



CHAPTER 3

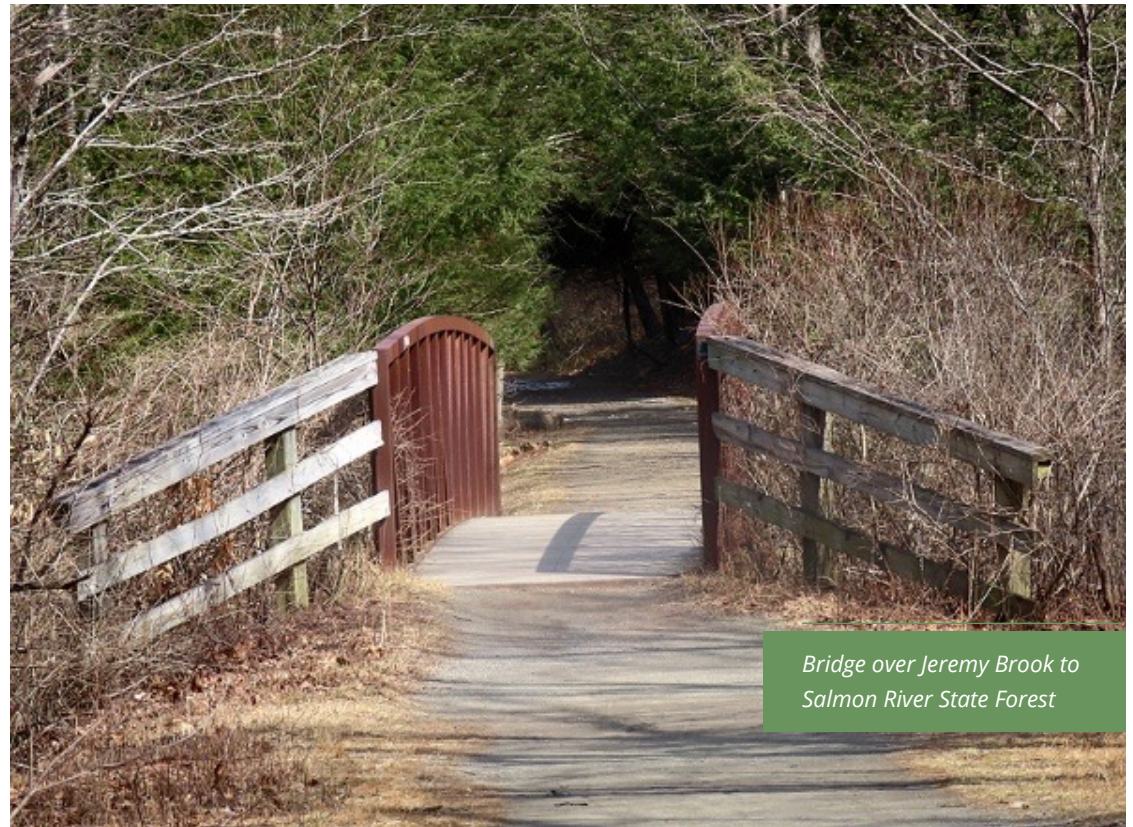
Air Line State Park Trail Region Conservation

OVERVIEW OF AIR LINE STATE PARK TRAIL REGION

For the most part, the Air Line State Park Trail (ALSPT) Region is sparsely populated with small towns, rural residential development, and conserved lands. From the nearest points of the ALSPT Region, the urbanized area of Worcester is located 30 miles north of the region, the City of Hartford is 30 miles to the west and the New London-Groton region is 30 miles to the south. The smaller urbanized area of Windham (Willimantic) serves as the central urban axis for the ALSPT as well as its junction with the Hop River Trail (see Figure 3A).

A geographic description of the Air Line State Park Trail Region and neighboring towns is as follows: “The landscape includes agriculture, including both pasture and livestock grazing, and cropland. Major crops include hay, corn for silage, nursery stock, greenhouse products, dairy, livestock, some poultry, sweet corn, potatoes, other vegetables, and tobacco. Forest cover is significant, including upland sites and some wooded wetlands, and there are both larger, unbroken tracts of forest and smaller, fragmented forests. Generally, the current climate is humid and continental, slightly colder and with a slightly shorter growing season (120-160 days) than bordering lowland regions. Precipitation is slightly lower than more coastal areas, but still high (40-50 inches annually) and roughly equally-distributed year-round. Late summer to early fall averages sunnier, with the rest of the year being overcast roughly half the time. <https://bplant.org/region/801>

Of the many multi-use trails in Connecticut, the Air Line State Park Trail is an exceptionally unique corridor. While the



Bridge over Jeremy Brook to Salmon River State Forest

“What I like most about the trail is the beautiful scenery; we do photography on the trail. Look forward to when it will connect through to Cobalt & Portland. I use it primarily for running and walking. It’s great to have a nice long walk in nature in the shade. We see all sorts of wildlife and enjoy seeing our neighbors on the trail.”

