Conservation Plan

for

Amherst, New Hampshire

Photo credit: Peter Warren

Prepared by the:
Amherst Conservation Commission
Amherst, New Hampshire

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Mission of the Amherst Conservation Commission

The Amherst Conservation Commission (ACC) protects and manages the town's biodiversity[1] and natural resources[2], and promotes the public use of natural open space for low-impact outdoor recreation that is consistent with conservation.

Purpose of the Conservation Plan

The purpose of the Amherst Conservation Plan (the Plan) is to provide ACC and other town officials with a science-driven and consensus-based approach to fulfilling ACC's mission. The plan integrates the best available information with expert judgment.

The Plan should be updated on a regular basis and will inform the regular revisions of the Amherst Master Plan to guide the town's sustainable growth and conservation of its natural assets.

[1] *Biodiversity* is defined in accordance with the Convention on Biological Diversity as the "variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species, between species and of ecosystems".

[2] *Natural resources* are defined as naturally occurring biotic and abiotic assets that generate benefits to society, including *inter alia* forest products, water, areas for outdoor recreation, and environmental aesthetics.

Amherst's Conservation Priorities

ACC has identified three large zones and multiple smaller areas as priorities for conservation. The purpose of the prioritization is to focus ACC's efforts on those areas expected to generate the greatest contributions towards the fulfilment of its mission over time. However, there remain opportunities to support this mission outside of these priority areas, and ACC will continue to evaluate options to allocate time and effort to these places as well.

New Hampshire Fish & Game developed a comprehensive map of the wildlife habitats in the state, which has enough resolution to provide a detailed view of the habitats within Amherst (Figure 1). The dominant habitats in Amherst are Appalachian oak-pine forests and hemlock-hardwood-pine forests (Table 1). Interspersed across the town are smaller patches of grasslands, wet meadows, temperate swamps, peatlands, and lakes and ponds. Each habitat supports an assemblage of plant and animal species. A summary of wildlife species and the habitats each utilizes can be found in Appendix B.

Table 1: Wildlife habitats by area in Amherst, NH

Habitat	Acres	% Town
Appalachian oak-pine	8,733	40%
Hemlock-hardwood-pine	4,740	22%
Grassland	1,782	8%
Wet meadow/shrub wetland	1,234	6%
Temperate swamp	837	4%
Peatland	461	2%
Open water	305	1%
Floodplain forest	78	0%
Rocky ridge	13	0%
Cliff and Talus	1	0%
Developed	3,842	17%

None of these habitats, nor the species they support, are unique to Amherst and commonly occur over the wider northern New England landscape. Therefore, in order to prioritize for conservation any single habitat type in a given location a *landscape-scale* analysis is needed to ascertain its importance using a range of variables. New Hampshire Fish & Game and The Nature Conservancy have prioritized the habitats throughout the state and the biological region, respectively (Figure 2), based on consideration of three classes of variables: *biological diversity*, *landscape context*, and *human impacts*. Biological diversity largely focuses on the number of rare animal and plant species found in each habitat type. Landscape context relies on a number of variables that are predictive of the interactions among habitat patches such as dispersal of wildlife and abundance of intact habitat. Human impact considers the effects of development on ecological integrity in terms of habitat fragmentation, introduction of invasive species, contamination, and modified local climate. Each habitat type is evaluated separately and the top 15% of each habitat type are assigned the highest priority for conservation. A more detailed explanation of the prioritization can be found in the New Hampshire Wildlife Action Plan (http://www.wildlife.state.nh.us/wildlife/wap.html).

ACC's prioritization also includes values that are best analyzed at a *town-wide scale* such as natural resources that generate benefits to our citizens and biodiversity that is limited in occurrence or especially valued within the boundaries of our town.

- *Hydrology* – Amherst has a comprehensive inventory of wetlands (Figure 3)[3] as well as data on the transmissivity of surface geology for the town's aquifers and floodwater storage areas, complemented (Figure 4) by an analysis of drift aquifers and the lands with greatest potential for future municipal wells (Figure 5).
- *Rural values* – A range of landscape features contribute to the rural aesthetic of Amherst. Many are not mapped, but two means of prioritizing sites for protection are:
    - Areas where agricultural soils are of high quality and farms currently exist – Amherst has a map of "prime farmland soils" and "soils of local and state importance" (Figure 6) Combined with the existing map of current land use, working farms can be identified and prioritized for conservation.
    - Landscape corridors where streams, wetlands, steep or highly variable topography, and diverse ecological communities together engender an aesthetic experience and a heightened sensory quality of the environment – in Amherst, landscape corridors can be mapped from aggregations of these three qualities.
- *Trail connectivity* – Amherst has over 25 miles of recreational trails, but most are isolated within specific properties. Further development of trails may include consideration of connectivity to establish intra- and inter-town networks (Figure 7).
- *Lands in conservation* – Amherst has protected 2600 acres of open space (Figure 7). In addition, the USAF Tracking Station, protects over 600 acres of natural habitat in Amherst. These areas will always be a priority for long-term conservation, as will many areas contiguous to them.

Data on each of these values can be found in an online mapping application called MapGeo, maintained by the Nashua Regional Planning Commission (https://nrpcnh.mapgeo.io/). The maps presented in this document are only town-wide screenshots – greater detail can be obtained online. In addition to these data, ACC continuously pursues other sources of information that may be specific to individual sites and as a general rule conducts field visits as part of any decision-making process.

Using these maps, ACC has identified several major zones of priority for conservation.

- *North Amherst* – the area bounded by the entire northern border of Amherst, the western border of Amherst between the northern border and Sprague Rd, Austin Road on the south, and Horace Greely road on the west, with the inclusion of the O'Dell Preserve and surface waters and riparian areas that form the easterly drainage of this watershed. This priority area for conservation extends into Milford, New Boston, and Bedford.

- *Pond Parish and Grater Woods* – the area bounded by Baboosic Lake Road on the north, Spring Road on the west and south, and the border of Amherst on the east. This priority area for conservation extends into Merrimack.

- *Southern Hydrologic Zone* – all wetlands and supporting areas of hydrologic importance on the north and south sides of route 101A.

[3] Unlike other towns in New Hampshire, Amherst does not prioritize "prime wetlands" for conservation, but rather applies equally strong protections to all wetlands.

In addition to these major zones, examples of additional locations of priority for conservation include, but are not limited to:

- *The Great Meadow* – a large wet meadow located adjacent to the town cemetery and the Wilkins school.

- *Lindabury Orchard* – an example of a working rural landscape, this area preserves rural character and aesthetic beauty, as well as providing recreational space for residents.

- *Managed grasslands* – located throughout the town, these areas provide important wildlife habitat that is limited in New Hampshire and must be maintained by periodic mowing (see Figure 10 in the next section).

