



Wildlands in New England

Past, Present, and Future

The looming global crises of climate change, biodiversity loss, and precarious human welfare call for urgent action. Today, in New England, we can and must act by halting forest and farmland loss, accelerating land protection, increasing the sustainable production of food and wood, and designating more Wildland areas. Wildlands—conservation areas that are preserved to allow natural processes to unfold, with no active management—lie at the heart of this integrated conservation agenda.

Wildlands in New England is the first regional study to map and describe all known Wildlands. New England, with about 40 million acres of land, is 81 percent forested, but only 3.3 percent of the region (1.32 million acres) are Wildlands. These Wildlands comprise 426 individual municipal, state, federal, and private properties. Although the pace of Wildland conservation has increased in recent decades, the total area protected remains far below the Wildlands, Woodlands, Farmlands & Communities (WWF&C) goal of at least 10 percent of the region.

This report provides a baseline, and a way forward, for policy makers, conservation organizations, landowners, and every community seeking to conserve more Wildlands.

Executive Summary



**Wildlands
Woodlands
Farmlands &
Communities**

An Integrated Conservation Initiative

About the Report

As Aldo Leopold pointed out decades ago, we need well-kept farms and home places, well-managed forests, and large Wilderness Areas. None of these needs to compete with any other.

—David W. Orr,
The Nature of Design,
2002

More than any other modern land category or management system, Wilderness recognizes our way of relating to the land and the Earth. The wilderness idea that humans are part of a larger “community of life” (and should act like it) has been known to my people for millennia...

—Bernadette Demientieff,
“A Gwich’in Perspective,”
2021

Wildlands in New England is the first study in the United States to document all of the Wildlands in a region. These *forever wild lands* include federal Wilderness areas along with diverse public and private natural areas and reserves. Knowing the precise locations of Wildlands, their characteristics, and their protection status is important as both a baseline for advancing conservation initiatives and an urgent call to action for supporting nature and society. This research was conducted by WWF&C partners Harvard Forest (Harvard University), Highstead Foundation, and Northeast Wilderness Trust, in collaboration with over one hundred conservation organizations and municipal, state, and federal agencies.

The concept of Wildlands embraces the enduring presence of Indigenous groups in New England, living for millennia in reciprocity with the whole land community, including old and majestic forests that allowed the full diversity of life to thrive. Wildland conservation, like all of conservation, is only necessary due to unchecked development and destructive practices—first introduced to this region by colonizing people—that have threatened all natural systems and society itself.

As a complementary strategy to protecting Woodlands (actively managed forests) and farmlands, there are myriad reasons to protect Wildlands:

- Most importantly, Wildlands hold immense intrinsic value—wild nature simply has a right to exist, as do all species.
- Wildlands are essential for maintaining and increasing biodiversity. Over time, Wildlands that are allowed to mature under the influence of natural processes will support unique ecosystems, rich assemblages of species, and many structural features missing from most of the actively managed landscape.
- Wildlands are critical in mitigating climate change by removing and storing vast quantities of carbon from the atmosphere.
- Wildlands, with their complex ecological structure and potential to cover large areas, enhance landscape resilience to stresses from climate change, biodiversity loss, and habitat fragmentation.
- Wildlands offer quiet space for renewal, both spiritual and physical.
- Wildlands can serve as ecological references for scientific inquiry as well as forest management and conservation.
- Finally, Wildlands form a central component of **30x30**, the nationally and internationally embraced goal to protect 30 percent of the land and waters of the Earth by 2030 to address the looming crises of biodiversity, climate change, and human welfare.

The Wildlands, Woodlands, Farmlands & Communities initiative calls for at least 70 percent of New England to be protected forest; Wildlands to occupy at least 10 percent of the region; and all existing farmland to be permanently conserved.



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Gray fox, becoming more common in New England in recent decades, occupy both young, mast-rich woodlands and mature lowland deciduous forests. Here, an infant gray fox emerges from a den in a large fallen log in a wild forest.

The Knowledge Gap: Where Are the Wildlands?

