This past year, the Town of Litchfield, through state funding, developed an Open Space Plan designed to prioritize the town's conservation of remaining open space for future generations. Meeting from January to July, 2009, a town Open Space Committee, comprised entirely of volunteers, identified those parcels of still undeveloped Litchfield land comprising aquifers, prime agricultural soils, wildlife habitats, forest, natural heritage buffer areas and other natural resources which, through landowner donation, purchase or other arrangements that may provide tax and other incentives for landowners, should be the focus of preservation. The Open Space Plan is completely aspirational and cooperative: it represents no town mandate and depends solely upon willing landowner participation. It does, however, provide a valuable guide for the Town of Litchfield in making critical decisions concerning its resources down the road.

NO ASSUMPTIONS SHOULD BE MADE FROM THE OPEN SPACE REPORT THAT LANDS DESCRIBED OR SHOWN THEREIN ARE OPEN TO PUBLIC USE WITHOUT THE EXPRESS PERMISSION OF THE LANDOWNER.

OPEN SPACE COMMITTEE MEMBERS

Frank Byron (Board of Selectman)
Alison Douglas (Planning Board)
Marion Godzik (Conservation Commission)
Richard Husband (Conservation Commission)
Sharon Jones (Conservation Commission)
Tom Levesque (Conservation Commission)
Joan McKibben (Conservation Commission)
Matthew McQuesten (Resident)

I-93 Community Technical Assistance Program

CTAP

New Hampshire Communities Planning Together

Litchfield CTAP Open Space Plan

NRPC

NASHUA REGIONAL PLANNING COMMISSION

August 2009

LITCHFIELD CTAP OPEN SPACE PLAN

Introduction

The Community Technical Assistance Program (CTAP) is a New Hampshire Department of Transportation (NH DOT) five-year initiative to assist the 26 communities that will be affected by the rebuilding of Interstate 93. The following three communities are in the Nashua Regional Planning Commission's region: Litchfield, Hudson and Pelham. The purpose of CTAP is to promote the beneficial growth patterns and development practices to minimize the negative effects of growth on community services, remaining open space, schools, existing traffic patterns, quality of the environment, and existing residential and commercial development.

The CTAP process follows three main stages. The first stage is Assessment, which helps communities to determine where they are and where their current planning and zoning will take them in the future. Once assessments have been made, communities can use this information to begin the second stage, Visioning and Planning. Visioning is the process in which a community pictures the future it wants and plans how to achieve it. The final stage of the CTAP process is Implementation. Implementation takes the assessments and plans that have been developed and turned them into actions that move the community toward its ultimate vision.

Open Space Goals for the Town

During the first stage a Community Assessment Report was completed for Litchfield. A number of recommendations were developed related to open space. They are as follows:

1) Compile a Natural Resources Inventory and Develop an Open Space Plan. Although recommendations for open space protection can be found in the Master Plan, the next step is to compile an inventory of the natural resources and develop a plan (through CTAP) that identifies and outlines how these resources are related to priority parcels to be protected. The Wildlife Action Plan and Natural Services Network information compiled by the NH Fish and Game Department and the Audubon Society will compliment the inventory and Open Space Plan nicely.

2) Research Zoning Districts and Other Open Space Protection Strategies that Fit Best for the Town of Litchfield. After an Open Space Plan is developed for the Town, the land use boards should work together to activate this plan and develop specific tools that can be used to protect open space. This could be done through a zoning district, updates to the conservation subdivision regulations, requiring developers to plan according to your Open Space Plan, etc.

Open Space Committee

In January of 2009 the Town applied for funding through the CTAP program to develop an Open Space Plan for the town. An Open Space Committee was formed and included the following members: Frank Byron, BOS; Alison Douglas, Planning Board; Marion Godzik, Conservation Commission; Richard Husband, Conservation Commission; Sharon Jones, Conservation Commission; Tom Levesque, Conservation Commission; Joan McKibben, Conservation Commission; and Matthew McQuesten, Resident. The committee met on the following dates in 2009: January 27th, March 4th, March 31st, May 12th, June 9th, and July 28th. The completion of this plan fulfills the development of an Open Space Plan as identified in the above recommendations.

