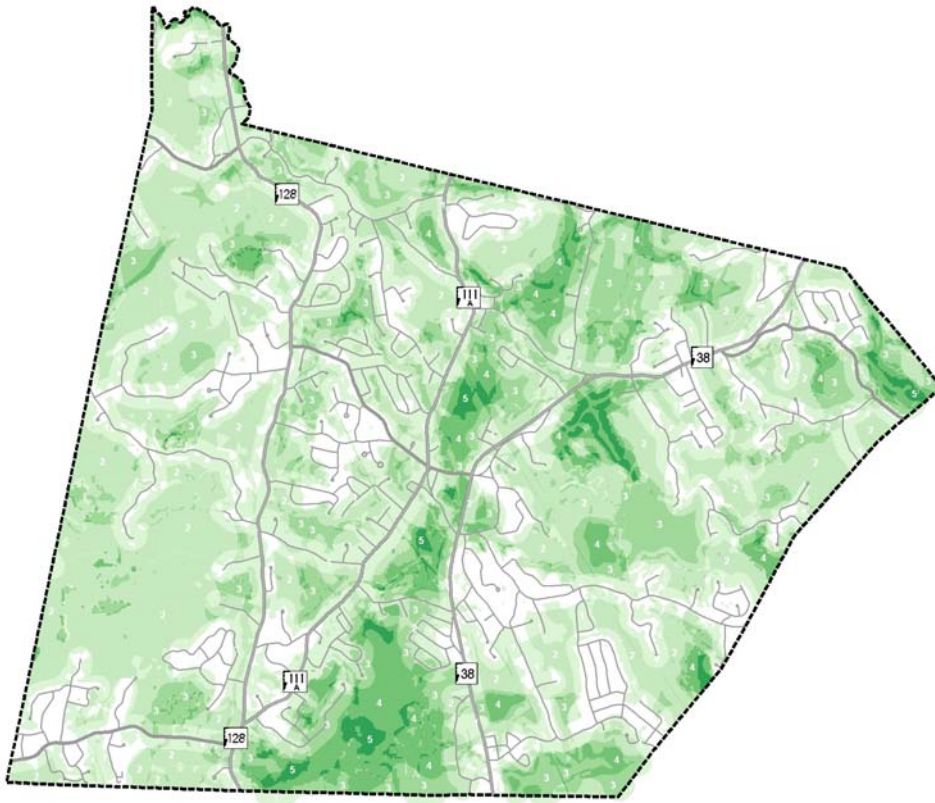




Pelham CTAP Open Space Plan



January 2010

PELHAM 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: Pelham, Hudson and Litchfield. 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 Pelham. A number of recommendations were developed related to open space. They are as follows:

1. Develop an Open Space Plan. Although recommendations for open space protection can be found in the Master Plan and a Natural Resources Inventory has been developed, the next step is to develop a plan that identifies and outlines how priority parcels are to be protected. The final step would be to adopt the Natural Resources Inventory as a chapter in the Master Plan.
2. Research zoning districts and other open space protection strategies that fit best for the Town of Pelham. After an Open Space Plan is developed for the Town, the Land Use boards and Conservation Commission should work together to activate this plan and develop specific tools that can be used to protect open space. This could be done through the conservation development ordinance currently being developed requiring developers to plan according to your Open Space Plan, etc. The key here is to work with the Land Use boards and Conservation Commission to develop this strategy – open space protection requires more than one tool and needs participation from many boards to make it happen.
3. Develop a more formal land protection committee or land trust to oversee protected land. As the town begins to protect more land, it could get more difficult to manage the uses and protect the natural resources on these parcels. There is currently no land trust in Hillsborough County; however, there is the possibility of working with the Rockingham Land Trust.

OPEN SPACE COMMITTEE

In the Spring 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: Paul Gagnon, Karen Mackay, Christine McCarron and Lisa Loosigian all of the Conservation Commission. The committee met on the following dates in 2009: July 21st, September 3rd, September 30th, October 29th, and December 1st. 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.

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 of priority areas. The method conducted in Pelham 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. Different priority areas were identified within the green infrastructure.

