BioMap2

Guiding Land Conservation for Biodiversity in Massachusetts

Lanesborough

This report and associated maps provide information about important sites for biodiversity conservation in your area.

This information is intended for conservation planning, and is not intended for use in state regulations.

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BioMap2: Guiding Land Conservation for Biodiversity in Massachusetts

Lanesborough

Lanesborough is located in north-central Berkshire County, just north of Pittsfield. Most of the town falls within the Housatonic River watershed. The tributary streams of Town and Secum Brooks flow south through the town's central valley to enter Pontoosuc Lake near the town boundary with Pittsfield; from Pontoosuc Lake, the West Branch Housatonic River then flows south to join the East Branch in central Pittsfield. In a smaller valley in eastern Lanesborough, the headwaters of the Hoosic River flow north and collect in the Cheshire Reservoir before moving on downstream.

Lanesborough is part of three ecoregions (see Figure 1): the Taconic Mountains to the west, the Green Mountains and Berkshire Highlands to the east, and the Western New England Marble Valleys in the town's central valley. Both the Taconic and Green Mountain ranges are areas of higher elevations and steep topography with underlying metamorphic bedrock. They have colder climates and more acidic soils than the lowland marble valleys. The Taconic Mountains in western Lanesborough, along the town's border with Hancock, contain some of the highest elevations in the region, including Jiminy Peak, which rises to 2,392 feet. In the northeast are the lower slopes of Mount Greylock, the highest elevations of which lie further north in Adams and Williamstown.

With its close proximity to Pittsfield, Lanesborough has a higher population density than most towns in Massachusetts' portion of the Housatonic River watershed. The town lacks the industrial operations found in Pittsfield, but much of its central valley is still heavily developed. Land around Pontoosuc Lake and north along Main Street and Route 7 is residential and densely settled, and additional housing development is scattered throughout the valley. Commercial development is also significant – stores and businesses are concentrated near the village center and the large shopping complex of Berkshire Mall lies in southeast Lanesborough. Agricultural areas and open fields lie along the perimeters of many of these more heavily developed areas, stopping only at the base of the slopes of the Taconic Mountains and the Berkshires.

Despite the degree of development and human settlement in Lanesborough's valleys, the town supports a variety of uncommon and state-listed species and natural communities that are closely tied to its forested areas, streams, floodplains, and wetlands. Both Town Brook in central Lanesborough, which flows south to the West Branch Housatonic River, and the headwater reaches of

Lanesborough at a Glance

- Total area: 18,925 acres or 29.6 square miles
- Human Population in 2009: 2,851 people
- Open space protected in perpetuity: 4,557 acres, or 24.1% of total area*

BioMap2 Components

Core Habitat

- 8 Aquatic Cores: 175 acres
- 4 Forest Cores: 1,845 acres
- 2 Vernal Pool Cores: 127 acres
- 2 Wetland Cores: 21 acres
- 2 Priority Natural Communities: 37 acres

Species of Conservation Concern**

- 3 amphibians, 1 bird, 14 plants

Critical Natural Landscape

- 7 Upland Buffers of Aquatic Cores: 836 acres
- 3 Upland Buffers of Wetland Cores: 105 acres
- 3 Landscape Block: 8,830 acres

*calculated using MassGIS data layer "Protected and Recreational Open Space—November 2010"
**see next page for complete list of species, natural communities, and other biodiversity elements

Species of Conservation Concern, Priority and Exemplary Natural Communities, and Other Elements of Biodiversity in Lanesborough

Amphibians

Jefferson Salamander (*Ambystoma jeffersonianum*), Special Concern
Spring Salamander (*Gyrinophilus porphyriticus*), SWAP
Four-toed Salamander (*Hemidactylium scutatum*), SWAP

Birds

Mourning Warbler (*Oporornis philadelphia*), Special Concern

Plants

Barren Strawberry (*Waldsteinia fragarioides*), Special Concern
Bartram's Shadbush (*Amelanchier bartramiana*), Threatened
Comb Water-milfoil (*Myriophyllum verticillatum*), Endangered
Crooked-stem Aster (*Symphyotrichum prenanthoides*), Threatened
Dwarf Scouring-rush (*Equisetum scirpoides*), Special Concern
Fen Sedge (*Carex tetanica*), Special Concern
Intermediate Spike-sedge (*Eleocharis intermedia*) Threatened
Large-leaved Goldenrod (*Solidago macrophylla*), Threatened
Long-styled Sanicle (*Sanicula odorata*), Threatened
Northern Prickly Rose (*Rosa acicularis* ssp. *sayi*), Endangered
Purple Clematis (*Clematis occidentalis*), Special Concern
Schweinitz's Sedge (*Carex schweinitzii*), Endangered
Straight-leaved Pondweed (*Potamogeton strictifolius*), Endangered
Wapato (*Sagittaria cuneata*), Threatened

Priority Natural Communities

Black Ash – Red Maple – Tamarack Calcareous Seepage Swamp (Imperiled)
Rich, Mesic Forest (Vulnerable)

Other BioMap2 Components

Aquatic Cores, Forest Cores, Wetland Cores
Landscape Blocks
Upland Buffers of Aquatic Cores
Upland Buffers of Wetland Cores
Vernal Pool Cores

the Hoosic River in the east part of town, are part of the calcareous lowlands of the Western New England Marble Valleys ecoregion and are noteworthy for their biodiversity value. This is one of the most distinct and biologically rich ecoregions, both in Massachusetts and throughout New England, stretching from northwest Connecticut up through sections of the Hudson River and Lake Champlain watersheds. The marble valleys support an impressively high percentage of Massachusetts' state-listed species and natural communities, some of which are restricted to the ecoregion while others are more widespread. In Lanesborough, the valleys support uncommon plant species, like Barren Strawberry and Crooked-stem Aster, which require rich soils to grow. State-listed aquatic plants like the Comb Water-milfoil grow in reservoirs along the upper reaches of the Hoosic River, and uncommon natural communities such as the Rich, Mesic Forests found in northern Lanesborough near Town Brook are also characteristic of the marble valleys. In this community, soils are both moist and rich in essential nutrients, particularly calcium, and support a great diversity of fern, sedge, lily, and buttercup species, as well as many worms and snails.