Planning Process

The intent of the open space planning process is to identify key resource areas in town, connections between these sites and mechanisms to achieve this protection. This can be accomplished by working with a committee to utilize GIS mapping tools and analyze data layers to identify, measure the value of and prioritize open space resources. Goals include the creation of a green infrastructure map showing potential connectivity throughout the town and the identification of

priority target parcels. The green infrastructure map will show areas comprised of existing conservation lands and desirable areas for connectivity based on a ranking process of environmentally significant overlays. A list and a map of prioritized parcels have also been created.

Methods

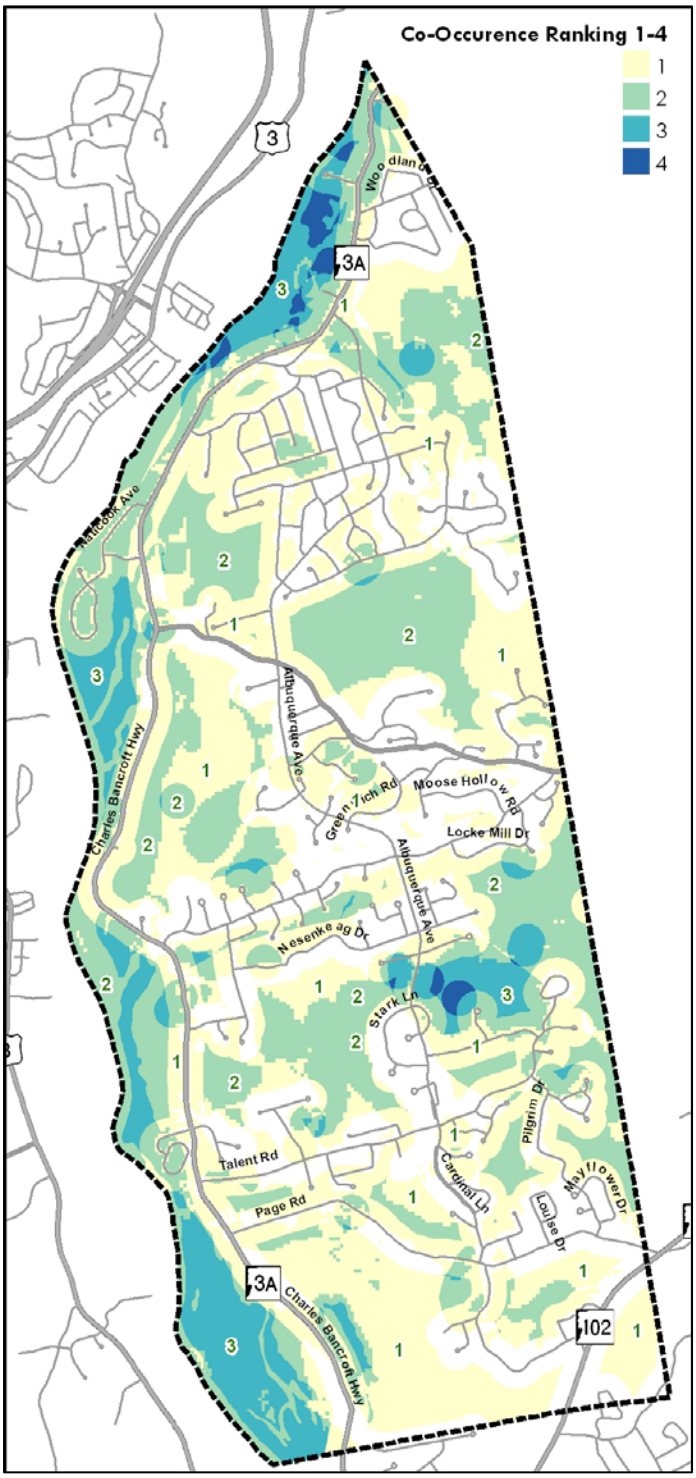
The process for identifying open space and priority parcels is Geographic Information System (GIS) and mapping intensive. The purpose of the process is to provide a systematic, less subjective approach to identifying key resource areas. The two products of this method are a green infrastructure map focused on highlighting target conservation areas and connectivity in a general way and a map and list of high priority conservation parcels. The method conducted in Litchfield involved several steps:

