions that promote greater stewardship of Dover's open spaces and identify where amenity improvements are needed.

- **Regulatory Initiatives**
  Actions that assess and amend land use regulations to better protect open space in Dover.

- **Relationship Building**
  Actions that promote collaboration between Dover and other land protection organizations to build capacity and leverage resources.

- **Communication**
  Actions that focus on communication to the public about Dover's open space assets.

- **Data Analysis**
  Actions that support an ongoing inventory and database of conservation land and open spaces in the city.

The City will steward a trackable excel version of the action matrix that will be updated regularly. Updates will be shared with the public.

ACTION MATRIX FOR DOVER'S CONSERVATION AND OPEN SPACE CHAPTER				
#	Organization	Priority (High, Med, Low)	Timeframe (Long, Med, Short, Ongoing)	Responsible Party
1. Conservation Priorities				
1.1	Continue permanently protecting lands with conservation value through available methods including but not limited to conservation easements, fee ownership, deed restrictions, agricultural preservation restriction, and protective easement for water supply lands.	High	Ongoing	Planning/ Open Lands Committee
1.2	Prioritize Conservation efforts that address at least one of the three priorities identified in this Chapter: • Groundwater Quantity and Quality Lands • Hazard Mitigation Lands • Important Wildlife Habitat Lands	High	Ongoing	Planning/ Conservation Commission
1.3	Use the co-occurrence analysis to inform and guide future conservation efforts, including: • Identifying potential natural resource or recreational connections between existing conserved lands. This could include smaller and more targeted parcels to achieve connectivity. • Identifying larger blocks of remaining land and preventing further fragmentation. • Identifying lands with the greatest conservation value and advantageous co-benefits.	Medium	Ongoing	Planning/ Conservation Commission/ Open Lands Committee
1.4	Review and update scoring criteria used by the Open Lands Committee for potential conservation projects which could include: • Develop a goal for the amount (or percentage) of conservation land to secure within ¼ mile of the Cochecho and Bellamy Rivers and tributaries.	Medium	Medium	Planning/ Open Lands Committee
1.5	Evaluate Transfer of Development Rights fees to ensure they are appropriate.	High	Short	Planning
1.6	Continue utilizing the conservation fund toward the mission of conserving more land in addition to maintaining the already protected land.	High	Ongoing	Planning/ Conservation Commission
1.7	Develop a long-term, sustainable funding strategy to fund future land conservation and stewardship of conserved lands. Investigate existing and potential funding mechanisms and how they work together to fund conservation in the city. Forecast what will be needed in the future.	Medium	Medium	Planning
1.8	Identify opportunities for future conservation of city-owned land.	Low	Long	Planning

#	Organization	Priority (High, Med, Low)	Timeframe (Long, Med, Short, Ongoing)	Responsible Party
2. Connectivity Efforts				
2.1	Create a well-connected open space network by establishing new greenway connections that provide safe and accessible multi-modal transportation and recreation connections.	Medium	Long	Planning
2.2	Ensure that public access is a major focus in all future land acquisitions.	Medium	Ongoing	Planning
2.3	Use the 2024 Natural Resource Inventory, Existing Conditions Analysis (found in Appendix A), and other Master Plan Chapters to inform the planning for conservation and trail connectivity across the open space network.	Medium	Ongoing	Planning
2.4	Continue efforts to provide access and increased connectivity to the Community Trail while extending it and creating regional connections with neighboring communities including Rochester and Somersworth.	Medium	Long	Planning
2.5	As Dover's trail system expands, ensure all future intersections with the existing road/transportation network are well-marked and safe for pedestrians, bicycles, and vehicles.	Low	Long	Planning/ Community Services
2.6	Continue to use the current Transportation Chapter of the Master Plan to assist in guiding Dover's alternative transportation connectivity. Creating a pedestrian and bicycle friendly network that is integrated into the City's transportation system will also help meet the connectivity goals related to Dover's Conservation and Open Space network.	Medium	Ongoing	Planning/ Community Service
2.7	Connect Dover's open spaces and conservation lands to existing neighborhoods to ensure all residents have safe access, can enjoy the health benefits of these lands, and have an opportunity to contribute to community building. Enabling residents to get to where they need to go through pathways other than roads can also alleviate stress on existing transportation infrastructure and improve recreational opportunities within the City.	High	Ongoing	Planning
2.8	Encourage the Planning Board to promote set aside areas on open space plans that align with neighboring protected land.	Medium	Medium	Planning/ Planning Board