— TRAIL USER COMMENT, UCONN ALSPT TRAIL SURVEY

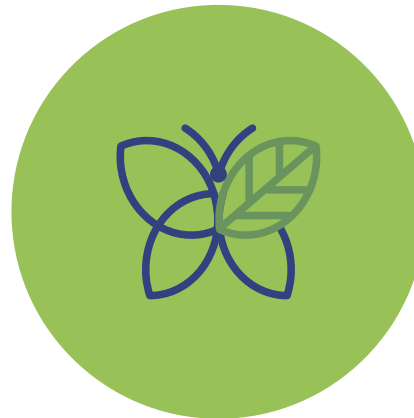
The trail provides a transformational continuity of riding, walking, hiking for miles and miles through vast acreage of rural landscape, rich diversity of topography, geomorphology, vegetation, forests, and wildlife

trail's primary feature is its designation as a state park, a linear one that currently extends from East Hampton to Thompson, it also serves as a rural recreation corridor and transportation system owned, maintained, and improved by the CT DEEP with cooperative support by other organizations and/or local municipalities. It connects and joins other trail systems in Connecticut, such as the Hop River State Park Trail, the Colchester Spur Trail, the Nipmuck, Goodwin & Natchaug hiking trails and various multi-use trails in Massachusetts and Rhode Island. The trails of state forests and parks, land trusts, municipal open space and nonprofit outdoor centers branch off from this multi-use recreation corridor

providing trail users with numerous recreational opportunities. This network of interconnected trails is its own eastern Connecticut recreational trail transportation system.

In addition, its relative rural geography is in contrast to other multi-use trails, ones that are predominantly located in more urban and suburban sections of the state, west of the Connecticut River. Over 53 miles in length, 64 miles long with the Portland extension, the finished trail will ultimately traverse through twelve eastern Connecticut towns from the junction of the Arrigoni Bridge in Portland to the Tri-State Marker in northeast Thompson.

Finally, the trail provides a transformational continuity of riding, walking, hiking for miles and miles through vast acreage of rural landscape, rich diversity of topography, geomorphology, vegetation, forests, and wildlife. A trail user travels or can connect to a small village center or an eclectic college downtown, like that of Willimantic in Windham. The trail travels through or near two remote State parks and four sprawling State Forests, also managed by CT DEEP's Bureau of Outdoor Recreation. Connecting neighbors include vast conserved lands owned by the Connecticut Audubon Society, the Joshua's Tract Conservation and Historic Trust, the Eastern Connecticut Forest Landowners Association (ECFLA) & the Wolf Den Land Trust (WDLT) and the Windham Land Trust as well as town owned parks and open space.

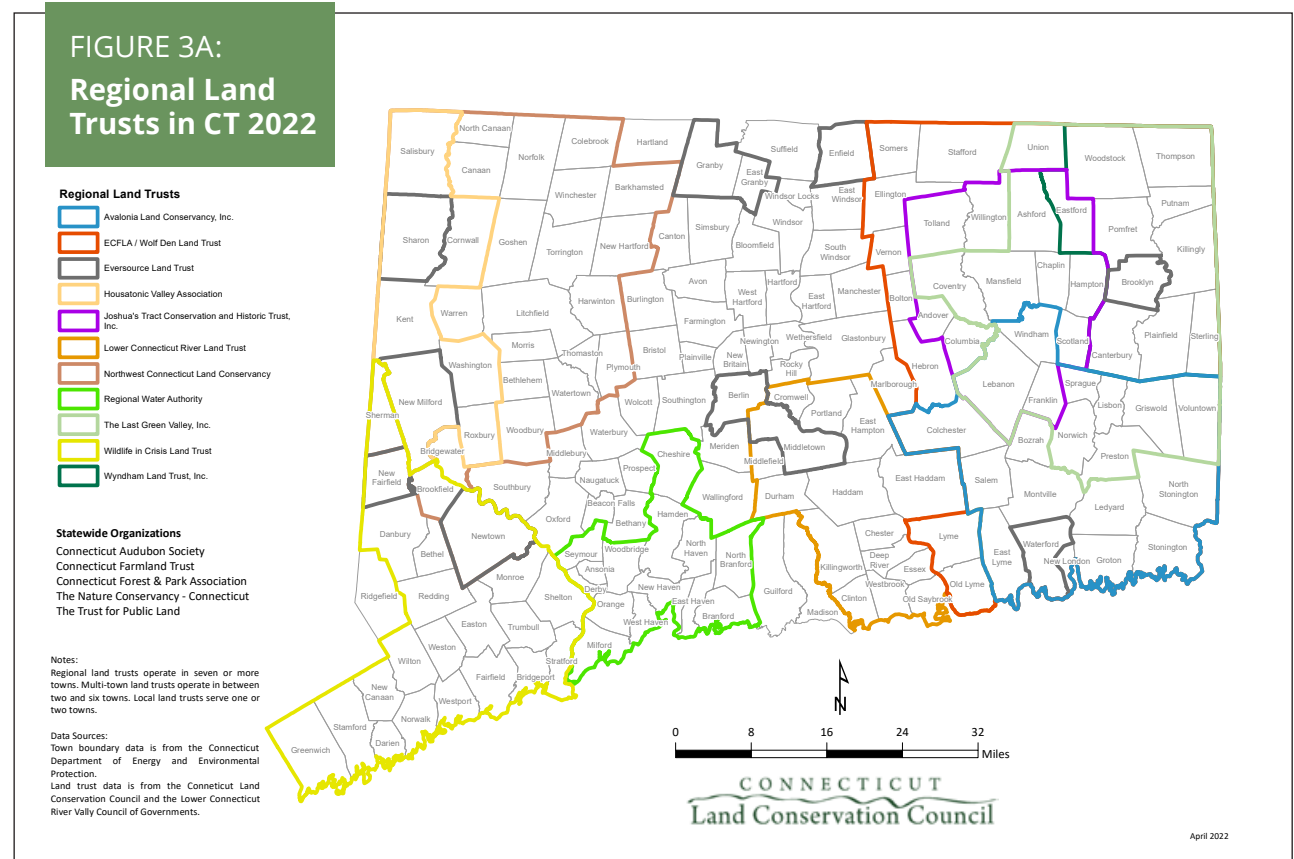


EXISTING OPEN SPACE SYNERGY & COLLABORATION

There are numerous land trusts in the Air Line State Park Trail Region. The Wyndham Land Trust, the Joshua's Tract Conservation and Historic Trust, the Middlesex Land Trust, and the Avalonia Land Conservancy are regional trusts with significant acreage preserved in the state. Figure 3A depicts Connecticut land trust organizations and how blocks of open space properties of varied organizations can provide larger acreage conservation blocks for forest continuity and habitat.