1. The committee identified key environmental features important to the town.
2. The key features were overlaid in a co-occurrence analysis to identify high value resource areas.
3. A green infrastructure was drawn by the committee utilizing the co-occurrence analysis and other map layers to highlight areas of potential connectivity.
4. Using the green infrastructure as a guide, high priority parcels for conservation were identified.

Key Environmental Layers

The Litchfield Open Space Committee identified five environmental layers as very important:

- Stratified Drift Aquifers (High Transmissivity areas 4000+ ft sq per day)
- Unfragmented Forest Blocks
- Prime Agricultural Soils
- Wildlife Action Plan Habitat Tiers (Highest Ranked & Supporting



Map 1. Co-Occurrence Analysis

Landscapes) - NH Fish & Game Wildlife Action Plan

- Natural Heritage Buffer Areas (Specie & plant Sightings) - 500 foot buffer around sighting locations

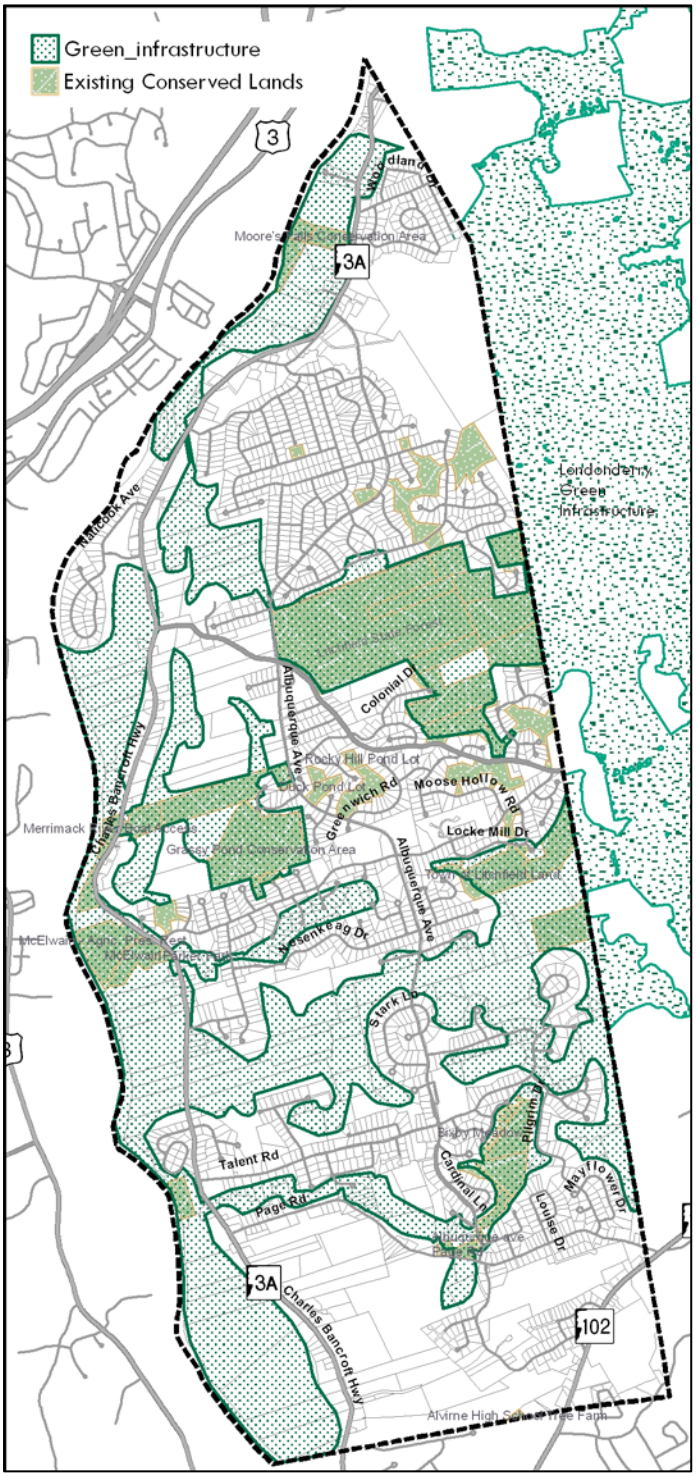
Co-occurence mapping

A co-occurrence analysis consists of overlaying multiple datasets, or map layers, to identify the amount of coincidence or overlap on any given location. In this analysis, each of the five key environmental layers was given a value of one (1), the layers were overlaid in GIS and the values added together for every location in town. This produced a co-occurrence score between zero (for no features at a location) to four (Four of the five key environmental layers existed at a location.). The highest co-occurrence of features was four. There were no locations in town where all five key environmental layers existed. For example, an area of town that possessed high transmissivity aquifers, prime agricultural soils and highly ranked habitat would receive a co-occurrence score of three. A high co-occurrence score indicates that more environmental features identified as important can found at a location and therefore this area may be important to conserve. Map 1 shows the co-occurrence ranking for Litchfield.

Green Infrastructure

The green infrastructure is an additional map overlay created by the committee using as a guide the co-occurrence analysis, existing conservation lands, parcel data and other map overlays. The green infrastructure is meant to be a general identification of important conservation areas in the community. It is focused on connecting existing conservation areas and creating green corridors in the community. It may include some existing developed areas important for interconnectivity. Finally, the green infrastructure is meant to be a long-term guide to assist community officials in conservation planning.