Figure 1: Wildlife habitats of Amherst, NH

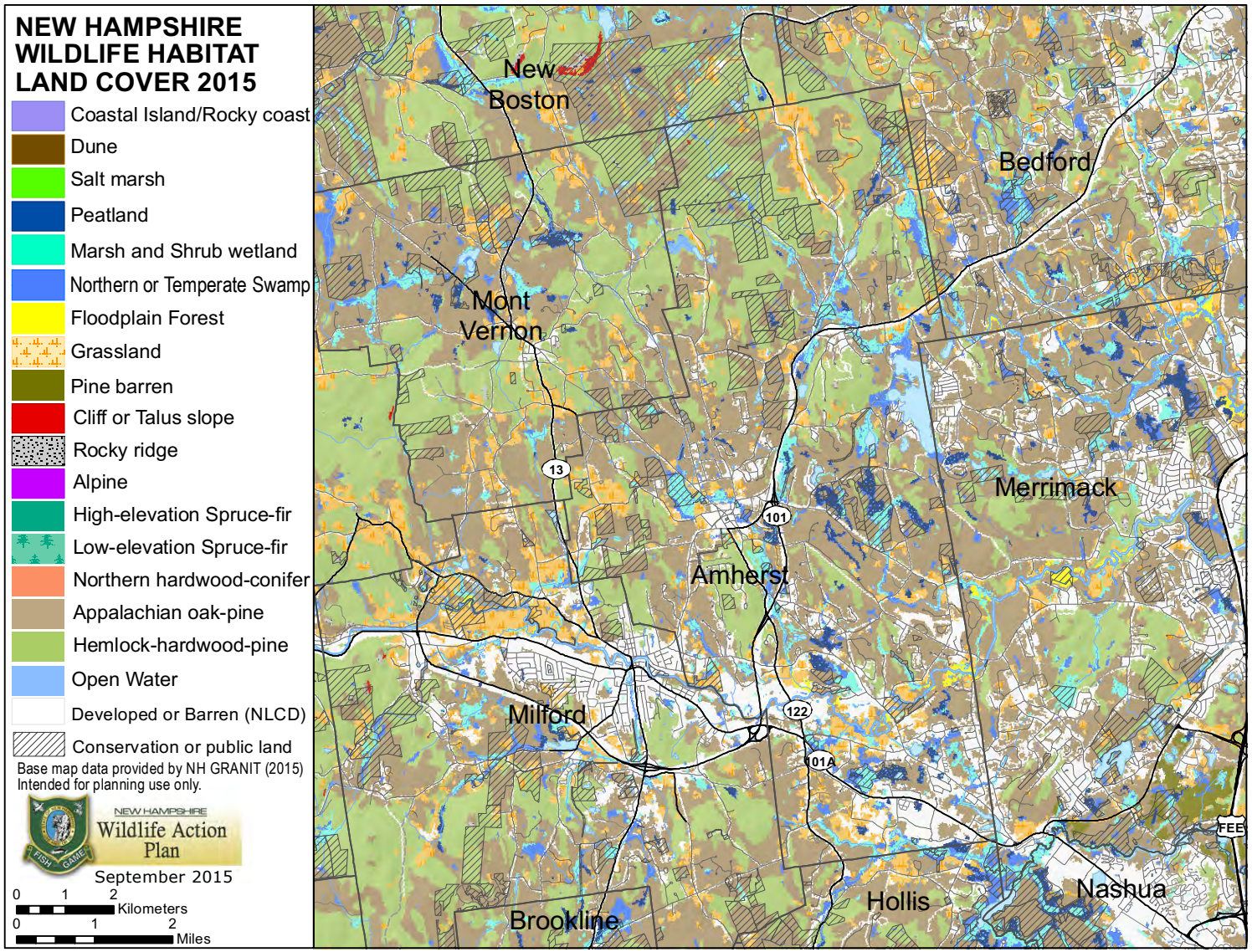


Figure 2: Areas of landscape-scale priority for biodiversity conservation

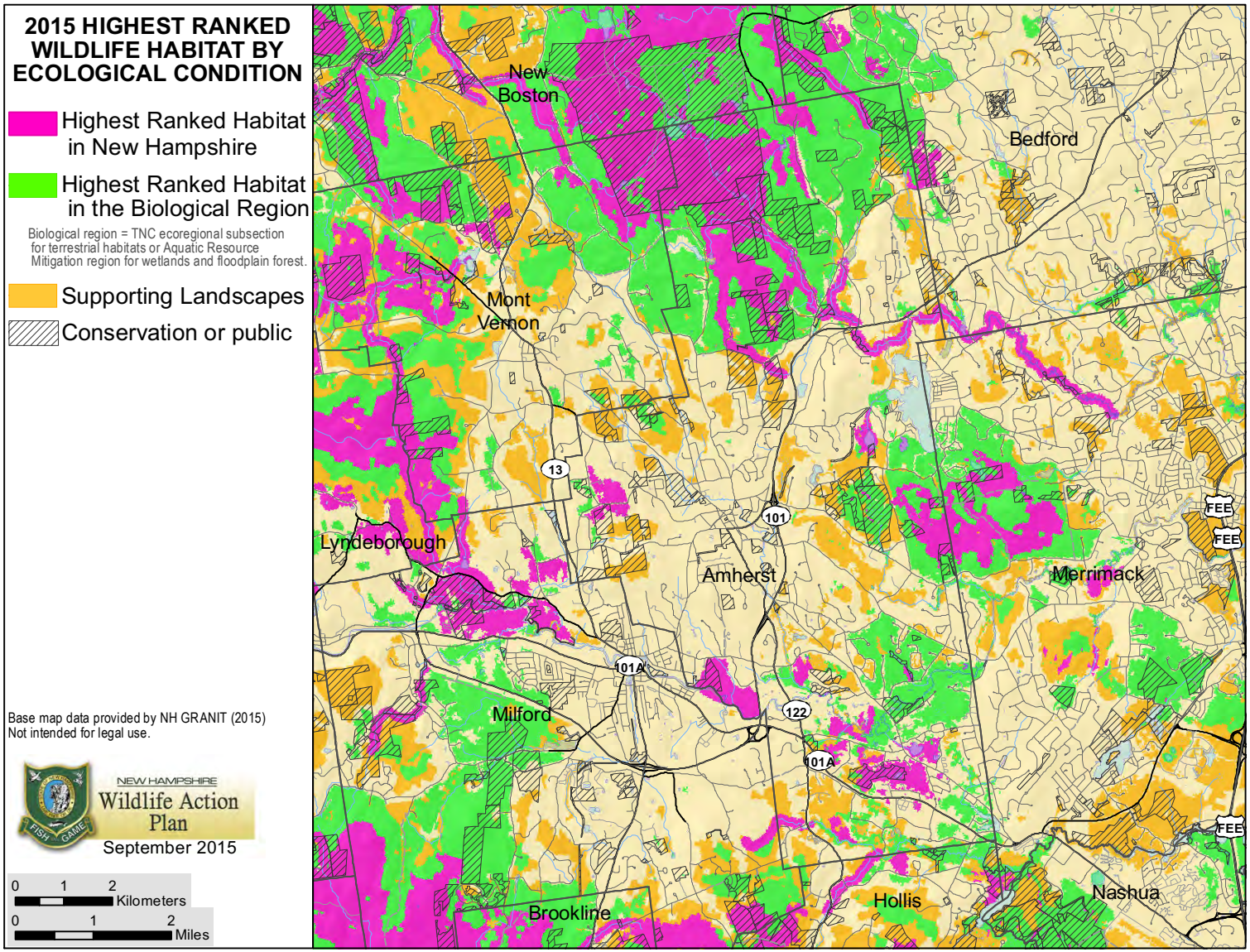


Figure 3. Map of wetlands and surface waters in Amherst, NH

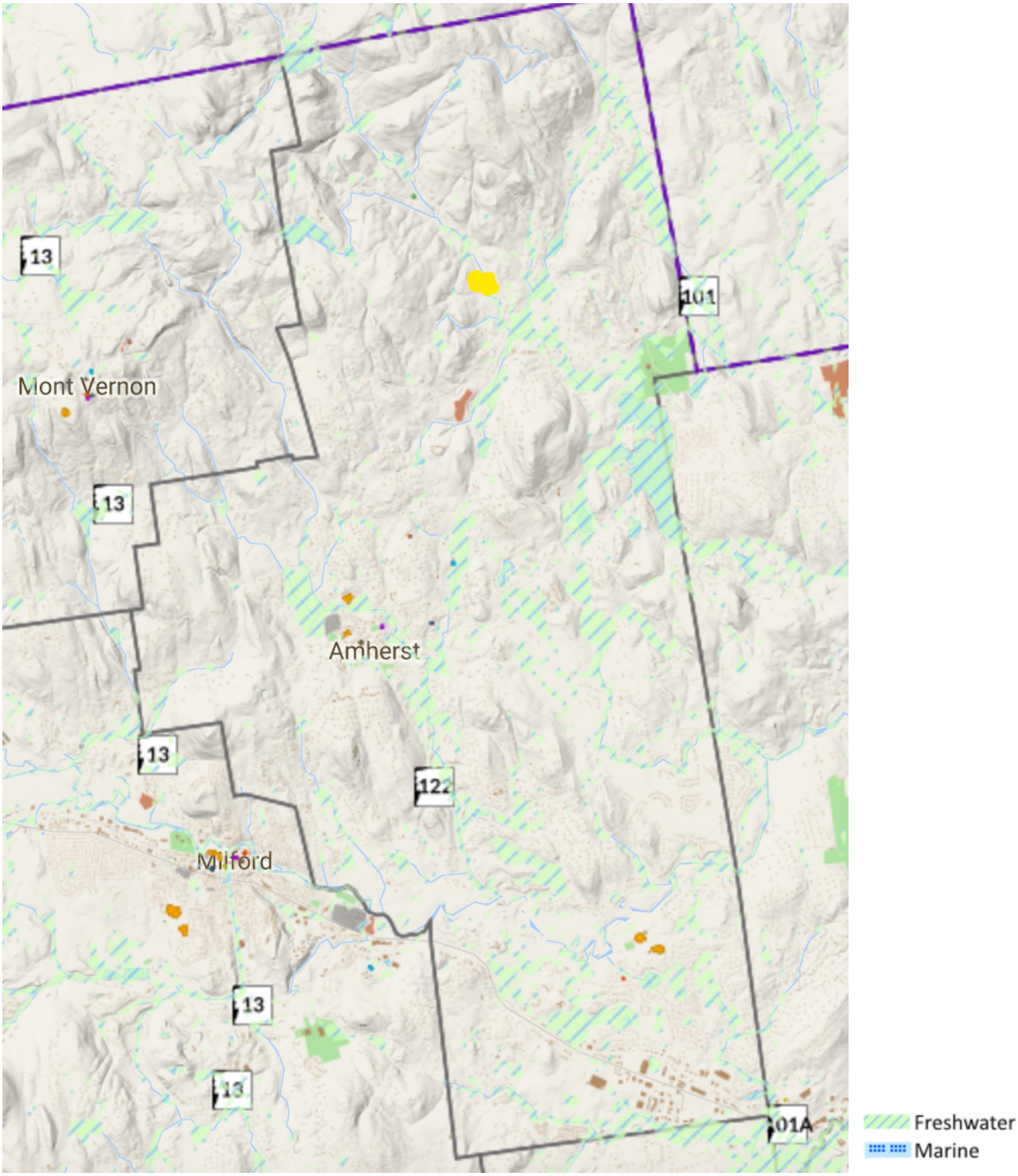


Figure 4. Map of aquifer transmissivity in Amherst, NH (light to dark)

