

# **Land Use Planning in Hanover**

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## **Policies and Mechanisms for Implementing the Open Space Priorities Plan**

By the Students of Environmental Studies 50  
at Dartmouth College  
Spring 2001

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*for Dana*



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## **PREFACE**

This report was written by a group of 31 third and fourth-year environmentally-conscious students enrolled in Environmental Studies 50: Environmental Problem Analysis and Policy Formation at Dartmouth College in the Spring of 2001. At the suggestion of our professor, we took the Open Space Priorities Plan, composed by the Conservation Commission and the Open Space Committee, and decided to provide a complement to the OSPP. By identifying ways to implement the plan, our hope was give the Town of Hanover a valuable tool to fulfill the goals of the OSPP. With this in mind, we split into groups to explore various resources that could prove useful in conserving open space: planning and zoning, economic incentives, and conservation easements and land acquisition. The results of our research are found in the following pages, and we hope that they contribute to the continuing dialogue on land planning and development in the Town of Hanover.

Students of ENVS 50  
Hanover, New Hampshire  
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## **EXECUTIVE SUMMARY**

In order to realize the goals identified in the Open Space Priorities Plan (OSPP), released in the fall of 2000 by the Hanover Conservation Commission, this report investigates land protection strategies for the town of Hanover. We concur with the long-term conservation spirit of the OSPP and present this document as a logical next phase for the preservation and management of open space in Hanover. By focusing almost exclusively on open space protection tools, this report aims to shift the documented support for open space in Hanover beyond the theoretical realm and into practical implementation. A brief introductory chapter begins the report, followed by three chapters that each comprehensively analyze a different implementation vehicle: Planning and Zoning (Chapter 2), Economic Incentives (Chapter 3), and Conservation Easements and Land Acquisitions (Chapter 4).

### **Chapter 1: Introduction**

The first chapter begins with a brief outline of the OSPP, placing particular emphasis on the structure and format of the document in order to elucidate its approach to defining and organizing different tracts of open space. Twelve specific properties receive attention in two different sections: “Conservation/Recreation Action Areas” and “In-Town Open Space Action Areas.” The value of each open area is qualified using a rubric of open space benefits, and the report concludes by presenting different conservation recommendations and suggestions for their implementation.

Having summarized the work that catalyzed our own efforts, an argument is made for the benefits of open space in accord with the goals inherent in the OSPP. A theoretical argument for open space is presented in tandem with a glimpse into what may happen if protection of open space is not prioritized, most notably the potential for full residential build-out in as few as sixty-five years.

Investigation into Hanover’s natural resource base offers an additional argument for open space protection. The Town’s rich forest and aquatic ecosystems boast a number of unique species, but are disproportionately located in open space areas. We

advocate open space protection as a viable tool to ensure the long-term sustainability of these natural assets.

Additionally, Hanover's residential appeal, best indicated by the Town's growing population and the relative wealth of residents in comparison to neighboring Upper Valley towns, threatens the "small town" ethos of the community. Because the increasing population strains a finite resource base through the development of open space, the Town ultimately risks jeopardizing the fragile relationships between history, ecology, culture, and the Hanover living experience. In conclusion, we believe:

- **There is a clear mandate from the townspeople to implement proactive open space conservation measures.**
- **Open space protection in Hanover has historical precedent, ecological justification, and economic benefits.**
- **Given the potential build-out scenarios and the impending finalization of the Town's Master Plan, the existing open space in Hanover has reached a critical juncture and needs timely protection.**

## **Chapter 2: Planning and Zoning**

Since 1961, the Town of Hanover has worked to implement and revise a Zoning Ordinance that aims to control and direct the impact of new development. In the wake of recent population growth and suburban sprawl, this obligation has become increasingly difficult to sustain. Public sentiments in Hanover indicate that residents support the use of zoning in order to restrict development and to preserve open space. By helping to prevent unchecked growth in Hanover, zoning can be an important device used to guide Town development.

However, this chapter concludes that limiting growth and development through the use of regulations within the Zoning Ordinance is impractical by itself as a long-term option. As a community's interests change over time, zoning ordinances are adjusted to reflect these shifts in public opinion. If open space is to be protected, a permanent clause of the zoning ordinance must be mandated or else long-term conservation is unlikely. The notion of creating permanent zoning ordinances undermines the transient characteristic that makes it a valuable land management vehicle for dynamic

communities. We believe that the interface between open space conservation and zoning should be governed by the following principles:

- **Regulations should be used very cautiously because preserving open space may lead to isolation of certain properties that could be used in the end to promote development and accommodate population growth.**
- **Planners and the Zoning Board must ensure that regulations (such as the Zoning Ordinance) will not compromise the rights of property owners.**
- **The Planning Board should consider other tools for the conservation of open space beyond the exclusive use of the Zoning Ordinances.**
- **When zoning is used, the Town should promote Open Space Development/Cluster Zoning and Large Minimum Lot Size Zoning. These two zoning mechanisms will help Hanover retain remaining open space while still providing housing to residents.**

### **Chapter 3: Economic Incentives**

Financial instruments and policy tools can play significant roles in preserving open space in Hanover. Research indicates that existing economic incentives encourage the purchase of Hanover's rural lands over its in-town lands, thereby depleting residents of available open space resources. This chapter presents the economic benefits associated with the conservation of open space and an in-depth analysis of several economic incentives that can be employed to better conserve Hanover's open spaces.

Many misconceptions exist regarding the fiscal responsibility of preserving open space. One tool that can effectively dispel many of these inaccuracies is a Cost of Community Services (COCS) study, which provides a cost-benefit analysis of land uses in a community at a specific point in time. Nearly all COCSs show that the costs of development and the following drain on community services exceeds tax revenues, causing communities to lose ground from a fiscal perspective. We recommend:

- **A COCS study should be implemented in Hanover in order to highlight the economic benefits of open space as opposed to residential development and to gain public support for establishing funding sources for open space conservation.**

- **Studying other economic impact analysis tools used across the state may help the Town gain a better understanding of further ways in which to obtain information about the fiscal impacts of land uses.**
- **A COCS study used in combination with an assessment of the costs of purchasing conservation easements or directly purchasing lands designated as open space in the Open Space Priorities Plan could be helpful to Hanover, by indicating how the benefits gained through “cost avoidance” can outweigh the costs of preserving open space lands.**

The Current Use Tax Program and the Land Use Change Tax (LUCT) are both effective policy tools that encourage environmentally conscious land use through a combination of tax incentives and penalties. We have found that:

- **New Hampshire’s Current Use Program and the Land Use Change Tax effectively promote open space preservation. The programs should not be significantly altered, except for a suggestion to look into donating more of the LUCT revenue in Hanover to the Conservation Council.**

When used together, Impact Fees and Excise Taxes also provide strong economic incentives to leave open space undeveloped. Impact fees (with significant restrictions) allow towns to charge new developments for the added costs of services, and Excise Taxes levy a fee on the business of subdividing land or developing property. It is our recommendation that:

- **Impact Fees should be established for schools and park/recreation areas using the average cost method.**
- **Impact fees for fire, police, water and sewer should be established using the marginal cost method.**
- **Hanover should consider an excise tax to generate revenue for purchasing land to designate as open space.**

Finally, instruments that transfer development rights, specifically Density Bonuses and Transfer of Development Rights Programs (TDRs), are also important land conservation tools. Density Bonuses provide incentives through zoning exemptions for developers to voluntarily cluster development to one-fourth of their property. A TDR program further preserves open space by allowing for the separation of the rights to

develop a parcel of land from the property holder's ownership rights, thus allowing for the creation of specific "sending" and "receiving" areas of development and conservation. We recommend that:

- **Clear and equitable guidelines should be created regarding the use of Density Bonuses.**
- **Hanover must carefully and clearly defines sending and receiving areas before starting a TDR program in order to avoid legal issues and administrative complications.**
- **The town should be sure that the designated receiving areas are large enough to guarantee that all landowners in sending areas will be able to sell their development credits.**
- **A TDR bank should be used to establish a competitive market and guarantee a fair price for development credits, and the Town should actively promote any implemented TDR program to ensure its use.**

#### **Chapter 4: Conservation Easements and Land Acquisitions**

Conservation easements and land acquisition are general mechanisms to establish permanent restrictions on property development, thus facilitating the long-term protection of tracts of open space. An easement is established when a landowner sells or donates his or her right to develop private property to a conservation organization. Easements are beneficial in preserving open space in Hanover because they are flexible, permanent, relatively inexpensive, and allow landowners to retain private property rights. Easements can also be economically advantageous for the landowner in that they lower property value for estate tax purposes, and donations can qualify for income tax deductions from the Internal Revenue Service. Currently, a number of conservation easements are already in place in Hanover. In regards to easements, we recommend the following:

- **In order to use easements as a land conservation tool in Hanover, landowners should be individually contacted and educated as to the potential this option holds for permanent open space preservation and tax incentives.**
- **Local conservation groups should be consulted to facilitate protection efforts and the education of citizens.**

- **A standardized monitoring and enforcement system should be implemented to address violations of conservation easements.**
- **Hanover could further benefit by the addition of easements in areas such as Gilman Island in the Connecticut River, Lord's Hill, and Moose Mountain East.**

Land acquisition is a method in which the full ownership of a parcel of land is transferred from a private citizen to a public or a private conservation organization. There are varieties of land acquisition methods, including outright purchase, donation, bargain sales, and remainder interest, some of which provide significant tax incentives to landowners who are conservation-minded. However, this method of conservation is limited in Hanover because of the outright expense and responsibility that comes with acquiring full ownership. As with conservation easements, it is important to ensure that local conservation groups are involved in all preservation efforts.

In order to utilize these two mechanisms to preserve open space in Hanover, a diverse network of funding is necessary. Funding for projects will need to come from outside sources such as land trusts, local conservation groups, and state and federal grant programs in addition to in-town sources. Money is necessary to the future of open space protection in Hanover, and pursuing a wide range of funding outlets is crucial. With regards to land acquisition and funding, we conclude the following:

- **The Town could benefit from land acquisition if the land in question is economically viable and can produce revenue from activities such as forestry or recreation.**
- **The limited funds currently available for open space protection would best be used on the education of the public, in the hope that increased knowledge will breed motivation for conservation.**
- **Pursuing a number of funding options is necessary in order to facilitate the use of conservation easements and the purchase of land for permanent conservation.**

We, the authors, have written this report to offer a description and analysis of existing land protection techniques applicable to the Town of Hanover in order to further the goals outlined in the Open Space Priorities Plan. We aim to foster additional discussion and debate on the topic of land conservation and the protection of open space.

# **CHAPTER 1: INTRODUCTION**

We present this report as a complement to the Open Space Priorities Plan (OSPP), in order to further explore the OSPP's necessity, function, and feasibility. In considering these goals, we determined that an effective exploration must include a firm justification for the OSPP. Our introduction starts with a thorough summary of the OSPP itself to provide a foundation for its examination. We move on to discuss the general benefits and opportunity costs associated with the conservation of open space in New Hampshire, focusing on Hanover in particular. Next, we show the importance of swift, proactive conservation measures by outlining the Town's residential build-out scenario, a model that unfavorably forecasts Hanover's future, given current development regulations. We further expound on the need to implement OSPP through a detailed history of land use and demographics. We believe that the unique rural character of Hanover today, which residents overwhelmingly want to preserve, is best understood through familiarity with its origins.

The chapters contained herein detail elements of zoning, easements, and economic incentives, the three categories of implementation of the OSPP. They will serve as resources to guide town planning for the Hanover community. When read in conjunction with the OSPP, we hope these chapters will continue to encourage informed discussion among Hanover residents about the future of their town's open space.

## **Open Space Priorities Plan**

Published in December of 2000, the Open Space Priorities Plan is a significant contribution to the discussion on how Hanover should manage its land in the future. It is the culminating work of the Open Space Committee, a subcommittee of the Conservation Commission; the subcommittee studied Hanover's undeveloped natural terrain and made policy recommendations regarding its use and/or preservation. Resulting from "increasing amounts of citizen support for greater municipal open space protection"<sup>1</sup>, the OSPP first offers a comprehensive analysis of existing open spaces based on established goals and perceived beneficial criteria. The report also details possible tools and methods for achieving these goals.



Five main sections include an introduction; a discussion of the purposes, definitions and goals of the document; attention to conservation/recreation action areas; commentary on in-town open space action areas; and discussion on different implementation schemes.

The principal intention of the OSPP's introduction is to outline the Plan's format, most importantly how the authors have organized their approach to comprehensively tackling the different types of open space found in Hanover. To meet this challenge, the OSPP establishes two categories of land "embracing a total of twelve significant areas"<sup>2</sup> deemed most significant for conservation in Hanover.

The purposes, definitions, and goals section identifies the origin of the OSPP and the technical framework guiding its creation. The three purposes of the document are:

- To provide meaningful input for the town Master Plan.
- To encourage and guide land protection by individuals and non-profit organizations.
- To ensure thoughtful expenditure of public moneys.<sup>3</sup>

The six general goals of the open space plan for Hanover are also mentioned in this section:

- To promote the conservation, protection and sound management of the natural resource base.
- To protect and enhance the ecological integrity of the town's diverse natural communities and wildlife habitats.
- To sustain the scenic quality and visual character of the town.
- To maintain and expand landscape-based recreational and educational opportunities.
- To protect the town's historic sites and cultural landscapes.
- To protect in-town spaces.<sup>4</sup>

Having framed the organization and intentions of the document for the readers, the OSPP then delves into discussion of particular areas. In the "conservation/recreation action areas" segment, the authors define open space. These lands are said to:

"typically have no buildings or other complex man-made structures... they may be in their natural state...or they may be used for agriculture, forestry, and/or outdoor recreation...they ensure the continued functioning of the natural infrastructure and the recreation resources"<sup>5</sup>

The criteria used to evaluate individual "conservation/recreation" areas are presented next in the OSPP. A template of potential benefits, ranging from water supply to educational value, is used as a checklist to discuss the specific geographic areas.

Following this discussion, the OSPP addresses the second category of Hanover's open space, "in-town open space." These areas are defined as "immediately accessible to people in Hanover's densest population center...are generally smaller in size, and typically have more obviously focused uses."<sup>6</sup> The general goals of conserving in-town open space are more narrowly defined than those established for conservation/recreation open spaces. In effect, the OSPP feels that "additions to in-town open spaces would strengthen the already established pattern of village-scale combinations of development and open spaces"<sup>7</sup> and that preserving Hanover's in-town open space will "sustain and expand [the town's] natural backdrop and smaller open spaces...[and its] physical amenities and recreational opportunities".<sup>8</sup> The OSPP breaks down in-town open space into three main types: forested backdrop, smaller local parks and open spaces, and connections. The plan then provides a list of specific areas within each category (and criteria by which to evaluate them) as well as the benefits associated with their conservation.

Following this focus on in-town open space is the OSPP's final section, which details "open space protection and financing methods."<sup>9</sup> This segment addresses the many potential "protection options" the town might effectively employ to meet the OSPP's goals. In its final pages, the OSPP highlights the use of the town's Conservation Fund as a powerful financial mechanism that could be employed to conserve Hanover's diverse open space resources.

### **Arguing for Open Space**

What are the advantages of land preservation? What are the opportunity costs? Would it be better to use or develop open land for economic gains or permanently conserve the land for non-market benefits? These are only a sampling of the questions one confronts when determining the best use for a particular plot of land. Their answers can be uncertain and are always dependent on the specific attributes of a space.

In some cases, land development and resource extraction are necessary for human survival, but this is not the case in the Hanover area. However, a moratorium on all economic activity and town development is neither useful nor practical. Instead, Hanover needs a thoughtful and thorough plan for land use, thereby preventing sprawl and limiting environmental degradation.

Open space provides numerous benefits for local residents both ecologically and aesthetically. It creates a natural stability for the region by maintaining biodiversity, providing habitat for flora and fauna, and protecting endangered species. It helps to safeguard clean air and water through buffers and connections to other conservation areas. It also minimizes the impact of humans on the earth's ecosystem.

Land preservation also creates intangible benefits such as peace of mind. Open space provides scenic beauty; in-town parks, hiking trails, lakes and other types of recreation are beneficial to mental health. Studies have shown that people around open space are emotionally refreshed and work more efficiently.<sup>10</sup> Long-term preservation of open space further improves residents' quality of life by linking them to the region's cultural and natural heritage. This benefit in turn makes the region more attractive to employers and workers, boosting economic prosperity.<sup>11</sup> Indeed, this attractiveness is largely responsible for Hanover's recent population boom, a phenomenon that threatens to destroy the qualities that make Hanover appealing, and hastens the necessity of a land conservation plan to implement the goals of the OSPP.

In order for widespread conservation to occur, people must be willing to concentrate development and focus residential and commercial density. This method of land management has the advantage of making the Town's resources more accessible; it has the disadvantage of changing current development patterns. Although it may not be apparent, urban and rural sprawl is detrimental because of fragmentation caused by roads, housing, etc. and reduction of buffer zones. In order to preserve open space, communities must strategize and use available land effectively to minimize human impact.

The loss of jobs is frequently cited as an argument against prioritization of open space. Studies show, however, that activities directly and indirectly dependent on open space provide 16% of all jobs in the state and account for 25% of the gross state product.<sup>12</sup> Consideration of all the variables of open space needs to occur before Town planners can act. One way to analyze the needs of the Town in the future is through a build-out plan.

### **Residential Build-Out**

In November 1998, the Hanover Planning Board in cooperation with the Upper Valley Lake Sunapee Regional Planning Commission (UVLSRPC) commissioned a residential build-out analysis of the town. The term "build-out" is a planner's reference to a hypothetical point in

the future when all land that can be developed has been developed.<sup>13</sup> The build-out analysis conducted for Hanover is based on the premise that all land in Hanover, whether presently developed or not, will eventually be developed according to the maximum density enabled by the Zoning Ordinance.<sup>14</sup> More specifically, the build-out analysis was conducted to analyze how much land area can be developed under existing land use regulations and where this growth will occur. The results of the build-out analysis show the need for the implementation of certain measures to accommodate future growth in Hanover.

Scenarios for number of households and for the total population were calculated using models from past growth rates coupled with what current zoning regulations would allow. The results show a total of 4,150 residential units that could be added under full build-out in Hanover. This addition represents a 148% increase (from 2,802 units in 1998 to 6,952 units).<sup>15</sup> If the number of housing units in Hanover continued increasing at the rate experienced between 1980 and 1990 (10.5% for the decade), it would be possible to reach full build-out in approximately 70 years.

Assuming that, as in 1990, there will be an average of 2.4 persons per household, the year-round population of Hanover would be 13,944 (not including Dartmouth students).<sup>16</sup> This growth represents an increase of approximately 130% from the 5,868 residents reported by the 1990 Census.<sup>17</sup> Including Dartmouth College students, Hanover at full build-out would hold 18,388 residents<sup>18</sup>. In 1998, The UVLSRPC has estimated the population (including Dartmouth students) at 10,097. This represents a growth rate of about 1% per year. If this trend were to continue, full build-out could be reached in just over 65 years<sup>19</sup>.

Although the build-out analysis is just a model for predicting development possibilities, the projected number of years for possible full build-out to occur is somewhat alarming. Under current zoning regulations, Hanover could experience rapid development over the next 65 to 70 years, and reach maximum population and housing capacity. These potential results allow us to begin questioning what impacts will be associated with the projected growth, and what additional services and facilities might be required to serve the needs of future residents and employees. If the residents of Hanover are concerned about full build-out and its implications, it is indeed time for the implementation of conservation measures to begin.

## **Land-Use History**

The Town of Hanover was chartered in 1761, and chosen for the site of Dartmouth College in 1770. The establishment of the College shifted the village center from Mill Village (currently Etna) to downtown Hanover. Hanover remained predominantly an agricultural town; the railroad in nearby White River Junction functioned as a draw for the development of manufacturing in the Upper Valley. The few exceptions to this land use were the saw and gristmills built on Mink Brook. As of 1926, woodland covered half of the Town; pastures and cultivated land constituted 39%. Between 1926 and 1956, the most substantial shift in land use was from pasture to woodland. By 1956, 75% of Hanover's land was wooded and only 17% existed as open, undeveloped land. By 1975 the amount of pastured land in Hanover had decreased another five percent.

Today, developed land accounts for 5.6% of the town area, and 78% of this development is used for residential purposes. The two primary reasons for this transition are institutional changes within Dartmouth College and increasing population due to the Hanover's desirability as a place to settle. As Dartmouth's influence in Hanover grew, the College took on an active role in providing residences for college employees, including the purchase of large plots of land in the town. The institutional changes within the college, namely the admission of women, and the expansion of the Medical School to a full M.D. program, necessitated the college's employment of a significantly larger faculty and staff. Other major employers in Hanover, such as the Cold Regions Research Engineering Laboratory and Hypertherm, have attracted people to Hanover since the 1960s.<sup>20</sup> Despite the growth of Hanover, however, development has traditionally been focused in the Town center, with open and wooded areas still predominant throughout the town. This pattern of development indicates that open space has been and will continue to be a priority in land use planning.

Today's land use policy is based on the premise that "Hanover's natural resources should be preserved and that the future development of the Town should be directed and limited by the ability of the land to support that development."<sup>21</sup> One of the key issues in land use development in Hanover is curtailing suburbanization, which has become a greater concern with the move of the hospital outside of the town. This trend towards suburbanization indicates the need for cooperation between Hanover and its surrounding towns, in order to manage rampant

development.<sup>22</sup> Conservation of open space is imperative to combating urban sprawl, as well as to maintaining the small town New England atmosphere that Hanover has historically enjoyed.

Hanover has a rich natural resource base. Rivers, brooks, and ponds make up 2.4% (746 acres) of land in Hanover. The primary uses of these water sources are recreation, flood storage capacity, wildlife habitat, scenic value, and water supply. The biggest threat to water resources is surface water pollution.<sup>23</sup> Wetlands, or “areas of hydric soil that are inundated or saturated at a frequency and duration sufficient to support wetland vegetation” make up 8% of the town, or 2600 acres<sup>24</sup>. Benefits of wetlands include storage of floodwaters, storage and absorption of soluble nutrients, groundwater recharge, filtration, wildlife habitat, and recreation. Groundwater resources, which provide drinking water for the town, face threats of pollution through septic tanks, fuel storage tank leakage, road salts, and excavation. Floodplains act as storage areas during times of flooding, and travel corridors for wildlife. Development threatens floodplains because this periodic water retention may increase flood potential and the likelihood of erosion and sedimentation. However, floodplains are attractive to develop because they are flat and therefore more inexpensive to build on than other areas around Hanover.