Additionally, other organizations such as the Eastern Connecticut Conservation District, the Connecticut River Coastal Conservation District, the Last Green Valley, and the Connecticut Audubon Society deliver conservation support to the region as well as preservation guidance and partnership opportunities. Policies, projects, and research by these organizations, as well as the larger land trusts with support from smaller land trusts and towns, deliver a synergistic understanding of the trail's impact and priorities for conservation and outdoor tourism with neighboring open space and conservation properties.

In addition, The Last Green Valley's open space map project offers a data source for creating mapping throughout the ALSPT Region with support from the four Councils of Governments



(COGs) (see Figures 3B and 3C). Expanding this type of mapping for the Air Line State Park Trail Region cooperatively with The Last Green Valley would provide important land use and conservation data for planning and implementation of trail improvements and connectivity to other properties. Overall, the ALSPT system is supported by many

organizations that recognized the definable conservation experience of the trail system and partnered properties. Along with CT DEEP as owner, regulating, managing, and permitting, there is momentum in place to implement the concept of building the ALSPT as sustainable conservation based trail experience for trail visitors (see Figure 3D).

FIGURE 3B

Pomfret Conservation Focus Area



Existing Open Space Trail Connecting with Air Line State Park Trail

The ALSPT system is supported by many organizations that recognized the definable conservation experience of the trail system and partnered properties.

The Role of Land Trusts in Connecticut



Land trusts are nonprofit, community-based organizations dedicated to the permanent protection and stewardship of land for public benefit.



They work closely with landowners, communities, and other nonprofits to conserve land through acquisition or gifts of property or through conservation agreements (called conservation easements). Land trusts are supported through charitable donations and use funds for a variety of purposes in support of their mission.

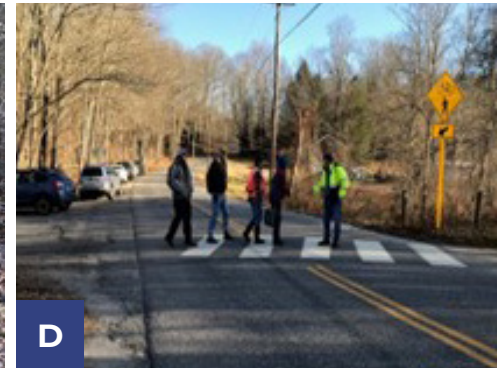


Land trusts have an ongoing responsibility to care for the land they conserve, ensuring that the conservation agreements (conservation easements) are upheld and public conservation areas and/or nature preserves are taken care of forever.



More than 130 land trusts currently serve the communities of Connecticut, representing the third most land trusts of any state in the country. Collectively protecting and managing property with significant natural, recreational, cultural, and scenic resources, land trusts range in size from small, all-volunteer organizations to those with professional staff.

THE ENVIRONMENTAL REVIEW TEAM PROCESS



With such a wealth of existing knowledge about land conservation in the ALSPT Region from public and private agencies and landowners, the Environmental Review Team (ERT) process was a perfect match for this Master Plan's conservation goals on collaboration and coordination of insights and recommendations. CT RC&D's Environmental Review Team Program provides free natural resource assessment to towns and land trusts for their properties. In this program, professional volunteer consultants evaluate property and natural resources, transportation access, determine state, regional and local land use consistency and deliver recommendations toward best management practices for resources or species of significance. For the 12 Town ALSPT Master Plan, CT RC&D funded a 20% match from the ERT program toward the CT DEEP's Recreational Trail Grant funds.

The ALSPT Region Master Plan research included an ERT natural resource survey, inventory, and recommendations. While conservation of the natural resource experience is evident throughout the trail system, ERT professional consultants focused on the three conservation focus areas of Hebron, Lebanon and Pomfret. The investigations in these three areas provides an example of how to evaluate site specific concerns during trail construction, permitting and maintenance. The ALSPT travels through these two focus areas and associated properties as well as through the Salmon River State Forest and properties of the Connecticut Audubon Society, Wyndham Land Trust, and Joshua's Tract Conservation and Historic Trust.