Some state-listed species are found at higher elevations, along the margins of the marble valleys or within the highlands. Along the slopes of Mount Greylock, the perching bird Mourning Warbler nests in open areas of forests. Jefferson Salamanders are found in many locations throughout western Lanesborough, usually near vernal pools in the vicinity of Secum and Daniels Brooks. The Spring Salamander also occurs here; it is typically found at high elevations along steep headwater streams.

BIODIVERSITY CONSERVATION TARGETS IN THE TOWN OF LANESBOROUGH: CORE HABITAT, CRITICAL NATURAL LANDSCAPE, AND PRIORITY CONSERVATION AREAS

Overview

In this section, we outline areas in Lanesborough that warrant special focus of conservation efforts locally, regionally, and throughout the state. Components of the Natural Heritage & Endangered Species Program's (NHESP's) statewide BioMap2 project, which incorporates NHESP data and includes findings of studies funded by the Natural Resource Damages Assessment and Restoration Program (NRD) conducted in 2008 and 2009 as part of its Core Habitat and Critical Natural Landscape, were used to delineate and map these areas. The areas range in size from fewer than 10 acres to several thousand acres. Areas of Core Habitat, each called a BioMap2 Core (BC), and areas of Critical Natural Landscape (CNL), along with their associated components, are illustrated in Figure 2 and outlined in detail below. BioMap2 components described in this report are those that occur only in Lanesborough, although a given area of Core Habitat or Critical Natural Landscape listed here may extend outside of the town boundaries of Lanesborough and contain additional components.

To facilitate land protection and stewardship, NHESP further prioritized areas in each of the towns in the watershed using habitat size, habitat conditions, and other biodiversity indicators. Priority Conservation Areas (PCAs) were considered to be of high biodiversity value if they

Biodiversity Studies in Massachusetts and the Housatonic River Watershed

BioMap2 is a statewide biodiversity conservation plan produced in 2010 by MassWildlife's Natural Heritage & Endangered Species Program and The Nature Conservancy. It is designed to guide strategic biodiversity conservation in Massachusetts over the next decade by focusing land protection and stewardship on the areas that are most critical for ensuring the long-term persistence of rare and other native species and their habitats, Priority Natural Communities, and a diversity of ecosystems. BioMap2 is also designed to include the habitats and Species of Conservation Concern identified in the State Wildlife Action Plan (SWAP).

BioMap2 identifies two complementary spatial layers, Core Habitat and Critical Natural Landscape. Core Habitat identifies key areas that are critical for the long-term persistence of rare species and other Species of Conservation Concern, as well as a wide diversity of natural communities and intact ecosystems across the Commonwealth. Protection of Core Habitats will contribute to the conservation of specific elements of biodiversity. Critical Natural Landscape identifies large Landscape Blocks that are minimally impacted by development. If protected, these areas will provide habitat for wide-ranging native species, support intact ecological processes, maintain connectivity among habitats, and enhance ecological resilience to natural and anthropogenic disturbances in a rapidly changing world. Areas delineated as Critical Natural Landscape also include buffering upland around wetland, coastal, and aquatic Core Habitats to help ensure their long-term integrity.

In 2008 and 2009, field surveys were carried out to improve knowledge of the region's biodiversity resources in towns in the Housatonic River watershed in western Massachusetts. During these surveys, coordinated by the Natural Heritage and Endangered Species Program (NHESP) with funds from the Natural Resources Damage Assessment and Restoration (NRD) Program, researchers collected important information about state-listed species and Priority Natural Communities of 19 towns in the region. Surveys were conducted by NHESP staff, expert consultants, academic researchers, and graduate students. Information on the surveys' findings was added to the NHESP database, combined with other NHESP data, and incorporated into Core Habitat of BioMap2. BioMap2 data layers, complete with these data and other information, are now available for use in conservation planning at the town, regional, and state levels.

contained concentrations of state-listed species or Priority Natural Communities, or large areas of intact habitat. In each town, a total of one to six Town PCAs were selected. Each Town PCA contains part of at least one BioMap2 Core. Lanesborough has six Town PCAs. Figure 3 illustrates how its BioMap2 Core Habitat and Critical Natural Landscape relate to the distribution of Town PCAs.

A larger scale prioritization was also conducted to select Regional PCAs of the highest conservation and stewardship value among all towns in Massachusetts' portion of the Housatonic River watershed. Regional PCAs often cross town boundaries and are quite large, ranging from 373 acres to more than 25,000 acres. Ecological connectivity within these Regional PCAs is important to biodiversity conservation, and these large units often include select Town PCAs that are of particular biodiversity value to both the town and the region. In this way, biodiversity can be conserved at two scales: locally within each town, as well as within a broader regional context. Regional PCA 7, which also covers parts of Hancock and western Pittsfield, includes the area in western Lanesborough designated as Town PCA 5 and TownPCA 6.

Core Habitat and Critical Natural Landscape Components in Lanesborough

Areas of Core Habitat in Lanesborough, called BioMap2 Cores (BCs), are summarized here. Also described are the various components of each BC, which may include Species of Conservation Concern, Exemplary and Priority Natural Communities, and Aquatic, Forest, Vernal Pool, or Wetland Cores. Components of Critical Natural Landscape (CNL) associated with each BC are also provided. These include Upland Buffers of both Aquatic and Wetland Cores, as well as Landscape Blocks.

