



**LEBANON PLANNING BOARD
APRIL 26, 2021 - 6:30 PM
REMOTE VIA MICROSOFT TEAMS
LEBANONNH.GOV/LIVE**

1. Call to Order

- A. Review of meeting procedures and NH RSA 91-A "Right-to-Know" requirements.

2. Other Business

- A. Discussion re: Ped/Bike - Related Amendments to Site Plan Review and Subdivision Regulations
- B. Review and discussion of Open Space Plan
- C. Overview of Proposed 2022 Zoning Amendments

3. Committee Reports

- A. **Planning Board Subcommittees:**
 - Planning Board Capital Improvement Program (VACANT/VACANT/Garland/L. Stavis)
 - Planning Board Development Regulations Update (M. Hall/K. Romano/ J. Rutter / J. Monroe)
- B. **City Council Subcommittees:**
 - Class VI Roads Advisory Committee (J. Monroe)
 - Lebanon Energy Advisory Committee (J. Monroe)
- C. **Other Subcommittees:**
 - City Council Representative (D. Whittlesey/K. Zook)
 - Heritage Commission (J. Rutter)
 - Pedestrian & Bicyclist Advisory Committee (G. Amaro)
 - Upper Valley Lake Sunapee Regional Planning Commission (B. Garland/L. Stavis)
 - UV Subcommittee of the Connecticut River Joint Commissions (B. Garland)
 - Upper Valley Transportation Management Association (VACANT)
 - Mascoma River Local Advisory Committee (K. Romano)
 - Steering Committee for the Implementation of the Master Plan (B. Garland/K. Chewinging/VACANT/J. Monroe)
 - West Lebanon Revitalization Advisory Committee (L. Stavis)
 - Planning & Development Department – Task Status (D. Brooks/ M. Goodwin/T. Corwin/R. Owens)

4. Approval of Minutes

- A. March 22, 2021

5. Adjournment

The order of agenda items is subject to change.

Due to the current situation with the COVID-19 Pandemic, the City of Lebanon is offering its meetings via Microsoft Teams. Members of the public are encouraged to attend by going to LebanonNH.gov/Live where you will find instructions on how to enter the meeting. Members of the public will be able to participate and ask questions through the Microsoft Teams software or by phone. Please visit LebanonNH.gov/Live for full details.

THE AGENDA, IN ITS ENTIRETY IS AVAILABLE ON THE CITY'S WEBSITE AT [LEBANONNH.GOV](https://LebanonNH.gov)

**Agenda
Planning Board
April 26, 2021**

**Agenda Item #2A
Other Business**

**Discussion re: Ped/Bike -
Related Amendments to Site
Plan Review and
Subdivision Regulations**

ARTICLE II – DEFINITIONS

[...]

Car-sharing: A private motor vehicle or fleet that is owned, maintained and administered by an organization and made available by membership for short-term use through a fully automated self-service reservation system requiring a one-time written agreement by the customer.

[...]

Parking, long-term bicycle: *Bicycle parking* in a weather-protected facility, intended for at least 4 hours of utilization as workday, overnight, or similar long-term bicycle storage by residents, ~~non-residential occupants~~visitors, and employees.

Parking, short-term bicycle: *Bicycle parking* provided by a bicycle rack located in a publicly accessible, highly visible location intended for transient or short-term utilization by visitors, ~~guests, patrons, and deliveries to the principal building or use, including events.~~

[...]

Shared streets: Shared roadway spaces between motor vehicles, pedestrians, and bicycles. The sidewalk and street are typically at the same level. The overall feel of the area signifies to automobile drivers that they are “guests” and should yield to pedestrians and other uses.

[...]

Universal design: A general term for buildings and systems that integrate easy-to-use, convenient design and inclusive mobility for people of all ages and physical capabilities; it complements design required by the Americans with Disabilities Act (ADA) and includes age-friendly considerations such as per AARP Livable Communities guidance.

[...]

Section 5.1 – Drawings and Other Submittals

[...]

An application for Site Plan Review shall include the following information:

[...]

Site Plan drawings shall include the following information (NOTE: The submission requirements described in paragraphs E.1 through E.4 below shall not be waivable under the procedures set forth in Article VII - “Waiver Procedure” of these Regulations):

[...]

15. The 100-year flood elevation, floodway, shoreland protection zone, and flood plain limits, where relevant.

Section 6.5 – Coordination of Roads, Parking, Loading, Recreation, and Safety

A. [...]

B. Design Standards

1. Accessible Design. Conform with the latest accepted or adopted roadway and multimodal design standards available, including but not limited to:
 - a. The City of Lebanon's Complete Streets Policy (2017) and its cited⁴ design standards. The Policy is available online using the search function of the City Manager Department's Document Center webpage or by request.
 - b. Americans with Disabilities Act (ADA) Standards for Accessible Design and ANSI Standards.
 - c. **Universal design** best practices that are inclusive of the needs of users with limited vision, mobility devices, and disabilities, in conjunction with ADA standards, such as for non-visual wayfinding with audible and tactile cues (e.g., detectable warning strips), contrasting color delineation of pedestrian, bike and other zones and edges, flush curbs on shared streets, and related design elements.
 - d. U.S. Federal Highway Administration (FHWA) Bikeway Selection Guide (2019).
 - ~~a.e.~~ FHWA Small Town and Rural Multimodal Networks (2016).
2. Signage and markings. All traffic control applications, signs and devices are to be pursuant to the Manual on Uniform Traffic Control Devices (MUTCD), current edition. Ensure the visibility of crosswalks in areas of high-density pedestrian traffic through use of contrasting, high-visibility surface treatments (stamped concrete, pavers, solid color-painted areas, and other textures), curb extensions, and similar measures to protect pedestrian safety. Use a consistent design throughout the site.
3. Internal Access Drives/Roads. Except as otherwise required by law, such as for truck, fire or service routes, the travel lanes of any on-site access should not be more than 10.5 feet wide.

C. Orientation and Form

1. Orientation to frontage. Buildings and building facades, including those in multi-tenant shopping plaza arrangements, must be visually and physically oriented to public ways (including sidewalks) to prioritize convenient pedestrian access and appeal from the right of way. Buildings shall also include orientation to public open spaces, trails, and waterways, such as including the Mascoma River, Northern Rail Trail and Mascoma River Greenway, as secondary physical and visual access opportunities where appropriate.

2. Highlight entrances. At least one primary entrance to the building shall face the public way on which the lot has frontage. If the lot has frontage on both a primary ~~street~~ and a secondary street, as defined above, the main entrance shall be oriented toward the primary street. If the lot has frontage on more than one primary street, the main entrance to the building shall be oriented toward the street that carries the greatest volume of pedestrian and vehicular traffic. An entrance on a corner along the primary street also meets the intent of this standard to provide a convenient and welcoming pedestrian access from the public way.
3. Adaptable entrance design and building massing. Pedestrian entrances shall be provided at least every 60 linear feet along the ground floor of the primary façade unless such egress would create safety or security concerns for the building's use. In such instances, a significant architectural feature that creates varied massing, such as a bay window or other feature, must be provided every 60 linear feet. No structure may be longer than 350 feet unless a pedestrian passage is provided at midway (or similar) along the structure length. The passage must be at the ground floor level ~~between of the front and rear exteriors of each side (front and back)~~ of the structure. This may be waived in industrial zoning districts.
4. Structured parking, garage and carport design.
 - a. When parking structure (e.g., parking garage) is located on a lot with frontage, the portion(s) with frontage, shall be designed to include attractive fenestrations, high-quality materials, and varied design elements. At least 1/3 of frontage-facing elements in new construction shall be **screened** by occupied active interior space for other uses at the ground floor level (retail, lobby, etc.), or at least 1/3 of the frontage must have variation in massing, substantial transparency and additional architectural detail that is distinct from the rest of the building and which visually enhances the remainder of the ground floor level. Occupied uses shall have a depth of at least 20 feet.
 - b. The visibility of multi-unit garages and carports (e.g., multifamily) from the street should be minimized by placement, scale and/or **screening**. Garages should be placed underneath or at the rear of multi-unit structures. Garages should be grouped in small clusters rather than as unbroken lines or 'corridors' or rows around the perimeter of the development. When parking is provided as individual garages (not structured parking), then garage doors should not comprise more than 1/3 of the façade at the ground floor level.
 - c. The installation of rooftop photovoltaic solar panels is encouraged, as are provisions for **electric vehicle charging/parking** and **car-sharing** parking opportunities.

[...]

DB. Access and Traffic

1. [...]

4. All projects proposed for development, except for those in rural lands and heavy industrial zoning districts, shall install sidewalks along the street frontage(s).

a. When a location's posted vehicular traffic speeds are 25 mph or greater, there must be a 5-foot wide pedestrian facility on at least one side of the street. When the posted limit is 35mph or greater, the facilitysidewalk must be separated from the road by at least an additional 2-foot wide ,such as by a 2-foot landscaped median.

b. Sidewalks must be at least 5 feet wide (not including curb) and free of barriers and obstructions including signage, utilities, lighting and landscaping. Wider sidewalks are favored forshould be considered for primary routes in new construction.

a.c. On-site pedestrian areas may be merged with public sidewalks along the principal frontage, for a wider route overall, in order to create a broad walking surface in high traffic locations. Pavement and concrete are preferred; alternative sidewalk surfacing materials such as pavers, may be considered, such as for additional width beyond 5 feet. If the project is along a major connecting route and a sidewalk is not currently feasible, provide at minimum a level 5-foot shoulder right-of-way for potential future improvements.

b.d. Where the existing or proposed development has no alternative to the provision of vehicle parking in the front yard setback and contiguous to the roadway, appropriate pedestrian facilities must be provided elsewhere along the frontage. Provide a continuous connection between existing or proposed sidewalks.

5. [...]

6. On-site pedestrian facilities shall be provided and address the following:

a. Convenience. Well-marked and convenient pedestrian facilities that minimize walking distances must be provided between the primary building entrance(s), parking areas, principal frontage and adjacent public sidewalks. Minimize walking distances, to the extent practical depending on site grade, siting of common open space and similar elements. For sites with multiple buildings, uses, or residential unit entrances at the ground floor level, pedestrian walkways should connect each entrance to primary pedestrian collector routes (e.g., to parking or to public sidewalks). A common route with spur paths may meet this requirement.

b. Visibility. Pedestrian routes must be continuous and clearly demarcated as such by application of signage, contrasting paint

colors, changes in materials or textured surfacing, reflectors, landscaping, and/or attractive barriers. Surface materials must provide traction and facilitate general maintenance and snow removal.

c. Parking area safety. Pedestrian aisles through parking lots must be provided, and where applicable, must be separated from vehicle circulation areas for at least every four rows of parking, or at a maximum spacing of 200 feet between aisles. When the aisle is integrated with landscaped islands between rows, the landscaped island must be at least 12 feet wide. Aisles must be at least 4 feet wide.

d. Crossing safety. Pedestrian crossings are required when the walking route crosses vehicle circulation areas. To identify crossing points, and support visibility, safety, and wayfinding, the transition area at street or drive crossings and between parking lot walkways and entrances, shall be highlighted through curb extensions (bump outs), contrasting materials, planters, pedestrian-scale lighting such as decorative bollards, and landscaping, including adherence to Sec. 6.2.B. Any raised crossings must meet requirements for drainage and snow removal equipment and should be flush with the height of the adjoining sidewalk and at least 10 feet wide to allow the front and rear wheels of a passenger vehicle to be on top of the table at the same time.

e. Connectivity. Connect neighboring commercial properties at the side and rear lot lines with pedestrian facilities (path or sidewalk) when public routes are not available within 100 feet. Locate facilities to connect to existing parks and trails, and/or according to City plans for connectivity improvement needs, where they exist. Alternatives may be permitted where it is determined that there is insufficient potential for utilization, steep slopes, or other contextual challenges. For adjacency to conservation properties, work with the Conservation Commission to accommodate accesses, where deemed to be appropriate by the Commission. Prioritize use of new or existing corridors, such as sewer easements. Seek and obtain public access easements for future non-motorized access.

7. Access management. Minimize curb cuts along a property edge onto the public right-of-way, particularly along heavily used pedestrian corridors, and provide a continuous circulation system within the property. Link a road or driveway with the overall site circulation patterns of adjacent parcels. For improvements to existing developments, redundant access points must be evaluated for closure or limited access, such as for fire lanes. A driveway intersecting a street that constitutes the principal frontage of a lot is not permitted when the lot can be accessed from another frontage or when the lot can be accessed by a shared driveway on an adjacent property with an existing or planned curb cut/access. Prioritize use of connections to secondary cross-streets. Service drives for loading and drop-off zones shall be designed as alleys at the rear of a lot or subdivision whenever possible.

8. Shared streets. In cases where traffic speed and volume are low, an internal roadway/drive may be designed as a **shared street**. This would be a thoroughfare without sidewalks or striped lanes. Vehicle, bicycle, and pedestrian movement are mixed and movement must be adequately controlled through **traffic calming** and safety features as well as landscape and amenity elements to the satisfaction of staff and Planning Board review.
9. Transit. If a property borders or is planned to host an existing, proposed, or planned (i.e., mentioned in an active plan) **transit** stop or dedicated **transit** route, considerations for on- and off-site street design must be detailed in the application. Correspond with the transit authority and City officials to verify service and review proposed design changes. Considerations for appropriate design include: pavement markings, crosswalks between stops, adjacent sidewalks and site access for pedestrians/bus riders, snow removal accessibility and responsibility for stops, curb height, spacing of **transit** stops, dimensions of **transit** stop space (e.g., for bus shelter pad), bulb-out or pull-out, sidewalk tip-down, distance from intersections and drive accesses, shelters, street furniture, signage, and lighting. Safe access must be provided to and from the main development entrance(s) to the **transit** stop. Pedestrian access to the **transit** stop must limit crossing points and distance over parking facilities, driveways, and vehicular rights of way. Specifications must adhere to City construction and lighting policies for elements in the public way.
10. Transportation demand management. Higher density buildings and larger businesses may be required to submit a mobility management plan that addresses implementation of transportation demand management programs and services.
11. Sightlines. To ensure sightlines are maintained at pedestrian crossings on or between public and private streets, provide at least 15 feet of no parking on either side of the crossing, if there is not a curb extension at the crossing. Trees, structures, signs, and other visual obstructions must also be set back from all pedestrian crossings for appropriate visibility. Where surface markings do not provide enough visibility or there is a high volume of pedestrian traffic, such as between a building entrance and a parking facility, pedestrian crossing signs shall be installed on both sides of the crossing/crosswalk.

[...]

Fl. Bicycle Storage and Parking

The intent of this section is to enhance bicycle usage, support transportation efficiency by reducing reliance on vehicles for short-distance travel, and improve public health. The requirements of this section shall apply to new developments as well as changes to or expansions of use at existing developments.

1. Residential development. Multi-family dwellings with more than five (5) units must provide:
 - a. **Short-term bicycle parking** for at least 15 percent of occupants (e.g., 50 units = 8 spaces)
 - b. **Long-term bicycle parking** for at least 30 percent of all building occupants, but with no less than one (1) long-term bicycle storage space per dwelling unit.
2. Non-residential development. Other uses, including municipally owned buildings, must provide:
 - a. Secure **short-term bicycle parking** or **long-term bicycle parking** for at least ten (10) percent of the number of automobile parking stalls approved by the Planning Board. Alternatively, provide spaces for at least 5 percent of building occupants (measured at average daily peak), whichever is greater, but in no case may the total be less than two (2) rack spaces.
 - b. At least 25 percent of the spaces as **long-term bicycle parking** when the total number of bicycle parking spaces required is in excess of 20 spaces.
 - c. Bicycle parking wayfinding signage.
3. When a calculation yields a fractional number of required spaces, the number of spaces shall be rounded up to the nearest whole number.
4. Facilities must adhere to Lebanon's Bike Storage Design Guide, available online on the Planning & Development Department's Documents, Studies and Resources webpages or by request.
5. Bicycle parking should be located with convenient access to a principal building's main entrance and/or to a recreational facility and its associated transportation network, such as a public street or path.
6. Locate parking/storage in a well-lit, highly visible area.
7. Shared **bicycle parking** facilities are encouraged.
8. **Bicycle parking** may be required by the Planning Board for commercial uses whenever any new use is established, or any existing use is expanded for which more than ten (10) automobile parking spaces are required.
9. Shower and changing/locker storage facilities are encouraged to be provided in non-residential development. Facilities should be accessible in the building, or within 200 yards of the building entrance (such as in tenant

properties with shared facilities). One facility is equivalent to at least one shower stall and five locker units. When provided, there should be at least one facility for every four (4) bike spaces required.

10. The Planning Board may adjust any of the amounts in this section upward or downward based on factors such as the site location, site characteristics and layout, the type of users and residents, the amount of vehicle parking provided, and other pertinent factors.

[...]

Lebanon Bike Storage Design Guide **DRAFT**

The purpose of this guide is to support requirements in the City's Site Plan Review development regulations.

The benefits of providing bicycle parking/storage and associated ped-bike facilities like lockers and showers include their value in supporting a community and properties that are:

- **Equitable:** Bike-friendly housing and workplaces enable accessibility for affordable transportation/housing and also protect cyclists' investments in equipment, especially for those who do not own cars.
- **Manageable:** For property managers, storage helps protect elevators, walls, carpets etc. as bikes are not brought indoors to apartments/offices. Also prevents hazards and eyesores of random parking.
- **Economical:** Less expensive to build than vehicle parking, better land use and saves on law enforcement resources (less impoundment).
- **Desirable:** Attract employees and residents—many value such features.
- **Impactful:** Racks and showers facilitate an active, healthy community benefiting cyclists and whole community, also reducing traffic/emissions.

Two types of bike parking are required in Lebanon's Site Plan regulations, **Short-Term** and **Long-Term** storage.



Short-term bicycle parking/storage includes racks and comparable equipment that is convenient and easy to use, for parking periods less than 4 hours.

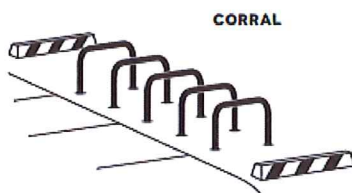
- (1) Must be simple to operate and have as few moving parts as possible.
- (2) Must be easily accessed from the street and protected from motor vehicles. Locate no more than 50 feet walking distance from a major pedestrian entrance, with direct access (e.g., a walking route). Access must be at least 5 feet wide with a grade no greater than 8 percent; landings may be considered.
- (3) Must not obstruct other uses. May be in front or rear setbacks as long as adequate spacing of the racks is assured and so that the right-of-way is not obstructed; do not block foot traffic and vehicle driver sightlines and have a minimum height of 2.5 feet so as to not create a tripping hazard. Support clear and maneuverable bike/rider access, ability for snow removal equipment to navigate around the rack and adequate clearance from vehicle parking, curb ramps, transit loading areas, utility poles, etc.
- (4) Covered parking, when required per Site Plan Review regulations, must provide enclosure from the elements. Otherwise, sheltered racks may be integrated with the primary structure's weather protection (e.g., awnings, porches).
- (5) Each side of a rack may count as a required space where a bike can be locked on both sides of the rack component without conflict.
- (6) Types of short-term storage (examples illustrated below):
 - a. should accommodate a wide range of bicycle shapes and sizes

- b. must have a no-maintenance finish that won't chip, peel, or rust, with galvanized steel finishes preferred
- c. must be securely anchored on a permanent, tamper-proof fixed surface for stability
- d. must be functional for both U-locks and cable locks,
- e. must support a standard bicycle at 2 points of contact to prevent damage to the bicycle wheels and frame, allowing the bike to stand upright with both wheels on the ground (without requiring kickstand to stay upright and without requiring support by the wheel-only)
- f. preferred permanent fixture styles include: the rail/staple/A type rack made of 2" galvanized pipe, 54" long by 32" high, which holds two bikes; the inverted U-rack; or cycle-stall corrals
- g. temporary fixture styles, such as for monitored event parking include public on-street or on-sidewalk corrals with installation coordinated by the City; these are encouraged for large events to reduce traffic impacts and vehicle parking needs.

Sample Acceptable Bike Storage



POST & RING



CORRAL

Sample Unacceptable Bike Storage

RACKS TO AVOID

Because of performance concerns, APBP recommends selecting other racks instead of these.

WAVE
also called undulating
or serpentine



Not intuitive or user-friendly; real-world use of this style often falls short of expectations; supports bike frame at only one location when used as intended.

SCHOOLYARD
also called
comb, grid



Does not allow locking of frame and can lead to wheel damage. Inappropriate for most public uses, but useful for temporary attended bike storage at events and in locations with no theft concerns. Sometimes preferred by recreational riders, who may travel without locks and tend to monitor their bikes while parked.

COATHANGER



This style has a top bar that limits the types of bikes it can accommodate.

WHEELWELL



Racks that cradle bicycles with only a wheelwell do not provide suitable security, pose a tripping hazard, and can lead to wheel damage.

BOLLARD



This style typically does not appropriately support a bike's frame at two separate locations.

SPIRAL



Despite possible aesthetic appeal, spiral racks have functional downsides related to access, real-world use, and the need to lift a wheel to park.

SWING ARM SECURED



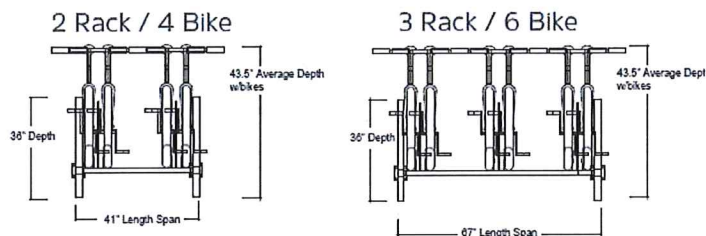
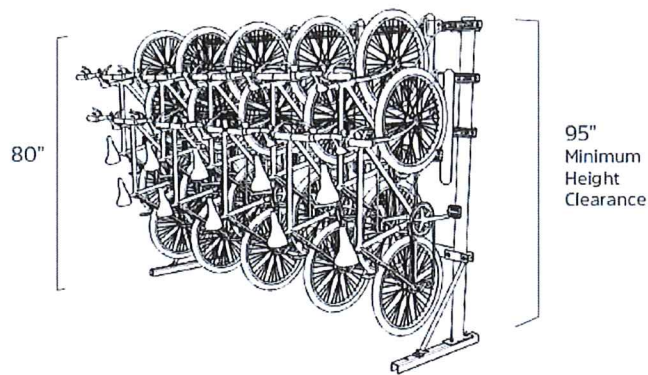
These racks are intended to capture a bike's frame and both wheels with a pivoting arm. In practice, they accommodate only limited bike types and have moving parts that create unneeded complications.

For additional ideas → See the links under the References section below, particularly #4, APBP.

Long-term bicycle parking/storage includes lockers and rooms that are secure and fully sheltered, for parking of 4 hours or more.