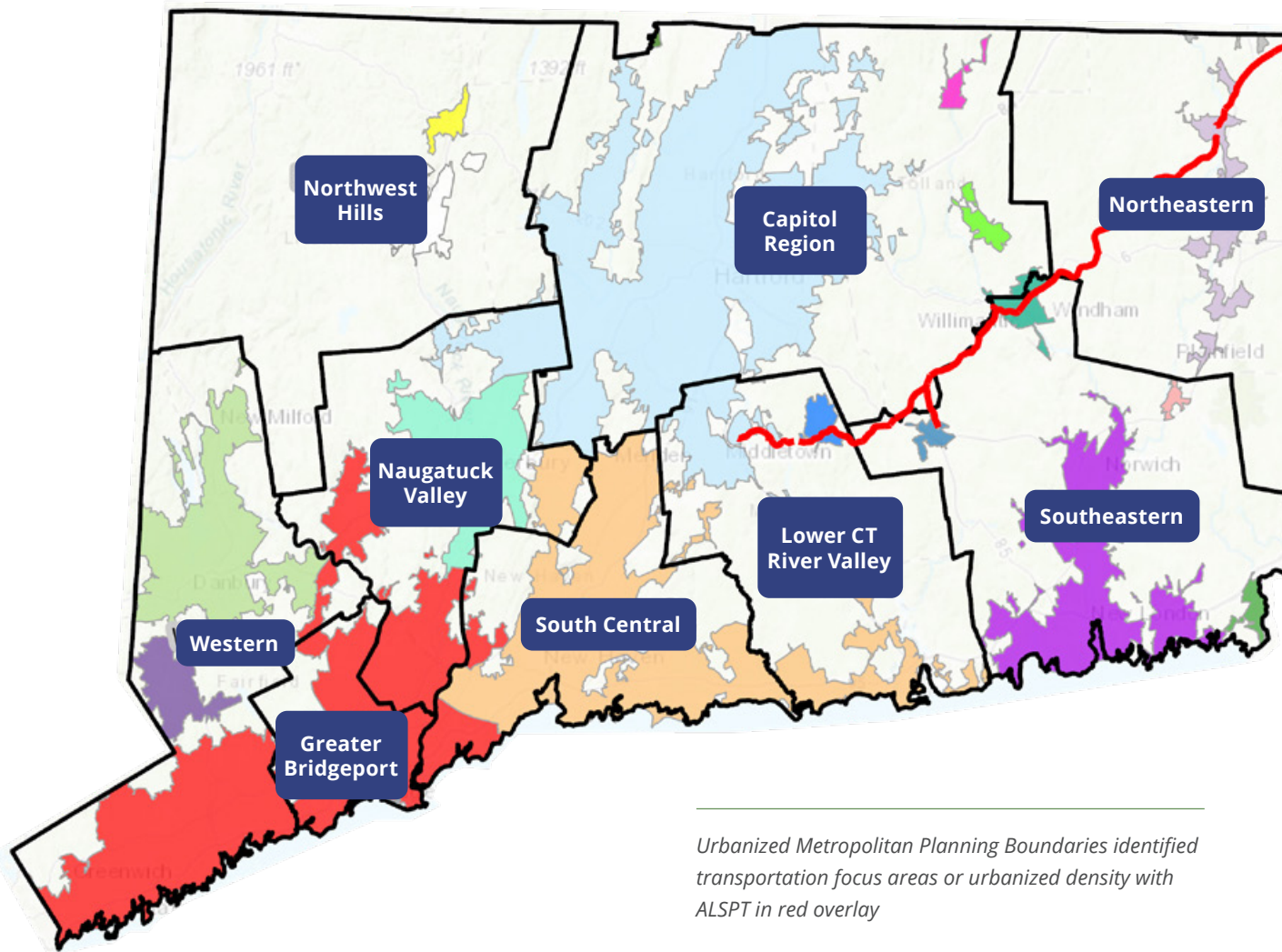
The ERT analysis and recommendations illustrate best practices in management of critical areas for natural resource protection near the trail so that

ERT Teams on site tours. A: Pomfret ERT Team evaluates off-trail connections between service venues, the connections to Pomfret's recreation properties and off trail – trail bike course and partnered relationships with neighboring land trusts. B: Pomfret ERT Team. C: Hebron ERT Team at Raymond Brook – connection to Hibbert property site visit with town officials. D: ERT Team in Lebanon evaluating agriculture connections, impacts, and opportunities from the ALSPT Trail.

trail users would both benefit from the ongoing preservation of the rural scenic landscape and access to wildlife observation and other eco-tourism-based activities near the trail. Many of the recommendations found in this section are derived from these three area natural resource inventory surveys. The full report of the team for these properties can be found in Appendix C. You can also read the [Hebron Bernstein-Hibbert ERT report](#), a more in-depth report that was produced in partnership with the Town of Hebron.

FIGURE 3C

Council of Government and Urban Areas



Urbanized Metropolitan Planning Boundaries identified transportation focus areas or urbanized density with ALSPT in red overlay