Why is this report needed now? The Earth is in peril and New England has an urgent need to address this crisis by assembling a thriving Wildland infrastructure to support nature and society within the six New England states (Maine, New Hampshire, Vermont, Massachusetts, Connecticut, and Rhode Island), and extending well beyond the region's borders. Nonetheless, prior to this study, there existed only a general sense of the extent and characteristics of Wildland properties in New England, with no available map or database. We undertook this comprehensive study to fill this knowledge gap, to underscore the importance of Wildlands, to encourage bold efforts to advance Wildland conservation and all forms of land protection, and to ensure that policy makers, public agencies, conservation organizations, and landowners have regional context, accurate data, and clear recommendations for advancing conservation efforts.

Goals of the Study

To support land planning, climate and conservation policy and action, the report set out to address the following goals:

1. Establish a definition of Wildlands applicable to the land ownership of New England, and of the United States.
2. Identify, from over 650 areas recommended by hundreds of groups, all lands fitting this definition.

3. Develop and maintain an open-source database and web map for all Wildlands and protected conservation lands in New England, adding to and complementing existing databases of conserved lands.
4. Disseminate the results and recommendations to landowners, practitioners, and policy makers to increase the understanding, appreciation, and conservation of Wildlands as a critical part of an integrated approach to land planning, both regionally and worldwide.
5. Initiate further research on and tracking of Wildland conservation as part of the WWF&C initiative.

Our Wildland definition draws from conservation history; the federal Wilderness Act and its application; international standards for protected lands; and feedback from conservation scientists and practitioners.

“Wildlands” are tracts of any size and current condition, permanently protected from development, in which management is explicitly intended to allow natural processes to prevail with “free will” and minimal human interference. Humans have been part of nature for millennia and can coexist within and with Wildlands without intentionally altering their structure, composition, or function.

Three key criteria determine whether a property meets this definition:

- i. **Wildland intent.** The property has a deliberate Wildland purpose.

- ii. *Management for an untrammeled condition.* The property is allowed to mature freely under prevailing environmental conditions and natural processes with minimal human intervention.
- iii. *Permanent protection.* Wildland intent and management are in perpetuity *or* are open-ended but expected to persist.

