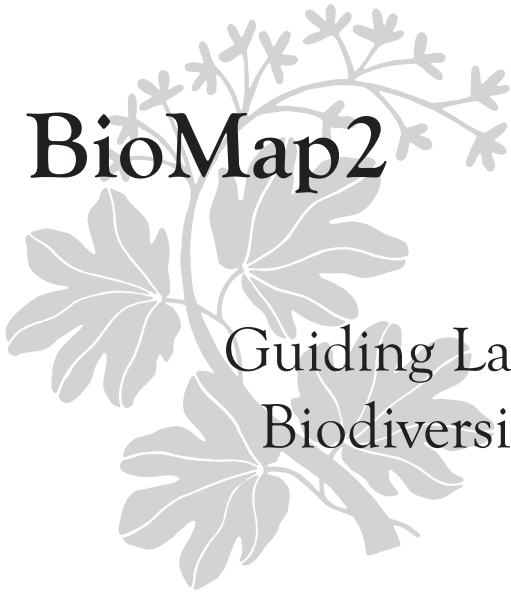




BioMap2

Guiding Land Conservation for Biodiversity in Massachusetts

Great Barrington

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.

Produced by:
Natural Heritage & Endangered Species Program
Massachusetts Division of Fisheries and Wildlife

Commonwealth of Massachusetts

Produced in 2011



BioMap2:

Guiding Land Conservation for Biodiversity in Massachusetts

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http://www.mass.gov/dfwele/dfw/nhesp/land_protection/biomap/biomap2_summary_report.pdf

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BioMap2: Guiding Land Conservation for Biodiversity in Massachusetts

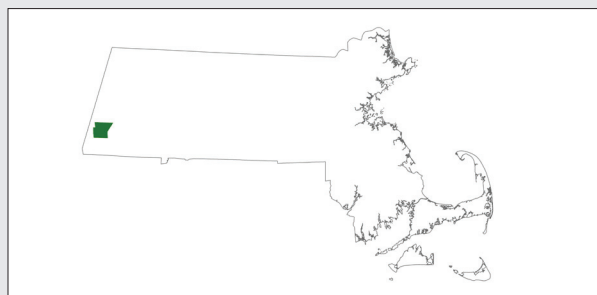
Great Barrington

Great Barrington is located in south-central Berkshire County, in the heart of Massachusetts' Housatonic River valley. The river enters town from the north, between Ball and Monument Mountains, then winds south through farmland and villages in the lowlands of Great Barrington, following a dynamic and sinuous path. The river has flooded and ebbed over time, which has eroded and shifted stream sediments and gradually altered its course, leaving looping oxbows along its floodplain. Further south toward Sheffield, the valley broadens and the river's meanders widen with it. Oxbows also grow larger and become more frequent. Smaller tributaries to the Housatonic River also turn through the valleys of western Great Barrington. Among them is the Williams River, which flows into the town from West Stockbridge, entering Great Barrington along its northern boundary. The Green River originates to the west in Alford and Egremont, flows through southwestern Great Barrington, and joins the mainstem near the town's southern boundary with Sheffield. The landscape of eastern Great Barrington is more mountainous; here, headwater streams drain north through Beartown State Forest to the Konkapot, East, and West Rivers, which then enter the Housatonic River in Lee.

The Housatonic River has played an extremely important role in the region's natural and human history. Mahican Indians and European settlers both migrated to the valley more than three hundred years ago to farm the nutrient-rich lands along the river's banks. During the 1800s, human land use expanded as agriculture grew and people began to harness the energy of the river to power grist and saw mills. Developing industry in nearby towns also contributed to increases in the region's human population. Great Barrington remains fairly developed today, though the kinds of major industrial operations present in other towns along the river, like Pittsfield and Lee, have diminished over the years here. Most of its developed lands are directly along the river and to the west of it, concentrated in the villages of Great Barrington and Housatonic, as well as in the valley along State Road near Butternut Ski Resort. The town's agricultural lands lie pri-

marily along lower reaches of the Green River.

The valley floor in Great Barrington holds not only fertile farmland, but also long stretches of floodplains along the mainstem river and its tributaries. These lowland floodplains host a great diversity of wetlands, natural communities, and uncommon plants and animals, and are part of the Western New England Marble Valleys eco-



Great Barrington at a Glance

- Total area: 29,311 acres (45.8 square miles)
- Human population in 2009: 7,355 people
- Open space protected in perpetuity: 15,501 acres, or 52.9% of total area*

BioMap2 Components

Core Habitat

- 9 Aquatic Cores: 1,552 acres
- 5 Forest Cores: 7,193 acres
- 9 Wetland Cores: 627 acres
- 1 Vernal Pool Core: 72 acres
- 9 Exemplary and Priority Natural Communities: 513 acres

Species of Conservation Concern**

- 2 freshwater mussels, 9 insects, 2 fish, 2 amphibians, 3 reptiles, 3 birds, 23 plants

Critical Natural Landscape

- 7 Upland Buffers of Aquatic Cores: 3,074 acres
- 12 Upland Buffers of Wetland Cores: 1,720 acres
- 4 Landscape Blocks: 14,845 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 Great Barrington

Invertebrates (non-insect)

Freshwater Mussels

- Creepers (*Strophitus undulatus*), Special Concern
- Triangle Floater (*Alasmidonta undulata*), Special Concern

Invertebrates (insects)

Dragonflies

- Arrow Clubtail (*Stylurus spiniceps*), Threatened
- Brook Snaketail (*Ophiogomphus aspersus*), Special Concern
- Harpoon Clubtail (*Gomphus descriptus*), Endangered
- Ocellated Darner (*Boyeria graefiana*), Special Concern
- Skillet Clubtail (*Gomphus ventricosus*), Special Concern
- Spine-crowned Clubtail (*Gomphus abbreviatus*), Endangered
- Zebra Clubtail (*Stylurus scudderii*), Special Concern

Butterflies

- Dion Skipper (*Euphyes dion*), Threatened

Moths

- Ostrich Fern Borer (*Papaipema* sp. 2 nr. *pterisii*), Special Concern

Fish

- Longnose Sucker (*Catostomus catostomus*), Special Concern
- Bridle Shiner (*Notropis bifrenatus*), Special Concern

Amphibians

- Jefferson Salamander (*Ambystoma jeffersonianum*), Special Concern
- Spring Salamander (*Gyrinophilus porphyriticus*), SWAP

Reptiles

- Spotted Turtle (*Clemmys guttata*), SWAP
- Wood Turtle (*Glyptemys insculpta*), Special Concern
- Eastern Ribbon Snake (*Thamnophis sauritus*), SWAP

Birds

- American Bittern (*Botaurus lentiginosus*), Endangered
- Common Moorhen (*Gallinula chloropus*), Special Concern
- Sedge Wren (*Cistothorus platensis*), Endangered

Plants

- Black Maple (*Acer nigrum*), Special Concern
- Bur Oak (*Quercus macrocarpa*), Special Concern
- Climbing Fumitory (*Adlumia fungosa*), Special Concern
- Crooked-stem Aster (*Symphyotrichum prenanthoides*), Threatened
- Culver's-root (*Veronicastrum virginicum*), Threatened
- Downy Arrowwood (*Viburnum rafinesquianum*), Endangered