Forests make up 83% of Hanover (26,276 acres). Logging is minimal in Hanover; the predominant uses of forest resources are recreation and wildlife management. Agricultural soils are yet another natural resource valuable to Hanover, comprising 19% (5900 acres) of the town’s land. The final resources prevalent in Hanover include a variety of wildlife and scenery, such as the views from town or on roads around town.<sup>25</sup>

In addition to the extensive resource base detailed above, Hanover hosts a number of unique natural assets. The *Natural Communities and Rare Plants of Hanover, New Hampshire* 2000, a document by the Nature Conservancy, was written in order to:

- serve as a starting point for the accumulation of a more detailed inventory of habitats and biodiversity
- collect information on species and communities
- provide information useful for conservation planning
- enhance knowledge and appreciation of Hanover’s rich natural endowment.<sup>26</sup>

The report noted that Hanover was already privy to an abundance of healthy natural features, including:

Eight rare plants and communities; high elevation mountain tops, ridgelines, and river valleys; clean rivers, streams, lakes, bogs, swamps, and wetlands; large tracts of unbroken “matrix” forest; agricultural and timber resources; recreational opportunities in

natural settings; sweeping natural and pastoral views; a relatively high percentage of protected land within a 14-town region; and opportunities to expand protection of natural features.<sup>27</sup>

The report identified three exceptional natural communities. Velvet Rocks was lauded for its ‘rich mesic forest,’ as well as for the presence of the northern waterleaf (rare throughout New Hampshire) and Goldie’s Fern. The Bottomless Pit boasts two natural communities: an acidic seepage swamp and a level bog. Finally, Mink Brook is home to at least two rare plant species, the barren strawberry and the marsh horsetail.<sup>28</sup> The presence of these rare natural communities and plants provides further incentive for the implementation of the Open Space Plan as a means of conserving these species and of ensuring the preservation of their habitat. Hanover’s natural resource base is so extensive and unique that it warrants preservation and careful consideration in development and land use planning.

### **Hanover’s Demographics**

Hanover’s unique demography within the state of New Hampshire has contributed to the need to create the Open Space Plan. Much of the difference between Hanover and the rest of the state is a result of the location of Dartmouth College and the needs generated by the college. Because of the high percentage of academicians and professionals in the area, Hanover’s per capita income is \$17,496, the median income of a four-person family is \$65,488, and the median household income is \$51,899. In nearby Lyme, the four person median family income is \$50,563 and the median household income is \$42,188. Other nearby communities, Enfield and Lebanon, report four person median family incomes of \$38-40,000 and median household incomes between \$32-34,000.<sup>29</sup> Hanover’s relative wealth creates a different dynamic and generates a heightened awareness of the need for planning and conservation, especially as more people move to the area.

In addition to Hanover’s affluence, another distinguishing feature is the relative concentration of the population. As Hanover has increased in attractiveness, its population has risen, along with a concentration of the “in-town” area. From 1990 to 2000, the number of people living in Hanover increased from 9,118 to 10,850—a 19% gain. Once again, this growth is relatively high when compared to an 8.3% increase in the Upper Valley and 11.4% increase overall in the state of New Hampshire.<sup>30</sup> Of the 10,850 people, approximately 8,150 of them live

in a 4.5 square mile area in the southwest corner of the town.<sup>31</sup> Much of the remaining land of Hanover is forest and other open space, privately and publicly owned.

One of the most important reasons to implement the recommendations of the Open Space Plan is that there is no sign that this population surge will level off in the near future. Hanover continues to be an attractive spot for people to relocate to because of the wealth of resources available in the town, especially those of Dartmouth College. Considering that the growth of the population from 1990 to 2000 was almost twice that expected by town officials, planners lack concrete expectations for growth in the next decade.<sup>32</sup> The population cannot continue to grow at the same rate if the town maintains the current level of housing availability. If the town values open space and the “small town with amenities” feel that has developed in recent years, the time to act is now.

## **Chapter Summaries**

Following the introductory chapter, the text will examine three categories of open space protection, with recommendations at the end of each chapter.

### **Chapter 2**

Chapter 2 of our report outlines the basics of zoning and land-use regulations for the Town of Hanover. We start by considering land use control mechanisms such as the Town Zoning Ordinance and its subdivision regulations. We then move on to talk about the legality of zoning. A discussion of various zoning tools such as Open Space Development/Cluster Zoning and Large Minimum Lot Size Zoning are expanded upon in order to show how open space can be effectively conserved if properly administered. Finally, a set of recommendations concerning zoning in Hanover is given which can serve to complement the Open Space Priorities Plan.

### **Chapter 3**

Chapter 3 of this report explores various economic incentives that can help to preserve open space in Hanover. Existing economic incentives for real estate in Hanover tend to encourage the development of rural town lands, thereby depleting open space resources. In this chapter, we present a selection of policy tools and financial instruments that might halt this



undesirable development trend. Possible and existing incentive options for Hanover range from Cost of Community Services Surveys and Impact Fees to Current Use Taxation and Transfer of Development Right Programs.

## Chapter 4

Another tool that can be used for preservation of open space in Hanover is a conservation easement. A conservation easement is voluntary agreement that allows a landowner to limit the type or amount of development on a property while retaining private ownership of the land. An easement is a legally binding covenant that is recorded and runs with the property deed in perpetuity. Easements are instrumental in preserving open space because they protect natural resources, limit unwanted development, retain ownership of the land, and assure that the property will be protected forever.

Another method of preserving open space explored in Chapter 4 is land acquisition. Land can be protected when full ownership of the land is granted to the public or a private conservation organization, either by donation or outright purchase. Land trusts are another form of land acquisition, in which a non-profit organization established for the purpose of protecting land resources that are deemed important to the quality of life and environmental health of the community. The purpose of a land trust is not to protect the land, but to serve as a vehicle through which the chosen preservation method is implemented. Any or all of these methods of land management are intrinsic to the preservation of open space in Hanover and should be evaluated.

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<sup>1</sup>Town of Hanover, *Open Space Priorities Plan*, 2000, 29 March 2001. <[http://www.hanovernh.org/twn\\_openspace.html](http://www.hanovernh.org/twn_openspace.html)>, 3.

<sup>2</sup>OSPP, 3.

<sup>3</sup>OSPP, 6.

<sup>4</sup>OSPP, 6.

<sup>5</sup>OSPP, 6.

<sup>6</sup>OSPP, 5.

<sup>7</sup>OSPP, 51.

<sup>8</sup>OSPP, 60.

<sup>9</sup>OSPP, 61.

<sup>10</sup>Griffin, Janice. "Open Space Preservation: An Imperative for Quality Campus Environments." *Journal of Higher Education*, 65(6): 646.

<sup>11</sup>Fausold, J. Charles and Robert Lilieholm. "The Economic Value of Open Space." *Land lines*. 8(5).

<sup>12</sup>Taylor, Dorothy Tripp. *Open Space for New Hampshire*. Manchester: New Hampshire Wildlife Trust, 2000, 1.

<sup>13</sup>UVLSRPC, "Residential Build-out Analysis," 1998, p.1.

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- <sup>14</sup>UVLSRPC, 1.
- <sup>15</sup>UVLSRPC, 12.
- <sup>16</sup>UVLSRPC, 11.
- <sup>17</sup>UVLSRPC, 14.
- <sup>18</sup>UVLSRPC, 15.
- <sup>19</sup>UVLSRPC, 16.
- <sup>20</sup>Town of Hanover Planning Board. Master Plan 2000. Appendix XII-1, 1-7.
- <sup>21</sup>Master Plan 2000, 258.
- <sup>22</sup>Master Plan 2000, 124.
- <sup>23</sup>Master Plan 2000, 238.
- <sup>24</sup>Master Plan 2000, 239.
- <sup>25</sup>Master Plan 2000, 240-243. All statistical facts are from the Town of Hanover Master Plan 2000 as cited above.
- <sup>26</sup>New Hampshire Chapter of the Nature Conservancy. *Natural Communities and Rare Plants of Hanover, NH*. March 2000, 5.
- <sup>27</sup>Nature Conservancy, 7-8.
- <sup>28</sup>Nature Conservancy, 15-16.
- <sup>29</sup>Economic and Labor Market Information Bureau, New Hampshire Employment Security. *New Hampshire Community Profiles, 2000*. 18 March 2001. <<http://www.nhworks.state.nh.us/soicc/profiles/grafic00.pdf>>
- <sup>30</sup>“U.S. Census 2000: Hanover population soars”. *The Dartmouth* [Hanover, New Hampshire] 30 March 2001, 1.
- <sup>31</sup>U.S. Census Bureau. *American Fact Finder*. 12 March 2001. <[http://factfinder.census.gov/servlet/ThematicMapFramesetSrvle?ds\\_name=DEC\\_2000\\_PL\\_U&geo\\_id=06000US3300933860&tree\\_id=400&tm\\_name=DEC\\_2000\\_PL\\_U\\_M00090&\\_lang=en](http://factfinder.census.gov/servlet/ThematicMapFramesetSrvle?ds_name=DEC_2000_PL_U&geo_id=06000US3300933860&tree_id=400&tm_name=DEC_2000_PL_U_M00090&_lang=en)>
- <sup>32</sup>“U.S. Census”, *The Dartmouth*.

## **CHAPTER 2: PLANNING AND ZONING**

### **Introduction to Zoning**

Zoning is the principal tool used to implement local planning policies. It operates by dividing the land in a community according to use, with the premise that different uses will be permitted in different zones, so that similarly categorized lands occur in adjacent zones. All property within a zoning district is subject to a uniform set of zoning regulations that restrict the development of land in that district. Zoning regulations are enacted through a zoning ordinance, which consists of written text supplemented by a zoning map of districts.

This chapter explains the permitted uses and defines the minimum standards for each zone. Zoning tools are presented first in terms of general zoning, to better define confusing terminology. Zoning specific to Hanover's open space goals are then presented, using tools specific to Hanover's needs. Hanover's unique geographic and demographic setting requires a multi-faceted approach to zoning in conjunction with other open space preservation tools. Considerations of public perception, the institutional nature of Dartmouth College, legal issues of the Takings Clause of the Fifth Amendment, and Hanover's rural and historic value all are presented in this chapter.

It is important to note that zoning is highly mutable, and might not be the single best strategy for achieving conservation goals. Zoning policies change relatively frequently and rapidly to reflect new priorities of the community. Hanover's planning agenda must be supplemented with other types of land use regulation to ensure that long-term planning objectives are achieved.

### **The Legality of Zoning and Land Use Regulations**

Private property must be secured or liberty cannot exist. The moment the idea is admitted into society that property is not as sacred as the laws of God, and that there is not a force of law and public justice to protect it, anarchy and tyranny commence.  
--John Adams<sup>1</sup>

Private property is a creature of society, and is subject to the calls of that society where its necessities require it, even to the last farthing.  
--Benjamin Franklin<sup>2</sup>

New Hampshire's state government recognizes that zoning and land use regulations are essential tools for guiding industrial growth, residential development, and population increases. Therefore, state government requires that the local legislative body of any city, town, or county of unincorporated areas must adopt some form of zoning if they wish to limit the property rights of the citizens.<sup>3</sup> In order to assist local legislative bodies in designing appropriate zoning ordinances for their respective communities, the state has established central guidelines. These guidelines limit the powers of local planning and zoning boards when it comes to establishing regulations, but they should not be viewed as unacceptable hindrances. They should be seen as starting points—foundations for development.

In general, zoning ordinances must work to guide, not limit development. In effect, communities have to use extreme caution when establishing restrictions on land use. The state government requires that zoning be used only to promote “the health, safety, or the general welfare” of a given area.<sup>4</sup> In other words, local land use regulations must accomplish at least one of the following:

- lessen the congestion in streets
- secure safety from fires, panic, and other dangers
- provide adequate light and air
- prevent overcrowding of land
- avoid undue concentration of population
- facilitate the adequate provisions of transportation, solid waste facilities, water, sewerage, school, parks, child care, or
- assure proper use of natural resources and other public requirements.<sup>5</sup>

Zoning regulations should never compromise the integrity of agriculture, forestry, and commercial fisheries, and cannot limit the availability of residential housing, though the interpretation of this statute is subjective.<sup>6</sup>

Though the limitations mentioned above seem quite extensive, the state government empowers local legislative bodies to devise varying types of regulations to accomplish zoning goals. For example, communities have the power to regulate the timing of development and can establish laws regarding the controversial issue of accessory uses on private land.<sup>7</sup> Accessory uses allow the public or a third private party

to access private land. Moreover, all zoning ordinances have the unquestionable power to regulate and restrict the following:

- the height and size of buildings and other structures
- lot sizes, percentages of lots that may be occupied, the sizes of yards, courts, and other open spaces
- population density within the municipality
- location and use of buildings, structures, and land used for business, industrial, and residential purposes.<sup>8</sup>

As long as local legislative bodies obey the guidelines put forth by the state government, they have great latitude in creating regulations and restrictions that do not appear in this list.

### **Key Elements of Successful Zoning**

There are seven basic components to effective zoning:

- i. *Understanding*: It must be made clear that while zoning does regulate land use, it is not an infringement on personal rights. People must understand the principles that underlie zoning so that they are able refute anti-zoning propaganda disseminated by vested interests. Most importantly, both residents and local officials must also understand what zoning can and cannot accomplish.
- ii. *Attitude*: A community should adopt a zoning ordinance not because it is “the done thing” but because the community as a whole believes in the philosophy embraced in the principle of zoning.
- iii. *Goal*: Random and haphazard zoning will fail to produce logical patterns of development and prevent unwanted growth. The enactment of a zoning ordinance must be preceded by the adoption of a Master Plan, which ensures that a defined goal exists.
- iv. *Support*: Both officials and residents must be in support of the provisions adopted through the zoning ordinance. Adjustments to these regulations can be made on a case-by-case basis, where appropriate, but there must be underlying support for the ordinance.
- v. *Structure*: Effective zoning requires a well-crafted ordinance based on the specific needs and goals of the community. It cannot simply be a conglomeration of bits and

pieces of the zoning ordinances of other communities. The ordinance itself should be formulated on the basis of sound analysis, and good technical and professional advice.

- vi. *Enforcement:* Effective enforcement is imperative if zoning is to fulfill its objectives. The community must be prepared to contract enforcement personnel to ensure compliance with zoning provisions.
- vii. *Administration:* For a zoning ordinance to be effective it must be closely administered. The municipal attorney must understand and support the ordinance; he or she must be aware of the ever-changing elements of zoning, as determined by changes in state legislation and court decisions. The role of the Board of Adjustment or Board of Appeals is especially significant since this board has the power to adjust zoning provisions on a case-specific basis. Members must therefore be aware of their responsibility to the community and be prepared to carry out the board's function with integrity.<sup>9</sup>

## **Zoning Tools**

Zoning tools can help achieve the desired outcome of the Open Space Priorities Plan. Each tool has advantages and disadvantages, and one zoning tool may be beneficial in one area of Hanover while being a detriment in another. Additionally, not all areas in the Open Space Priorities Plan will from the use of any zoning tools. Understanding how to best use zoning to implement the Open Space Priorities Plan begins with an understanding of the various zoning tools available.

- i. *Open Space Development/Cluster Zoning:* Conventional zoning does not normally set aside land for open space; instead, it has been characterized as “planned sprawl.”<sup>10</sup> Open space development, however, recognizes the environmental and aesthetic benefits of open space within a town, and it requires that land be reserved for that purpose. This arrangement is most commonly achieved through the tool of cluster zoning, a technique that allows a group of new homes on a small part of the property while restricting development on the remainder of the property.<sup>11</sup> There are several advantages to cluster zoning. First, it does not require large public expenditures in order to achieve open space. Additionally, because there is an

incentive to increase housing density, there are economic advantages to the reduced cost of building road, water, and sewer lines. The primary disadvantage of cluster zoning remains the political feasibility of mandating open space on private property.

- ii. *Greenways and Buffers*: This zoning technique is emerging as one of the best ways to prevent conflict between different land uses. A “buffer” strip, typically 75 to 100 feet wide, separates different types of land.<sup>12</sup> In New Hampshire, state law requires the use of buffers in various instances, such as shoreland development, forestry, industrial areas, and trails.<sup>13</sup> Buffers serve their purpose well, and there are few disadvantages to their implementation.
- iii. *Large Minimum Lot Size Zoning*: Generally, this technique is used to promote the transfer of lots to agriculture instead of residential development.<sup>14</sup> However, it often results in “snob zoning.” Homes will be built, but only for those who can afford such large lot sizes. Additionally, land remains open space, but not usable for farming, forestry, or recreation. Lots can become “too large to mow, but too small to plow.”<sup>15</sup> Lyme, NH employs a 50-acre minimum lot size. Lyme has avoided the “snob zoning” phenomenon because it uses the 50-acre minimum to promote forestry, not residential development.
- iv. *Overlay Zoning Districts*: This zoning tool is used in association with existing zoning districts; it supplements them in order to protect certain natural resources. For example, zoning might exist to protect a certain plant species, and that protection would overlay other zoning districts. New Hampshire uses several overlay districts in its state laws, including historical districts, mountain districts, and steep slope and wetlands protection.<sup>16</sup> This tool avoids building on environmentally sensitive areas, but literally adds layers to enforcement and planning staff.
- v. *Site Plan Review*: This technique is used in towns that already have detailed zoning ordinances and subdivision regulations. Laws sometimes call for site plan reviews that address issues such as groundwater protection and open space. This established technique is used to change existing zoning regulations to update the needs of the community. It involves the use of consultants, such as engineers or hydrologists.

- vi. *Sliding Scale Zoning*: Under sliding scale zoning, the number of houses per area goes up as lot sizes decrease. Like large minimum lot size zoning, the purpose of this technique is to preserve the rural character of the land by having relatively fewer developments on large lot sizes. Sliding scale zoning might help avoid 'snob zoning' since it allows for smaller lot sizes. A wider variety of people can live in an area, yet not experience the exclusionary financial requisites associated with a large minimum lot size. However, this technique also offers no area-wide protection, since smaller parcels can be developed over all spaces. Promoting fractionation of habitat.<sup>17</sup>
- vii. *Urban Growth Boundary*: This zoning tool limits the area of development for a city for a given amount of time. The boundary line is based on projected public needs and resource protection goals.
- viii. *Performance and Design Standards*: In general, this technique sets specific guidelines on new development. For example, it might limit the slope of roads to 15 percent, or require tree-lined streets. Another performance/design zoning tool is flexible zoning: this technique allows flexibility on what specifically is put in place, as long as it meets certain performance standards.<sup>18</sup>
- ix. *Lottery*: Development can often occur at an undesirably fast rate. In order to limit development, towns in the Cape Cod and Lake Tahoe areas have employed a lottery system of limited building permits. Although extreme, these measures have been effective in limiting over-development and preserving open space.<sup>19, 20</sup>
- x. *Environmental Sensitivity Rankings*: In 1980, the Tahoe Regional Planning Agency (TRPA) developed a land rating system based on environmental sensitivity. Environmentally sensitive areas are ones whose balance could be quickly upset by development, or areas that are critical to human or ecosystem health, like groundwater recharge zones. The TRPA decided to use proximity to water sources, erosion concerns, and wildlife habitat. Development on the most sensitive areas is prohibited<sup>21</sup>. Because sensitivity levels change, and since all new developments need to be tested for sensitivity, monitoring and enforcement play particularly large roles in this zoning tool.



There are several areas mentioned in the Open Space Priorities Plan for which many of these zoning tools can help achieved desired results. Below, we explore the consequences of using various zoning tools for the nine areas that might benefit most from zoning changes.

### **Zoning In Hanover**

Four different types of groups are responsible for the creation and implementation of land use policies in Hanover: the Hanover Planning Board, the Zoning Board of Adjustment, the attendees of Town meetings, and various conservation groups. The Hanover Planning Board is the group responsible for the development of zoning policy. The Planning Board continually updates the Town's Master Plan, proposes zoning amendments, and reviews and adopts site plans and applications for subdivisions. The Zoning Board and the Zoning Board of Adjustment maintain and enforce regulations created by the planners. To apply for a building permit, an individual or company must provide detailed information regarding the proposed construction and the site on which it is located. Permission is granted depending on whether or not the project is in accordance with the Town's zoning regulations within the area.

The Zoning Board of Adjustment hears three types of zoning cases: appeals of Administrative Decisions are cases where the applicant claims that the zoning ordinance is not being enforced correctly; special Exceptions are cases that require the Zoning Board to consider the impact of projects on the neighborhood in which the project is proposed to be located; variances are cases where the applicant requests that certain requirements of the Zoning Ordinance be waived in a particular case.<sup>22</sup>

### **Current Zoning Regulations**

Zoning Ordinances in Hanover have evolved from the downtown precinct building and college regulations in 1931 to the first town-wide policy in 1961. Subsequent Town meetings have amended the 1976 Zoning Ordinance annually to create a flexible document that strives to suit the social and economic needs of the Town.<sup>23</sup>

An overview of Hanover's Zoning Classification reveals a set of rules consistent in its goals to delineate lands according to their best use and is taken directly from the most recent revision of the Zoning Ordinance from the Town of Hanover on May 9, 2000. However, there is room for slight changes to better implement the goals of the Open Space Plan.

For the purposes of this report, 'in-town' boundaries remain defined as in the Open Space Plan: "extending from the Connecticut River west of the Rinker tract and Oak Hill to and along Grasse Road to East Wheelock, then cross country to the intersection of Lebanon Street and Greensboro Road, and south on Lebanon Street to the southern border of the Town of Hanover."<sup>24</sup> Subsequently, the 'out of town' designation refers to land outside of this boundary including property southeast of Balch Hill to Etna. This land has municipal water and sewer service and has the highest potential for development in rural Hanover.

Within the boundaries of the zoning map, the most influential controls on development continue to be lot size, density of development, and distances from property lines.<sup>25</sup> The most recent Zoning Ordinance for rural Hanover has a three-acre minimum lot size, which allows single-family houses to be built without any neighborhood context. There is very little 'mixed-use' zoning in Hanover, which would encourage higher density residential and commercial development. The lack of mixed use allows for separation of living and shopping with increased driving distances.