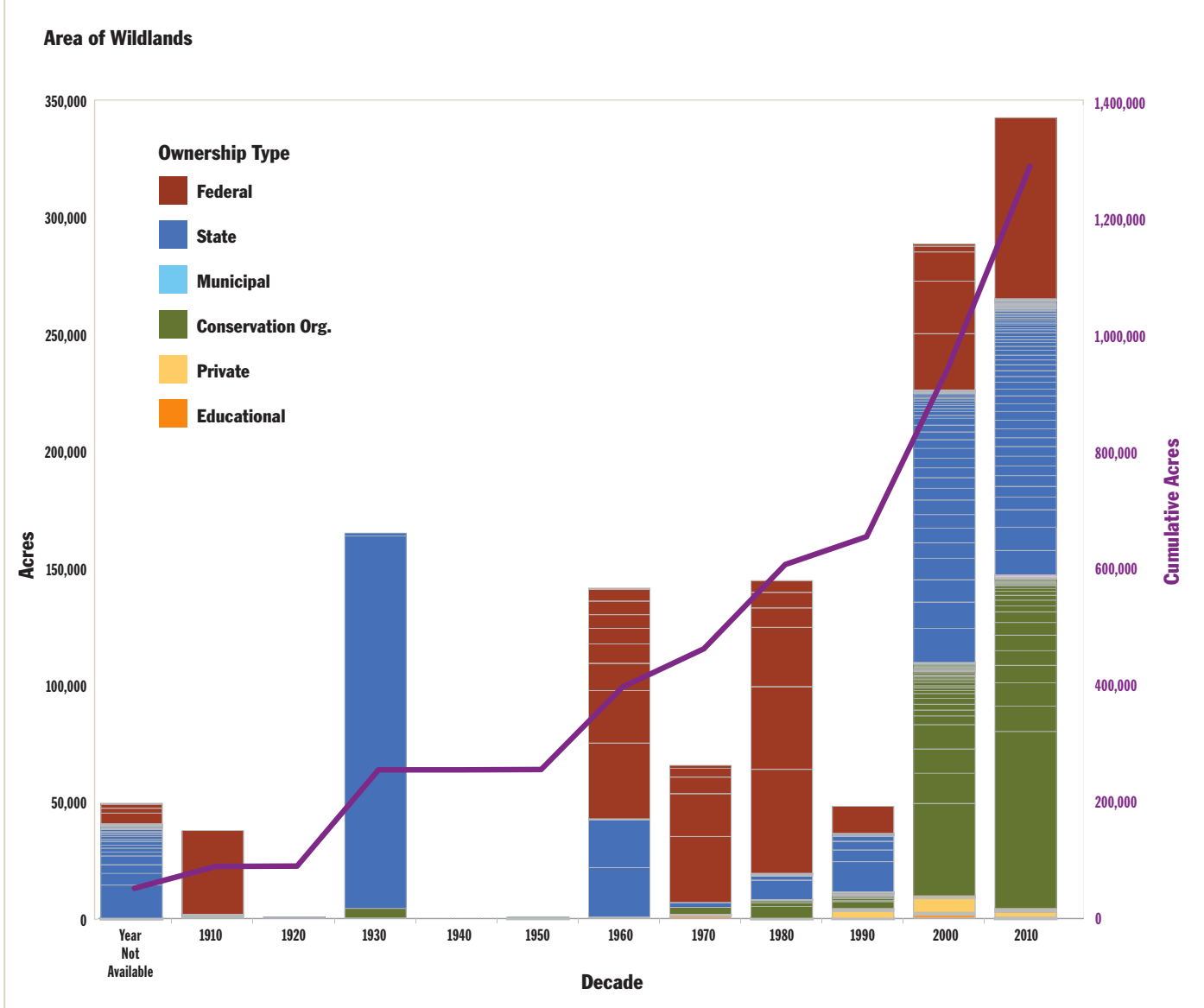
The wild condition of the land derives not from the land's history but from its freedom to operate untrammeled, today and in the future. In New England, where the land has experienced widespread use, most Wildlands develop through a process of natural “rewilding” that is unconstrained by people and unpredictable in its dynamics. Although a few Wildlands may be true old-growth forests, others may be recently clear-cut areas or former pastures with legacies of human history. As Wildlands, all will develop old forest conditions over time.