- (1) Shall be intended primarily to serve residents, employees or other persons who would require storage of a bicycle for a substantial portion of the day, for an overnight period, or for multiple days; however, it may serve other bicycle users as needed.
- (2) Provide secure individual spaces (separate from other bikes) or permit bicycles to be secured individually, with tamper-proof built-in locks or ability to be locked individually.
- (3) Locate within 50 feet walking distance of any functional entry and be easily accessible to all building users.
- (4) Dedicated lockers etc. do not require assignment per unit. Long-term bicycle storage may be utilized for general storage needs in addition to bike parking, where space is designed for such and to maximize utilization of space, however dedicated bike storage should not also serve as the primary storage space for units.
- (5) To accommodate a range of physical capabilities, provide a minimum 50 percent of racks which do not require the use to lift their bike above the floor or ground more than 1 foot, and which store the bicycles in a horizontal position (upright with both wheels parallel to the surface where the rack is installed).
- (6) Must be in a high-visibility and/or separate limited access space that is fully sheltered/enclosed to protect bicycles from precipitation and theft.
- (7) Acceptable long-term storage space types include but are not limited to the following types (examples illustrated below):
 - a. Motor vehicle garages. Structured vehicle parking such as individual/separated vehicle garage units with adequate additional spacing for bikes may meet this requirement.
 - b. Bicycle lockers or pods. Individual locked enclosure, indoors or outdoors, for one bicycle.
 - c. Bicycle rooms. Located in private building or multifamily housing with access control. May be located in a publicly accessible storefront with attendant or access control. May include other amenities such as showers, changing areas or clothing lockers.
 - d. Bicycle cages. Located in private buildings or multifamily housing parking garage with access control.
 - e. Bicycle parking structure. Also known as a secure parking area. Standalone structure with access control, such as by an attendant or security system. Appropriate for campuses and similar building clusters, or adjacent to residential or office buildings as accessory uses.
 - f. Bicycle parking station. Space protected continuously by a security system, such as camera surveillance or an attendant or co-located with transportation facilities, e.g., parking garage, bus shelter, Park & Ride.





For additional ideas → See the links under the References section below, particularly #4, APBP.

Sample RESIDENTIAL Bike Rack Calculations (based on formulas in the Site Plan regulations)

- Short-term storage – 15% of occupants
 - 5 units (studio) = 1 outdoor bike spaces
 - 50 units (studio) = 8 outdoor bike spaces or 1 space per 6.25 occupants
 - 100 units (2-person units) = 30 spaces
- Long-term storage – 30% of occupants
 - 5 units (studio) = 1.5 covered bike spaces/storage units (round up to 2)
 - 50 units (studio) = 15 covered bike spaces/storage units
 - 100 units (2-person units) = 60 covered bike spaces/storage units

Sample NON-RESIDENTIAL Bike Rack Calculations (based on formulas in the Site Plan regulations)

- Short-term storage – 10% of auto spaces OR 5% of occupants
 - 5 auto spaces = 2 outdoor bike rack spaces (min. to provide at least 2)
 - 50 auto spaces = 5 outdoor bike rack spaces
 - 100 auto spaces = 10 outdoor bike rack spaces.
- Long-term storage – only if over 200 auto spaces, provide 25% of the required 20 total bike rack spaces as LT storage
 - If 200 auto spaces and 20 bike rack spaces required, 25% or 5 of those must be LT storage.
200 car stalls: 15 outdoor bike stalls : 5 covered bike stalls
 - If 300 auto spaces and 30 bike rack spaces required, 25% or 8 of those must be LT storage.
300 car stalls: 22 outdoor bike stalls : 8 covered bike stalls

General Guidance for All Bike Storage

Enhancements and storage with flexible dimensions are encouraged (e.g., charging outlets or extra space for *electric bikes, integration with public artwork, repair/air pump kiosk, automated doors, bikeshare programming, adaptive tricycle and recumbent bike parking etc.).

Alternate designs will be considered provided the design meets or exceeds the intent of this section, with reference recommended to the FHWA University Course on Bicycle and Pedestrian Transportation, Lesson 17 (2006) and American Association of State Highway and Transportation Officials (AASHTO) *Bicycle Guidelines* and *Bicycle Parking Guidelines* (2002) for “recommended” (e.g., post & loop, inverted “U” or “staple”, “A”) and “not recommended” (e.g., wave, toast, and comb) bicycle racks.



**Note: an “e-bike” is a bicycle equipped with a low-speed electric motor. In New Hampshire, E-bikes are typically allowed on public ways, where not otherwise regulated (N.H. Rev. Stat. §259:6, 259:27, 265:144, effective as of August 18, 2019). There are three classes of pedal and no-pedal assist e-bikes.*

Related References

1. 2012 Lebanon Master Plan

OUTCOME 1: Continue revitalization of the Lebanon Central Business District.	
3.1.A8	Provide improved and attractive streetscape amenities, such as movable planters, seating, adequate trash cans, and bicycle racks throughout the CBD.
50 percentOUTCOME 1: Promote revitalization of the West Lebanon CBD to improve the viability of its businesses and vitality of surrounding community.	
4.1.A10	Develop a plan for a safe, convenient, and attractive network of pedestrian paths, bikeways, and bike lanes, including connections to parks and transit stops, as well as bike racks .
OUTCOME 4: Promote active living, biking and walking as part of the daily routine, which has dramatic improvements in public health.	
9.4.A4	Install bicycle racks, showers, and lockers in public spaces throughout the community.
9.4.A5	Require developers to install bicycle racks, showers, and lockers as part of site plan approval.

2. Lebanon Complete Streets Policy

Lebanon’s Complete Streets [Policy](#) notes under design guidance that “The City shall utilize the latest accepted or adopted design standards available, including [NACTO and AASHTO]”

3. Lebanon – 2017 Bike Friendly Community

The [report card](#) includes key next steps: “Policies and practices relating to bicycle parking could be improved. Studying current bike parking and future needs would be a good step for continued coordination with transit and potentially developing community bicycle branding.”

4. Association of Pedestrian and Bicycle Professionals (APBP) [Essentials of Bike Parking](#)

5. NACTO

[Bicycle Facilities Guide](#)

6. Upper Valley Transportation Association

[Mobility Checklist](#): Does the development proposal include 6. Ample, convenient, sheltered, and secure bicycle parking?

7. Federal Highway Administration (FHWA)

[Bicycle Parking and Storage Lesson Plan](#)

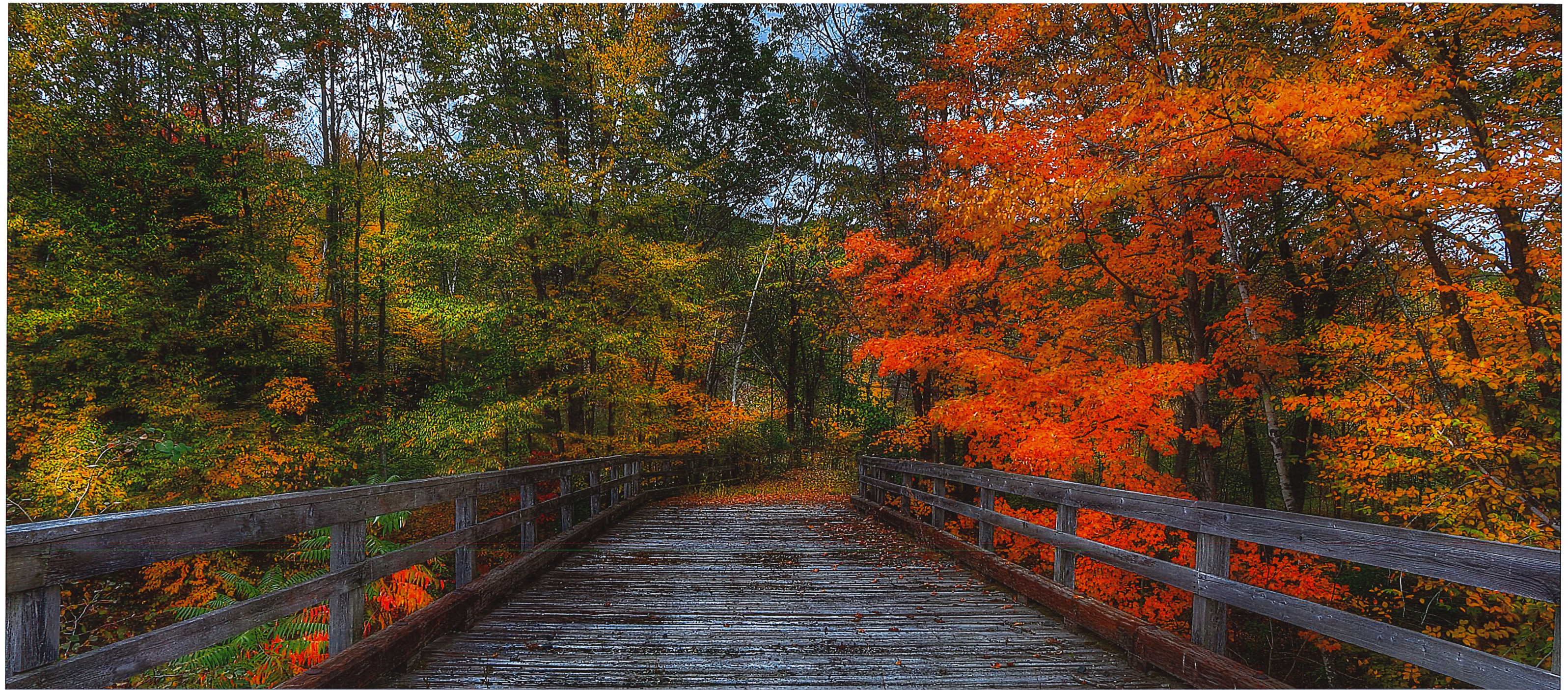
8. Examples of Similar Municipal Requirements

- Off-street bicycle parking may be required by the Planning Board in the Commercial Zones whenever any new use is established, or any existing use is enlarged for which more than 10 auto parking spaces are required. ([Kingston, NH](#))
- Similar to Kingston, but for all zones, with min. 2 stalls; must have stalls for 5%/3% of vehicle parking for 25-100 spaces/over 100 spaces ([Merrimack, NH](#))
- Similar to Kingston, including same %'s ([Stratham, NH](#); [Londonderry, NH](#)). Londonderry also notes provision of additional amenities including but not limited to covered parking and shower facilities is encouraged for lots >100 auto spaces.
- All sites shall provide lockable bicycle parking/storage. The number of bicycles which must be facilitated shall equal not less than 5% of the site parking demand, but not be less than 2. Developments that provide for on-site shower facilities for employees that bicycle, jog, or walk to work may be allowed additional parking waivers. ETC. ([Barrington, NH](#))
- Bicycle racks shall be provided for all development that provides 5+ parking spaces or where such would be required. For residential multi-unit developments with >20 residents, a covered area shall be provided to protect bicycles. ETC. ([Durham, NH](#))
- All sites shall provide lockable bicycle parking/storage. The number of bicycles... shall equal not less than 5% of the site parking. All non-residential sites with 20,000 square feet or more of floor space may reduce the provision of on-site parking by 5% by providing shower facilities and bicycle parking/storage for employees choosing to bicycle to work ([Newmarket, NH](#))
- Commercial 5-10% of the number of automobile spaces; 1 space per 1-2 apartments; other uses with similar %'s ([Portland, OR](#))

**Agenda
Planning Board
April 26, 2021**

**Agenda Item #2B
Other Business**

Review and discussion of Open Space Plan



LEBANON OPEN SPACE PLAN

a strategy for integrating and advancing efforts to conserve the city's ecological integrity



CREDITS

This Open Space Plan is dedicated to the network of individuals, groups, and organizations that were inspired by their natural surroundings to engage in efforts to support and maintain the natural systems that are the lifeline for the ecological integrity of the natural landscape of Lebanon — an extensive list that includes:

- 🕒 Residents and private landowners who share, protect and maintain properties and trails;
- 🕒 Volunteers serving on various boards and committees;
- 🕒 Decision-makers who provide support;
- 🕒 Public and private organizations and entities whose primary mission is to support the stewardship of natural resources and conservation lands; and
- 🕒 Natural resource professionals.

Collectively, they provide **an impressive stewardship network that Lebanon is extremely fortunate to have.**



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OPEN SPACE is undeveloped land containing natural resource features that collectively interact to provide healthy and vibrant ecological systems that are worthy of conservation.



In every walk with Nature one receives far more than he seeks.

~John Muir

LEBANON OPEN SPACE PLAN

a strategy for integrating and advancing efforts to conserve the city's ecological integrity

EXECUTIVE SUMMARY

Lebanon is – and has long been – engaging in actions to manage, conserve and preserve open space. These efforts include policy adoption, regulatory implementation, land acquisition and protection, and conservation property stewardship. Those efforts, combined with our goals and objectives for future actions, including implementation tools and resources, constitute the Lebanon Conservation Program (LCP). The LCP interacts with both the Lebanon Master Plan and the Lebanon Natural Resource Inventory.

The **purpose** of this Open Space Plan is to:

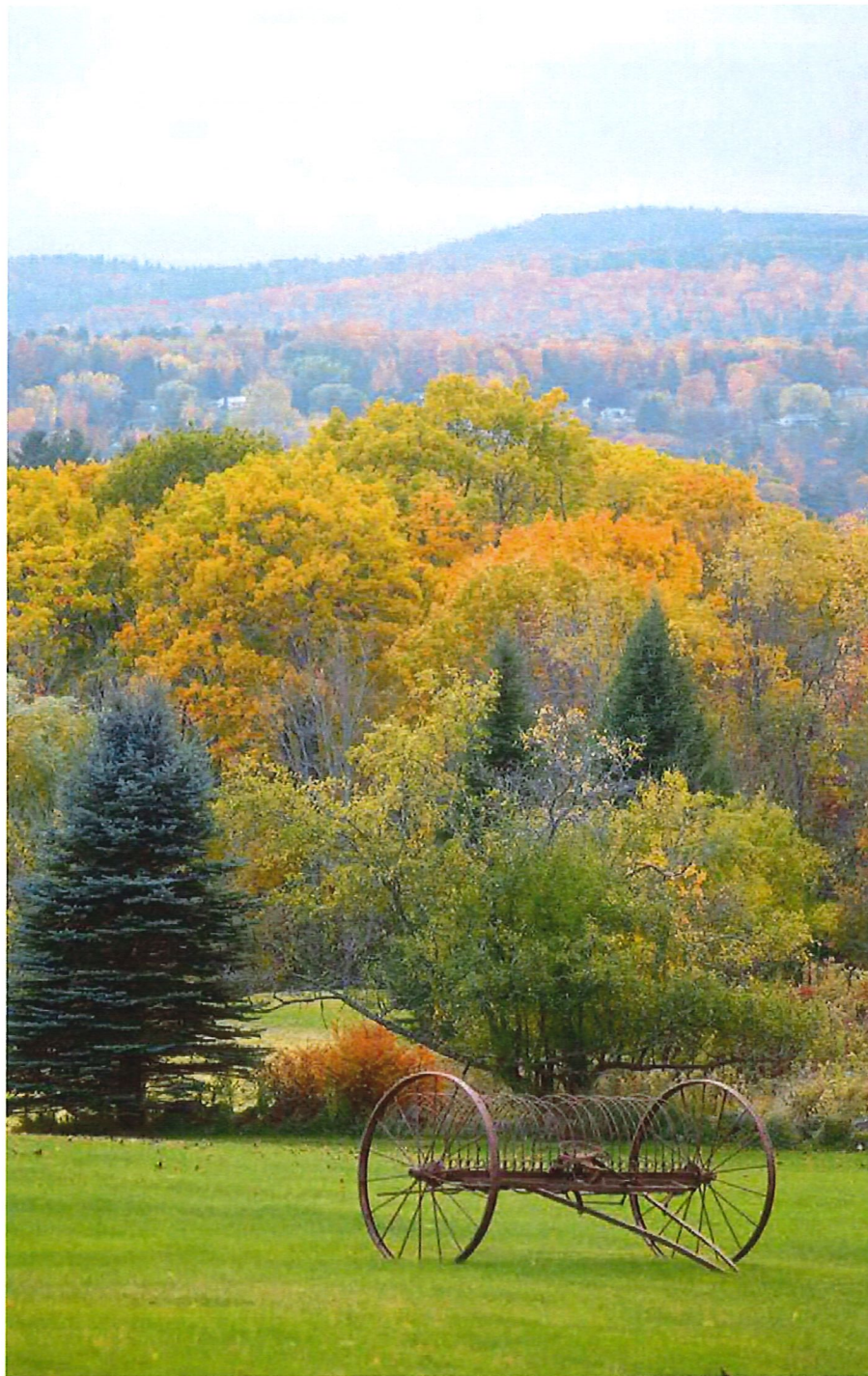
- 🕒 Increase the visibility of the Lebanon Conservation Program;
- 🕒 Articulate the city's long-term vision for land conservation;
- 🕒 Attract additional support for conservation efforts;
- 🕒 Set open space benchmarks that can be used to measure progress; and
- 🕒 Provide useful information on desirable open space characteristics, and on the tools and process for managing the ecological integrity of open space.

This Open Space Plan begins with a description of the community setting, a reference to the public support for open space, and the statement of purpose, goals, and a vision of this plan. It further articulates the importance of open space, the value open space provides, and concerns regarding the loss of open space. Section Three proposes an open space prioritization methodology, with Section Four proposing strategies for future conservation efforts. The addendum includes maps and descriptive information for many of the existing conservation properties in Lebanon.

The City of Lebanon continues to benefit from a network of individuals, groups, and organizations who, inspired by their natural surroundings, engage in and support open space conservation efforts that help maintain the ecological integrity of the city's natural landscape. These partners and supporters of open space protection include:

- 🕒 Private landowners who are willing to share and often protect properties;
- 🕒 Policy decision makers that provide support;
- 🕒 Volunteers who collectively make up the various boards and committees tasked with policy development, oversight and management decisions;
- 🕒 Private and public organizations and entities whose primary mission is to support the stewardship of natural resources and conservation lands;
- 🕒 Professionals (foresters, ecologists, wetland scientists, botanists, biologists and others) who offer a wealth of knowledge; and
- 🕒 Lebanon's residents who serve in many roles (volunteering on boards, engaging in trail maintenance, supporting policy decisions, and more).

Collectively these partners and supporters provide a powerful stewardship network that Lebanon is extremely fortunate to have. This Open Space Plan prepared by the Lebanon City Planning and Development Office with assistance from PlaceSense was built upon that network's local knowledge, professional expertise and commitment to conserving the city's open space for future generations.



It is our task in our time and in our generation to hand down undiminished to those who come after us, as was handed down to us by those who went before, the natural wealth and beauty which is ours.

~John F. Kennedy, March 1961

1. INTRODUCTION

Community Setting

The City of Lebanon, New Hampshire is one of the core Upper Valley communities. It is located on the Mascoma and Connecticut Rivers, surrounded by traditional villages, beautiful rural areas and expanses of farmland and forests. The abundance and quality of natural resources in and around the city – clean air and water, open space, wildlife habitat, undeveloped natural vistas, and working farm and forest land – is one of its greatest assets. Much of Lebanon is characterized by scenic views and vistas of the rivers, unspoiled ridges and valleys, and woods interspersed with open fields. More than 80% of land in Lebanon remains undeveloped, with a significant portion enrolled in the New Hampshire Current Use Program. There are still two working farms in the city. From almost everywhere in Lebanon, one can still see and access considerable expanses of open land.

The City of Lebanon is a growing community. It is a regional hub and the principal employment and shopping destination for a federally-designated “micropolis” consisting of 25 towns stretching across two states. Because of its distinct role as the heart of the region’s economy, Lebanon has faced considerable development pressure for many years. New industries, offices and services have provided Lebanon residents with high-quality jobs and a wide variety of choices for shopping, dining, and other services. At the same time, these enterprises have attracted more people and traffic to the area, straining the city’s infrastructure and stimulating demand for still more development.

That demand has led to once open land, including some of the richest agricultural soils in the state, being converted to shopping centers, subdivisions and other types of development. Significant floodplains and wetlands were drained or filled before the advent of protective regulations, and development pressure continues to affect these resources. In the uplands, wooded ridges and hillsides are being fragmented by roads and rural residential development. Increasing vehicle emissions, road salt and other pollutants threaten air and water quality.

The City of Lebanon has reached a crossroads at which it must make significant decisions about the future of land development and conservation. How land is used shapes a community’s character and vitality for generations into the future. As Lebanon continues to grow and develop as a dynamic economic center, the city should take proactive measures through thoughtful planning and responsible environmental protection to ensure that important natural resources are conserved. Growth and change are inevitable and welcome, but it is imperative that Lebanon guide development in order to preserve open land and scenic resources. Without adequate forethought, future development could fray the fabric of the community by diminishing the natural resources that make Lebanon an attractive place to live and do business.

Public Support for Open Space

There is widespread public support for open space preservation in Lebanon. Residents have consistently identified preserving rural character – whether in terms of open space, regional traditions, smaller-scale and independently-owned businesses, etc. – as a critical factor in maintaining Lebanon’s quality of life and sense of place for more than 30 years. A common viewpoint is that the natural environment and open space – forests, agricultural land, water bodies, viewsheds, wildlife habitat, and ridgelines – must be protected to prevent irreversible damage that would change the community’s character. The open space preservation policies in the current plan have developed in response to such public comments and suggestions over the decades.

The 2012 City Master Plan repeatedly references the need for an open space plan to identify key open space resources, as well as strategies and techniques to maintain open space for future generations (page 5-6). It recommends that Lebanon develop an open space plan that:

“Sets priorities for acquiring or otherwise protecting privately-held land from willing sellers/owners, establishes incentives for landowners to voluntarily place conservation easements on their land, and includes recommendations on the use of City-owned parcels.
[Land Use Chapter Outcome 4, Action 1, page 2-25]

Will inventory natural and cultural features, and recommend green space corridors for continued wildlife habitat and for the benefit of residents.
[Natural Resources Chapter Outcome 1, Action 1, page 5-12]

Statement of Purpose

The overarching purpose of this Open Space Plan is to increase the visibility of the Lebanon Conservation Program (LCP), to attract additional support and to clearly articulate the city’s long term vision for open space protection. From an action or engagement perspective, this plan will help guide and inform the actions of local officials, boards and committees, and the general public. It provides a framework within which the community can focus its efforts and resources toward preserving important natural resources and open spaces.

This Lebanon Open Space Plan charts a course that will enable all interested parties to make the most of conservation opportunities as they arise. In particular, it:

- Identifies the value of preserving open space and natural resources.
- Identifies types of open spaces that are important to conserve.
- Prioritizes and optimizes open space conservation opportunities.
- Informs and advises anyone who might wish to conserve open space.

LEBANON OPEN SPACE PLAN

a strategy for integrating and advancing efforts to conserve the city’s ecological integrity

General Goals of the Open Space Plan

This plan establishes the following goals for open space conservation in Lebanon:

- 🕒 Protect the quality of surface and underground drinking water supplies;
- 🕒 Protect the quality of lakes, streams, and wetlands needed to sustain aquatic ecosystems and water-based recreation;
- 🕒 Preserve open space, particularly forest lands, to protect and enhance air quality, to absorb and store carbon, and to provide critical buffering against climatic extremes;
- 🕒 Protect habitat for the diversity of plant and animal species to ensure the protection of healthy, viable, and sustainable ecosystems, as well as the conservation and preservation of biological diversity within the city;
- 🕒 Protect habitats that sustain the traditional pastimes of hunting, fishing, and viewing fish and wildlife;
- 🕒 Maintain and encourage the important natural resource-based industries of farming, wood products, and tourism;
- 🕒 Protect and enhance those scenic, historic and cultural resources that are recognized as valued parts of the common heritage of Lebanon's citizens;
- 🕒 Protect in-city open spaces for residents of more densely developed areas;
- 🕒 Provide places for education and research on ecological, environmental, and appropriate cultural resources to provide a better understanding of the systems from which they derive; and
- 🕒 Provide high quality outdoor recreation opportunities, on both land and water, accessible to all Lebanon's citizens, regardless of where they live, their financial status, or their physical abilities.