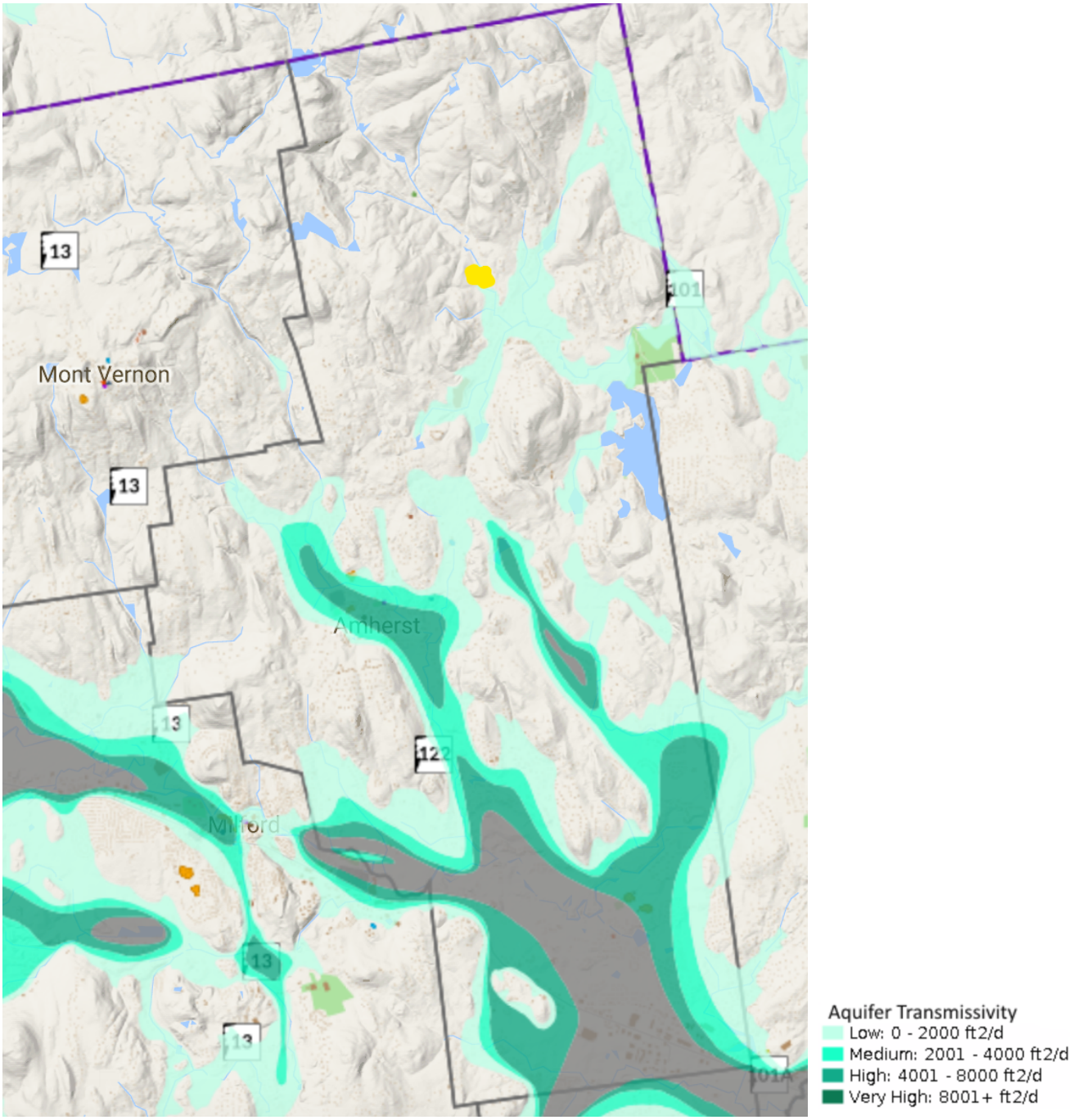
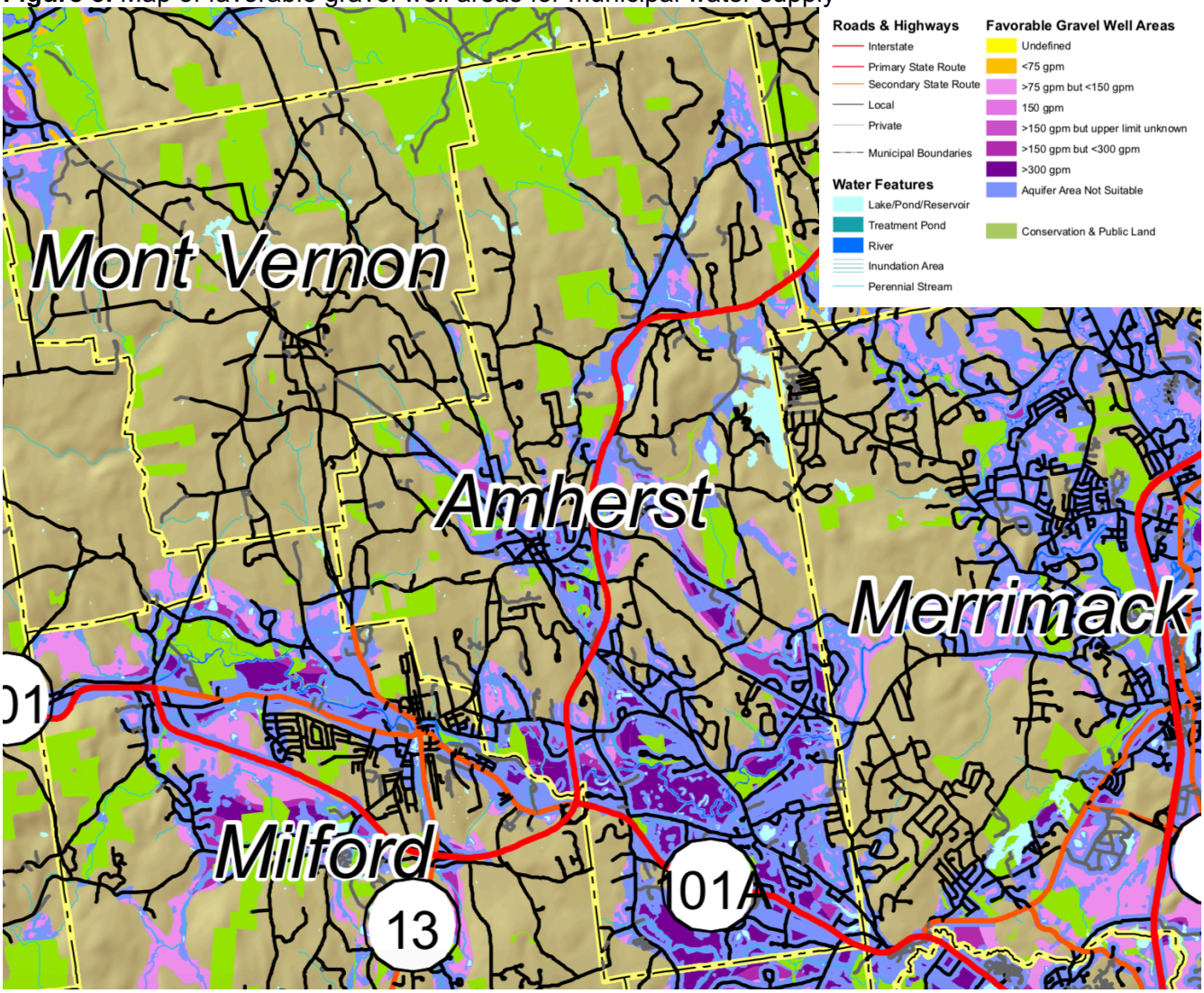


Figure 5. Map of favorable gravel well areas for municipal water supply[4]



[4] http://clca.forestsociety.org/nhcl/fgwa.asp

Figure 6. Map of soils of importance and prime farmland soils (lightest to darkest) in Amherst, NH