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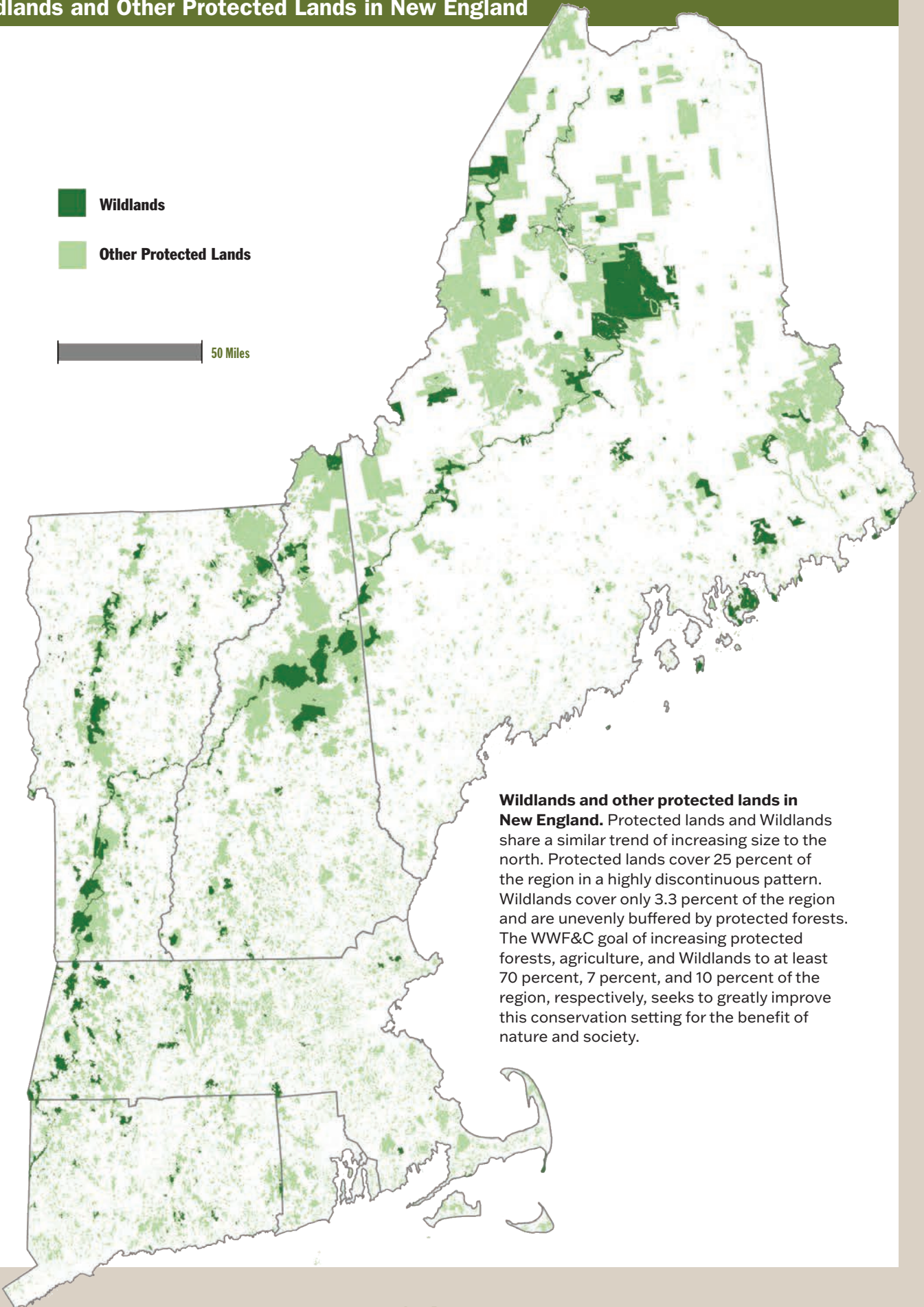
In Wildlands such as this forest in New Hampshire, natural ecological processes—windthrow, tree death, decay, and regrowth—are allowed to function without human intervention.

Timeline of Wildland Establishment in New England



The rate of Wildland establishment displays a large increase in the past two decades and includes substantial contributions by private conservation organizations.

Wildlands and Other Protected Lands in New England



Wildlands and other protected lands in New England. Protected lands and Wildlands share a similar trend of increasing size to the north. Protected lands cover 25 percent of the region in a highly discontinuous pattern. Wildlands cover only 3.3 percent of the region and are unevenly buffered by protected forests. The WWF&C goal of increasing protected forests, agriculture, and Wildlands to at least 70 percent, 7 percent, and 10 percent of the region, respectively, seeks to greatly improve this conservation setting for the benefit of nature and society.

Results and Discussion

Characteristics and Geography of Wildlands

This study determined that New England (40.2 million acres) is 81 percent forested and contains 1.3 million acres of Wildland, or 3.3 percent of the region. Wildlands comprise 426 individual properties, on municipal, state, federal, and private lands, a number that increases monthly. Highly varied in size, these Wildlands range from fewer than 10 acres to more than 150,000 acres (Baxter State Park, Maine), and in geographical, ecological, and cultural settings. They also vary in human history and in current ecological condition. New England lacks an immense Wildland comparable to New York's approximately 6-million-acre public-private Adirondack Park, which contains about 2.9 million acres that are constitutionally protected "forever wild."

Wildlands are largely confined to the remote and rural portions of New England, in a band extending from northwestern Connecticut through western Massachusetts, across the mountainous and northern areas of Vermont and New Hampshire, to north-central Maine and Baxter State Park. Large, more developed areas of New England—much of Connecticut and Rhode Island, eastern Massachusetts, southeastern New Hampshire, and the southern quarter of Maine—support few Wildlands. The Appalachian Trail, conceived in 1921 by Benton MacKaye as a wilderness way,

comprises a nearly continuous line of Wildlands that helps to define the regional pattern.