Vision Statement

It is the community's vision that:

“*The natural resources and open spaces that make the City of Lebanon a desirable place to live shall be conserved for future generations to enjoy and appreciate. This conservation shall occur in the context of a community that is also growing and changing.*

Those areas with high natural resource value and that are important to Lebanon, the State of New Hampshire, and to the nation will be subject to careful stewardship. These areas include places deemed of local importance as well as those of regional or statewide significance. Particular importance will be placed on lands whose development would have an undue, adverse effect on water quality, wildlife habitat, agricultural lands, and scenic areas.

Lebanon will protect and conserve working farm and forests, core habitat areas important to flora and fauna, and the corridors that link those core areas. Because personal connections with nature are important to maintaining Lebanon's heritage and sense of community, low-impact recreational opportunities that do not alter natural areas will be encouraged. The city will strive to be a place of natural beauty and uninterrupted views.

Elements of the Open Space Plan

This Open Space Plan consists of four elements:

- 🕒 **Chapter 2** discusses the importance of open space within the community. It provides some historical context for open space preservation in Lebanon, as well as a summary of recent land use development and conservation trends in the city.
- 🕒 **Chapter 3** proposes a prioritization framework that establishes how much open space is needed and identifies lands that should be protected based on a 78-22 ratio of open space to developed land in the city.
- 🕒 **Chapter 4** provides a summary of key tools and techniques available for preserving the city's natural resources and open space areas.
- 🕒 **Appendix A** inventories many of the existing city-owned conservation lands.

It is typical for an open space plan to include extensive description of the flora, fauna and general landscape characteristics of the community. This plan does not do that and instead cross-references the existing natural resource content included within the city's 2010 Natural Resource Inventory and 2016 Wildlife Corridor Assessment. Collectively those documents and this Open Space Plan are intended to serve as the blueprint for the Lebanon Conservation Program.

2. IMPORTANCE OF OPEN SPACE

This section of the Open Space Plan attempts to answer the following questions:

- ❏ What is open space?
- ❏ What value does open space have?
- ❏ Why should people be concerned about the loss of open space?
- ❏ How much open space does a community need?

The answers to these questions shape this plan and the implementing public policies. They provide a clear understanding of the public interest and benefit in policies such as land regulation or acquisition for open space protection.

What is open space?

Many people think of open space as land in its natural state, while acknowledging that natural forces and organisms – as dramatic as glaciers or as subtle as moss – continually shape the landscape. Others expand that to encompass land modified by human activity. Open space also includes water bodies such as lakes and rivers.

What is considered open space depends, in part, on its surroundings. A vacant lot or community garden may be considered open space in a developed neighborhood. A narrow corridor or pathway for walking or bicycling may be open space even though it is surrounded by development.

In the Lebanon Open Space Plan, open space is defined as undeveloped land areas containing natural resource features that collectively interact to provide healthy and vibrant ecological systems that are worthy of the following conservation measures:

- ❏ A municipal planning process with foundation principles grounded in natural resource oversight;
- ❏ Regulatory oversight and innovative land use planning techniques;
- ❏ Land protection measures such as conservation easements and open space requirements; and
- ❏ Simple sound property stewardship.

This definition of open space for conservation purposes acknowledges the symbiotic relationship with other forms of open space. This includes active open space like the town common (Colburn Park), recreation fields, and recreation paths. It also includes open space elements that are integrated into the built environment such as vegetated parking lot islands, rain gardens, and greenways. The Lebanon Open Space Plan focuses primarily on the open space resources outside of the built environment, while strongly endorsing the sound management of other forms of open space in accordance with the recommendations of various studies, reports, and planning documents such as the recreation master plan, development regulations and zoning ordinance.

What value does open space have?

Open space is an integral part of any healthy city. It is not just the leftover areas or land that is not yet economical to develop. Open space is as essential to a thriving community as neighborhoods, public utilities and transportation systems. Open space provides a combination of environmental, social and economic benefits that would be costly, if not impossible, to replicate by other means.

This Lebanon Open Space Plan focuses primarily on the ecological value of open space. Other benefits, including aesthetics and recreation, are considered secondary to the primary goals. However as articulated in the 2010 Wildlands and Woodlands report:

“A well designed open space program will include a balance of lands that are protected from development and managed for forest products, water supply, wildlife habitat, recreation, aesthetics, and other objectives, as well as lands that are established as reserves subject to minimal human impact and shaped by natural processes.

Environmental Benefits

Open space helps provide the ability for natural processes to function and thrive, supporting the intricate natural resource web of flora and fauna, preserving biodiversity, and maintaining healthy natural systems. It acts as a circulatory system for natural processes such as wildlife movement and hydrological flows. Open space provides general environmental services such as erosion control, flood water retention, groundwater recharge, watershed protection, etc.

Open space also has ecological functions providing habitat for plant and animal life, and supporting biodiversity. The undeveloped landscape provides for important wildlife habitat and helps to maintain a diverse and healthy environment. There are approximately 1,900 species of plants and 17,000 species of animals in New Hampshire. While many of these species are considered common, it is estimated that 75% of the habitat for rare, threatened or endangered species remain unprotected and vulnerable to development.

Forested open space also provides an important source of renewable energy and carbon storage – key factors in slowing the rate of climate change. Open space is critical for supporting the adaptation that many species will face as habitats are impacted by climate change.

Social Benefits

Patches and corridors of open space interspersed throughout the built environment weave the fabric of the city together. Together they add natural beauty, character and uniqueness to the landscape. The larger open space patches typically found on the edge or beyond the built environment provide residents and visitors with places for outdoor recreation, including hunting, fishing and other traditional uses.

Open space offers opportunity for many different types of active and passive recreation, which has positive benefits for the health and well-being of residents. It provides places for people to interact socially. Open space also allows people to

increase their awareness of the natural environment through outdoor education and field research programs.

Open space offers scenic and aesthetic enjoyment. It also preserves the community's heritage by protecting historic and archaeological resources. These benefits help maintain the community's character, support tourism and enhance quality of life.

Economic Benefits

It is difficult to quantify many of the public benefits that open space provides in monetary terms. In some instances, it is possible to express the natural process values of open space in the dollar terms of traditional economic analysis. For example, there is the income derived from sustainable timber harvesting and local agricultural production on open space lands. An analysis completed for the Society for the Protection of New Hampshire Forests found that more than \$3.6 billion dollars of income and more than 60,000 jobs were directly attributable to open space-based economic activities in New Hampshire during the years 1996/1997.

Another direct benefit are the avoided costs as a result of open space protection. An example of this would be the avoided cost of flood damage when open space land provides flood storage and reduces the extent of downstream damage. Or the avoided cost of replacing a public water supply when open space provides protection from contamination and groundwater recharge around a wellhead.

Open space also offers indirect economic benefits. It can positively impact surrounding property values and benefit local businesses by spurring economic activity within the surrounding area. According to the National Association of Home Builders (in the Business NH Magazine, October 1998), it is not uncommon for the value of building sites to be enhanced by 15 to 20% in the vicinity of park and recreation areas. The increased value to the landowner is also shared by the municipality, because as relative property values are higher, then assessed valuations and tax revenues will also be higher.

Communities increasingly consider the opportunity cost of losing open space to development, especially residential development. As detailed in the University of New Hampshire Cooperative Extension report “Does Open Space Pay?” (Auger 1996), open space land uses are often a net asset to communities, typically generating much more revenue than they cost in terms of services provided. Residential development, on the other hand, generally costs a community more in the way of services than it generates in tax revenues. While commercial and industrial land uses tend to result in a net gain in tax revenues, such development may provoke a need for more housing and increased loss of open space unless satisfied with infill and redevelopment.

Most public open space areas have a relatively low economic return and a low frequency of use for any single individual. Open space is commonly considered to be a community resource. Traditional arguments on the behalf of open space planning have not rested upon economic considerations. Rather, they have been founded upon the need for protecting environmentally sensitive lands, the need for public recreation facilities, and the attractiveness and ecological importance of green spaces.

New England Forest Cover and Human Population

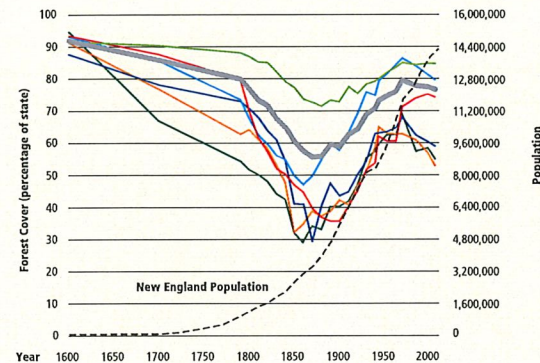
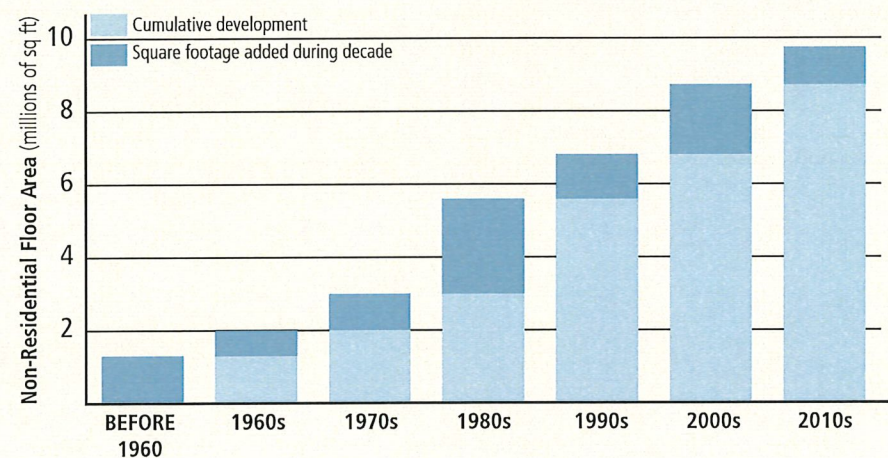
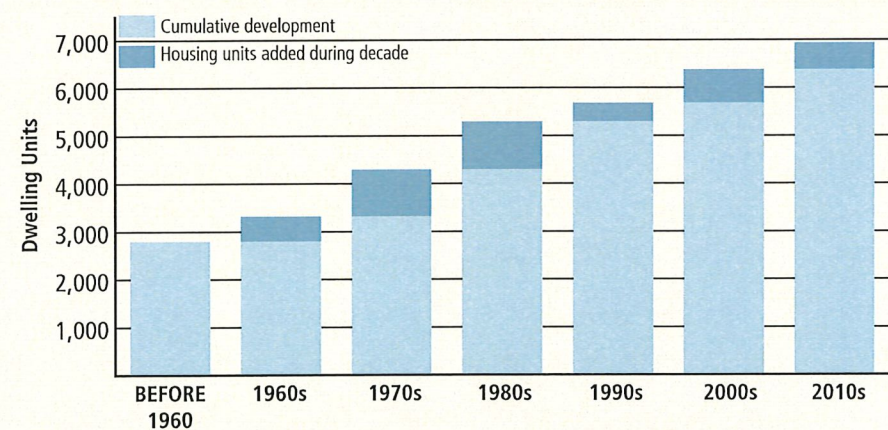


Figure 1. Historical changes in forest cover show that reforestation of abandoned farmland from the mid-19th through the late 20th century has provided a second chance to determine the fate of the region's forests. Recent trends show the loss of forest throughout the region.

Non-Residential Growth in Lebanon



Residential Growth in Lebanon



Why be concerned about the loss of open space?

Undeveloped land in Lebanon will continue to be lost given the trends in population, housing and economic growth in the city and region. Now is the time for Lebanon to decide what open space is important to conserve and how best to achieve those goals.

Population and Housing Growth

The number of people living in Lebanon increases each year although the rate of population growth has slowed markedly over the past several decades. The city has been adding about 60 new residents annually this decade (2010s) – a population growth rate of less than 0.5% a year.

Lebanon has been adding housing units at a faster rate than residents in recent years as the average household size has been falling. On average, 70 housing units were created in the city annually during 2010s. Given the recognized shortage of housing in the region, it is anticipated that the demand for housing will remain strong in this decade. That demand is being driven by growth in the regional economy with much of the associated job creation occurring in Lebanon as described below.

The location of new residential development is the most important factor as it relates to impacts on open space. Compact housing development that occurs as infill or redevelopment within the urban core has far less impact than low-density suburban or rural residential development.

The statewide trend of increased footprint and land consumption for single-family homes does appear to be occurring for new homes located outside the urban boundary in Lebanon. However, that trend is being offset by the shift from single-family home development in rural areas to multi-family development within the city's urban core – serving as yet another compelling benefit of directing the housing growth to within the urban areas. With appropriate design measures such as provision of green infrastructure, the city can benefit from the vibrancy that new housing brings to existing neighborhoods and can avoid impacts to open space areas. For this reason, the city's Master Plan identifies compact and infill residential development in the urban core as the desired vision for the future.

Economic Growth

The city added 2.9 million square feet of non-residential space between 2000 and 2018. The city has approved more than 2 million square feet of non-residential development that has yet to be constructed. This suggests that the rate of non-residential development will remain strong for the foreseeable future.

Lebanon's topography, combined with the proximity to transportation, sewer and water infrastructure, has directed most non-residential growth to land within or in close proximity to the urban core – thus avoiding the adverse impacts of rural sprawl and fragmentation. However, the majority of recent non-residential development has occurred on previously undeveloped land (greenfield development), as opposed to redevelopment (brownfield development). The cumulative impacts of this pattern of development can degrade the quality of surrounding natural areas. The Centerra Business Park, Airport Business Park, DHMC campus, Etna Road light industrial uses, and commercial development along Route 12A are all located on former natural open space or agricultural land.

How much open space does a community need?

There are a number of factors to consider when determining the quantity, type and location of open space land appropriate for a community. A more diverse portfolio of protected lands (high elevation, forests, floodplains, wetlands, shorelines, agricultural lands, etc.) enhances the environmental, ecological and climate benefits of open space. Protecting land dispersed around the community will ensure that more residents have access to open space near their homes. Where there is a denser pattern of development, public open space becomes critical for quality of life – providing urban residents with places for outdoor recreation and enjoyment of nature. Further, there may be specific resources within the community of scenic, cultural or historic value that merit protection through open space conservation.

Historic Open Space Protection

Fortunately for Lebanon, there has been a pattern and trend of land conservation efforts occurring simultaneous with development over the past several decades. In 1980, there was about 100 acres of city-owned, permanently protected open space in Lebanon – 40 years later, there are nearly 2,000 acres.

Private land has also been protected by property owners either voluntarily placing conservation easements on their land or permanently setting aside land as conserved open space as part of a residential development. Approximately 1,200 acres of privately-owned open space was protected as of 2019.

The 3,221 acres of public and private open space protected from future development represents approximately 12% of Lebanon's total area. Geographically dispersed around the city, these open space lands include a variety of landforms and natural communities.

Future Open Space Protection

While Lebanon's open space protection efforts have been effective to-date, there remain significant resources vulnerable to future development. The 2010 Natural Resource Inventory and 2015 Wildlife Corridor Assessment include specific recommendations for further open space protection and other measures to retain or enhance the function and values of the city's diverse ecosystems.

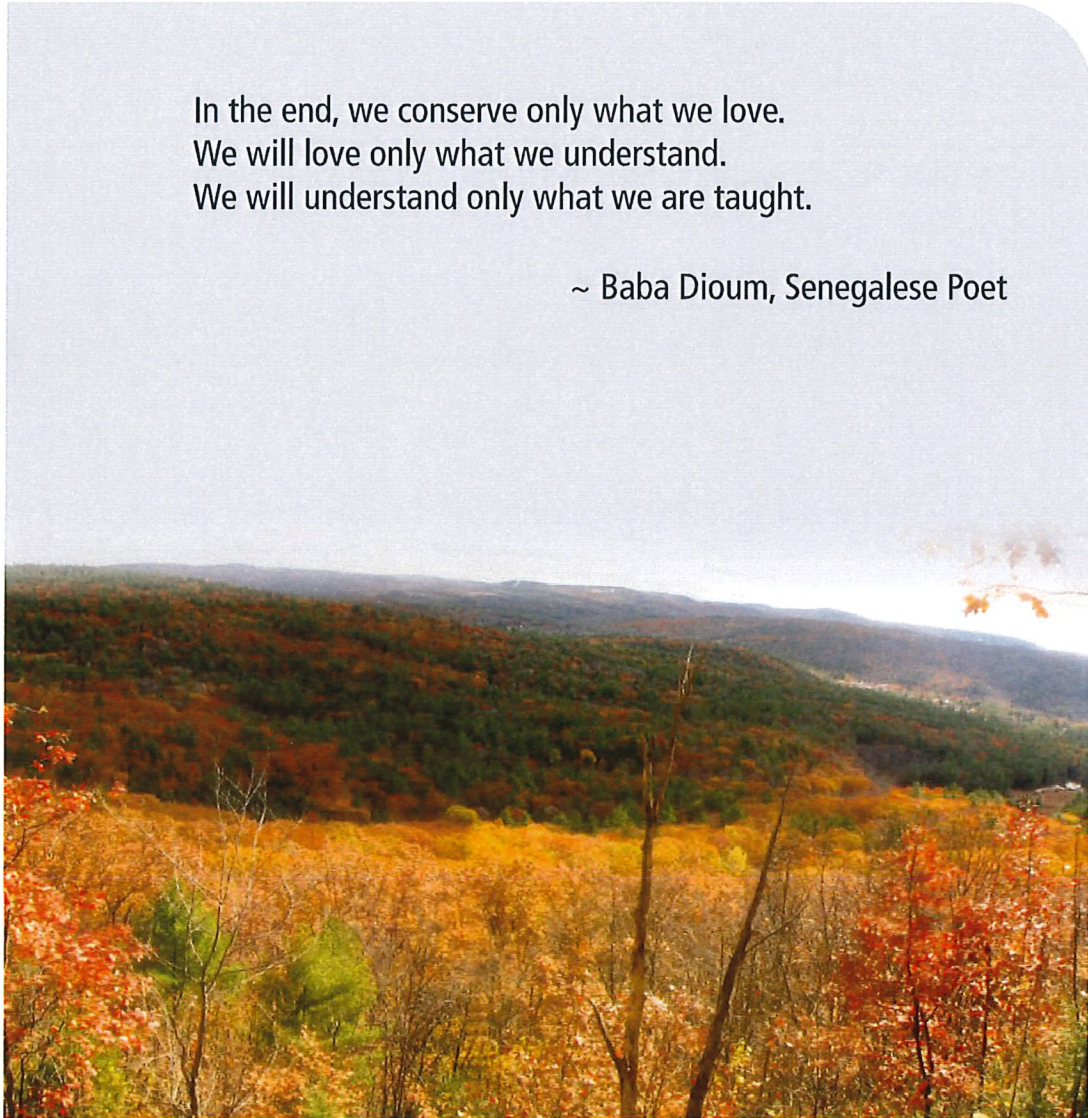
- 🔄 The 2010 Natural Resource Inventory identifies 73 significant ecological areas (SEAs) that, due to their sensitive nature and unique set of natural resource characteristics, require special consideration. The SEAs represent less than 10% of the city. Nearly all the city's rare and endangered plant species are contained within these lands, and virtually all of the rare wildlife species depend upon them. The Inventory recommends that the SEAs be priorities for conservation due to their ecological integrity and ecosystem services. Currently, 28% of the SEAs are within protected open space areas.
- 🔄 The 2015 Wildlife Corridor Assessment focused on 17 priority wildlife crossing areas. It found that recent development has reduced potential crossing areas. Unfragmented blocks of habitat are becoming isolated as development along the road networks have built up physical barriers to wildlife. To preserve

ecological values and functions, the Assessment recommends that protected open space areas be linked by greenbelts that allow for the movement of wildlife. Only two of the priority crossing areas currently connect through protected open space lands.

The guidance that follows in Chapter 3 for establishing goals, benchmarks and a methodology for prioritizing the city’s open space protection efforts builds upon the recommendations from the Natural Resource Inventory and the Wildlife Corridor Assessment. It is also consistent with the land use goals of city’s Master Plan, which call for most future growth to occur in the urban core.

In the end, we conserve only what we love.
We will love only what we understand.
We will understand only what we are taught.

~ Baba Dioum, Senegalese Poet



3. OPEN SPACE PRIORITIZATION

The Conservation Commission has recommended that the City identify, prioritize, and actively work to conserve land with high-value natural resources that are currently unprotected. This chapter briefly describes previous efforts to prioritize open space for conservation. It then proposes a new prioritization framework that is grounded in the concept of **how much** open space is needed, and **where** are the currently undeveloped lands located that should be prioritized for conservation.

Historic Open Space Prioritization

The historic open space prioritization efforts described below are testament to the desire of Lebanon residents to maintain the special open space and conservation qualities that are part of the fabric of this community. The information and recommendations they contain continue to guide present day conservation endeavors. Grounded in a fundamental bio-diversity conservation planning framework, Lebanon is positioned to use this information to engage in a very progressive, forward thinking approach to preserving the functions and values of its existing open space lands, and maintaining the desired community character.

1996 Conservation Commission Approach

In 1996, the Conservation Commission developed an approach in which they identified generic land types that were desirable locations for open space preservation. These were not parcel-specific recommendations, but rather a listing of generic attributes that were recommended for preservation. The list included:

- 📍 Mascoma Lake Shore Lands
- 📍 Connecticut River Shore Lands
- 📍 Mascoma River Shore Lands
- 📍 Flood Plain Wetlands
- 📍 Prime Wetlands
- 📍 Other Wetlands
- 📍 Unique Geologic Features
- 📍 Mountain Tops & Ridgelines
- 📍 Old Farms and Fields
- 📍 Wildlife Habitat and Corridors
- 📍 Aquifer Areas
- 📍 Mixed and Old Growth Forest
- 📍 Land Contiguous to Existing Conservation Land
- 📍 Rare and Endangered Flora Habitat

Around the same time, students from the Lebanon High School Environmental Science class and Students for a Sustainable Future (SFF) teamed up with the Lebanon Conservation Commission to conduct a poster ballot project. The project sought input from the community about open spaces in Lebanon. The vote from participating residents included the following results, listed from most popular to least:

1. The Mascoma River Shorelands
2. The Connecticut River Shorelands
3. Mascoma Lake shorelands
4. The Landmark Lands
5. Farms
6. Mt. Support and Rix Ledges
7. Blueberry Hill and Hardy Hill areas
8. Daisy Hill area
9. Quarry Hill
10. Class VI Roads
11. Corridors in the City of Lebanon
12. Route 4/Eastman Hill intersection

One of the mutual highlights between these two efforts was that undeveloped shoreline is both valued, as well as in need of protection as it is often equally prized for its development potential.

Conservation Commission Periodic Review

The Conservation Commission undertakes a periodic review of City of Lebanon owned parcels. This exercise occurred in 1993, 2006, 2011, and most recently in 2017. The list of City owned properties changes over time as private owned parcels transfer to City ownership, the result of a failure to pay taxes, gifting to the City, etc.

The results of the 2017 analysis revealed that there are very few, if any, additional protection opportunities for City owned properties, as many of the properties with valuable natural resource characteristics are already under some form of protection or are simply undevelopable. Or the properties are currently developed, typically providing some sort of infrastructure support to the City, such as the City Landfill, the Wastewater Treatment Plant, recreation fields, etc.