- Drooping Speargrass (*Poa saltuensis* ssp. *languida*), Endangered
- Foxtail Sedge (*Carex alopecoidea*), Threatened
- Frank's Lovegrass (*Eragrostis frankii*), Special Concern
- Gattinger's Panic-grass (*Panicum philadelphicum* ssp. *gattingeri*), Special Concern
- Green Dragon (*Arisaema dracontium*), Threatened
- Hairy Wild Rye (*Elymus villosus*), Endangered
- Hemlock Parsley (*Conioselinum chinense*), Special Concern
- Hill's Pondweed (*Potamogeton hillii*), Special Concern
- Intermediate Spike-sedge (*Eleocharis intermedia*), Threatened
- Long-styled Sanicle (*Sanicula odorata*), Threatened
- Mountain Spleenwort (*Asplenium montanum*), Endangered
- Purple Clematis (*Clematis occidentalis*), Special Concern
- Shining Wedgegrass (*Sphenopholis nitida*), Threatened
- Small Dropseed (*Sporobolus neglectus*), Endangered
- Swamp Birch (*Betula pumila*), Endangered
- Wapato (*Sagittaria cuneata*), Threatened
- Yellow Oak (*Quercus muehlenbergii*), Threatened

Exemplary Natural Communities

- Hemlock – Hardwood Swamp (Secure)
- Northern Hardwoods – Hemlock – White Pine Forest (Secure)

Priority Natural Communities

- Black Ash – Red Maple – Tamarack Calcareous Seepage Swamp (Imperiled)
- Calcareous Basin Fen (Critically Imperiled)
- Calcareous Sloping Fen (Imperiled)
- Circumneutral Talus Forest/Woodland (Vulnerable)
- Ridgetop Pitch Pine – Scrub Oak Community (Imperiled)
- Transitional Floodplain Forest (Imperiled)
- Yellow Oak Dry Calcareous Forest (Imperiled)

Other BioMap2 Components

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

logical region (see Figure 1). Stretching from northwest Connecticut up through sections of the Hudson River and Lake Champlain watersheds, this is one of the most distinct and biologically rich ecoregions both in Massachusetts and throughout New England. The marble valleys support an impressively high percentage of Massachusetts' state-listed species and natural communities. Some of these natural elements are restricted to the ecoregion, while others are more widespread. In Great Barrington, floodplain forests full of Silver Maple trees support diverse herbaceous plants and sedges, and provide suitable near-river habitat for turtles and amphibians. In the river itself, freshwater mussels called Creeper and Triangle Floater burrow in the sediments and feed by filtering algae and

bacteria from flowing water. During much of the year, the state-listed fish Longnose Sucker lives and feeds along rocky areas of the bottom of the Housatonic River; during spring, it migrates upstream to cooler, faster-flowing waters to spawn. Larvae of dragonflies like the Ocellated Darner live along stream bottoms, while mature, flying adults of the same species later inhabit nearby uplands. Protection of habitat for resident species and natural communities in these valley lowlands is critical to conservation of the river ecosystem – however, most conservation lands lie high in the Berkshire Hills to the east and not in the valley. As a result, stewardship by private landowners is very important to the protection of ecological resources along the river and its floodplains.

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.

Highland areas in Great Barrington are somewhat less diverse than the valleys, but their upland forests still support a distinctive suite of species and natural communities. These areas contain vernal pools that provide breeding habitat for state-listed amphibians like the Jefferson Salamander. Spring Salamanders are also found here, along undisturbed, high-gradient headwater streams. The highland areas also support uncommon rock outcrop communities, including the Priority Natural Community called a Ridgetop Pitch Pine – Scrub Oak Community, along mountain ridges. Much of this area is protected for conservation through various stewardships; the largest blocks of conservation land are part of East and Beartown State Forests, which provide extensive forested habitat throughout the eastern part of the town.

BIODIVERSITY CONSERVATION TARGETS IN GREAT BARRINGTON: CORE HABITAT, CRITICAL NATURAL LANDSCAPE, & PRIORITY CONSERVATION AREAS

Overview

In this section, we outline areas in Great Barrington 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. Separate 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 described in detail below. BioMap2 components described in this report are those that occur only in Great Barrington, although a given area of Core Habitat or Critical Natural Landscape listed here may extend outside of the town's boundaries 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

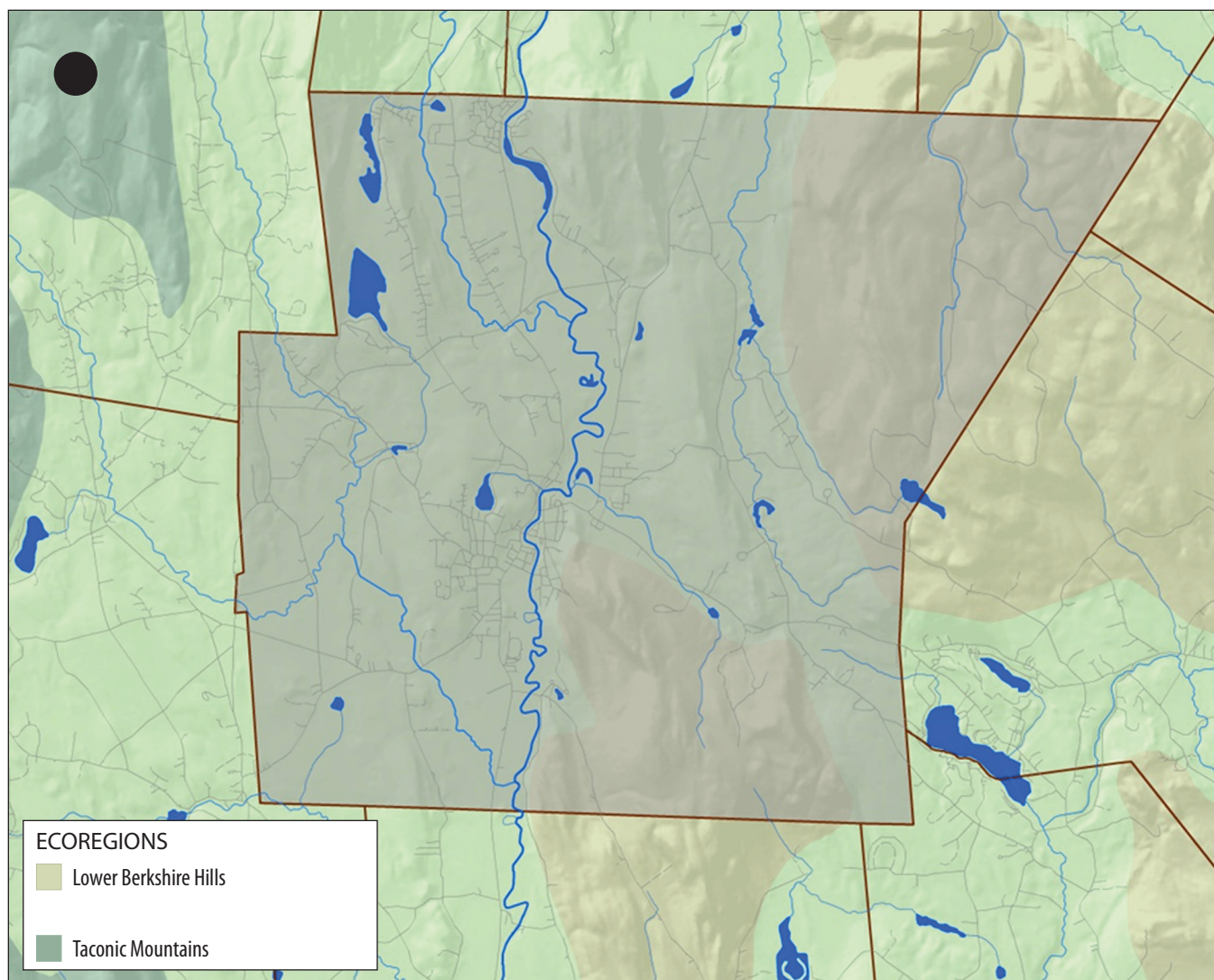


Figure 1. Great Barrington is located mostly within the Western New England Marble Valleys ecoregion. Mountains in the south and east sections of town are part of the Lower Berkshire Hills; the Taconic Mountains lie to the west, beyond the town's boundaries.