Of the residential zones, classifications vary by allowed density of multiple or single-family living arrangements. General Residence Zoning (GR) sanctions duplex and apartment housing as well as Planned Residential Developments (PRDs). Within this zone, GR-2 offers the highest density residential construction, with the smaller minimum lot size and setbacks than GR-1. Typical neighborhood zoning in-town falls into the Single Residence (SR) category. Limited to the outskirts of the downtown retail core and corridor along Greensboro Road, SR categories vary by lot size and setbacks depending on class, with SR-3, SR-2, and SR-1 ranging from most to least dense.

As expected, though a majority of Hanover's population lives in-town, a majority of its land and the area with the greatest growth potential and loss of open space remains in Rural Residence (RR) classification. RR has a three-acre minimum lot size, allowing

both widely spaced single-family lots and developments clustered around a larger area of shared, open space. Much of Dartmouth College's lands fall under Institutional (I) classification, including residence halls and faculty housing on campus. The only other residential units allowed in Hanover are seasonal dwellings, in the Forestry Zone, inhabitable less than 183 days of the year so that they don't require municipal services.

Only four examples of deliberately clustered developments exist in Hanover—Ivy Pointe, Grasse Road Phase I, Berill Farms, and Cuttings Corner. Two more planned neighborhoods will be coming soon to Greensboro and Grasse Road.

Remaining lands in Hanover are zoned for commerce. Service Business and Limited Manufacturing Zoning (BM) include non-retail building types such as light industry, research, wholesale, and light manufacturing. The intent of this zoning separates industry from residential zones. Retail Business Zoning (B) is divided into two sub classes of local retail sales and services. Neighborhood Business District (B-1) encourages larger lot area and frontage while Central Business District Zoning (B-2) encourages smaller lots and taller buildings. Office and Laboratory Zoning (OL) offers high-end workspace with direct access to transportation networks, with no provisions for open space built into the zoning regulations.

Natural and aesthetic resource lands fall under the Forestry and Recreation (F) and Natural Preserve Zoning (NP). There are four parcels of land zoned as Nature Preserve (NP). These include the Upper Valley Land Trust easement protected Mink Brook, a Single Residence (SR-1) parcel located adjacent to Balch Hill, a Business and Limited Manufacturing (BM) land adjacent to the Bottomless Pit, and an easement protected section of Dartmouth College land.<sup>26</sup> Only special exemptions allow seasonal dwellings on F lands, with an emphasis on low intensity uses. "Least intensity use" on NP lands precludes any permanent structures or any actions that impair the fragile and unique qualities of these protected lands. New Hampshire Law, RSA 36-A, specifies use of this land under the jurisdiction of the Hanover Conservation Council.

Wetland and Water Body regulations supercede the existing zoning map of Hanover with a 75-foot setback, prohibiting all development around "areas that are saturated by surface ground water at a frequency and duration to support, and that under normal conditions does support, a predominance of vegetation typically adapted for life

in saturated soils.”<sup>27</sup> Special exemptions do allow a limited number of roads to cross wetlands, but any proposed use must be approved by both the Planning Board and the New Hampshire State Department of Environmental Services, ensuring that wetland protection will remain a major commitment in Hanover zoning.

### **Single versus Planned Residential Development**

The pattern of residential development in Hanover has shifted to the North of the “in-town” boundary in the last 10 years. Over eighty new homes were permitted on lots off Lyme Road, while 26 and 52 new homes were built in central and East Hanover respectively. Only seventy new homes built in Single Residence zones in-town.<sup>28</sup> An extremely limited supply of buildable lots in-town forces development in the rural zones of Hanover. Because of the threats to historical character in Hanover, rebuilding newer, high density housing in-town is unlikely.<sup>29</sup> To avoid scattered, sprawling housing lots over unusable scraps of open space, special attention to conservation-oriented housing construction must be made.

Both PRD and Open Space zoning allow smaller minimum lot sizes attached to larger parcels of protected, un-developable land. A key component of this open land is its accessibility to the public, such that all residents of a planned development have access to their designated, shared space. Residence associations then take primary control over the maintenance of the open space. The distinction between the two is that PRD regulations allow for multifamily dwellings and a 65% minimum open space while Open Space zoning only allows single residences with a minimum of 35% open space. Open Space Subdivisions within the SR1 and SR2 encourage compact neighborhoods with designated greenspace closer to the core of Hanover and Etna, achieving the goals of protected space and reduced transportation in the Open Space Plan.

In Hanover, however, there are only a limited number of PRDs or Open Space Subdivisions. Because of the high capital costs of planning and building such a project, the only major players that have instigated developments are Dartmouth College and the Simpson Development Corporation. Phase I and Phase II of Dartmouth’s Grasse Road developments have been permitted as an Open Space Development and a PRD respectively.<sup>30</sup> Phase II of the Grasse Road Development has 23 lots on twelve acres,

with eight acres of open space. A cursory review of the site shows that the designated OS lands are wetlands, with the central common of the neighborhood placed on an existing grade.<sup>31</sup>

Along Greensboro Road, the Berill Farms PRD and the Cuttings Corner Open Space Subdivision create 45 lots on 25.77 acres.<sup>32</sup> Wetlands push the Berill Farms houses away from the road and show extensive open space, ponds, and a community garden in the Cuttings Corner cul-de-sac, though surrounded by trees, directly abuts the road. An approved development by the Simpson Corporation includes a total of 83 units on 230 acres. The plans specify how units will have access to the common open space, including a connection to the Appalachian Trail. However, closer examination of the site reveals numerous wetlands to consider, slopes that need significant re-grading, and minimal open lawn space for community recreation.<sup>33</sup>

### **Special Considerations in Hanover**

Before deciding what zoning techniques are most suitable for different areas, one must first consider the current demographic of Hanover as well as the preservation direction in which the Town is headed.

#### *The Build-Out Plan<sup>34</sup>*

Hanover's build-out analysis shed light on two important trends: population growth and emerging residential patterns. If current trends of population growth are to continue, Hanover is likely to reach its maximum build-out population of 18,388 persons in approximately 65 years. Refer to Chapter 1 for a more extensive discussion.

#### *Dartmouth College*

An important factor to consider in Hanover Town planning is the influence of Dartmouth College, a major landholder of significant political influence. Dartmouth owns several tracts of land throughout Hanover, including a large portion in the southwest zoned institutional use. While Dartmouth's student population is expected to remain more or less static, the College is currently looking for ways to provide more social options to the student body, as well as increase the availability of on-campus

housing. The College is also looking for ways to provide better housing for faculty and graduate students.

Dartmouth's relationship with Hanover is essential to the proper functioning of Hanover's Master Plan. Durham, New Hampshire, and the University of New Hampshire share a similar relationship, and their Master Plans are intertwined just as those of Hanover and Dartmouth. It is rare for an institutional body to have exactly the same goals as the town in which it exists, though they are often co-dependent. Assimilating the two sets of goals takes cooperation and compromise.

Revisions to and updates of Durham's Master Plan carefully consider possible impacts on UNH's Master Plan, even though as a state body, the University is exempt from local regulations. Higher student enrollment in the public college has led to increasing construction and changes in traffic patterns in the town of 12,900 people, and Durham's zoning must adequately consider these changes. UNH is by far Durham's largest employer, and the student population is only 1400 persons smaller than the Town's population. Considerations regarding services and activities for the UNH student body are incorporated into the Town's Master Plan. Several provisions even specifically address college needs.

### *Public Perceptions of Zoning*

Zoning has the potential to mediate much of open space conservation in Hanover, principally because of the willingness of the community to cooperate with municipal means of land preservation. Hanover is similar to many small, rural communities in New Hampshire, but it is the exception to the anti-zoning character that occurs in small towns. Landowners nationally express the characteristic New Hampshire "Live Free or Die" mindset concerning restrictions on private property, but Hanover residents generally support municipal restrictions to preserve rural character and open space.

In towns where economic and residential growth is a high priority, zoning seems useful only for geographically restricting unwanted development to the outside of town centers. This phenomenon has recently appeared "Not In My Backyard (NIMBY), like in the growing Walmart syndrome. Most cases where zoning makes headlines involve either a landfill or the placement of a store like Walmart. People want the products from

such a chain but are very reluctant to let one into town. When the protection from unwanted development is applied to private property, most see zoning as a hindrance rather than a protection.

When zoning is applied to more affluent towns, it can be used to protect rural character, as it sometimes does for tourism or for the aesthetic needs of the population. Such is the case in a growing number of New England towns; Hanover is no exception. Scenic quality and open space are high on the list of Hanover's priorities, as evidenced by the creation of the Conservation Commission and by the development the OSPP, as well as by the many periodic surveys of public opinion that the Town has undertaken. Although contingent valuation such as surveys can yield erroneous results, the results in Hanover seem to indicate a high willingness to pay for such amenities as scenic views, rural character, and containment of sprawl.

In New Hampshire two misconceptions still persist about the cost of open space and the role of zoning in its conservation. The first of these is the belief that a residential and corporate tax base is a 'necessary evil'. Residents feel that open space and rural character, while attractive aesthetic options, do not provide the tax input to support Town services. Related economic analysis, some of which is discussed in Chapter Three, reveals that the opposite is actually true; industrial and residential burdens on the community cost more than open space preservation. The second misconception is the belief that large-lot zoning is the best way to achieve conservation goals. Several case studies have, however, shown that this strategy actually confounds conservation attempts by encouraging the construction of large temporary homes that fractionate wild habitat further. The perception persists nonetheless, perhaps because of a lack of known alternatives to large-lot zoning.

As demonstrated in surveys of the populace, the residents of Hanover already advocate the use of zoning to restrict development in order to preserve open space, even though they may believe it will cost more in taxes to maintain such a standard. Surveys undertaken by the Planning Board all generated very high levels of participation. Surveys were sent to Hanover residents in 1974, 1981, 1994 by the Planning Board, in 1998 by the Scenic Locales Committee, and in 1999 by the Guiding Growth in Rural Hanover Committee.

## **Potential Use of Zoning Regarding the Open Space Priorities Plan**

### **Telecommunications Zoning**

In the “General Recommendations” section of the Open Space Priorities Plan, the authors proposed “a zoning change to allow telecommunications facilities on pre-existing structures only.”<sup>35</sup> Implementing this recommendation would simply require a change of zoning policy through a modification of existing performance and design standards. The report, however, does not provide justification for this recommendation; one is left to assume that it was made simply to physically allow for more open space. In the future, however as technological needs change there may be a need for some free-standing telecommunications facilities, and the report fails to consider such potential necessities. Free-standing facilities can be built with minimal intrusion of open space. Dartmouth's satellite farm near the Dartmouth Medical School is an excellent example of how this implementation might work. An extensive site plan review in the context of larger zoning regulations can help find the best site.

Hanover needs to avoid the regional tendency toward confrontational cell tower placement. For example, the Town of West Brookfield, MA has become engulfed in controversy surrounding the placement of two new cell towers. Zoning laws in West Brookfield require a 1500-foot setback for new cell towers, but neither of the proposed sites meets this requirement. Zoning board member Richard Aube believes that the 1500 ft setback law eliminates many possible sites, and notes that most towns have only 300 to 500 ft setback laws. West Brookfield bylaws give the zoning board the option to waive the 1500 ft regulation, but these attempts are usually met with opposition from residents. Proponents of the variance believe it minimizes aesthetic and health impacts associated with cell towers, but opponents think it reduces the amount of possible sites, and often eliminates sites that may be less intrusive than others.<sup>36</sup>

### **Moose Mountain**

The Open Space Priorities Plan makes it very clear that the Town would like to preserve the rural character of the Moose Mountain area. In writing about Moose Mountain East, the committee asserts: “The threat to this area is the creeping



development of camps and seasonal dwellings. Current zoning allows seasonal homes with no limit to their size or impact”.<sup>37</sup> Moose Mountain West zoning regulations have a minimum lot size of only 10 acres, and seasonal dwellings there also “will have a negative effect on the wildlife habitat and wild character of the area.”<sup>38</sup>

There are several zoning options available for Moose Mountain. First, the minimum lot size in that area can be expanded from 10 to 50 acres, just as the bordering area in Lyme allows. This change can help facilitate the transfer of land use from seasonal residential housing to forestry or open space. It is important to note that if other zoning tools are not used in conjunction with an expansion of minimum lot size, the expansion may simply serve to spur the development of even larger seasonal residential homes. A second feasible zoning technique to use in Moose Mountain is open space/cluster zoning. This option gives the advantages of open space, while still allowing some form of residential use of the land. Finally, overlay zoning can help protect Moose Mountain’s natural resources, like watershed quality, biodiversity, and ridgeline view.

## **Etna**

Several different techniques may potentially be used for the preservation of Etna and its surrounding area. Planners may choose one or more of the following techniques for implementation in Etna, depending not only on political feasibility but also on the particular preservation goals of residents. The ultimate decision lies with the residents when the plan is put to a vote at the Town meeting. An Urban Growth Boundary, for example will permit residents of Etna to determine where development will be encouraged and where development will be discouraged. A boundary line should be designated within the town, based on population projections, resource availability, and other pertinent factors.

Another feasible approach could be a Village Overlay District. This technique would establish different development patterns in village areas. These areas would also incorporate additional zoning restrictions on new buildings and building patterns in accordance with the kind of construction village residents wish to encourage or avoid. A Historic Overlay District might also be effective by introducing additional zoning

restrictions in specified areas in order to protect historic structures and to discourage development in areas whose qualities would otherwise be compromised.

### **Appalachian Trail**

The AT is currently protected by a series of trail buffers that ensure its continued functionality and attractiveness. However, extension of the buffer would connect it to other protected land in the area, such as the Hanover Waterworks land. Such additional protection would strengthen not only the trail's vitality but also that of surrounding protected lands.

### **Rare Plants Report and Related Topics**

As discussed in Chapter One, the Natural Communities and Rare Plants of Hanover report, prepared by the New Hampshire chapter of the Nature Conservancy, outlines sensitive environmental areas and the populations of certain delicate plants. The report specifically outlines the following areas: Moose Mountain, Pressey Brook, Scales Brook, Straw Brook, the Water Works, Velvet Rocks, Lord's Hill, Bottomless Pit, Mink Brook, Huntington Hill, the Connecticut River Bank, the AT, Ferson Road, Hayes Hill, and Blueberry Hill.

Many of these areas already enjoy some environmental protection. All face the threat of fragmentation via development. One effective way of protecting these areas is to connect existing protected areas with these sensitive areas in a contiguous fashion; possible techniques include additional forestry and trail buffers. In areas of higher elevation like Moose Mountain, a mountain overlay district, or perhaps a steep slope overlay district, might be appropriate. In areas where sensitive species have been established, a species of concern overlay district may be established, with restrictions enacted in accordance with the species in question.

### **Zoning Problems**

While zoning can be an effective tool for land management, several caveats remain. One general disadvantage of zoning is that it is subject to change as a community's needs or interests change. Since long-term reliance on potentially short-

term zoning regulations is problematic, zoning tools are best used in combination with other land conservation techniques. In an effort to fully explore the downsides of zoning, this section begins with an outline of the major zoning problems, and concludes with issues to keep in mind for Hanover specifically.

### **Snob Zoning**

As Hanover expands into the hills, many of the new homes constructed are virtual castles. Zoning laws citing minimum acreage requirements for development contribute to these opulent residences. Massachusetts lawmakers are currently attempting to repeal Chapter 40B of their law code, the code which is familiarly known as the "anti-snob zoning law." In Worcester County, proposals to increase minimum land requirements for development have come under fire for their lack of affordable housing.

Increasing minimum acreage requirements is generally beneficial to communities. Though slightly more costly to run utilities and roads to dispersed units, this negative is by far overshadowed by the benefits resulting from preventing overcrowding. With fewer units under development, impacts on utilities, transportation, schools, and other town services are moderated. However, the need for affordable housing often comes into conflict with larger lot size requirements. Chapter 40B in the Massachusetts code has been criticized for forcing towns to expand housing capabilities beyond the capacity of the aforementioned amenities and services. Getting rid of Chapter 40B would allow for more local authority in determining how and where affordable housing units can be developed.<sup>39</sup>

Worcester County has recently proposed several zoning changes, the most controversial of which was increasing minimum lot sizes. The Planning Board notes undue stress upon the Town of Paxton's septic system, and has proposed increasing the minimum lot size from 20,000 to 30,000 square feet. This plan comes under fire as a product of 'snob zoning' and may face state review before approval.<sup>40</sup>

### **Zoning Enforcement**

Establishing a zoning ordinance may be relatively easy, but trying to enforce land use regulations that aid in zoning is quite difficult. In Hanover, the responsibility of

enforcing the local zoning ordinance falls on the planning and zoning staff and the county prosecutor. These officials, along with building inspectors, have the power to give citations and prosecute individuals who violate land use restrictions and regulations. In most cases, disputes are settled out of court when the guilty party agrees to pay a fine by mail and correct the error. In all communities, not just Hanover, civil penalties collected by district courts go to the municipality issuing the citation.<sup>41</sup> Such funds come in handy when towns are looking to acquire private lands for public use.

Though enforcement of land use regulations seems straightforward, at least in Hanover, there have been numerous problems with enforcement around the country. In large communities, especially those with numerous industries and landowners, it is difficult to ensure that all aspects of the zoning ordinance are being met. When members of the zoning and planning staff in such communities find that restrictions and regulations are being ignored or broken, they quickly try to remedy the issue. In many cases, they push for greater penalties in order to stop violations. If this approach does not work, they investigate changing the regulations, often making existing regulations more detailed and stringent. However, this attempt does not often help to fix the problem. Such changes often increase the number of violations because changes in regulations lead to increased complexity; a complex law is usually a law that people violate or choose to ignore because they do not understand its intricacies.<sup>42</sup>

## **Sprawl**

Zoning has been cited as a key contributor to the observable sprawl-oriented pattern of development. The exclusion of mixed-use zones and the tendency toward low development density has resulted in vast spread cities of huge zones of developmental uniformity and life-style conformity.<sup>43</sup> Hanover needs to pay attention to efficient use of zones in order to avoid this problem.

## **Social injustice**

Zoning, by placing restrictions on things such as lot size, building size, frontage, and the number of unrelated persons that can reside together, often serves to classify the population and to segregate them according to their socio-economic status.<sup>44</sup> Zoning has

been criticized for not allowing the development of affordable housing. Furthermore, zoning standards often have prohibitively expensive compliance requirement, leading to even higher housing costs.<sup>45</sup>

### **Ultimate Authority**

Occasionally the question arises as to whether state or local agencies have the ultimate authority in zoning issues. Two court cases making their way through the New Jersey court system could clarify these concerns. Both cases involve a conflict between towns trying to enact zoning to restrict the growth and activities of local airports. The airports have challenged these regulations by appealing to rulings set forth by the Federal Aviation Administration and state agencies protecting their interests. The outcome of these cases could determine which agency has the ultimate authority in zoning regulations.<sup>46</sup>

### **Environmental Injustice**

Society has become increasingly aware of the fact that environmental hazards and locally unwanted land uses are typically inequitably distributed on the basis of race and class. Trends have shown that low-income, high-minority neighborhoods are often subject to more intensive zoning than high-income, low-minority neighborhoods and in many cases, industrial-use and commercial-use designations are in very close proximity to residential-use designations.<sup>47</sup>

### **The Fifth Amendment's Takings Clause**

There are many legal intricacies to zoning, most of which are simplified for the purposes of this report. However, a greater deal of attention has recently been paid to the rights of landowners in the future. Since rezoning could potentially play an important role in open space preservation, it is important to understand the complexity of private ownership of land. In purchasing a parcel of land, a person, group, or company does not simply buy an estate, but all the potential uses of that estate. Property owners have a bundle of rights associated with their land. The most fundamental right within this bundle is the ability to possess all physical property granted in the deed. The second

most basic right is the privilege landowners have to bar the public from accessing their land. In *Kaiser Aetna v the United States* (1979), the judge ruled that the right to exclude others is “one of the most essential sticks in the bundle of rights that are commonly characterized as property.”<sup>48</sup> Moreover, this bundle allows owners to develop their land as they see fit, excluding restrictions caused by easements on their property. A comprehensive discussion of easements is included in Chapter 4.

Though landowners have many rights regarding the use of their property, they do have to acknowledge restrictions established by local, state, and federal legislative bodies. The most basic restriction on private land declares that owners can never use their property in a way that compromises public welfare, safety, and health. Any activity that does violate this mandate is considered a public nuisance and a citation may be issued. Moreover, landowners must obey regulations established by government agencies for the purpose of promoting and protecting public goods, such as laws established to maintain the integrity of wetlands, riparian forests, and endangered species habitats.

Government agencies have the capacity to remove some rights from a landowner’s bundle, but they cannot operate with free reign when it comes to private property. The Fifth Amendment’s Takings Clause limits the government’s ability to infringe on the rights of property owners. The Takings Clause reads: “nor shall private property be taken for public use without just compensation.”<sup>49</sup> In other words, the government cannot take private property without paying the owner a just sum. Though the clause does not define what it means to ‘take’, numerous legal cases over the years have worked to create general guidelines that can be applied to the clause. As defined by past cases, a ‘regulatory taking’ occurs when:

- a full estate is taken by a government agency--the land title changes hands;
- a regulation leads to the loss of all or nearly all property value--unless it is a regulation designed to protect public health and safety;
- property is physically invaded by a government order--either permanently or temporarily; or
- unreasonable or disproportionate permits prohibit land use.<sup>50</sup>

Whenever any of the above activities occur, the government agency responsible for the regulatory taking must justly compensate the landowner.

Though government agencies have the power to take private property, they can only do so in order to promote a substantial public purpose. The New Hampshire State statute “requires the showing of a public purpose of any taking and of a probable net benefit if a taking occurs for the intended purpose.”<sup>51</sup> From this mandate, we see that a taking must work to accomplish some public goal, whether it be achieving an end highlighted in a community’s Master Plan or promoting public health and safety.

Determining just compensation for regulatory takings is a difficult task. In physical invasion cases, courts have rarely settled disputes by requiring legislative bodies to pay fees for damages. Instead, courts force the community or state, depending on who created the legislation in question, to stop the invasive activities or null the invasive regulations. But in cases where property owners lose all or nearly all of the economic value of their land, just compensation must be determined. There are three methods of appraisal used to accomplish this task: the comparable sales method, the income method, and the reproduction cost method. All three methods work to establish the total value of the land ‘taken’ by a government agency.