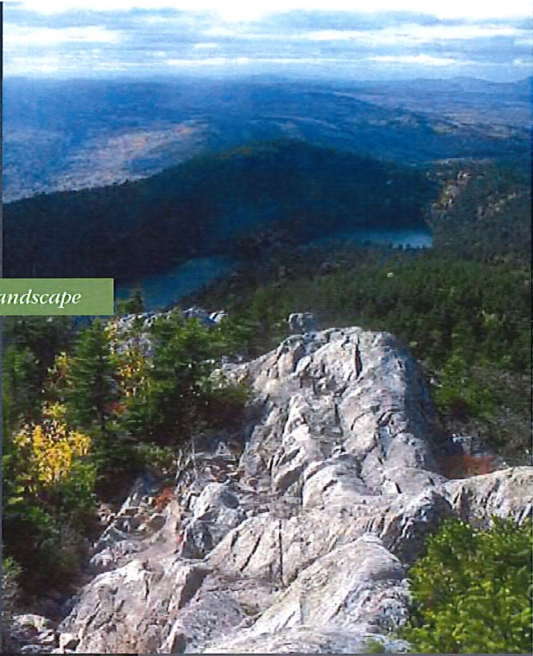
2010 Natural Lebanon

The 2010 Natural Lebanon – Natural Resource Inventory (NRI) report was completed to serve as a “framework” planning document, providing extensive descriptive information associated with the undeveloped natural open space areas within Lebanon. It is impressively robust as to the level of detail contained within the report, including the following: a wetland assessment and prioritization; identification of existing and potential vernal pools; species and habitat types occurring within Lebanon including rare plants, rare animals, and target species of special concern. It provides valuable prioritization input, including highlighting priority conservation sites, priority wetland complexes, and highlighting areas deemed as “Significant Ecological Areas” (SEAs), as well as Co-Occurrence areas. The proposed prioritization methodology detailed later within this chapter includes this information as the core component.



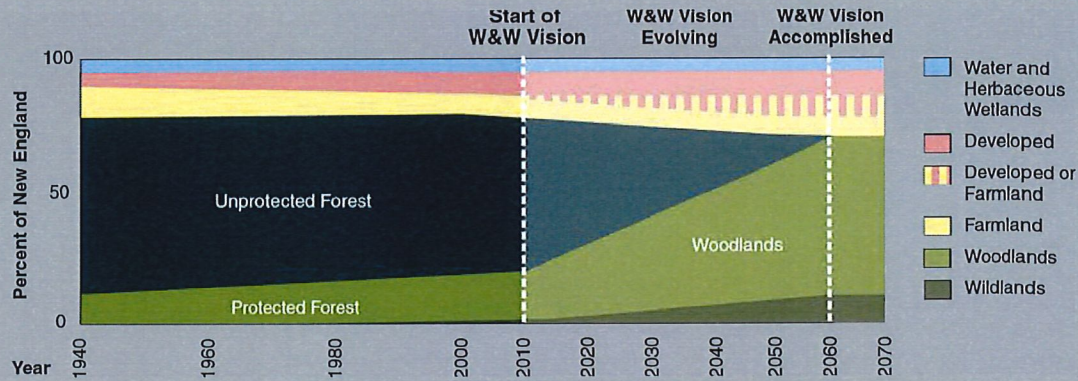
Wildlands and Woodlands

A Vision for the New England Landscape



New England Land Cover: Past, Present, and Future

Figure 3. Projections for the implementation of Wildlands and Woodlands demonstrate that roughly a doubling in the rate of forest conservation over current levels is needed to achieve the vision within 50 years.



Lebanon Master Plan

The Lebanon Master Plan – “Lebanon 2030” provides guidance as to recognizing the role of open space within the community, including highlighting a desirable future development pattern that emphasizes development within the existing urban cores, particularly infill development, and avoiding urban sprawl into the rural undeveloped areas of Lebanon. Chapter 5 (Natural Resources) includes the following key points:

- Recognize that conservation of the natural environment is essential to maintaining the City’s quality of life and economic vitality
- Conserve open space and maintain the functions of natural systems while respecting the rights of property owners
- Establish a connected network of open spaces, conservation lands, greenbelts, and working farm and forest land that is accessible to City residents

How Much Open Space Should Be Preserved?

When considering an Open Space plan and conservation recommendations, one question that inevitably arises is: How much land is enough? Answering the question of “how much” can be challenging to provide in the form of a finite figure, as open space and conservation planning is often as much an art as it is science. However, there is significant value in setting benchmark for conservation goals as a means to both evaluate progress and celebrate successes.

- The Society for the Protection of New Hampshire Forests challenged municipalities to conserve “at least 25% of its lands for a network of trails, parks, farms, and forests where people can connect with the natural world.”
- Keene, NH set a goal within their master plan of 50% protected land.
- Burlington, Vermont has established a goal of retaining a 20% ratio of developed land-to-protected natural areas in an effort to ensure that natural areas are preserved as other land is developed. Their policy states that “for each four acres of new development, one acre should be set aside by the developer as a natural area.”

The EPA encourages an approach that includes targeted percentages of developed to undeveloped land that is grounded in scientific rationale associated with water quality protection.

Prioritization Methodology – The Proposal for Lebanon

The prioritization methodology proposed for Lebanon is framed by the “how much” open space and the “location” of currently undeveloped lands. This plan recommends a metric that is a ratio of developed to undeveloped land. Additionally, it is intended that within this undeveloped, open space mosaic will be a portfolio of natural resource characteristics that collectively represent and support biodiversity at both a local and regional scale.

The proposed “how much” is informed by benchmarks proposed within the Wildlands and Woodlands – A Vision for the New England Landscape report (Harvard Forest, 2010), including differentiating between working woodlands and preserved wildlands. The proposed identification as to the “location” of such lands is shaped by historic prioritization efforts, the 2010 Natural Resource Inventory, the 2015 Wildlife Corridor Assessment, the Lebanon 2030 Master Plan, and enhanced by the integration of, “The Spatial Solution Methodology” (Forman, Richard, 1996), to create a proposed blueprint for open space conservation grounded in science and embracing the concept of biodiversity protection.

The “How Much”

The Wildlands and Woodlands report articulates a vision for the New England Landscape, including establishing measurable benchmark associated with the overall goals. It was authored by more than 20 forestry professionals, including foresters, forestry professors, natural resource scientist, etc. A review of this document highlights the similarities between the existing forest to developed area ratio within the New England landscape and that of Lebanon. The reports objectives additionally align with the vision expressed within the Lebanon Master Plan, including: avoiding sprawl, encouraging infill, and preserving the natural landscape. And perhaps most

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a strategy for integrating and advancing efforts to conserve the city’s ecological integrity

encouraging, the reports vision and goals appear to align with an opportunity that still exists within the Lebanon community.

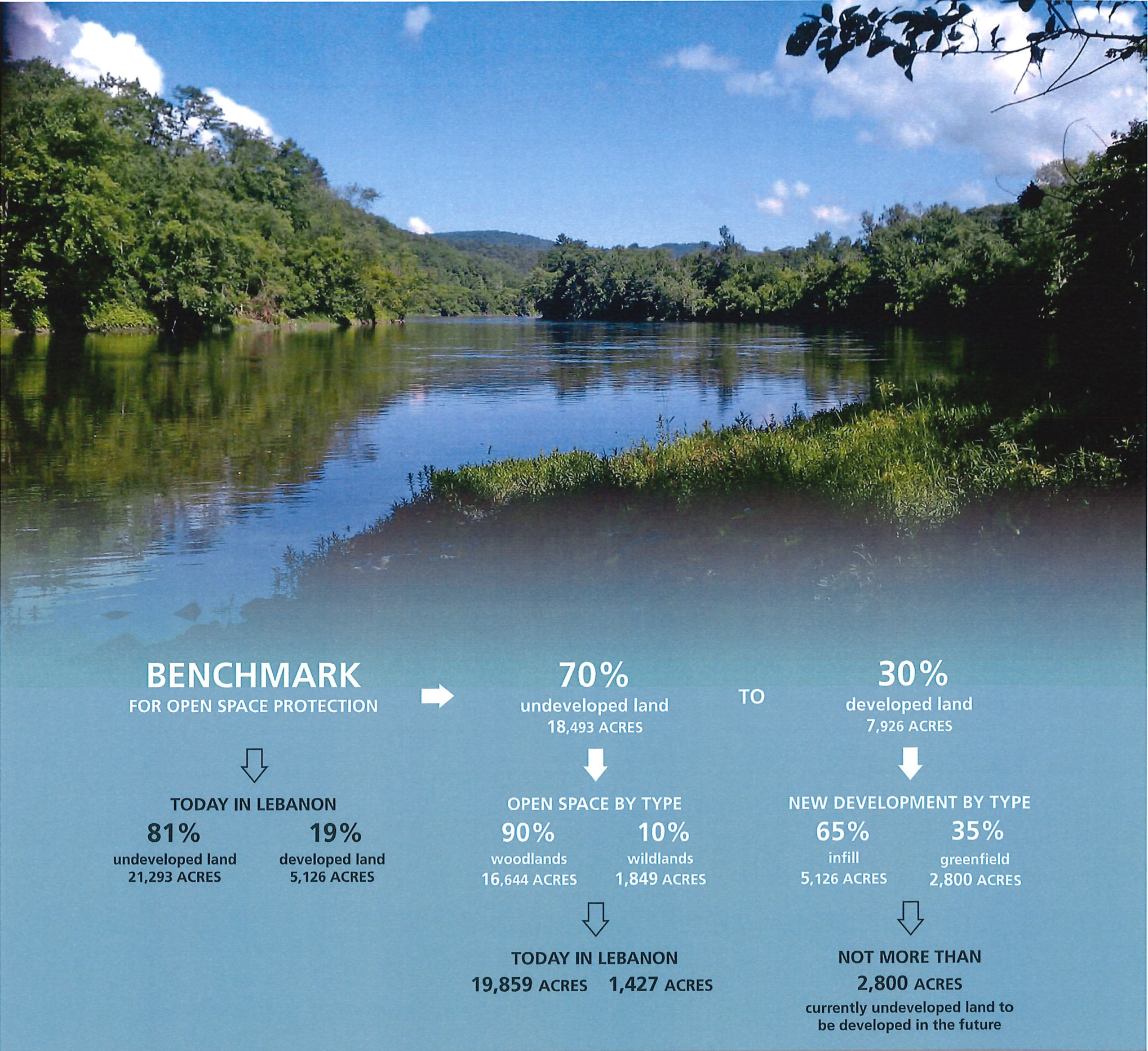
The Wildlands and Woodlands vision builds on decades of planning and leaves room for continued growth and development. It:

- Calls for an unparalleled, long term conservation effort to retain at least 70% of the region in forestland, permanently free from development. This would be achieved through easements from willing private land owners guided with strategic conservation acquisitions and enhanced economic incentives to retain forestland. This forested land would be punctuated only by waters, wetlands, and farmland.
- Strikes a balance between active, long-term forest management and preservation. 90% of forestland would be expansive “Woodlands” that are voluntarily protected from development and managed for forest products, water supply, wildlife habitat, recreation, aesthetics, and other objectives. 10% of forestland (or 7% of the community) would be “Wildlands” that are established as large landscape preserves subject to minimal human impact and shaped by natural processes.

Applying the Wildlands and Woodlands vision to Lebanon that aligns with desires expressed by the community, it would propose that the amount of undeveloped to developed land within the community not exceed a 78% / 22% developed ratio. Furthermore, of the 22% of undeveloped land (18,546 acres), a minimum of 10% (2,601 acres) would be protected open space managed as “wildlands.” Lebanon’s Farnum Hill property currently provides 820 acres that would qualify as “wildlands” where logging is prohibited, mountain bikes and other uses are excluded, and the existing foot trail network will not expand. Rix Ledges is another 250-acre natural area that could be managed as “wildlands.” Together these two existing city-owned properties account for 41% of the fully realized “wildlands” aspired to within the plan.

Lebanon is currently at a 81% undeveloped to 19% developed land ratio. The 78/22 ratio benchmark could accommodate existing development projects currently underway, as well as provide an opportunity for a small amount of continued development in the more rural undeveloped areas into the foreseeable future. However, it would require the vast majority of future development projects to be urban core infill and redevelopment, which is the form and pattern of development called for in the city’s Master Plan.

The proposed approach for categorizing the Lebanon landscape (e.g. developed, undeveloped open space, and wildlands) and setting benchmarks for each, serves to create a portfolio of the various land categories, as well as desired units of measurement or “metrics” for each. It aligns a local vision with a broader regional vision that is espoused by forest professionals and grounded in science. It is in concert with the Lebanon Master Plan’s Future Land Use map, adopted by both the Lebanon Planning Board and Lebanon City Council. This vision focuses on the preference for “brownfield” development and establishing a benchmark limit on “greenfield” development. This vision does not attempt to address the desired or optimal level of growth within the existing developed areas, opting to simply encourage the Planning

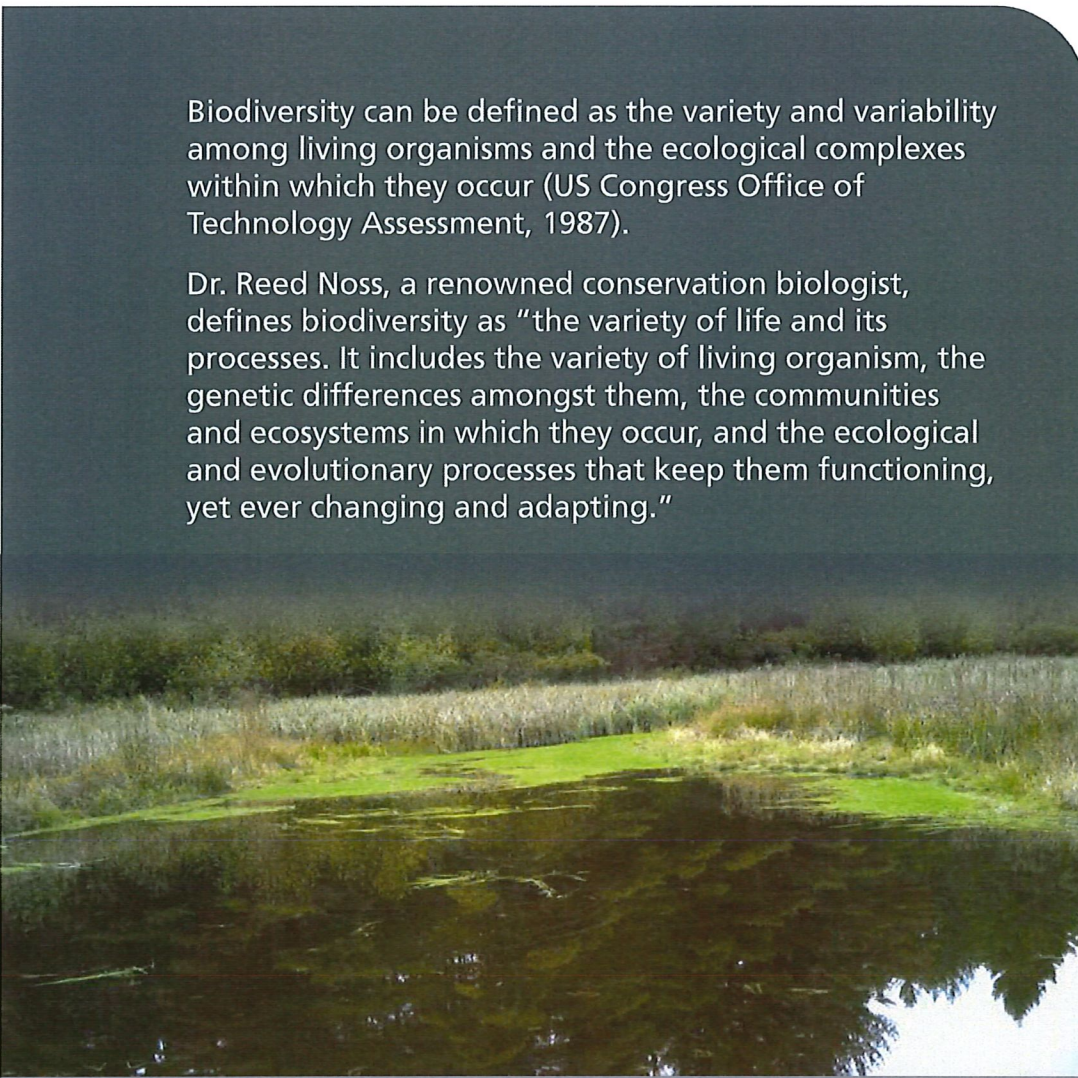


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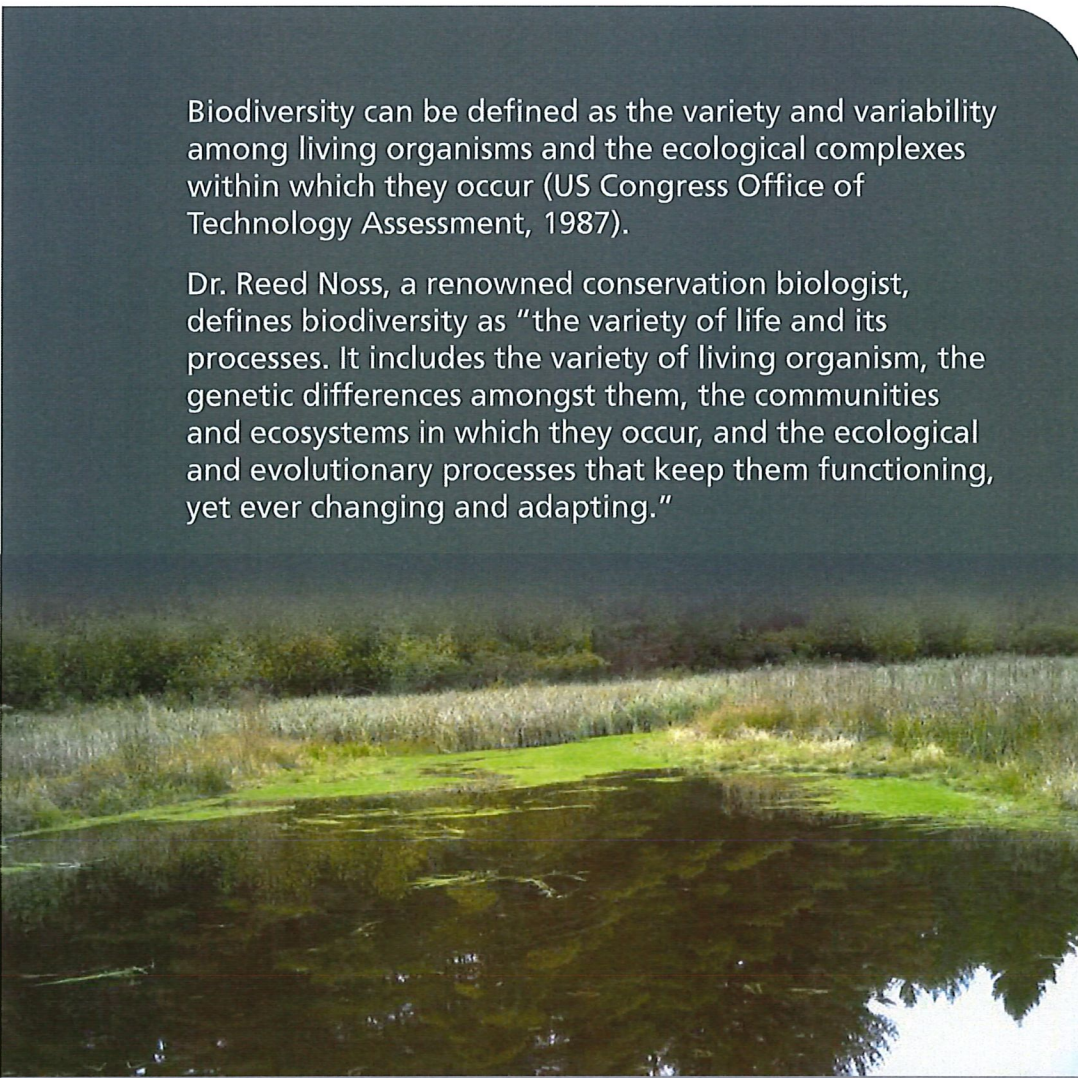
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A photograph of a pond with a thick green algal bloom on the water's surface, surrounded by tall grasses and trees in the background. The image is used as a background for the text.