High Priority Parcels

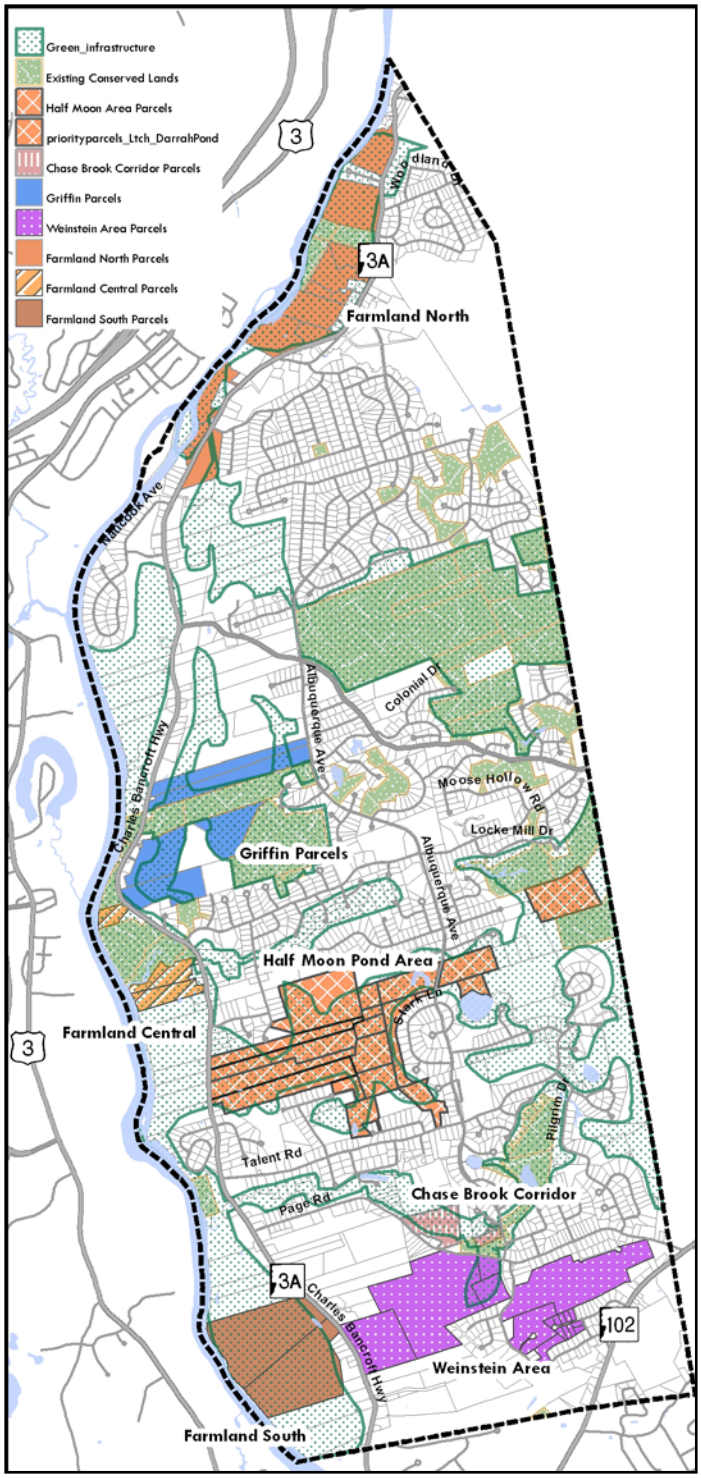


Map 2. Green Infrastructure

Using the green infrastructure as a guide, the Open Space Committee identified a list of most desirable parcels for

Map	Lot	Location	Approx. Acres
Farmland North			
20	2	416 CHARLES BANCROFT	2.8
20	3	CHARLSE BANCROFT	22.2
20	4	CHARLSE BANCROFT	5.0
20	7	434 CHARLES BANCROFT	18.3
21	1	480 CHAS BANCROFT HWY	9.8
20	21	CHARLSE BANCROFT	28.2
22	96	CHARLES BANCROFT	26.6
22	4	CHARLES BANCROFT	8.8
22	9	514 CHARLES BANCROFT	3.6
22	100		19.1
22	11	CHAS BANCROFT HWY	15.0
22	14	540 CHARLES BANCROFT	41.1
23	16	CHAS BANCROFT HWY	23.0
Farmland Central			
9	8	CHARLES BANCROFT	20.7
9	16	CHARLES BANCROFT	18.9
12	10	240 CHARLES BANCROFT	8.6
Farmland South			
1	16	CHARLES BANCROFT	96.3
1	17	CHARLES BANCROFT	103.4
Griffin Parcels			
12	30	287 CHARLES BANCROFT	30.4
12	11	19 MCELWIN DRIVE	55.1
