

The Future of our Forests: Land Protection and Sustainable Forest Management



A Strategic Conservation Plan for the MassConn Sustainable Forest Partnership



Draft: February 2013
Partner Review: April 2013
Final Plan: August 2013

Contents

Background and Purpose of this Plan	4
The Partnership	5
Our Community	6
Conservation Priorities.....	8
Focus Areas.....	9
• Emerald Woods	9
• Northern Connections.....	11
• Four Corner Woods	13
• Shetucket Headwaters	14
Implementation	16
References.....	18
Appendices.....	19
1. List of Workshop Speakers, Day 1 & 2	20
2. List of Workshop Participants	22
3. Map of MassConn Region.....	24
4. List of MassConn Steering Committee Members.....	25
5. Map of Regional Conservation Partnerships (RCPs).....	26
6. MassConn Boundary Map.....	27
7. Forest Blocks in MassConn Region Map.....	28
8. MassConn Land Cover Map.....	29
9. MassConn Population Density Map.....	30
10. MassConn Population Change Map	31
11. Natural Heritage Endangered Species & Habitat Map	32
12. TNC Resilient Sites Map.....	33
13. TNC Flow Map.....	34
14. Valuation Score Map of MassConn Region and Focus Areas.....	35

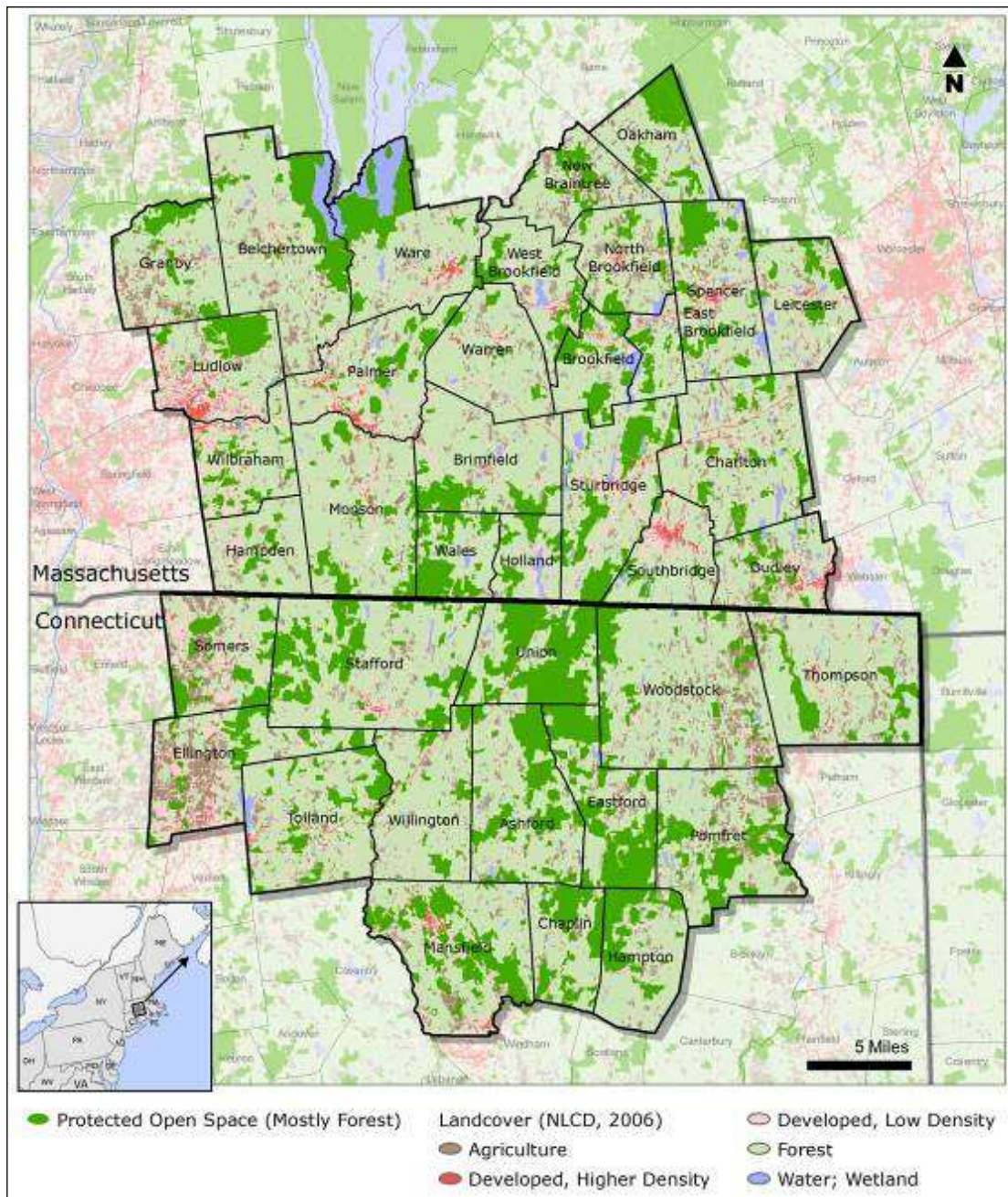
15. MassConn Focus Area Maps.....36

16. Emerald Forest Focus Area Map 37

17. Northern Connections Focus Area Map 38

18. Four Corner Woods Focus Area Map..... 39

19. Shetucket Headwaters Focus Area Map..... 40



Background and Purpose of this Plan

Southern New England has seen a rapid increase in forest fragmentation and loss over the last fifteen years due to development. Also, a large percentage of the remaining forest tracts are in the hands of private landowners and are not permanently protected. Because of these factors the MassConn Sustainable Forest Partnership (MassConn) has placed a high premium on working closely and cooperatively with a variety of partners and private landowners to develop a Strategic Conservation Plan that will build a greener, more sustainable future for all.

In 2012, MassConn received a grant through the Regional Plan Association entitled the Northeast Landscape Conservation Peer Exchange Program (PEP). The goals of PEP were to:

- Support conservation of important landscapes in the northeastern United States,
- Grow the professional capacity of the network of landscape conservation practitioners and organizations across the Northeast and nationally, in particular to address challenges posed by land use change, infrastructure investment, climate change adaptation and / or new funding sources, and
- Foster relationships between organizations working with comparable challenges and opportunities so that the collective knowledge and capacity of this network can be brought to bear on local, regional, and national policy issues.

Through this grant MassConn partnered with an established organization, The Conservation Fund (TCF), for mentoring and information exchange in developing a workshop for the MassConn Partnership. The workshop was designed to launch or significantly advance a landscape conservation initiative. With guidance from Ole Amundsen of TCF, MassConn developed a one and a half day workshop in October 2012, focused on Strategic Conservation Planning (43 partners attended on day one of the workshop and 20 attended on day two). At the workshop, speakers presented natural resource information and a gallery of maps of the MassConn region, participants outlined potential focus areas and afterward several drafts of these areas and associated case statements were circulated and reviewed. See Appendices 1 and 2 for workshop agenda and list of participants. The main deliverable from this workshop is this Strategic Conservation Plan, which includes newly crafted conservation focus areas for the MassConn Region.

This Strategic Conservation Plan is a completely voluntary effort that seeks to work collaboratively with private landowners, land trusts, non-profit organizations, government agencies and foundations to facilitate communication, designate focus areas, justify conservation efforts, inform partners and the public, and guide fundraising efforts. The conservation goals of this plan include:

- Continuing to build a strong partnership of active local, state, federal, non-profit, private sector partners to collaborate on forest management and conservation projects and enhance support for MassConn's work,
- Developing a network of working forests in the region,
- Promoting sustainable forest management for private and municipal forestland owners

- Building land conservation connections between focus areas and across major highways dividing the region, specifically the Mass Turnpike Interstate 90 and Route 84,
- Working to increase connectivity with surrounding protected land to enhance the landscape's utility for climate change adaptation, and
- Expanding outreach and education efforts to forest landowners to discuss forest conservation and management options.

The projects currently in progress and those that MassConn plans to implement will seek to enhance these goals and work with communities to recognize and reward sound stewardship.

MassConn plans to reconvene the partnership in the fall of 2013 to work on an Action Plan for implementation and then to meet one year later (2014) to discuss lessons learned and adjust the plan and focus areas if needed or desired. This plan will be fully revised in five years (2019).



Figure 1. Participants at MassConn's Strategic Conservation Planning Workshop discuss focus areas

The Partnership

The MassConn Sustainable Forest Partnership is a voluntary association of public and private forest conservation entities committed to working together to increase land protection and sustainable forest management in 38 towns in south central Massachusetts and northeastern Connecticut. See Appendix 3 for Map of MassConn Region. It consists of land trusts, conservation organizations, state and federal agencies and foresters. The members of this partnership realize that political boundaries are irrelevant to plant and animal communities, and to ecosystem processes, which makes it increasingly important that we work together to conserve

land in a way that is meaningful on a larger, regional scale, and to tap into resources that are not available to organizations working alone.

The mission of MassConn is to work with partner groups to identify key areas of the region for conservation, collaborate on land protection efforts, promote sustainable forestry practices, and organize public outreach and education efforts in order to increase the pace and efficacy of conservation in the MassConn region.

The partnership is guided by an active steering committee representing a diverse mix of conservation professionals across both Connecticut and Massachusetts. Organizations represented include Norcross Wildlife Sanctuary and Foundation, Monson, MA Conservation Commission, Opacum Land Trust, Northern Connecticut Land Trust, East Quabbin Land Trust, Highstead, Connecticut Forest and Park Association, and Joshua's Tract Conservation and Historic Trust. See Appendix 4 for MassConn Steering Committee List.

MassConn is also one of over 30 Regional Conservation Partnerships (RCPs) in the northeastern U.S. working across political boundaries to achieve common conservation goals and build an expansive network for idea and resource exchange. MassConn's inception was inspired by the *Wildlands and Woodlands: A Vision for the New England Landscape* report (2005, revised 2010). The partnership was formed to work collaboratively toward reaching the goals laid out in the plan: permanently retain at least 70% of New England forestlands over the next 50 years. MassConn is active in the RCP network, attending regional conferences, participating in presentations and connecting with neighboring RCPs over conservation projects, events, grants and information sharing. See Appendix 5 for map of existing RCPs.

Our Community

The MassConn region consists of 760,000 acres in 38 towns across south central Massachusetts (24 towns) and northeastern Connecticut (14 towns). The MassConn region is bound to the north by the Quabbin reservoir, to the south by Storrs, CT, to the west by the Connecticut River Valley and Interstate Route 91 and to the east by the Blackstone River Valley and Interstate 395. The Massachusetts Turnpike Interstate 90 runs east-west through the central part of the Massachusetts towns and Route 84 runs southwest to northeast across the entire region. Further, the MassConn region lies in close proximity to the following major cities: Boston and Worcester, MA, Hartford, CT and Providence, RI. See Appendix 6 for MassConn Boundary Map.

The MassConn region boasts significant natural areas for people and wildlife alike. There are upwards of 11 state forests and parks, significant reservoirs, including portions of the Quabbin Reservoir, numerous wildlife sanctuaries, major historical landmarks, including the largest living history museum, Sturbridge Village, and miles of local, inter-state and regional hiking trails. The Silvio O. Conte National Wildlife Refuge, the first watershed to receive national recognition, and the Norcross Wildlife Sanctuary span both states.

Regarding land cover statistics, the majority (76.5%) of the MassConn region is forested. Most of this forest area is contained in large forest blocks, areas not intersected by paved roads. Many of these blocks are greater than 1,000 acres and some of the largest blocks, greater than 3,000

acres, are clustered along the Massachusetts-Connecticut border. This concentration of unfragmented areas of forest along the state border heralds the need for inter-state partnerships like MassConn. See Appendix 7 and 8 for Forest Block and Land Cover Maps.

There are about 5.1 million acres of forestland across Southern New England (Massachusetts, Connecticut and Rhode Island). In Massachusetts, 3.0 million acres of forestland, makes up 61% of land cover. In Connecticut, 1.7 million acres of forestland account for 56% of land cover. However, the amount of forestland has been decreasing over the last decade. Between 1998-2007, Connecticut had an eight percent loss and Massachusetts had a three percent loss in forest. Most of the forestland loss is attributed to development that is unlikely to revert back to forest (i.e. roads, buildings).

Ultimately, the fate of the existing forestland is in the hands of those who own and manage it. In Southern New England, that ownership lies overwhelmingly in the hands of private family forest owners. In Massachusetts, 69% of forests are privately owned. In Connecticut, 77 % of forests are privately owned. The average size of family forests in Connecticut is nine acres and in Massachusetts its six acres. Overall, population density is low in the MassConn region, with a split between categories - about half the region is 214 to 1,113 people/square mile and the other half is 70 to 213 people/square mile. See Appendix 9 for Population Density Map. While population change is typical within the MassConn region, there are pockets that have experienced higher rates of population change. See Appendix 10 for Population Change Map.