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: in Great Barrington, four Town PCAs were selected. Figure 4 illustrates how BioMap2 Core Habitat and Critical Natural Landscape relate to the distribution of Town PCAs in Great Barrington.

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; consequently 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. One Regional PCA – Regional PCA 8 – covers the highlands in parts of northeastern Great Barrington and includes two Town PCAs.

Core Habitat and Critical Natural Landscape Components in Great Barrington

Areas of Core Habitat in Great Barrington, called BioMap2 Cores (BCs), are summarized here. Also described are the various components of each BC, which may include Species of Conservation Concern, Exemplary or Priority Natural Communities, or Aquatic, Forest, and Wetland Cores. Components of Critical Natural Land-

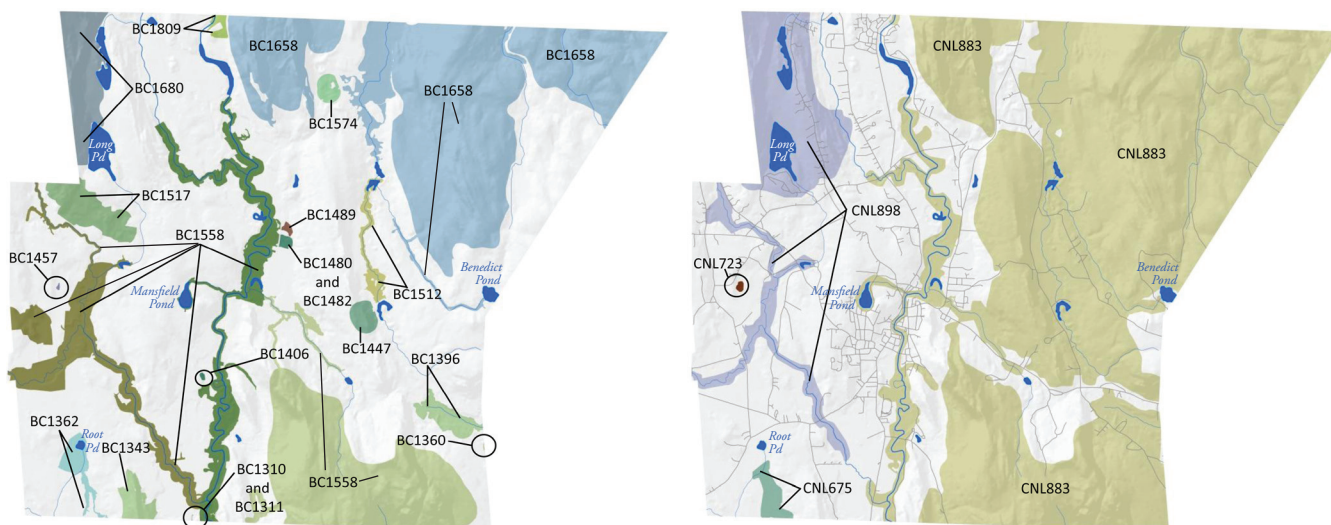


Figure 2. Great Barrington includes 19 BioMap2 Cores (BCs; left) and four areas of Critical Natural Landscape (CNL; right). Overlap between these layers is shown in Figure 4. Subdivisions of BC1558 are shown in Figure 3.

scape (CNL) associated with each BC are also provided. These include Upland Buffers of both Aquatic and Wetland Cores, as well as Landscape Blocks.

BC1310, BC1311, BC1406, and BC1482 (no CNL); BC1480, BC1489, and CNL883

Most of these small BCs comprise less than 10 acres each, and fall within central and south-central Great Barrington, near the Housatonic River mainstem. Most are not associated with any CNL; however, parts of BC1480 and BC1489 are within an Upland Buffer of CNL883. Collectively, these cores support three state-listed plants.

Foxtail Sedge (*Carex alopecoidea*), Threatened: In Massachusetts, this plant is usually found with other sedges, grasses, and herbs in open swales within floodplain forests.

Small Dropseed (*Sporobolus neglectus*), Endangered: Natural habitats of this plant species include calcareous seeps, flat rock outcrops, riverside outcrops, and river shores. It is also occasionally found along roadsides and in other disturbed, open sites.

Yellow Oak (*Quercus muehlenbergii*), Threatened: This tree is a Midwestern and southern species; it reaches the northeastern extent of its distribution in western Massachusetts, where it is found in uplands on limestone hills known as cobbles.

BC1343 (no CNL)

This primarily forested BC includes Vossburg Hill and surrounding areas in southwestern Great Barrington. It extends south into Sheffield and totals just over 290 acres. A golf course lies to the north. West Sheffield Road, which

runs along this BC's eastern boundary, is bordered to the east by low density residential and agricultural areas. The state-listed species and Priority Natural Community present here are characteristic of limestone bedrock. The presence of non-native invasive species degrades the otherwise very good habitat. BC1343 includes a variety of important state-listed plants and one Priority Natural Community:

Plants

Downy Arrowwood (*Viburnum rafinesquianum*), Endangered:

In Massachusetts, this plant species is found on open rocky ridgelines, lightly wooded summits, and dry rocky slopes of southern Berkshire County. The population in BC1343 is one of the state's few occurrences.

Drooping Speargrass (*Poa saltuensis* ssp. *languida*), Endangered: This species inhabits dry, rocky, fertile soils derived from base-rich bedrock such as basalt, marble, or limestone. It typically occurs on slopes and ridge crests and is found in deciduous forests and woodlands.

Shining Wedgegrass (*Sphenopholis nitida*), Threatened: This plant inhabits dry, rocky, fertile soils derived from base-rich bedrock like basalt or marble. It typically occurs on steep upper slopes and ridgecrests in deciduous forests.

Yellow Oak (*Quercus muehlenbergii*), Threatened: This tree is typically a Midwestern and southern species; it reaches the northeastern extent of its distribution in western Massachusetts, where it is found in uplands on limestone hills known as cobbles.

Priority Natural Community

Yellow Oak Dry Calcareous Forest (Imperiled): This Priority Natural Community type usually occurs on dry, well-

drained slopes that are underlain by calcareous rocks. It has an open canopy of oak species and Sugar Maple, with a diverse understory. BC1343 includes several patches of Yellow Oak Dry Calcareous Forest that total eight acres. This occurrence is in good condition despite the presence of many invasive plants.