12	17	265 CHAS BANCROFT HWY	93.8
12	27	281 CHARLES BANCROFT	42.0
Half Moon Area			
6	30	CHARLES BANCROFT	47.3
6	31	CHALRES BANCROFT	29.6
6	32	157 CHARLSE BANCROFT	
6	33	165 CHALRES BANCROFT	
7	6	BIRCH	8.1
7	59	CAMPBELL	16.7
7	63	TALENT	15.5
7	124	UNKNOWN	9.2
7	125	BACKLAND	21.7
7	126	BACKLAND STARK	17.3
9	2	CHARLES BANCROFT	72.5
10	1		3.7
10	8	STARK	23.0
10	167	BACKLAND STARK	8.4
10	173	ALBUQUERQUE	25.5
11	8	BLUE JAY	8.3
11	16	WREN	42.3
11	17	ALBUQUERQUE	24.2
Chase Brook Corridor			
5	148	OFF ALBUQUERQUE	4.6
5	149	ALBUQUERQUE	1.4
4	36	PAGE	27.3
Weinstein Area			
2	83	CUTLER	7.3
2	60	WOODBURN	1.3
2	61	WOODBURN	1.3
2	71	WOODBURN	1.1
2	62	OFF WOODBURN	1.2
2	63	20 WOODBURN	1.0
2	59	WOODBURN	1.4
2	58	WOODBURN	1.1
2	57	WOODBURN	1.1
2	56	WOODBURN	1.1
1	20	CHARLES BANCROFT	53.3
2	55		1.2
2	86	WOODBURN	26.5
2	102	CUTLER	14.6
5	195	PAGE	7.2
1	31	76 PAGE	129.6
2	88		95.8