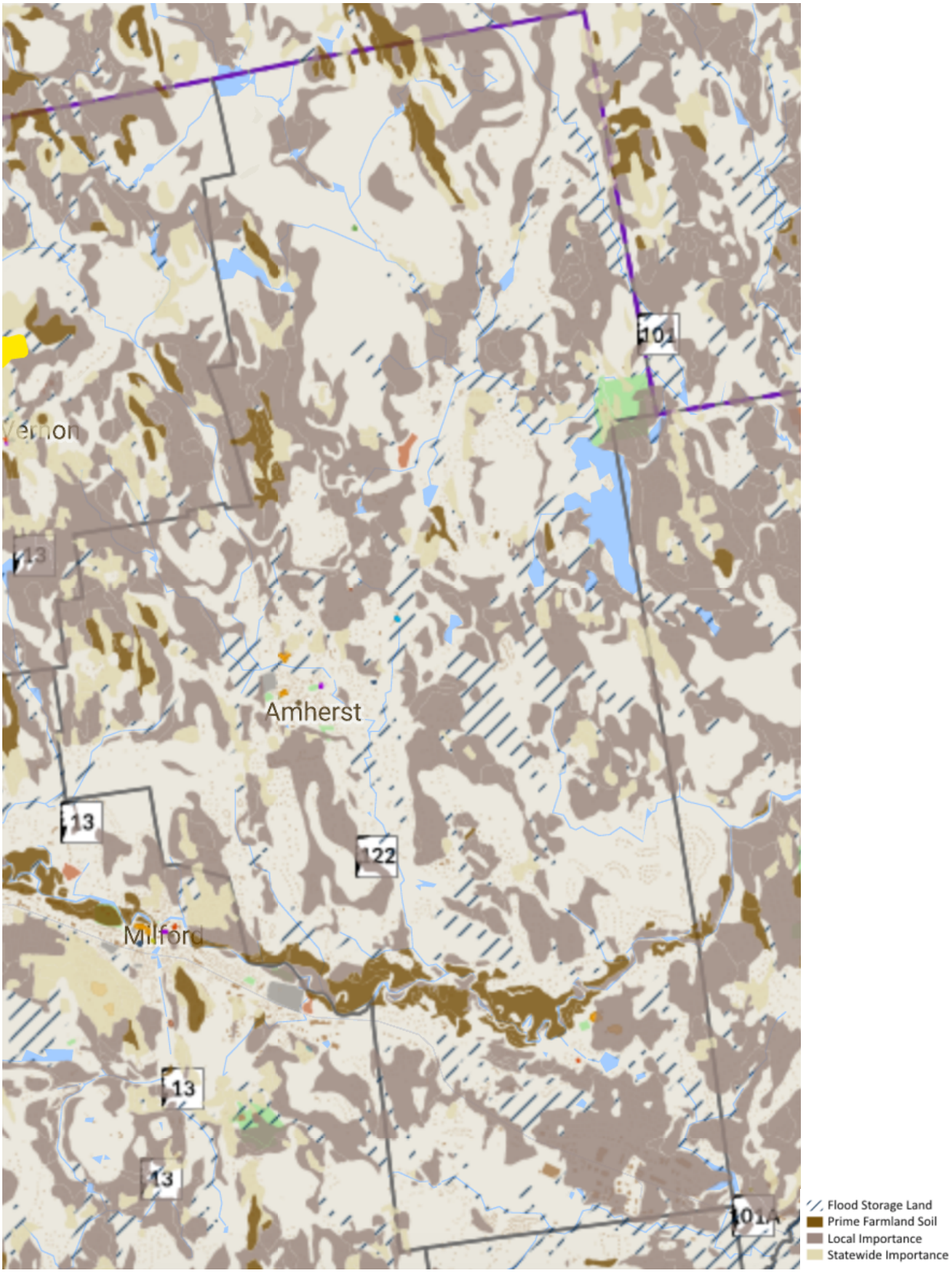
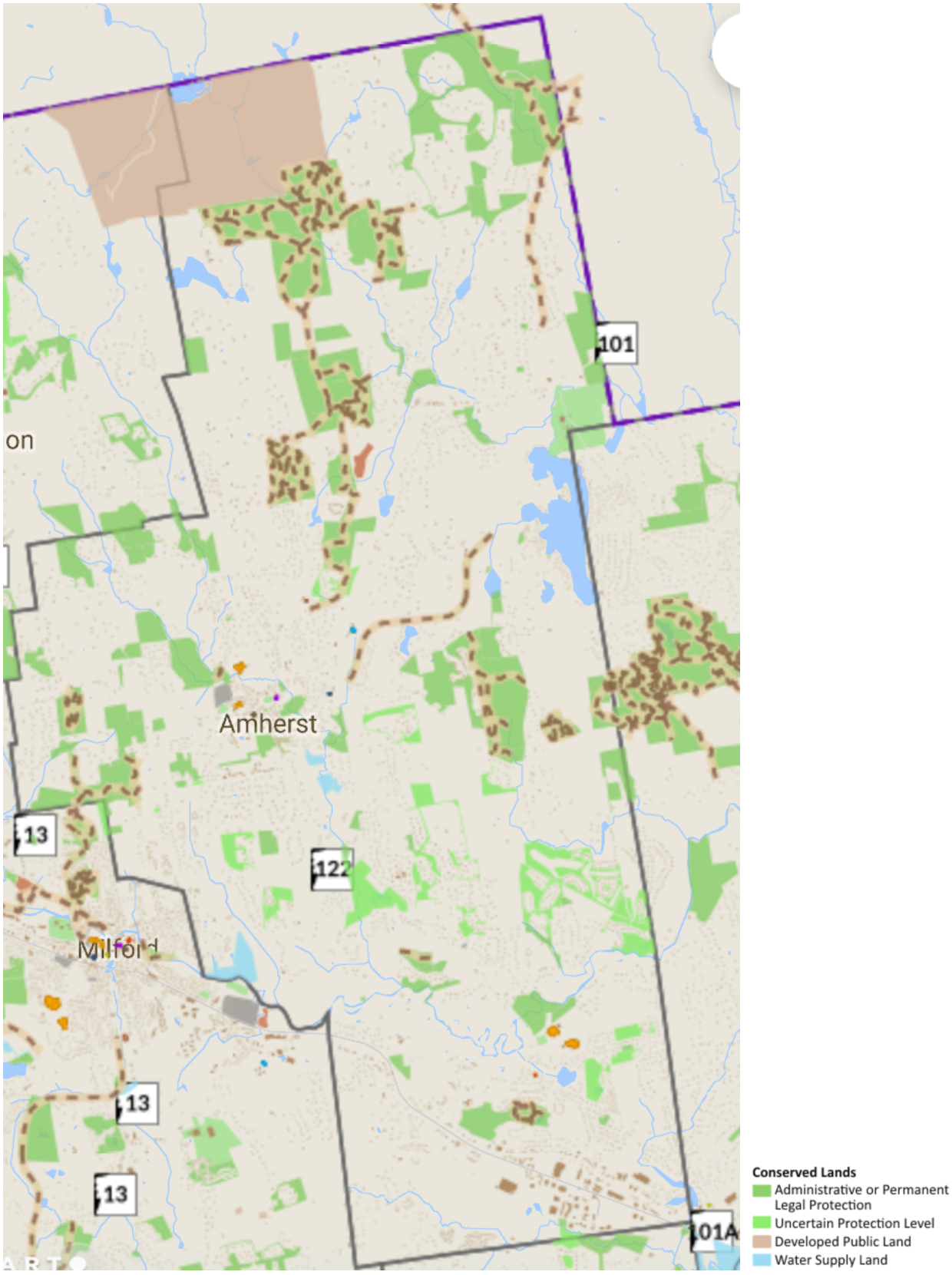


Figure 7. Map of conserved areas (green) and trails (brown hashed lines) in Amherst,



ACC's Strategies for Conservation

ACC does not have a target for the percentage of land it seeks to hold in conservation, rather it seeks to conserve those lands it currently owns (~14% of the town), to acquire priority areas under threat of development, and to promote conservation by other landowners. Public and private lands combined that can contribute to biodiversity and natural resource conservation represent >80% of the town's land base. ACC will seek to optimize the quality and extent of conservation over this combined area using a core set of strategies:

1. Influence zoning, planning and zoning adjustments
2. Acquire (and protect) property and development rights where appropriate for conservation
3. Manage town forests
4. Manage town grasslands
5. Control invasive species
6. Promote low-impact outdoor recreation
7. Educate citizens about Amherst's biodiversity and natural resources.

Following is a description of the principles and primary activities for each strategy. Each strategy may be supported by one or more documents providing additional specifics.

Strategy 1. Influence Zoning, Zoning Adjustments, and Planning

Zoning and Zoning Adjustments

ACC advises the town on zoning changes infrequently, but when it does ACC communicates the town's conservation priorities to decision makers to ensure they are reflected in the town's zoning map. Based on statutory criteria, variances may be granted to developers by the Zoning Board of Adjustment (ZBA). ACC is responsible for making ZBA aware of the town's conservation priorities (as set forth in the following section) and participating in meetings where variances are being considered for development on lands considered a high priority for conservation.

Wetlands

The Planning Board approves all Conditional Use Permits for work in the *Wetland and Watershed Conservation District*, as defined by Section 4.11 (F) of the Amherst Zoning Ordinance. ACC considers a set of criteria in advising the Planning Board, as outlined in Section 4.11 (G-H) of the Zoning Ordinance. The purpose of ACC's advice is to:

a) Prevent the destruction of or significant changes to wetland and surface waters and adjoining land which provide flood protection;
b) Protect persons and property against the hazards of flood inundation by ensuring the continuation of the natural flow patterns of streams and other watercourses;
c) Provide for nutrient attenuation and augmentation of stream flow during dry periods;
d) Preserve and protect important wildlife habitat, flora, and fauna areas, including those critical to threatened and endangered species, and to maintain ecological balance;
e) Prevent the expenditure of municipal funds for the purposes of providing and/or maintaining essential services and utilities which might be required as a result of abuse or inharmonious use of land situated within the District;
f) Protect wetlands, surface waters, and groundwater supply and recharge areas within the

Town of Amherst from degradation;

g) Mitigate the effects of structures and associated land uses which have the potential to compromise surface and groundwater supplies through the introduction of sewage, nutrients, hazardous substances, and siltation; and,
h) Preserve and enhance those aesthetic values associated with wetlands and the watershed conservation district.

ACC is the only local board authorized to "intervene", or request more time, to review applications for permits submitted to NHDES Wetlands Bureau under Section 404 of the Clean Water Act for projects that may impact wetlands. Permit applications to impact <2,000 ft^2 require no response from ACC; over that ACC must respond within 60 days. The criteria for evaluating the proposed impacts are provided in the application.

ACC may also advise on the issuance of gravel and sand quarry permits. Currently, ACC has no procedure or specific guidance for evaluating such permit applications, but in general seeks to protect natural habitats and the species that rely upon them.

Strategy 2. Acquire properties and development rights

ACC may acquire properties or development rights for the purpose of conserving priority lands in town. In can do this by:

- Fee-simple purchase (or receipt of donation) of land;
- Purchase (or receipt of donation) of a conservation easement.

ACC maintains a Conservation Fund to support acquisitions. The fund receives revenue from the Land Use Change Tax (LUCT) and profits from the sale of forest products from town forests.

ACC must prioritize resources to achieve its mission and to fulfill the mandates of the Amherst Master Plan. Prioritization of land parcels for acquisition can be accomplished by evaluating two factors:

- *Irreplaceability* – as the rarity of a conservation feature increases, it becomes more difficult to find substitutes that provide the same ecological function;
- *Vulnerability* – the greater the number and intensity of threats that a conservation feature faces, the greater likelihood it will be lost.