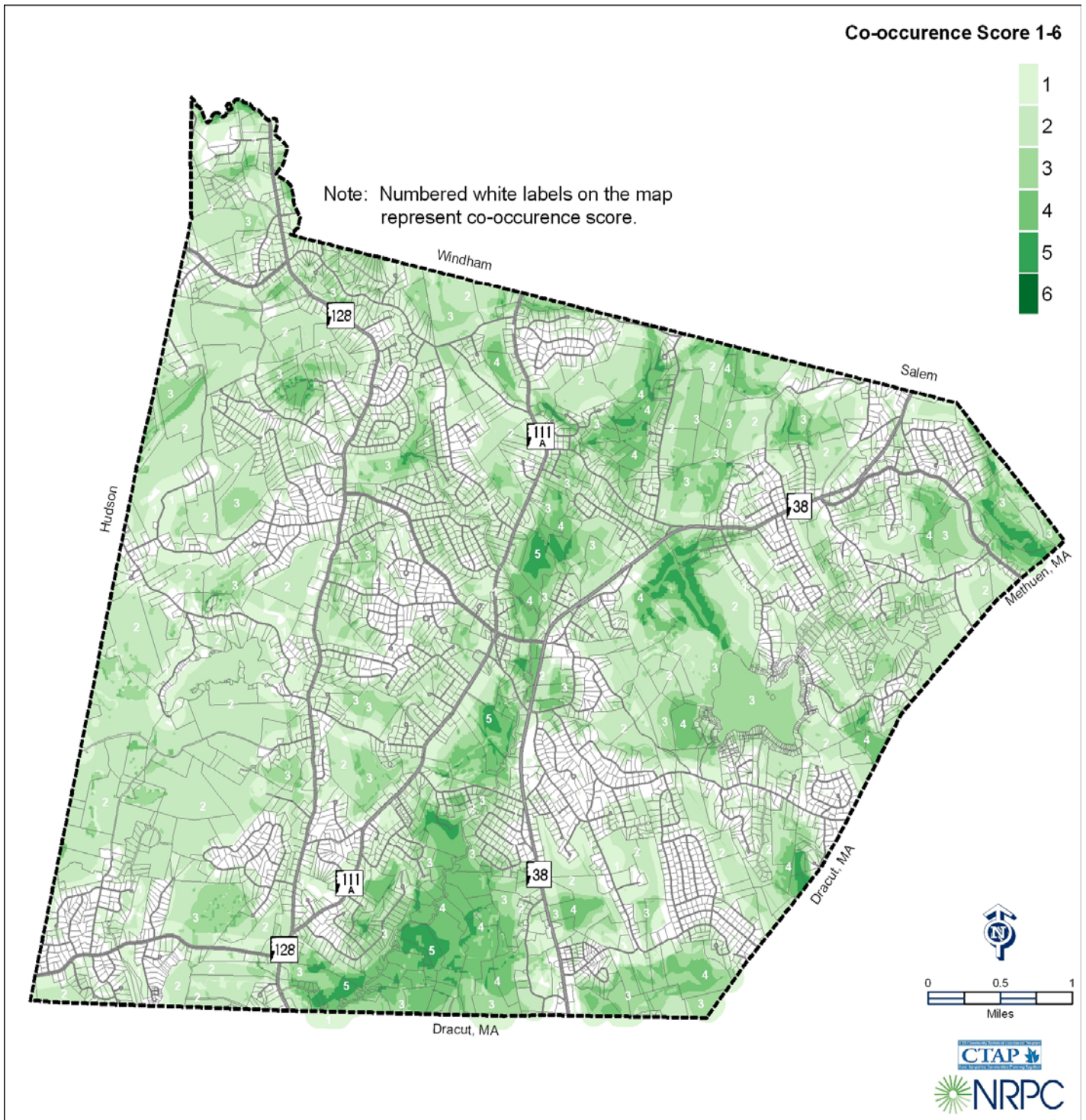
KEY ENVIRONMENTAL LAYERS

The Pelham Open Space Committee identified six environmental layers as very important:

- Stratified Drift Aquifer Areas
- Developable Lands (Open land uses from CTAP Land Use 2005)
- Utility Corridors (Pipelines / Power lines) for connectivity
- Wetlands, Prime Wetlands & 500 foot buffer of Prime Wetlands
- Wildlife Habitat (Highest Ranked Habitat from NH Fish & Game Wildlife Action Plan)
- Unfragmented Forest Blocks (100+ Acres)