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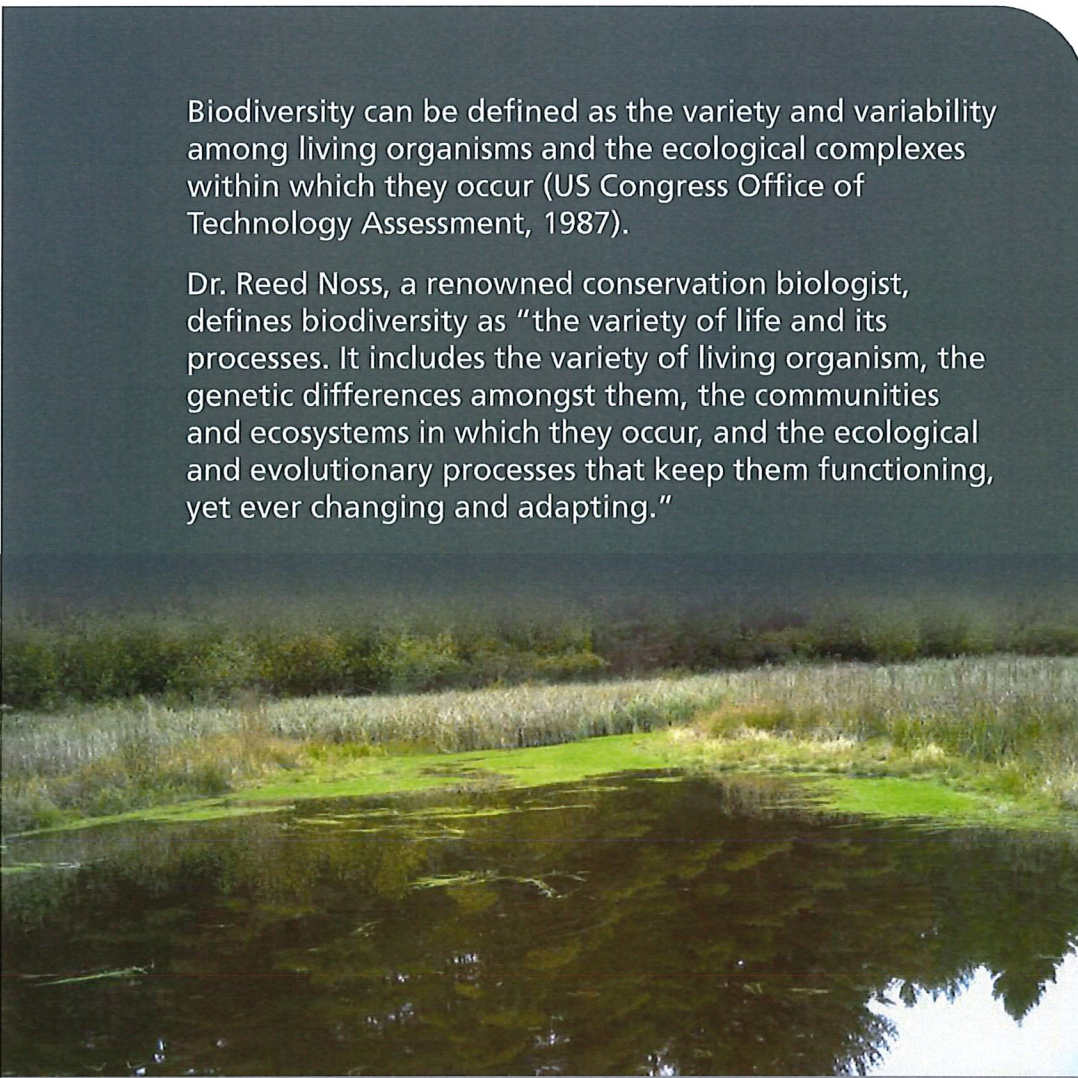
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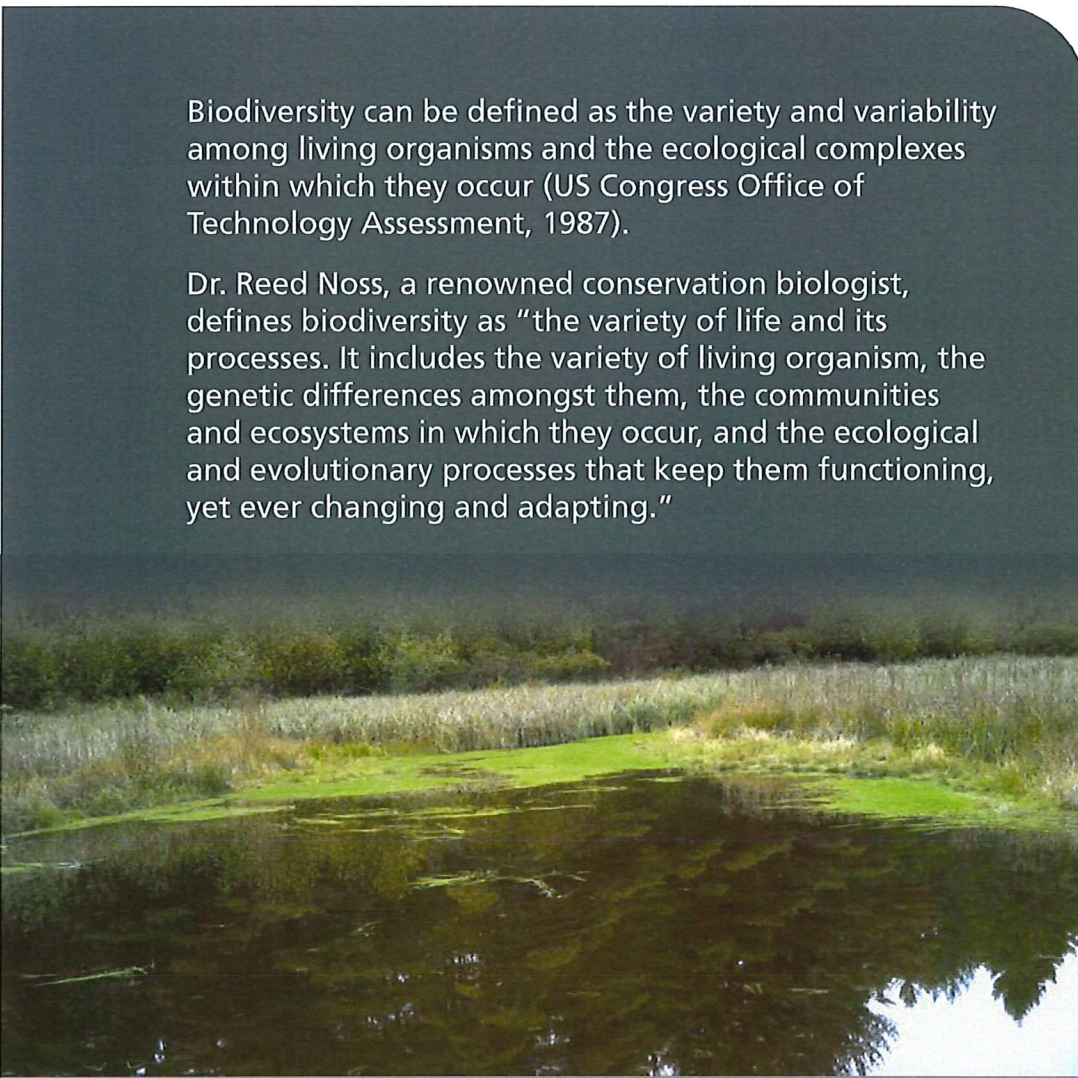
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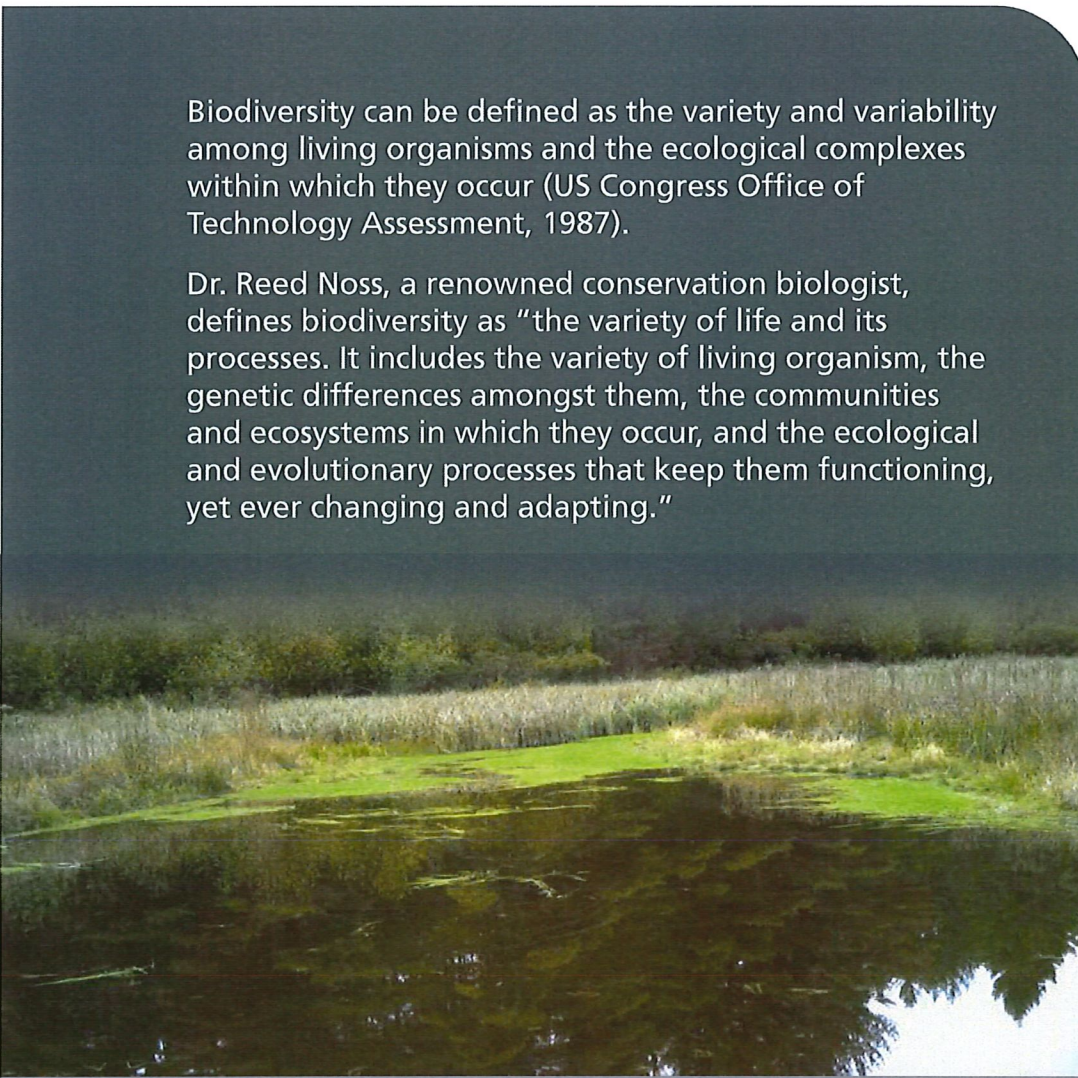
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The large patches of natural areas in Lebanon are bounded by roadways or other forms of development. The quality of the natural habitat provided increases with distance from the edge effects of traffic and other human impacts. The interior or core areas of the large patches are particularly noteworthy, as documented in the NRI report. Fragmentation of large patches is considered a serious threat to regional biodiversity and a leading cause of species extinction.

An assessment of Lebanon's large patches has included an edge to perimeter ratio, as well as core area assessment. The concept being that a large patch providing significant core area with low edge to perimeter ratio is one that offers more "buffering" from edge disturbance. For example, the scarlet tanager is an interior nesting bird and as such, seeks habitat within the interior core area of a forest. Predation is an edge effect that is decreased as the distance is increased from the edge. "Umbrella species" such as bobcat, bear, or moose, require large patch habitats, and by maintaining these species habitat requirements, habitat is provided to multitudes of species with smaller habitat requirements, hence the concept of an umbrella species.

The Landmark Lands, Rix Ledges, Greater Bass Hill, Mt. Tug, and Hibbard Brook Headwaters provide some of the most notable large natural area patches within Lebanon. It is important to note that many of these extend into the neighboring communities, highlighting their role and value at a landscape

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The interior portions of large patches are logically good candidates for the wildland category of natural open space, in which human disturbance is avoided to the greatest extent possible.

A photograph of a riverbank. The foreground shows the calm surface of a river, reflecting the greenery above. The middle ground is a dense line of tall, yellowish-green grasses growing along the water's edge. Behind the grass is a thick forest of green trees, their leaves creating a textured canopy. The lighting suggests a bright day, with some highlights on the grass and foliage.

Vegetated corridors occur along major streams and rivers (e.g. riparian corridors), providing hydrologic and ecologic benefits such as:

- 🔄 Controlling streambank erosion;
- 🔄 Reducing mineral nutrient and other substance inputs to streams;
- 🔄 Providing shade and fallen branches for fish habitat;
- 🔄 Providing leaves and branches as the base of aquatic food chains; and
- 🔄 Protecting conduits for species moving along the dendritic system (Binford and Buchenau, 1993; Malanson, 1993).

Both width and connectivity appear to be key variables determining the effectiveness of stream corridors.

Lebanon's undeveloped riparian corridors are identified as a top priority within the NRI, due to the functions and values they provide and the development pressure or general disturbance they experience. Lebanon has adopted a local riverbank protection district as a regulatory approach to conserving the integrity of these features, but additional conservation measures are likely needed to maintain the full habitat functionality provided.

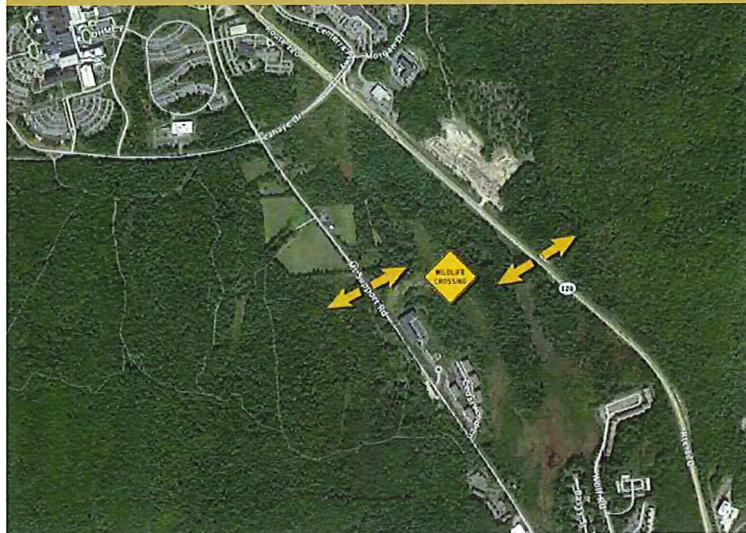
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CONNECTIVITY BETWEEN LARGE PATCHES



Wide connected corridors or, in some locations, a scatter of small patches are keys to effective movement of species between large natural-vegetation patches (Harris and Gallagher, 1989; Saunders and Hobbs, 1991; Noss, 1993a; Forman, 1995). The movement of species among large patches enhances recolonization following local extinction, reduces the probability of inbreeding depression and decreased genetic variability, and spreads risk in case of severe disturbance to a patch.

The NRI report identifies 65 wildlife crossing sites occurring within Lebanon. Of these, 17 were selected for additional habitat availability assessment as they had one or more of the following attributes:

- They were identified as a wildlife crossing area in the 2008-2010 NRI
- They had a high spatial or temporal species crossing frequency as determined in the field during the wildlife assessment portion of the NRI
- They abutted at least one unfragmented area of at least 500 acres
- They included 'pinch points' along roadways subject to potential development

The 2016 Wildlife Corridor report details the descriptive assessment of the seventeen, including: the general direction of travel for the crossing animals, the width and type of crossing, the traffic volume of the roadway, the primary species using the crossing site, and the unfragmented landscapes they are moving between. Detailed recommendations for improving each crossing area are provided, as well as the additional prioritization that includes categorization as either "major" or "best."

The Mt. Support wildlife corridor highlights the challenges to preserving the viability of these features. The area is appropriately zoned as a high-density residential district due to its close proximity to a major employment center and it is experiencing significant development pressure that has the potential to adversely affect wildlife movement. The opportunity does exist to combine a coordinated development review process with desired site design to provide an opportunity for both needed housing and the continued viability of this existing wildlife crossing.

BITS OF NATURE ACROSS THE MATRIX



Where the surrounding matrix is ecologically unsuitable or less suitable than the large patches, small patches and/or corridors scattered over the area provide several key ecological benefits. These include:

- Protecting rare habitats and species outside the large patches;
- Providing stepping stones for species movement in all directions;
- Breaking up extensive stretches of matrix to reduce wind or water erosion; and
- Providing heterogeneous conditions throughout the landscape as a hedge against disturbance.

These features likely require the greatest oversight and active management as they won't have the recognition to generate the level of awareness and response the more easily identified large patches or prominent vegetated riparian corridors experience. Lebanon's requirement that large subdivisions provide 50% open space area, as is generally described as a conservation development design approach, is one planning tool that could be utilized to conserve the "bits of nature." Transitioning from large subdivisions occurring within existing natural open space areas, to infill or redevelopment would be even more effective.

STRATEGIC POINTS IN A LANDSCAPE



Strategic points in a landscape are those locations whose ecological importance is exceptional and long term. Examples include:

- Content of location, including the only vegetated patch, or perhaps the only high elevation undeveloped ridgeline point within a urban setting.
- Flux centers' where movements or flows are concentrated, such as a migration route, or intersection of a network
- An especially sensitive habitat or location that if altered, has a long recovery time

Examples of Lebanon's strategic points, as highlighted in the NRI report, would include rare, threatened, and endangered species; critical or "best" wildlife crossings; high value wetlands and vernal pools; exemplary natural communities; prime farmland soils and soils of importance; surface and ground water; flood plain forest and other high value natural community types; and Significant Ecological Areas (SEAs). SEAs are "those sites that, because of their sensitive nature and unique resource characteristics, require special treatment in terms of long-term conservation and/or protection from human impacts." SEA's are significant because they represent land that contains the highest value natural resource aspect of a given area. Within the boundary of an SEA is one or more valuable elements that exist only by virtue of a unique combination of environmental conditions.

The co-occurrence layer generated for the NRI combines important species, habitats, and natural resources together, yielding a "snapshot view" of locations where these attributes overlap. This information presents an additional opportunity for the identification of strategic points.

The Spatial Solution Methodology. To describe the prioritization methodology in a “science based” narrative, one could simply state the goal is to preserve the existing biodiversity of the community. To apply the concept of biodiversity in a conservation planning context, Landscape Ecologist, Richard Forman of Harvard University has shown that “there are spatial land-use patterns that make good ecological sense and that will conserve the bulk of nature and natural processes in any landscape or major portion thereof. These patterns will not protect every species, every soil particle, every nutrient concentration or every portion of water bodies, but the spatial pattern will conserve the bulk of the attributes, as well as the most important ones.”

Forman’s Spatial Solution to Conservation Biodiversity describes both indispensable patterns that occur within a landscape, as well as strategic points. The following section will provide a description of the indispensable patterns and strategic points, as well as provide the specific examples of such occurring within the Lebanon landscape, as gleaned from the NRI report. The intent is to utilize this framework, in addition to the information contained within the NRI and Wildlife Corridor report to guide conservation planning efforts.

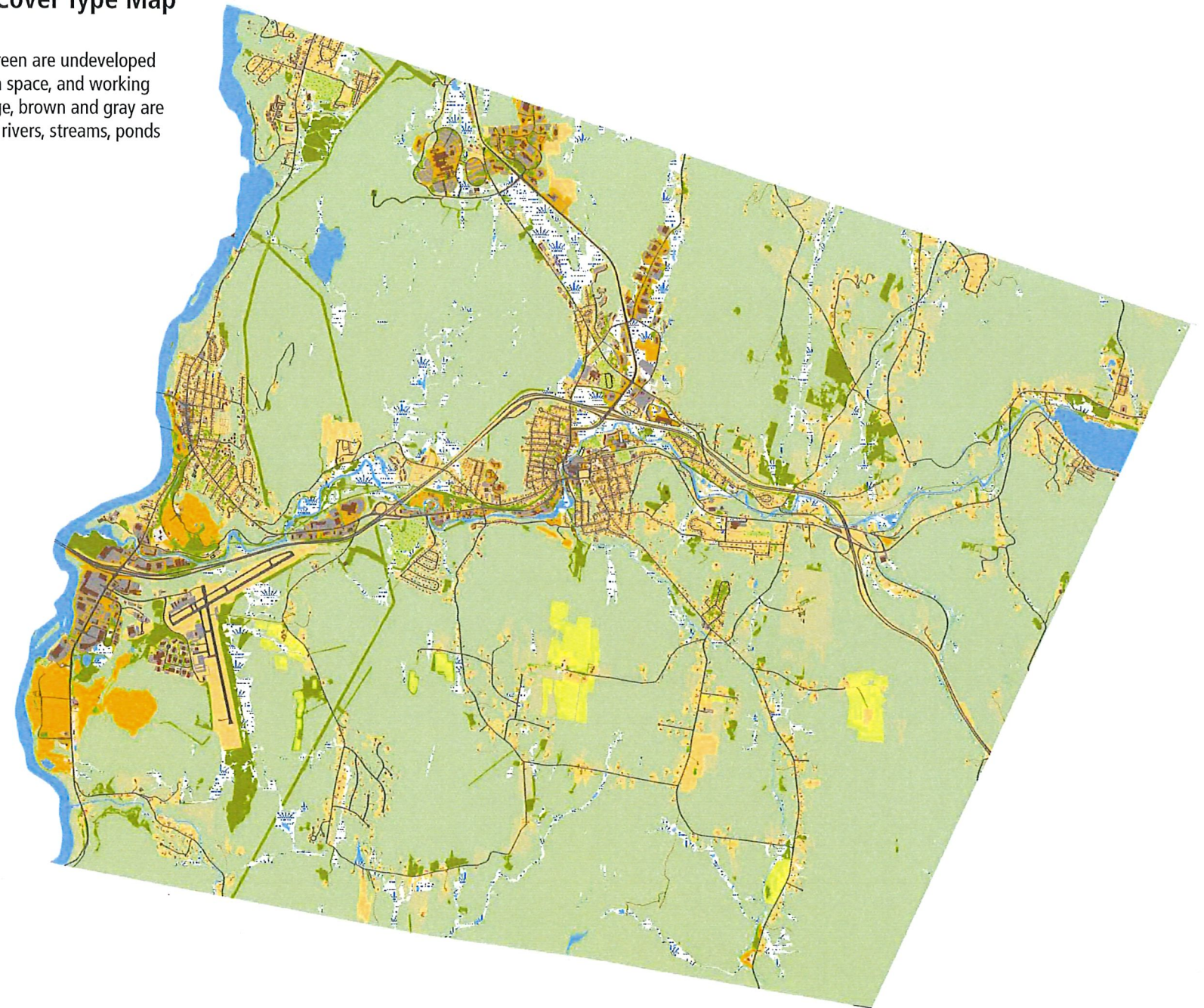
Methodology Summary

To summarize, the proposed approach for maintaining the existing, vibrant, undeveloped open space landscape within Lebanon, includes achieving a desired ratio between developed and undeveloped lands, as well as utilizing a landscape scale framework approach for general guidance, and existing detailed natural resource information for more direct action as part of the general planning process. For the proposed approach to work, it is essential that the Lebanon community embrace the overall value of achieving the stated conservation vision and engage in a “planning” process that is far more inclusive and innovative than simply relying on the traditional techniques of deploying regulation or purchasing properties as a means to preserve open space.

The traditional planning process reacting to demands of growth and resultant adverse impacts on open space are evident up and down the East Coast, from New Jersey, to the communities in Southeastern New Hampshire. Sprawling subdivisions, filled wetlands, forest fragmentation, increased pervious pavement, and roadway construction, has devastating impacts on the natural systems within communities. With the wealth of knowledge existing within the current day planning profession, and the conservation/planning tools that are available, there is a real opportunity for Lebanon to secure a different outcome. Directing future growth to within the urban core areas and the redevelopment of existing properties, combined with and a continued recognition of the value provided by maintaining the natural open space areas, including sound management decisions, affords the ability to achieve a healthy balance between development and conservation. The following section provides strategies to be utilized to achieve such.

Land Use / Land Cover Type Map

Areas colored yellow to green are undeveloped forestland, protected open space, and working lands. Areas colored orange, brown and gray are developed. Blue areas are rivers, streams, ponds and wetlands.



4. OPEN SPACE MANAGEMENT STRATEGIES

Meeting Lebanon's benchmark of 78% open space to 22% developed area will require the continued use of standard conservation measures and implementation of the planning practices espoused in the Lebanon Master Plan. If the community is to continue to grow, it is imperative that infill and redevelopment be the guiding principles for future development. The 78-22 benchmark accommodates a limited amount of residential development outside Lebanon's core areas. The remainder of the development, including non-residential growth, should occur within the core areas. That is sensible not only to meet the objectives of this plan, but for prudent fiscal reasons such as limiting the cost of municipal operations and infrastructure construction.

Businesses initially locate, expand, and thrive in Lebanon for the community's quality of life, which includes the natural landscape surrounding the existing built environment. That growth drives demand for more housing and services. Paradoxically if that growth continues to convert undeveloped land to developed land, it can undermine the quality of life that made the community attractive to employers and residents in the first place. Lebanon can have both a vibrant economy and open space preservation if the city's planning and development process is successful in directing growth to appropriate locations within the community.

Beyond promoting infill and redevelopment over sprawl or greenfield development, Section 3 detailed a methodology for identifying and prioritizing undeveloped land in the city for protection based on its ecological functions and values. It recommends that the city's open space include both working woodlands and wildlands – areas established as landscape preserves subject to minimal impact and shaped by natural processes. Further, Lebanon will consider worthy land conservation efforts in all its sections and neighborhoods. Widely-dispersed conservation lands will help maintain wildlife corridors and will provide immediate access to open space for city residents.

This plan recommends the following general strategies to achieve Lebanon's open space objectives.

Public Education and Outreach

Educating residents about the value of Lebanon's open space resources and how those resources improve the quality of life in the community is essential to build and sustain support for land conservation efforts. City residents must have opportunities to become better aware of and informed about the beautiful places and important resources found in Lebanon, and how those resources contribute to quality of life, environment, and the economy. With this knowledge and insight, residents will better appreciate the diversity of the city's landscape and understand the importance of long-term protection.

Partnerships

Public education is partly the responsibility of the Lebanon Conservation Commission. However, every effort must be made to work in partnership with the Lebanon

Planning Board and City Council, as well as the many state and local agencies, non-governmental and education organizations that share an interest in land conservation and stewardship. Partnerships help to spread the workload, cost, and message to a broader constituent base. The Conservation Commission may also be able to draw upon citizens with specific interests, talents and skills, who are willing to volunteer their time to broaden the Commission's capability and capacity in this regard.