BC2276, CNL1067, and CNL1068

BC2276 lies just northwest of the Berkshire Mall in the headwaters of the Hoosic River, upstream of the Cheshire Reservoir. It includes headwater streams and associated Aquatic Core, as well as wetlands. West of Swamp Road it is surrounded by an Upland Buffer of CNL1068. East of Swamp Road it is surrounded by an Upland Buffer of CNL1067. BC2276 supports several state-listed plants that are associated with wetlands, and one Priority Natural Community:

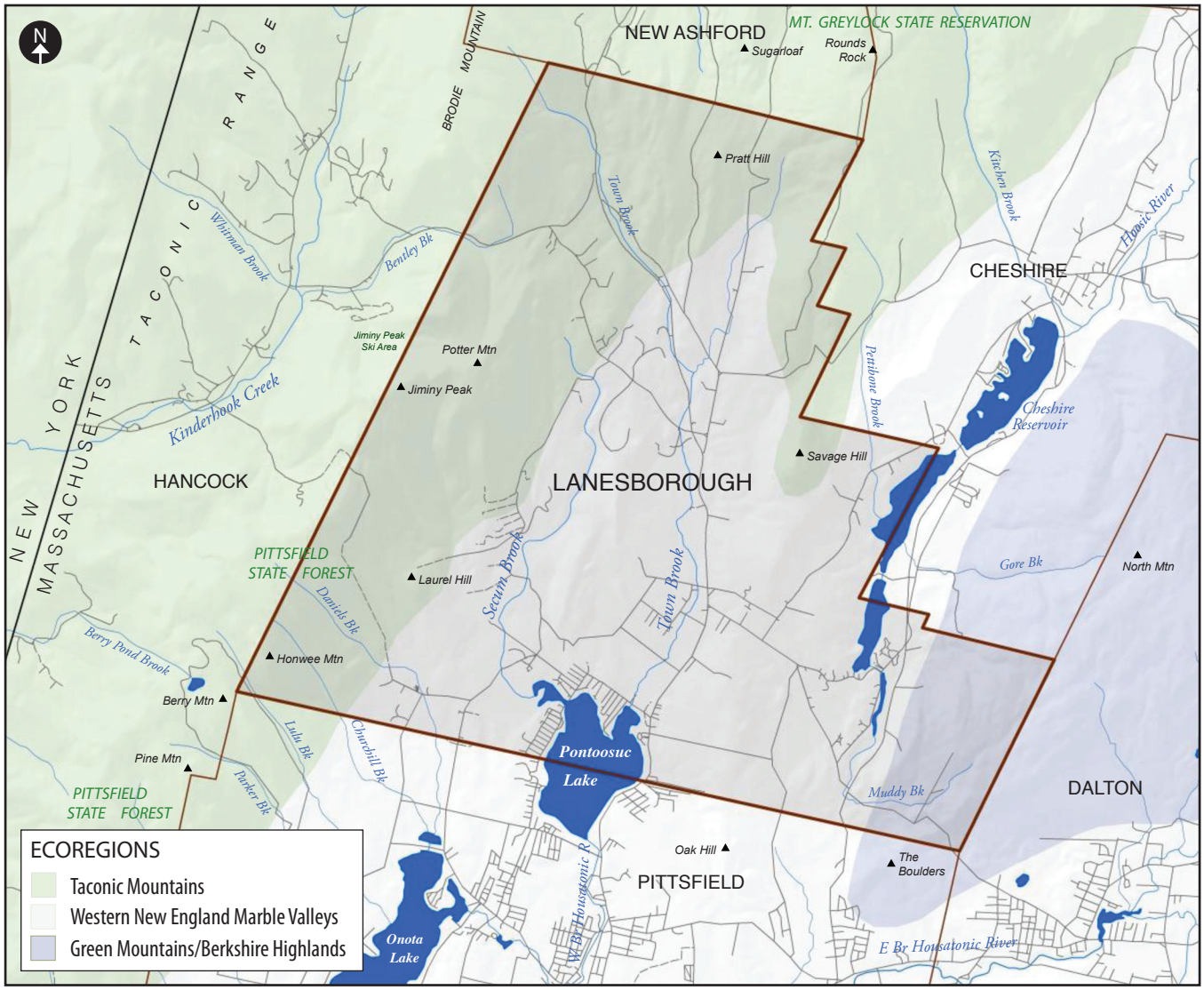


Figure 1. Town boundaries of Lanesborough, Massachusetts. Lanesborough lies within the Berkshire Highlands, Western New England Marble Valleys, and Taconic Mountains ecoregions. Much of the town contains headwaters of the Housatonic River, which flows to the south, and other parts contain headwaters of the Hudson River, which flows to the north and west.

Plants

Barren Strawberry (*Waldsteinia fragarioides*), Special Concern: This plant is a short herbaceous perennial that occurs on rich soils near streams in a variety of forest types.

Bartram's Shadbush (*Amelanchier bartramiana*), Threatened: This species is a northern shrub that thrives in mountain thickets and on steep, wooded rocky slopes.

Dwarf Scouring-rush (*Equisetum scirpoides*), Special Concern: This perennial, evergreen fern-ally grows in the herbaceous layer in a variety of cool, usually wet habitats, including hummocks in swamps, moist stream banks, and seepy areas under conifers.

Fen Sedge (*Carex tetanica*), Special Concern: This narrow-leaved perennial sedge grows in open calcareous fens.

Intermediate Spike-sedge (*Eleocharis intermedia*), Threatened: This densely tufted, grass-like annual is found on muddy, alkaline riverbanks and pond shores, usually seen during periods of low water when mud is exposed.

Schweinitz's Sedge (*Carex schweinitzii*), Endangered: This soft-stemmed, yellow-green, grass-like perennial occurs in open, seepy calcareous wetlands.