BC1360 (no CNL)

Only one acre of this 56-acre BC falls within the town of Great Barrington; the rest is located in Monterey just northwest of Lake Buel. In Great Barrington, BC1360 is forested and contains a vernal pool, but its perimeters are bordered by housing and cleared land, isolating it from other suitable habitat. It supports one state-listed amphibian species:

Jefferson Salamander (*Ambystoma jeffersonianum*), Special Concern: This salamander species inhabits upland forest 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. One vernal pool has been certified in BC1360; protecting this vernal pool and identifying and certifying any others may help protect Jefferson Salamanders in this area.

BC1362 and CNL675

This BC falls along headwaters of Hubbard Brook near the joint boundary of Sheffield, Great Barrington, and Egremont. It includes 145 acres in total; the majority of its area is in Great Barrington, where it surrounds Root Pond and an unnamed stream that drains into the pond from the south. BC1362 is mostly forested and also includes a Wetland Core that is surrounded by an Upland Buffer of CNL675. A population of one uncommon turtle species is found in this BC.

Spotted Turtle (*Clemmys guttata*), SWAP: This small, dark-colored turtle with yellow spots on its carapace inhabits wetlands year-round and nests in nearby uplands during spring. Roads are the chief threat to Spotted Turtles in this BC, as the turtles must cross them in order to move between wetlands and to access nesting areas.

BC1396 and CNL883

BC1396 is a forested BC located in southeastern Great Barrington, between Bear and East Mountains. It surrounds an unnamed headwater stream that flow east to join Lake Buel in Monterey. The stream's upland areas abut roads and residential areas; some of these devel-

oped areas are included in the BC. BC1396 includes an Aquatic Core and a Wetland Core, and is part of a Landscape Block in CNL883, a large CNL that covers much of eastern Great Barrington, Tyringham, Monterey, and New Marlborough, as well as in parts of Lee, Stockbridge, West Stockbridge, and Sheffield. Great Barrington's part of CNL883 includes Aquatic and Wetland Core Upland Buffers and extends into the Landscape Block. The portion of BC1396 in Great Barrington is known to support two state-listed species:

American Bittern (*Botaurus lentiginosus*), Endangered: This species is a mottled brown, heron-like bird that feeds and nests primarily in large cattail, tussock, or shrub marshes, and is very sensitive to disturbance. Its coloring and unique behavior of pointing its bill skyward when threatened, sometimes swaying to mimic movement of grasses in the wind, make it well-camouflaged in marsh habitat.

Jefferson Salamander (*Ambystoma jeffersonianum*), Special Concern: This species 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. A very good population of Jefferson Salamander is known to reproduce in BC1396, although roads present a threat to individuals migrating to and from breeding pools in the spring.

BC1447 and CNL883

BC1447 is a forested, 80-acre core located in the east-central part of town, just west of Monument Valley Road and Muddy Brook. It contains a state-listed amphibian species and is part of a Landscape Block of CNL883.

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. Two vernal pools have been certified in BC1447; identifying, certifying, and protecting any other vernal pools may be important to Jefferson Salamander conservation in this area.

BC1457 and CNL723

BC1457 is located in the western part of Great Barrington, in a forested area near Alford Brook. It is surrounded by

farmland and contains a small wetland. This core supports one Priority Natural Community – a Calcareous Sloping Fen – and is conserved under an Agricultural Protection Restriction. CNL723 provides Upland Buffer around the wetland natural community.

Calcareous Sloping Fen (Imperiled): This Priority Natural Community type is an open, sedge-dominated wetland that occurs on slight to moderate slopes with calcareous groundwater seepage. It tends to be a rare species ‘hot spot’, often containing plants such as Fen Sedge (*Carex tetanica*) and Sweet Coltsfoot (*Petasites frigidus* var. *palmatus*), as well as uncommon turtles and butterflies. The occurrence in BC1457 makes up less than two acres but is part of a larger wetland complex.

BC1512 and CNL883

BC1512 is a core located along Muddy Brook on the east side of Monument Valley Road. It contains reaches of Muddy Brook and a Wetland Core near Barbieri Reservoir. As a whole, it is surrounded by Upland Buffers and is within a Landscape Block of CNL883. Several Certified Vernal Pools are within and near wetlands in BC1512. This BC also contains areas of forested wetlands, marshes, and open water. Its northern portion includes farm fields that are part of a conservation restriction held by the Berkshire Natural Resources Council. Several roads cross this core. BC1512 contains one state-listed plant.

BC1517 and CNL898

BC1517 is north and east of Alford Road and comprises just over 300 acres in Great Barrington and Alford; over 250 acres are in Great Barrington. Most of the area is forested, but it also contains sparse residential development, some agricultural fields, and a gravel pit. Parts of the northern portion of BC1517 lie within a Landscape Block of CNL898. This BC supports a state-listed salamander.

Jefferson Salamander (*Ambystoma jeffersonianum*), Special Concern: This species 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. Two vernal pools have been certified in BC1517; protecting these and identifying and certifying any others may be important to Jefferson Salamander conservation in this area.

BC1558, CNL883 and CNL898

BC1558 is one of the largest cores in the region (see Fig-

ure 3), extending along the lower part of the Housatonic River mainstem in Great Barrington and Sheffield and including tributary corridors and their sub-watersheds. It encompasses the rivers and streams themselves, as well as nearby uplands and floodplains. It also includes mountainous areas, such as East Mountain in Great Barrington and Sheffield. These areas are all included as part of BC1558 because they are physically and ecologically connected: the particular ecological value of each part is enhanced by protection of their interconnections within the core. However, for ease of discussion, divisions were made among parts of this large BC to designate six different sub-areas that are somewhat spatially and ecologically distinct. These areas are given letter sub-labels of BC1558a through BC1558f. Great Barrington contains parts of BC1558a, BC1558b, and BC1558c, each of which is described in detail below.

BC1558a and CNL883

BC1558a contains areas of conservation importance located in and near the Housatonic River mainstem in central Great Barrington and Sheffield, and supports a great diversity of species and habitats. Most of this BC sub-area

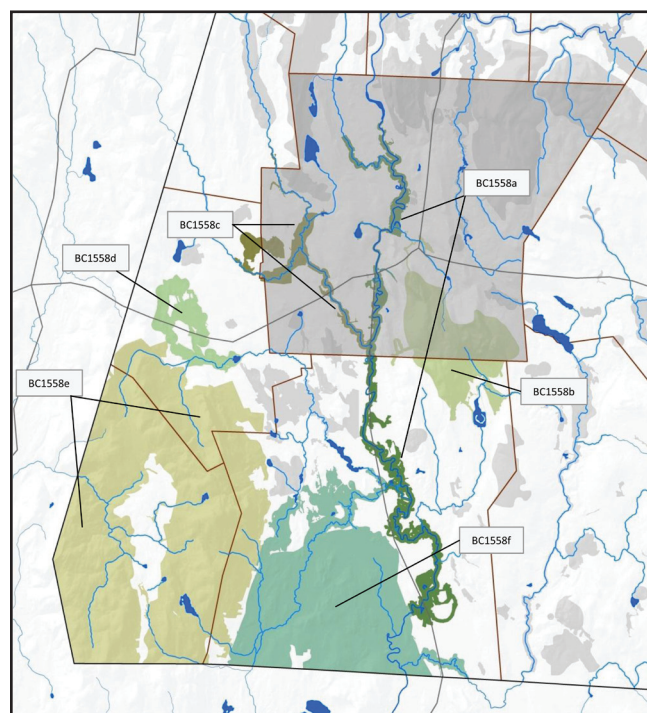


Figure 3. BC1558 is a large BioMap2 core subdivided into six sub-areas (shown here in color). The sub-areas are somewhat distinct spatially and ecologically, but their interconnections are very important. Parts of three sub-areas – BC1558a, BC1558b, and BC1558c – fall partly within Great Barrington. Other Core Habitat is depicted with grey shading.