In addition to forest area, agriculture makes up about 9.0% of the region, water/wetlands account for 0.5 % and development makes up 11% (10.0% low density, 1.0% high density). Of the 760,000 total acres of the MassConn region, about 175,000 acres (or 23%) are protected open space. Forestland makes up 26% of protected open space, 19% is farm fields, 49% is ponds/lakes and 42% is wetlands. See Appendix 8 for Land Cover Map.

The region also contains a significant amount of core habitats and state-listed endangered and threatened species. BioMap 2, in Massachusetts, and the Natural Diversity Dataset, in Connecticut, outline information about rare species' habitats and the critical areas necessary for their long-term persistence. While these data layers are incomplete and rare species locations imprecise, these are the best state-wide data available to conservation and land managers. See Appendix 11 for Natural Heritage Map.

MassConn Region Land Use Statistics

Land Use	Land Cover of MassConn Area	Land Cover in Acres	% Protected	Protected Land in Acres
Forest	76.5%	581,400	26%	151,164
Agricultural Fields	9%	68,400	19%	12,996
Water	3%	22,800	49%	11,172
Wetland	0.5%	3,800	42%	1,596
Development, High Intensity	1%	7,600		
Development, Low Intensity	10%	76,000		
TOTALS	100%	760,000	23.3%	176,928

Ecologists have increasingly understood the importance of landscape connectivity — contiguous and connected forested areas that allow species to migrate, interbreed, and shift their ranges in response to changes in the environment — to the health and sustainability of our ecosystems, and ultimately our planet. New data that has become available is that associated with The Nature Conservancy’s recent report, *Resilient Sites for Terrestrial Conservation in the Northeast and Mid-Atlantic Region*. This report outlines the realities ecosystems are and will continue to face with ever-changing climates. Many of those changes will be related to where species can live and how habitats will shift. TNC’s resiliency data models outline areas most important for protecting biodiversity in the face of climate change.

One of the key results of TNC’s analysis was a map of resilient sites. A resilient site is defined as a place that “can buffer an area from the direct effect of changing climate by offering a connected array of microclimates that allow species to persist.” There are significant portions of the MassConn region (almost half of the region) listed as resilient sites. This means that with the diversity of elevations ranges, landforms and water resources there are areas with enough microclimates (climate variations) that species can find suitable habitat without travelling too far. See Appendix 12 for TNC Resilient Sites Map.

Another key aspect of TNC’s analysis looked at connectivity over the landscape or species movement patterns. These ‘flow patterns’ looked at broad east-west and north-south patterns to identify areas where species movement is likely to be concentrated in the face of climate change. Flow refers to the ability of species to migrate or move over longer distances. One of the two major north-south corridors in the northeast United States identified as concentrated flow runs directly through the MassConn region. This resiliency and flow analysis data shows that the MassConn region is (and will be) a critical corridor for species movements. See Appendix 13 for TNC Flow Data Map.

Conservation Priorities

The MassConn steering committee determined several priorities based on MassConn’s mission and the overarching conservation goals of this plan (See Page 1, Paragraph 4) that were used by Brian Hall, GIS Specialist at Harvard Forest, to conduct a suitability analysis of data overlays in the MassConn region.

The analyses divided the region up into 30m cells and gave each cell one point if it was within each of the following conservation-related GIS layers: 1) large forest blocks (> 500 acres), 2) near (within 500m) current protected open space, 3) state natural heritage data locations, 4) in waterbodies, wetlands, or within 15m of a stream centerline, 5) in a TNC Climate Change Resilience focal area, and 6) in a TNC Climate Change Resilience area of concentrated or diffuse flow. Based on this suitability analysis, each cell in the region received a score of 1 (lower conservation value) to 6 (highest conservation value). A final map was made showing the conservation valuation scores along with current protected land and current developed land. See Appendix 14 for Valuation Score Map of MassConn Region.

Once the valuation score map was finished, the developed land and current protected open space layers were overlaid on top to show the conservation valuation of land that is not already

protected and developed. This suitability analysis was explained at the workshop and the maps were used by participants to determine focus areas for setting priorities and implementing projects within the MassConn region.

Focus Areas

From this exercise, four regions became clear as focus areas: Emerald Forest, Northern Connections, Four Corners Woods, and Shetucket Headwaters. See Appendix 15 for Focus Areas Map. All of these regions have multiple interested partners that worked together to create case statements to support the implementation of projects within their unique areas. These statements describe the boundaries, resources and particular conservation goals of each focus area. These areas and their associated case statements will help guide MassConn’s specific conservation efforts moving forward.

Emerald Forest (Focus Area #1)

Description: This ten-town, bi-state focus area is nestled in the highlands between Massachusetts and Connecticut, and is at the very heart of the MassConn region. The 95,998 acres of this focus area include parts of the towns of Hampden, Monson, Brimfield and Sturbridge, MA and all of Holland and Wales, MA. It also includes parts of Somers, Stafford, Union and Woodstock, CT. Often described by motorists on the Mass Turnpike as the “prettiest view from the highway” and as a rural “sweet spot”, this scenic region is in close proximity to the cities of Hartford, Connecticut and Springfield and Worcester, Massachusetts. When viewed from the top of Peaked Mountain, a Trustees of Reservations property, the rolling hills, wetlands, ponds and expanse of forest are striking. See Appendix 16 for Emerald Forest Map.



Figure 2. Early Spring at the Norcross Wildlife Sanctuary.

The area is 90% forested (83,638 acres), however only 33% (27,531 acres) of forests are protected. Much of this forestland is actively managed for both commercial purposes as well as ecological values by a patchwork of private landowners, nonprofit organizations and public agencies. The forest products industry is strong in the region, providing supplies for a range of wood products including flooring and round wood. Private landownership of the woods has served this region well and there are opportunities for collaborations with private landowners to reward sound stewardship practices. The extensive tree cover provides corridors for wildlife movement across New England.

As a highland, this focus area is a headwaters or filtering region for many watersheds including the Quinebaug and Connecticut River. Wetland systems and vernal pools support complex ecosystems while filtering surface and ground water as it moves south to more densely populated regions. The United States Army Corps of Engineers manages several flood protection facilities, dams and reservoirs in the region, protecting downstream communities.

The valleys of the Emerald Forest are home to villages and towns with a rich history and culture. Orchards, row crops and dairy farms provide vistas of the forested hill sides as well as local food for the region. Many of the local farms are protected with agricultural preservation restrictions.

Conservation Work: The Emerald Forest Focus Area has been recognized as a cherished landscape by public agencies in both states, with holdings of state forestlands and park lands. At the core of the Emerald Woods is the Norcross Wildlife Sanctuary, a privately managed landscape with over 8,000 acres of habitat. The largest contiguous, unfragmented tract of Norcross forestland is 3,200 acres in size and includes the original Tupper Hill Sanctuary that was established in 1939. The formation of the Sanctuary is an inspiring story of how committed individuals can make a difference to their region. The Opacum Land Trust, Northern Connecticut Land Trust, Trustees of Reservations and Connecticut Forest and Park Association are active in the region, with a mixture of fee and easement land holdings. The Conservation Commissions of area towns are active – with five communities within the focus area with open space plans and two Massachusetts communities having approved the Community Preservation Act. The region is home to many private landowners who are committed stewards of their lands. Recognizing this ethic on the part of private landowners is critical.

Land Conservation Goals: Strategically protect 31,000 acres¹ of forest land. Specific goals include:

- Attract federal and state land conservation funding to the area. In Connecticut, MassConn is working with two groups of forest owners to create a multi-phased Forest Legacy Program application that will be sufficiently competitive nationally to secure at least partial funding. In Massachusetts, MassConn is facilitating the establishment of a new state-approved Forest Legacy Program focus area which would bridge two existing Forest Legacy focus areas and create opportunities for private forestland owners in Massachusetts and Connecticut to access funding for the purchase of development rights.

¹ In keeping with the goals outlined in *Wildlands and Woodlands: A Vision for the New England Landscape* report, specific goals for acres of forestland to protect for each focus area are based on their vision to permanently protect 70% of New England forests over the next 50 years.

- Contribute to this landscape’s utility for climate change adaptation by conserving forestland in a north-south orientation, building on the existing triangle of conserved forest that includes the 8,000-acre Norcross Wildlife Sanctuary, the 4,000-acre Brimfield State Forest (Massachusetts), and the 6,600-acre Shenipsit and 15,000-acre Natchaug State Forests (Connecticut).
- Promote the establishment and expansion of forestland acreage devoted to ecological reserves that are not subject to forestry and silvicultural practices (the current Mass. state policy for the Brimfield State Forest).
- Promote sustainable forest management for private and municipal forestland owners, emphasizing private owners enrolled in Chapter 61 (Mass. current use property tax program) and PA 490 (Conn. current use program) and those who already have conservation easements on their land. The Norcross Wildlife Sanctuary provides a venue for workshops and field trips to see sustainable forest management practices at work.
- Increase opportunities for local wood using businesses to obtain raw materials from local woodlands that are sustainably managed.

Northern Connections (Focus Area #2)

Description: This eight-town focus area on the Massachusetts side, contains approximately 73,069 acres in the towns of Granby, Ludlow, Belchertown, Ware, Warren, New Braintree, West Brookfield, and Palmer, Massachusetts. The area is 80% forested (58,765 acres), however only 32% (19,158 acres) of forests are protected. This focus area also has several small to moderate-



Figure 3. View of Mount Holyoke Range from Kestrel Land Trust's Mt. Pollux Conservation Area, Belchertown, MA

sized farms throughout the landscape, making up 4,677 acres and providing local food, breathtaking views across rolling hills, and a meaningful contribution to the region's economy. See Appendix 17 for Northern Connections Map.

Recent Climate Change Resiliency data released by The Nature Conservancy identifies the Northern Connections Focus Area as an area with high connectivity and flow between wooded ridgetops and river bottoms. Considerable portions of the Quaboag, Ware, and Swift Rivers flow throughout the area along with numerous smaller tributaries leading to the Connecticut River. Water quality in these waterways is protected by stands of dense hemlock, mixed oak and pine, and other hardwoods. Area residents rely on water derived from either town surface water supplies, town wells or private wells. Retaining significant forestland cover that is managed sustainably is important to ensure the continuous clean water supply for the region's residents.

This focus area is threatened by development filtering in from the east-west Route 9 corridor that bisects the region. Ensuring forestland corridors across this barrier is critical for wide ranging wildlife species such as moose, black bear and bobcat. Conserving undeveloped landscape connections between existing conservation areas will serve all area human and wildlife residents by enhancing the quality of life while maintaining the region's ability to provide clean water and air, wood and food products, and outdoor recreational experiences.

Conservation Work: The Northern Connections Focus Area incorporates significant properties conserved for diverse public and private uses. The Springfield/Ludlow Reservoir and Quabbin Reservoir lands provide clean public drinking water for residents of the greater Springfield and greater Boston areas. The Mount Holyoke Range State Park incorporates miles of recreational trails and breathtaking vistas. The Herman Covey Wildlife Management Area offers blue-ribbon catch-and-release fly-fishing along the Swift River.

Municipalities and land trusts also hold important outdoor recreation and conservation lands in this focus area. For instance, Grenville Park in the Town of Ware invites residents to experience the wildness of the Ware River and opportunities to play basketball and tennis. Holland Glen and Scarborough Brook Conservation Areas in Belchertown provide miles of walking trails and were conserved with support from the Kestrel Land Trust. The East Quabbin Land Trust owns several parcels including the Hyde Woodlot and Frohloff Farm that help to sustain conservation connections across the wooded landscape of the region.



Figure 4. East Quabbin Land Trust's portion of the Mass Central Rail Trail, Hardwick, MA

Land Conservation Goals: Strategically protect 22,000 acres of forest land. Specific goals include:

- Provide a link between the 80,000-acre Quabbin Reservoir to the north and the Emerald Forest Focus Area to the south.
- Using the current protected land base (36% of focus area), leverage additional support for new conservation initiatives to sustain connections across the landscape and ensure climate resilience for plants, wildlife, and our own quality of life.
- Protect the highest priority (ecologically important and most threatened by development) forests by working with interested and willing private landowners.
- Conduct outreach to private forest landowners on forest conservation, management and estate planning topics.