In New England, Maine contains half of all Wildland acres (54.7 percent), followed by New Hampshire (17.6 percent) and Vermont (16.7 percent), with Massachusetts contributing 8.8 percent and Connecticut slightly more than 2 percent. Rhode Island has a single known Wildland tract.

The distribution of Wildlands has two consequences for the region's population. On the one hand, the rural location of most Wildlands provides solitude and quiet, qualities long sought by wilderness proponents. On the other hand, this distribution, and that of conservation lands more broadly, imposes challenges for society: a lack of equitable access to open space for all communities and an absence of green spaces in every neighborhood. A democratic approach to Wildland conservation will support a combination of large rural Wildlands and a constellation of smaller but more accessible Wildlands.

History of Wildland Conservation and Ownership

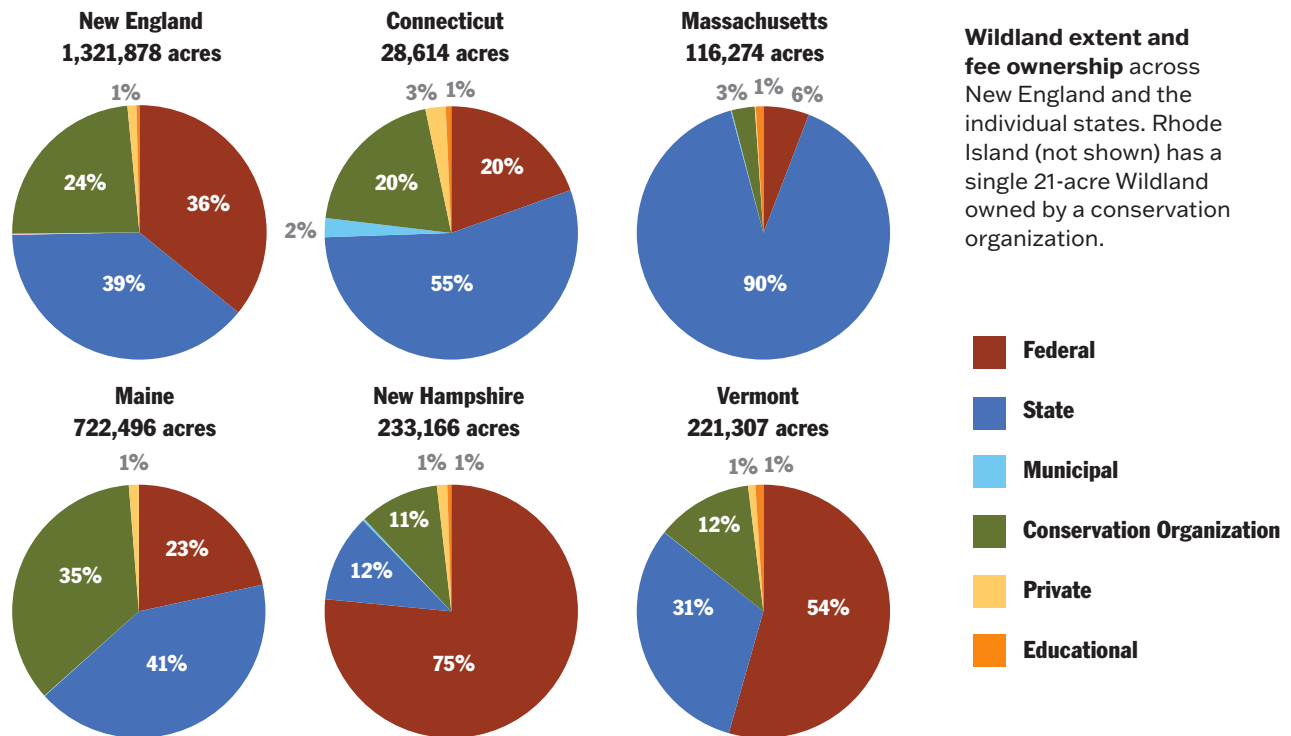
Wildland conservation in New England began slowly in the early twentieth century, increased through the 1990s, and surged from 2000 to 2023, a period in which more than 660,000 Wildland acres have been protected. The number of organizations, agencies, and entities conserving Wildlands in New England now exceeds one hundred and continues to increase.