Wapato (*Sagittaria cuneata*), Threatened: In Massachusetts, Wapato is primarily found in a variety of settings within riverine floodplain habitats, including alkaline backwaters, oxbow ponds, and small shallow depressions with muddy substrates. Wapato particularly favors stagnant or very slow-moving water.

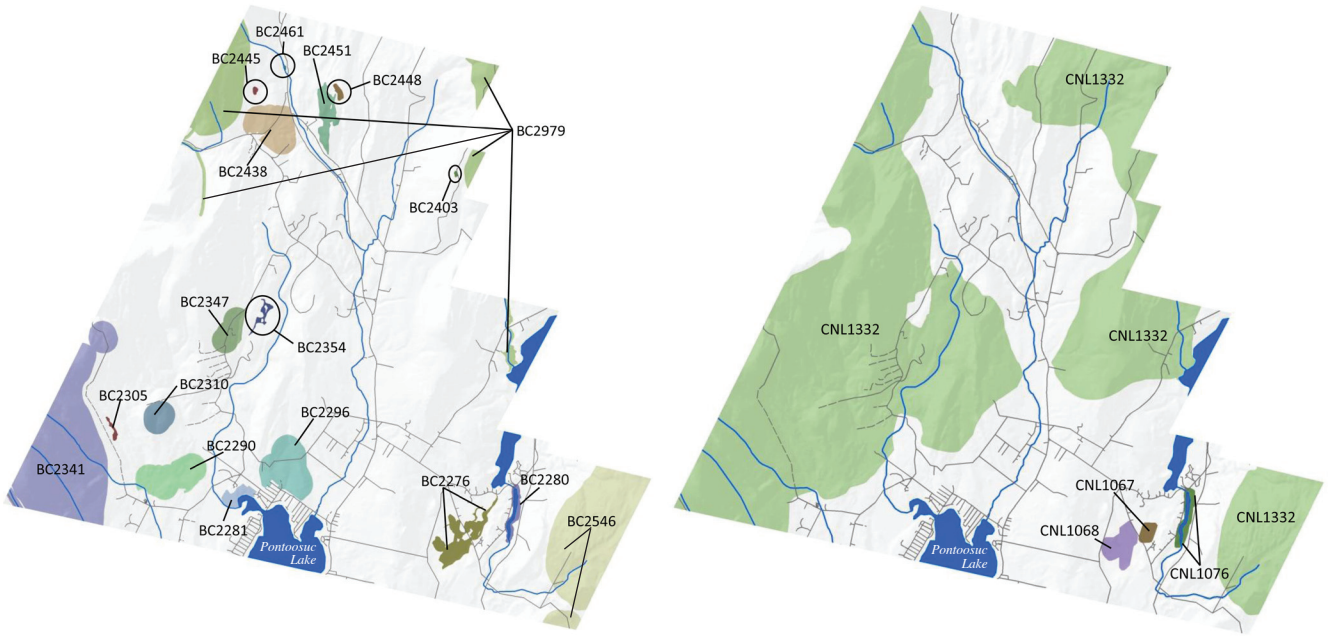


Figure 2. Lanesborough includes a total of 18 BioMap2 Cores (BCs; left) and four areas of Critical Natural Landscape (CNL; right). Overlap between Core Habitat and Critical Natural Landscape is shown in Figure 3.

Priority Natural Community

Black Ash – Red Maple – Tamarack Calcareous Seepage Swamp (Imperiled): This is a mixed deciduous-coniferous forested swamp found in areas with calcium-rich groundwater seepage. The nutrient enrichment supports many uncommon, calcium-loving plant species. The moderate-sized example of Black Ash – Red Maple – Tamarack Calcareous Seepage Swamp in this core is in good condition, with minimal invasive species present.

BC2280 and CNL1076

BC2280 consists of a 39-acre Aquatic Core associated with Berkshire Pond, a small impoundment of the Hoosic River located upstream of Cheshire Reservoir and northeast of the Berkshire Mall. It is surrounded by an Upland Buffer of CNL1076 and supports two state-listed plant species:

Comb Water-milfoil (*Myriophyllum verticillatum*), Endangered: This aquatic plant grows underwater in shallow, still, and alkaline lakes and ponds.

Straight-leaved Pondweed (*Potamogeton strictifolius*), Endangered: This slender aquatic annual grows underwater, rooted in the substrate of shallow, alkaline ponds.

BC2281 (no CNL)

BC2281 is a 35-acre core that borders Pontoosuc Lake to the northwest. It supports a population of one state-listed amphibian species.

Jefferson Salamander (*Ambystoma jeffersonianum*), Special Concern: This salamander inhabits upland forests during most of the year, where it resides in small-mammal burrows and other subsurface retreats. Adults migrate during late winter or early spring to breed in vernal pools and fish-free areas of swamps, marshes, or similar wetlands. Larvae metamorphose in late summer or early fall, then disperse into upland forest.

BC2290 and CNL1332

BC2290 is over 150 acres and lies mostly within Balance Rock State Park and Pittsfield State Forest near the base of the Taconic Mountains, along the perimeter of developed areas west of Pontoosuc Lake. It includes two Vernal Pool Cores where salamanders can find breeding habitat, and falls partly within a Landscape Block of CNL1332.

Jefferson Salamander (*Ambystoma jeffersonianum*), Special Concern: This salamander inhabits upland forests during most of the year, where it resides in small-mammal burrows and other subsurface retreats. Adults migrate during late winter or early spring to breed in vernal pools and fish-free areas of swamps, marshes, or similar wetlands. Larvae metamorphose in late summer or early fall, then disperse into upland forest.

BC2296 and CNL1332

BC2296 falls within a small, forested area in the midst of residential development near the outlet of Pontoosuc

Lake, and supports a state-listed salamander species. It partly overlaps CNL1332's Landscape Block.