Four Corner Woods (Focus Area #3)

Description: This four-town, bi-state focus area lies along the Massachusetts and Connecticut state line where Sturbridge and Southbridge, MA meet Woodstock and Union, CT. The total focus area is 19,617 acres. The area is nearly 90% forested (17,473 acres), however only 40% (6,922 acres) of forests are protected. In addition to forests, the area is a diverse landscape with farms, streams and other wetlands and quiet neighborhoods. The area is rich with history as evidenced by the miles of stone walls that line the roads and continue on long forgotten paths, bounding fields that have given way to the woods. It is not uncommon for farmers tilling the fields to come across Native American artifacts as this area sustained that population for thousands of years. The Four Corner Woods Focus Area is a place where wildlife abounds, where fresh, clean streams provide water for the public drinking supply and recreation for fishermen and where visitors can learn about land use history at the area's largest living history museum, Sturbridge Village. See Appendix 18 for Four Corners Woods Map.



Figure 5. Opacum Land Trust's Claire Birtz Wildlife Sanctuary. Photo by G.L. Sweetnam

Conservation Work: Four Corner Woods is an area where the conservation work of many overlap. In Connecticut, this includes the New Roxbury Trust, Joshua’s Trust and Wolf Den Land Trust, as well as, the Connecticut Department of Energy and Environmental Protection. In Massachusetts, Opacum Land Trust and the Massachusetts Department of Fish and Game have been active. Along the state line, there are also parcels held by the Opacum Land Trust and the New England Forestry Foundation. Hull Forest Products is a large landowner in this focus area whose working forest is subject to a conservation easement. The four communities of this focus area have active conservation commissions and the Town of Sturbridge has passed CPA. This is, in part, the Quinebaug Highlands focus area for The Nature Conservancy and is also part of The Last Green Valley².

Land Conservation Goals: Strategically protect 5,000 acres of forest land. Specific goals include:

- Protect and preserve the waters, forests and wildlife of Woodstock and Union, CT and Southbridge and Sturbridge, MA.
- Permanently protect the City of Southbridge water supply land, a 3,000-acre watershed.

Shetucket Headwaters (Focus Area #4)

Description: This nine-town focus area on the Connecticut side, contains approximately 76,810 acres in the towns of Union, Woodstock, Eastford, Pomfret, Hampton, Chaplin, Mansfield, Willington and Ashford, Connecticut. The region is bound by Route 190 and 171 to the north, Route 6 to the south, Route 198 and Natchaug State Forest to the East and Route 89, Route 74 and Daleville Road to the west. The region spans the Bigelow Brook and Mount Hope watersheds and contains the major river systems of the Mount Hope and Natchaug Rivers, Bigelow Brook and the headwaters to the Shetucket River. See Appendix 19 for Shetucket Headwaters Map.

Tucked away in what is known as the ‘Quiet Corner’ of northeastern Connecticut, the Shetucket Headwaters focus area is one of the last remaining intact and forested areas in Connecticut. Forestland makes up about 87% (66,503 acres) of the land use in this region, another 5% (4,028 acres) is agricultural land and the remaining land use is low-density residential development (6% or 4,332 acres). The area boasts diverse forest systems, biodiversity, numerous recreational opportunities such as hiking and hunting and a legacy of working forests. However, only about 36% (24,145 acres) of forestland are protected in the area.

The predominantly unfragmented landscape of the Shetucket Headwaters connect existing protected open spaces, such as the Natchaug State Forest and the Connecticut Forest and Park Association’s Nipmuck and Natchaug Blue-Blazed Hiking Trails. The woods in this focus area

² The Last Green Valley (TLGV) is a 35-town heritage corridor in eastern Connecticut and south central Massachusetts and is described as a “relatively undeveloped rural island in the midst of the most urbanized region in the nation, making it a resource of local, regional, and national importance.”

are diverse ecosystems and home to large, wide ranging mammals such as bobcat and moose. The concentration of invasive plant species in this region is lower compared to bordering areas.



Figure 6. Recently managed forest stand of the Yale-Myers Forest.

There is also a long-standing legacy of working forests in the Shetucket Headwaters focus area. The focus area includes the Yale-Myers forest, a demonstration forest of Yale University where faculty and students use the forest as a laboratory for education. Managers of the forest also do outreach to surrounding landowners about sustainable forest management. Additional institutional resources and opportunities for partnering exist with the University of Connecticut and Eastern Connecticut State University, as they also own land within the focus area.

Conservation Work: The Shetucket Headwaters focus area has been identified as a place of importance and of strategic conservation from Climate Change Resiliency data released by The Nature Conservancy (TNC) and by The Last Green Valley (TLGV), a local non-profit organization (see footnote 2). There is a well-established conservation-minded community in this region. In addition to TNC and TLGV, Joshua's Trust, Connecticut Forest and Park Association, Northern Connecticut Land Trust, Wyndham Land Trust, Wolf Den Land Trust and the Quiet Corner Initiative are all active in the area. These organizations own several fee properties, hold easements in the area and assist landowners with meeting their woodland conservation needs such as drafting forest management plans. There are also several important large-scale landowners in the Shetucket Headwaters focus area. These include Hull Forest Products, the State of Connecticut and the above-mentioned universities.

Land Conservation Goals: Strategically protect 22, 000 acres of forest land within the Shetucket Headwaters focus area. Specific goals include:

- Support working forests in the area by working with foresters and promoting local wood products.
- Conduct widespread vegetation surveys to locate areas of significance and rare species.
- Prioritize forested areas along the Nipmuck and Natchaug trails to increase corridor connections.
- Increase outreach efforts to private forest landowners to begin building relationships and to discuss estate planning options of their forestland.



Figure 7. One of Connecticut Forest & Park Association's many trails, the Nipmuck Trail

Implementation and Conclusion

Forest fragmentation and development pressure have motivated MassConn to work cooperatively with partners and landowners to develop this strategic conservation plan. Fueled by the capacity-building, resources, and enthusiasm from the Strategic Conservation Planning Workshop, MassConn is excited to jump-start and continue pursuing numerous land conservation projects. The funding from the Regional Plan Association grant combined with the energy and involvement spurred by the workshop, MassConn has attracted additional funding from the Norcross Foundation. Additionally, MassConn was invited by two other regional partnerships to collaborate on a joint application for a USDA Forest Service Re-design grant (FY 2013).

This Strategic Conservation Plan and the four focus areas will be used as a framework for identifying key projects within the MassConn region. The steering committee agrees to revisit the plan annually and reexamine goals, comment on land conservation projects inside and outside of focus areas and update focus area boundaries and case statements. The partnership plans to share this Strategic Conservation Plan and associated maps with workshop participants and MassConn partners. In the fall of 2013 the partnership will reconvene to formulate an Action Plan for implementing and tracking the goals included in this plan. Moving forward, annual updates/revisions on the plan will coincide with annual partnership gatherings. The plan will be fully revised every five years.

This plan will be used to guide conservation priorities, as outlined in the overarching goals and the goals within each focus area summary, and will be noted as a strategic approach to land conservation in Southern New England. Currently, there are several land conservation projects in progress or planned for the MassConn region that support and enhance the goals set forth in this plan. The projects that the partnership is currently organizing include:

- Submitting a Forest Legacy application in Connecticut for FY 2015.
- Establishing a Forest Legacy Area in the Massachusetts side of the MassConn Region known as the Heritage Corridor Forest Legacy Area: (<http://www.mass.gov/eea/docs/dcr/stewardship/forestry/other-reforest/hcfla-proposal-finaldraft.pdf>) to bridge two existing Forest Legacy focus areas and create opportunities for private forestland owners in Massachusetts to access funding for the purchase of development rights.
- Submitting a Forest Legacy application in Massachusetts for FY 2015.
- Coordinating a landowner outreach program to facilitate peer-to-peer exchange between uninvolved landowners and active and engaged woodland owners termed ‘Woodland Ambassadors.’
- Organizing forest landowner outreach events such as woods walks and woods forums with ‘Woodland Ambassadors.’
- Hosting the New England Forestry Foundation’s pilot project, *Heart of New England Campaign*, a forest landowner outreach program to increase access to and awareness of resources available to aide decisions they make about their land.
- Organizing MassConn steering committee and partner meetings.
- Applying for grants to fund a part-time partnership coordinator and grants for land conservation projects.
- Strengthening the partnership with outreach to less-involved partners.

MassConn is enthusiastic about this plan and feels it is an important milestone in the continued growth of the partnership. This plan reinforces our commitment to our conservation partners and our efforts to work with private landowners. MassConn’s land conservation work, guided by the newly crafted focus areas in this plan will help shape a regional identity for the partnership and their numerous partners and will work toward making this a greener future for all.

References

Amundsen, Ole, 2011, *Strategic Conservation Planning*, Land Trust Alliance.

Anderson, Mark, M. Clark and A. Olivero Sheldon. 2012. *Resilient Sites for Terrestrial Conservation in the Northeast and Mid-Atlantic Region*. The Nature Conservancy, Eastern Conservation Science.

Butler, Brett et al., 2011. *The Forests of Southern New England, 2007: A report on the forest resources of Connecticut, Massachusetts and Rhode Island*. Resources Bull., NRS-55. Newtown Square, PA: U.S. Dept. of Agriculture, Forest Service, Northern Research Station. 48 p.

Butler, Brett et al., 2007. Understanding and Reaching Family Forest Owners: Lessons from Social Marketing Research. *Journal of Forestry*. October/November: 348-357.

CT Department of Energy and Environmental Protection datalayers, CT.gov, August thru November 2012.

DeNormandie, John, 2009. *Losing Ground Beyond the Footprint: Patterns of development and Their Impact on the Nature of Massachusetts*. Massachusetts Audubon publication, fourth ed.

Hall, Brian, 2012. Natural Resources Inventory of the MassConn Region, powerpoint presentations and maps. Harvard Forest Research Station, Petersham, MA.

MassGIS Datalayers, MassGIS, Mass.Gov, September 24, 2012, August thru November 2012.



Natural Heritage and Endangered Species Program and The Nature Conservancy, 2010. *BioMap2: Conserving the Biodiversity of Massachusetts in a Changing World*. Prepared for the Executive Office of Environmental Affairs, Boston, MA.

Ohop, Jennifer et al., 2012. *Amendment Forest Legacy Needs Assessment Massachusetts: Heritage Corridor Forest Legacy Area*, Massachusetts Forest Legacy Committee, Clinton, MA.

Appendices

1. List of Workshop Speakers, Day 1 & 2
2. List of Workshop Participants
3. Map of MassConn Region
4. List of MassConn Steering Committee Members
5. Map of Regional Conservation Partnerships (RCPs)
6. MassConn Boundary Map
7. Forest Blocks in MassConn Region Map
8. MassConn Land Cover Map
9. MassConn Population Density Map
10. MassConn Population Change Map
11. Natural Heritage Endangered Species & Habitat Map
12. TNC Resilient Sites Map
13. TNC Flow Map
14. Valuation Score Map of MassConn Region and Focus Areas
15. MassConn Focus Area Maps
16. Emerald Forest Focus Area Map
17. Northern Connections Focus Area Map
18. Four Corner Woods Focus Area Map
19. Shetucket Headwaters Focus Area Map

Appendix 1: List of Workshop Speakers/Program Day 1 & Day 2



Strategic Conservation Planning Workshop* Program

Day 1: Friday October 12, 2012

9:00 am Introductions and Welcome (Jennifer Ohop (Opacum Land Trust/Norcross) and Katherine Blake (MassConn))

9:15 am Strategic Conservation Planning and Capital Campaigns, Ole Amundsen (The Conservation Fund (TCF))
Step 1: Laying the Foundation (why planning and how it relates to fundraising, who is your public, what are your goals)

9:45 am **Step 2:** Understanding your Community Overview by Ole Amundsen, TCF

1. Resource Inventory/Map Gallery Overview by Brian Hall (Harvard Forest) (natural resources, demographics, new layers like climate change)
2. Forest Legacy Update Katie Blake, MassConn
3. Southern New England Heritage Forest Partnership and Landowner Messaging– Cythia Henshaw, East Quabbin Land Trust
4. Gathering Inspiration information Exercise (list of writers, artists, photographers who use the landscape) Ole Amundsen, TCF

12:00 to 1pm Lunch!