is surrounded by an Upland Buffer of CNL883. BC1558a includes the Housatonic River, its floodplains and immediate uplands, much of which is designated as Aquatic Core. This wealth of biological diversity in the heart of Massachusetts' Housatonic River Valley is of significant value to the town of Great Barrington, the region, and the state. River specialist species here include the fish Longnose Sucker (*Catostomus catostomus*) and Bridle Shiner (*Notropis bifrenatus*), and the freshwater mussel Creeper (*Strophitus undulatus*). BC1558a also includes plant species such as Hairy Wild Rye (*Elymus villosus*) and Culver's Root (*Veronicastrum virginicum*), typically limited to calcareous wetlands and uplands. Floodplain forest communities are also part of this BC sub-area. Areas of highest species and habitat diversity within BC1558a typically occur along shores that are the least disturbed by human activities, have little impact from pollution or siltation, lie within a riparian buffer, and have the fewest invasive species. BC1558a includes more Species of Conservation Concern than any other BC or BC1558 sub-area in Great Barrington.

Plants

Black Maple (*Acer nigrum*), Special Concern: This tree can grow to about 130 feet tall and has dark bark. It grows best in rich, moist soils.

Foxtail Sedge (*Carex alopecoidea*), Threatened: In Massachusetts, Foxtail Sedge is typically found with other sedges, grasses, and herbs in open swales within floodplain forests. A very small population of this species occurs along the mainstem Housatonic River.

Frank's Lovegrass (*Eragrostis frankii*), Special Concern: This annual grass grows in open sandy and silty riverbars and river shores. In Massachusetts, it is found only along the Housatonic and Connecticut Rivers. Moderate-sized populations of this species occur within BC1558a, and grow alongside invasive exotic plant species in both intact and disturbed areas along sandy river riverbanks and within floodplain forests. One occurrence in this core is the largest known to occur in the state.

Gattinger's Panic-grass (*Panicum philadelphicum* ssp. *gattingeri*), Special Concern: This annual grass occurs in generally disturbed and open habitats with alkaline soils, such as open rocky ledges, sandy shores, and roadsides. This subspecies is one of three that occur in Massachusetts – a moderate-sized population of it occurs in roadside habitat in southern Great Barrington.

Green Dragon (*Arisaema dracontium*), Threatened: This herbaceous species, a relative of Jack-in-the-Pulpit, is found in floodplain woodlands with open to filtered light, and in moist alluvial sites with annual flooding. It is usually restricted to the low lands along large rivers. Small pop-

ulations occur in floodplain forests in Great Barrington, where they often grow alongside invasive plants in disturbed, fragmented habitat.

Hairy Wild Rye (*Elymus villosus*), Endangered: In Massachusetts, Hairy Wild Rye inhabits high terrace floodplain forests with moist alluvial soils and rich, rocky, and open woods and thickets with moist to dry soils. An established population of this species is found in BC1558a, although it co-occurs with invasive plant species. Recent efforts have been made to remove these invasive plants.

Intermediate Spike-sedge (*Eleocharis intermedia*), Threatened: In Massachusetts, this grass-like sedge is found on muddy, alkaline river banks and pond shores, usually visible during periods of low water when mud substrate is exposed. BC1558a includes several small populations of this species that grow alongside abundant invasive plants in habitat that is somewhat fragmented.

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. A small to moderate-sized population of this aquatic herbaceous perennial occurs in backwater marshes of BC1558a, along with other native species such as Silver Maple and Sweet Flag.

Moths

Ostrich Fern Borer (*Papaipema* sp. 2 nr. *pterisii*), Special Concern: This moth species inhabits floodplain forests that have abundant Ostrich Fern, which its larvae must eat to survive. It is found throughout a reach of the Housatonic River south of the village of Great Barrington.

Dragonflies

Arrow Clubtail (*Stylurus spiniceps*), Threatened: This dragonfly is part of the diverse Gomphidae family. Nymphs, or larvae, are aquatic and live on bottoms of swift-flowing, sandy rivers and some lakes, while adults are terrestrial and inhabit riparian and upland areas.

Brook Snaketail (*Ophiogomphus asperses*), Special Concern: Aquatic larvae of this dragonfly can be found in clear, sand-bottomed streams that contain intermittent rapids and often flow through dense woodlands. A moderate-sized population occurs in BC1558a, and is located in an area of good habitat with good surroundings.

Harpoon Clubtail (*Gomphus desertus*), Endangered: This insect is a member of the Gomphidae – one of the most diverse dragonfly families, with more than 100 species. It generally inhabits clear, cold streams with intermittent sections of rocks and rapids. Streams with occasional pools provide burrowing habitat for its nymphs (aquatic larvae); adults dwell in nearby uplands.

Ocellated Darner (*Boyeria grafiana*), Special Concern: Larvae of this dragonfly inhabit clear, shallow, rocky, swift-flowing streams as well as large, rocky, poorly-vegetated lakes. Adults also inhabit nearby uplands, which often are forests with a mix of coniferous and deciduous trees. This dragonfly has been observed in BC1558a, but only in relatively small numbers in a part of the river with somewhat developed surroundings.

Skillet Clubtail (*Gomphus ventricosus*), Special Concern:

Skillet Clubtails are dark brown dragonflies with pale yellow to greenish markings. Larvae are aquatic and live in the sandy bottoms of rivers of various sizes. While potential habitat for the Skillet Clubtail is present throughout BC1558a, it has been documented in only one stretch of river.

Spine-crowned Clubtail (*Gomphus abbreviatus*), Endangered:

This is a dark brown or black dragonfly with pale to bright yellow markings on its body and green eyes. Their larvae are aquatic and burrow in the river bottom. Spine-crowned Clubtails inhabit medium to large rivers with silty and sandy bottoms, and are known to occur within one stretch of river in BC1558a.

Zebra Clubtail (*Stylurus scudderii*), Special Concern: This dragonfly species inhabits lakes or mid-sized forested streams that are sandy-bottomed and have slow to moderate stream flows with intermittent rapids. Its larvae are aquatic and live on stream bottoms, while adults are terrestrial and inhabit nearby uplands.

Fish

Longnose Sucker (*Catostomus catostomus*), Special Concern:

This species is a torpedo-shaped fish with a snout extending beyond its downturned mouth. It is typically found in cool, lower order streams and rivers with rocky bottoms. These fish rely on clean and well-oxygenated gravel substrates to rear their eggs. In Massachusetts, they are found only in the western part of the state.

Freshwater Molluscs

Creeping (*Strophitus undulatus*), Special Concern: Like most freshwater mussels, the Creeper burrows in stream bottoms, filters algae and bacteria from the water, and uses a fish host to transform from young larvae into juvenile mussels. This freshwater mussel occurs in various reaches of the Housatonic River mainstem, including a number of sites in BC1558a. Most animals found here are older individuals whose reproduction may be limited.