Areas that have ***both*** high irreplaceability ***and*** vulnerability should be considered as priorities for action by ACC, as shown in Figure 8. Areas that are high in either variable, but low in the other may be considered for action, but as a lower priority. For example, an area may be identified as highest value for wildlife habitat conservation but may not be developable for practical reasons. If a land owner wished to donate this property to the town, it should be accepted, but a significant expenditure of town resources to purchase the area would not be warranted. Areas low in both irreplaceability and vulnerability should not be considered for action.

A site in Amherst has high **irreplaceability** if it is within the general areas prioritized for conservation in this plan. Field assessment of sites is important to confirm that maps are accurate, the expected conservation values are present, and no values have been missed.

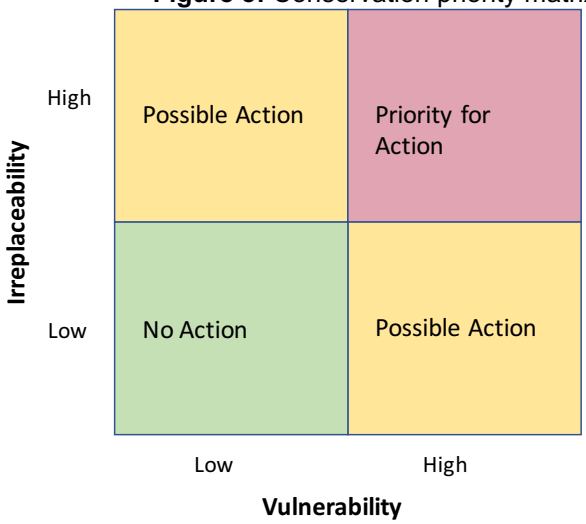
A site in Amherst is considered **vulnerable** if it meets *all* of the following criteria:

- Not currently zoned for conservation;
- Not within the 100-year floodplain; and,

- Has topography and geology that is amenable to cost-effective development.

Vulnerability is heightened if a large property has been approved by the Planning Board for sub-division, although the cost of conservation may become prohibitive in such cases.

Figure 8: Conservation priority matrix



All properties and development rights owned by the Town of Amherst that are managed by ACC are to be monitored regularly to ensure that no development occurs on them by third parties. Currently, ACC manages 2600 acres of public land, approximately 13% of the town.

Strategy 3. Manage Town Forests

ACC serves as the manager of Amherst's town forests *where active forest management is possible*. These include 10 areas, totaling 1612 acres (Figure 9):

- Joe English (536 acres)
- Betty Arnold Forest (230 acres)
- Grater (17 acres adjacent to 21 acres owned by Amherst Land Trust)
- Woolsey (26 acres)
- Boutelle Property (57 acres)
- Caesar's Brook Reservation (41 acres)
- Haseltine Community Preserve (93 acres)
- Joppa Hill (437 acres)
- Dacquino Forest (70 acres)
- Upper Bragdon Farm (59 acres)
- Lindabury Orchard (46 acres – not all forest)

ACC will, over the coming years, develop an updated forest management plan for each of these properties.

The management plan will include an inventory of the commercial and non-commercial elements of the property, including: forest types and size classes, stocking, topography (and access, operability),

species composition by commercial use (sawtimber, cordwood/pulpwood, reproduction), habitat structure, cutting history, significant wildlife elements, major land features (e.g., streams, wetlands, stone walls, roads, trails).

The management plan will then describe active interventions, such as logging, and passive strategies, like allowing natural forest dynamics to proceed on their own. Management approaches will depend on the objectives for each forest property, which may include one or more of the following: a) forest health and biodiversity conservation; b) public recreation; and, c) revenue generation.

Objective 1: Forest health and biodiversity conservation

Managing for forest health and biodiversity conservation typically requires active interventions in New England for three reasons. First, forests are often dominated by even-aged stands that grew in old fields abandoned in the early twentieth century. Because these stands lack structural diversity, the variety of wildlife habitats is limited. Stands of early succession species, such as white pine, are reaching maturity and are prone to blowdown. Second, hemlock trees in southern New Hampshire are being affected by Hemlock Woolly Adelgid and Elongate Hemlock Scale, which will likely result in high levels of mortality. Harvesting these trees before they die allows for their commercialization (which pays the cost of their removal) and opens areas for regeneration of the forest with other species. Third, land use change in New Hampshire over the last century has resulted in less habitat for species that require open areas and young forest. Forest management practices, such as group selection, can help to provide this habitat.

Forest management practices that maximize forest health and biodiversity conservation benefits will:

a) Diversify the age classes of forest stands across the larger landscape;
b) Salvage diseased trees, especially hemlock;
c) Create gaps in the forest of an acre or more using group selection harvesting methods.

For all areas, forest health and biodiversity conservation must be a goal. Balancing this with public recreation and revenue generation goals will require case-by-case forest management planning for each property.

Objective 2: Public recreation

The most common form of public recreation in Amherst's town forests is trail use by hikers, runners, skiers, and mountain bikers. The public's enjoyment of trails is generally a function of accessibility to well-constructed and maintained trails, forest aesthetics, and the opportunity to view wildlife. Forest management practices that maximize recreational benefits will therefore:

a) Avoid impacting existing trails via tree felling, heavy machinery movements on trails, and disruption of drainage patterns causing trails to flood or erode;
b) Allow for older forests to develop along selected trails;
c) Moderate large-area cuts (e.g., group selection) along trails to limit the aesthetic impact of such cuts, but potentially provide some cuts (determined on a case-by-case basis) to improve opportunities for wildlife viewing.

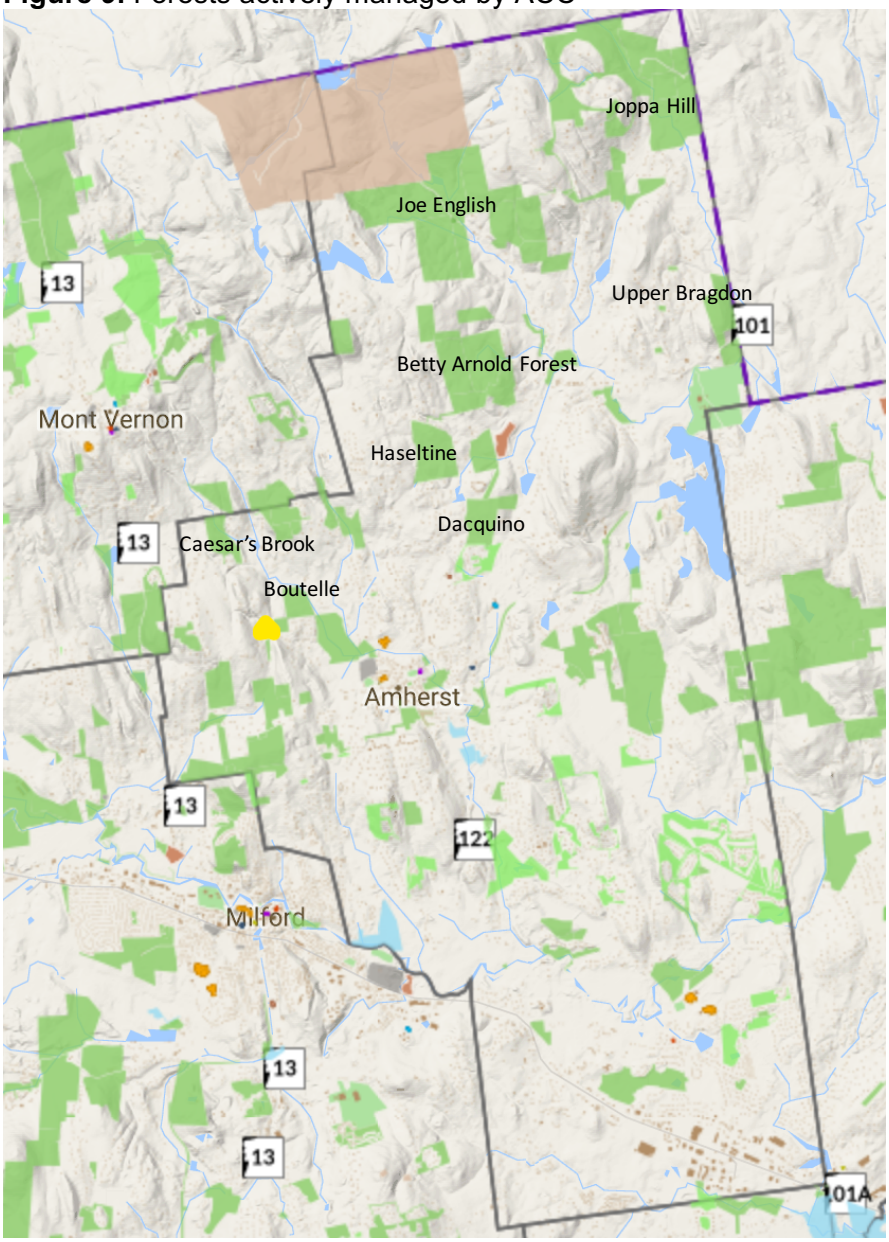
Property-specific management plans will set out the considerations for recreation for each property.

Objective 3: Revenue generation

The economic value of the commercial timber in Amherst's town forests is significant, however ACC does not choose to maximize profitability as a goal, but rather prioritizes forest health/biodiversity conservation and recreation. Revenue generation from timber harvests is important though, as it pays the costs of forest management and it generates profits that are deposited in the Conservation Fund (which can be used to acquire additional conservation lands in the future).

Every property has a forest stand inventory that details the volume of commercial timber by species. This is to be updated periodically, and should be used as an input in planning harvest decisions to ensure that management costs are covered and appropriate profits are generated.