1pm **Step 3.** Setting Conservation Priorities, Ole Amundsen, TCF

1. Creating Focus Areas from updated MassConn Conservation Sustainable Model – Brian Hall, Harvard Forest (presentation, discussion and exercise) (Due to constraints of the workshop we just looking to outline 2-3 additional focus areas and that MassConn will gain experience in the next year of using these areas to see if the concept works in attracting resources)

2:30pm Divide the group up in to teams to draft Fact Sheets/Case Statements for Focus Areas (facilitators Ole, Katie, Brian, Cynthia)

3:50pm Wrap up Days work: Provide Quick Overview of Saturday, TCF and MassConn



Day 2: Saturday October 13, 2012

Implementation of Strategic Conservation Planning


- 9:00 am Introductions and Welcome by MassConn
- 9:15am **Step 4. Implementation and Measuring Success Presentation, Ole Amundsen, TCF**
- 9:30am Massachusetts State Funding Update (Melissa Cryan, Mass Executive Office of Environmental Affairs (EOEA))
- 10:00 Local Conservation Funding and Implementation – Panel
- a. Amy Paterson, Executive Director, CT Land Conservation Council: Conn Land Trusts working with municipality
 - b. Melissa Cryan, EOEA –Land and Water Funding and Open Space Plans
 - c. Leslie Duthie, Chair, Monson Conservation Commission: town using CPA funds and open space planning
- 11am Tips on Crafting Forest Legacy Applications, (Jay Rasku, North Quabbin Regional Partnership Coordinator)
- 12:00 Wrap Up and Next Steps: TCF and MassConn

* This workshop is funded by: The Regional Plan Association/America 2050, the Doris Duke Charitable Foundation, the USDA Forest Service Urban and Community Forestry Program, and the National Park Service Northeast Area

Special thank you to:

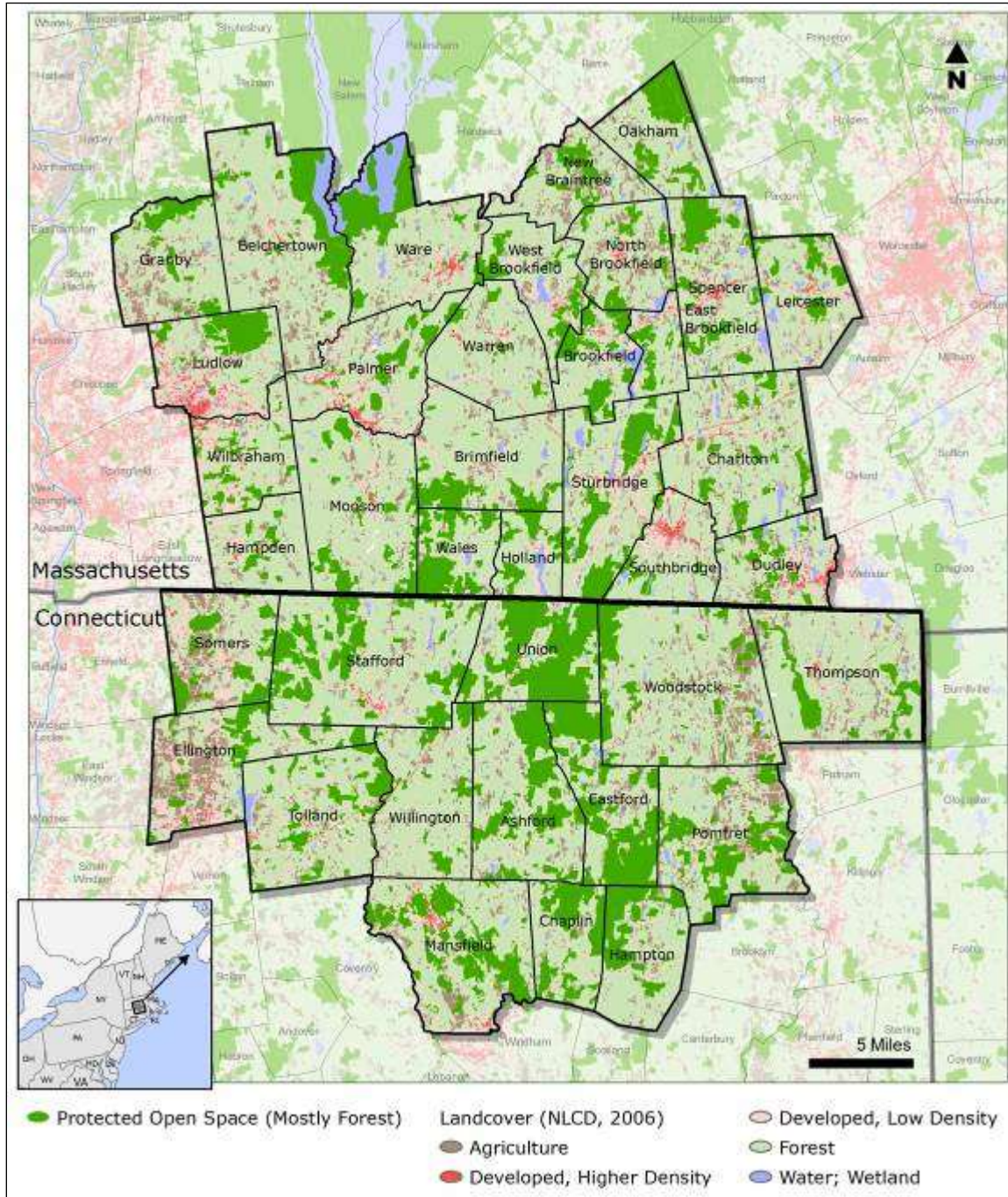
- You, for attending!
- Our funders, (see above) for making this workshop possible
- Our speakers, for taking time out of your busy schedules to share your expertise!
- Donors to our raffle: Highstead (Redding, CT), Kestrel Land Conservation Trust (Amherst, MA), Equal Exchange Coffee and Collective Copies (Florence MA), Randall's Farm and Greenhouse (Ludlow, MA), Triple Oaks Farm and Sugarhouse (East Brookfield, MA)

Appendix 2: List of Workshop Participants

		THE CONSERVATION FUND
		
Strategic Conservation Planning Workshop Norcross Wildlife Sanctuary List of Attendees		
Lee	Alexander	The Trustees of Reservations
Ole	Amundsen	The Conservation Fund
Liz	Austin	Norcross Wildlife Sanctuary
Alex	Barrett	Yale School Forests
Katherine	Blake	MassConn Sustainable Forest Partnership
Andrea	Buglione	Mount Grace Land Conservation Trust
Anne	Capra	Pioneer Valley Planning Commission
Stephanie	Clark	Joshua's Trust
Glenn	Colburn	Sturbridge, MA Conservation Commission
Melissa	Cryan	Mass Executive Office of Energy & Environmental Affairs
Dan	Donahue	Norcross Wildlife Sanctuary
Maureen	Doyle	Southbridge, MA Conservation Commission
Nancy	Drenzek	Norcross Wildlife Sanctuary
Leslie	Duthie	Monson, MA Conservation Commission, Norcross Wildlife Sanctuary
Howie	Fife	Opacum Land Trust
James	Gage	Northern CT Land Trust
Melissa	Graves	Wilbraham, MA Conservation Commission
Brian	Hall	Harvard Forest
Cynthia	Henshaw	East Quabbin Land Trust
Shane	Hetzler	Yale School Forests, Quiet Corner Initiative
Grace	Jacobson	Woodstock, CT Conservation Commission
Stephen	Johnson	New England Forestry Foundation
Danelle	Laflower	Wales, MA Planning Department
Sonya	Leclair	New England Forestry Foundation
Peter	Lesmerises	Connwood Foresters Inc.
Kate	Marquis	W.D.Cowls, Inc., Land Company
Stephen	Meno	Highstead
Lindsey	Michel	CT Forest & Park Association
Vinny	Normand	Norcross Wildlife Sanctuary
Robert	O'Connor	Mass Executive Office of Energy & Environmental Affairs
Jennifer	Ohop	Opacum Land Trust, Norcross Wildlife Sanctuary
Angela	Panaccione	Brimfield, MA Conservation Commission

Amy	Paterson	CT Land Conservation Council
Robert	Perschel	New England Forestry Foundation
Robert	Pirani	Regional Plan Association
Matthew	Pooler	Norcross Wildlife Sanctuary
Jay	Rasku	Mount Grace Land Conservation Trust
Anne	Renaud-Jones	Opacum Land Trust
Alan	Smith	Opacum Land Trust
Ethan	Smith	Norcross Wildlife Sanctuary
Ellen	Sousa	Common Ground Land Trust
Gus	Steeves	Southbridge Press
Derrick	Talbot	Norcross Wildlife Sanctuary
Joelle	Vautour	MA Department of Conservation & Recreation
Mary	Wigmore	Wigmore Forest Resource Mgt
Tim	Worthen	Norcross Wildlife Sanctuary
Benjamin	Wright	Kestrel Land Trust
Eilizabeth	Wroblicka	Land Conservation Associates