CO-OCCURENCE MAPPING

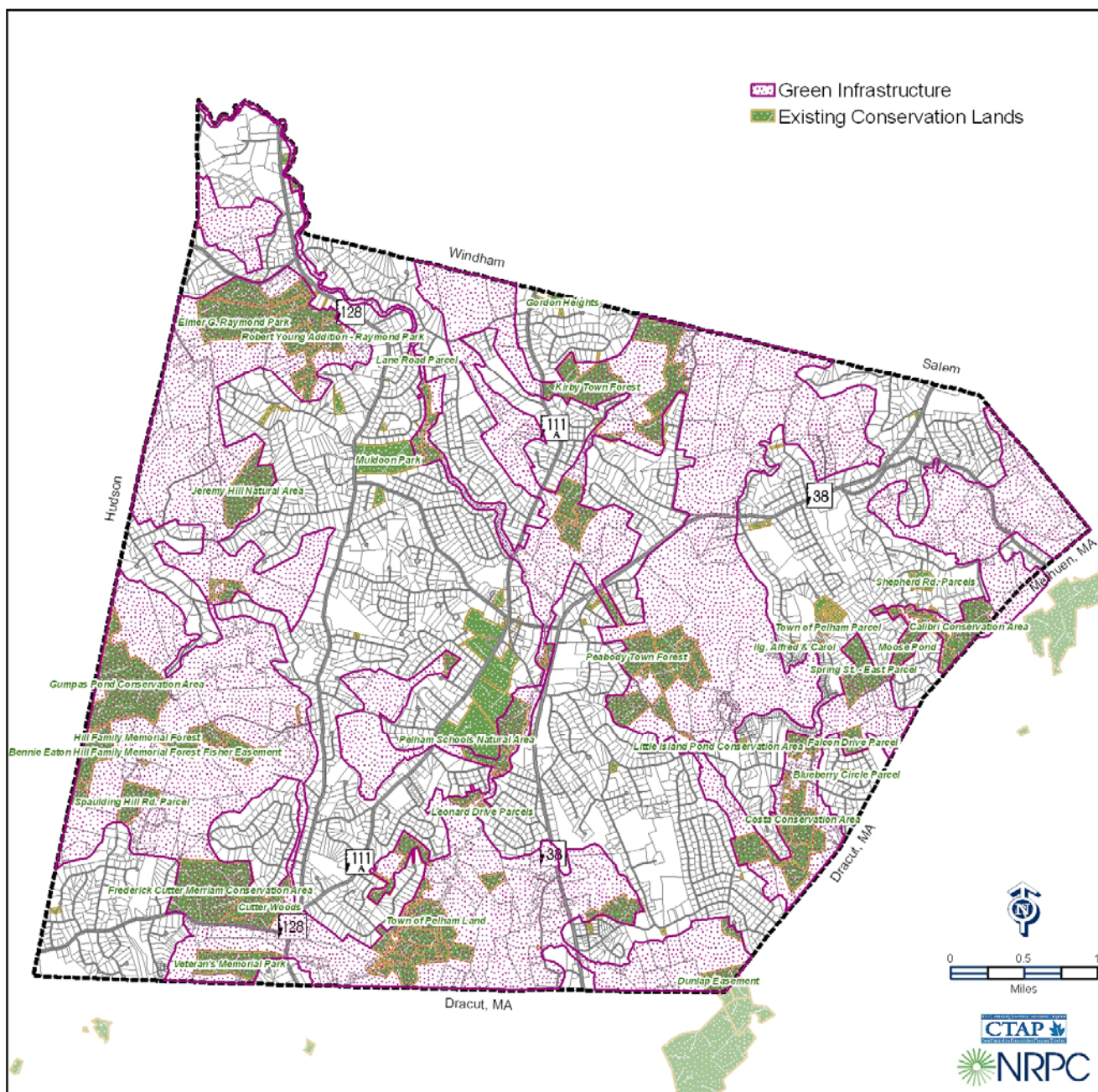
A co-occurrence analysis consists of overlaying multiple datasets, or map layers, to identify the amount of coincidence or overlap on any given location. In this analysis, each of the five key environmental layers was given a value of one (1), the layers were overlaid in GIS and the values added together for every location in town. This produced a co-occurrence score between zero (for no features at a location) to six (All of the six key environmental layers existed at a location.). For example, an area of town that possessed developable lands, prime wetlands 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 Pelham.