URBAN AREAS

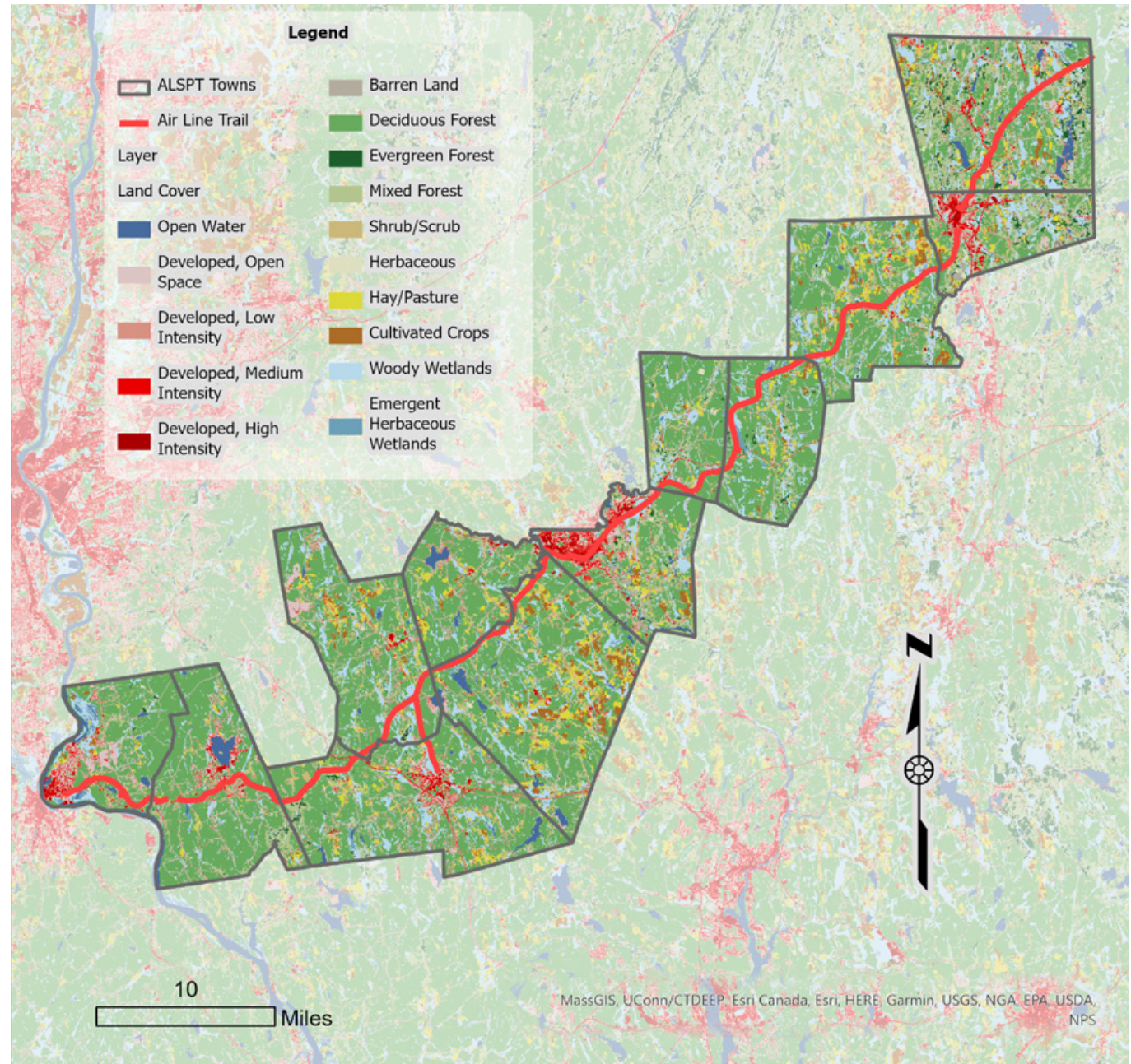
- Bridgeport-Stamford, CT-NY
- Colchester, CT
- Danbury, Ct-NY
- Hartford, CT
- Jewett City, CT
- Lake Pocotopaug, CT
- New Haven, CT
- Norwich-New London, CT
- Putnam-Killingly, CT
- Ridgefield, CT
- Springfield, MA-CT
- Stafford Springs, CT
- Storrs, CT
- Torrington, CT
- Waterbury, CT
- Westerly, RI-CT
- Willimantic, CT
- Winsted, CT
- Worcester, MA-CT
- Air Line Trail

Esri, HERE, Garmin, FAO, USGS, NGA, EPA, NPS

FIGURE 3D

Land Cover in the ALSPT Region

This land cover map is a composite of land uses in the region. While it doesn't depict preserved open space properties, the land use components of properties have been classified into probable current land use. The UConn Extension's CLEAR Program has made progress in this mapping method with a series of land use cover maps to depict land use change over time. This initiative along with similar mapping produced by The Last Green Valley and with support from Councils of Government is a good baseline for mapping the open space and natural resources of the ALSPT Region.



Environmental Review Teams Inform Trail Planning



As this current planning process unfolded, conservation research with partner organizations created an understanding of the options, limitations, and requirements with partnering and adjacent open space properties from the Air Line State Park Trail.

The teams in both Hebron and Pomfret included CT DEEP district managers, foresters, wildlife specialists, fisheries experts, the Conservation District’s watershed scientists, a geologist, two soil scientists, land trust representatives, two herpetologists, an ornithologist, agriculture-soil scientist, pollinator, and invasive species experts as well as support from the Councils of Governments and town officials. (see acknowledgement list in Chapter I for list of dedicated ERT professionals and volunteers) The team worked through varied seasons to evaluate site conditions and provide the inventories, overviews, and recommendations. Summaries are included in this chapter and the full text is available in Appendix C.

As this current planning process unfolded, conservation research with partner organizations created an understanding of the options, limitations, and requirements with partnering and adjacent open space properties from the Air Line State Park Trail. An example is pictured in Figure 3E. In this location, the ERT team, specifically the team members from the Eastern Connecticut Conservation District, provided feedback on the need to fully assess the advantages and disadvantages to improving a trail connection from the Air Line State Park Trail to the We-Li-Kit Farm Ice Cream Stand, a popular refreshment

stop in Pomfret. The business could be a highlighted designation on the Air Line State Park Trail, but the signage and routing would need to be fully evaluated. Nearby Route 97 is classified as, “more suitable,” for bike traffic by the Connecticut Department of Transportation (CTDOT) and would provide an option for cyclists to travel to the business. The question is what proficiency of cycling would the cyclists need to have, i.e., should children on small bikes use this route?

As noted in the diagram and explained in the ERT report, “The southernmost connection to the ALSPT starts out almost perpendicular to the slope. Erosion was noted on parts of the trail. Installation of water bars across the grade on an angle is recommended to dissipate any accumulated flow to reduce trail erosion. Due to the existing condition of the trail, it is not recommended that the trail to We-Li-Kit Ice Cream Stand be promoted for bike travel.”