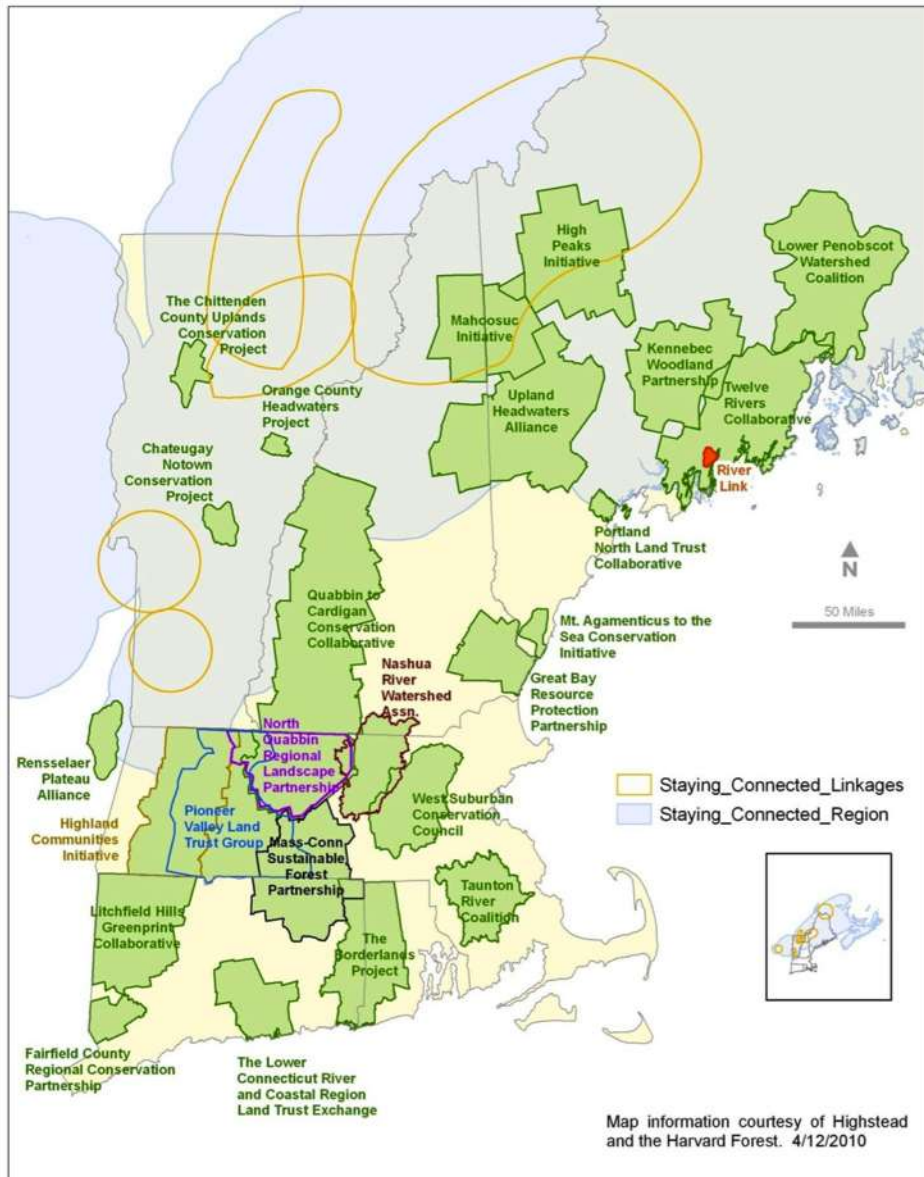
Appendix 3: Map of MassConn Region



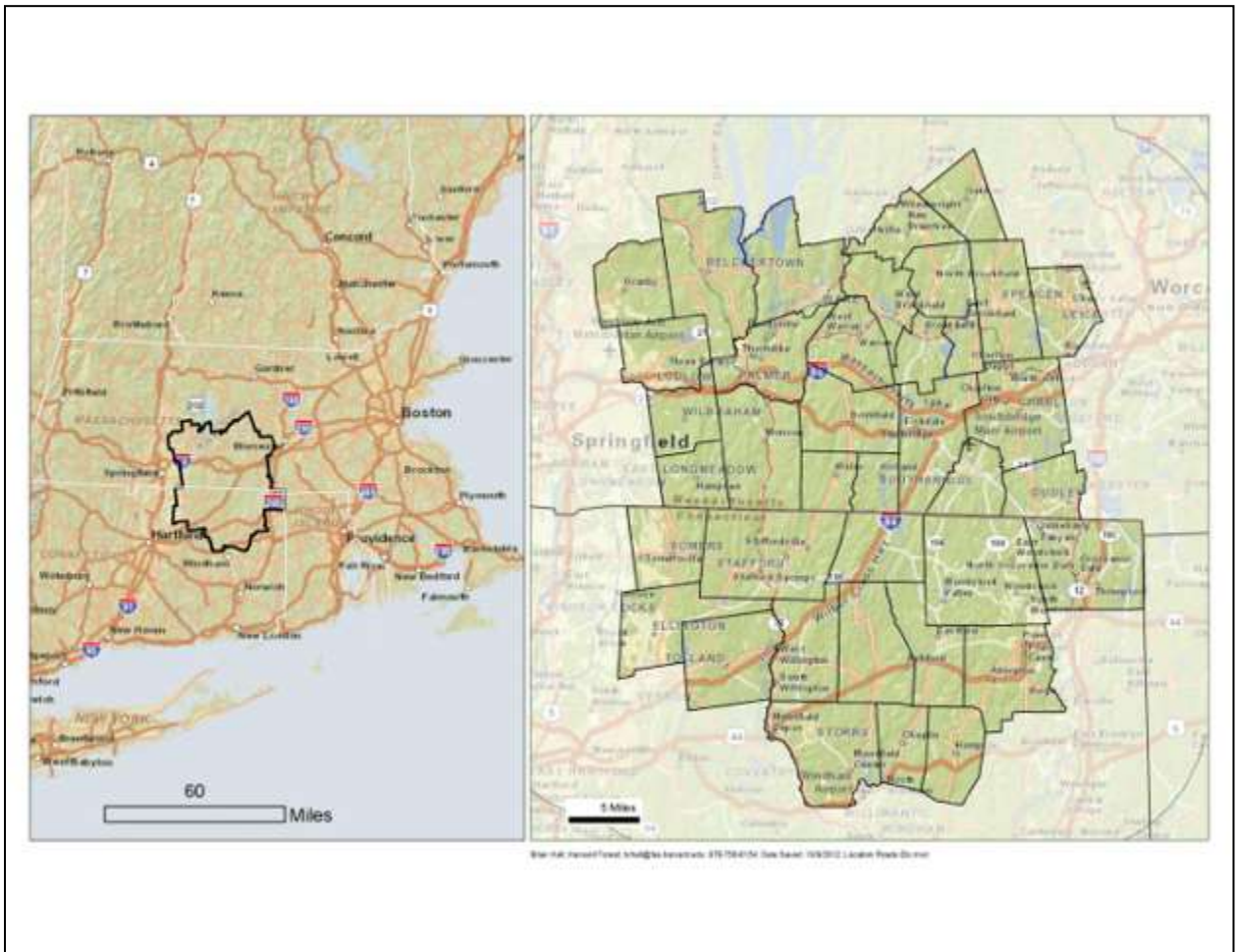
Appendix 4: MassConn Steering Committee List

- **Stephanie Clark** - Executive Director of Joshua's Tract Conservation and Historic Trust
- **Dan Donahue** - Director of Land Protection & Stewardship at the Norcross Wildlife Sanctuary and Foundation
- **Leslie Duthie** - Staff horticulturist at the Norcross Wildlife Sanctuary, chair of the Monson, MA Conservation Commission, Vice President of Opacum Land Trust
- **James Gage** - Treasurer at Northern Connecticut Land Trust
- **Cynthia Henshaw** - Executive Director at East Quabbin Land Trust
- **Bill Labich** - Regional Conservationist at Highstead
- **Lindsay Michel** - Land Conservation Director at Connecticut Forest & Park Association
- **Jennifer Ohop** - Staff Naturalist at the Norcross Wildlife Sanctuary and President of Opacum Land Trust

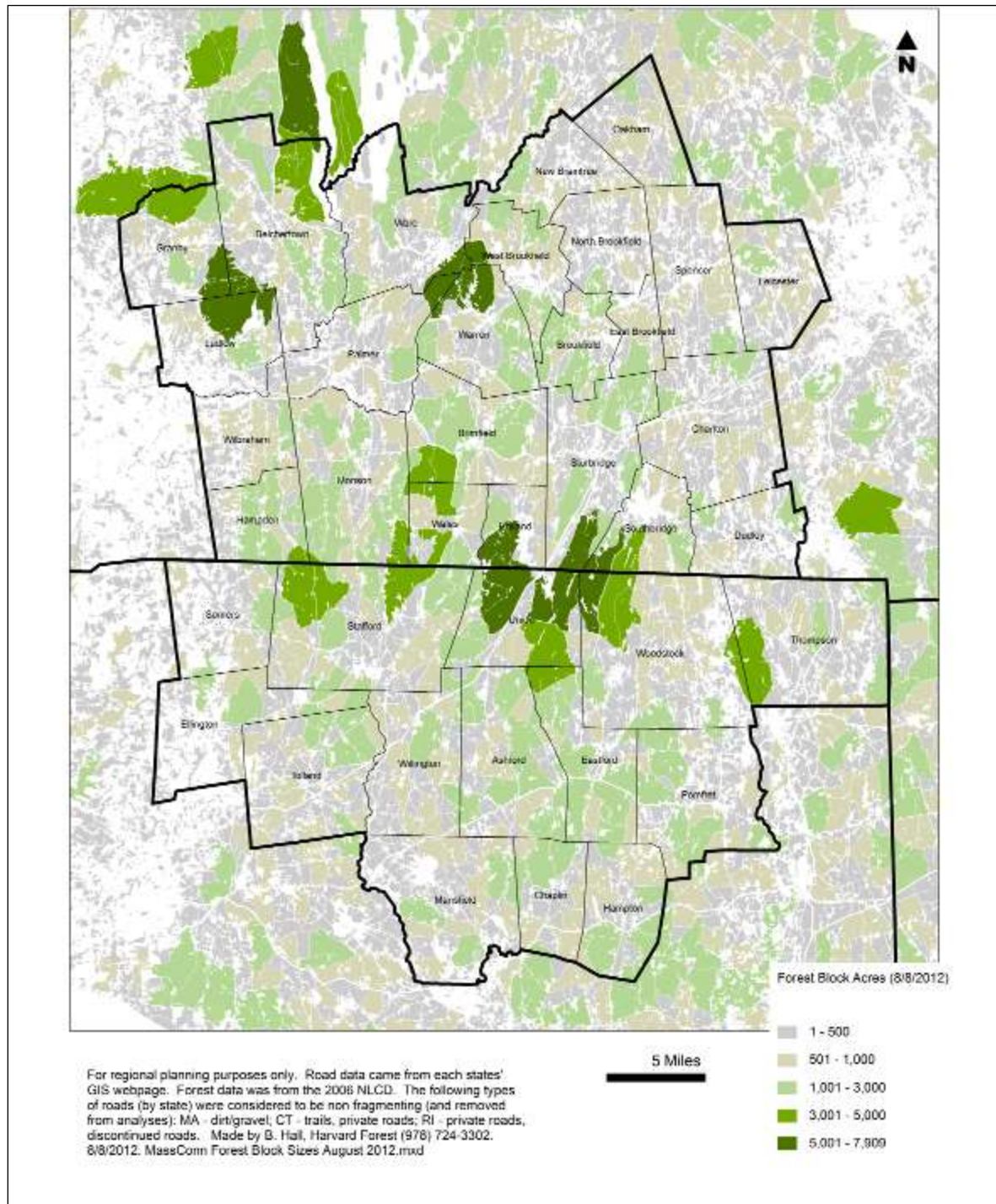
Appendix 5: Regional Conservation Partnerships (RCPs) of the Northeastern U.S.