In the comparable sales method, an appraiser determines the value of the ‘taken’ property by looking at sales, or sales offerings, of similar properties in the area around the time of the taking. An appraiser using the income method determines property value by looking at the capitalized net income gained by the property on an annual basis. Using the reproduction cost method, an appraiser first determines the value of the land without buildings or structures, then adds the depreciated current cost of reconstructing the buildings and structures. The reproduction cost method tends to inflate the fair market value of the property. For the landowner it is profitable; for the legislative body responsible for compensation, it is not the optimal decision.<sup>52</sup>

### **Private Property Rights Movement**

Due to the rise of environmental concerns in the 1970s, state legislatures began strengthening the planning and regulatory capabilities of local governments. Therefore, when deciding what regulations would promote the overall integrity of developed and

undeveloped areas, community planners found great support from a sympathetic judiciary. Their power to establish regulations seemed limitless, but this legal latitude began to wane considerably with the start of a new decade. By the late 1980s, federal actions and insights had done their part to decrease the power of state governments and local legislative bodies. This push for abridged state and local power gained momentum when the Supreme Court began paying closer attention to the Fifth Amendment's Takings Clause. By 1990, the United States was facing increased judicial scrutiny regarding the protection of wetlands, historic districts, grazing lands, coastal areas, and open space. Increased public scrutiny forced community planners across the country to narrow their planning objectives.<sup>53</sup>

District courts and state legislatures are more hostile toward planning and environmental regulations than they have been in the past. New property rights laws are appearing around the country to safeguard landowners from the legislative powers of government agencies. Moreover, many of these new laws and other proposed laws see the Takings Clause as ample reason to sue. Property rights supporters continue broadening the scope of the clause, and have been working to establish new legislation that builds on the old.

Among new private property rights legislation, assessment laws, compensation laws, and conflict resolution laws are by far the most popular throughout the United States. Twenty-five states have adopted one or more of these laws in an attempt to give more financial security and legal support to property owners of all types.

In general, an assessment law works to predict how government legislation will impact property owners. In states that have adopted the law, all government agencies must "conduct assessments of proposed legislation, rules, and regulations to determine how they will impact private property rights."<sup>54</sup> The law keeps government agencies from running into problems concerning regulatory takings, and offers landowners new protection from unjust takings.

A compensation law focuses directly on the financial burdens that result from regulatory takings. According to the generic definitions regarding takings, a government agency 'takes' private property if the agency forces the owner to obey a regulation or support an action that removes all or nearly all economic value of the property. Over the



years, judges have questioned what is meant by ‘all or nearly all economic value’. Many government agencies believe that a 90% reduction in property value must occur before any regulation or action can be considered a taking. An endless number of property owners do not agree with this approximation. In effect, Arkansas, Maine, Montana, New Mexico, and other states have proposed legislation that would allow property owners to condemn their entire estate if a government regulation or action results in anywhere from a 20% to 50% (each state has its own percentage) reduction of fair market value.<sup>55</sup> The government agency responsible for lost property value would have to compensate the landowner for the full value of the estate!

In Oregon last November, voters approved Measure 7, a provision that will require the state and local governments to reimburse property owners if zoning or other provisions lower the value of the land. Oregon has long been known for focusing its zoning on conservation, and disenchanted landowners supported the compensatory measure. Owners who have purchased the land before land use restrictions have compromised the value of their property are subject to reimbursement from the state.<sup>56</sup>

A conflict resolution law is much less confrontational than a compensation law. It is used when landowners are displeased with government regulations and actions impacting their property. In these cases, the regulations and actions called into question do not qualify as takings, but still financially inconvenience landowners or prevent them from using their property as they wish. A conflict resolution law calls for a “formal process for negotiation among aggrieved parties, sometimes through the establishment of a new office for conflict resolution, whereby impacts on private property rights can be discussed and hopefully resolved to the satisfaction of all concerned.”<sup>57</sup> Such a law is important for maintaining healthy relations between private property owners and government agencies. An appeased landowner is less likely to resist future government regulations concerning private property.

Local officials should try to accomplish the goals of zoning ordinances and Master Plans without depending too heavily on regulations. Instead, they should use conservation easements and other innovative tools for assistance. When regulations are needed, zoning board members and planners need to know the law and its law’s limitations.

In New Hampshire, the state government gives local legislative bodies significant power when it comes to creating regulations, but there are also guidelines that must be followed. Local officials must be knowledgeable of these guidelines. Public participation in all activities in which private property rights are disputed should be encouraged. Giving landowners a voice through focus groups, surveys, and public meetings keeps them involved in zoning and planning processes. This involvement often prevents conflicts between landowners and government officials from getting out of control—it prevents the judiciary from having to step in.<sup>58</sup>

### **Problems Specific to Hanover**

- i. Many towns with rural agricultural roots have found that the re-zoning of agricultural property precludes the development rights on that property. An example of landowner loss of development rights occurred in Carroll County, Maryland. Two brothers planned to use the sale of their family's agricultural land as their retirement package. They bought the land with belief that the incorrect zoning had been originally designated, and its routine reversal would provide the necessary development rights for a golf course and residential development.<sup>59</sup> This problem could occur in Hanover if changes to existing zoning laws interfere with the potential planned investment on existing open space.
- ii. The possibility exists that the surveys, which showed approval of municipal open space protection, were not a good indication of all of Hanover's opinion. Should Hanover, like Lyme, distribute surveys to all adult residents as opposed to homeowners? While homeowners may be satisfied with the preservation of open space at the cost of limited residential development, renters or temporary/seasonal home owners who vote in the Town or contribute to its viability could have a very different perception of zoning and municipal land regulation. In that case, there could be opposition to zoning regulation to protect open space, which might not have been indicated by previous surveys. The 1998 *Scenic Locales* survey consisted of a mailing to rural landowners only, and the others were sent to households chosen randomly. The *Guiding Growth in New Hampshire* survey targeted only selected rural landowners, with questions about preserving rural character. None of the

surveys distinguished between the differing attitudes of large-lot property owners, those most likely to be impacted by large lot zoning. Additionally, it is unclear whether or not renters were included in the mailed portions of surveys. Such subsections of the community could have disparate opinions regarding affordable housing.

- iii. There is a discrepancy between the preservation of rural character and rural quality. Does Hanover want to look and feel like it once did or is it willing to devote money to the preservation of agricultural land? This factor was not covered in any of the surveys of Hanover thus far, and is the subject of much concern on the statewide level. The New Hampshire Cooperative Extension runs a program for communities attempting to preserve historic and rural character through support of local agriculture.<sup>60</sup> Given the public support in Hanover for organically grown vegetables and local industry, this suggestion is consistent with the goals of the Open Space Priority Plan.
- iv. Changes in the perception of zoning interfere with homeowner decisions. Zoning today is seen as necessary protection for preventing unchecked growth, as opposed to other parts of the country that see zoning as an infringement upon the property rights of land owners. But that could change with an increased dependence on or complexity in zoning. Take the case of Carl Drega, of Columbia, New Hampshire, who many say went on a killing spree as a result of his encounters with Connecticut River frontage zoning restrictions.<sup>61</sup> When zoning starts to interfere with perceived citizen rights, as in the case of Carl Drega, the perception of zoning as a legitimate open space preservation mechanism may end.
- v. Zoning is temporary and requires the constant re-approval and vigilance of the town's residents. A short-term change in the perception of zoning could result in permanent loss of open space through the reversal of zoning ordinances.
- vi. The public, though supportive of the ideals of zoning restrictions to preserve open space objectives, may have an understanding of exact zoning regulations that is less than ideal. Respondents to Town surveys had difficulty with name-specific zones or laws, but they were forthcoming with specific wishes for zoning goals, indicating that the public's perception of zoning may be influenced by misinformation.

Hanover must seek to educate its residents of the expectation of each zone, especially one that may become rezoned.

### **Learning from Vermont**

Vermont controls growth and preserves the environment with the guidance of Act 250, a farsighted piece of legislation enacted in 1970 that has provided an invaluable framework for the preservation of Vermont's environment. During the 1960s, Vermont began to experience unprecedented increases in recreational use. The Vermont Land Use and Development Law was passed to address the social, economic, and environmental impacts resulting from this increase. The Act created local and statewide environmental boards and granted these boards the power to regulate development using ten criteria outlined by the bill. In 1973 the Vermont legislature complimented Act 250 by adopting a development plan that stressed the preservation of agriculture, forestry, and recreational activities provided by Vermont's natural attributes.

Most new development is subject to Act 250 review, with certain exceptions for farming and forestry. The environmental board reviews the applications based on ten framework criteria, which include:

- i. Impact on water, soil erosion, and air pollution
- ii. Impact on educational institutions, municipal and state government services
- iii. Aesthetic and historical considerations
- iv. Impact on endangered species and their habitats
- v. Conformity with resource use plans as well as local and regional planning commissions.

Most plans are drafted while keeping these criteria in mind, ensuring well thought-out proposals. If requested by the applicant or if deemed a 'major' project, a public hearing may be held before the District's Environmental Commission. Most permits are issued within 60 days.<sup>62</sup>

Punishment for Act 250 violations usually comes in the form of fines for violations. Earlier this year the Agency of Natural Resources was fined \$10,000 by the Vermont Environmental Board for neglecting to get an Act 250 permit for trail work done at an altitude above 2,500 feet. The Agency of Natural Resources will put the amount of the fine toward environmental restoration projects in the surrounding area.<sup>63</sup>

Act 250 has not been free of controversy. In the 31 years since its inception the law has been updated several times, and now efforts are being made to loosen requirements. Detractors of the law, who are primarily businessmen and developers, claim that Act 250 constitutes unnecessary state involvement in the private sector, and that it favors big businesses, contributes to sprawl, and that it makes Vermont prohibitively expensive.<sup>64</sup> These parties are largely in support of a provision that is presently making its way through the Vermont Senate. This provision will allow witness testimony given in front of the district environmental commissions to be recorded legally, thereby saving time and money if a case is appealed. Environmental groups oppose this provision because they feel that turning informal Act 250 hearings into a legal forum will discourage citizen involvement. Proponents to Act 250 also claim that many of the delays in the permit process are not actually a result of the Act 250 screening process but of delays in local and state zoning hurdles. Vermont Environmental Board Chairwoman Marcy Harding contends, “If they really want the permit process to work better, they should look at what really is slowing down the process. Often it turns out that Act 250 is not the problem, it’s something else”.<sup>4</sup>

Though some improvements have been called for, Act 250 does not generally infringe on development. Ninety-eight percent of projects requiring Act 250 permits passed, though most are modified during the application process. Act 250 ensures the quality of development by holding developers to high standards; land use in Vermont has been well conceived and executed, preserving the Green Mountain state’s natural attributes and quality of life. The better-planned development projects make Vermont less susceptible to recession. Act 250’s success can be attributed to the original goal of balancing the interests of citizens, cities, and economic development, and has become a win-win situation for all involved. Though amended somewhat over the years, the framework has remained intact and Vermont has been able to handle increasing recreational demands while preserving its natural attributes.

## **Overall Recommendations**

Hanover is a community of financial opportunity and aesthetic integrity: a place that attracts, and will continue to attract, people searching for a balanced community to

call home. Hanover's appeal as a hometown will ensure an inevitable population increase in the coming years. This increase will call for greater residential and commercial development in order to provide for the needs of its people. The combined effect of population increase and new development has the unquestionable ability to destroy open space. In making recommendations concerning open space and zoning, residents and planners must remember that limiting growth and development through the use of regulations built into the zoning ordinance is impractical both by itself and as a long-term option. The following recommendations focus on the reasons for this failing, the pitfalls to avoid in zoning, and the properties of zoning that can aid in open space protection.

- New Hampshire's state government sees growth and development as life-blood; it believes growth and development are the virtues that allow a state to continue to prosper. Local legislative bodies are legally bound to oppose laws that may compromise this ideology. In effect, communities must use legislation sparingly when trying to preserve open space, because preserving open space means isolating property that could be used to promote development and accommodate population growth.
- Land use regulations established under a zoning ordinance are not the most effective means for preserving open space areas. Too many problems arise when it comes to legislation. The new private property rights movement, combined with the increasing importance of the Fifth Amendment's Takings Clause, may make zoning ordinances less effective in the future. Planners and zoning boards will have to ensure that regulations will not compromise the rights of property owners; in effect, their pathways toward achieving community goals will grow more and more narrow, and less regulatory options will be available.
- Zoning ordinances are not the best tools for accomplishing long-term goals because they are always subject to change. With the passing of time, a community's interests and needs change; therefore, the communities zoning ordinance must also change. Regulations established today can be revoked tomorrow. The authors of this report determined that the zoning ordinance can do very little to permanently maintain open

space areas in Hanover. The Planning Board should look toward other tools for achieving this goal.

- In those few instances where legislation may help open space preservation, we determined that the two best zoning tools for preserving open space are Open Space Development/Cluster Zoning and Large Minimum Lot Size Zoning. Because cluster zoning achieves a long-term solution within the realm of normally temporary restrictions, it will help Hanover retain remaining open space while still providing housing to residents. Large lot zoning likewise seems helpful to Hanover because it has the general support of the community.

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<sup>1</sup>Jacobs, Harvey M. *The Impacts of State Property Laws: Those Laws and My Land*. American Planning association. 14 April 2001. <<http://www.planning.org/pubs/zdmar98.htm>>.

<sup>2</sup>Jacobs.

<sup>3</sup>*RSA 674:16*. State of New Hampshire Revised Statutes Online. 14 April 2001. <<http://sudoc.nhsl.lib.nh.us/rsa/search.htm>>.

<sup>4</sup>*RSA 674:16*.

<sup>5</sup>*RSA 674:17*. State of New Hampshire Revised Statutes Online. 14 April 2001. <<http://sudoc.nhsl.lib.nh.us/rsa/search.htm>>.

<sup>6</sup>*RSA 672:1*. State of New Hampshire Revised Statutes Online. 14 April 2001. <<http://sudoc.nhsl.lib.nh.us/rsa/search.htm>>.

<sup>7</sup>*RSA 674:16*. State of New Hampshire Revised Statutes Online. 14 April 2001. <<http://sudoc.nhsl.lib.nh.us/rsa/search.htm>>.

<sup>8</sup>*RSA 674:16*.

<sup>9</sup>Rody, Martin J., and Herbert H. Smith. *Zoning Primer*. Trenton: Chandler-Davis Publishing Company, 1960.

<sup>10</sup>Arendt, Randall. *Open Space Zoning: What it is & why it Works*. 1992. Planning Commissioners Journal. 1 May 2001. <<http://www.plannersweb.com/articles/are015.html>>.

<sup>11</sup>*Conservation Zoning Tools*. 1000 Friends of Minnesota. 14 April 2001. <<http://www.1000fom.org/tool%20box/conservation%20zoning%20tools.pdf>>.

<sup>12</sup>Arendt.

<sup>13</sup>Taylor, Dorothy Tripp. *Open Space for New Hampshire*. Manchester: Electronic Prepress Solutions, Inc., 2000.

<sup>14</sup>*Conservation Zoning Tools*. 1000 Friends of Minnesota. 14 April 2001. <<http://www.1000fom.org/tool%20box/conservation%20zoning%20tools.pdf>>.

<sup>15</sup>Arendt.

<sup>16</sup>Taylor, 37-41.

<sup>17</sup>Arendt.

<sup>18</sup>Taylor, 45-47.

<sup>19</sup>“Study says Cape Cod will become clogged if zoning laws stand.” *Associated Press State and Local Wire*. 12 February 2000.

<sup>20</sup>*TRPA Background*. Tahoe Regional Planning Agency. 16 April 2001. <<http://www.trpa.org/trpabckg.html>>.

<sup>21</sup>Taylor, 37-41.

<sup>22</sup>Available at: <[http://www.hanovernh.org/twn\\_zoning.html](http://www.hanovernh.org/twn_zoning.html)>.

<sup>23</sup>Hanover Planning and Zoning Department. *Town of Hanover Zoning Ordinance*, 1995. 28 April. 2001 <[http://www.hanovernh.org/twn\\_zoning.html](http://www.hanovernh.org/twn_zoning.html)>.

<sup>24</sup>Town of Hanover Open Space Committee. *Open Space Priorities Plan*. December 2000.

<sup>25</sup>*Town of Hanover Zoning Ordinance*.

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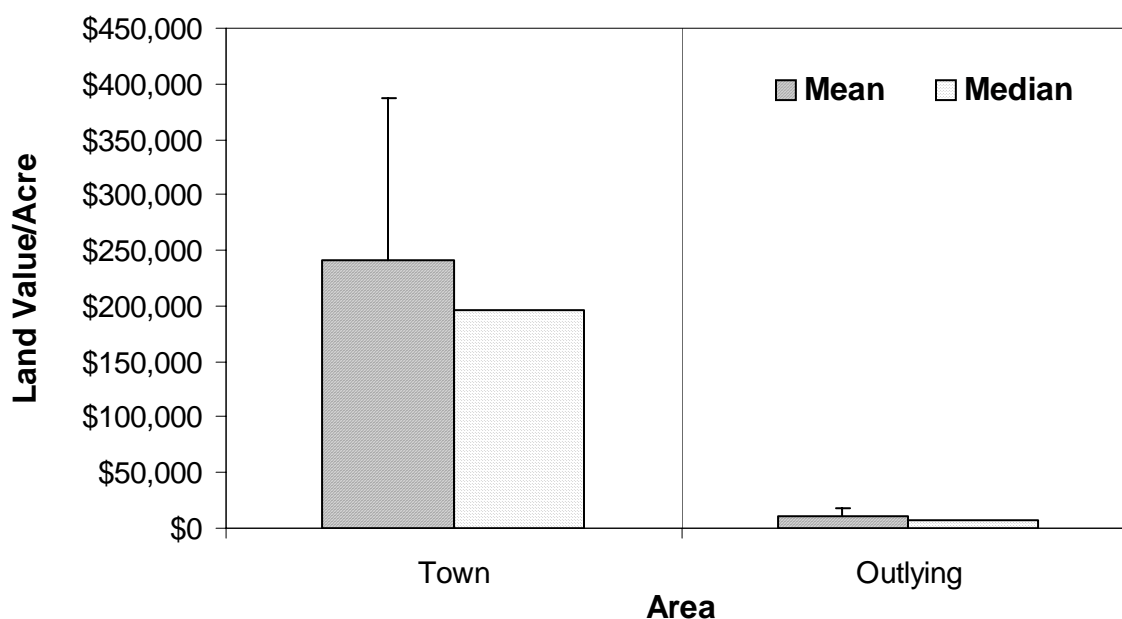
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## CHAPTER 3: ECONOMIC INCENTIVES

### Introduction

Economic incentives are one way in which components of the Open Space Priorities Plan could be implemented in Hanover. In their current state, the economic incentives of real estate in Hanover promote the purchase and development of land that has been prioritized as open space. Figure 1 graphically emphasizes this discrepancy: land value in Hanover is significantly cheaper in outlying open space areas than in the more densely populated “town” area.



**Figure 1. Comparative Land Values in Town vs. Outlying Areas of Hanover, NH.** Based on analysis of land values of 20 developed or developable properties each in both town and outlying areas of Hanover. Mean  $\pm$  SD, all differences statistically significant ( $p < .01$ ). Data collected from Hanover town real estate computer database, 4/27/01.

This figure clearly demonstrates that the existing economic incentive for new residents of Hanover is to purchase and develop the cheaper land available outside of the town center. Such a practice undoubtedly threatens the preservation of open space in Hanover. In this chapter, therefore, we present a number of policy tools that might be implemented to offset this current, undesirable incentive for land use.

Economic incentives are defined as instruments that use financial means to motivate land conservation and are generally created through pricing mechanisms, quantity mechanisms, or by defining liability rules.<sup>1</sup> Pricing mechanisms work by establishing a charge, tax, or subsidy that is expected to change behavior with regard to land conservation. One common example of a pricing mechanism is the Current Use Program, which provides tax breaks to landowners who maintain their properties in traditional uses such as agriculture and forestry. Quantity mechanisms are used to restrict the total quantity and configuration of development in order to retain a contiguous area of open space. They include programs such as density bonuses, which allow the developer some reduction in (zoning) regulations in return for providing some form of amenities to the community; and transfer of development rights programs (TDRs), which are designed to use market forces to transfer development from a sending area to a receiving area. Liability rules consist of policies such as development or impact fees which charge developers fees to help cover the costs of development on increased municipal services.

In this chapter, we will begin by highlighting the economic benefits of open space and by analyzing different economic tools (i.e. Cost of Community Services studies), which are used to provide information on the fiscal benefits of open space lands. We will then evaluate several economic incentives that are used in the preservation of open space, notably the Current Use Program, development or impact fees, density bonuses, and transfer of development rights programs. We will analyze how these tools have been applied in New Hampshire and other states to achieve conservation priorities, and we will use our analysis to make recommendations for the town of Hanover. Land use decisions are strongly affected by economic incentives, and, therefore, these mechanisms could be useful in achieving effective conservation in Hanover.

### **Cost of Community Services Studies**

“Land conservation is often less expensive for local governments than suburban style development. The old adage that cows do not send their children to school expresses a documented fact—that farms and other types of open land, far from being a drain on local taxes, actually subsidize local government by generating far more in property taxes than they demand in services.”<sup>2</sup>

Many communities throughout the country have made development-based decisions under the assumption that development pays. It seems reasonable to conclude that more houses translate into more people and, therefore, more tax money to be used within the community. Recently, however, this notion has been challenged by studies that show that there are substantial fiscal benefits to open space. Open space and parks offer a variety of amenities, such as preservation of waterfront and land, attractive views, and wildlife enhancement, which can be reflected in higher property values and increased marketability for property located near open space lands. Additional economic benefits of open space also include increased local and regional economic activity, reduced health costs associated with an increase in quality of life, the potential for higher tax revenues through decreased public service requirements, and higher quality of educational and scientific resources available.<sup>3</sup>

In New Hampshire, open space supports the economy in two distinct ways. First, open space is the primary resource for land-based industries such as agriculture and forestry, and these industries are dependent on open space for the production of food and raw materials. Second, open space is a key factor in both the recreation and tourism sectors. Open space, which includes lakes, farmland, forests, mountains, and wilderness, is one of the main reasons why numerous tourists visit New Hampshire. Furthermore, open space is a fundamental factor in the selection of New Hampshire for second homes.<sup>4</sup> According to the New Hampshire Wildlife Federation, 16% of all jobs in New Hampshire are dependent on open space, 23% of gross state product is directly related to open space, and 35% of total and local tax revenues come from open-space activities.<sup>5</sup>

One economic tool that is being used to highlight the economic benefit of open space land is the Cost of Community Services (COCS) study. Created in the mid 1980s by the American Farmland Trust, an organization working to protect agricultural lands throughout the country, COCS studies provide a cost-benefit analysis of land uses in a community at a specific point of time<sup>6</sup> by comparing the relationship between the costs associated with providing services to different land uses (i.e. school capacity, fire and police protection, etc.) to the benefits gained in tax revenues. The process of conducting a COCS study is relatively straightforward. According to the American Farmland Trust, there are five steps necessary in performing a COCS study. First, the scope of the study

is determined, land use categories are identified, and datum is collected regarding local revenues and expenditures. Revenues and expenditures are then divided and allocated to the land use categories that have been identified. Finally, the data is analyzed and revenue-to-expenditure ratios calculated in order to determine which land uses are the most cost-efficient.<sup>7</sup>

More specifically, these studies most often break land use down into three categories: Residential, Commercial and Industrial, and Open Space. Revenues from the town are then examined and distributed among land uses. Major components of this section involve profits obtained through taxes (property and land use), motor vehicle permits, business licenses and fees, building fees, incomes from town departments, and property sales. Expenses are then divided similarly, with substantial costs to the residential land use due to school expenses, waste removal, police, fire, and ambulance services, road maintenance, and animal control. When it is difficult to estimate the exact revenues and expenditures that can be attributed to each land use category, a default percentage is used. This percentage is based on the relative property value of each land use category but is used as seldom as possible because it assumes that property value is an appropriate proxy for local spending and revenues.