Figure 9. Forests actively managed by ACC



Strategy 4. Manage Town Grasslands

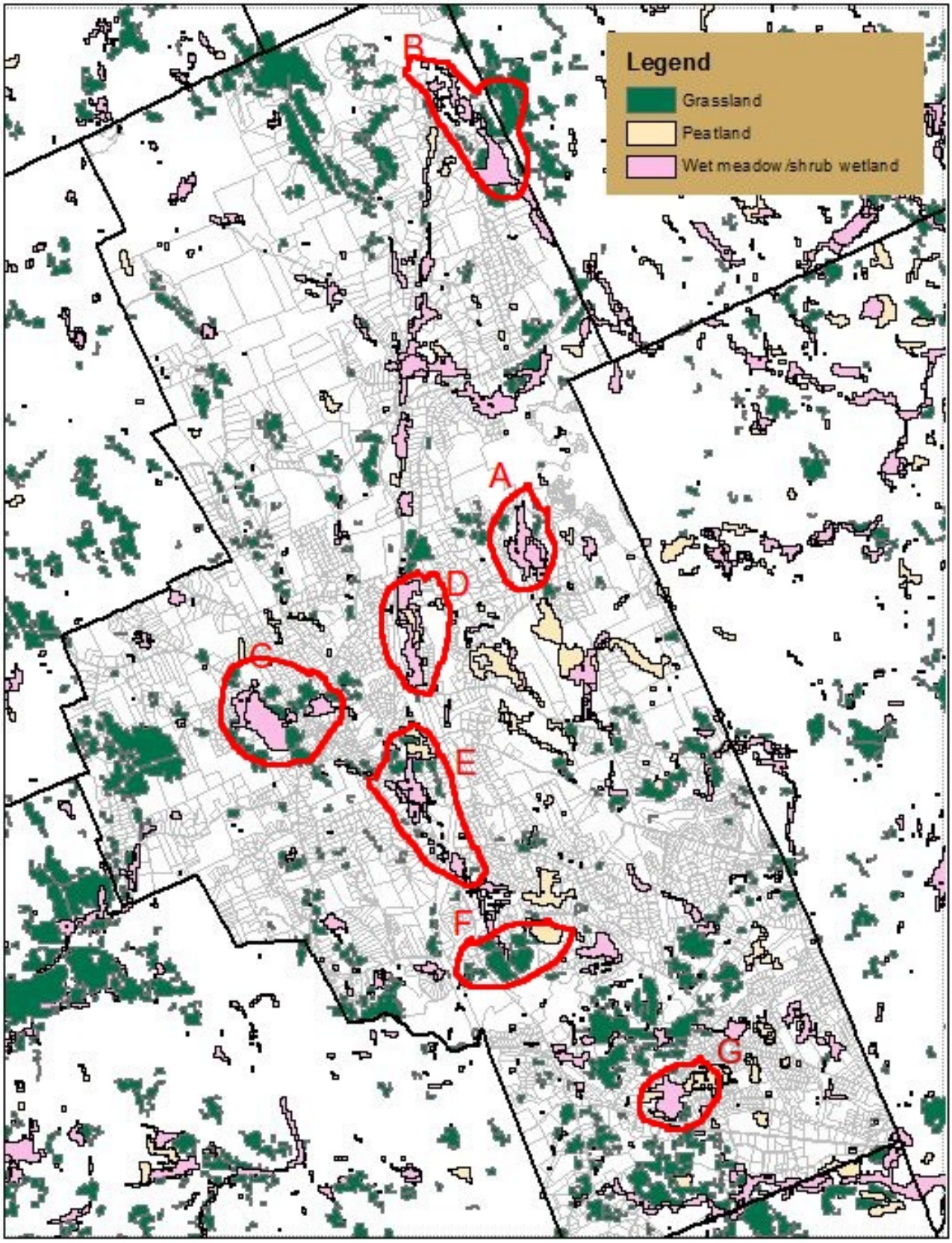
Grasslands are comprised of grasses, sedges, and wildflowers with little to no shrubs and trees. Grasslands provide an important type of wildlife habitat within the matrix of different ecosystems in the landscape. Grassland habitats in Amherst may support around 70 species of wildlife. However, their relative abundance is diminishing in New Hampshire, as areas once in grassland are either being developed or have reverted to forest.

Amherst's town grasslands are composed of 14 parcels totaling almost 250 acres (Table 2 and Figure 10). They are generally dry upland, scrub-shrub, or wet meadow surrounded by forests.

Table 2. ACC Managed Grasslands

ID	Name	Acreage, Type	Location
A	Pond Parish	71; Mixed peatland, wet meadow	Pond Parish Road
B	Joppa Hill Farm	14; Mosaic of upland, forested, beaver pond	Four fields including adjoining fields in Bedford owned by Bedford; in back of the Joppa Hill Farm barn off of Joppa Hill Road in Bedford
C	Great Meadow	72; Mosaic of wet meadow and damp forest	on Boston Post Road across from and slightly west of Wilkins School
D	Amherst Village District Land	21; Wet meadow	
E	Minot J. Ross Memorial Bird Sanctuary	20; Wet Meadow	On Thornton Ferry Road
F	Ponemah Bog Wildlife Sanctuary	72; Acidic fen	Sterns Road
G	Beacon – Wells - Wolf	11; Wet meadow	Boston Post Road
	Currier Land	14; Mosaic of upland and scrub, river floodplain	Between Fairway Drive, off of Boston Post Road, and the Souhegan River.
	Forestview Cemetery	15;dry floodplain	Merrimack Road
	Caesar's Brook	1; Dry upland	A former log landing, north of Mont Vernon Road, just east of the junction with Eaton Road
	Souhegan Valley District Landfill	1; dry landfill cap	NH Route 101 opposite Walnut Hill Road
	Grater Woods Meadow	3; Dry upland	At the end of Grater Road
	Woolsey	1; Dry upland	A former home lawn, on Wilson Hill Road in Merrimack immediately after the end of Spring Road at the Amherst-Merrimack border
	Sky Meadow + Rear Town Transfer Station	5; Dry upland	At the bottom of Austin Road
	Lindabury Orchard	?; Dry upland	Christian Hill Road, lower hayfield only

Figure 10. Grasslands managed by ACC



Most grasslands require maintenance such as mowing to prevent them from reverting to shrubs or forests. ACC's vision is to maintain grasslands in Amherst as a vital component of the larger mosaic of wildlife habitats in our landscape. The strategy to manage grasslands applies to Amherst town properties containing native grassland, wet meadow/shrubland and peatland.

Prior to 2017, ACC management for grasslands involved annual mowing of grasslands early in the fall after nesting season, mostly to keep the fields open from reverting to forest. Numerous projects performed by commissioners and volunteers removed encroaching trees and brush, including invasive species. The principal management objective was to preserve the rural character of the town.

In 2017, the ACC determined to use the NH Wildlife Action Plan as a guide to enhancing our grassland habitats to encourage better habitat conservation for species in decline. This will include characterizing the current flora and fauna composition and structure in our grasslands, setting targets for composition and structure we would like to maintain in the future, developing management specifications, and establishing key performance indicators for measuring our effectiveness.

Like the forest management strategy, management practices are to be tailored for each property according to its type and the desired species composition and structure, as well as recognition of its functional role within the broader landscape mosaic of ecosystems. Key habitat variables for wildlife include minimum grassland size, vegetation composition and structure. Wildlife species may require different habitats for different needs, such as food, shelter, breeding and rearing of young.

ACC will seek to integrate its grasslands management with its forest management plan, and with the management of private lands abutting ACC lands. Examples of integrated management prescriptions include feathering the borders of adjacent forests to minimize distinct edges, reducing or eliminating hedgerows, and maximizing contiguity of grassland habitats.

Strategy 5. Control invasive exotic species

Invasive exotic species are those that are non-native (or alien) to the ecosystem and whose introduction causes or is likely to cause economic or environmental harm or harm to human health.

ACC seeks to control invasive *plant* species throughout the town. This includes:

- Direct control of invasive exotic species on ACC managed public lands;
- Collaborative control of invasive species with the Department of Public Works on other town properties, especially transportation rights of way, which act as corridors for the spread of these plants;
- Encouragement of private landowners to control invasive species on their land.

ACC also controls poison ivy where it poses a threat to the public on ACC properties.

Currently, ACC has no plan for the control of *non-plant* invasive species.

Strategy 6. Promote low-impact outdoor recreation

ACC promotes low-impact outdoor recreation on the lands that it manages.

Trails

The most significant management activity is the development and maintenance of >25 miles of trails and associated infrastructure (e.g., bridges, kiosks, parking areas, and web-based trail maps and guides). ACC is committed to accommodating multiple types of trail use: hiking, wildlife observation, trail running, x-country skiing, snowshoeing, and mountain biking. It does not allow motorized vehicles on any of its trails.

ACC relies heavily on volunteers to develop and maintain trails. Trail maintenance is undertaken by a large group of volunteers in Amherst that are approved by ACC has *trail stewards*. These individuals regularly walk the trails, remove natural debris (e.g. fallen branches or trees), collect litter, and identify major repair needs (e.g., failing infrastructure). In recent years, significant assistance in trail development has come from external organizations such as the New England Mountain Bike Association. Lumber for infrastructure has been generously donated by Currier Lumber. As such, trail maintenance and new trail development occurs at little or no cost to the town.

ACC maintains a current set of trail maps and guides for public access at:
https://www.amherstnh.gov/conservation-commission/pages/amherst-trails

In addition, most trailheads have a physical trail map with a QR code that will load an electronic version of a trail map onto a user's smartphone.