Jefferson Salamander (*Ambystoma jeffersonianum*), Special Concern: This salamander inhabits upland forests during most of the year, where it resides in small-mammal burrows and other subsurface retreats. Adults migrate during late winter or early spring to breed in vernal pools and fish-free areas of swamps, marshes, or similar wetlands. Larvae metamorphose in late summer or early fall, then disperse into upland forest.

BC2305 and CNL1332

BC2305 includes a small, 6.5-acre Wetland Core along Potter Mountain Road, and is surrounded by an Upland Buffer and lies within a Landscape Block of CNL1332.

BC2310 and CNL1332

BC2310 provides habitat for a state-listed salamander and is part of a Landscape Block of CNL1332.

Jefferson Salamander (*Ambystoma jeffersonianum*), Special Concern: This salamander breeds in vernal pools and fish-free areas of open water in marshes. Young spend their early lives in vernal pools, safe from predation, and adults live primarily in upland forest areas.

BC2341 and CNL1332

BC2341 is a large core that lies primarily in the mountains of southern Hancock, but which also includes areas in Pittsfield, Richmond, and Lanesborough. It supports a variety of important biodiversity elements characteristic of highland areas near the Housatonic River. It is heavily forested, and has a large area of Forest Core and many Wetland Cores. In Lanesborough, it includes over 800 acres of Forest Core and incorporates Aquatic Core along Daniels and Churchill Brooks. BC2341 is associated with an Upland Buffer and large Landscape Block of CNL1332. It supports two uncommon salamander species:

Jefferson Salamander (*Ambystoma jeffersonianum*), Special Concern: This salamander inhabits upland forests during most of the year, where it resides in small-mammal burrows and other subsurface retreats. Adults migrate during late winter or early spring to breed in vernal pools and fish-free areas of swamps, marshes, or similar wetlands. Larvae metamorphose in late summer or early fall, then disperse into upland forest.

Spring Salamander (*Gyrinophilus porphyriticus*), SWAP: Spring Salamanders inhabit clean, cold, high-gradient brooks and headwater seeps in forest habitat, usually at elevations above 300 feet. Larvae are entirely aquatic and largely nocturnal, spending daylight hours buried below the streambed or hidden under stones. Adults are semi-aquatic and spend most of their time under cover objects along the margins of brooks, springs, and seeps; however, they will venture into upland forest during rainy weather.

BC2347 and CNL1332

BC2347 is an 87-acre core that falls along Silver Street, lies within a Landscape Block of CNL1332, and supports a state-listed salamander species:

Jefferson Salamander (*Ambystoma jeffersonianum*), Special Concern: This salamander inhabits upland forests during most of the year, where it resides in small-mammal burrows and other subsurface retreats. Adults migrate during late winter or early spring to breed in vernal pools and fish-free areas of swamps, marshes, or similar wetlands. Larvae metamorphose in late summer or early fall, then disperse into upland forest.

BC2354 and CNL1332

BC2354 consists of a Wetland Core near Secum Brook in central Lanesborough. It is surrounded by an Upland Buffer and within the Landscape Block of CNL1332.

BC2403 and CNL1332

BC2403 is a 1.4-acre core in the Mount Greylock State Reservation in northeast Lanesborough. The core is embedded in CNL1332's Landscape Block.

Mourning Warbler (*Oporornis philadelphia*), Special Concern: This perching bird nests in brushy patches within higher elevation forests. Early successional habitat resulting from the disturbance of forest structure, such as blowdowns or logging, is important for this species.

BC2438 and CNL1332

BC2438 is a 163-acre core that lies just west of Town Brook, near the base of Mount Brodie, in northwestern Lanesborough. It supports state-listed amphibian and plant species. A small part of the core is part of CNL1332's Landscape Block.

Plants

Long-styled Sanicle (*Sanicula odorata*), Threatened: This perennial herbaceous plant is found in a variety of deciduous forest types, usually on mesic slopes in stream valleys or along lake margins.

Amphibians

Jefferson Salamander (*Ambystoma jeffersonianum*), Special Concern: This salamander inhabits upland forests dur-

ing most of the year, where it resides in small-mammal burrows and other subsurface retreats. Adults migrate during late winter or early spring to breed in vernal pools and fish-free areas of swamps, marshes, or similar wetlands. Larvae metamorphose in late summer or early fall, then disperse into upland forest.

BC2445 and CNL1332

BC2445 is a small core in northwestern Lanesborough. It lies within a Landscape Block of CNL1332, and supports one state-listed plant species.

BC2448, BC2451, and CNL1332

BC2448 and BC2451 are two small, adjacent cores that lie in part within the Division of Fisheries and Wildlife's Lanesborough Natural Heritage Area. They support state-listed plant species and a Priority Natural Community. BC2448 includes an Aquatic Core and is surrounded by an Upland Buffer and lies within a Landscape Block of CNL1332.

Plants

Northern Prickly Rose (*Rosa acicularis* ssp. *sayi*), Endangered: This small, bristly shrub grows in calcium-rich substrate on dry rocky outcrops, ledges, and cliffs.

Purple Clematis (*Clematis occidentalis*), Special Concern: This perennial woody vine occurs on semi-shaded slopes in deciduous or mixed woodlands. It typically requires pH-neutral or calcareous soil conditions.

Priority Natural Communities

Rich, Mesic Forest (Vulnerable): This natural community is a variant of northern hardwood forest. It is dominated by sugar maple trees and supports a diverse suite of herbaceous plants that thrive in its moist and nutrient-rich environment, including many spring wild flowers. This occurrence of nearly 27 acres is in very good condition, with no exotic invasive species.