Programs

The Conservation Commission has a solid history of organizing on-going education programs concerning the City's natural areas. The "Wild About Lebanon" guided walks and hikes provide people with an opportunity to experience first-hand the rich diversity of scenic and rare resources available in the City. The Conservation Commission is interested in developing additional programs, such as an annual amphibian crossing project, a volunteer trail stewardship program, and a range of workshops and educational events designed to engage the public and improve the stewardship of both public and private open space properties. Other potential opportunities to educate the public include creating education programs through the local schools and developing or expanding collaborative working relationships with other organizations dedicated to conservation education.

Mapping and Signage

While the city already provides trail maps for the public open space properties, the information about those properties on the City web page could be expanded and enhanced. Continuing to install kiosks at trailheads and trail markers/signage can enhance the experience of exploring these properties, as well as attracting additional users.

Property Owner Outreach and Recognition

Land conservation is often a reactive process; individuals and institutions marshal effort and money to protect property when it is placed on the open market for sale or development appears imminent. A more effective and coordinated approach would be for the Conservation Commission to proactively reach out to landowners whose properties fall within the City's natural resource priorities before they decide to sell or develop their land.

This outreach can take the form of both education to encourage private conservation efforts and information about sound land-management practices. Information about the many conservation strategies currently available and the organizations that practice them can help large landowners plan for a future that will both meet their own economic needs and protect the City's natural heritage. If landowners have this information in advance, they are more likely to practice responsible land management and to be receptive to conservation-minded alternatives to conventional development options.

As part of the City's outreach activities, the owners of properties that possess important conservation value should be identified and informed about the important



resources on their property, the benefit those resources provide to the community, and things they can do as stewards of these resources to maintain or enhance these assets. These options could range from limiting development on the property (conservation easements, transfer of development rights) to preserving a buffer space around sensitive areas or educating landowners about land use impacts, such as mowing or “brush-hogging”, on particular species. These owners could also be made aware of the opportunities provided by Lebanon’s Open Space Trust Fund. The Conservation Commission should build funding for these activities into their annual budget.

There are numerous property owners in Lebanon who have been responsible stewards of important resources – some for multiple generations – and can serve as examples. To the extent possible, the City should seek ways to recognize these private stewards for the service they are providing the community.



Regulatory Protection

Regulatory measures are a cost-efficient means of land preservation, and can be extremely effective in curbing sprawl and protecting land if implemented in accordance with the City’s open space priorities. Lebanon’s Zoning Ordinance, Site Plan Review and Subdivision Regulations, and the Capital Improvements Program can all be utilized to influence the location and intensity of development within the City.

Planned Unit Development

The current Zoning Ordinance already contains provisions for Planned Unit Developments or Cluster Subdivisions that are intended to preserve significant natural land features and/or open space by providing greater development flexibility. In return for setting aside a percentage of the land as permanent open space, the landowner can still receive the allowed density for the entire parcel and may also benefit from reduced development costs. The City requires such conservation developments under certain circumstances to ensure that open space is preserved at the same time as development is approved.

Dimensional Standards and Parking

The current Zoning Ordinance also provides for dimensional requirements, including minimum lot size, minimum yard requirements, maximum building coverage limitations, and even minimum parking requirements. The City should consider developing and incorporating a Maximum Lot Coverage limitation to ensure that a portion of all lots remains as greenspace. In addition, because a significant amount of lot coverage is typically associated with parking, the City should develop Maximum Parking Requirements and allow for reductions in parking provided on site. Encouraging adjoining properties to share parking may also help reduce impervious surface in the City.

Increasing the maximum height of buildings should be evaluated and incorporated within appropriate zoning districts as that measure could support reducing the overall footprint of development projects. The high density Residential One (R-1) district, as well as the CBD, LDD, and Industrial districts are likely the most logical places to increase building height.

Innovative Land Use Planning Techniques

Incorporating additional innovative land use planning techniques, such as those promoted by the New Hampshire Department of Environmental Services, the NH Association of Regional Planning Commissions, NH Office of Energy and Planning, and the NH Local Government Center should be assessed and adopted as deemed appropriate. Examples would include lot size averaging, density transfer credit, urban service districts, etc.

Overlay Districts

The current Zoning Ordinance contains several Overlay Districts, which are intended to provide an additional layer of review and protection for certain natural or cultural resources, including wetlands and flood plain areas. The City should review the advisability of incorporating additional Overlay Districts, where warranted, to protect

additional resources deemed important by the community. Examples include a steep slope, a source water, aquifer, and ridgeline overlay protection district.

Road and Driveway Standards

Regulating the length as well as the design of private roads or driveways would significantly reduce the fragmentation effects on open space areas. For generations, interior forest areas as well as ridgeline areas remained in a natural state as it was simply cost prohibitive to construct roadways to access these areas. In recent years, there has been an emerging trend to locate homes in such locations for the privacy and views they may afford throughout the Upper Valley. The edge effects of development in interior forest areas will contribute to the degradation of some of the highest value open space areas in the city and region.

Acquisition of Property or Property Rights

Some undeveloped lands that offer high-quality natural resources must be permanently protected. Without such protection, there is no guarantee that existing open spaces will remain in their current state. Indeed, there is much evidence indicating that unprotected lands will ultimately be converted into residential and commercial development. The acquisition of easements, which are legal rights in land that may restrict development, preserve a view, etc., can be used to protect natural resources. Easements are attractive when the owner of a property wishes to continue some level of activity or use of that property, such as when a farmer continues to grow crops on farmland. Easements also allow property to remain in private ownership and, therefore, they allow families to transfer conserved property from generation to generation. Alternatively, conservation can be achieved by “fee simple” purchase, which transfers ownership of the entire parcel to a municipality or land trust with the placement of an easement occurring subsequently.

When high-value open space lands are available for purchase from a willing seller, the City and its partners should make a reasonable effort to conserve these lands through direct acquisition, easement, or another established protection mechanism. Undeveloped parcels containing high-value resources should be a conservation priority for the City. This policy will simultaneously maximize conservation funds and natural-resource benefits.

However, it is important to reiterate that the focus on high-value lands does not preclude conservation of lesser-value properties. For example, the prioritization of large, contiguous parcels does not mean that small properties should be eliminated from consideration. Some flexibility can be maintained by introducing weighting factors into the resource analysis where the community feels that certain natural features or functions are particularly sensitive and significant. With this flexibility, parcels containing an especially rare or valuable resource, but which lack the co-occurrence of other resources, can still receive a relatively high priority ranking by the City.

The legal cost associated with creating an easement, as well as associated endowment fees, could be a barrier to a willing landowner. The City or other partners may be able to provide financial assistance as needed to cover the cost incurred by a property owner when placing an easement on their property. The Conservation Commission

has recently initiated a campaign to inform landowners of this proposed partnership concept.

To facilitate the acquisition of properties, as well as the partnership funding concept for the placement of easements on private property when deemed appropriate, the City should continue to support the funding of Lebanon Open Space Trust (L.O.S.T.) fund. These funds should be used to leverage other sources of funding, including state and federal grants and appropriations, and private donations. In addition, the City should develop and maintain a reference list of private, state, and federal funding sources to support acquisition, planning, and management activities.

The City should continue and enhance its marketing and outreach strategy to connect with interested landowners. These outreach strategies should encourage the voluntary donation of land or easements. The City should develop informational and educational materials concerning the potential benefits of donations and work closely with other existing entities engaged in land preservation.

Summary

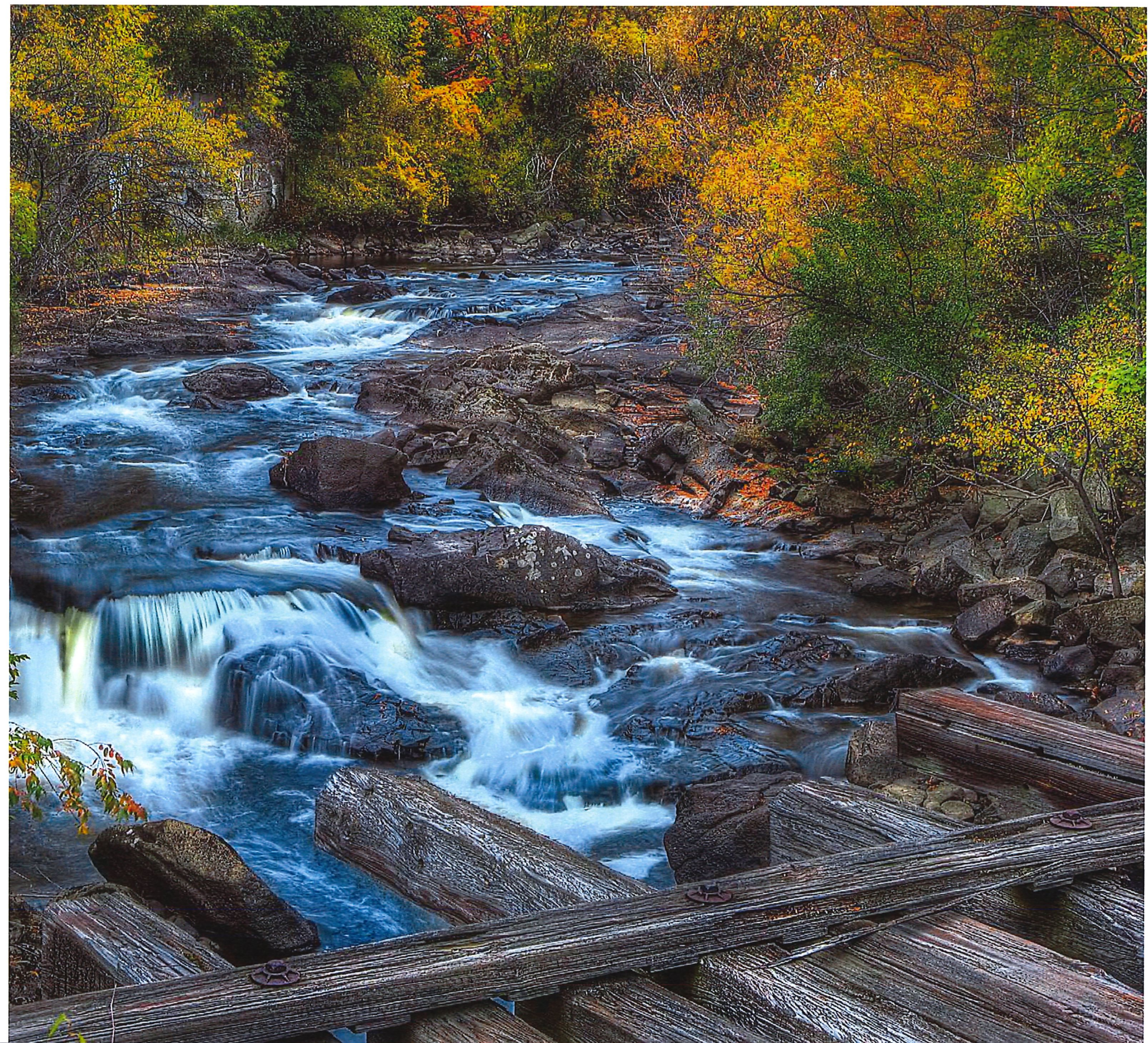
Areas of open space are an essential element of every successful community. As noted in the previous sections, open and green spaces offer a host of environmental, social, and financial benefits. Protection of open space has been an interest and objective of the City for many years. Pressure to develop existing open space and sensitive areas will continue to mount as Lebanon becomes built-out and development seeks out increasingly sensitive and marginal sites.

While Lebanon welcomes new development, it must be guided into areas that are best suited and desirable — not just those sites that remain undeveloped. For this to be effective, the City should approach this challenge from two fronts:

- 🕒 Identifying those areas where new and more intensive development is welcome and encouraged; and
- 🕒 Identifying those areas that should be protected over the long term - the purpose of this plan.

Open space protection in Lebanon embraces the reality that not all lands can or even should be protected from development. As a regional growth center, Lebanon must find a balance between conservation and continued development that addresses the needs of the City's diverse population — present and future.

Lebanon's plans for the future must encourage the continued revitalization of areas within the built-up core areas of Lebanon and West Lebanon. Furthermore, by encouraging and accommodating more development, and at higher densities than in surrounding communities, Lebanon will also play a very important role in protecting open space and working lands throughout the region.



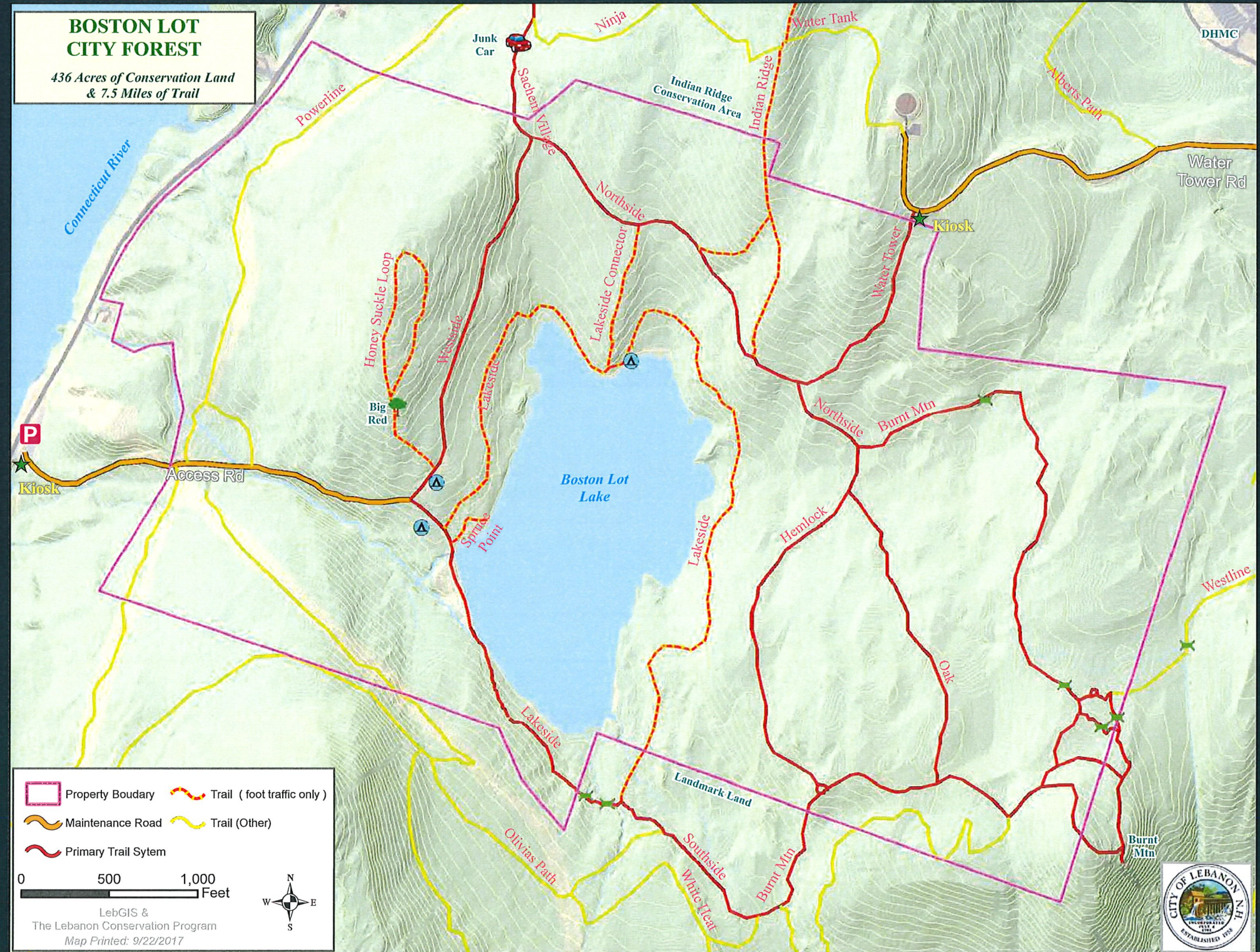
BOSTON LOT CITY FOREST

436 acres | 7.5 miles of trails

Boston Lot Lake, the centerpiece of this property, was formed in the early 20th century when a dam was built to create a 45-acre reservoir that served as the water supply for West Lebanon until the early 1960s. The lake sits at the bottom of a bowl ringed by forested ridges, which lends the site a 'back country' feeling despite its proximity to the Route 10 corridor and Dartmouth Hitchcock Medical Center (DHMC). Several small streams flow into the lake and it discharges from the dam spillway through a stream to the Connecticut River. Outcrops of bedrock (primarily Lebanon granite), large glacial boulders and steep ledges are common.

The property's original 330 acres were permanently protected in 1996 through a conservation easement held by the Society for Protection of New Hampshire Forests. Dartmouth College gifted the city an additional 108 acres in 2009 that expanded the property to the west towards Route 10. The property and its network of trails is accessible from the parking area adjacent to the Wilder Dam on the east side of Route 10, the water tower access road west of DHMC, the Indian Ridge trail, the Sachem Village trail, Dartmouth College's Landmark property trails, and several other trails on private property.

The Boston Lot is forested with sugar maple, beech, red oak, hemlock and white pine predominating. Several large 'specimen' trees that have survived past logging remain. Wildflowers and ferns abound. The woods are abundant with wildlife including migrating and resident birds, and the lake contains a variety of fish species including perch and bass. More detailed information about the natural resources found on the property is available in [Natural Lebanon](#).



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FARNUM HILL RESERVE

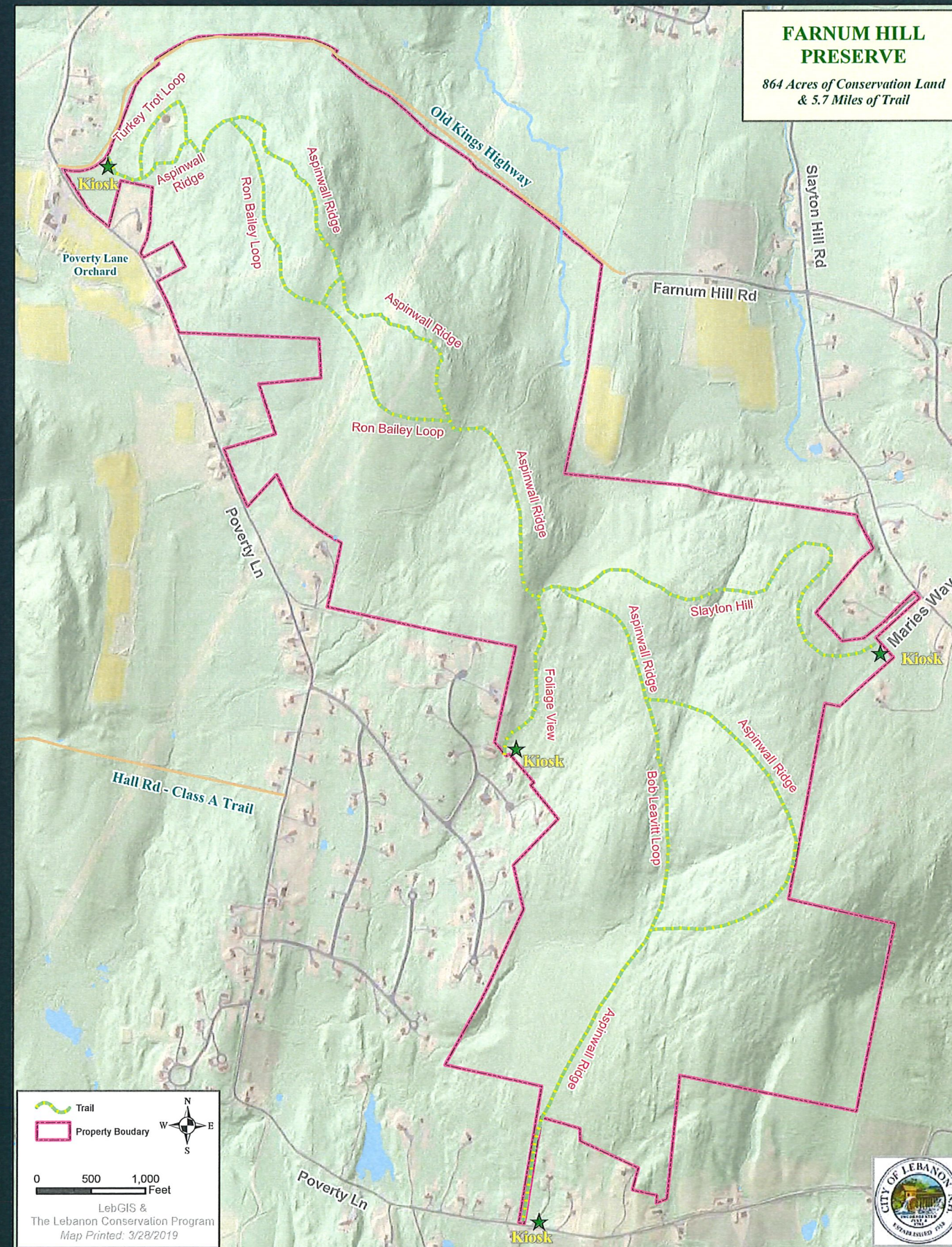
820 acres

This upland forestland on Farnum Hill, historically part of a large farm, was preserved as a natural reserve largely through the efforts of the Dr. W. Myric Wood, Jr. family. The land was transferred to the city in 1982 with support from multiple funding sources.

Farnum Hill is a north-south ridge with three distinct summits – South Peak being the highest point at 1,336 feet. Trails climb steep terrain and run along the rocky ridge. There are magnificent views in all directions from numerous points along the ridge. The terrain varies from gentle slopes to steep ledges. Several small streams flow intermittently from the ridge to lower elevations. Boulders carried by glaciers from the Quarry Hill – Boston Lot area, mainly granite and some the size of cars, are found throughout the reserve.

The area around Farnum Hill is rich in early Lebanon History. King's Highway, the first planned colonial road in Lebanon, is now a class A trail running along the north boundary of the reserve. During the 1800s and the early part of the 1900s, most of this area was pasture. Old fence lines and stone walls abound. Some old fence boundaries represent abrupt changes in the stages of forest regrowth. Recent tree harvesting has also altered uniform growth patterns.

Most of the reserve is forested by typical upland forest stands of mixed hardwoods and hemlock. There are pure stands of white pine, red oak and hemlock. The hemlock stands provide deer with winter yarding areas. Native wildflowers such as trout lily, bunchberry, wintergreen, pyrola, Pointed-leaved tick-trefoil, yellow violets and Canadian mayflowers may be found in the reserve. Wildlife species are diverse and abundant. These include white-tailed deer, bobcat, rabbit, fisher cat, red fox, raccoon, ruffed grouse, woodcock, several kinds of woodpeckers, hawks, barred owls, and many songbird species.