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Coring of the shallow sediments of Hemlock Hollow in the Wildland on the Prospect Hill tract of the Harvard Forest. Analyses of these materials have yielded a 10,000-year record during which old-growth hemlock forests dominated this site interrupted by fire, abrupt climate change, and harvesting following European arrival.

Wildland Extent and Fee Ownership across New England



Public Agency Ownership

Wildland ownership is strongly skewed to public control (75 percent) and split between state (39 percent) and federal (36 percent) agencies. It is important to note that portions of many national parks, national monuments, national forests, state forests and parks, and state reserves are not Wildlands.

State Ownership

While Maine has the largest extent of state Wildlands (296,502 acres), Massachusetts stands out due to the dominant role of state agencies in Wildland conservation, with 90 percent of the Wildland area in the state owned by the Commonwealth. Most of the Massachusetts Wildlands are weakly protected.

Federal Ownership

Three federal agencies are responsible for 473,781 acres of Wildlands: the U.S. Forest Service (Department of Agriculture) and the National Park Service and U.S. Fish and Wildlife Service (both within the Department of the Interior). The donation of nearly 90,000 acres in Maine to the U.S. government led to the designation of Katahdin Woods and Waters National Monument in 2016 with 76,633 acres of Wildlands.

Private and Nonprofit Ownership and Stewardship

Many different private conservation and educational organizations and families own or hold conservation easements on 25 percent of Wildland acres, with a few organizations playing a dominant role.

The Nature Conservancy (TNC) owns 47 Wildland properties in the three northern states, comprising nearly 220,000 acres, and numerous additional properties in the southern three states.

Forest Society of Maine holds permanent conservation easements on just over 100,000 acres of Wildlands.

Northeast Wilderness Trust, the youngest of these organizations and the only one in the region dedicated exclusively to Wildlands conservation, owns 21 properties comprising 28,163 acres and holds forever-wild easements on over 34,204 additional acres, across every New England state except Rhode Island.

The Appalachian Mountain Club, through its Maine Woods Initiative, has purchased and designated four Wildlands totaling 27,166 acres in the last two decades.

The Society for the Protection of New Hampshire Forests owns 39 Wildlands properties comprising 9,284 acres that range from 15 to over 2,600 acres in size.

Protection Mechanisms

Wildlands employ various mechanisms with variable strength of protection, ranging from *federal statutes, state statutes*, and *legal mechanisms* that impose enduring “deed restrictions” to *policy, administrative decision*, and *management plans*. The last three mechanisms, comprising 465,103 acres, or 35 percent, of all Wildland area and 205 (48 percent) of all Wildland properties, involve “self-oversight,” the weakest level of protection.

Conclusions

Although Wildland conservation and other modes of conservation that largely prioritize nature are expanding, New England is far from attaining the international goal of conserving 30 percent of the land for nature by 2030. Indeed, much is needed to reach the long-standing Wildlands, Woodlands, Farmlands & Communities goal of conserving at least 10 percent of the region as Wildlands. More than 1.3 million acres, or 3.3 percent, of the total land area (slightly more than 4 percent of the forested area) has been secured as Wildlands. This accomplishment falls short by key metrics in conservation science, namely: tract size and total percent of the region's land area; connectivity and buffering of Wildland properties by compatible conservation lands; representation of the region's natural physical landscapes and critical habitats; consistency in management and protection; and benefit to all the region's people. No properties, nor aggregations of properties, encompass landscapes large enough to support the full range of natural processes and human experience recommended by ecological science. Significantly, key species remain absent, including the region's largest native predators—the wolf and cougar. In contrast, adjoining New York State, with twice the population density of New England, supports an array of Wildlands comprising 16 percent of the forest land and approximately 9 percent of the state.



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Canada lynx are secretive creatures of spruce-fir forests, where they hunt and capture snowshoe hare and other prey in a mosaic of habitats created by natural disturbance events. The regrowth of New England's forests has created new habitats and movement pathways for these wide-ranging cats.