BC2461 (no CNL); BC2546 and CNL1332

BC2461 is a 1.1 acre Core in northwest Lanesborough that has habitat for a state-listed plant species. BC2546 includes Forest Core in Dalton, Cheshire, Windsor, and southeastern Lanesborough, and sections of Aquatic Core along the Hoosic River and its tributaries in Cheshire and small parts of Windsor and Adams, with all areas totalling nearly 11,500 acres. Much of BC2546 has been protected by an impressive combined stewardship of federal, state, and private entities. It is nearly coincident with a large Landscape Block of CNL1332, much of which is Forest Core. Northern hardwood forest is the prevailing matrix forest type, and is interspersed with less common natural community types at higher elevations. In Lanesborough, BC2546 includes 709 acres of Forest Core in Chalet Wildlife Management Area, and supports state-listed salamander species:

Jefferson Salamander (*Ambystoma jeffersonianum*), Special Concern: This salamander inhabits upland forests during most of the year, where it resides in small-mammal burrows and other subsurface retreats. Adults migrate during late winter or early spring to breed in vernal pools and fish-free areas of swamps, marshes, or similar wetlands. Larvae metamorphose in late summer or early fall, then disperse into upland forest.

Four-toed Salamander (*Hemidactylium scutatum*), SWAP: This non-listed SWAP species is the smallest salamander in Massachusetts. Four-toed Salamanders live in forested habitats surrounding swamps, bogs, marshes, vernal pools, and other fish-free waters that are used as breeding sites. Most breeding sites in Massachusetts are characterized by pit-and-mound topography with significant Sphagnum moss cover. Eggs are typically laid in mounds or patches of moss that overhang water. Upon hatching, the larvae wriggle through the moss and drop into the water, where they will develop for several weeks prior to metamorphosis.

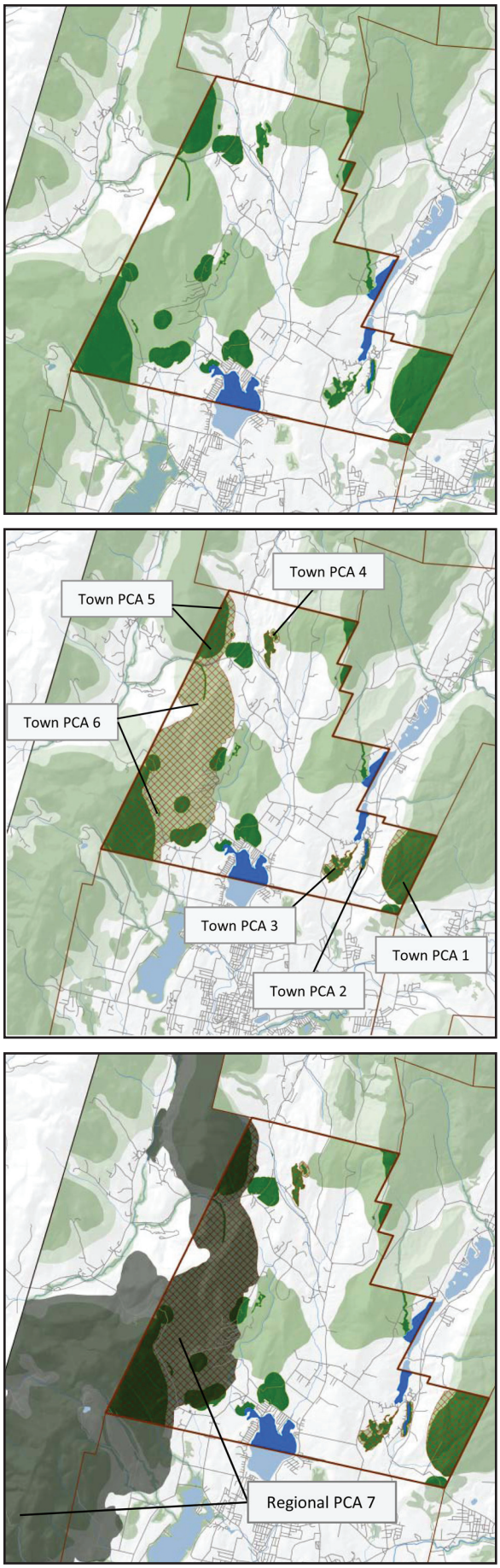
BC2979 and CNL1332

BC2979 covers over 23,000 acres in Hancock, Cheshire, Adams, North Adams, Williamstown, and Lanesborough. It includes Aquatic Core along many miles of the Hoosic River and its tributaries, as well as tracts of Forest Core in Mount Greylock State Reservation and across Mount Brodie. In Lanesborough, it includes limited areas around the town's northern perimeters. In the northeast, it includes Aquatic Core along Pettibone Brook and land along the lower slopes of Mount Greylock, and in the northwest includes lower slopes of Mount Brodie and select headwater reaches of Kinderhook Creek. All of these areas fall within CNL1332's Landscape Block and are surrounded by areas of Upland Buffer. In Lanesborough, one state-listed plant species is documented in this core.

Priority Conservation Areas in Lanesborough

Lanesborough contains six areas designated as Priority Conservation Areas (PCAs). Six are Town PCAs. Two of these – Town PCAs 5 and 6 – are part of Regional PCA 7.

Town PCA 1: This PCA is located in the southeast corner of Lanesborough. It includes BC2546 and its associated BioMap2 components, including over 700 acres of Forest Core and habitat for uncommon salamander species.



Town PCA 2: Lanesborough's second PCA is in southeast Lanesborough. It lies along South State Road to the northeast of the Berkshire Mall, and it includes and surrounds Berkshire Pond. The pond supports state-listed species of aquatic plants.