## Examples and Results

Since their development in the mid-1980s COCS studies have been conducted in over 70 communities,<sup>8</sup> including eleven towns in New Hampshire. The table below displays the results of COCS studies in these New Hampshire communities.<sup>9</sup>

### Summary of Cost of Community Services Studies in New Hampshire Communities

**Table 1. Results of COCS Studies in New Hampshire Communities.** In the columns representing cost per dollar spent on Residential, Commercial, and Open Space lands, figures shown are calculations determining how much the town is spending on each land use for every dollar of revenue taken in by that same land use.

Community	Population	% of Open Space	Residential Cost per \$ Income	Commercial Cost per \$ Income	Open Space Cost per \$ Income
Groton	339	71%	\$1.01	\$0.12	\$0.79
Sutton	1,479	72%	\$1.01	\$0.40	\$0.21

Lyme	1,537	78%	\$1.05	\$0.28	\$0.23
Fremont	~2,700	64%	\$1.04	\$0.94	\$0.36
Deerfield	3,200	52%	\$1.15	\$0.22	\$0.35
Meredith	5,000	40%	\$1.06	\$0.48	\$0.29
Alton	3,500	55%	\$0.92	\$0.54	\$0.52
Stratham	~5,200	35%	\$1.15	\$0.19	\$0.40
Peterborough	5,600	25%	\$1.08	\$0.31	\$0.54
Exeter	13,000	25%	\$1.07	\$0.40	\$0.82
Dover	25,500	35%	\$1.15	\$0.63	\$0.94

The results of the COCS studies completed in these New Hampshire towns, as well as over sixty similar studies performed in many other parts of the country, all show that open space and commercial / industrial land generate more in local tax revenues than it costs local governments to provide services to them. Using these results, we calculated for these New Hampshire towns that for every dollar generated from open space, an average of \$.50 was spent in services. Moreover, the studies indicate that, on average, the income from residential property is insufficient to pay for the services that residents demand. This is the case because traditional residential housing brings with it tremendous costs in the way of community services, roads, landfills, and schools. There are examples of residential development that carry their own fiscal weight, however, such as housing for elderly and recreational / seasonal housing.<sup>10</sup>

The implications of these COCS studies, therefore, demonstrate that open space can be an economic asset that helps to contribute to the financial stability of local communities. These results are consistent with those of conventional fiscal impact analyses, which document the high cost of residential development and recommend commercial and industrial development to help balance local budgets. In addition, these COCS studies further enhance the findings of fiscal impact analyses by highlighting the fact that open space and agricultural land can also generate a fiscal surplus to help offset the shortfall created by residential demand for public services.<sup>11</sup> COCS studies thus provide local leaders with useful information to help them to encourage open-space protection and to invest in permanent open-space protection measures. These analyses can be used to gain public support for establishing funding sources for open space conservation (e.g. a bond issuance) by illustrating how the benefits gained in open space protection through “cost avoidance” can outweigh the costs of preserving these lands.<sup>12</sup>

## **Limitations**

While the results of COCS provide useful information regarding a community's fiscal situation, it is important to note that they do have their limitations. COCS studies are only intended to offer an assessment at a particular point in time, and they do not provide a community with a fiscal impact measure for a proposed development. In addition, there are many underlying assumptions that are made in apportioning costs across land uses, and these assumptions are sometimes subjective and most often based on discussions with local staff and officials. Many studies also do not differentiate between various types of land uses within each category, such as agricultural lands and vacant lots, which may have dissimilar costs and revenues associated with them.<sup>13</sup>

## **Other Economic Tools**

However, despite the limitations of COCS studies they nonetheless provide communities with a useful tool to guide future land use planning and to assess the net fiscal contribution of different land uses to local budgets. In addition, a whole range of other economic analysis tools can be used to supply information about fiscal impacts of land uses. Such examples of economic tools include the following:

- A study performed in Chester, NH and Peterborough, NH which found that the cost of educating students from residential areas was greater than the tax income from those neighborhoods;
- A statewide study comparing taxes and open space in all of New Hampshire which found that, on average, property taxes are higher in communities with more taxable property, residents, and commercial and industrial development and with larger tax bases;<sup>14</sup>
- A fiscal impact study conducted in Londonberry, NH which evaluated the tax consequences of development versus a taxpayer-funded purchase of development rights on a commercial apple orchard located near the center of town and found that a purchase of development rights would lead to lower tax bills in the long run.<sup>15</sup>

### **Implementation of a COCS in Hanover**

Each community in New Hampshire has a different mix of residential, commercial, industrial, and open-space land-use components, and the results of the New Hampshire studies indicated above may not be applicable to other towns. The implementation of a COCS study in the town of Hanover might prove to be beneficial in that it may provide useful information regarding the economic benefits of open space and to gain public support for land conservation. A COCS study used in combination with an assessment of the costs of purchasing conservation easements or directly purchasing lands designated as open space in the Open Space Priorities Plan may be a useful way in which to highlight the economic benefits of conservation and to make the town of Hanover more aware of the value of open space. Additionally, conducting a COCS in Hanover would be relatively cheap and simple. Not only can COCS studies be completed by volunteers, but they are also inexpensive, with the COCS study performed in Lyme costing \$2000 (half of which was funded by S.P.A.C.E., the Statewide Program of Action of Conserve our Environment).<sup>16</sup>

### **Recommendations**

- A COCS study should be implemented in the town of Hanover in order to highlight the economic benefits of open space and to gain public support for establishing funding sources for open space conservation.
- Studying other economic analysis tools may help the town of Hanover gain a better understanding of additional ways in which to obtain information about the fiscal impacts of land uses.
- A COCS study used in combination with an assessment of the costs of purchasing conservation easements or directly purchasing lands designated as open space in the Open Space Priorities Plan could be helpful to the town of Hanover by indicating how the benefits gained through “cost avoidance” can outweigh the costs of preserving open space lands. For more information on easement and acquisitions, please see



### **Current Use Program**

The Current Use Tax Program in New Hampshire is a statewide economic incentive strategy that encourages open land conservation. Known to other states as the Preferential Tax Program, this program gives tax breaks to land owners who use their land in a favorable way for agriculture, forestry, and other types of open space. Its fundamental purpose is to discourage land development.<sup>17</sup> In general, property tax rates are based on the market value of the land or its potential earning capabilities. Therefore, the landowners of open space face high property taxes in comparison to their actual earnings on unused land. The Current Use program supports open space landowners by taxing land enrolled in the program for its potential to generate income in its existing use, rather than being taxed on its possible income under the most economically profitable use in the real estate market.<sup>18</sup> The Current Use Taxation Law, RSA 79-A, was enacted in 1973 in the state of New Hampshire and has been one of the most effective conservation legislation through the years. The Declaration of Public Interest states that:

It is further declared to be in the public interest to prevent the loss of open space due to property taxation at values incompatible with open space usage...The means for encouraging preservation of open space authorized by this chapter are the assessment of land value for property taxation on the basis of current use...<sup>19</sup>

Landowners who would not be able to afford to keep their lands as open space under the regular property taxation rate are able to do so under this program. As a result, lower property taxes act as incentives for conservation, agriculture, and forestry that would otherwise be economically infeasible.<sup>20</sup> The Current Use Program encourages sound forest management by enabling landowners to keep the trees standing rather than harvesting them or developing the land.<sup>21</sup>

While the Current Use program has been in effect for over 25 years in New Hampshire, similar programs have also been well established and utilized across all 50 states, having first been implemented in 1956 in Maryland.<sup>22</sup> For example, Michigan and Wisconsin have a unique income tax credit system often called the "Circuit Breaker"

approach discussed below. The Current Use Tax Program is a voluntary program in which the landowners willing to conserve open space must apply to the town administration to qualify for the benefits.<sup>23</sup>

In New Hampshire, land enrolled under the Current Use Program is evaluated by assessors selected by the state. They in turn appraise the land at a lower value in order to receive tax breaks. In order to be eligible for this program, the land must be farmland, forest, wetland, or other undeveloped area that is at least 10 acres of size without any sort of development such as roads, buildings, or septic systems.<sup>24</sup> Exceptions are sometimes made on a case by case basis.

Today, almost two-thirds of taxable private land is enrolled under this program in New Hampshire. These 3 million acres benefit almost 27,000 landowners throughout the state. The majority of the beneficiaries are families and individuals with average to below average incomes with long term commitment to the program. About 20,000 acres are under the Current Use Program in the Hanover Township today, and the enrolled residents saved about 8 to 10 percent on their property taxes. This is equal to about \$50 to \$60 saved per acre each year on their property tax.<sup>25</sup>

### **Land Use Change Tax**

While the Current Use Program allows environmentally conscious landowners to conserve their property through tax breaks, the state and towns must cope with potentially lower tax revenues. The Land Use Change Tax (LUCT) is an alternative source of income that complements the Current Use program for these towns.<sup>26</sup> Since the Current Use Program is funded by a tax revenue loss, the state and the towns do not spend actual money in this conservation effort. Thus, the Current Use Program allows towns, which would otherwise not have the funds to fully engage in land easements and other costly conservation techniques, to participate in pragmatic land conservation. It is not difficult to see how the LUCT is one of the easiest and most successful conservation techniques used today due to its accessibility and simplicity.

When a landowner in New Hampshire decides to develop on land that is enrolled in the Current Use Program, he or she must pay a Land Use Change Tax levied by the town. This tax is equal to 10% of the full market value of the land when the change in

use occurs, and does not need to be paid until actual development begins. Furthermore, the LUCT is issued upon the area being developed, and not on the entire property. Thus, a landowner who has a piece of land that is subdivided into lots only has to pay the LUCT for those lots that are being developed. The remaining land is still eligible for current use provided that it is undeveloped. However, as soon as the amount of undeveloped property falls below ten acres—the minimum requirement for enrolling in the Current Use Program—the LUCT is levied for this remaining parcel, and the entire property no longer qualifies for the program.

The Land Use Change Tax provides a town with the opportunity to take back lost tax revenue from land that was originally enrolled in the Current Use Program. In fact, towns will not only reclaim the lost taxes, but also gain an additional return. A study by Charles Levesque demonstrates that towns indeed can earn an income from the LUCT.<sup>27</sup> After having analyzed ten New Hampshire towns, he found that on average, they were able to recapture all of the tax money lost to the Current Use Program plus a 56% return. Likewise, Hanover earned a substantial \$156,340 last year in LUCT revenues. Thus, from a township's perspective, it seems that the LUCT provides one incentive to continue using the Current Use Program. Clearly, it is a substantial source of revenue. It can be considered a source of comfort to towns that worry about losing potential tax revenues when much of the land is under the program. However, in Hanover, only 50% of this money goes to the conservation fund;<sup>28</sup> the rest is spent on a senior citizen home and other services.

From a landowner's perspective, the Land Use Change Tax acts as a deterrent of development. People thinking about developing would want to consider the amount they would have to pay for withdrawing their land from the Current Use Program. In this way, the LUCT should be used as an incentive for thoroughly planned land use prior to enrolling in the Current Use Program. Because the LUCT imposes a stiff fine on those who decide to withdraw land from the program, a landowner should be certain of his goals for his property and of his values on open space before enrolling. He will then be able to determine whether or not the Current Use Program is suitable for his land. Whichever way he chooses, the LUCT can potentially be avoided by not having to shift land in and out of the Current Use Program.

### **Case Study: Maine's Open Space Taxation**

Maine uses a system similar to New Hampshire's Current Use Program called the Open Space Taxation. This program, passed in 1994, proposed some current use taxation options for towns.<sup>29</sup> The program suggested that any land, to be included in the taxation program would receive a 20% reduction in its total taxed value.<sup>30</sup> Lands permanently set aside as open space, such as preserves for the purpose of farming or forestry, were to receive a 50% reduction in total taxed assessed value. In addition, land that was permanently limited under easements or as preserves under a term called "Forever Wild", was to be given a 70% reduction. Maine's Tree Growth Taxation program was similar in purpose to its Open Space Taxation program.<sup>31</sup> Landowners in Maine who owned commercial woodlots with a sustainable timber harvesting management plan of more than 10 acres were to receive lower tax rates. Prior to this, Maine's Farm and Open Space tax law as well as the Tree Growth tax law were passed in the 1970s in order to prevent property taxes from forcing woodlands, open space, and farms into becoming residential or other advanced development.<sup>32</sup>

The amount of land enrolled in Maine's Open Space Taxation program varies from place to place, ranging from just 2% to a substantial 36% of total town land. The "current use" designation does not necessarily last indefinitely because owners may shift land use, but it certainly provides an added level of long-term stability, especially to forestry and farming. However, while many local governments actively encourage enrollment in these plans, some have actually worked hard to discourage enrollment. These latter towns are hoping to maximize their short-term property tax revenues, while most likely compromising the value of their land in the long term and certainly the value of their ecological resources. It seems that towns in general want to preserve open space, but are sometimes unwilling to give up the short-term tax base in order to encourage this to take place. This being said, most comprehensive plans in Maine recommend that landowners enroll their land in either the Tree Growth or Open Space Taxation Programs.

### **Wisconsin's Farmland Preservation Program**

The Farmland Preservation Program used in Wisconsin is another plan that

encourages land conservation. Approved in 1977, this program was designed to provide tax relief to farmers, to conserve arable soil and water, and to preserve farmland by promoting wise land-use planning and development.<sup>33</sup> Out of the 16.8 million acres of farmable land in Wisconsin, about 8 million are enrolled in the program, and farmers are able to save a considerable amount of money. For example, in 1998, nearly 22,000 farmers received \$20 million in tax credits for having their farmland enrolled in the Farmland Preservation Program.<sup>34</sup> This is equal to \$907 per farmer. Towns and counties have placed 6.7 million acres of this land under exclusive agricultural zoning (EAZ), which ensures that the land is only used for agricultural and agriculturally related purposes, while the rest of the acreage is under individual farmland preservation agreements.

Despite its success, the Farmland Preservation Program is not immune to criticism. One criticism, put forth by the On Common Ground Foundation, is that the program's financial incentives neither recognize reduced on-farm income, nor provide a way of rewarding conservation-conscious or profitable farmers.<sup>35</sup> This organization suggests that soil and water standards be created as an incentive for farmers to improve or maintain their land. If they comply, they should be rewarded.

### **Circuit Breaker Taxes**

Wisconsin also implements "circuit breaker" taxes to supplement its current use taxes, which allow farmers to claim state income tax credits and to counteract local property tax bills.<sup>36</sup> The name comes from the relief from real property taxes that they provide to farmers by allowing them to "break out" of the "circuit" of the real estate market. Circuit breaker taxes, which are also used in New York and Michigan, have a three-part philosophy: to help farmers stay in business by lowering the real property taxes; to tax farmland based on its agricultural value instead of its full market value; and to protect land by alleviating farmers of the financial pressures that would potentially force them to sell their land for development.

### **Recommendations**

- New Hampshire's Current Use Program seems to be quite effective, and the system is

now deeply embedded in the way land is managed and taxed in New Hampshire. No significant alterations are needed.

- It is not only difficult, but also unconstitutional to significantly alter the Current Use Program for people who have already agreed to take part in the Current Use Program, as that would be a retroactive and therefore illegal tax.
- The 10% fee of the LUCT is a fair method of discouraging individuals from developing their land on a whim.
- The LUCT must not be too large, or else landowners would not want to risk having to pay it and therefore would be unlikely to enroll in the program in the first place.
- It seems sensible to look into donating more of the LUCT revenue in Hanover to the Conservation Council.

## **Impact Fees and Excise Taxes**

### **Impact Fees**

Impact Fees are fees charged by the town government on new development or subdivisions upon application for a building permit. Impact Fees are generally assessed when the building permit is issued, and collected upon certificate of occupancy. These fees may cover several added costs that new development incurs: extra police and fire protection, added school facilities, additional municipal water and sewer services, new park and recreational facilities, and the preservation of open space. Impact Fees allow towns to charge new developments for the added costs of services (beyond existing capacity) that the town must provide. Development that covers a large area adds extra strain on a town's financial resources since the costs of providing services at great distances can overwhelm tax revenue; impact fees have been used in New Hampshire and other rural towns to alleviate some of these costs.

Collection of Impact Fees is governed by the State of New Hampshire in Chapter 674, Local Land Use Planning and Regulatory Powers.<sup>37</sup> They must only include the additional costs accrued to the town by that specific development. All Impact Fees must be regulated and managed separate from all other town expenditures. Any Impact Fee that is not spent on the town within six years must be returned to the resident with the interest accrued. In the following section, we examine different types of impact fees and

their feasibility to control sprawl in Hanover.

## **Open Space**

It seems politically and legally infeasible to assess impact fees intended to create or purchase open space since the state of New Hampshire outlaws such impact fees in Section 674-21: “impact fee means a fee or assessment imposed upon development...for the construction or improvement of...public recreational facilities not including public open space.”<sup>38</sup> Furthermore, due to the 6-year time limit on spending any revenue collected, the availability of open space for purchase and the attainment of complementary finances become difficult obstacles.

## **Parks**

Unlike Open Space, Impact Fees for Parks & Recreation are feasible since they are legal in the state of New Hampshire. As long as the facilities or land purchased is exclusively dedicated to active recreational space, an impact fee may be charged. Two New Hampshire towns, Londonderry and Bedford, have successfully implemented Recreational Impact Fees. Recreational Impact Fees are constant geographically – that is, they do not vary by location within the town. Thus, fees of this sort are not useful tools to direct or guide the location of new development. However, they are useful in contributing to the expense of recreational facilities such as ball fields, swimming pools, tracks, and playgrounds that can be costly. In both Londonderry and Bedford, an outside consultant was hired to calculate the cost of current recreational facilities and to project demand through growth. This was done with the help of federal and state standards on recommended recreational space per person or population size. Gifts, donations, national grants and funding are subtracted from the basic costs of the new or additional facilities calculated. This cost is then divided on an individual basis and impact fees per a new household are estimated. In Londonderry and Bedford, these fees range from \$600 to \$800 for varying residential units. Neither town has had any difficulty finding locations or facilities on which to spend the money, and both have found that residents are satisfied with the fees.<sup>39</sup> Bedford, a town with a population of 18,000 that experienced a growth rate of almost 45% in between 1990 and 2000, collects an annual revenue of

approximately \$100,000 in Recreational Impact Fees. These fees are matched by the town's tax appropriations so almost \$200,000 is set aside for recreational facility improvements every year. About half this amount is actually spent every year.<sup>40</sup>

## **Services**

Municipal Service Impact Fees help fund the costs of development that is located at a distance from the urban core and thus requires additional sewer and water pipes or extended fire and police protection zones. Collecting these impact fees negates the expense of new facilities supplying new development that could be charged to already existing residents. In St. Albans, Vermont, a town of approximately 5,000 citizens, impact fees have met with great success. Impact Fees in St. Albans included charges to fund law enforcement, fire protection, libraries, road equipment and schools.<sup>41</sup> These fees actually resulted in significant savings for the town and the residents. In the first five years of the program, St. Albans generated over \$85,000 from Fire, Police, and Road Impact Fees and the interest generated by the fees. The combined effect of impact fees and life of asset financing generates an estimated \$1.6 million in savings for taxpayers in the town of St. Albans from 1994 to 1999.<sup>42</sup>

Although impact fees for schools, libraries, and parks do not vary with location within a town, it is possible to assess water and sewer impact fees so that development further from the town center is charged at a higher rate. A geographically dependent impact fee could direct growth; Lancaster, CA has successfully done just this. Lancaster's program sets a distance surcharge only on services such as street weeping, park maintenance, and police protection that are more expensive to provide at a greater distance. This surcharge increased with distance from the pro-rata service core. This added expense has dramatically reduced the number of proposals for development far away from the urban core and has limited rapid growth to the downtown area.<sup>43</sup>

In Hanover, there is an existing economic incentive to move out of the dense areas onto cheaper land, as shown by the analysis at the beginning of this chapter. Impact fees that are calculated for each site and thus take into account the distance of the new development from the central infrastructure can begin to offset this dramatic discrepancy in land-value prices in Hanover. However, impact fees alone may not be sufficient to



control sprawl, since the fees assessed must equal only the proven costs to the town of additional services, which might not be enough to prohibit rural sprawl. The fees will justly pay for the costs of development, which is a politically defensible stance. It is true that Impact Fees can raise land prices, but low-income housing can readily be exempted from the charges, thereby reducing the potential for an inequitable burden of cost.

### **Assessment of Impact Fees**

There are essentially two methodologies used to calculate impact fees: the average cost method and the marginal cost method. The average cost method relies on historical precedent to determine the average cost per capita for a particular type of facility. The developer is then charged an impact fee based on this average cost and the population of his development. For example, if the average cost of fire services per person was calculated to be \$800 and the development would consist of 4 homes holding an average of 2.0 people, the developer would be charged a total impact fee for fire services of \$6400, or \$1600 per household). There are, however, a number of problems with the average cost method of assessing impact fees. First of all, this method assumes that future costs will follow historical precedents and will not be affected by changes in technology. More importantly, the average cost method fails to account for variation in costs based on the location of the development: developments in higher-density town areas that are already served by existing fire facilities will be charged the same amount as a development in the rural area of town that require significantly higher capital expenditures for fire service.<sup>44</sup> The average cost method might therefore be most appropriate for calculating the impact fees of services that benefit the community equally, such as schools and parks.