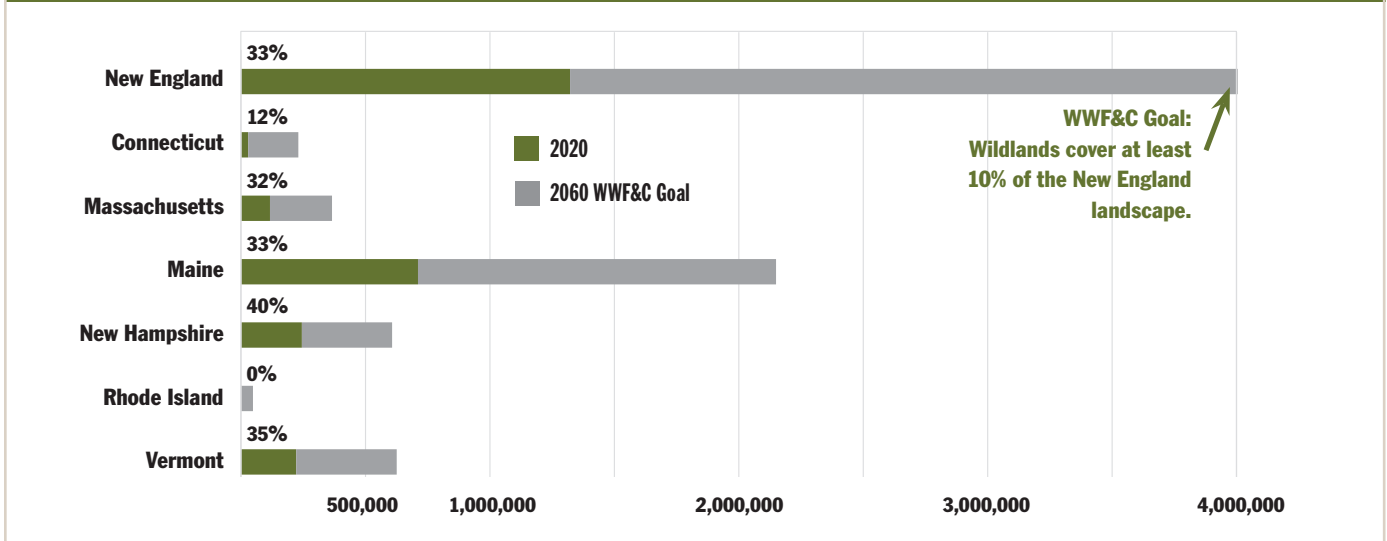
It is important to note that many protected Wildlands are surrounded by carefully managed Woodlands, which serve important ecological functions including connectivity, water and air filtration, species habitat, and many others. Buffering Wildlands with carefully managed, largely natural lands is a critical priority for landscape conservation as a whole, but it is no substitute for additional very large Wildlands entirely controlled by natural dynamics.



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The east-facing shore of Monhegan Island, Maine, where more than two-thirds of the island is permanently preserved as a Wildland by the Monhegan Associates, a group of local landowners and advocates.

Current Wildland Extent and WWF&C Goals for 2060



The current status of Wildlands in New England relative to the Wildlands, Woodlands, Farmlands & Communities (WWF&C) goal for Wildlands to cover at least 10 percent of the New England landscape, or approximately 4 million acres by 2060. Wildlands currently cover about 3.3 percent of the New England region or one-third of the goal. State-level goals are based on the simplifying assumption that the WWF&C goal will be allocated evenly across the six states in relationship to the extent of forest land in each state. To date, no state has established a goal for Wildlands.

Recommendations

New England has tremendous opportunity to develop a more robust network of Wildlands, integrated with managed Woodlands and farmlands to support diverse human communities that benefit in health and welfare as nature thrives around them. This future is possible because the level of support for land conservation has reached a historic peak regionally and nationally; the number and diversity of Wildland advocates and landowners is increasing; and Wildlands are recognized as critical for addressing the global crises arising from climate change, biodiversity loss, and threats to human well-being. Both the opportunity and the need for Wildland conservation in New England have never been greater.