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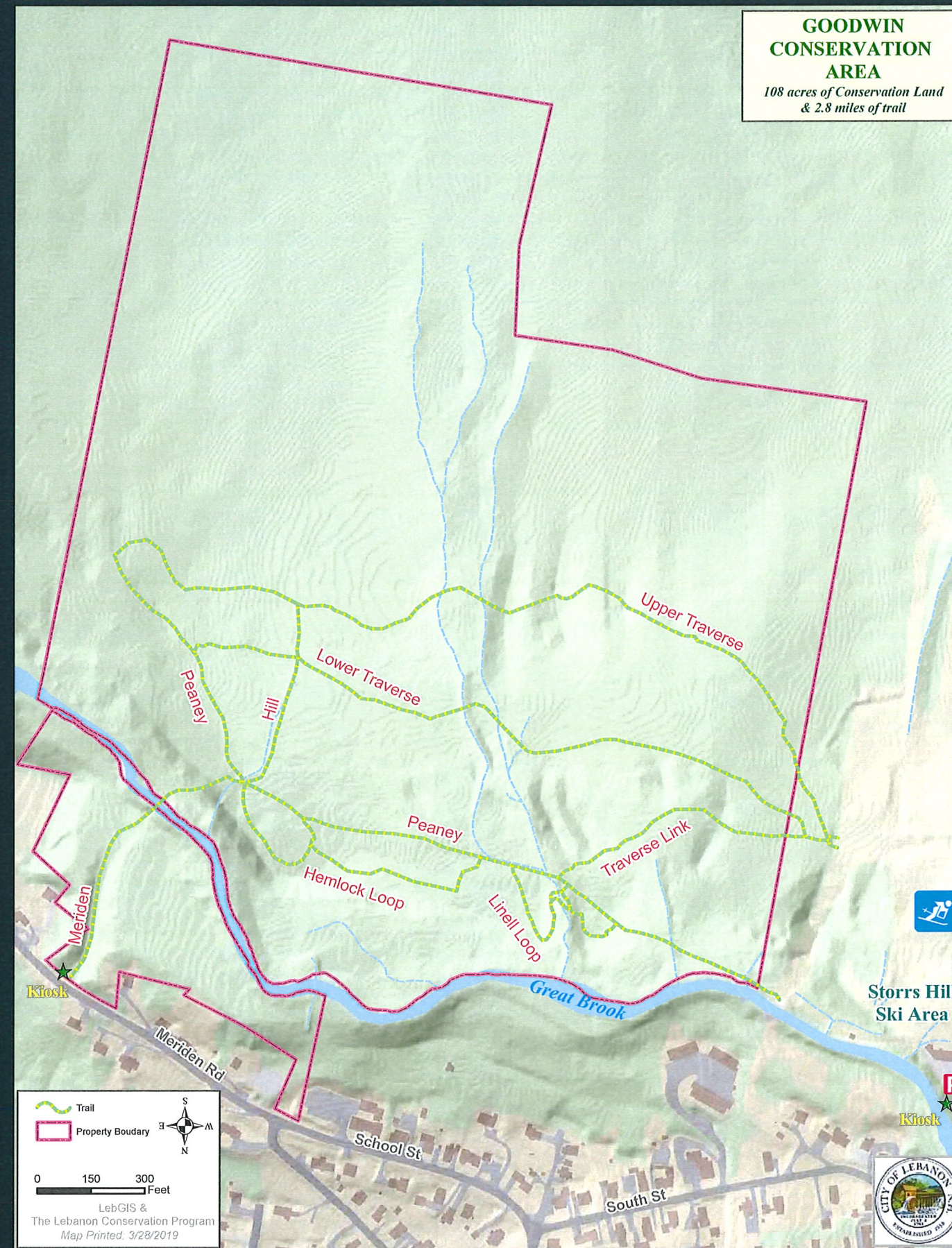
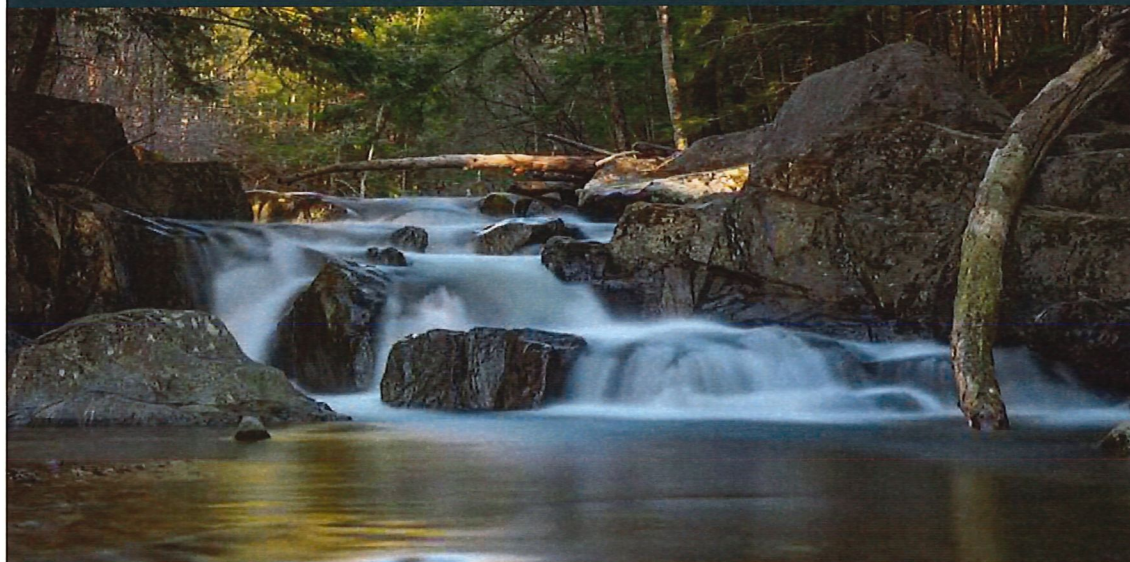
GOODWIN CONSERVATION AREA

108 acres

Goodwin Conservation Area abuts Storr's Hill Ski Area and offers recreational opportunities year-round. The popular Exercise Trail with 17 exercise stations follows Great Brook and opened in 1980. In the winter months, cross-country ski trails loop along the hillside. Edmund and Dorothy Goodwin donated the 108-acre property to the City of Lebanon in 1974 to be used solely for recreation purposes.

The park is located on the north slope of Storr's Hill, extending from Great Brook to the Townsend property. Many small boulders accent the hillside; most soils are well drained. Small springs and several intermittent streams are located on the hillside. Running along the base of the hill, Great Brook has several erosional features. Small waterfalls and many potholes - some the size of bathtubs - are located near the bridge at the school street access. Potholes are formed in the rock streambed by the abrasive action of rocks, pebbles and sand in the swirling water. Several good - sized wading pools are located along the stream with "Scrape Bottom" being one of the most popular on hot summer days. Stream flow is usually sufficient to maintain pool levels throughout the summer.

The forested slope is dominated by young to medium aged northern hardwoods and hemlock with areas of thick vegetation and slash, the result of recent logging. The hardwood vegetation is particularly well-developed upslope. Hemlock becomes especially prominent down along the brook at the base of the hill. Wintergreen, trailing arbutus, and pipsissewa are also found near the brook. By contrast, many of the interesting spring herbs are best developed under hardwoods: trout lily, red trillium, wild leek, blue cohosh, wild ginger, toothwort, avens, jack-in-the-pulpit, wood anemone, liverwort, pink ladyslippers and sharp-leaved hepatica. Storr's Hill is also of botanical interest and harbors a number of rare plants and several concentrations of spring wildflowers.



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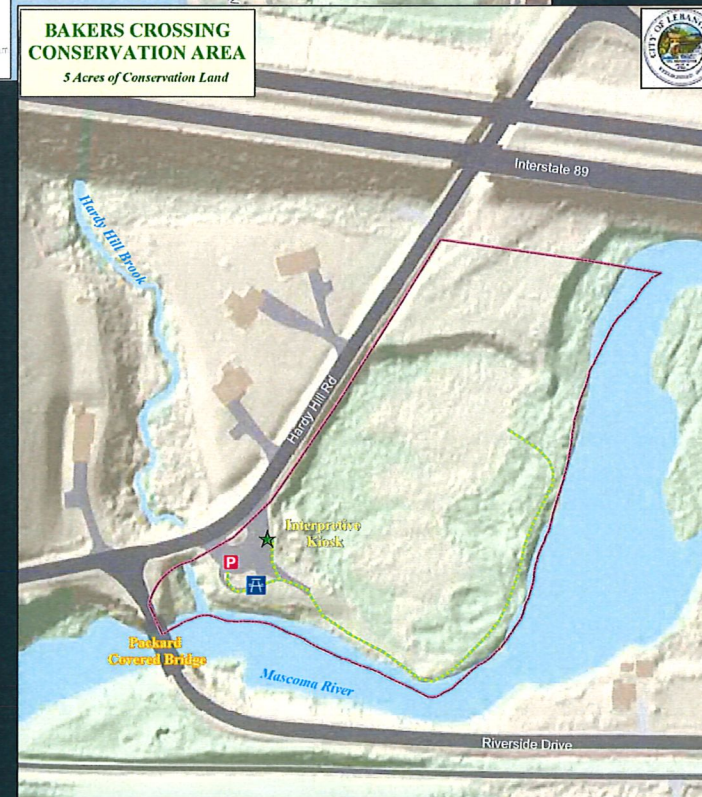
ALANA COLE CONSERVATION AREA

16 acres | 0.5 miles of trails

This unmanaged forestland property is located along the Connecticut River adjoining the Chambers Memorial Preserve property (together they protect nearly one mile of river frontage). Access is from East Wilder Road from a small parking area with a kiosk just north of the road terminus. The trail along the river is relatively flat, providing an easy stroll for viewing the river. A visible segment of the historic "Old Horse Trail" is located near the eastern boundary of the property, connecting with present day Wildwood Road.

The property features a variety of geomorphic features of glacial origin. The wooded ridge along the Connecticut River is an esker, formed by glacial debris, after the last glacier receded. The property is comprised of three distinct wildlife habitats: shoreline habitat; riverbank floodplain forest consisting of white and red oak species; and hemlock-hardwood-pine forest along the eastern edge of the property where the topography slopes on the esker. Dogwoods are found in the moist soils near the river and the woods are home to numerous wildflowers including fringed polygala, wild sarsaparilla and pink ladyslippers. The property also overlays a high-yield aquifer and its conservation has protected the quality of the groundwater.

The city bought the property in 1989 from Alana Cole with multiple public and private funding sources including the proceeds from the sale of timber off the Boston Lot. A conservation easement held by the Society for Protection of New Hampshire Forests permanently protects the property.



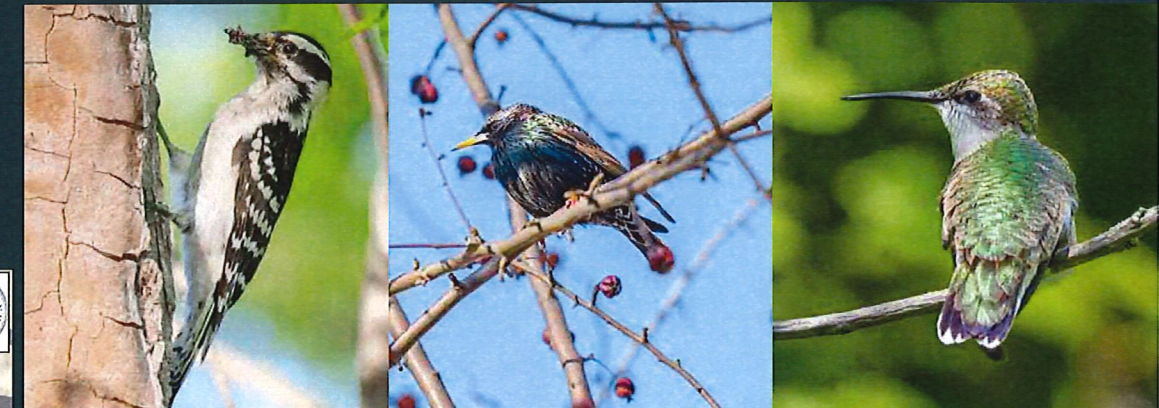
BAKERS CROSSING CONSERVATION AREA

5 acres

The property is located along the Mascoma River near the intersection of Hardy Hill Road and Riverside Drive. The small parking area provides access to the riverwalk trail head as well as a scenic view of the Packard Covered Bridge and Mascoma River. The Lebanon Rotary club has been actively managing the parking area for several years, including the maintenance of planters as well as general clean-up tasks.

The scrub/shrub field as well as the floodplain forest along the river's edge provide valuable habitat for migratory birds, butterflies, and other small animal species. The property offers access for fly-fishing and is a favorite location for bird-watchers.

The property was transferred to the city by Harold and Lorraine Slack in 1992 as part of a subdivision open space agreement.



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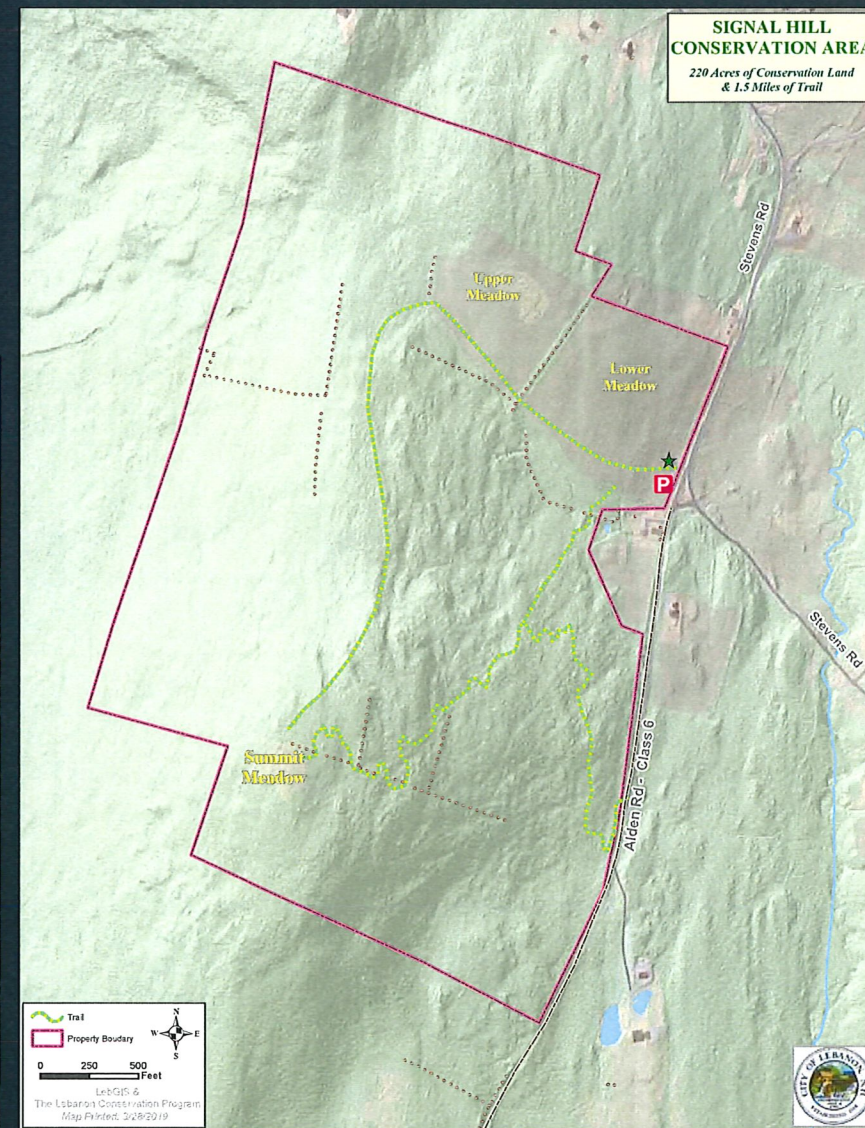
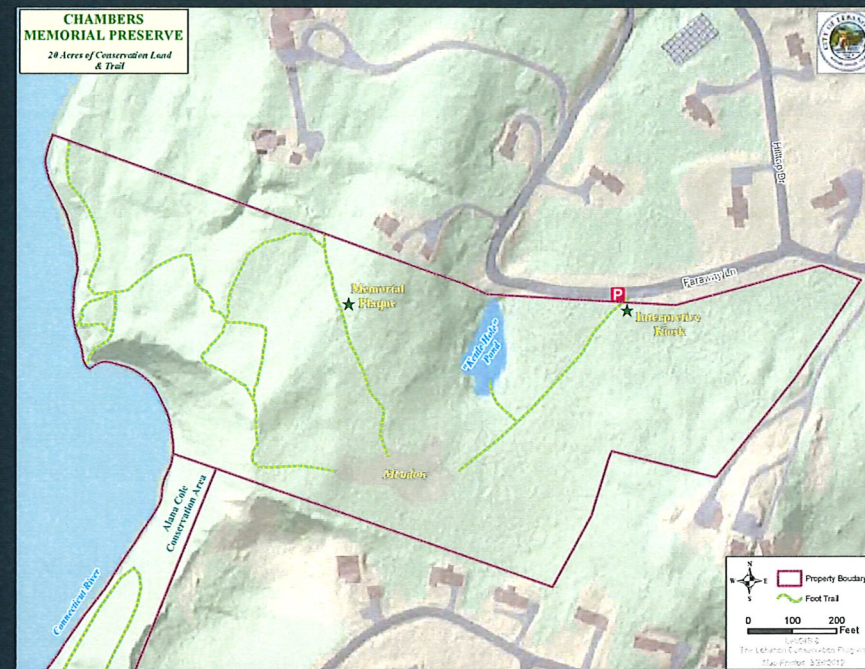
CHAMBERS MEMORIAL PRESERVE

19 acres

Chambers Memorial Preserve is a 19-acre park accessed via Wyeth Road to Faraway Lane. Trails pass by a kettle pond, through a wildflower meadow, and go down to the Connecticut River. The park was dedicated in 1973 to the memory of William Chambers, MD, a respected physician and naturalist. The Connecticut River Watershed Council transferred ownership of the property to the City of Lebanon and gave a conservation easement to the Society for the Protection of New Hampshire Forests in 1997.

The property features a variety of geomorphic features of glacial origin. The wooded ridge along the Connecticut River is an esker, formed by glacial debris, after the last glacier receded. The small pond near the entrance to the park is an example of a glacial feature common throughout New England – a kettle hole pond – which was created when a block of ice surrounded by debris melted away, leaving a depression that filled with water.

Varied habitats support a wide array of plants and animals. The park is home to chipmunks, foxes, frogs, waterfowl and songbirds. White pine, hemlock and white oak dominate the forest, while dogwoods are found in the moist soils around the pond. The meadow and woods are home to numerous wildflowers including fringed polygala, white and purple violets, wild strawberries, hawkweed, pinks, yellow rattle and pink ladyslippers.



SIGNAL HILL

220 acres

Signal Hill is so named because it was part of a chain of hills and mountains where colonists would signal using semaphore arms in daylight and fires at night during the Revolutionary War period to warn residents of approaching British forces. The property was later home to several small-scale kyanite and copper mines, and then was farmed.

Old logging trails travel uphill with beautiful overlooks through two large fields and dense pine woods to a small clearing affording views of Croydon Mountain, Mount Ascutney and Blueberry Hill.

The large amount of edge habitat supports a variety of plant and animal life. Plants include Bird's eye speedwell, blue-eyed grasses, blackberry and blueberry bushes, goldenrod, Canada mayflowers, clintonia, wild strawberries, purple violets, and wild sarsaparilla. The park is also home to deer, bear, red-tailed hawks, chipmunks, squirrels, foxes, woodcock, and songbirds.

The park was acquired by the City of Lebanon Conservation Commission in cooperation with the Upper Valley Land Trust.



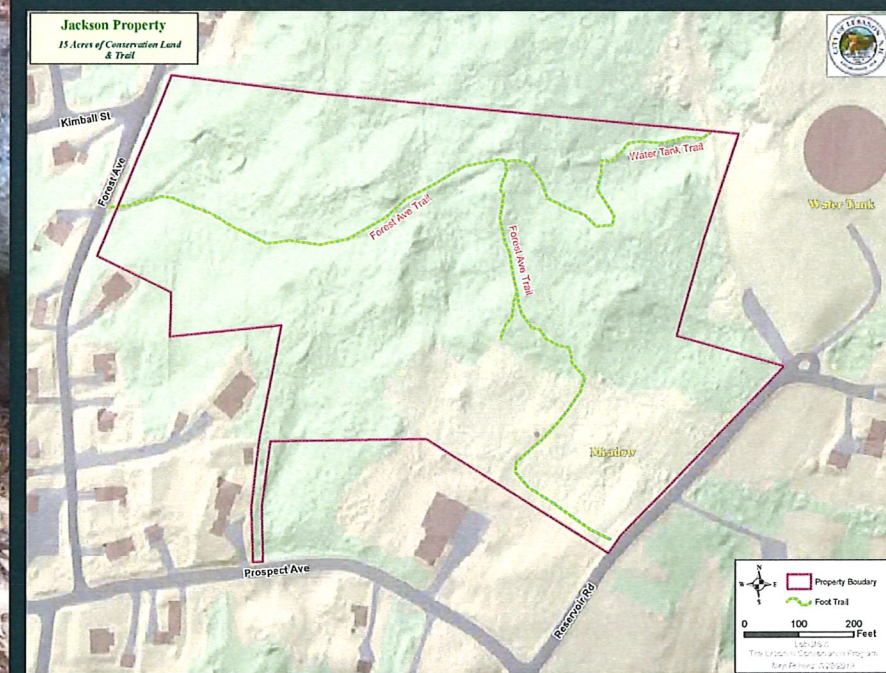
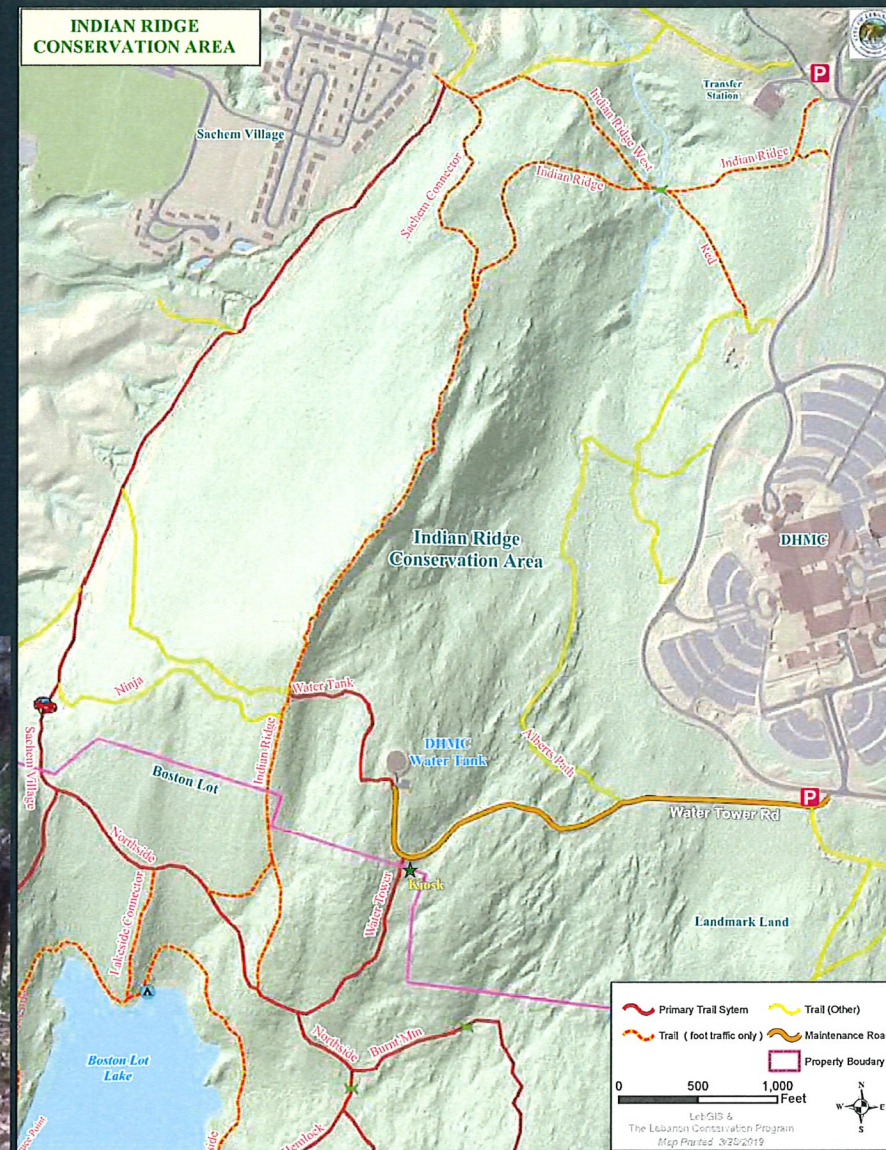
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INDIAN RIDGE

237 acres

The approximately 237 acres of conserved land are part of a larger parcel owned by Dartmouth College. The existing property easement was generated as part of an agreement between Dartmouth College and the Town of Hanover. The trails on this property connect to the DHMC trail system, the Boston Lot trail system, as well as to the Sachem Village neighborhood. The views from the ridge include various Vermont peaks, as well as Dartmouth's Baker Tower.