Triangle Floater (*Alasmidonta undulata*), Special Concern:

This small freshwater mussel (generally no more than three inches in length) occupies low- to mid-gradient streams, or occasionally lakes, that contain sand and gravel substrates. Like other freshwater mussels, it lives on the streambottom, filters algae and bacteria for food, and its larvae require a fish host. Like the creeper, this

freshwater mussel species is found in various locations in the Housatonic River mainstem.

Priority Natural Communities

Transitional Floodplain Forest (Imperiled):

This Priority Natural Community is a riverside forest with a tree canopy composed primarily of Silver Maple, Green Ash, and American Elm. It experiences moderate levels of annual flooding. In BC1558a, it occurs in two locations (four and nine acres each) along the Housatonic River mainstem. Areas of Transitional Floodplain Forest in BC1558a are largely undisturbed, and include diverse native species and microhabitats despite the presence of many invasive exotic plant species.

BC1558b and CNL883

BC1558b comprises much of East Mountain and the headwaters of tributaries that flow northwest directly into the Housatonic River. It also includes headwater tributaries that flow south to Ironworks Brook and the Konkapot River in Sheffield, and incorporates over 2,000 acres of Forest Core and a Wetland Core. It includes Aquatic Core and is part of an Upland Buffer along streams flowing north from East Mountain. Most of BC1558b is also part of CNL883's very large Landscape Block. This BC sub-area also supports one state-listed fish species, two salamander species, and an Exemplary Natural Community.

Fish

Longnose Sucker (*Catostomus catostomus*), Special Concern:

This is a torpedo-shaped fish with a snout extending beyond its downturned mouth. It is typically found in cool, lower order streams and rivers with rocky bottoms. These fish rely on clean and well-oxygenated gravel substrates to rear their eggs. In Massachusetts, they are found only in the western part of the state.

Amphibians

Jefferson Salamander (*Ambystoma jeffersonianum*), Special Concern:

This salamander inhabits upland forest 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 forests. This species is documented in two areas of BC1558b.

Spring Salamander (*Gyrinophilus porphyriticus*), SWAP:

This salamander inhabits clean, cold, high-gradient brooks and headwater seeps in forest habitat. 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, but venture into upland forest during rainy weather.

Exemplary Natural Communities

Northern Hardwoods – Hemlock – White Pine Forest (Secure):

This rather common natural community consists of a mix of evergreen and deciduous trees, and has a closed, full canopy with sparse shrub and herbaceous layers. It often occurs on north-facing slopes and in ravines with moderately acidic soils. The exemplary occurrence of Northern Hardwoods – Hemlock – White Pine Forest in BC1558b is extensive (960 acres). Its species and habitats are diverse, and it is embedded within a large, naturally vegetated area without roads.

BC1558c and CNL898

BC1558c includes the Green River and its surrounding riparian areas and floodplains in Great Barrington and Egremont. Much of this land is protected for conservation. In Great Barrington, it includes riparian and immediate upland areas of the Green River and Alford Brook, both mid-sized tributaries to the mainstem Housatonic River. It also includes an apparently separate area (that is connected in Egremont) of Jefferson Salamander habitat, just west of the confluence of Alford Brook and the Green River. Vegetation in much of BC1558c consists of mixed evergreen and deciduous forests. Most land along the Green River contains a mix of forested and agricultural land, with some residential areas, though more developed lands lie to the east in the village of Great Barrington. BC1558c includes several Aquatic and Vernal Pool Cores, and much of it is buffered by an Upland Buffer of CNL 898. The portion in Great Barrington includes several Species of Conservation Concern.

Plants

Black Maple (*Acer nigrum*), Special Concern: This tree can reach to about 130 feet tall. It has dark bark and grows best in rich, moist soils.

Crooked-stem Aster (*Symphyotrichum prenanthoides*), Threatened: This perennial herbaceous plant occurs in rich soils with open to semi-open conditions along rivers, streams, and seeps and along open and semi-open roadsides in the vicinity of such habitats. The occurrence in BC1558c extends into BC1680 in Alford, forming a good, large population overall. The Crooked-stem Asters in these BCs also co-occur with abundant invasive plant species.

Culver's-root (*Veronicastrum virginicum*), Threatened: This is a tall, showy herbaceous plant that occurs in mesic to wet, generally open habitats in calcareous regions.

Long-styled Sanicle (*Sanicula odorata*), Threatened: This perennial herbaceous plant is found in a variety of de-

ciduous forest types, usually on mesic slopes in stream valleys or on lake margins. The population in this core occurs along the Green River in an agricultural area just west of Great Barrington village.

Amphibians

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.

Reptiles

Wood Turtle (*Glyptemys insculpta*), Special Concern:

Riparian areas in along the Green River and Alford Brook are large and interconnected, providing excellent habitat for this turtle species, which requires long corridors of undeveloped, connected uplands extending on both sides of the waterways. BC1558c includes a medium-size population of Wood Turtle.

Dragonflies

Arrow Clubtail (*Stylurus spiniceps*), Threatened: This dragonfly is part of the diverse Gomphidae family. Nymphs, or larvae, are aquatic and live on bottoms of swift-flowing, sandy rivers and some lakes, while adults are terrestrial and inhabit riparian and upland areas.

Brook Snaketail (*Ophiogomphus asperses*), Special Concern:

Aquatic larvae of this dragonfly species can be found in clear, sand-bottomed streams that contain intermittent rapids and often flow through dense woodlands. Adults dwell in nearby uplands.

Harpoon Clubtail (*Gomphus desertus*), Endangered: The larvae of this dragonfly inhabit clear, cold streams with intermittent sections of rocky rapids, while adults are terrestrial and dwell in nearby uplands. The population in BC155c occurs over a distance of several miles along the Green River.

Ocellated Darner (*Boyeria graffiana*), Special Concern: The larvae of this dragonfly species typically inhabit clear, shallow, rocky, swift-flowing streams and large, rocky, poorly vegetated lakes. Adults occupy nearby uplands, often preferring forests with mixed coniferous and deciduous trees. This population occurs in a nearly two-mile reach of the Green River that contains good habitat.

Skillet Clubtail (*Gomphus ventricosus*), Special Concern: Larvae of this dragonfly species are aquatic, living in the sandy bottoms of rivers of various sizes.

Zebra Clubtail (*Stylurus scudderii*), Special Concern: This dragonfly species inhabits lakes or mid-sized forested streams that are sandy-bottomed and have slow to moderate stream flows with intermittent rapids. Its larvae

are aquatic and live on stream bottoms, while adults are terrestrial and inhabit nearby uplands.

Fish

Bridle Shiner (*Notropis bifrenatus*), Special Concern: The Bridle Shiner is a small, straw-colored minnow with a distinct dark lateral band that runs from the tip of the snout to the base of the tail. It is typically found in clear water in slack areas of streams and rivers, as well as in lakes and ponds, and is sensitive to turbidity, invasive plant species, and severe changes in flow regime. This fish is generally associated with submerged aquatic vegetation, but it also uses areas of open water to school.

Longnose Sucker (*Catostomus catostomus*), Special Concern: This is a torpedo-shaped fish, with a snout extending beyond its downturned mouth. It is typically found in cool, lower order streams and rivers with rocky substrates. These fish rely on clean and well-oxygenated gravel substrates to rear their eggs. In Massachusetts, they are found only in the western part of the state.