Access to We-Li-Kit Ice Cream Stand for trail users from Air Line State Park Trail through Wyndham Land Trust, Gellert, and Valentine Properties — EVALUATION BY J. PILLO, WATERSHED MANAGER, EASTERN CT CONSERVATION DISTRICT

This example illustrates the decisions for each section of the trail that access adjacent properties of business. In this case, several decisions as well as coordination between the Wyndham Land Trust, the Town of Pomfret, the We-Li-Kit Ice Cream Stand, CT DEEP and CT DOT are required for two possible options:

- 1 At the intersection of the ALSPT and Brooklyn Road, wayfinding signs could be posted noting access to the ice cream stand. The signs might read: Travel by bike to We-Li-Kit Ice Cream Stand via Route 97. Further up the trail, there is a bike stand and walking path to We-Li-Kit Ice Cream Stand.
- 2 Avoid Route 97 as a travel way by not signing the way to Route 97 from Brooklyn Road (people would have to double back to re-enter the ALSPT). Install bike rack, bench and signage noting We-Li-Kit Ice Cream Stand at the walking path location on the Air Line State Park Trail.

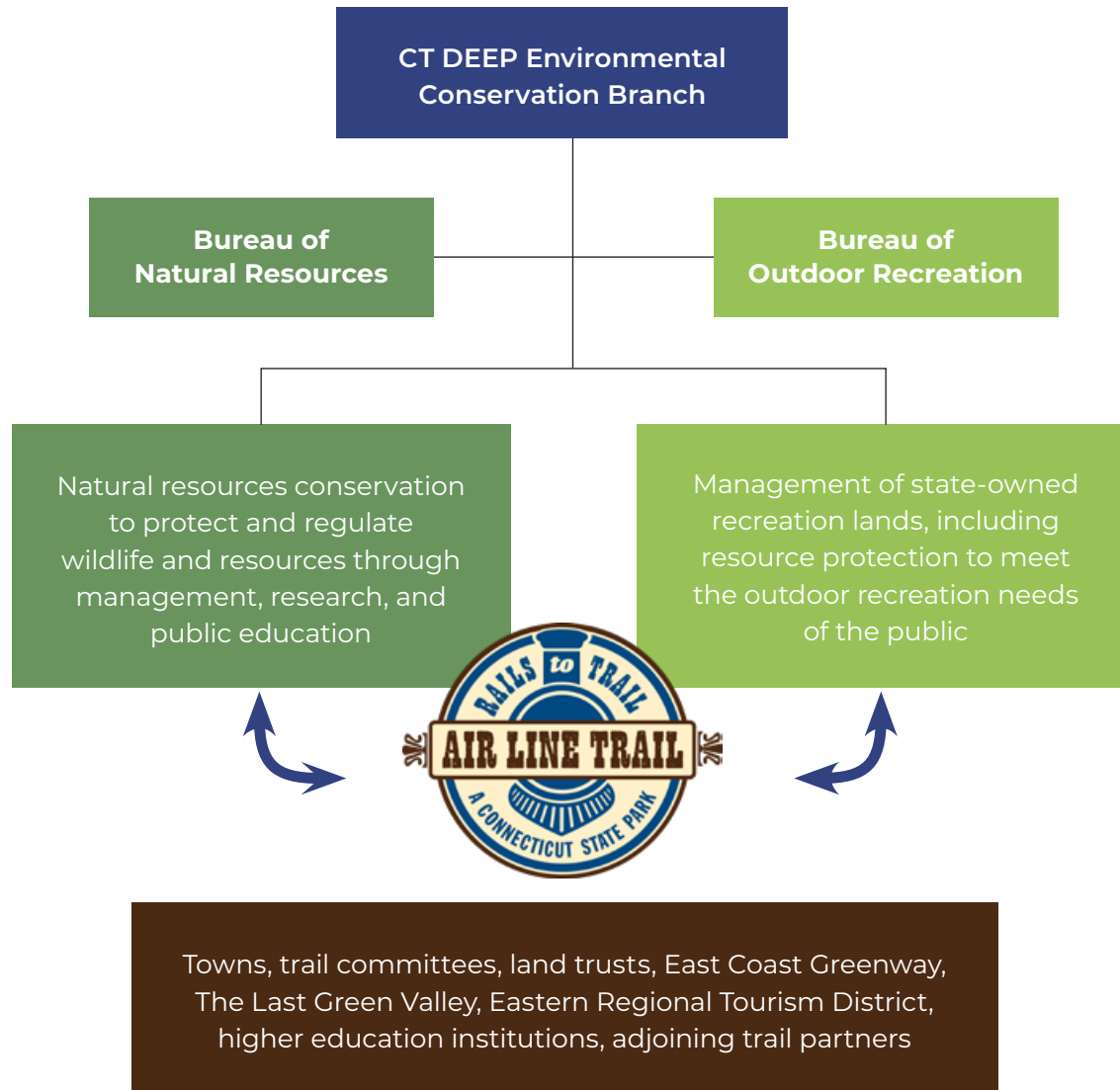


FIGURE 3E

Possible Trail Access to Businesses

- A** Cycling/pedestrian state road
- B** Cross section slope on existing trail through Gellert property
- C** Wider trail section on route
- D** Area of investigation