Hunting

ACC allows hunting on all of its properties, as regulated by the State of New Hampshire. Wildlife populations are monitored and regulated by New Hampshire Fish & Game. Hunters with appropriate licenses and during the established hunting seasons are welcome on ACC-managed properties without express permission of ACC. Exceptions are the hunting of coyotes and trapping. In these cases, hunters must contact ACC to request permission on a seasonal basis. ACC will typically grant permission for these activities if the proponent is cognizant of responsible practices.

Strategy 7. Educate citizens about Amherst's biodiversity and natural resources

In order to reach ACC's goals, public education and outreach will be necessary. ACC has not yet developed a complete sub-plan for this strategy and will explore options for building the Commission's capacity in this area. It will be a priority to find ways to work with private landowners to participate in conservation.

Appendix A: Supporting Information on Enabling Legislation

The following text, excerpted from the Handbook for New Hampshire Municipal Conservation Commissions[5], summarizes the enabling legislation for a conservation commission and describes its responsibilities.

> New Hampshire RSA 36-A authorizes a municipality to establish a conservation commission for "the proper utilization and protection of the natural resources and for the protection of watershed resources of said city or town." A commission is the only local body specifically charged with protecting natural resources; it provides a focal point within municipal government for environmental concerns. Without a conservation commission, other boards may or may not be aware of and consider natural resources in carrying out their responsibilities.
>
> A commission is an advisory body: it may offer advice on conservation matters to state and local agencies and boards, such as the Department of Environmental Services (DES) Wetlands Bureau, planning board, or board of selectmen. It is the only local board authorized to "intervene", or request more time, to review applications submitted to DES Wetlands Bureau.
>
> A commission may act directly to protect natural resources by acquiring, with the approval of the selectmen or city council, the fee (full title) or lesser interest (easement) in land or water resources on behalf of the municipality. It then may manage these conservation areas. If authorized by the local legislative body, it may manage duly designated town forests (RSA 31: 110-113).
> ….
>
> The statute directs every conservation commission to:
>
> - "…conduct researches into its local land and water areas…";
> - "…seek to coordinate the activities of unofficial bodies organized for similar purposes…";
> - "…keep an index of all open space and natural, aesthetic or ecological areas…all marshlands, swamps and other wetlands…"; and,
> - "…keep accurate records of its meetings and actions…".
>
> RSA 36-A also authorizes a conservation commission to engage in optional activities:
>
> - "…may recommend…a program for the protection, development or better utilization of all…areas [in the index]…"
> - "…may receive gifts of money and property, both real and personal, in the name of the city or town, subject to the approval of the local governing body, such gifts to be managed and controlled by the commission…"
> - "…may acquire in the name of the town or city, subject to the approval of the local governing body,…the fee in such land or water rights, or any lesser interest…and shall manage and control the same, but the city or town commission shall not have the right to condemn property for these purposes."
> - "…may advertise, prepare, print and distribute books, maps, charts, plans and pamphlets…necessary for its work."

[5] Swope, M. 2004. *Handbook for Municipal Conservation Commissions*. Published by the New Hampshire Association of Conservation Commissions.

Other Statutory Powers

Several other statutes give conservation commissions other optional powers. Using them can increase the scope and influence of commission's activities.

Town forests

The statute enabling local designation and management of town and city forests, RSA 31:110-113, provides two options for municipal forest managers: a forestry committee created for that purpose, or, by vote of town meeting or city council, a conservation commission.

Dredge and fill in wetlands

The NH statute governing Fill and Dredge in Wetlands, RSA 482-A, allows a conservation commission to "intervene", or request time to investigate, a permit application filed with DES Wetlands Bureau. If a commission makes this request within 14 days of the date a standard application is signed by the town or city clerk, the Bureau must delay action on that application until a report is received from the commission or until 40 days from the date of the clerk's signature, whichever comes first. The conservation commission is the *only* municipal body with authority to "intervene".

A conservation commission may also prepare the report and maps for local designation of prime wetlands under RSA 482-A:15.

Sand and gravel excavations

Unlike most NH statutes that allow a municipality to regulate an activity if it chooses to do so, RSA 155-E requires all municipalities to regulate sand and gravel excavations by issuing permits. The planning board is responsible for administering this permit system unless the municipality votes to assign responsibility to the zoning board of adjustment or selectmen.

RSA 155-E:3 requires an applicant for an excavation permit to send a copy of the application to the conservation commission. This is an opportunity for a commission to make comments and recommendations on proposed excavation and restoration plans. A commission should see to it that it does in fact receive copies of applications and that its comments are considered in regulatory decisions. Local regulations should require the regulator to consider the commission's comments and prepare written findings if a decision differs from those recommendations.

Of particular importance for ACC are the town zoning ordinances related to the protection of wetlands and public water sources. In particular, **Section 4.11: Wetland and Watershed Conservation District** and **Section 4.13 Aquifer Conservation and Wellhead Protection District**. Given ACC's role in protecting wetlands, it should be active in ensuring the proper enforcement of these ordinances.

In addition to the legislation that governs conservation commissions, there are numerous relevant federal, state, and local environmental laws. Other laws include (but are not limited to) key topics such as the protection of threatened and endangered species. None of these laws assigns responsibilities to the commission, but rather they provide a framework of environmental protection in which the commission should operate and assist appropriate authorities as needed. A description of those laws and their relationship to the responsibilities of the conservation commission is provided in the Handbook for New Hampshire Municipal Conservation Commissions.

Appendix B: Species of Conservation Concern by Habitat Type

Potential Species - Common Name	Taxonomic Group	NH Status	Habitats	More Info
Blanding's Turtle	Amphibians and Reptiles	SE, SGCN	Floodplain Habitats, Marsh and Shrub Wetlands, Peatlands, Temperate Swamps, Vernal	http://www.wildlife.state.nh.us/wildlife/profiles/blandings-turtle.html
Blue-Spotted/Jefferson Salamander	Amphibians and Reptiles	SC, SGCN	Appalachian Oak-Pine Forest, Floodplain Habitats, Hemlock Hardwood Pine Forest, Marsh and Shrub Wetlands, Northern Hardwood-Conifer Forest, Northern Swamps, Peatlands, Temperate Swamps, Vernal Pools	http://www.wildlife.state.nh.us/wildlife/profiles/blue-spotted-salamander.html
Eastern Box Turtle	Amphibians and Reptiles	SC, SGCN	Appalachian Oak-Pine Forest, Grasslands, Hemlock Hardwood Pine Forest, Marsh and Shrub Wetlands, Shrublands, Temperate Swamps	http://www.wildlife.state.nh.us/wildlife/profiles/box-turtle.html
Eastern Hog-nosed Snake	Amphibians and Reptiles	SE, SGCN	Appalachian Oak-Pine Forest, Hemlock Hardwood Pine Forest, Marsh and Shrub Wetlands, Pine Barrens, Shrublands, Vernal Pools	http://www.wildlife.state.nh.us/wildlife/profiles/hognose-snake.html
Eastern Ribbonsnake	Amphibians and Reptiles	SGCN	Floodplain Habitats, Marsh and Shrub Wetlands, Peatlands, Vernal Pools	http://www.wildlife.state.nh.us/wildlife/profiles/ribbon-snake.html
Fowler's Toad	Amphibians and Reptiles	SC, SGCN	Appalachian Oak-Pine Forest, Dunes, Large Warmwater Rivers, Marsh and Shrub Wetlands, Pine Barrens, Shrublands, Vernal Pools, Warmwater Lakes and Ponds,	http://www.wildlife.state.nh.us/wildlife/profiles/fowlers-toad.html
Marbled Salamander	Amphibians and Reptiles	SE, SGCN	Appalachian Oak-Pine Forest, Vernal Pools	http://www.wildlife.state.nh.us/wildlife/profiles/marbled-salamander.html
Northern Black Racer	Amphibians and Reptiles	ST, SGCN	Appalachian Oak-Pine Forest, Grasslands, Hemlock Hardwood Pine Forest, Rocky Ridge, Cliff, and Talus, Shrublands	http://www.wildlife.state.nh.us/wildlife/profiles/black-racer-snake.html
Northern Leopard Frog	Amphibians and Reptiles	SC, SGCN	Coldwater Rivers and Streams, Floodplain Habitats, Grasslands, Lakes and Ponds with Coldwater Habitats, Large Warmwater Rivers, Marsh and Shrub Wetlands, Shrublands,	http://www.wildlife.state.nh.us/wildlife/profiles/leopard-frog.html
Smooth Greensnake	Amphibians and Reptiles	SC, SGCN	Grasslands, Marsh and Shrub Wetlands, Peatlands, Rocky Ridge, Cliff, and Talus, Rocky Ridge, Cliff, and Talus, Shrublands	http://www.wildlife.state.nh.us/wildlife/profiles/smooth-green-snake.html
Spotted Turtle	Amphibians and Reptiles	ST, SGCN	Floodplain Habitats, Marsh and Shrub Wetlands, Peatlands, Temperate Swamps, Vernal	http://www.wildlife.state.nh.us/wildlife/profiles/spotted-turtle.html
Wood Turtle	Amphibians and Reptiles	SC, SGCN	Coldwater Rivers and Streams, Floodplain Habitats, Grasslands, Shrublands, Warmwater Rivers and Streams	http://www.wildlife.state.nh.us/wildlife/profiles/wood-turtle.html
American Black Duck	Birds	SGCN	Lakes and Ponds, Rivers and Streams, Marsh and Shrub Wetlands, Northern Swamps, Peatlands, Temperate Swamps	http://www.wildlife.state.nh.us/wildlife/profiles/wap/birds-americanblackduck.pdf
American Kestrel	Birds	SC, SGCN	Developed Habitats, Grasslands, Shrublands	http://www.wildlife.state.nh.us/wildlife/profiles/american-kestrel.html
American Kestrel	Birds	SC, SGCN	Developed Habitats, Grasslands, Shrublands	http://www.wildlife.state.nh.us/wildlife/profiles/american-kestrel.html
American Woodcock	Birds	SGCN	Appalachian Oak-Pine Forest, Hemlock Hardwood Pine Forest, Marsh and Shrub Wetlands, Northern Swamps, Shrublands, Temperate Swamps	http://www.wildlife.state.nh.us/wildlife/profiles/woodcock.html
Bald Eagle	Birds	ST, SGCN	Appalachian Oak-Pine Forest, Floodplain Habitats, Hemlock Hardwood Pine Forest, High Elevation Spruce-Fir Forest, Lakes and Ponds, Rivers and Streams, Lowland Spruce-Fir Forest, Marsh and Shrub Wetlands, Northern Hardwood-Conifer Forest	http://www.wildlife.state.nh.us/wildlife/profiles/bald-eagle.html
Bank Swallow	Birds	SC, SGCN	Coldwater Rivers and Streams, Grasslands, Lakes and Ponds with Coldwater Habitats, Large Warmwater Rivers, Marsh and Shrub Wetlands, Warmwater Rivers and Streams	http://www.wildlife.state.nh.us/wildlife/profiles/wap/birds-bankswallow.pdf
Bay-breasted Warbler	Birds	SGCN	High Elevation Spruce-Fir Forest, Lowland Spruce-Fir Forest, Northern Hardwood-Conifer Forest, Northern Swamps, Peatlands	http://www.wildlife.state.nh.us/wildlife/profiles/wap/birds-baybreastedwarbler.pdf
Black-billed Cuckoo	Birds	SGCN	Appalachian Oak-Pine Forest, Hemlock Hardwood Pine Forest, Pine Barrens, Shrublands	http://www.wildlife.state.nh.us/wildlife/profiles/wap/birds-blackbilledcuckoo.pdf
Blue-winged Warbler	Birds	SC, SGCN	Pine Barrens, Shrublands	http://www.wildlife.state.nh.us/wildlife/profiles/wap/birds-bluewingedwarbler.pdf
Bobolink	Birds	SGCN	Grasslands	http://www.wildlife.state.nh.us/wildlife/profiles/wap/birds-bobolink.pdf
Brown Thrasher	Birds	SGCN	Pine Barrens, Shrublands	http://www.wildlife.state.nh.us/wildlife/profiles/wap/birds-brownthrasher.pdf
Canada Warbler	Birds	SGCN	Hemlock Hardwood Pine Forest, Lowland Spruce-Fir Forest, Northern Hardwood-Conifer Forest, Northern Swamps, Temperate Swamps	http://www.wildlife.state.nh.us/wildlife/profiles/wap/birds-canadawarbler.pdf