Appendix 6: MassConn Boundary Map

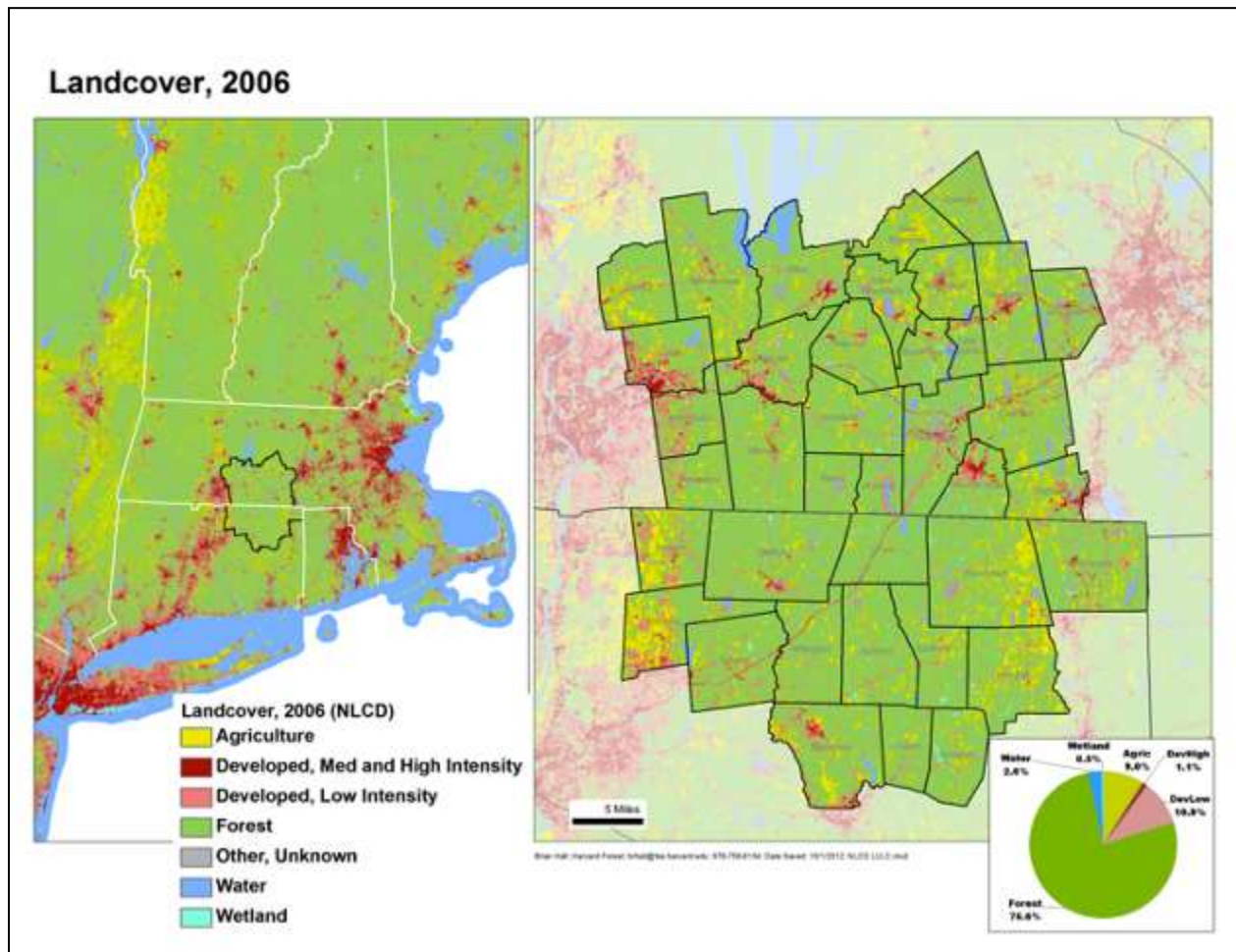


Appendix 7: Forest Blocks in MassConn Region

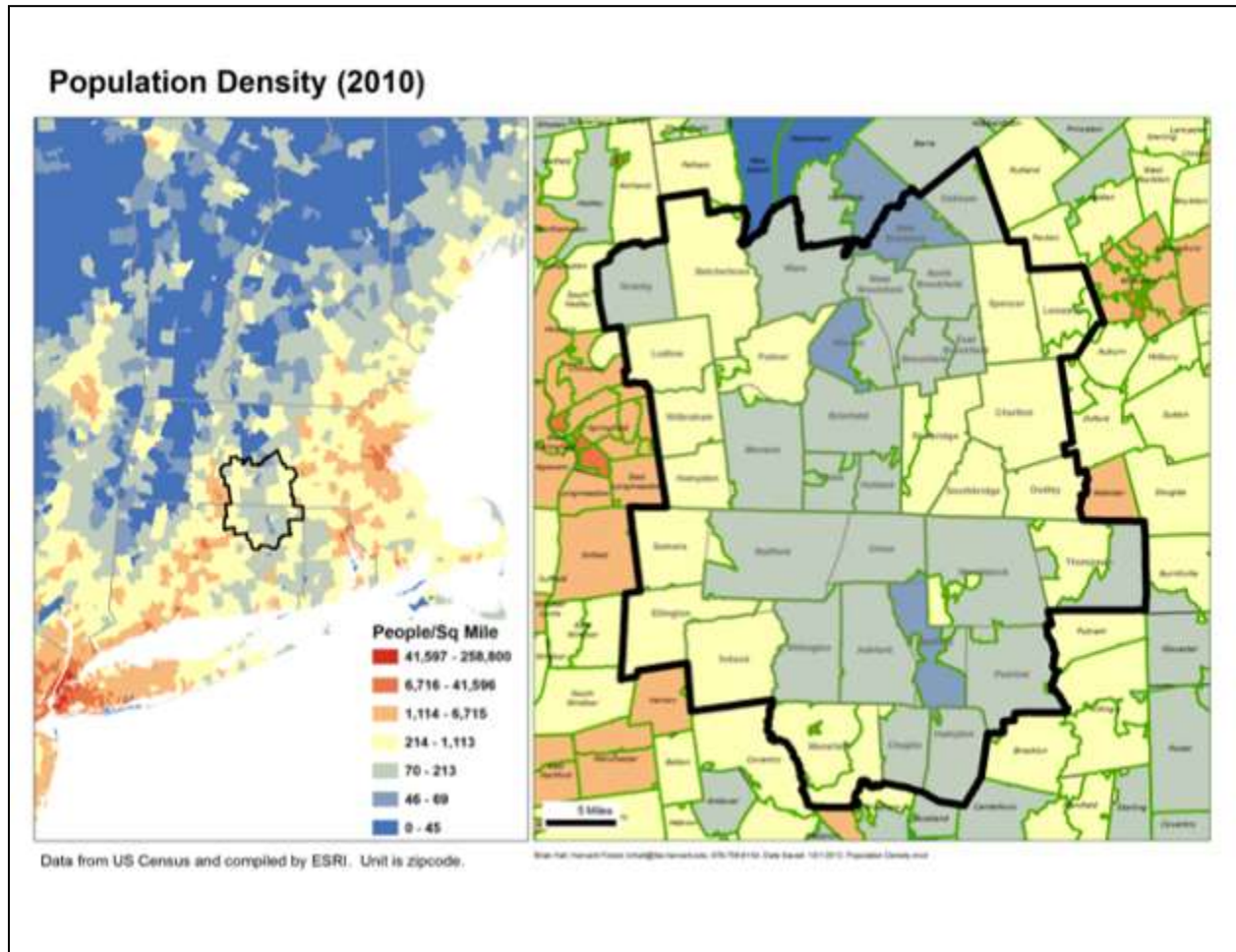


The majority (76.5%) of the MassConn region is forested. Most of this forest area is contained in large forest blocks, areas not intersected by paved roads. Many of these blocks are greater than 1,000 acres and some of the largest blocks, greater than 3,000 acres, are clustered along the Massachusetts-Connecticut border.

Appendix 8: Land Cover in MassConn Region

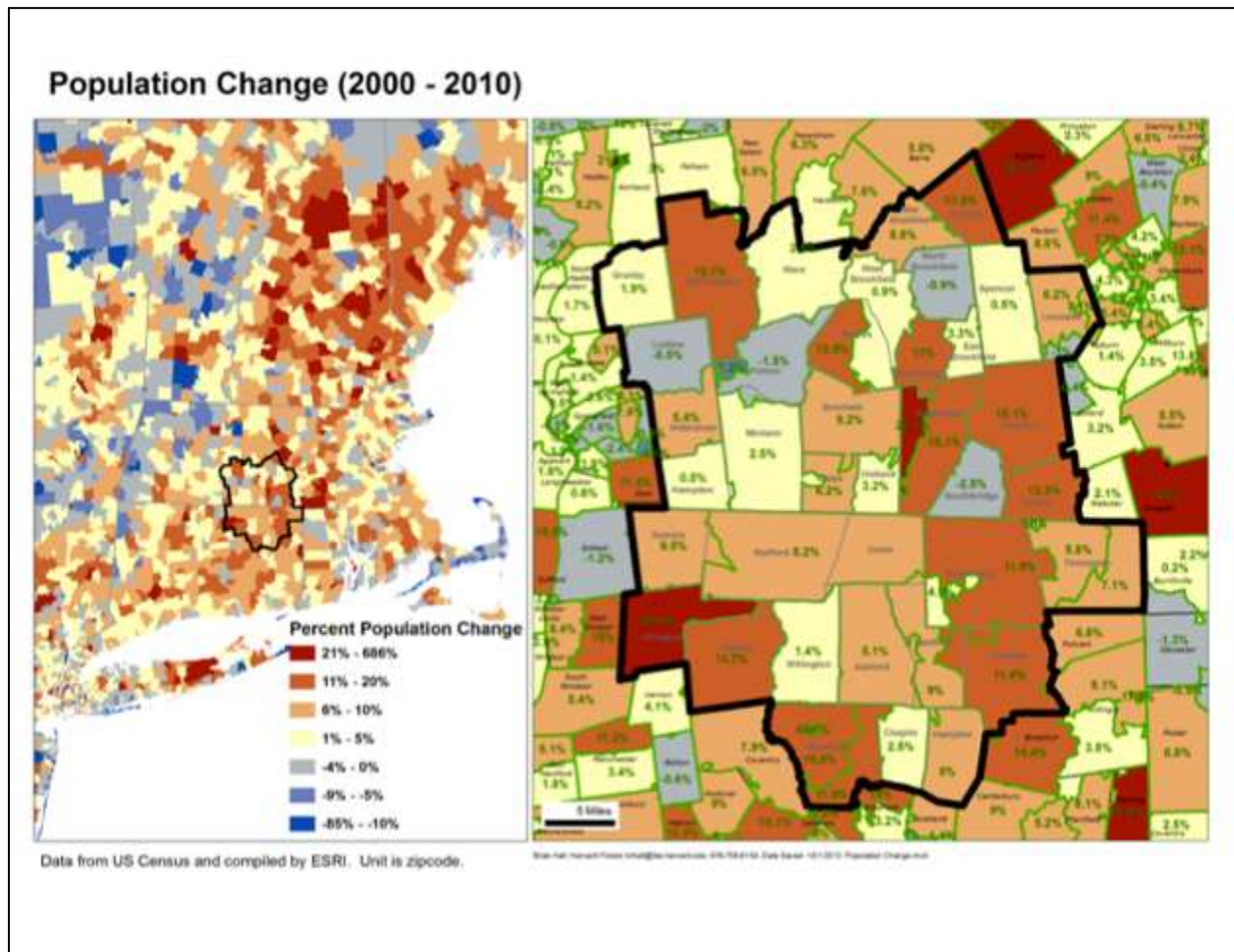


Appendix 9: Population Density in MassConn Region



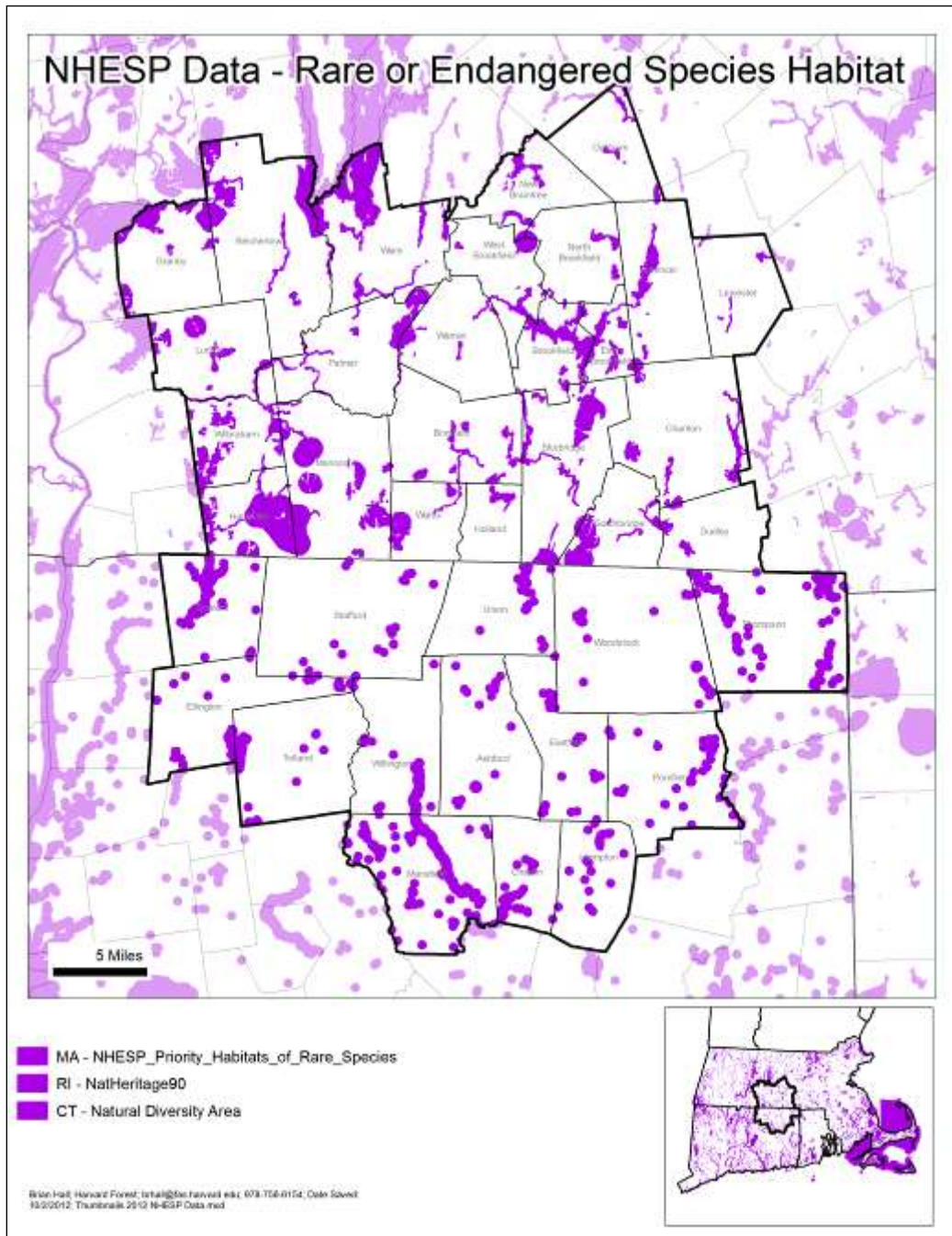
Overall, population density is low in the MassConn region, with a split between categories - about half the region is 214 to 1,113 people/square mile and the other half is 70 to 213 people/square mile.

Appendix 10: Population Change in the MassConn Region



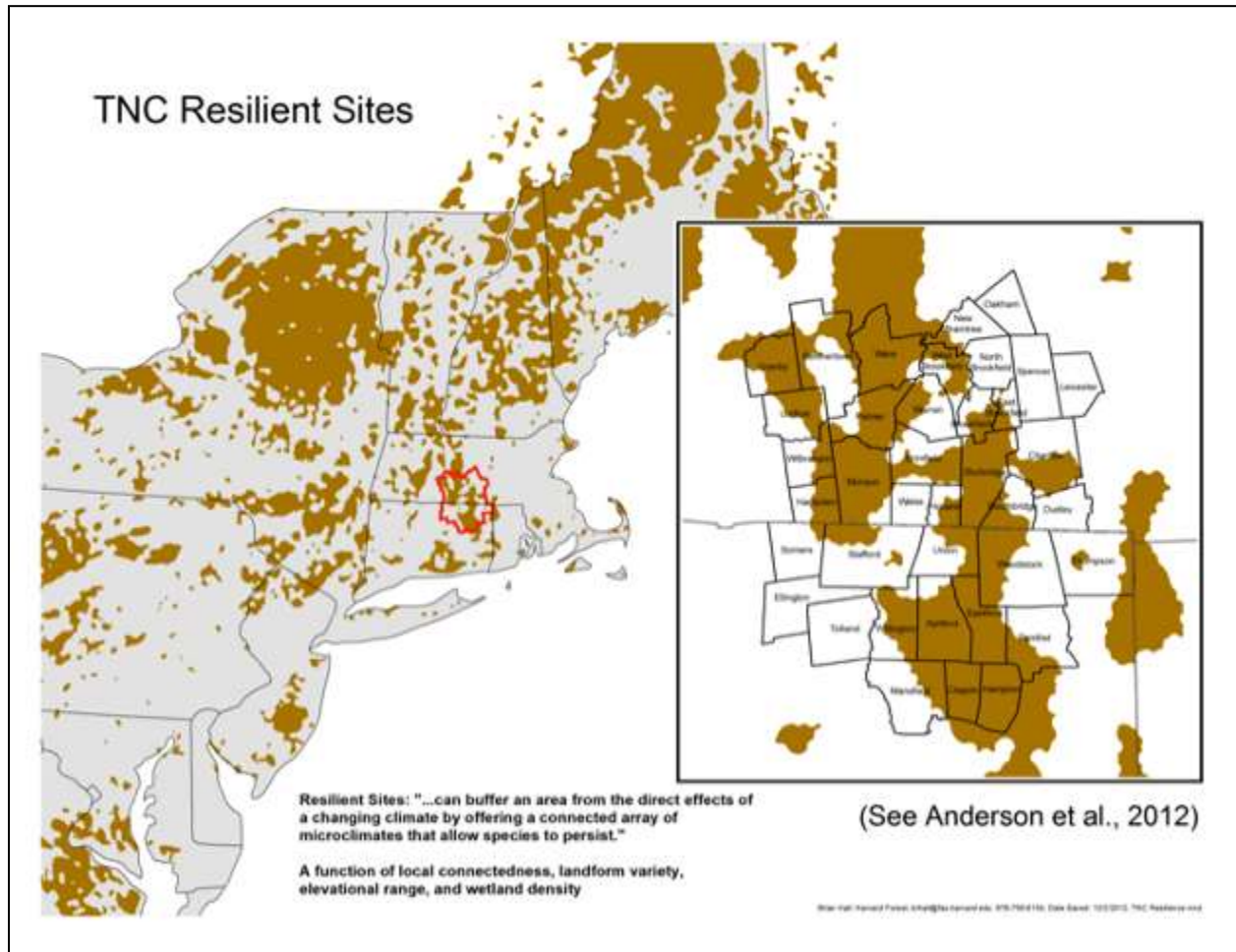
While population change is typical within the MassConn region, there are pockets that have experienced higher rates of population change.