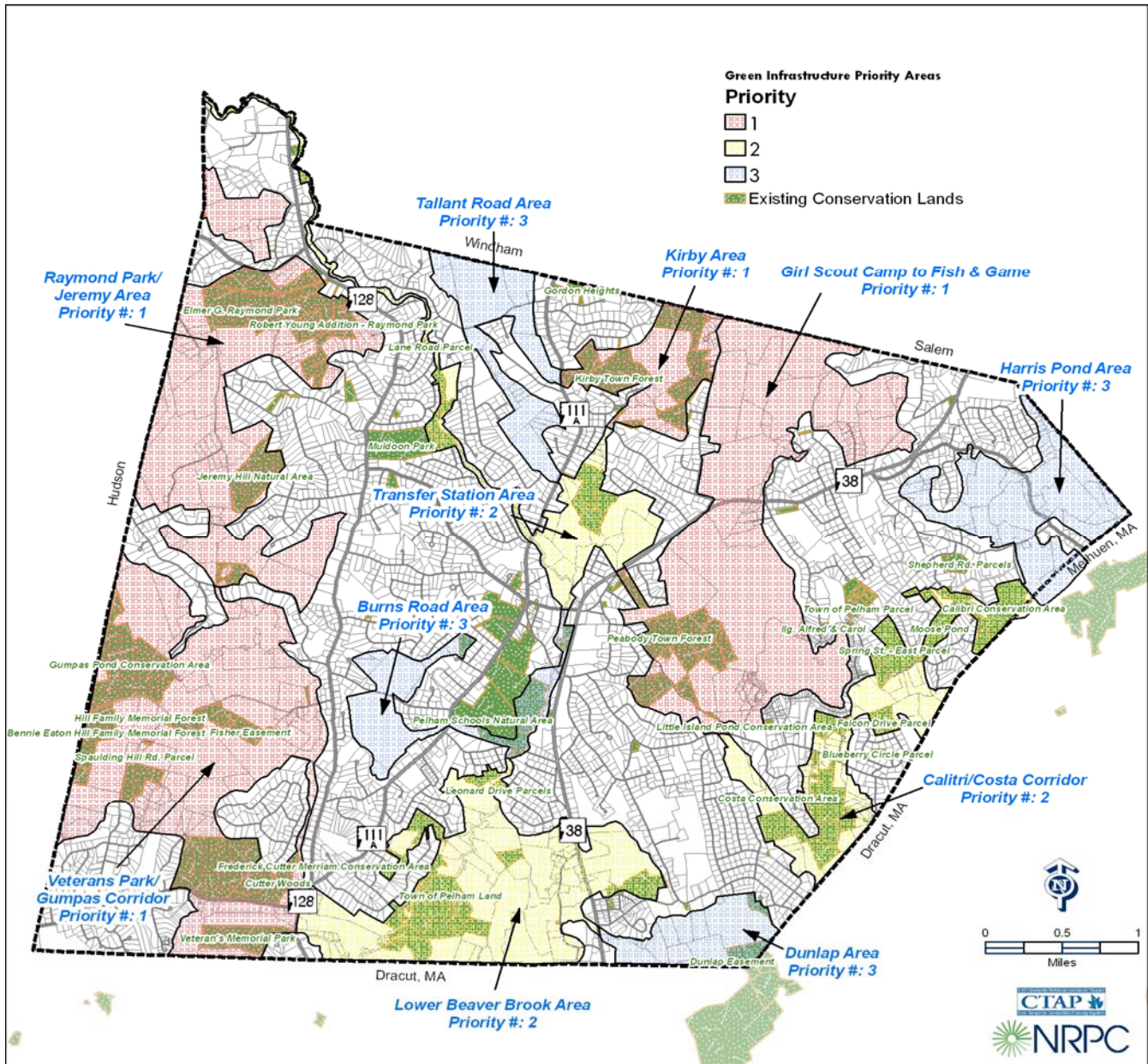
Map 1: Co-Occurrence Analysis

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. Map 2 shows the Green Infrastructure overlay for Pelham.



Map 2: Green Infrastructure



Map 3: Green Infrastructure Priority Areas

HIGH PRIORITY AREAS

The criteria for selecting high priority areas for protection includes, areas of high environmental value based on the co-occurrence mapping, areas with high connectivity value based on the green infrastructure overlay, areas adjacent to existing protected lands and various local factors including ownership and financial opportunities. The Pelham Open Space Committee first identified priority areas within the green infrastructure. Eleven (11) different areas were identified. As shown on Map 3, each area was given a priority ranking of 1-3. Areas with a higher ranking are not necessarily more valuable for conservation but for various reasons have received more attention from the Pelham Conservation Commission. The three categories can be defined as:

1. High priority Areas with a large total of existing conserved lands and the highest potential for connectivity.
2. High priority areas with existing conserved lands with the potential for connectivity.
3. High priority areas with few existing conserved lands but highly ranked in the co-occurrence analysis.

The committee ranked priority areas to more clearly define the goals of the Open Space plan, however properties become available for protection in many ways and a property should not be passed over simply because it is in a priority area of two or three. The categories are rankings within high priority areas and all parcels in those areas are considered high priority.

METHODS FOR LAND PROTECTION

In order to successfully create and implement the Green Infrastructure, a number of methods have been 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. Pelham has already established two funds for the purchase of open space, a "Land Use Change Fund" (also called "Current Use Fund") and a "Bond Fund" have both been approved by town vote. As parcels become available, the Board of Selectmen vote on the purchase. Monies from either of these two funds can be used. This allows a fast response and an additional check by requiring each purchase be approved by the Board of Selectmen as well as the Conservation Commission.

Con – High cost of acquisition.

2. 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.

3. 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.

4. 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.

5. Wellhead Protection

Pro – Add wellhead protection measures for all wells to the land use regulations for a greater level of protection.

Con – Can restrict land uses in these areas.

6. Land Donations

Pro – Provides an opportunity for the land owner to work directly with the town. May provide a tax benefit to the land owner and is an inexpensive method for the town to acquire land.

Con – Less tax revenue by the town (less significant if under current use status) and the town assumes liability of the property.

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