The marginal cost method is an alternative method of calculating impact fees that might be more useful for directing development in Hanover. This method requires the consideration of each development individually, with an accurate and idiosyncratic assessment of costs of services for that particular case study. It should be noted that this method is more time-consuming and therefore more expensive than the average cost method, but it allows for a more fair assessment of impact fees for maintenance of the existing standards of service: developments outside of the pre-established town

infrastructure will be charged more heavily than those that rely on the existing services. The marginal cost of development on the community is much less in downtown areas than in outlying rural areas. By forcing these outlying developments to pay for the additional strain on town coffers, the marginal cost method of assessing impact fees could fairly provide an economic incentive to help protect Hanover's open space.<sup>45</sup> The marginal cost method would thus be most appropriately employed in Hanover for the determination of impact fees for such distance-dependent services as water, sewer, police, and fire.

### **Legal Issues**

A technical memorandum must be prepared, and a town ordinance allowing impact fees must be approved, before economic incentives such as impact fees can be used.<sup>46</sup> Recent lawsuits by developers against towns have challenged the legality of impact fees in certain situations. The legal expenses associated with these cases, along with enforcement costs, could make such a policy tool expensive unless the process is carefully thought out and implemented.<sup>47,48</sup> Excellent examples of how to go about actually measuring and calculating specific impact fees for particular services can be taken from reports of the successful results of St. Albans, Vermont<sup>49</sup>, Salt Lake City, Utah<sup>50</sup>, and Lancaster, California<sup>51</sup> (the latter successfully implemented distance-dependent impact fees that might be of use in consideration of Hanover's Open Space Priorities Plan; the town also has software available that is designed to aid with the calculation of impact fees). The New Hampshire towns of Londonderry and Bedford employed the services of impact fee consultant Bruce Mayberry, who also helped the Southern New Hampshire Planning Commission publish a useful handbook on impact fees.<sup>52</sup> Another excellent source on implementation is "Impact Fees: A Practical Guide for Calculation and Implementation".<sup>53</sup>

### **Excise Taxes**

Whereas impact fees cannot be used for open space, excise taxes provide an alternative means of attaining revenue that can be spent more flexibly. The development excise tax is defined as "a municipal excise tax on the business of subdividing land or

developing property.”<sup>54</sup> It has the advantage of generating large streams of revenue with flexible rates, no time restrictions, and no restriction on the use of the funds attained.<sup>55</sup>

The city of Boulder, Colorado, provides a good example of how development excise taxes can be applied in addition to the standard set of impact fees. Boulder implements three types of excise taxes: the development excise tax is based upon the replacement costs of capital improvements, the transportation excise tax covers the capital project needs created by new growth, and a park and land acquisition and development fee for the acquisition of community park land (in Hanover, this latter type of excise tax could be substituted for with an impact fee for parks and recreation). The taxes in Boulder apply regardless of the value of the property developed, and are often assessed per square footage of the development. Revenue from these taxes is channeled into individual funds created expressly for the type of community improvements targeted by each tax.<sup>56</sup>

In the case of Hanover, the two distinct advantages of the excise tax over impact fees are that it could allow the town to tax individual areas that have been prioritized by the Open Space Priorities Plan, while at the same time allowing the revenue to be spent on projects for this Plan. However, there are drawbacks to the excise tax: it must be authorized by the state legislature and approved by a community vote. In Hanover, where demand is already driving up housing prices, the potential for further price increases (although limited to new developments in specified areas) might be politically unpopular.<sup>57</sup>

A novel application of an excise tax that could help to implement the Open Space Priorities Plan would be similar to an impact fee for parks and recreation, except that the revenue from the excise tax could legally be used to purchase land for open space. With an excise tax, this land could either be located at the new development, or elsewhere in Hanover. The excise tax is not required to provide services solely for the development charged. Such a tax could thus be used to discourage development in certain proposed open space areas, while at the same time directing funds to where they might be most needed for the creation and protection of open space in Hanover.

## **Recommendations**

- Consider implementing a Parks/Recreation Impact Fee.
- Develop impact fees for schools and parks/recreation using the average cost method.
- Develop impact fees for fire, police, water and sewer using the marginal cost method.
- Consider an excise tax to generate revenue for purchasing land to designate as open space.

## **Transferring Development Rights**

### **Density Bonuses**

Density bonuses allow land to be developed beyond zoning regulations in exchange for amenities that benefit the community. They can be used to provide additional incentives to developers to build and yet continue to preserve open space. Most often used in “cluster development”, density bonuses allow the developer some reduction in (zoning) regulations in return for providing some form of amenities to the community, such as the preservation of open space. In effect, a developer would be allowed to build more units than zoning allowed in return for clustering them on one fourth of his property and turning the remaining three quarters over in trust to the government as preserved open-space.<sup>58</sup> Using density bonuses is often successful because they rely on incentives and are thus voluntary rather than compulsory.

In order for the usage of density bonuses to be effective, the system must be understood and supported by the leaders, developers, and members of the community involved. The goals of its usage should be outlined in an Official Community Plan alongside the specific policies. Guidelines about the conditions under which the bonuses may be used should be clear and equitable.

Market forces play a distinct role in the usage of density bonuses. Developers must have significant economic incentive and a measure of certainty about the economic viability of making the exchange of land for a relaxation of zoning rights. Therefore, this system will not work in a community where development is slow and unprofitable.<sup>59</sup>

Further, the market might be responsible for higher development prices. Allowances must be made for the community's tastes; the developer may not be able to construct the cheaper style of housing that is often the most profitable in density bonus uses. It may be necessary to pay more and plan an attractive community design in order to reap benefits.<sup>60</sup> All in all, valuing the bonus must take into account all additional costs of increased development and provide for a financial incentive beyond that. If the bonus is not large enough, it will be ignored by developers but if it is too large, the cost of providing the bonus will outweigh the amenities to the community.<sup>61</sup>

It is important to keep in mind that density bonuses should be addressed as part of an overall community plan. They will result in an increase in the overall density and if taken out of context of the greater goals of the community, they can appear to undermine local zoning regulations. The optimal level of development and density necessary to achieve those goals should be considered at all times when planning for and granting density bonuses.<sup>62</sup>

### **Transfer of Development Rights**

The transfer of development rights (TDR) is a method used to permanently preserve areas of open space within a community. Under a TDR program, the rights to develop a parcel of land are separated from the property holder's ownership rights; they can then be bought and sold independently from the land itself. Defined as "the process by which development rights are transferred from one lot, parcel, or area of land in a sending district to another lot, parcel, or area of land in one or more receiving districts,"<sup>63</sup> TDR programs funnel development into designated receiving areas and reduce or halt development in sending areas, thereby preserving open space. This aspect of management adds flexibility to zoning in the area of land conservation.

TDRs are focused on the private market of "development credits." The landowner selling the development rights is awarded a certain number of marketable credits for those rights. The landowner can then choose either to develop the land, or to sell the credits to developers in the receiving area in exchange for agreeing not to develop the land. However, he still retains ownership of the land and can continue to use it for certain approved purposes, such as agriculture or forestry, which do not involve

development. He can therefore reap a financial benefit from both the sale of the credits and his own land use. Consequently, the public benefits from having land that is permanently protected from development. Furthermore, the credit buyers benefit because they are able to build additional projects within a designated receiving zone.<sup>64</sup>

### **Key Elements of Successful TDR Programs**

In New Hampshire, TDRs are authorized under RSA 674:21(d), Innovative Land Use Controls, and are under the control of the local government. They can be used along with zoning or as the center of an open space plan as seen fit, but the zoning ordinance of the town must specifically define the TDR Program in all administrative and procedural aspects.<sup>65</sup> This will hopefully allow the program to be simple enough to be understood and used by community members. Yet, it should also be complex enough that it covers all of the necessary issues and is perceived to be fair. Along with public understanding and support of the reasons behind the use of TDRs, clear legislation is key in starting a successful program.

Defining the sending and receiving areas from the start is a critical ingredient in a successful program. This process begins with a generic environmental impact statement for each parcel of land being considered. For example, the New York State legislature defines sending zones as appropriate if they “consist of natural, scenic, recreational, agricultural, forest, or open land or sites of special historical, cultural, aesthetic or economic values sought to be protected.”<sup>66</sup> There must be adequate desire to retain the current face of the land and to place permanent barriers against development. Receiving districts must be able to accommodate the impact of higher development without resulting in significant environmental degradation. Because TDR programs are designed to allow development beyond what is allowed by current zoning regulations, consideration of environmental impact to the receiving district must be very thorough.<sup>67</sup>

Attempting to pre-plan how development will progress in receiving zones can also be extremely important. While it has proven relatively easy for communities to agree on areas that are in need of protection from development (the sending areas), it has proven significantly more difficult for communities to agree on exactly where and how development should proceed. For example, researchers who have been studying TDR

programs nationwide have reported what they perceived to be a “knee-jerk reaction against higher density” development by the public.<sup>68</sup> This is an important political obstacle to the development of a successful TDR program, as relatively large receiving areas are needed in order to ensure that an adequate market for development rights exists. The receiving districts should provide 30-50% more building units than the actual number of transferable rights would allow to develop. This will ensure competitive prices for the credits and help the private market basis of the program to work smoothly. Beyond this, a higher ratio of receiving areas to sending areas will be advantageous in creating larger receiving areas. In some cases, this is as high as 2.5 to 1.<sup>69</sup>

A related problem to the designation of receiving areas is defining and regulating the type of development that can occur in receiving areas. While most TDR programs establish and define “sites for increased density” (i.e. receiving areas), the

use of that density may not be constrained beyond the existing town zoning bylaws. The unfortunate result is that the increased density is as likely to be used for a suburban strip mall as for compact, centered development, thus creating localized sprawl within the receiving area.<sup>70</sup>

While some communities have made efforts to get around such problems by creating guidelines outlining specific types of development allowed in particular areas, the administrative complexity that such guidelines necessarily create has proven so high as to hinder the effectiveness of the program.<sup>71</sup> Thus, pre-planning development is crucial to solving this problem and ensuring economic viability.<sup>72</sup>

Finally, a tool that has proven quite useful in helping to establish a successful TDR program has been the development rights bank.<sup>73</sup> A TDR bank was implemented as part of a program designed to help preserve historical landmarks in Chicago and help solve what was perceived to be several related problems with other already-established TDR programs.<sup>74</sup> For example, “The small pool of potential buyers meant that the [land] owners might have a hard time finding a purchaser, and in the absence of competition for the TDRs, would probably receive a low price.”<sup>75</sup> Additionally, in New York, as in many other areas where TDR programs have been implemented, there was a time-lag problem; landowners in sending districts were often eager to sell their TDRs, but they were unable to find suitable buyers in the designated receiving areas right away.<sup>76</sup>

A development rights bank could play an integral role in creating a competitive market in development rights by facilitating TDR transactions. Instead of trying to find perspective buyers, landowners in sending districts can sell their TDRs directly to the bank in exchange for cash; this helps create an early TDR surplus that the bank can turn around and sell to developers in the receiving area. The goal of the bank is to ensure that landowners will be able to get a fair price for their TDRs at any time that they wish to sell them by providing a buyer of last resort. By creating an initial market, and by establishing price floors, TDR banks can help set “parameters for valuation,” thereby promoting a more competitive TDR market.<sup>77</sup>

### **Types of TDRs**

There are three main types of TDR programs to be considered. “Mandatory TDRs” change zoning laws with the purpose of reducing development in sending districts. In this case, landowners have no choice and must limit development on their properties. “Voluntary TDRs” leave the existing zoning laws in place in the sending districts but allows the owner to place a conservation easement on their property in exchange for development credits which they can then sell to buyers in the receiving zones (See Chapter 4 for a full investigation of conservation easements.) “Partial TDRs” create a situation by which owners in a sending zone can place conservation easements upon a part of their property and still retain development rights for other parts.<sup>78</sup>

### **Legal Concerns**

In addition to the problems of designating receiving areas, there are a number of legal issues that have surfaced through current TDR programs. The first such issue involves the use of the “eminent domain” clause in the United States Constitution, which allows the government to take private property without the owner’s consent. The Fifth Amendment limits this power, by requiring that the owner be provided “just compensation” for any governmental takings.<sup>79</sup> The Supreme Court has ruled that public regulation of private land use can, under certain circumstances, be considered a “taking,” for which the owner is entitled just compensation. If a landowner can prove that any



regulation, such as those that would establish a mandatory TDR program, “results in no economic or beneficial use remaining in the land,” then it is considered to be a taking.<sup>80</sup>

On several occasions, landowners have brought lawsuits against the planning agencies responsible for initiating mandatory TDR programs on the grounds that the compensation provided for their loss of development rights is not just. Over the years, the Supreme Court has ruled that TDRs may provide a “just” compensation for any takings that might occur under the program,<sup>81</sup> and that they may even allow local governments to sidestep the takings issue altogether.<sup>82</sup> In any case, most of the legal issues involving eminent domain in TDR programs can be avoided simply by adopting a voluntary TDR program, rather than a mandatory program. Under a voluntary program, any governmental “takings” occur only with the landowner’s permission; just compensation is not required in such cases.<sup>83</sup>

Another area in which past TDR programs have been challenged lies within the realm of substantive due process. In *Village of Euclid v. Ambler Realty Co.*, the Supreme Court upheld the right of local governments to enact zoning regulations, so long as they are not “clearly arbitrary or unreasonable, having no substantial relation to the public health, safety, morals, or general welfare.”<sup>84</sup> As a result of this interpretation, local governments must have some reasonable purpose (presumably rooted in public safety) behind their zoning regulations; they cannot be arbitrary.<sup>85</sup> Furthermore, this means that once established, a local government must adhere to its zoning plans, or “expose itself to a due process challenge.”<sup>86</sup> This creates a problem for TDR programs, which are typically designed to allow developers to build beyond the densities established by zoning regulations.

The problem under most TDR programs is that the government essentially asks developers to pay a premium to develop beyond limits established by zoning regulations in the receiving areas. This means that one of two things must be true about the receiving areas: either the developer is jeopardizing public health and safety by building in excess of what is allowed by zoning regulations (which are supposedly there to protect public safety), or the developer is not jeopardizing public health and safety, in which case the zoning limits were set too low in the first place, and therefore the developer should not have to pay a premium to exceed them. While this issue has not yet been fully explored

by the Court, there is at least some reason to be concerned about the possibility of litigation over TDR programs on substantive due process grounds.

## **Case Studies**

### *New Jersey Pinelands Commission*

The Pinelands Commission was created in 1979 by federal legislation in order to develop a management plan for one million acres of swamps, oak and pine forests, and berry farms that extend between Atlantic City and Philadelphia. The commission developed a plan that classified land into five categories: preservation, forests, agricultural production, rural development, and regional growth. Districts designated as preservation, agriculture and forest areas were considered “sending zones,” and were placed under strict land use controls. In exchange, landowners were given development credits with values corresponding to the development potential of their land. Land owners in receiving areas could purchase credits in order to build additional developments on their land.

The New Jersey legislature, in order to reach “full measure of the benefits” of the TDR program and to assure the marketability of the Pineland Development Credits (PDCs), created a TDR bank. In 1985, the Pinelands Development Credit Bank was created and “authorized to act as the buyer of ‘last resort’ for development credits as well as to guarantee loans secured by PDCs.”<sup>87</sup> The bank thus guarantees a minimum price for the PDC and ensures their value by treating the credit as an asset that the owner can then use as collateral. The bank, however, can never pay more than 80% of market value for the PDC in order to encourage private sales of TDRs. The Pinelands Development Credit Bank maintains a registry of PDCs and issues certificates, and is therefore involved in every PDC transaction to some extent.

The TDR bank concept is often credited for the Pinelands successful implementation of TDRs. The Bank was established to “jump start” the program. As a result, in the decade between 1981 and 1991, 5,900 acres of land in sending areas were conserved through the use 3,200 transferred development rights. Presently, 13,000 acres of land in southern New Jersey have been conserved through the TDR program.<sup>88</sup>

### *Montgomery County, Maryland*

Montgomery County, Maryland, north of Washington D.C., has been experiencing urban sprawl and the destruction of agricultural land since the mid-1950's. In response, the Maryland legislature, in an effort to prevent subdivisions of farmland, developed Montgomery County's General Plan. The plan's implementation strategy was finally developed in 1980 in Montgomery County's Functional Master Plan, which included a TDR program and credit bank.<sup>89</sup> The plan decreased the development density on one-third of the land from one house per five acres, to one house per every twenty-five acres. The town designated these sending areas as "Rural Density Transfer Zones." Landowners from the sending zones were allowed to sell development rights of their land at a rate of one per every five acres. The initial receiving area established in the town was adjacent to existing highway and railway corridors into Washington and could accommodate up to 3,000 development rights.

In order to ensure the demand for development rights, Montgomery County established a TDR bank. The bank would purchase TDRs and hold them as a last resort until receiving landowners agreed to purchase the rights. The bank remained in use between 1982 and 1990 to guarantee a buyer for TDRs until receiving areas could be set up. Once the market demand for TDRs matched the supply of rights from the Rural Density Transfer Zones, the bank was eventually abolished, as a strong market for TDRs has emerged.

Between 1983 and 1993, about 3,000 development rights had been transferred, resulting in the conservation of 15,000 acres of farmland under conservation easements. Montgomery County's success is suspected to have evolved from three main factors: (1) the restrictions on sending areas; (2) demand for TDRs has been high due to the rapid growth rate of the county; and (3) the County was proactive in the education of landowners, developers, realtors, and attorneys. As a result in Montgomery County, six other Maryland counties have adopted TDRs as well.<sup>90</sup>

### *Long Island Pine Barrens*

The Long Island Pine Barrens TDR program was implemented in 1995 and has been used only moderately. The Long Island Pine Barrens Maritime Reserve Act was

modeled after the New Jersey program and aimed to preserve the ecosystem in the Pine Barrens. However it contained a significant difference. The Pine Barrens Program set a ratio of receiving sites to the number of credits generated to be 2.5 to 1:

A PBC [Pine Barrens Credit] will be allocated for each single family dwelling permitted on a parcel of land, base on the development yield. The development yield varies, according to the amount of units the zoning permits per acre. For instance, if zoning permits four units per acre, the development yield factor is 2.7 Pine Barrens Credits per acre.<sup>91</sup>

The Pine Barrens case demonstrated the need to have large ratio of receiving areas to sending areas, thus necessitating larger receiving areas.

In the first three years of implementation, 189 acres of land from the preservation area were conserved through transferred development rights. Additionally, the Long Island Pine Barrens Protection Act of 1997 placed the Long Island Pine Barrens under protection from development to preserve the natural resources of the Pine Barrens-Peconic Bay area. The Act divided the land into a preservation area and a growth sector. By 1998, 228 parcels of land were awarded transferable development credits.

The Central Pine Barrens Joint Planning and Policy Commission was then created to oversee and regulate land use in the area. The Commission was obligated to “(1) inventory all privately owned land in the core preservation area; (2) calculate the development yield of all such parcels based on measures of area, density, height limitations, and floor-area-ratios; (3) notify the owners of such parcels of its determination; (4) designate receiving areas, both inside and outside the Central Pine barrens; and (5) consider the fiscal impact of the TDR program it develops.”<sup>92</sup>

#### *New Hampshire TDR Programs*

The City of Dover, New Hampshire implemented a TDR program in 1992 in an effort to encourage commercial development on executive and technology zones. Due to the recession in the mid 1990's, Dover's TDR program started slowly, but with the neighboring airbase in Portsmouth, industry was expected to eventually overflow. In 1998, Kramer Fabrics bought wetlands acreage from sending areas to place under a permanent conservation easement in exchange for the right to expand beyond their five-

acre limit. Since 1998, Kramer has expanded two more times, both times taking advantage of the TDR program, and placing more wetlands under permanent protection.

Bedford, New Hampshire implemented a TDR program into its cluster ordinances in 2000. It has not yet been used, but the Planning Board currently has one application that will be coming forward in May 2001. The future success of Bedford's TDR program faces a few known obstacles. Since 90% of the town does not have sewer, finding land that can accommodate additional lots in order to leave other land vacant will be difficult. Currently, the direction of its TDR program is very uncertain.<sup>93</sup>

### **Recommendations:**

- Hanover must be careful to clearly define sending and receiving areas before starting a TDR program in order to avoid legal issues and administrative complications.
- Hanover should be sure that the designated receiving areas are large enough to guarantee that all landowners in sending areas will be able to sell their development credits.
- A TDR bank should be used to guarantee a fair price for, and establish a competitive market in, development credits.
- The town should be sure to actively promote any implemented TDR program to ensure its use.

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<sup>3</sup> Kilday, Ruth. *Economic Benefits of Parks and Open Space*. 1990. Montgomery Country Lands Trust. 6 May 2001. <<http://www.mclt.com/benefits.htm>>.

<sup>4</sup> High, Colin. *Economic Impacts of Open Space*. Resource Systems Group (1998): 10.

<sup>5</sup> *Forest Note*. NH Wildlife Federation (Spring 1999): 27.

<sup>6</sup> Taylor, Dorothy Tripp. *Open Space for New Hampshire: A Toolbook of Techniques for the New Millennium*. (Manchester, NH: New Hampshire Wildlife Trust, 2000): 8-10.

<sup>7</sup> American Farmland Trust. *Cost of Community Services Studies Fact Sheet*. 2000. 4 Apr. 2001. <<http://www.farmlandinfo.org/fic/tas/tafs-cocs.html>>.

<sup>8</sup> American Farmland Trust, *Cost of Community Services Studies Fact Sheet*.

<sup>9</sup> Taylor, Dorothy Tripp. *Groton Cost of Community Services Study*. (6 Oct. 2000).

<sup>10</sup> Auger, Philip A. *Does Open Space Pay?* UNH Cooperative Extension: 2-8.

<sup>11</sup> American Farmland Trust, *Cost of Community Services Studies Fact Sheet*.

<sup>12</sup> Auger, Philip A, 6.

<sup>13</sup> Edwards, Mary. *Community Guide to Development Impact Analysis*. 2000. University of Wisconsin – Madison. 4 Apr. 2001.