Town PCA 3: This PCA includes wetlands south of Cheshire Reservoir, just northwest of the Berkshire Mall. Although this area is intersected by Swamp Road and surrounded by rather densely developed lands, its wetlands support over ten acres of the Priority Natural Community called Black Ash-Red Maple-Tamarack Calcareous Seepage Swamp and contain a diversity of state-listed plant species.

Town PCA 4: Town PCA 4 includes a 27-acre area of Rich, Mesic Forest in north-central Lanesborough and supports a variety of state-listed plant species and an Aquatic Core, all associated with BC2448.

Town PCA 5/Regional PCA 7: This Town PCA lies along the lower slopes of Mount Brodie and includes BioMap2 components of BC2979, including Aquatic Core along headwater tributaries to Kinderhook Creek and nearly 300 acres of Forest Core. Town PCA 5 is part of regional PCA 7, which includes over 20,000 acres in Hancock and in western Pittsfield and Lanesborough, as well as areas of extensive and relatively undisturbed forest habitat. PCA 7 also includes headwater streams of Kinderhook Creek and the West Branch Green River in Hancock, Onota Brook and the Southwest Branch Housatonic River in Pittsfield, and Secum Brook in Lanesborough.

Town PCA 6/Regional PCA 7: Like Town PCA 5, Town PCA 6 is part of Regional PCA 7. Town PCA 6 is the largest in western Lanesborough, and its boundaries match those of a large part of CNL1332. It includes Forest Core of BC2341 in southwest Lanesborough, as well as several locations that support vernal pools and breeding populations of the Jefferson Salamander (*Ambystoma jeffersonianum*).

Figure 3. Core habitat (dark green), Critical Natural Landscape (light green), Town Priority Conservation Areas (PCAs; reddish-brown grid), and Regional Priority Conservation Areas (transparent grey) in Lanesborough. Town PCAs make up 5,702 acres, or 30.1 percent of the town's total land area. Part of Regional PCA 7 constitutes 4,634 acres or 24.5 percent of the town's land area.

Glossary

Aquatic Cores (in BioMap2, a component of Core Habitat) include intact river corridors within which important physical and ecological processes of the river or stream occur, delineated using integrated and functional ecosystems for fish species and other aquatic Species of Conservation Concern. To identify those areas integrally connected to each river and stream, each river segment was buffered 30 meters. All wetlands wholly or partially contained within this buffer were then included, and the combination of the river channel, the adjacent buffer, and the connected wetlands make up this riverine Core Habitat.

BioMap2 Cores (BCs) (called Core Habitats in BioMap2) identify key areas that are critical for the long-term persistence of rare species and other Species of Conservation Concern, as well as a wide diversity of natural communities and intact ecosystems across the Commonwealth. Protection of Core Habitats will contribute to the conservation of specific elements of biodiversity.

Certified Vernal Pools are temporary ponds or other fishless wetlands that meet certain biological and physical criteria to be classified as essential breeding habitat for a number of amphibian and invertebrate species, such as Wood Frog, Spotted Salamander, Blue-spotted Salamander, Jefferson Salamander, Marbled Salamander, and Intricate Fairy Shrimp. The certification of vernal pool habitat in The Commonwealth is administered by the Natural Heritage & Endangered Species Program. A number of regulations incorporate protections for certified vernal pools (please see http://www.mass.gov/dfwele/dfw/nhesp/vernal_pools/pdf/vpcert.pdf for more information).

Critical Natural Landscape (CNL) (part of BioMap2) identifies large natural landscape areas that are minimally impacted by development. If protected, these areas will provide habitat for wide-ranging native species, support intact ecological processes, maintain connectivity among habitats, and enhance ecological resilience to natural and anthropogenic disturbances in a rapidly changing world. Areas delineated as Critical Natural Landscape also include buffering upland around wetland, coastal, and aquatic Core Habitats to help ensure their long-term integrity.

Cobbles are small hills or rocky knolls made of marble and quartzite. The alkaline soils derived from the calcareous rocks support a distinct and diverse flora. Examples include Bartholomew's Cobble in southern Sheffield and Tyringham Cobble in Tyringham.

Critically Imperiled natural communities typically have five or fewer documented sites or have very few remaining acres in the state. Natural Community types ranked as Critically Imperiled are in the Priority Natural Communities category.

Disturbance, in an ecological sense, is an event that disrupts the normal structure and function of an ecosystem. Disturbances often produce bare soil and openings in forests where rapidly growing, sun-loving species, including invasive exotic species, can grow. Human activities have accelerated the number and types of disturbances in many ecosystems.

Ecoregions are areas of relatively homogeneous ecological systems, including vegetation, soils, climate, geology, and patterns of human uses.

Endangered species are in danger of extinction throughout all or a significant portion of their range or are in danger of extirpation from Massachusetts. Endangered is a category of state-listed species defined in the Massachusetts Endangered Species Act (M.G.L. c.131A) and listed in its regulations (321 CMR 10.00).

Exemplary Natural Communities are the best examples documented of relatively common (Secure) types of natural communities.

Forest Cores (in BioMap2, a component of Core Habitat) identify the best examples of large, intact forests that are least impacted by roads and development, providing critical "forest interior" habitat for numerous woodland species.

Fragmented Landscape, in ecological and conservation terms, refers to the idea that a large spatial area (the landscape) that in the past might have had connected habitats (for example, unbroken forest, continuous river, or undisrupted grasslands) have become interspersed with artifacts of human development that alter habitat and ecological processes – or that the human influence has come to dominate the land leaving patches, or fragments, of natural habitat surrounded by development.

Imperiled communities typically have 6-20 sites or few remaining acres in the state. Natural Community types ranked as Imperiled are included in the Priority Natural Communities category.

Landscape Blocks (component of BioMap2 Critical Natural Landscape), the primary component of Critical Natural Landscape, are large areas of intact and predominately natural vegetation, consisting of contiguous forests, wetland, rivers, lakes, and ponds, as well as coastal habitats such as

barrier beaches and salt marshes. Pastures and power-line right-of-way, which are less intensively altered than most developed areas, were also included since they provide habitat and connectivity for many species.