#	Organization	Priority (High, Med, Low)	Timeframe (Long, Med, Short, Ongoing)	Responsible Party
3. Stewardship and Amenities				
3.1	Leverage more volunteers to assist City staff with monitoring of conservation lands overseen by the City of Dover including conservation easements, fee owned land, and Open Space Subdivisions when applicable.	Low	Medium	Planning/ Open Lands Committee
3.2	Develop a monitoring program that could include creating an educational handbook, and organizing volunteers to assist with monitoring lands overseen by the City of Dover.	Low	Medium	Planning
3.3	Leverage more volunteers and/or staff resources to conduct essential maintenance like trail grading and water management on existing trails, developing new trails, managing vegetation, restoring habitats, and managing productive working lands like farms and forests.	Low	Medium	Planning
3.4	Utilize City owned properties to demonstrate new land management approaches that increase nature-based climate solutions, restore habitat, and inspire land management innovations on privately held open space parcels. This could include no mow areas, pollinator habitats, tree planting, food production, ecological stormwater management, and other practices.	Medium	Ongoing	Planning/ Community Services
3.5	Inventory all the publicly accessible open space parcels and determine priority projects for infrastructure or amenity improvements. These may include parking, improved access, signage, wayfinding, trail construction or repair, bathrooms, waste receptacles, and other needed amenities that will improve the quality of the user's experience. Examples of properties with demonstrated accessibility needs include the County Farm Cross Area, the Bellamy River Wildlife Conservation Area, and at open space within the northwest areas of the city.	Low	Long	Planning

#	Organization	Priority (High, Med, Low)	Timeframe (Long, Med, Short, Ongoing)	Responsible Party
4. Regulatory Initiatives				
4.1	Review the Site Plan Regulations to identify potential changes that would assist in the retention of open space areas and increase connectivity between parcels.	Medium	Short	Planning
4.2	Conduct a thorough review of Open Space Subdivision regulation, Transfer of Development Rights ordinance, and other related regulations against the Master Plan to ensure requirements and incentives will deliver the caliber of development that reinforces the conservation and open space vision for Dover. This should include: • Consider a reduction of the minimum project area required for an open space subdivision. • A review of the required open space set aside for subdivisions, including projects utilizing Transfer of Development Rights. • Consider requirements for full or limited public access to the open space created. • Explore the use of deed restrictions as a conservation approach if fee ownership or easement purchasing becomes more challenging.	High	Short	Planning
5. Relationship Building				
5.1	Continue to increase representation of all community members in conservation efforts by engaging in relationship building with members of underserved communities, and through the identification of conservation projects that provide co-benefits that address unmet community needs (ex. Food production, gathering spaces, etc.).	Medium	Ongoing	Planning/ Conservation Commission/ Open Lands Committee
5.2	Collaborate with the surrounding communities on land protection and connectivity efforts.	Low	Ongoing	Planning
5.3	Develop an educational program to inform landowners of Dover's conservation priorities and value of conserving land, and pathways for private land conservation.	Medium	Medium	Planning/ Open Lands Committee
6. Communication				
6.1	Develop and publish an inventory of all conservation properties including level of public access and recreational offerings	Medium	Long	Planning
6.2	Publicize and encourage visitation to lesser-known conservation and open space lands. This could include a publicity campaign to spread awareness of these properties.	Low	Ongoing	Planning

#	Organization	Priority (High, Med, Low)	Timeframe (Long, Med, Short, Ongoing)	Responsible Party
6. Communication				
6.3	Work with partner organizations to organize trail days and engage new volunteers.	Medium	Ongoing	Planning
6.4	Develop a cohesive and unifying signage program to promote all publicly accessible natural lands in Dover, and to build awareness of future conservation and connectivity initiatives. Incorporate this signage program into Dover's existing wayfinding.	Low	Long	Planning
6.5	Educate the public on appropriate use of open space and protected lands such as carry in and carry out policies/leave no trace behind/watershed education, foraging, etc.	Medium	Ongoing	Planning
6.6	Determine how the Community Trail should be publicized in relation to the rest of the conservation and open space network. This may provide an opportunity to promote connectivity, access, and other priorities related to the open space network.	High	Medium	Planning
7. Data Analysis				
7.1	Review the inventory of all conservation properties and determine the access status of the 732 acres of land within unknown access information in the GIS data.	Medium	Long	Planning/IT
7.2	Assess the availability of GIS data to the public and review for accuracy.	Low	Medium	Planning/IT
7.3	Update the new conservation lands shapefile and send it to GRANIT regularly to ensure it reflects the date recorded, level of public access, protection type, primary protection agency, and other important information.	Low	Ongoing	Planning/IT
7.4	Coordinate with the Community Services Department and property owners for the potential of additional groundwater studies to identify potential locations for subsurface wells and to inform the protection of the corresponding lands.	High	Ongoing	Planning/ Community Services
7.5	Identify the most effective way for the City to classify Open Space Subdivision set aside lands (common areas) in the GIS data. It is possible that these parcels can be classified differently for internal use versus updates to GRANIT.	Low	Medium	Planning/IT
7.6	Monitor the current use numbers annually to gauge the rate of current use land conversion versus the increase in conserved lands.	Low	Ongoing	Planning/ Assessing