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## **CHAPTER 4: CONSERVATION EASEMENTS AND LAND ACQUISITION**

### **Chapter Introduction**

Conservation easements and land acquisition are additional methods of land conservation that use the ownership of partial or full rights to open space lands. Conservation easements are a mechanism in which landowners place permanent restrictions on the development of their property by selling or donating the “right to develop” to a municipality or a private conservation organization. Land acquisition, via purchase or donation, is a mechanism in which full ownership of a parcel of land is transferred solely for purposes of conservation. Both are land protection methods that have been utilized by the Town of Hanover and local conservation organizations in order to protect open space.

In this chapter, we look first at conservation easements and then at variations of land acquisition in order to determine their usefulness and applicability to Hanover’s open space goals. The nuances of conservation easements are introduced and described in an effort to understand how they work as land protection measures. The various tax incentives that make conservation easements attractive to landowners are outlined, and monitoring and enforcement issues are discussed. Case studies in areas outside of Hanover are used to illustrate the variety of easement options as well as to point out both the advantages and drawbacks that exist. The section concludes with a survey of conservation easements within Hanover.

The chapter then investigates land acquisition; the variations of transferring full ownership of lands are discussed and then the tax incentives that exist for each option are outlined. Case studies in areas surrounding Hanover illustrate the applicability of such a land protection measure and the suitability to lands within the Town.

Next, we include a section detailing the funding options that necessarily must accompany conservation easements and land acquisition mechanisms. First, the current funding situation in Hanover is presented, and then local, state, and federal sources of potential open space money are described. The feasibility of pursuing such land

conservation options through both municipal routes as well as through private organizations is illustrated, in order to provide recommendations on the usefulness of conservation easements and land acquisitions to protect open space in the Town of Hanover.

## **Conservation Easements**

### **Introduction to Easements**

A conservation easement is a voluntary agreement between a landowner(s) and a qualified conservation organization that allows a landowner to limit the type and amount of development on a property while retaining private ownership of the land.<sup>1</sup> An easement is a binding covenant that is legally recorded and runs with the property deed in perpetuity. The conservation easement is signed by the landowner(s), and only they can decide when and where to place the conservation easement. The conservation organization then assumes responsibility for ensuring that the provisions of the agreement are honored.

A conservation easement is defined in most state and federal laws as:

non-possessory interest of a holder in real property imposing limitations or affirmative obligations, the purposes of which include retaining or protecting natural, scenic, or open-space values of real property, assuring its availability for agricultural, forest, recreational, or open-space use, protecting natural resources, maintaining or enhancing air or water quality, or preserving historical, architectural, archaeological, or cultural aspects of real property.<sup>2</sup>

Ownership of a piece of property is usually described as a “bundle of rights”, which are included with the property when it is bought or sold. These rights include the entitlement to occupy, use, lease, sell, and develop the land. An easement involves the transfer of one or more of these rights from the landowner to someone who does not own the land. An easement permits the holder certain rights regarding the land for specified purposes while ownership of the land remains with the private property owner.<sup>3</sup> An easement may be donated or sold to another party (municipality, non-profit group, or land trust).

The objectives of a conservation easement are to retain or protect natural scenic or open-space values of real property, protect natural resources, limit unwanted development, retain ownership, and assure that the property will be protected forever regardless of ownership. Typically, conservation easements prevent uses such as construction, subdivision and mining, but allow agriculture, forestry, wildlife habitat, non-commercial recreation, watershed protection, and education.<sup>4</sup>

The holder of a conservation easement is responsible for monitoring and enforcement of the easement's terms, a duty that is critical to the continued protection of the land. Should an easement violation occur, the holder has several options, including litigation, arbitration, mediation, and restoration of the property to its condition prior to the easement violation.

A land trust is an example of a qualified conservation organization that acts as a holder of a conservation easement. A land trust is a non-profit organization established for the purpose of protecting land resources, such as agricultural land, open space, or wildlife habitat that is deemed important to the quality of life and environmental health of the community.<sup>5</sup> There are national land trusts, such as the Nature Conservancy, governmental land trusts, and local land trusts, such as the Upper Valley Land Trust. The Land Trust Alliance is a national organization dedicated to providing "services, publications, information, and training for land trusts and other land conservation organizations which work for public policies that advance land conservation". It serves as the national focus for the growing private land trust movement in the United States.<sup>6</sup> In response to local conservation needs, the trust is typically a grantee and accepts preserved property in nearly any manner. Land trusts can also accept cash, bonds, or property that has little conservation value, with the condition that the items or property will be sold at fair market value to acquire more valuable land.<sup>7</sup>

The advantages offered by conservation easements are numerous. The landowner retains private ownership, and easements are flexible and may be written to meet a particular landowner's needs. Conservation easements are also permanent, remaining in effect when the land changes hands. If easements are donated rather than sold, there are significant tax advantages, described later this section. In short, the donation of a conservation easement to a land trust is treated as a charitable gift of development rights.

The donation creates a charitable tax deduction, equal to the value of the conservation easement, on the landowner's federal and state income tax returns. Also, estate taxes are significantly lower and conservation easements sometimes will lower property taxes, a result of reduced valuation on the property.<sup>8</sup>

In the short run, conservation easements provide excellent tax breaks for owners. In the long run easements place an affirmative obligation on every subsequent landowner, presenting difficulties to their use. At some point in time an heir who cannot afford to adhere to the terms of the easement may seek to violate the terms of the contract. Furthermore, since the property has lost productive potential (market value) because of the easement, the selling price would likely be reduced.<sup>9</sup> There is also the inherent tension of property versus contract rights, concerns pertaining to the monitoring and enforcement of the easement, valuing the easement for tax purposes, and terminating the easement.<sup>10</sup> An increase in violations may occur as lands under easement change hands and the original conservation-minded donors no longer own the property.

There are also direct monetary costs to placing a conservation easement on a parcel of land. A description of the property has to be based on a survey by a licensed surveyor. In order to claim an income tax deduction, the value of the easement must be determined by an appraisal of the land. There are legal fees, as an easement should be reviewed with legal experts to obtain complete understanding of its easement impact. Additionally, conservancy efforts, including walking boundaries, reviewing the survey, consulting with the donor, and drafting the easement document typically take up ten to fifteen hours of staff time per easement. Monitoring requires a fee, usually in the form of a one-time cash gift to an easement stewardship fund. Other professional fees may include consultations with landscape architects, foresters, or engineers.<sup>11</sup>

### **Conservation Easements–Tax Incentives**

Residents of Hanover have expressed their desire for conservation and maintenance of open space.<sup>12</sup> Fortunately, large tracts of land throughout Hanover remain undeveloped, or are classified as sparse or seasonal residential development areas.<sup>13</sup> Private landowners are often faced with the dilemma of using their land to its greatest economic value or maintaining it in its current state. Federal, state, and local

taxes complicate the equation, forcing “land rich, but cash poor” residents to develop or subdivide large tracts of land in order to pay income, property and estate taxes. Conservation easements provide a mechanism by which landowners can maintain open space and receive a substantial income tax deduction, as well as lower property values for estate tax purposes.

The Internal Revenue Service allows an income tax deduction for the value of a donated conservation easement. To be eligible, the contribution must consist of qualified real property interest, made to a qualified organization, and donated exclusively for conservation purposes.<sup>14</sup> The Internal Revenue Code defines a qualified real property interest for a conservation easement as “a restriction granted in perpetuity on the use of the real property.”<sup>15</sup> Tax regulations state that a qualified organization must commit to protect the donation’s conservation purposes and be financially able to enforce the restrictions.<sup>16</sup> The Upper Valley Land Trust is an example of a local organization that is qualified to accept conservation easements. Finally, the donated land must qualify under the “conservation purposes test” established by the Internal Revenue Code. The land must serve to preserve either areas of outdoor recreation for the general public, natural habitat for wildlife, open space for scenic enjoyment, farmland, forestland, or historically important land.<sup>17</sup>

The income tax deduction is equal to the fair market value of the easement at the time of donation, can be determined in two ways. The value can be established by analyzing the sale price of comparable easements in the region, or the land can be appraised first without the easement and then re-appraised with the easement. The value of the easement is the difference between the two estimates. Once the value of the easement is determined, up to 30 percent of the donor’s adjusted gross income can be deducted in each of the six subsequent years until the donation is fully used.<sup>18</sup>

In addition to providing reductions in annual income taxes, conservation easements can be extremely useful in estate planning. When an individual inherits a tract of land with a conservation easement in place, the value of the land is calculated with the easement. Lower land value lowers estate taxes, preventing the development or subdivision of a tract in order to recoup what was lost in the inheritance. Recently, President Clinton signed the Taxpayer Relief Act of 1997 (TRA). In passing the bill, the

Senate stated that the TRA “will ease existing pressures to develop or sell off open space in order to raise funds to pay estate taxes and will thereby help to preserve environmentally significant land.”<sup>19</sup> TRA legislation includes a provision providing additional tax incentives for land protection. In addition to the aforementioned benefits, the TRA “allows an executor to elect to exclude from the decedent’s estate up to 40% of the value of the land beyond the reduction in value of the land caused by the conservation easement.”<sup>20</sup> The scenario below will further illustrate the benefits of the TRA in practice. One considering placing a conservation easement on his/her land should consult someone experienced with the law to make sure the land satisfies all legal requirements.

The following example has been modified from a scenario developed by Katherine Anderson, in her article “Conservation Easements: An Essential Tool for Practitioner’s Estate Planning Toolbox” in the *Land and Water Law Review*:<sup>21</sup>

John Doe, an environmentally conscious citizen, owns an open tract of land valued at \$2 million that has been in his family for several generations. His cash assets total \$500,000. This is a situation where land value far exceeds cash assets. At John’s death the land may be transferred to his wife without any tax penalty due to the marital deduction. However, at her death their children could owe about \$800,000 in federal estate taxes.

By placing a conservation easement on the land, Mr. Doe could preserve the open tract, receive an income tax break, and help reduce the burden on his children to pay the estate tax. The example continues:

The Does donate an easement on their land that reduces the land’s value from \$2 million to \$700,000. Their adjusted gross income is \$180,000 a year. The Does also have \$40,000 in other itemized deductions. Without the conservation easement donation they would owe about \$36,000 a year in Federal income tax and over six years would pay about \$215,000. With the donation of a conservation easement, 30 percent of their \$180,000 gross income could be deducted. This is \$54,000 for six years. Along with their other deductions their taxable income goes from \$180,000 to \$86,000. They will pay about \$19,000 a year in federal income tax and over six years will pay about \$115,000 with the conservation easement. Their savings over six years is about \$100,000.

While the Does receive a large break in their income taxes with the easement, their children will also benefit greatly from their decision.

With the conservation easement, the value of the land has been reduced from \$2 million to \$700,000 so those who inherit the land would only be responsible for paying the estate tax on \$700,000. Without the easement, the children would be forced to pay about 40 percent of the land's value, about \$800,000, for estate taxes. The easement would reduce the amount owned to roughly \$280,000. The children can save even more, if the land qualifies under the provisions of the Taxpayer Relief Act. If the land is subject to the TRA then 40 % of the value of the land may be excluded from estate taxes. Thus the amount that the children would pay taxes on would be reduced from \$700,000 to \$420,000. The children would now owe about \$168,000. Their \$500,000 in cash assets, stipulated above, could be used to pay the estate tax and prevent the subdivision of the family land.

The above example illustrates how placing a conservation easement on one's land can generate large tax incentives. While a scenario as simple as the one above is unlikely, conservation easements can be written to allow special provisions that might allow the children who inherit the land to each build a house on the property. The land that is developed would not be exempt from estate taxes, but a sizeable reduction would still occur. Conservation easements provide both income and estate tax relief for individuals and can help maintain much sought after open space.

Although prohibitive estate taxes currently provide many landowners with incentives to donate their properties, the future of estate taxes remains uncertain. With the Congressional approval of a new budget resolution similar to President Bush's sweeping proposal, large tax cuts across the board are a near certainty.<sup>22</sup> What this plan means for estate taxes is still unclear, but it is likely that either a significant reduction or total removal of federal estate taxes will be included in upcoming tax bills placed before the House and Senate in the next few weeks. This reduction could have some important consequences for environmental charities, since the current structure of federal estate taxes has provided one of the largest incentives for private donation of land and conservation easements. At present, the Congressional approval of upcoming tax bills is uncertain, but they will undoubtedly have very important implications for many of the "land rich and cash poor" in Hanover.

## **Monitoring and Enforcement of Conservation Easements**

Most conservation easements will naturally necessitate a thorough monitoring program in order to effectively preserve the guidelines and intentions of the easement. Although it is the duty of the landowner to obey the easement's terms, it is the responsibility of the easement holder to organize and fund the monitoring programs. Consequently, effective monitoring generally requires a strong level of commitment and planning, as well as a good deal of cooperation between both parties.

Though the most basic goal of any monitoring program is to catch violations of the easement, there are a wide variety of other potential benefits as well.<sup>23</sup> Monitoring saves time and money by discovering violations before they become major problems, and it provides a thorough record in the event of court action. Monitoring also fosters good relations with property owners. By building a good rapport with the landowners, monitors can educate and advise them on a variety of conservation issues. Landowners might be convinced to voluntarily strengthen the terms of their easements or urge their neighbors to accept similar easements as a result of the monitor's advice and education. Additionally, monitoring is important to satisfy IRS requirements for charitable tax deductions (Treas. Reg. 1.170-A-14(c)(1)). To qualify as an eligible conservation easement holder, the IRS requires that the organization have "a commitment to protect the conservation purposes of the donation." Good monitoring records are one of the best ways for a conservation organization to demonstrate such a commitment.

Because every easement has unique purposes and problems, effective monitoring often requires a good deal of flexibility. The Upper Valley Land Trust inspects most of their sites on an annual basis.<sup>24</sup> For larger properties, an aerial inspection is often the most effective method, while a simple walk-through will generally suffice for smaller properties. Regardless, monitors must be well versed in both the terms of the individual easements and the general methodologies involved in inspection. A good training program is prerequisite if volunteers are recruited to help monitor.

Even with an effective monitoring program, conservation easements are frequently violated. In such a situation, it is the responsibility of the easement holder to



identify the best solution for reparation. In general, most problems can be resolved through cooperation and negotiation with the landowners.

Voluntary reparation by the property owner is the most common and preferred method of enforcement. In many cases, an owner has unwittingly violated the terms of the easement, and is often willing to make voluntary reparations to the easement holder.<sup>25</sup> Voluntary mediation should always be pursued first in negotiations, though careful planning and legal counsel are necessary to streamline the process.

If neither side can reach an agreement for reparation, independent arbitrators can decide the case. However, even if both sides agree to arbitration, the results are not legally binding, and only a court is legally allowed to issue an injunction to halt the offense. Arbitration is often not very helpful in complicated situations, but can be helpful in many situations if both sides agree to honor the decision in full-faith.

As a last resort, easement holders can take a violator to court. This can be a long and expensive process, and requires extensive commitment on the part of the steward. Though some special provisions exist, violations of an easement are covered under basic contract law, and can be prosecuted both criminally and civilly.

At all times, cooperation and voluntary reparation should be pursued as the best course of mediation. Rarely is it in the interests of either party to take the issue to court, since the prohibitive time and financial requirements of doing so can be crippling to most land trusts and landowners. However, in many situations legal resolution is the only method for protecting the conservation purposes of the easement. As a result, effective enforcement of the easement's terms requires a potentially large amount of resources and commitment, a fact that any land trust or other organization should consider carefully before accepting responsibility for a given easement.

### **Case Studies: Conservation Easements in Areas Surrounding Hanover**

#### *The Vermont Land Trust—Large Scale Protection through Easements*

Since its founding in 1977, the Vermont Land Trust (VLT) has permanently protected more than 10% of Vermont's privately owned farm, forest and open space lands largely through the use of conservation easements, setting an example for Hanover's privately owned open lands. Last year was the VLT's most productive year

when 166,770 acres were conserved. Farmers on conserved land were surveyed and 98% reported satisfaction with the conservation program.<sup>26</sup> Some of the Vermont Land Trust's most recent accomplishments are listed below.

The Champion Lands Project conserved 132,625 forested acres in August 1999. Federal, state, and private entities divided ownership of the lands that had been the property of the paper company Champion International, Inc. Currently, the lands remain open for the traditional public uses such as hunting, fishing, and snowmobiling; these activities support much of the region's economy and way of life.<sup>27</sup>

The Deerfield River Project conserved 16,000 acres surrounding the Harriman and Somerset reservoirs. The Vermont Land Trust now holds a perpetual conservation easement on this mostly pristine, forested shoreline, which safeguards black bear habitat, deer wintering areas, loon and peregrine falcon habitat, and some of Vermont's rarest plants. The easement guarantees permanent public access to unspoiled shorelines along reservoirs. It enables commercial forestry harvest on a sustainable basis on the protected land.<sup>28</sup>

The Mad River Valley Project began in 1982 when Ann Day decided to conserve Knoll Farm. She saw a future pressed for growth and development, and she wanted her land protected. Knoll Farm was the first parcel of land conserved through the Vermont Land Trust in Mad River Valley. Today, the Vermont Land Trust has helped safeguard 6,000 acres of land in the Valley from development, including a large wilderness area, five farms, recreation lands, and riverside properties.<sup>29</sup>

### *Monadnock Region – A Model Example*

The Monadnock Conservancy has protected over 1,000 acres of land in 15 different towns in southwestern New Hampshire in the decade since its founding. The Monadnock Conservancy serves the region from Temple Mountain to the Connecticut River. The Harris Center is the primary land trust organization that serves the Monadnock Region's central highlands region, including Antrim and Hancock. "Both organizations have seen increasing interest in the concept of conservation easements as the most effective ways to protect lands in the future".<sup>30</sup> Easements not only encourage stewardship by landowners but also serve the communities by not leaving tax rolls intact.

As land becomes more expensive in New Hampshire, there have been fewer ownership transfers and more transfers of easements because it is politically easier for many communities. If full ownership of the land goes to private non-profits, the land will go off the tax rolls; however, with easements the property stays on the tax rolls and if in the Current Use program already, the land's tax revenue doesn't change by putting a conservation easement on the land.

The Monadnock Region has seen a large increase in public interest towards conservation easements. In 1988, the Harris Center had less than 300 acres protected through conservation easements. Today, the center protects more than 2,500 acres through easements. Last year alone, the Harris Center agreed to steward almost 800 acres through conservation easements. In only three months, more than 20 landowners, towns, and state agencies contacted the Monadnock Conservancy for assistance in protecting more than 2,500 acres.<sup>31</sup> The rise in easement popularity should be considered when discussing Hanover's land conservation options and goals.

There are several reasons why the Monadnock Region has been so successful at protecting land through the use of conservation easements. First, the Monadnock Conservancy has an enthusiastic and committed Board of Trustees, who are all aware of their responsibilities to the long-term financial health of the Conservancy. They formally adopted the Standards and Procedures of the Land Trust Alliance.

Second, the Conservancy's monitoring program is a model example, specifically designed to head off easement violations before they occur. The Conservancy visits each property at least annually to meet with the landowner, review the easement, and answer any questions or concerns. They also walk the property with the landowner and discuss the future of the land. Each annual visit documents the property's condition and photos are filed in a written report. When a property under easement changes ownership, the monitoring program members try to meet with the new owner before the land is transferred, to review and explain the terms of the easement. However, if a future landowner or third party violates the terms of the easement, the Conservancy will contact and work with them as much as possible to stop the activity and restore the land.<sup>32</sup>

The Monadnock Conservancy maintains adequate funds to cover expenses of annual monitoring and outreach to landowners. Revenue to cover these expenses comes

from the Stewardship Endowment and the Enforcement Fund. Easement grantors make a one-time tax-deductible gift to the Stewardship Endowment to provide for the care of the new easement in perpetuity; the suggested donation depends on size of property and complexity of easement. It keeps monitoring costs low by using volunteers.<sup>33</sup>

Recent easements created in the Monadnock Region illustrate different aspects of their Land Protection Policy. They include a parcel in Peterborough, where the owner granted an easement on his 43 acres of woods, wetlands and former farmland to protect watershed and wildlife. The easement adds acreage to a watershed already protected by the US Army Corps of Engineer, a recent 82-acre easement to the Town of Peterborough, and other conservation lands up and down the river.<sup>34</sup>

In Temple, 28 acres were put under an easement granted by William Banks to protect village heritage. Much of the forest, orchard, and pasture that have always served as the backdrop for Temple village will remain for future generations. This easement will specifically help to preserve the rural character of the village.<sup>35</sup>

In Dublin, a 9-acre parcel that contains the only high-yield aquifer for public drinking water supply was protected. This key piece of land has seen two attempts at development in recent years and is very important for the long-range future of the Town.<sup>36</sup>

In Walpole, many residents feel it is important to maintain all the remaining forests as permanent open space, whether the Town owns them or not. Last year, two Town forests and a third 109-acre parcel were placed under easement. The Watershed Town Forest is a popular destination for hikers, birders, and snowmobilers, and now will remain so in the future.<sup>37</sup>

The Monadnock Conservancy, the Nature Conservancy, and the Harris Center for Conservation Education have all worked to link and expand conservation lands that total over 18,000 acres around the *Andorra Highlands* in Stoddard. John and Jean Hoffman made the latest addition with their easement on 50 acres of land overlooking Bolster Pond in Sullivan to protect wildlife and forest.<sup>38</sup>

The Monadnock Region exhibits several similarities to the Town of Hanover. Both regions are facing development pressures that will increase in the future. Citizens of both regions are dedicated to the protection and conservation of the land. The

Monadnock Conservancy provides an excellent example for conservation organizations in Hanover to follow in order to successfully protect land through conservation easements.