BC1574 (no CNL)

This 59-acre BC is located in north-central Great Barrington, along the lower elevations of Monument Mountain near Konkapot Brook. It is forested, but somewhat fragmented by agricultural and developed areas, including nearby roads, buildings, fields, and a gravel pit. It supports a state-listed salamander species:

Jefferson Salamander (*Ambystoma jeffersonianum*), Special Concern: Adult and juvenile Jefferson Salamanders inhabit upland forest during most of the year, where they reside 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.

BC1658 and CNL883

BC1658 is over 9,000 acres and constitutes much of northeast Great Barrington as well as parts of Stockbridge, Lee, and Tyringham. In Great Barrington, it includes three large areas of Forest Core (nearly 4,000 acres in total), as well as Aquatic Core around Agawam, Konkapot, East and West Brooks. It also supports three Wetland Cores, several Priority Natural Communities, and many uncommon species, most of them state-listed. It is also part of two Landscape Blocks and several Aquatic and Upland Buffers of CNL883.

Plants

Bur Oak (*Quercus macrocarpa*), Special Concern: Bur Oak is

a broadly distributed tree species that reaches the eastern limit of its range in western Massachusetts, where it is generally restricted to somewhat-enriched wetlands near limestone hills or outcrops. In Great Barrington, this species occurs along Konkapot Brook.

Climbing Fumitory (*Adlumia fungosa*), Special Concern: This herbaceous vine grows on rock ledges within moist, shady woods, often climbing over talus at the base of steep cliffs.

Hemlock Parsley (*Conioselinum chinense*), Special Concern: This is a perennial herbaceous plant of forested swamps that have a somewhat sparse tree canopy. It generally grows in enriched soils that overly calcareous bedrock.

Mountain Spleenwort (*Asplenium montanum*), Endangered: This small fern grows in tufts and lodges in crevices and cracks on acidic rock outcrops, often in shaded areas protected by small overhangs. BC1658 has an excellent population of this plant.

Purple Clematis (*Clematis occidentalis*), Special Concern: This plant is a member of the buttercup family, and occurs in mesic to dry, semi-shaded steep areas of non-acidic rocky outcrops, talus, and cliff areas. The vine trails along the ground on rocky slopes and ledges, or climbs vertically on supporting trees and shrubs. BC1658 includes a fairly widespread population.

Swamp Birch (*Betula pumila*), Endangered: Swamp birch is a short shrub that grows in open and forested wetlands that are influenced by calcareous groundwater seepage.

Butterflies

Dion Skipper (*Euphyes dion*), Threatened: This butterfly inhabits sedge wetlands, including calcareous fens, riparian marshes, wet meadows, and shrub swamps, where its larvae feed on various sedges (*Carex* species). Adults move to nearby upland fields where they feed on the nectar of flowers such as Common Milkweed.

Amphibians

Spring Salamander (*Gyrinophilus porphyriticus*), SWAP: These salamanders inhabit clean, cold, high-gradient brooks and headwater seeps in forest habitat. 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. BC1658 has multiple populations of Spring Salamanders in relatively undeveloped and well-protected areas.

Reptiles

Eastern Ribbon Snake (*Thamnophis sauritus*), SWAP: This snake species is a slender, striped snake that occurs in wetlands and along edges of open water. It is an adept swimmer, and generally feeds on amphibians, particu-

larly frogs, as well as some fish and insects. This species is known to occur in several parts of BC1658.

Birds

American Bittern (*Botaurus lentiginosus*), Endangered: This is a mottled brown heron-like bird that feeds and nests primarily in large cattail, tussock, or shrub marshes. It is very sensitive to disturbance. Its coloring and unique behavior of pointing its bill skyward when threatened, sometimes swaying to mimic movement of grasses in the wind, make it well-camouflaged in marsh habitat.

Common Moorhen (*Gallinula chloropus*), Special Concern: These are duck-like marshbirds that inhabit shallow freshwater marshes and typically nest in dense cattail beds adjacent to open water.

Sedge Wren (*Cistothorus platensis*), Endangered: This perching bird species inhabits shallow wetlands dominated by short grasses and sedges, and prefer areas of sparse vegetation or the drier margins of wetlands.

Exemplary Natural Communities

Hemlock – Hardwood Swamp (Secure): This rather widespread natural community type is a forested wetland with a dominant canopy species of hemlock. Hardwoods also occur in patches or gaps in the main canopy. This community type occurs throughout the state in acidic, poorly drained basins with saturated soils. The occurrence in BC1658 is quite extensive, totaling nearly 50 acres, and is unusual because it contains several notable rich-site indicator species usually found in areas with more nutrient-enriched soils. Some invasive species are present.

Priority Natural Communities

Black Ash – Red Maple – Tamarack Calcareous Seepage Swamp (Imperiled): This Priority Natural Community type is a forested swamp of mixed deciduous and coniferous tree species. It is typically found in areas with calcium-rich groundwater seepage. This nutrient enrichment supports many uncommon, calcium-loving plant species. The occurrence in BC1658 is the largest in the state and is part of a larger complex of enriched wetland types. A total of seven acres of the occurrence are part of Great Barrington.

Calcareous Basin Fen (Critically Imperiled): This Priority Natural Community is a sedge-shrub peatland found in well-defined basins that have calcareous water inputs. This small occurrence is approximately two acres, occurs around the perimeter of Lake Agawam, and has high species and habitat diversity.

Circumneutral Talus Forest/Woodland (Vulnerable): This Priority Natural Community generally contains somewhat dwarfed trees, tall shrubs, and ground-level plants dominated by vines and ferns. It tends to develop on boulder-strewn slopes near slightly acidic cliffs or rock

outcrops. There is often a gradient in vegetation density as the slope changes, with more trees growing along flatter and lower areas. This occurrence in BC1658 comprises eight acres, has few signs of human disturbance, occurs in a protected area, and is high in species and habitat diversity.

Ridgetop Pitch Pine – Scrub Oak Community (Imperiled): This Priority Natural Community type generally occurs on acidic bedrock along mountain ridges. It is typically shrub-dominated, often occurring in a mosaic with other types of rocky summit communities. It is also fire-dependent; component species such as Scrub Oaks and Huckleberries will sprout readily from their root crowns after a fire. Species of Ridgetop Pitch Pine – Scrub Oak communities are also tolerant of severe growing conditions, such as drought and strong winds. The example of this community in BC1658 is small and degraded by intensive recreational use, but it will likely persist.

BC1680 and CNL898

This BC is over 1,800 acres in size and covers areas near the joint boundary of Alford, Great Barrington, and West Stockbridge. Its boundaries are largely coincident with a Forest Core that is embedded in Landscape Block of CNL898, including intact forests that are relatively unimpacted by roads and development, and it is part of a Landscape Block of CNL898. The town and Great Barrington Land Trust have protected portions of the core as conservation land. This core provides critical interior forest habitat for numerous woodland species.

BC1809 and CNL883

BC1809 is very large – more than 11,000 acres in total size – and stretches along the Housatonic River mainstem in Stockbridge and Lee, as well as along several tributaries, including Hop Brook in Tyringham, Mohawk Lake Brook in Stockbridge, and the Williams River in West Stockbridge. In Great Barrington, it encompasses 33 acres along the mainstem of the Housatonic River, as well as land to the east, along the lower slopes of Monument Mountain. It contains Aquatic Core that is part of Upland Buffers of CNL883. One state-listed fish and one state-listed plant also occur in this part of BC1809.