FIGURE 3F: Synergistic Management of the Trail System



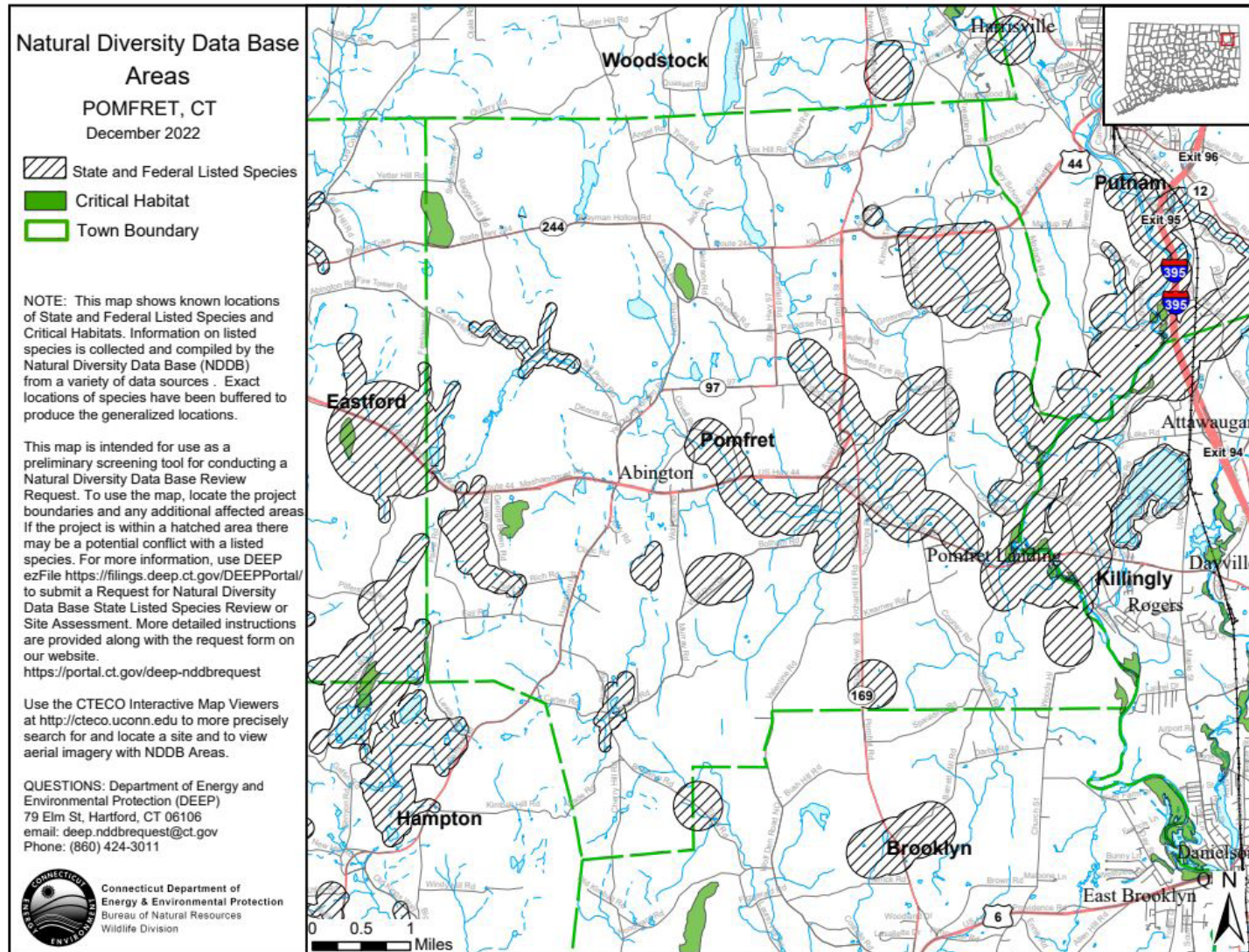
Integration of conservation management for Air Line State Park Trail

As the ALSPT and associated open space is so vast, the ALSPT Master Plan’s ERT visited and inventoried only two specific conservation focus areas, relying on the expertise of the CT DEEP to inform and support protection of the resources and habitats throughout the larger trail system. This in-depth analysis of two specific conservation areas offers insights into resources, methods and anticipated natural resources in the area. It also illustrates the need for a coordinated team approach between wildlife, fisheries, forestry specialists within the CT DEEP, the Bureau of Outdoor Recreation and partnering organizations, land use officials, town leadership and stakeholders toward managing the trail and neighboring properties.

The CT DEEP, as the owner and maintainer of the Air Line State Park Trail system, currently has very limited staff and resources to manage increased daily usage of the trail system and potential impact on natural resources, water quality and habitat that would result from increased usage. Like other trail systems in the state and nationwide, there is, and will be, an ongoing need for coordination, adaptability, and flexibility on the part of CT DEEP within the agency and also with towns, trail committees and partners to build a synergistic management of the trail system (see Figure 3F).

FIGURE 3G

Natural Diversity Data Base Areas, Pomfret CT



CT DEEP's Bureau of Natural Resources and Bureau of Outdoor Recreation synchronize their work to support analysis of the trail system as well as state forest and parks. They work closely with towns, partner organizations and agencies as well as adjacent property owners. One example is CT DEEP's Natural Diversity Database (NDDDB) where property owners and researchers can find access to information on critical or endangered species and their habitat. The ALSPT trail system has many areas of NDDDB species significance. The section of the trail in Pomfret (Figure 3G) shows these areas as dashed or green shapes overlaid on the road system. The NDDDB is one example of the information and data available at CT DEEP. To fully evaluate and map a section of the trail, go to the [ezFile website](https://portal.ct.gov/deep-nddbrequest) and create a user account to build a map of the specific area and locate species of concern.

CT DEEP's Natural Diversity Database allows property owners and researchers to access to information on critical or endangered species and their habitat.

GOALS AND RECOMMENDATIONS

The following conservation goals of the Air Line State Park Trail planning process are woven into interconnections of the best management practices for trail maintenance, new infrastructure, trail use design and land use policy/zoning adjacent to the trail. Visitor

and use dynamics as well as maintenance and construction can potentially have an impact on the eco-systems near the trail, the viewsheds that support the tourism marketing of the trail, and water quality.