JACKSON PROPERTY

15 acres

The property is located along the eastern edge of the Central Lebanon city limits. The original property was subdivided to allow the City of Lebanon to purchase and conserve the undeveloped portion of the land as a natural area. The 15+ acres was purchased and protected using the Lebanon Open Space Trust fund.

The property is primarily forested, with species including red oak, white pine, eastern hemlock, red maple, and to a lesser extent, sugar maple, white ash, yellow birch and hop hornbeam. A small red pine plantation exists near the end of Reservoir Road. The eastern hemlock along the northern boundary offer great wintering area for deer. There are also approximately 3 acres of open fields.



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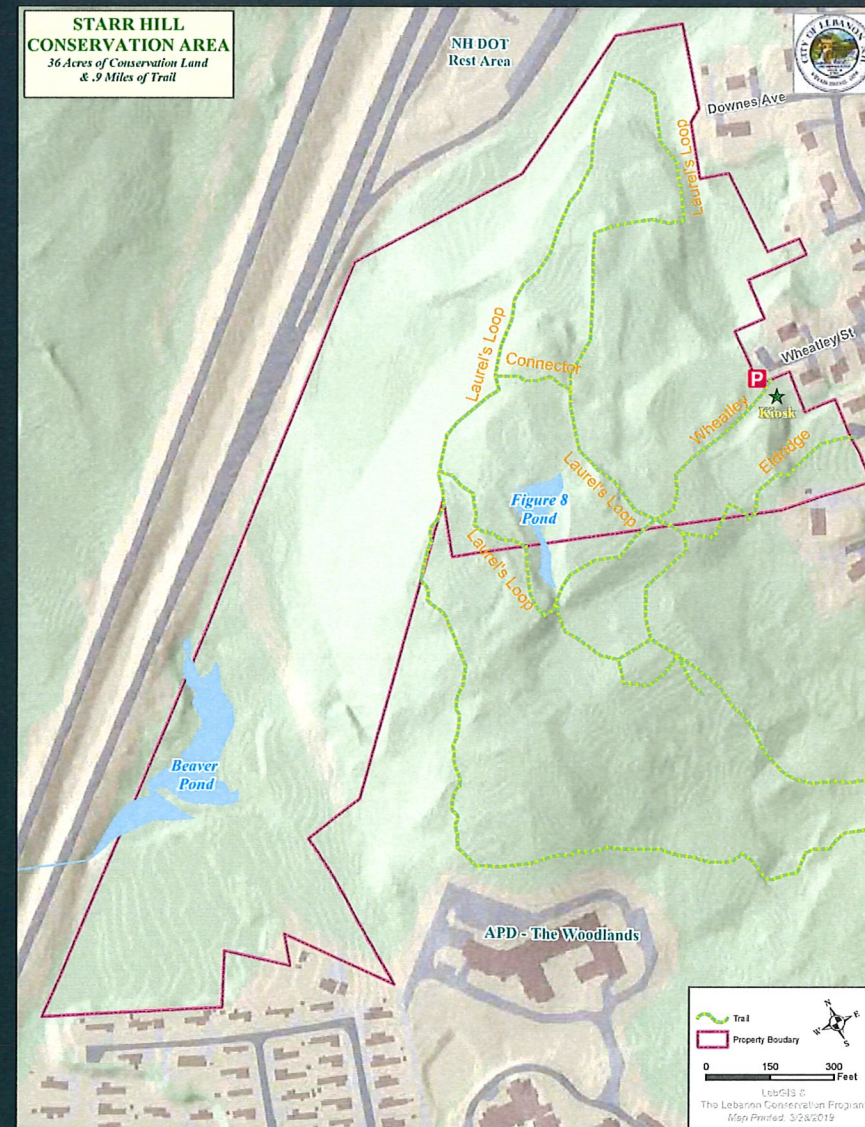
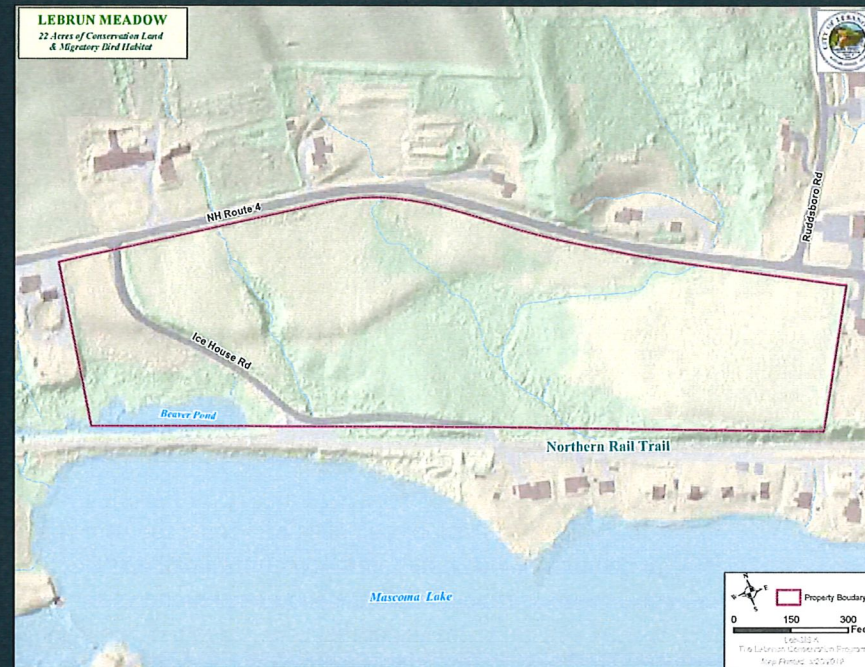
STARR HILL CONSERVATION AREA

36 acres

Starr Hill, named for the family that farmed this land, is located centrally in the city of Lebanon, southerly of the Interstate 89 corridor, and northerly of the Alice Peck Day Hospital. The history of the protection effort for this property extends back to 1991 when the first two parcels (15.2± acres in total) were conserved as part of a neighborhood initiative, led primarily by Laurel and Sid Letter. Present day protected acreage includes 36 acres.

The forested hill top property includes many interesting ecological and geological features, including vernal pools, small palustrine wetlands, large boulders, forest seeps, and a diverse mixed forest of both coniferous and hardwood species including some incredible hemlock, red oak and sugar maple legacy trees.

Trail access is found at the ends of Wheatley Street (a parking area and kiosk is located here) and Eldridge Street. The Laurel Letter Loop Trail provides access to most of the property, including a section along the top of the ledges. Along the western edge of the property is an access point to the extensive trail system on the APD/Woodlands property.



LEBRUN MEADOW

22 acres

The Lebrun Meadow property was purchased by the City of Lebanon from the Eugene D. and Valma M. Lebrun Trusts using the City's conservation funds (Lebanon Open Space Trust). The City was awarded a grant from the State of New Hampshire's Water Supply Land Grant Program to offset the purchase and conservation of the property. The parcel extends in an east-westerly direction between Dartmouth College Highway / NH Route 4 and the northwestern edge of Mascoma Lake.

The open fields on the property were historically hayed by a local farmer but are now on a four year brush-hog rotation so as to maximize the wildlife habitat diversity. Recreational users of the adjacent Northern Rail Trail can enjoy the sounds of birds as the property provides a buffer from the noise from traffic on Rte. 4. The protection of this property provides valuable water quality protection to Mascoma Lake.



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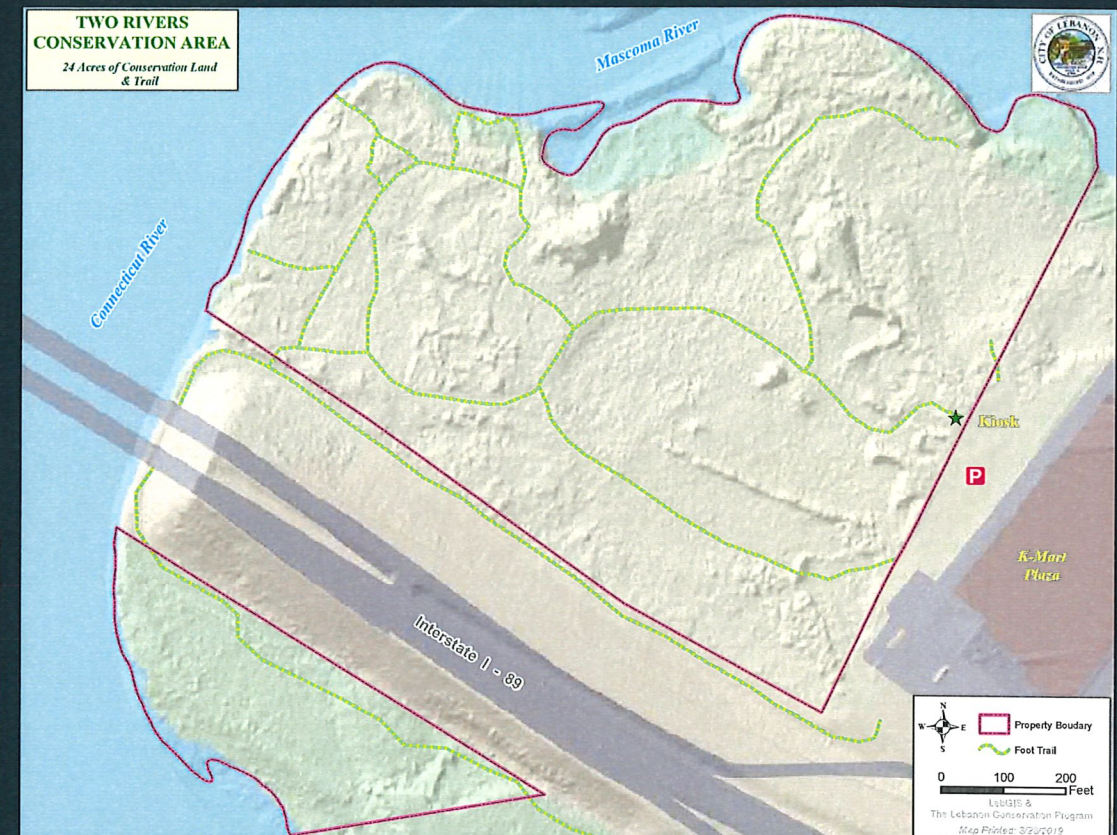
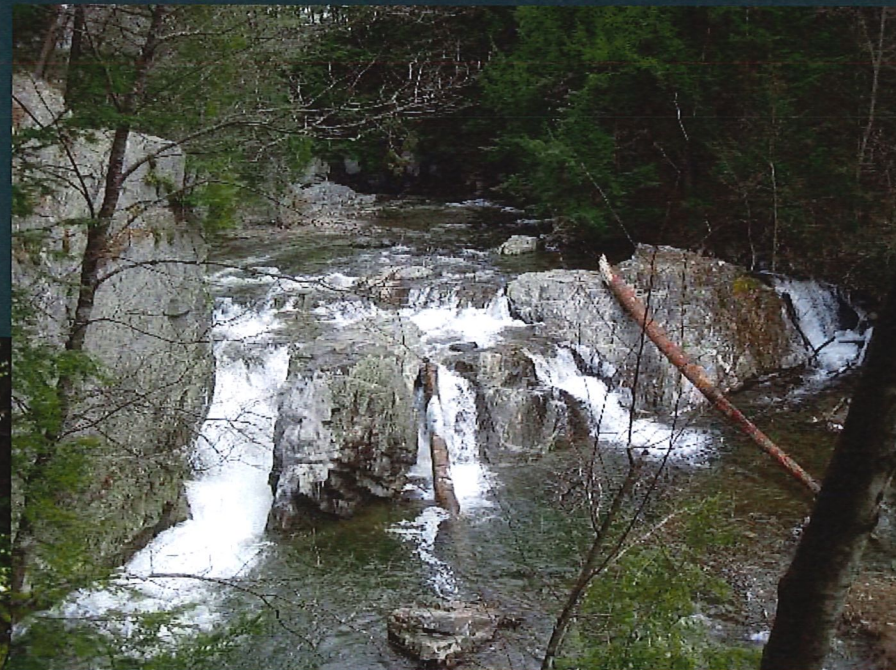


TRUES BROOK

2 acres

In 1998, local efforts succeeded in the City's acquisition of this parcel, and in turn being permanently conserved via an easement with the Upper Valley Land Trust. The property contains a nondescript trail that descends through the woods to the dramatic True's Brook, which drains much of southwest Lebanon.

The True's Brook gorge drops some 50 feet in elevation along 700 linear feet of shoreline, including three dramatic overlooks, and a long popular local swimming hole. There is a variety of aquatic, riparian, and upland species sharing this relatively small area.



TWO RIVERS

24 acres

This parcel's earlier use as sand/gravel pit and construction dump belies natural community on the rebound. It was acquired by Upper Valley Land Trust in 1989 and transferred to city of Lebanon in 1990. Trails provide access to both the Connecticut and Mascoma River, including their confluence. The functioning floodplain forest contains species such as basswood, aspen, and white oak, as well as the recent plantings of elm trees with assistance by the Nature Conservancy. Wildlife on this property include mink, fox, beaver, and deer.



LEBANON OPEN SPACE PLAN

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**Agenda
Planning Board
April 26, 2021**

**Agenda Item #4A
Approval of Minutes**

March 22, 2021

DRAFT

**LEBANON PLANNING BOARD
Work Session Meeting
Monday, March 22, 2021, 6:30 PM
Remote Via Microsoft Teams
LebanonNH.gov/Live**

ROLL CALL OF

MEMBERS PRESENT: Bruce Garland (Chair), Jim Winny (Council Representative), Gregorio Amaro, Kim Chewning, Joan Monroe, Kathie Romano, Jeremy Rutter, and Laurel Stavis

MEMBERS ABSENT: Matthew Hall (Vice-Chair)

STAFF PRESENT: David Brooks (Planning Director), Tim Corwin (Senior Planner), Rebecca Owens (Associate Planner)

1. Call to Order Chair Garland called the meeting to order at 6:30 PM.

A. Review of meeting procedures and NH RSA 91-A "Right-to-Know" requirements.

Mr. Corwin shared the State directive and participation details for the online meeting in Microsoft Teams. All members identified themselves.

Chair Garland conducted a roll call of members present as reported above.

2. Public Hearing Items

A. **Draft Amendments to the Site Plan Review and Subdivision Regulations**

Mr. Corwin explained items in the red line document, which represent changes based upon comments and suggestions received from both the Board members and legal counsel. The blue items are additions.

Chair Garland invited comments from the Board. The Board members asked for clarification and made a number of suggestions for minor changes.

Ms. Monroe noted that references to shoreland protection zones were not included. Mr. Corwin stated that those would be added once accurate wording is settled upon. Ms. Monroe also stated that landscaping in parking areas does not include wording regarding creation of unhealthy ground level ozone without proper shading.

Chair Garland opened the discussion to the public.

Sarah Riley made several comments. In regard to the planting suggestions related to landscaping requirements, amur maple is considered potentially invasive and is on the New Hampshire watch list. She recommended adding, "native plants that don't have invasive tendencies." Raised crosswalks could be very valuable on mixed use paths such as on Mount Support Road. The bottom of Eldridge Street now has no crosswalk and no sidewalk since the renovation of the former Sacred Heart School. Previous pavement is only as good as the maintenance of it. Lighting trespass, such as comes from the ground level parking garage at Altaria, illuminates the wildlife corridor. Ms. Monroe stated that enforcement has been an issue

1 that belongs on the Planning Board's agenda, and it is good to see the attention being paid to light spillage
2 situations like at Altaria.

3
4 Chair Garland closed the Public Hearing.

5
6 Chair Garland noted that there were no substantive changes requiring re-noticing, with most being edits to
7 language.

8
9 ***A MOTION by Laurel Stavis that the Planning Board adopt the Amendments to the Site Plan Review***
10 ***and Subdivision Regulations.***

11
12 ***Seconded by Kathie Romano***

13
14 ***Roll Call Vote:***

15 ***Voting in Favor – Ms. Chewning, Ms. Stavis, Mr. Garland, Mr. Amaro, Mr. Rutter, Mr. Winny, Ms.***
16 ***Monroe, Ms. Romano***

17 ***Voting Against - None***

18 ****The MOTION was approved (8-0).***

19
20 **3. Study Items**

21
22 **A. Discussion re: Updating Impact Fee Schedule**

23
24 Mr. Brooks stated that Zoning Section 213 requires that the Impact Fee Schedule be updated periodically.
25 The last update was done in 2018 by Bruce Mayberry, who is working on an update for 2021. The School
26 Board has recently expressed interest in a more broadly-based impact fee.

27
28 Mr. Mayberry gave a presentation, which explained the considerations and components for the Impact
29 Fee Schedule and included the history of fees in Lebanon. The goal is to ensure the fees are equitable and
30 reflect current circumstances, proportion, and projected needs. The calculations were explained along
31 with items currently being factored. The Impact Fee Schedule strictly maintains categories for collected
32 fees and expenditures. Currently, impact fees for the School District are applied solely to retire debt for
33 the Middle School. The current fee basis for the school fee was explained. Capacity needs to be
34 considered, and fees can be charged in anticipation of need. Going forward, it would include the entire
35 enrollment range and not just the Middle School.

36
37 Chair Garland inquired how much impact fees have totaled each of last three years. Mr. Brooks stated that
38 as of January 2021, the City has disbursed approximately \$530,000 in school impact fees pursuant to a
39 Memorandum of Agreement with the School District.

40
41 Lebanon School District Superintendent Dr. Joanne Roberts, speaking on behalf of the School Board,
42 stated that they are trying to meet the needs of students and staff. Current school capacity was last
43 reviewed in 2010, and the population and many needs have changed.

44
45 Mr. Mayberry clarified what qualifies as an expenditure for collected impact fees. The revenue can be
46 used for upgrades. It is important to look at the entire range of improvements, not specific items. There
47 must be a complete plan with overall goals, and it is funded on a per pupil basis that depends upon
48 existing capacity. The Board members' questions regarding the fee basis were addressed.

49
50 Mr. Brooks noted that Mr. Mayberry created a chart in 2010 to reflect the school impact fee options as
51 calculated for different circumstances. The Board Members agreed that it would be very useful to do that

again and include numbers for the entire school system. Mr. Winny stated that the City Council has been working on alternate revenue streams and is in favor of increasing the school portion of impact fees, particularly if it is currently low as compared to other communities. If there is a way to help the schools, the Council is in favor.

Mr. Rutter suggested the rapid pace of development may slow down if impact fees are raised;

Mr. Brooks confirmed that anything creating new dwelling units pays the impact fee.

Dr. Roberts stated that she appreciated the conversation and would be happy to provide additional information to Mr. Mayberry.

B. Discussion re: Ped/Bike - Related Amendments to Site Plan Review and Subdivision Regulations

Chair Garland noted the issue of encouraging shower facilities and suggested the wording needs to be changed.

Ms. Owens recommended a wording change by removing “must” at beginning of #2 and stating a condition for each item under #2.

The Board members discussed possible wording changes.

Chair Garland stated that the Amendments would be on hold until the fire-related amendments are ready before making a final recommendation. Ms. Owens agreed it could be covered at another time.

A MOTION by Laurel Stavis to extend the meeting until 9:45 PM.

Seconded by Jeremy Rutter

Roll Call Vote:

Voting in Favor – Mr. Garland, Ms. Stavis, Ms. Chewning, Mr. Amaro, Mr. Rutter

Voting Against – Mr. Winny, Ms. Monroe, Ms. Romano

*The MOTION was approved (5-3).

4. Committee Reports

A. Planning Board Subcommittees:

Planning Board Capital Improvement Program (VACANT/VACANT/Garland/L. Stavis)

Planning Board Development Regulations Update (M. Hall/K, Romano/ VACANT / J. Monroe)

B. City Council Subcommittees:

Class VI Roads Advisory Committee (J. Monroe)

The Committee is continuing to meet twice a month to work on roads that are more complex.

The change in the weather is making it possible to see the roads.

Lebanon Energy Advisory Committee (J. Monroe)

The Committee met with City Manager Mulholland and Public Works Director Donison to review the plans and accomplishments of LEAC. There was an excellent discussion and feedback.

There are issues at the Solid Waste Facility, with much red tape regarding new technology. Mr. Brooks noted some hurdles were caused by the utilities keeping it from moving forward. The site is expanding methane capture and there is a need to decide how to utilize it.

C. Other Subcommittees:

City Council Representative (J. Winny/K. Liot Hill)

Heritage Commission (VACANT)

Pedestrian & Bicyclist Advisory Committee (VACANT)

Upper Valley Lake Sunapee Regional Planning Commission (B. Garland/VACANT)

UV Subcommittee of the Connecticut River Joint Commissions (B. Garland)

There will be a Happy Hour on April 6 from 6:30 – 8:00 with a relicensing discussion and update on river issues.

Upper Valley Transportation Management Association (VACANT)

Mascoma River Local Advisory Committee (K. Romano)

Steering Committee for the Implementation of the Master Plan (B. Garland/VACANT /VACANT/J. Monroe)

West Lebanon Revitalization Advisory Committee (L. Stavis)

Planning & Development Department – Task Status (D. Brooks/ M. Goodwin/T. Corwin/R. Owens)

5. Other Business

Mr. Brooks announced that there will be a meeting regarding the special assessment district for the Mount Support corridor on Tuesday, March 30, at 6:30 PM. It will be an open meeting with all Mount Support property owners and will include an update on the types of improvements needed and steps required to create the district.

Mr. Brooks also announced that on April 21, the City Council will be adopting a resolution to honor Greg Schwarz at the beginning of the meeting. Mr. Schwarz's family will be present, and the Planning Board members are encouraged to listen in. Ms. Stavis inquired if Planning Board members could contribute during that event. Mr. Winny stated there would be an opportunity for folks to say something.

6. Approval of Minutes

A. February 22, 2021

A MOTION by Kathie Romano to approve the February 22, 2021, Planning Board Meeting Minutes as presented in the March 22, 2021 meeting packet.

Seconded by Jeremy Rutter.

Roll Call Vote:

Voting in Favor – Mr. Rutter, Mr. Winny, Ms. Monroe, Ms. Romano, Ms. Chewning, Ms. Stavis, Mr. Garland, Mr. Amaro

Voting Against - None

**The MOTION was approved (8-0).*

1
2 **7. Adjournment**
3

4 *A MOTION by Laurel Stavis to adjourn the meeting.*
5 *Seconded by Jeremy Rutter.*
6

7 *Roll Call Vote:*

8 *Voting in Favor – Ms. Stavis, Mr. Garland, Mr. Winny, Ms. Monroe, Ms. Romano, Mr. Rutter, Ms.*
9 *Chewning, Mr. Amaro*

10 *Voting Against - None*

11 **The MOTION was approved (8-0).*
12

13 The meeting was adjourned at 9:30 PM.
14

15 Respectfully submitted,
16 Holly Howes
17 Recording Secretary