Landscape Context refers to taking the broadest view of the ability of ecosystems or species populations to maintain themselves where they are by considering the siting within the larger area. For example, a wooded area within a city park has a very different, urban context than a wooded area on a farm.

MESA (Massachusetts Endangered Species Act) (M.G.L. c.131A) and its implementing regulations (321 CMR 10.00) provide regulatory protection of rare species and their habitats. MESA protects rare species and their habitats by prohibiting the "Take" of any plant or animal species listed as Endangered, Threatened, or Special Concern by the MA Division of Fisheries & Wildlife.

Natural Communities are assemblages of species that occur together in space and time. These groups of plants and animals are found in recurring patterns that are classified and described by their dominant biological and physical features.

Nymphs, sometimes informally referred to as larvae, are the young, immature form of dragonflies and some other invertebrates. Dragonfly nymphs are aquatic. On maturing, they change into the flying terrestrial adults that are seen along rivers and lakes, and nearby uplands.

Priority Natural Communities include types of natural communities with limited distribution, or relatively few occurrences, and/or low acreages in Massachusetts.

Protected in Perpetuity refers to land owned as conservation land by a public entity in Massachusetts whose lands come under the authority of Massachusetts Constitution Article 97, or federal land owned by a federal conservation agency, or by a non-profit dedicated to land conservation; or for which the conservation values have been protected by legal restrictions on the deed or by a conservation easement (conservation restriction).

Secure types of natural communities typically have over 100 sites or abundant acreage across the state; excellent examples are identified as Core Habitat to ensure continued protection and are referred to as Exemplary Natural Communities.

Special Concern species have suffered a decline that could threaten the species if allowed to continue unchecked or occur in such small numbers or with such restricted distribution or specialized habitat requirements that they could easily become Threatened in Massachusetts. Special Concern is a category of state-listed species defined in the Massachusetts Endangered Species Act (M.G.L. c.131A) and listed in its regulations (321 CMR 10.00).

Species of Conservation Concern (in BioMap2, a component of Core Habitat) include those species that meet the criteria for listing under the Massachusetts Endangered Species Act, as well as a number of species that do not meet these criteria for listing, but are considered to be of conservation concern within Massachusetts, such as inclusion in the State Wildlife Action Plan (SWAP).

State-listed Species are species listed under the Massachusetts Endangered Species Act (M.G.L. c.131A) and its regulations (321 CMR 10.00). – that is, Endangered, Threatened, or Special Concern species.

SWAP (State Wildlife Action Plan), approved in 2006, the Massachusetts Division of Fisheries and Wildlife's State Wildlife Conservation Strategy, most often referred to as the State Wildlife Action Plan (SWAP), is a comprehensive document to help guide wildlife conservation decision making for Massachusetts' wildlife for many years.

SWAP Species were identified as being those in greatest need of conservation in the Massachusetts Division of Fisheries and Wildlife' State Wildlife Conservation Strategy, most often referred to as the State Wildlife Action Plan (SWAP).

Threatened species are likely to become Endangered in Massachusetts in the foreseeable future throughout all or a significant portion of their range. Threatened is a category of state-listed species defined in the Massachusetts Endangered Species Act (M.G.L. c.131A) and listed in its regulations (321 CMR 10.00).

Upland Buffers of Aquatic Cores (component of BioMap2's Critical Natural Landscape) identify protective upland areas adjacent to all Aquatic Cores. A variable width buffer, that extends deeper into surrounding unfragmented habitats than into developed areas, was used to include the most intact areas around Aquatic Cores. The conservation of wetland buffers will support habitats and functionality of each aquatic area, and also include adjacent uplands that are important for many species that move between habitat types.

Upland Buffer of Wetland Cores (component of BioMap2's Critical Natural Landscape) identify protective upland areas adjacent to all Wetland Cores. A variable-width buffer, that extends deeper into surrounding unfragmented habitats than into developed areas, was used to include the most intact areas around the Wetland Cores. The conservation of wetland buffers will support habitats and functionality of each wetland, and also include adjacent uplands that are important for many species that move between habitat types.

Variant of a natural community refers to a named subtype of a more broadly defined type of community. In Massachusetts the term is not a formal designation, but rather is intended as an aid for understanding community relationships.

Vernal Pools, also known as ephemeral pools, autumnal pools, and temporary woodland ponds, typically fill with water in the autumn or winter due to rainfall and rising groundwater and remain ponded through the spring and into summer. They usually dry completely by the middle or end of summer each year. Vernal pools are unique wildlife habitats best known for the amphibians and invertebrate animals that use them to breed.

Vernal Pool Cores (BioMap2, component of Core Habitat) identify, based on a GIS model, the highest quality most interconnected clusters of Potential Vernal Pools (a dataset of likely vernal pools identified from interpretation of aerial photographs) and the habitat between them.

Vulnerable communities typically have 21-100 sites or limited acreage across the state. Natural Community types ranked as Vulnerable are in the Priority Natural Communities category.

Wetland Cores (BioMap2, component of Core Habitat) identify, based on a GIS model, the least disturbed wetlands within undeveloped landscapes—those with intact buffers and little fragmentation or other stressors associated development. These wetlands are most likely to support critical wetland functions (i.e. natural hydrologic conditions, diverse plant and animal habitats, etc.) and are most likely to maintain these functions into the future.

Help Save Endangered Wildlife!

Please contribute on your Massachusetts income tax form or directly to the

Natural Heritage &
Endangered Species Fund

To learn more about the Natural Heritage & Endangered Species Program and the Commonwealth's rare species, visit our web site at: www.nhesp.org.