Conservation Goals



Identify and amplify the conservation characteristics that promote the natural resource wealth of the trail system



Implement sustainable and innovative practices for natural resource protection & reduction of natural hazard impacts



Ensure the trail user continues to learn about & experience the natural resources of the Air Line State Park Trail Region



Inventory baseline natural resources near the trail that require special conservation and protection, adjacent land use and new infrastructure

RECOMMENDATIONS: Natural Resource Conservation

- 01** Management and planning for stormwater, drainage and soil erosion is ongoing and critical for water quality management, costly flooding and maintenance expenditures, habitat for water dependent wildlife. Even the smallest cuts and fills to create walking paths, install benches, bike racks and other improvements should consider soil disturbance and the potential for significant erosion.
- 02** Several information signs at key locations of interest should be installed identifying the geologic history and geographic context of the trail and the region.
- 03** To ensure management of water quality and waste, collaboration between the CT DEEP, ALSPT towns and adjacent partner organizations could provide solutions for bathroom stops and drinking water stations.
- 04** Always seek professional advice from experienced, licensed individuals. CT DEEP Service Foresters are a great place to start. Private consulting foresters also provide technical advice and services.
- 05** For trail connections, infrastructure, forest management or habitat protection project, work closely with CT DEEP toward a plan.
- 06** Where private contractors are hired, understand the conservation trail goals as part of the agreement in writing. A work order, service agreement or contract sets the terms and helps manage expectations. An important element of these agreements is insurance, which protects both the landowner and the service provider. Again, work closely with CT DEEP.
- 07** Monitor Natural Diversity Database Review recommendations to avoid negative impacts to threatened, endangered and/or of special concern species. This may include specific working timeframes, areas to avoid, and habitat elements to preserve.
- 08** For forest management, thoroughly prepare the site. This includes marking property boundary lines, marking trees to cut, marking trees to leave, marking trails, designing water crossings (if necessary), and designating access points. A well-prepared site will increase operator efficiency, avoid negative impacts to the land and residual trees, avoid potential conflicts and manage expectations on how the project will be carried out.

RECOMMENDATIONS: Natural Resource Conservation

- 09** Follow best management practices for water quality while harvesting forest products. This may include water bars, temporary bridges, and sediment control structures such as hay bales or silt fences. This applies to recreational trail construction/maintenance as well.
- 10** If present, manage invasive species prior to and/or after any tree cutting by mechanical or chemical means.
- 11** Self-guided explorations (“Biking or Hiking for Biodiversity”) could help people to explore some of the biological diversity and habitats along the northeast portion of the trail. Activities are divided into (1) “habitat call-outs”, designed to provide information related to various upland and wetland habitats, and land uses along the trail, and (2) “wildlife observations”, designed to engage people in active explorations employing various senses and technologies, especially smart phones.

- 12** Pollinator pathways are an ideal way to educate the public about the importance of pollinators. The Air Line State Park Trail is a sixty-three-mile potential pollinator pathway. It is easy to envision. Map or discuss specific locations that could provide starting points toward building a larger landscape of pollinators. The Trail offers multiple ways to develop a pollinator pathway. Different types of habitat enhancement will make sense in different places and for different groups of people.
- 13** All trail contributors and management should review the natural resource inventory and overview outlined in Appendix C as a baseline toward a natural resource management plan for the trail. CT DEEP should consider obtaining special grant funding to create a natural resource management plan.



RECOMMENDATIONS: General Policy

- 01** The Air Line State Park Trail has provided access to state forestlands and wildlife management areas for management purposes. Traditionally, the trail has been used for management access. However, full discussion of increased trail use by visitors and the need for access to these forests and wildlife management areas should be fully coordinated and evaluated within the next three years.
- 02** Mapping and accurate geospatial data is recommended to provide an understanding of the geography and trail usage data. Create a coordinated geospatial database and mapping to allow for timely trail and natural resource system assessment for permitting, maintenance issues, trail usage, and communications.
- 03** Promptly identify, treat, and remove invasive vegetation along the trail corridors to limit its spread.
- 04** Create a workable calendar and system toward the routine removal trash and litter from the trail.
- 05** Create signs to remind trail users to pack out their garbage and dog waste.
- 06** Monitor illegal use of trails by motorize vehicles and, where appropriate, add barriers to keep unauthorized vehicles off the trail.
- 07** Monitor the creation of illegal side trails, promptly remove them and work with adjacent property owners cooperatively with towns to educate through brochures and outreach, permitting, the positive role of adjacent property owners and the conservation goals of the trail.

RECOMMENDATIONS: General Policy

08 Hunter access to state forestlands and wildlife management areas via the Air Line State Park Trail requires discussion and coordination. Hunting is an important recreational activity, a conservation tool, and is a key component in forest management. That said, to minimize conflict of use and access for both recreational trail users and hunters, an established protocol for safety and information sharing needs to occur with hunters and the visiting public.

09 As trail usage by recreational visitors continues and increases, it is of vital importance that an ongoing communication network be established for the regional trail system between the CT DEEP, towns, trail committees and various partner organizations. See leadership and governance recommendations in Chapter 4.

10 Rules and regulations both on the trail and access to adjoining properties should be adequately signed at connection points, on information trail signs and on the Air Line State Park Trail Region website.

11 Contract with specialists and utilize the most up-to-date stormwater management design alongside trail, permitted side trails and parking areas (rain gardens, stormwater retention, erosion control, flooding)

12 Use the aforementioned Air Line State Park Trail geospatial database to ensure ongoing access to relevant information, access points to partner properties, and location of signage on and near the trail. This will create a quickly accessed positive experience for both all contributors to trail management, trail users and the neighboring partner properties.