To secure this future, it will be necessary to:

- **Center Wildlands in an integrated approach to land planning and conservation**, one that includes actively managed forests and farms and sustainably designed communities supported by a low-carbon, demand-reduction economy. Increased local production of agricultural and forest products can provide valuable jobs with low impact on the environment, securing the functionality of the land and avoiding extraordinary climate-change costs.
- **Strengthen existing Wildlands**, specifically:
 - ◆ **Develop clear intent.** Ensure that all Wildlands are designated explicitly and protected by clear legal or regulatory language.
 - ◆ **Reinforce the unique qualities of Wildland management.** Clarify that passive management is the norm, with only rare and minimal intervention.

- ◆ **Increase the protection of Wildlands in perpetuity.** Add permanent legal protections to Wildlands presently protected by policy, management plans, or good intentions.
- ◆ **Enhance the landscape setting for Wildlands.** Establish many more and larger Wildlands in a regionally connected network that secures the full diversity of nature. Distribute Wildlands in all biophysical regions and all geophysical settings—appropriately sized, connected, and buffered by protected lands to provide their full ecological function.
- **Advance Wildland conservation, significantly, thoughtfully, and strategically**, specifically:
 - ◆ **Recognize the region's history when establishing conservation goals.** Consult with and learn from Indigenous and local communities that have been in long and deep relationships with the land on which we all live and work, and which we seek to conserve.
 - ◆ **Embrace humility in conservation.** Learn from nature's ability to manage itself, in spite of natural and anthropogenic stresses and disturbances.
 - ◆ **Realize the vision for landscape-scale Wildlands.** Strive for vast, interconnected Wildlands stretching across the region.
 - ◆ **Ensure that diverse landowners and groups are included in Wildland conservation.** Exchange knowledge with private landowners, private land trusts, municipalities, and Indigenous groups. Ensure that new Wildlands offer benefits to all people in

all places by establishing a combination of small reserves close to major population centers, medium-sized reserves in lightly settled and rural areas, and expansive wild landscapes in more remote and largely forested places.

- ◆ **Advance Wildland policy at local, state, and federal levels.** Engage and educate policy makers in Wildland conservation science and practice and promote Wildland protection at all government levels.
- ◆ **Increase public and private funding for integrated approaches to land planning and conservation.** Inform decision makers and both state agency and nonprofit organization staff of model state policies and programs from across the United States that incentivize the integration of land planning, conservation, and community development through public-private partnerships and funding.

Advancing Wildland Conservation through the Wildlands, Woodlands, Farmlands & Communities Initiative

The WWF&C partners remain dedicated to advancing and strengthening our ambitious goals for land protection and planning. Our commitment to Wildland conservation is strengthened and informed by this study and will be further advanced by engaging in the following activities:

- **Increase Wildlands outreach, education, conservation action, and policy development** through the collaborative communication initiative and joint policy program of WWF&C and Food Solutions New England.
- **Evaluate elevating the goal for Wildlands in the region to 20 percent or more,** considering this report's findings and international goals for Wildland conservation. Extend this research by examining New England's potential to produce a greater proportion of the wood resources and food consumed in the region to help address the growing crises of climate change, biodiversity loss, and food insecurity.
- **Integrate Wildland conservation, local food and resource production, and community development.** Support a network of diverse people and organizations to accelerate the pace and scale of Wildland conservation alongside the protection of well-managed woodlands and farmlands to promote equitable access to natural lands, foods, and products, as well as the sustainable and equitable development of increasingly climate-resilient communities.
- **Enhance and maintain the New England Protected Open Space database and web map *with Wildlands*** as part of the WWF&C website to aid education, conservation, and land planning.





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Alder Stream Wilderness Preserve is a 7,000-acre-plus wild landscape in remote central Maine, protected by Northeast Wilderness Trust.



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Copies of this Executive Summary, the full report, the Wildlands web map, and additional information are available on the website of Wildlands, Woodlands, Farmlands & Communities: wildlandsandwoodlands.org/wildlands-in-new-england

To learn more about ways to directly support Wildlands conservation throughout New England, visit newildernesstrust.org/

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Cover photo: *The 825-acre Blue Mountain Wilderness Sanctuary in Ryegate, Vermont, is a forever-wild place protected by Northeast Wilderness Trust in 2022.*