Appendix 11: Natural Heritage within MassConn Region



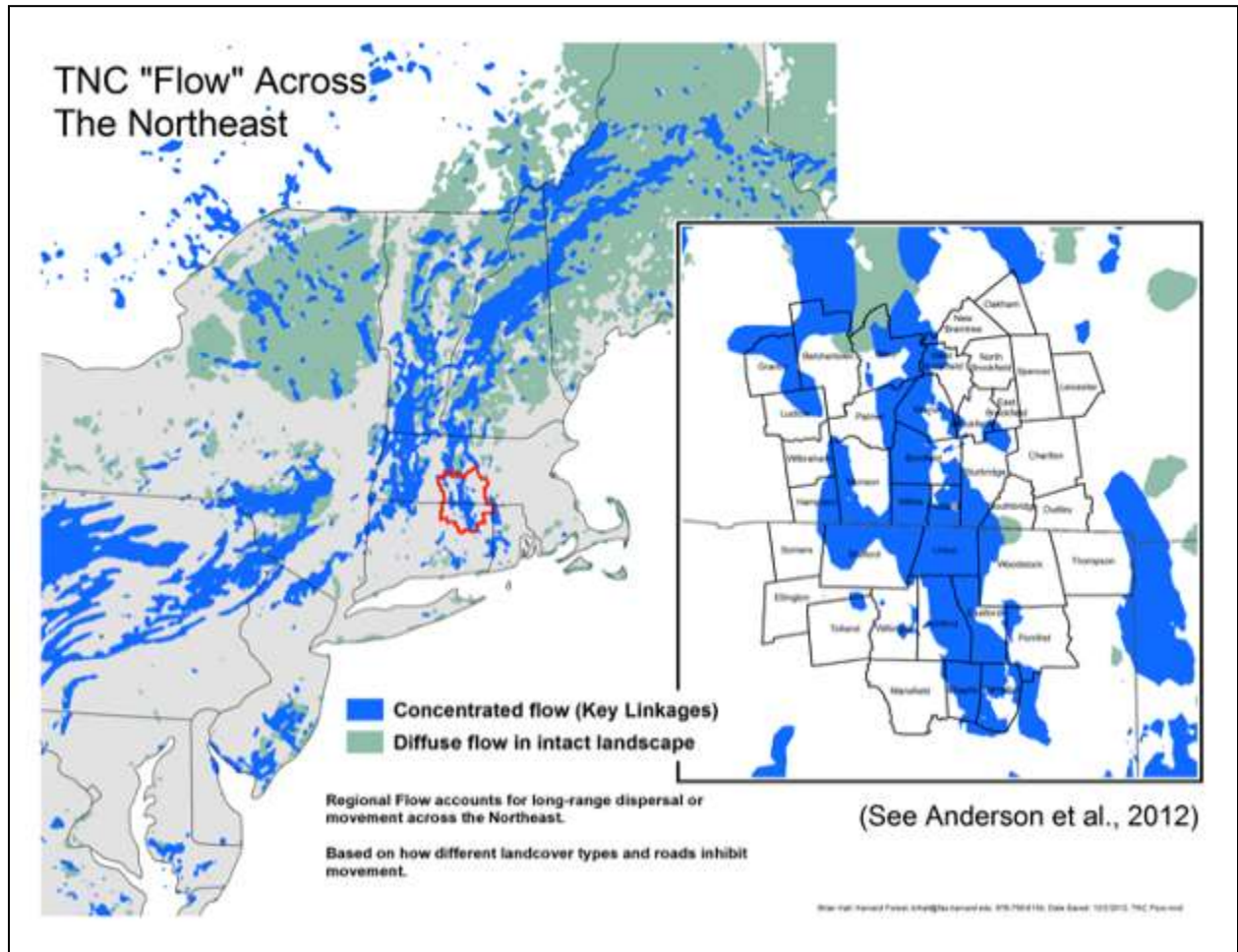
The region also contains a significant amount of core habitats and state-listed endangered and threatened species.

Appendix 12: TNC Resilient Sites in the MassConn Region



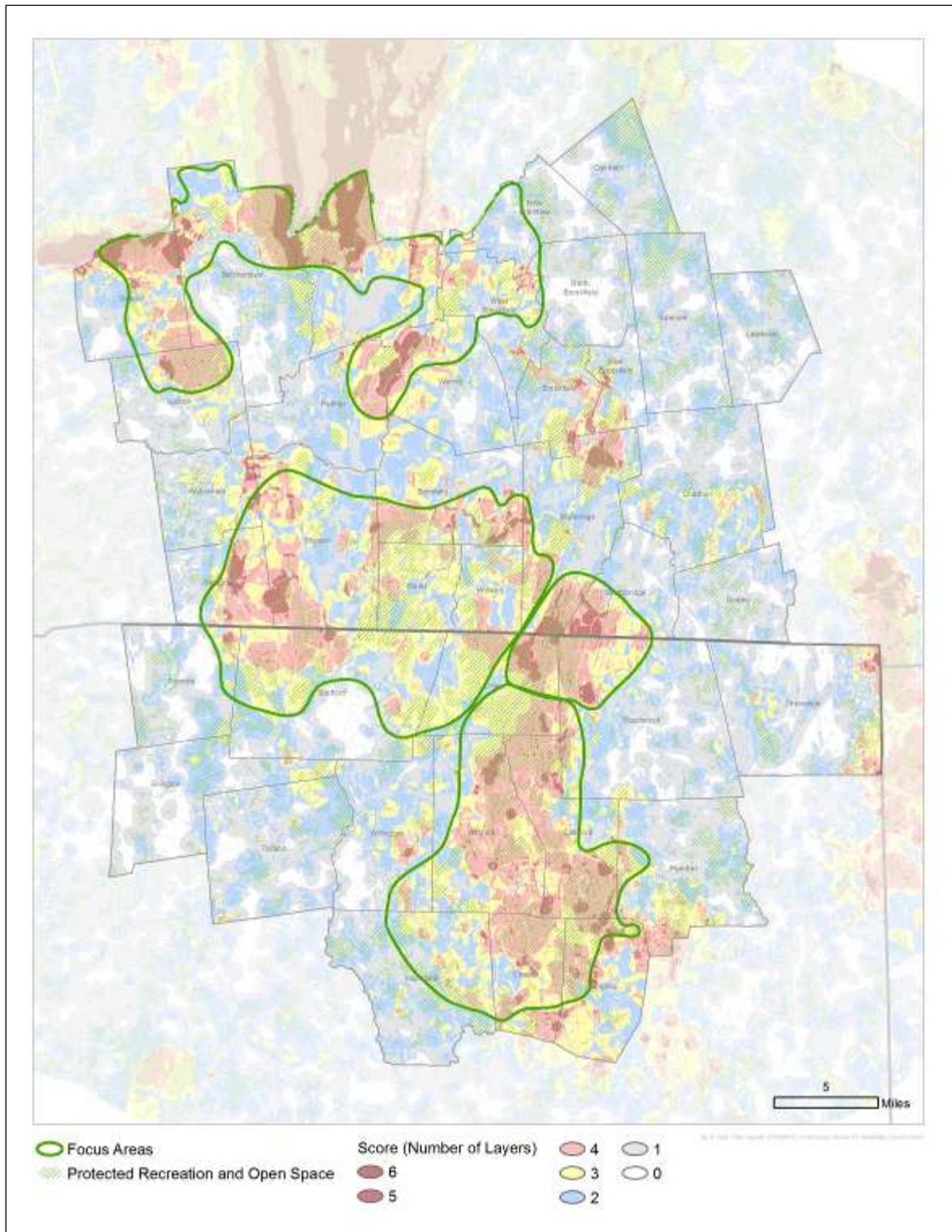
The MassConn region contains a significant portion of The Nature Conservancy's-identified resilient area which stress that nearly the entire region is estimated to be highly resilient in the face of climate change and as such remains an important corridor for species.

Appendix 13: TNC Flow Data in the MassConn Region



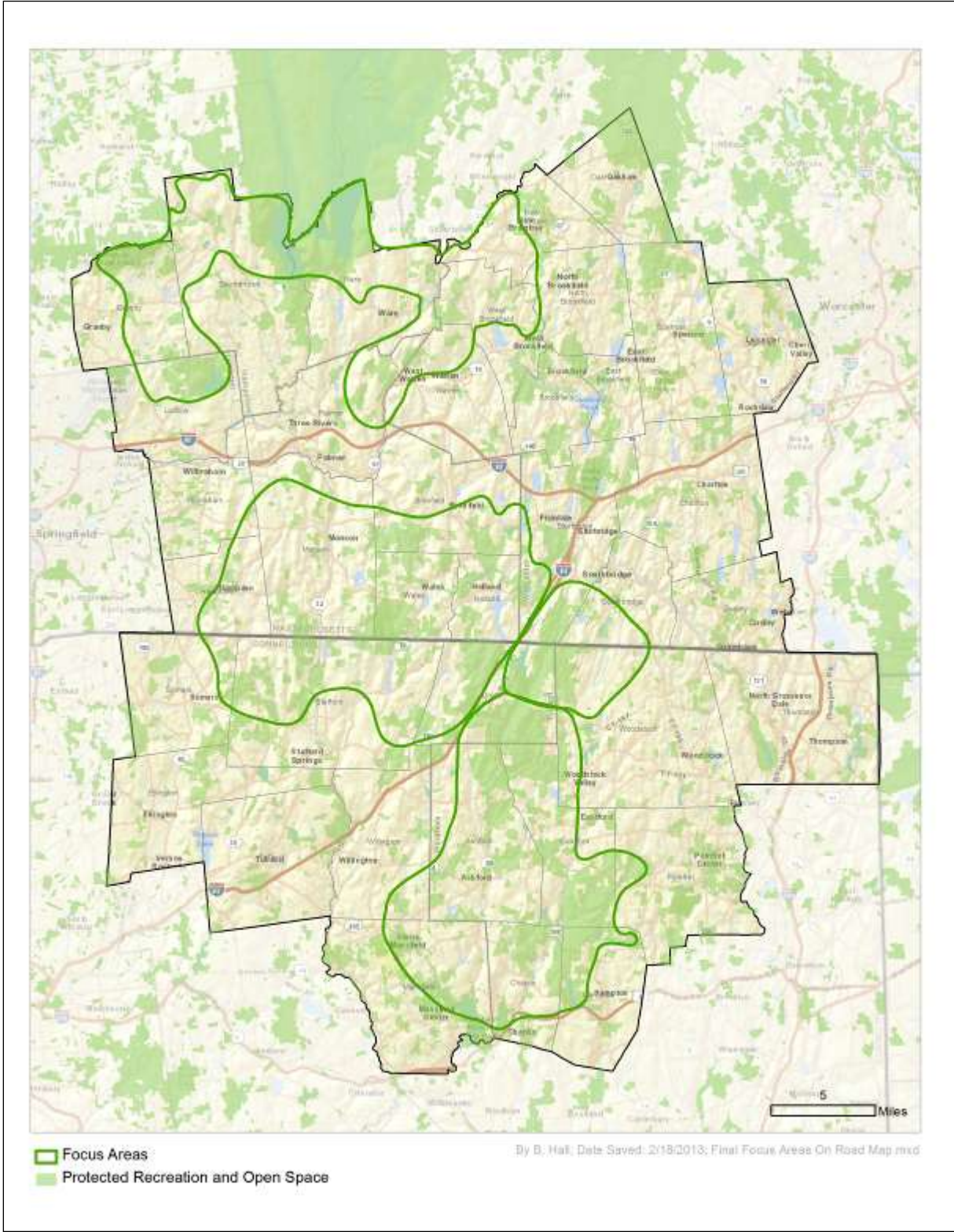
A major north-south corridor for wildlife species movement ("Area of Concentrated Flow") runs through the MassConn region. These corridors will be especially critical to protect as species and ecosystems respond to climate change.