Table 1. Priority Parcels



Map 3. Priority Parcels

protection. The criteria for selecting parcels includes, areas of high environmental value based on the co-occurrence mapping, areas with high connectivity value based on the green infrastructure overlay, parcels adjacent to existing protected lands and various local factors including ownership and financial opportunities. The Litchfield Open Space Committee identified priority parcels in five areas of town. As shown on Map 3, they are Farmland North, Farmland Central, Farmland South, Griffin Parcels, Half Moon Pond Area, Chase Brook Corridor and the Weinstein Area.

Methods for Land Protection

In order to successfully create and implement the Green Infrastructure, a number of methods must be identified to implement open space protection. The most straight forward method is outright purchase by the town of private lands. Although this is the simplest method it is also the most costly and therefore not a feasible method as the sole means of land protection throughout town. This method may be useful in specific situations, but the town should ideally have a number of sanctioned techniques available to provide flexibility as land opportunities present themselves. The following are a list of potential Mechanisms for Open Space Protection:

1. Deed to the Town
   Pro – Straightforward means for a town to obtain conservation lands. The town may want to consider establishing a fund at town meeting for purchases. Then as parcels become available, a special meeting can be held or the Board of Selectmen can vote on the purchase. This allows a fast response and an additional check by requiring each purchase to be approved by voters or the Board of Selectmen.
   Con – High cost of acquisition.

2. Formation of a Land Trust
   Pro – Land Trust could provide the resources and financing to protect lands; taking over this responsibility for the town.
   Con - Locally created Land Trust may lack expertise in land management. Resources likely more limited than an established Trust.

3. Management by a Land Trust
   Pro - Land Trust could provide the resources and financing to protect lands; taking over this responsibility for the town. Could use an existing organization such as the Forest Society.
   Con – The control and management of the land shifts from the town to a separate land trust.

4. Conservation Easements
   Pro – Permanently limits development of land and can allow passive recreation. Low cost of acquisition.
   Con – Need to establish easement during the review process. After the review process can be time consuming to work with individual property owners.

5. Conservation Subdivisions
   Pro – Allows for large areas in a subdivision to be set a side for open space. Can be used to protect sensitive areas of a parcel, and connect to an existing open space network. Low cost means to expand green space.
   Con – May not be as attractive to some developers.

6. Purchase of Development Rights
   Pro – Can be as simple as providing compensation to a property owner to limit development on their land and not to develop the land at the highest and best use.
   Con – Can be very complicated and administratively challenging.

7. Groundwater Protection Ordinance
   Pro – Could provide additional protection in the vicinity of the wellhead site.
   Con – Need town meeting approval to approve the Ordinance.

8. Transfer of Development Rights
   Pro – Could be as simple as adding language to the regulations to allow developers to fulfill open space requirements off-site in specified areas as shown in a master plan or a specific overlay district. Generally involves the formation of sending and receiving zones.
   Con – Can be administratively time consuming and costly with a more complex model. If an excessive burden is placed on the developer they may be less likely to participate in a Conservation Subdivision Program.

9. Agricultural Incentive Zoning
   Pro – Includes indentifying key soils, developing a comprehensive agricultural profile and extensive public outreach, much of this work has already been completed. Agricultural incentive zoning generally incorporates multiple innovative zoning techniques. Additional information can be found at http://des.nh.gov/organization/divisions/water/wmb/repp/documents/ilupt_chpt_1.7.pdf
   Cons – Getting farmers to buy in may be difficult. Requires multiple techniques to accomplish goal.

#4420-18