Long-styled Sanicle (*Sanicula odorata*), Threatened: This herbaceous perennial plant is found in small openings, typically in shade or filtered light, in rich, mesic soils. It is usually found in settings such as floodplain terraces. This good-sized occurrence of mature plants grows with associated native plant species. It is found in an area of BC1809 that is partially fragmented by residential development.

Longnose Sucker (*Catostomus catostomus*), Special Concern:

This is a torpedo-shaped fish, with a snout extending beyond its downturned mouth. It is typically found in cool, lower-order streams and rivers with rocky substrates. This species relies on clean and well-oxygenated gravel substrates to rear their eggs. In Massachusetts, it is found only in the western part of the state.

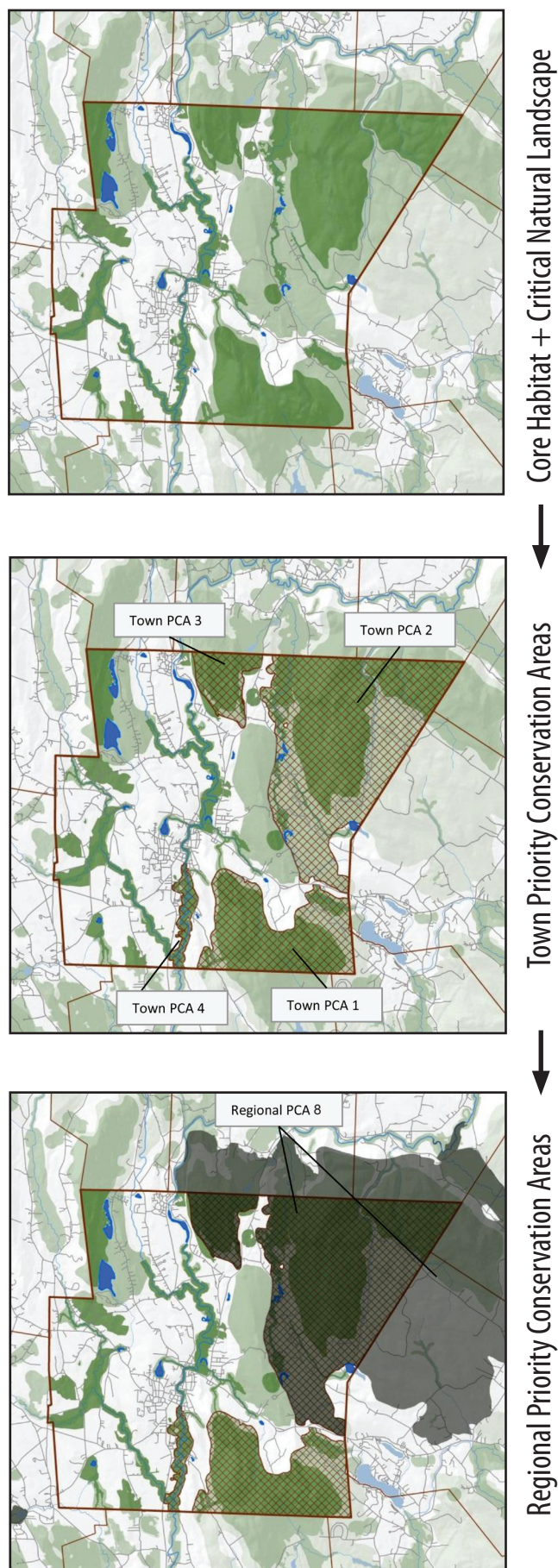
Priority Conservation Areas in Great Barrington

The town of Great Barrington contains four areas identified by NHESP as Priority Conservation Areas (PCAs) (see Figure 4). All four are Town PCAs; two of these are part of the larger Regional PCA 8.

Town PCA 1: Town PCA 1 is located in southeast Great Barrington, covering much of East Mountain and surrounding areas, including parts of BC1558b and CNL883. It encompasses 3,119 acres and includes a large area of Forest Core embedded in a Landscape Block. It supports both the American Bittern (*Botaurus lentiginosus*) and Jefferson Salamander (*Ambystoma jeffersonianum*), as well as an exemplary occurrence of Northern Hardwoods – Hemlock – White Pine Forest natural community. Headwaters in this area drain directly to the Housatonic River mainstem, in an area that supports a significant diversity of species. Much of Town PCA 1 is protected as part of East Mountain State Forest, the Appalachian Trail Corridor, and a water supply area for the town of Great Barrington.

Town PCA 2/Regional PCA 8: Town PCA 2 is part of Regional PCA 8. Regional PCA 8 includes nearly 20,000 acres in parts of Pittsfield, Washington, Lee, Lenox, and Great Barrington, and encompasses highland areas and headwater streams to the Housatonic River mainstem throughout this region. In Great Barrington, Town PCA 2 covers nearly 7,800 acres and is the largest of the Town PCAs. It is located in the northeast portion of the town and is defined by a large Forest Core and other components of BC1658 embedded in a Landscape Block of CNL883. It also includes several Aquatic Cores and Upland Buffers that encompass sections of Stony, Muddy, and Konkapot

Figure 4. Core habitat (dark green), Critical Natural Landscape (light green), Town Priority Conservation Areas (red grid), and Regional Priority Conservation Areas (transparent grey) in Great Barrington. Town PCAs make up 12,165 acres in Great Barrington, or 41.5 percent of the town's total area. The section of Regional PCA 8 in northeast Great Barrington constitutes 8,680 acres, or 29.6 percent of the town's total area.



Brooks, and is composed mostly of large tracts of forest that are part of Beartown State Forest. Several state-listed plants and animals occur here, including the Jefferson Salamander (*Ambystoma jeffersonianum*) and the marshbird American Bittern (*Botaurus lentiginosus*). This PCA also includes one exemplary natural community, the Hemlock – Hardwood Swamp.

Town PCA 3/Regional PCA 8: Great Barrington's third Town PCA is located in the north-central part of the town, just east of the Housatonic River mainstem. Like Town PCA 2, Town PCA 3 is part of Regional PCA 8 (described above). This Town PCA encompasses 906 acres in Great Barrington and is defined by a large Landscape Block that extends north into Stockbridge. This Landscape Block is adjacent to a second, much larger Landscape Block in Regional PCA 8 that includes much of northeast Great Barrington (including Town PCA 2), as well as parts of Tyringham and Monterey. Town PCA 3 includes a diversity of plant species, including Swamp Birch (*Betula pumila*), Climbing Fumitory (*Adlumia fungosa*), and Hemlock Parsley (*Conioselinum chinense*). Two bird species, Common Moorhen (*Gallinula chloropus*) and American Bittern (*Botaurus lentiginosus*), are also documented in this PCA. In addition, Town PCA 3 includes four Priority Natural Communities: Black Ash – Red Maple – Tamarack Calcareous Seepage Swamp, Calcareous Basin Fen, Circumneutral Talus Forest/Woodland, and Ridgetop Pitch Pine – Scrub Oak Community.

Town PCA 4: This Town PCA is located directly along the Housatonic River mainstem in south-central Great Barrington, and incorporates the southern extent of BC1558a. At only 380 acres, it is the smallest of the Town PCAs, but it contains a great diversity of trees, plants, insects, and freshwater mussels, including some species that are state-listed. It also includes the Transitional Floodplain Forest, a Priority Natural Community. All of these elements are associated with the river and its immediate floodplains and uplands.

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/nhsp/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 remain-

ing 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 undisturbed 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’s 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.

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