Appendix 14: Valuation Score Map of MassConn Region and Focus Areas

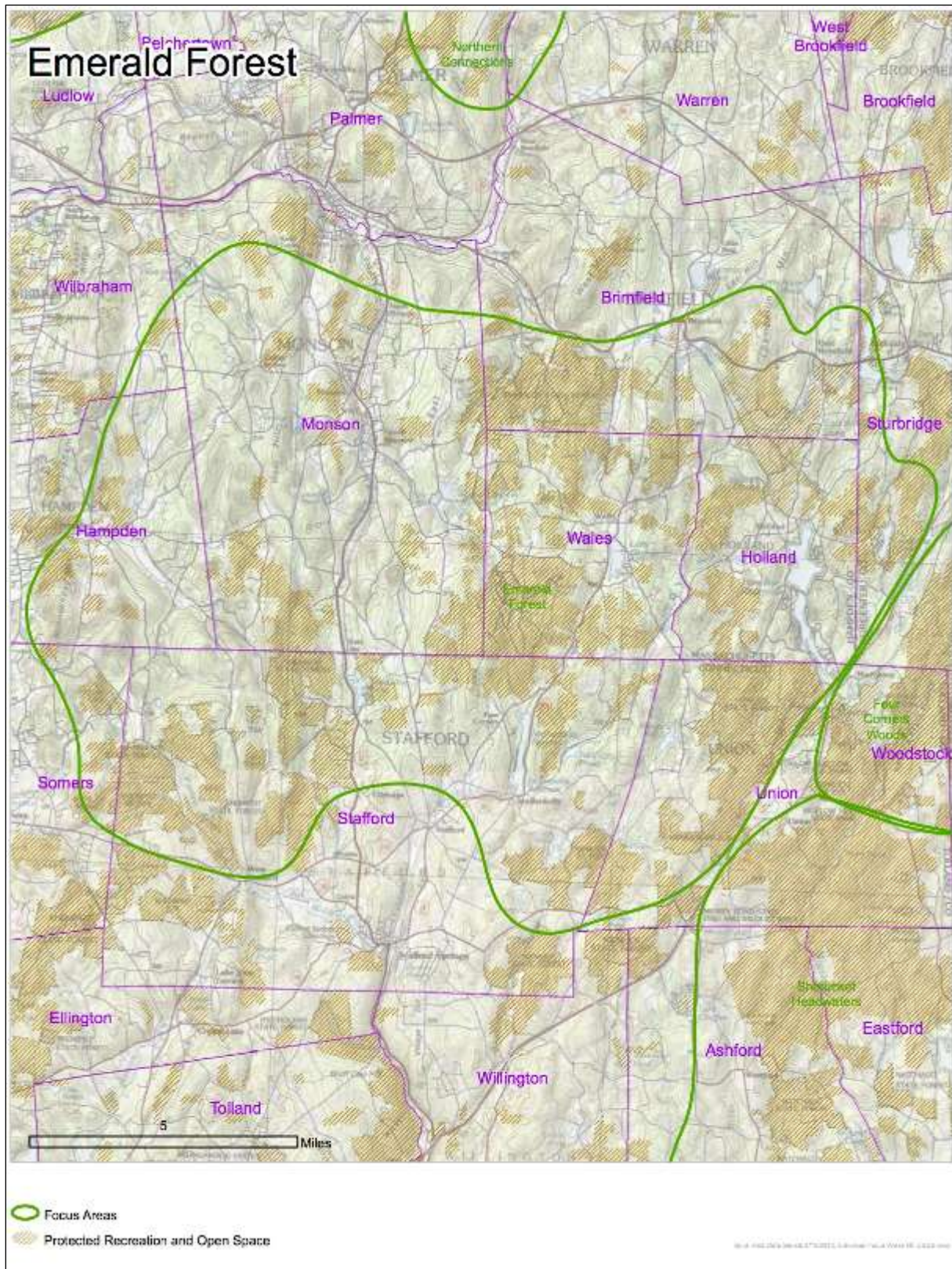


Following the Suitability Analysis, a final map (above) was made showing the conservation valuation scores along with current protected land and current developed land. Darker regions signify higher conservation scores and therefore areas of the highest priority to conserve.

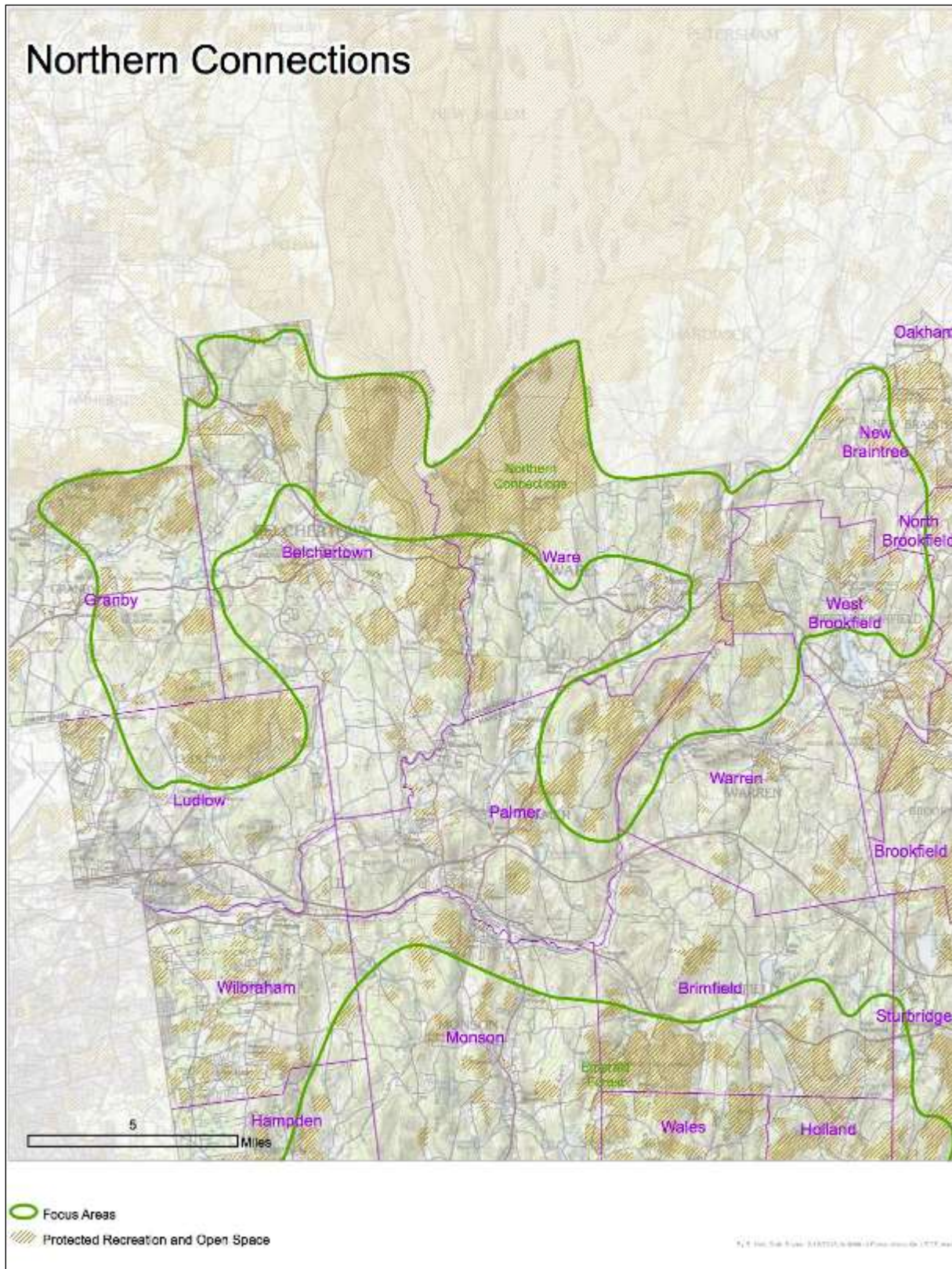
Appendix 15: Focus Areas in MassConn Region



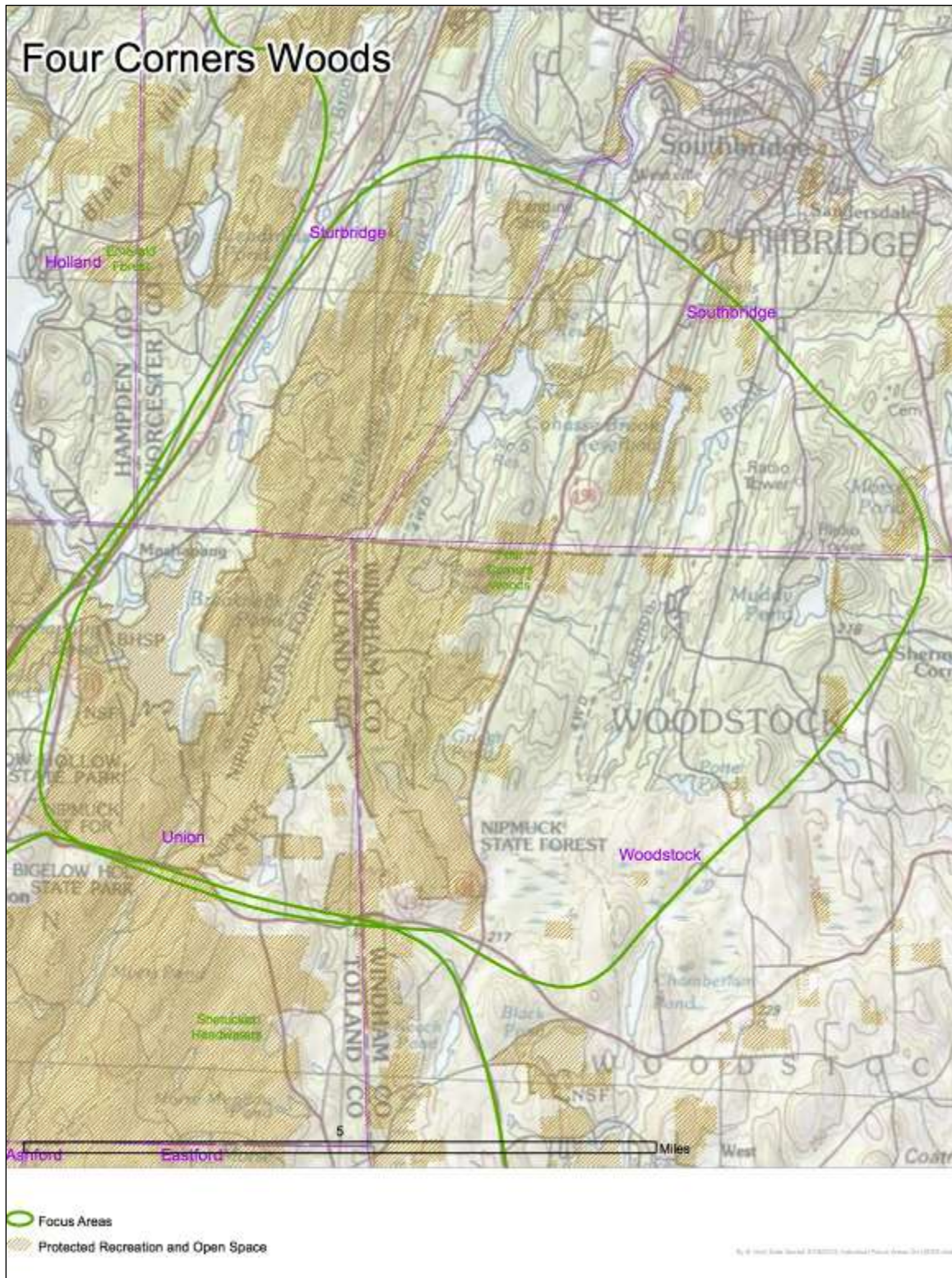
Appendix 16: Emerald Forest Focus Area Map



Appendix 17: Northern Connections Focus Area Map



Appendix 18: Four Corner Woods Focus Area Map



Appendix 19: Shetucket Headwaters Focus Area Map