Chimney Swift	Birds	SGCN	Appalachian Oak-Pine Forest, Developed Habitats, Hemlock Hardwood Pine Forest, Lowland Spruce-Fir Forest, Northern Hardwood-Conifer Forest	http://www.wildlife.state.nh.us/wildlife/profiles/wap/birds-chimneyswift.pdf
Eastern Meadowlark	Birds	SC, SGCN	Grasslands	http://www.wildlife.state.nh.us/wildlife/profiles/wap/birds-easternmeadowlark.pdf
Eastern Towhee	Birds	SGCN	Appalachian Oak-Pine Forest, Peatlands, Pine Barrens, Rocky Ridge, Cliff, and Talus, Rocky Ridge, Cliff, and Talus, Shrublands	http://www.wildlife.state.nh.us/wildlife/profiles/wap/birds-easterntowhee.pdf
Eastern Whip-poor-will	Birds	SGCN	Appalachian Oak-Pine Forest, Hemlock Hardwood Pine Forest, Northern Hardwood-Conifer Forest, Pine Barrens, Shrublands	http://www.wildlife.state.nh.us/wildlife/profiles/wap/birds-easternwhippoorwill.pdf
Field Sparrow	Birds	SGCN	Pine Barrens, Shrublands	http://www.wildlife.state.nh.us/wildlife/profiles/wap/birds-fieldsparrow.pdf
Golden Eagle	Birds	SGCN	Appalachian Oak-Pine Forest, Hemlock Hardwood Pine Forest, High Elevation Spruce-Fir Forest, Lowland Spruce-Fir Forest, Northern Hardwood-Conifer Forest, Rocky Ridge,	http://www.wildlife.state.nh.us/wildlife/profiles/golden-eagle.html
Grasshopper Sparrow	Birds	ST, SGCN	Grasslands	http://www.wildlife.state.nh.us/wildlife/profiles/wap/birds-grasshoppersparrow.pdf
Northern Goshawk	Birds	SGCN	Appalachian Oak-Pine Forest, Hemlock Hardwood Pine Forest, Lowland Spruce-Fir Forest, Northern Hardwood-Conifer Forest	http://www.wildlife.state.nh.us/wildlife/profiles/northern-goshawk.html
Northern Goshawk	Birds	SGCN	Appalachian Oak-Pine Forest, Hemlock Hardwood Pine Forest, Lowland Spruce-Fir Forest, Northern Hardwood-Conifer Forest	http://www.wildlife.state.nh.us/wildlife/profiles/northern-goshawk.html
Pied-billed Grebe	Birds	ST, SGCN	Marsh and Shrub Wetlands, Peatlands	http://www.wildlife.state.nh.us/wildlife/profiles/wap/birds-piedbilledgrebe.pdf
Prairie Warbler	Birds	SGCN	Pine Barrens, Shrublands	http://www.wildlife.state.nh.us/wildlife/profiles/wap/birds-prariewarbler.pdf
Purple Finch	Birds	SGCN	Appalachian Oak-Pine Forest, Floodplain Habitats, Hemlock Hardwood Pine Forest, High Elevation Spruce-Fir Forest, Lowland Spruce-Fir Forest, Northern Hardwood-Conifer	http://www.wildlife.state.nh.us/wildlife/profiles/wap/birds-purplefinch.pdf
Ruffed Grouse	Birds	SGCN	Appalachian Oak-Pine Forest, Grasslands, Hemlock Hardwood Pine Forest, Lowland Spruce-Fir Forest, Marsh and Shrub Wetlands, Northern Hardwood-Conifer Forest,	http://www.wildlife.state.nh.us/wildlife/profiles/wap/birds-ruffedgrouse.pdf
Scarlet Tanager	Birds	SGCN	Appalachian Oak-Pine Forest, Hemlock Hardwood Pine Forest, Northern Hardwood-	http://www.wildlife.state.nh.us/wildlife/profiles/wap/birds-scarlettanager.pdf
Veery	Birds	SGCN	Appalachian Oak-Pine Forest, Floodplain Habitats, Hemlock Hardwood Pine Forest, Northern Hardwood-Conifer Forest, Northern Swamps, Temperate Swamps	http://www.wildlife.state.nh.us/wildlife/profiles/wap/birds-veery.pdf
Vesper Sparrow	Birds	SC, SGCN	Grasslands, Pine Barrens	http://www.wildlife.state.nh.us/wildlife/profiles/wap/birds-vespersparrow.pdf
Wood Thrush	Birds	SGCN	Appalachian Oak-Pine Forest, Floodplain Habitats, Hemlock Hardwood Pine Forest, Northern Hardwood-Conifer Forest	http://www.wildlife.state.nh.us/wildlife/profiles/wap/birds-woodthrush.pdf
American Bumble Bee	Bumble Bees	SGCN	Developed Habitats, Grasslands, Shrublands	http://www.wildlife.state.nh.us/wildlife/profiles/wap/insects-americanbumbleebee.pdf
Rusty-patched Bumble Bee	Bumble Bees	SGCN	Developed Habitats, Grasslands	http://www.wildlife.state.nh.us/wildlife/profiles/wap/insects-rustypatchedbumblebee.pdf
Yellow Bumble Bee	Bumble Bees	SGCN	Developed Habitats, Grasslands	http://www.wildlife.state.nh.us/wildlife/profiles/wap/insects-yellowbumblebee.pdf
Yellowbanded Bumble Bee	Bumble Bees	SGCN	Developed Habitats, Grasslands, Shrublands	http://www.wildlife.state.nh.us/wildlife/profiles/wap/insects-yellowbandedbumblebee.pdf
Monarch	Butterflies and Moths	Review	Developed Habitats, Grasslands	http://www.wildlife.state.nh.us/wildlife/profiles/wap/insects-monarch.pdf
Noctuid Moth	Butterflies and Moths	SGCN	Pine Barrens	http://www.wildlife.state.nh.us/wildlife/profiles/wap/insects-pinebarrenlepidoptera.pdf
Pine Barrens Bluet	Dragonflies and Damselflies	SC, SGCN	Peatlands	http://www.wildlife.state.nh.us/wildlife/profiles/wap/insects-pinebarrensbluet.pdf
Ringed Boghaunter	Dragonflies and Damselflies	SE, SGCN	Appalachian Oak-Pine Forest, Hemlock Hardwood Pine Forest, Marsh and Shrub Wetlands, Peatlands, Temperate Swamps	http://www.wildlife.state.nh.us/wildlife/profiles/wap/insects-ringedboghaunter.pdf