*The Society for the Protection of New Hampshire Forests – Smaller Land Parcel Protection through Conservation Easements*

The Society for the Protection of New Hampshire Forests (SPNHF) is a non-profit, membership organization. Since its founding in 1901, the SPNHF has helped protect over one million acres in the state. In 2000, the organization protected 31 new properties, encompassing 4,896 acres. The protected areas represent landscapes of every type – from forests and farmland to wetlands and water frontage. SPNHF currently holds 453 easements on 68,653 acres.<sup>39</sup>

Some of SPNHF's most recent accomplishments include examples of lands applicable to the open space lands in the Town of Hanover. The Schendler Easement on 364 acres in Goshen/Lempster, is a property that is managed primarily for recreation and wildlife habitat and that features considerable portions of the Babb and Trow Brooks, several ponds, and 20 acres of open hay fields. The Stockwell/Mustin Easement on 322 acres in Sullivan connects SPNHF protected properties and the Bears Den State Forest. It contains excellent wildlife habitat, including a string of beaver meadows and a small bog. The Wheeler Easement on 195 acres in Peterborough is important both historically and environmentally because it is one of the oldest farms in Peterborough and the softwood forests provides good habitat for moose and deer. The Burgess Easement on 50 acres in Sharon provided a critical link between SPNHF lands and helped SPNHF take an important step in a strategic plan to protect the entire Gridley River headwaters area in Sharon, Jaffrey, and New Ipswich. The VandePoll Easement on 49 acres in Sullivan, is on an upland forest popular with many species of migratory and year-round waterfowl as well as raptors. It also contains habitat for black bear, moose, and bobcat. The Cahill Reserve, 800 acres in Stoddard is a large parcel of land providing excellent habitat for moose, bear, bobcat, migrating songbirds, and other species. The Bass Farm in Antrim, has an easement protecting scenic views and also one that protects diverse wildlife habitat, important agricultural soils, and an historic homestead.<sup>40</sup>

### *Adirondack Region of New York—Advantages and Drawbacks of Easements*

We now look outside of the Upper Valley Region for examples of conservation easements that illustrate both the benefits and drawbacks of such a land protection option. The forested lands of the Adirondack Region of New York present a number of obvious arguments in favor of conservation easements. Rural communities based on the forest industry may need the protection of conservation easements to maintain their current economic solvency because of the economic and environmental issues at stake.<sup>41</sup>

However, there are also some drawbacks to employing conservation easements. In certain instances, conservation easements may actually reduce environmental protection and sustainability in places where unacceptable forestry practices are continued. For example, in New York's Adirondacks, poor stewardship by rural owners has been encouraged through the use of government easements. The long-term benefits of this use are questionable. Conservation easements tie up property indefinitely and do not allow flexibility for future change in needs or values. Future ownership of these lands is uncertain and they may end up entirely owned by the government.<sup>42</sup> In some cases, the most affordable situation for heirs with a property under easement may be a donation to the government. When considering the use of conservation easements in the Hanover area, especially in forested areas, one should be aware of the potential negative impacts on the land that the Adirondack Region in New York has faced.

### **Conservation Easements in the Town of Hanover**

The Town of Hanover currently holds 19 conservation easements on various types of land including farms, trails, footpaths, highlands, and woodlands. There are also several easements in Hanover owned by private groups. The Society for the Protection of New Hampshire Forests holds four easements, the Upper Valley Land Trust holds six easements, the Hanover Conservation Council holds four easements, and the Residents' Association holds four conservation easements. State-owned easements, although not as prominent in Hanover as in other areas of the country, are also present. The New Hampshire Fish and Game department owns two conservation easements. The Hanover

Water Company Lands and Pine Park are not protected under conservation easements, but they are under a limited form of land protection.<sup>43</sup>

There are several reasons why the use of conservation easements should be continued and expanded in the Hanover area. First, they are important in order to sustain the scenic quality of the Town. Conservation easements also serve to protect natural resources and preserve the Town's historic sites and cultural landscapes.

With a number of conservation easements currently in place in Hanover, the Town has made significant achievements in the last several years, but there are still many parcels of land that would benefit greatly from these conservation measures. Lands that the Town of Hanover should consider for conservation easements include the working farm on Trescott Road, Gilman Island in the Connecticut River (which is now owned by U.S. Generating), and the riverbanks of the Connecticut River, which are important for managing fish and wildlife habitat. The Class VI portion on Piper Lane is rich in mesic forest and provides unique wildlife habitat, making it a high priority for the Town to protect. Conservation easements would also be helpful on Lord's Hill because the area is very vulnerable to development pressures. Placing an easement on this land would protect views to and from hillsides and ridgelines, and protect the substantial wildlife habitat area.<sup>44</sup>

The Monahan Valley is another area where conservation easements should be encouraged. The lands have existing protective covenants, but conservation easements would ensure the protection of the ground water aquifers. By placing a conservation easement on Moose Mountain East, the water quality in Scales and Presey Brooks watersheds would be protected. Owners of unprotected property in the Slade Brook area should be contacted about conserving their land in the lower Slade Brook Valley as well. The Water Company Land would benefit from the use of conservation easements to protect the reservoirs, natural resources, natural areas, and prime agricultural soils from the impacts of development. Additionally conservation easements can be placed on the properties to the west and north of the Water Company Lands.<sup>45</sup>

## **Recommendations**

- Conservation easements have the potential to be very powerful open space preservation tools in Hanover because they are effective, flexible, permanent, relatively inexpensive, and advantageous to private landowners. Landowners should be individually contacted and educated as to the potential that conservation easements hold for open space preservation and tax incentives.
- Involve local private and non-profit conservation groups in all conservation easement protection efforts and education. These local groups are important sources of funding, volunteers, personnel, information, and motivation. Monitoring and enforcement should be standardized across involved organizations in order to generate fair and understandable mechanisms to deal with violations.

## **Acquisition of Full Ownership**

### **Introduction to Land Acquisition and Donation**

In addition to conservation easements, land can also be protected when full ownership of the land is granted to or purchased by the public or by a private conservation organization. Private citizens who own property of significant conservation value may donate either the full or partial rights on their land. Additionally, the full rights to the land can be acquired by purchase at either the full property value or at a reduced price.

An unrestricted estate can also be donated in “fee simple” to a land trust. Such a situation exists when a grantor does not wish to pass the land to heirs, owns unused property, has substantial property holdings and wishes to relieve estate tax burdens, or no longer desires to manage or care for the land.<sup>46</sup> The grantee is awarded outright ownership of the land and an enduring restriction on the use of the land. Because the grantee has the ability to administer or dispose of the property in nearly any desired manner, the grantor must be assured that the grantee will use the property in a manner consistent with the grantor’s wishes.<sup>47</sup>

A variety of options exist for the conservation of land through conditioned donations. One of the most attractive for both parties involved is a reserved life estate. A reserved life estate, otherwise known as a ‘donation of a remainder interest’, allows the



grantor to donate his/her land while still retaining the right to live on it. Reserved life estates are generally negotiated as to allow the current residents to live out the remainder of their lives on the land, called a ‘remainder interest’ option, with full title and control of the property transferring afterwards.<sup>48</sup> However, reserved life estates can be crafted for any period of time, and donors may stipulate that at least one generation of their family will have rights to the land.

Another attractive form of conditioned donation is a charitable gift annuity (CGA).<sup>49</sup> A CGA is partly a gift and partly a purchase of an annuity contract. Essentially, the grantor of the land agrees to donate the property in return for an annual payment from the purchaser. The amount of this payment is dependent on a variety of factors including ages and numbers of the recipients. A National Committee on Gift Annuities has been established to decide proper annuity rates in a variety of situations. Though annuity payment rates are relatively negotiable, they will usually range between 6.5% and 10% of the value of the donated property.<sup>50</sup>

A bequest or ‘living trust’ allows a landowner to retain maximum flexibility during his/her lifetime and to promote conservation after their death. Landowners are able to donate property or conservation easements through their wills. A living trust can reduce a donor’s taxable estate while assuring permanent protection of land and allowing property owners control over the land during his/her lifetime.<sup>51</sup>

One alternative useful to an individual needing immediate income from the property, yet desiring the land to be preserved, is a bargain sale.<sup>52</sup> This option constitutes a part sale and part gift of the property to a land trust. The ‘sale’ by the property owner is the selling price of the property that is an amount below the property’s fair market value. The seller’s ‘gift’ is the difference between the sale price and the property’s fair market value, and is frequently deducted as a charitable donation from federal income taxes, to be further described below.<sup>53</sup>

### **Land Acquisition and Donation—Tax Incentives**

As with any charitable gift, donation of land to a conservation organization recognized by the Internal Revenue Service qualifies as a federally tax-deductible contribution. Consequently, outright donations, conditioned donations, and bargain sales

of land for open-space preservation provide a variety of tax incentives for potential donors.

Donors of land can receive a tax-deduction equal to the fair market value of the donated property. As with a donated easement, land donors are only eligible to deduct up to 30% of their income for up to six years after the time of sale. In situations involving those landowners who are “land rich and cash poor,” the value of their donation will often far exceed the value of their tax deductions. However, by donating the property they also exempt themselves from capital gains taxes on appreciated land, which would otherwise be due at the time of sale. This consideration is an especially important one in an area such as Hanover, where rural land has dramatically increased in value over the past several decades. Finally, donation of land exempts it from the donor’s taxable estate. As a result, family lands can be preserved forever without placing heirs in the unfortunate position of having to sell the land to cover estate taxes.

Another option for donation is through a bequest or living trust to a willing conservation organization. Although the donor receives no income tax deduction, the property value can be removed from the donors’ estate while simultaneously allowing them to enjoy the land for the remainder of their lives.

If a property meets the IRS test for having a significant contribution to environmental conservation, donation of a reserved life estate or remainder interest can be claimed as a taxable deduction. In general, the deductible value of the land is considered to be the fair market value at the time of sale minus the estimated value of the reserved life estate. However, values of remainder interests vary widely depending on the age and number of the donors. One particularly effective strategy for maximizing the taxable value of a remainder interest is to first place a conservation easement on the land. In the following example, donors who otherwise might not have qualified for a very large remainder interest were able to maximize the value of their taxable deduction, while still reserving the right to spend the remainder of their lives on the land.<sup>54</sup>

A husband and wife, ages 75 and 70, own a house and 100 acres of land with a fair market value of \$200,000. If they donated just a remainder interest, their total deduction would be 31% of the property value, or \$62,000. On the other hand, if they first placed a conservation easement on the property that lowered its fair market value to \$125,000, and then donated the remainder interest,

their total deduction would be \$113,750 (\$75,000 from the easement plus \$38,750 from the remainder interest on the restricted land value).

Because this combination provides both significant tax benefits and fully protects the conservation interests of the land, it should be pursued as a very attractive option for many landowners.<sup>55</sup>

Charitable Gift Annuities are usually subject to federal income tax deductions at the time of sale. The amount that a donor may deduct depends on the annual rate of the annuity payments; lower payments are eligible for larger deductions. For those donors who chose to select the rate recommended by the National Committee on Gift Annuities, the deduction is generally around 50% of the fair market value of the gifted property at the time of sale.<sup>56</sup> This deduction will change if the donor elects to alter the structure of the annuity rates at any period. Charitable Gift Annuities are most advantageous to older landowners, especially those that donate the land or defer the payments of annuities until after retirement, when they are eligible for higher tax deductions.<sup>57</sup>

Bargain sales of land to a certified conservation organization can provide the donor with both an immediate source of money as well as significant tax deductions. In general, the monetary difference between the fair market value of the land and the actual sale price is considered to be a charitable donation, and is therefore eligible for the same federal tax deductions as an outright donation. If a donor with land valued at \$100,000 sells his or her property to a conservation land trust for \$20,000, the former landowner is entitled to both the \$20,000 from the sale as well as a potential \$80,000 deduction from federal income taxes (deductible in increments of up to 30% of their income each year for up to six years). This approach can be very beneficial in situations of highly appreciated land, as it can free the donor from otherwise prohibitive capital gains taxes.

The benefits to full acquisition are obvious. The new owner has complete control over how the land is developed and maintained, for as long as the land remains in his or her possession. There is control over where the land ends up, with the ability to ensure that land is only passed along to conservation-friendly hands.

However, as appealing as outright acquisition may seem, it may also be the option fraught with the most potential obstacles. The most obvious is the cost associated with

acquiring land. The high price of land makes it difficult to obtain more than a few small parcels, too high to consider acquisition as a primary conservation plan. Land owned by non-profit organizations is subject to a lower property tax rate, so there is fear about land owned by conservation organizations negatively affecting the revenue base of the Town. There also exists concern about managing the land, and potentially high costs associated with land management.

### **Case Studies–Acquisition in Areas Surrounding Hanover**

Before looking at examples of acquisition in Hanover, there are numerous other towns in New Hampshire where land has been acquired, through purchase or donation, for the sole purpose of conservation. Among the most notable are Concord, Derry, Durham, Hollis, New London, and Stoddard.<sup>58</sup>

The Society for the Protection of New Hampshire Forests currently owns over 32,500 acres on 121 properties in 82 towns. The properties they have purchased include a 400-acre parcel on Mount Monadnock acquired in 1915, which has since been expanded to cover over 3,500 acres in the towns of Jaffrey, Troy and Dublin. Other properties include the *Pierce Reservation* in Stoddard (3,400 acres), the *Yatsevitch Forest* in Cornish and Plainfield (920 acres), the *Heald Tract* in Wilton (857 acres), and the *Creek Farm* property in Portsmouth (35 acres.)<sup>59</sup>

In addition to properties owned by The Society for the Protection of New Hampshire Forests, the Land Conservation Investment Program assisted the Town of Hopkinton in acquiring several large tracts of land through outright donation or bargain sale. The Monson Village Project in Hollis managed to fund-raise over \$330,000 to purchase 60 acres for conservation. Donors who were impressed by the amount raised by the project subsequently donated another 155 acres.<sup>60</sup>

### **Land Acquisition in the Town of Hanover**

Of the land currently acquired and owned for conservation purposes in Hanover, some parcels belong to the Conservation Council and others belong to the Town. Parcels owned by the Conservation Council have conservation easements registered with the Upper Valley Land Trust, which will continue to be held for conservation purposes. The

Town, however, does not have easements on the parcels mentioned in this section. These properties are therefore eligible for development at a future date if the Town decides it is in its best interest to do so.<sup>61</sup>

The Conservation Council owns Mink Brook, part of Balch Hill, and five acres near Goose Pond. These lands have been purchased largely with money raised by the Council, although the Mink Brook acquisition is a good example of how private donors can aid the quest for conservation. The parcel was recognized as a high priority by the Council years before it was put up for sale. The previous owner was unable to sell the property for his asking price, so he set plans into motion to create a housing development there. An anonymous donor offered to provide eight hundred thousand dollars if the Council could come up with the rest. Within a few weeks, the Council had fund-raised five hundred thousand dollars, and the property became under their ownership.<sup>62</sup>

Of the pieces of land owned by the Town of Hanover that are currently being used for conservation purposes, a prominent piece is the 1,000 acres of water company land in the center of Town, of which Hanover owns 49% and Dartmouth owns 51%. The Town owns another part of Balch Hill, the Tansee Preserve (a parcel of land adjacent to the Mink Brook property owned by the Conservation Council) and the Town Forest in the northeast corner of Hanover. The Town does not currently have plans to develop any of these lands, but none are permanently protected, so the Town could choose to develop them in the future. Town monies are not only scarce but also subject to vote, so it is unlikely that the Town will acquire significant portions of land for the sole purpose of conservation.<sup>63</sup> (Refer to the next section for funding considerations.)

The Conservation Council has made a list of additional properties it would like to consider acquiring in the future, including Slade Brook, a piece of riverfront property currently owned by DHMC, properties along the Appalachian Trail, and the water company land. These areas were selected by the Council because of their high priority in the Open Space Priorities Plan.<sup>64</sup>

Furthermore, the Appalachian Trail Conference (ATC) is a non-profit organization involved in protecting areas along the length of the Appalachian Trail. Within the town of Hanover, the ATC owns 7.4 acres, which was donated to them by a woman who wanted to ensure that the land be conserved. Although the ATC only owns

this small section of land, the federal government owns the additional hundreds of acres making up the corridor in Hanover, which is managed by the White Mountain National Forest.<sup>65</sup>

## **Recommendations**

- Acquisition of full ownership is a conservation technique that would also be powerful but limited in Hanover due to the expense and responsibility associated with full ownership. In cases of extreme land appreciation, donation or bargain sale of important lands becomes especially attractive to the current owner because of various tax incentives. Full ownership could be attractive to the Town if it could use the land to produce revenue—for example, as Town forests or recreation area.
- Involve local private and non-profit conservation groups, such as the Conservation Council and the Upper Valley Land Trust in all open space protection efforts.

## **Funding for Open Space Protection**

### **Current Situation in the Town of Hanover**

Preserving open space costs money. The more capital-intensive open space retention methods are acquisition and conservation easements. As numerous areas have been identified as having open space value, diverse means of funding will be needed to secure these lands and protect the open space of Hanover into the future. The roots of this funding need to be local and managed through a conservation commission that is committed to achieving the open space objectives of the Town. In 1999, the Hanover Town Meeting created a Conservation Commission, regulated under RSA 36:A4. The Commission established a conservation fund from which money can be spent at the Commission's discretion. When used acquire land, the money must approved by a vote in a Town Meeting.<sup>66</sup> Initially, The fund was created from a variety of existing funds, with a total budget of \$176,998.<sup>67</sup> In addition to this initial amount, the Town has voted that all revenue from timber sales on Town lands and fines collected from conservation and environmental violations shall go into the Conservation Commission's general fund budget, and any monies left over at the end of the year accrue to the conservation fund. However, there is no current system for the collection of conservation or environmental

finer, and the Town forester predicts only \$7,500 from timber sales over the next 5 years.<sup>68</sup> Half of the Land Use Change Tax (LUCT) receipts (see Chapter Three) go into the conservation fund. This allocation could be changed to 100% by a vote in a Town Meeting,<sup>69</sup> which would not only be beneficial but also appropriate, as land use change affects conservation and open space issues directly. These monies could then be used to counteract the effects of land use change.

Clearly, the conservation fund is extremely limited relative to the size and scope of the lands identified in the Hanover Open Space Priorities Plan. Most of the money will be needed for education, monitoring, enforcement, and stewardship programs. Simply holding a conservation easement is one of the cheaper means of conserving open space, costing a one-time fee of \$1,800 each.<sup>70</sup> Consequently, this money will need to be stretched as far as possible. Outright acquisition using conservation fund monies is prohibitively expensive, and even adding conservation easements will quickly add up in administrative costs. Fortunately, there are a number of alternative sources of funding, from private individuals through the spectrum to federal grant programs, which are available to help townships and municipalities protect their open space.

### **Local Sources of Funding**

Aside from money already contributed from the Town through LUCT receipts and fines, money and/or land from tax liens could be used to protect open space. If the defaulted property is identified as having particular open space value, it can be kept as such by the Town. If it is not valuable as open space land, the proceeds from selling it could go to the conservation fund.<sup>71</sup> These methods would require approval and implementation in a Town Meeting.

Hanover might consider a municipal bond to achieve their open space goals if all other options are exhausted. Because the open space plan will be implemented over a long time scale, municipal bonds would be more of an option ten or twenty years in the future. Presumably, a municipal bond would only be issued if a critical tract of land was in immediate need of protection, and could be protected using no other method. Municipal bond proposals, because of their direct effect on taxes, need to be approved by a two-thirds majority in Town Meeting.<sup>72</sup>

There are also numerous private sources on a local level. They are often very significant donations because of the donor's personal connection to the affected lands. Local land trusts, including the Upper Valley Land Trust and the Society for the Protection of New Hampshire Forests, are willing to hold conservation easements, taking the burden of paying for easement monitoring and enforcement off of the Town's conservation fund<sup>73</sup>. Local non-profits, such as the Conservation Council, can mobilize and raise hundreds of thousands of dollars in a short time, if the land is truly worth conserving.<sup>74</sup> Fundraising events can also raise hundreds of thousands, even millions, of dollars, if the need is great enough and well publicized. Because open space conservation has a direct effect on local people and their township, fundraising is the most substantial and reliable source of conservation funding.

### **State Sources of Funding**

There are a number of state sources of money, most of which match funds raised by local sources. These matching programs ensure that the benefiting township or municipality is serious about conservation and is willing to take an active role in the implementation of the efforts.

One such state-sponsored program is the Land and Conservation Heritage Investment Program (LCHIP). LCHIP is a grant program set up by the New Hampshire State Legislature, created in May of 2000. The program is designed to help communities conserve New Hampshire's most important natural, cultural, and historic resources by matching grants to municipalities and non-profit organizations to help save locally determined open spaces and historic sites.<sup>75</sup> Currently, the State Legislature has authorized up to \$13 million, but so far only \$3 million has been appropriated for the fund in 2001.<sup>76</sup> LCHIP specifically works by providing up to 50% of funding for approved projects to towns or non-profits working for conservation and/or preservation. Both the Town and the Conservation Council have received grants through this fund's predecessor, the Land Conservation Investment Program. It is expected that LCHIP could be an especially successful program for Hanover.<sup>77</sup> The state Senate is reviewing the budget May 2, 2001 and may add funds to LCHIP.<sup>78</sup>



Another program is the Water Supply Land Protection Grant Program. The state's Department of Environmental Services supplies grants through the Water Supply Land Conservation Grant Program. These grants are designed to help protect the quality of public drinking water, and must be matched 3:1 with local sources, which can include donated land or easements, public funds, transaction expenses, or private funds. This program is particularly suited to Hanover, which has limited protection over Water Company lands. It would be appropriate to apply for monies to protect this land further through this grant program. Applications are considered twice a year. First round applications are already being considered for 2001, but Hanover could apply in time for the second round in the fall of 2001.<sup>79</sup>

### **Federal Sources of Funding**

Federal funding works like state funding. Grants are applied for and often require matching funds for approval. These programs are a few more ways to stretch initial local money. One particularly large fund is the Land and Water Conservation Fund (LWCF). The LWCF provides funds for federal agencies as well as stateside funding. Although there was no funding for state grants from 1995-1999, there are once again funds available to the state for land and water conservation. Some of this money can be granted to appropriate Town or municipal projects through an application to the state. Hanover could be eligible for some of the statewide \$91 million appropriated in 2001. Congress is currently considering adding a fund to the LWCF, the Conservation and Reinvestment Act Fund, which would provide up to \$450 million for the same type of projects. Substantial growth of this fund could have significant impacts on monies available to townships.<sup>80</sup>

Another potential federal source is the Scenic and Cultural Byways Program. Grants are available through the Federal Highway Administration's Scenic Byways program annually. There is already a Scenic Byways Council for the Connecticut River Valley, a potential route through which to apply for funds.<sup>81</sup> The Open Space plan calls for protection along Lyme Road, and this area would be an excellent candidate for Federal Scenic Byways money.<sup>82</sup>

Private farmland in Hanover is eligible, if it meets certain criteria, for protection through a federal grant program called Farmland Protection Program. The criteria are consistent with the Open Space plan, so active farms in Hanover should consider this source of grant money to support continued and sustained agriculture.<sup>83</sup> Funds are also available through the USDA Forest Legacy Program to maintain privately owned forests as multi-use open space. This federal grant program provides up to 75% of the cost of keeping forests from being developed and it can be applied for by citizens, through the Town, or through local land trusts. Hanover citizens on Moose Mountain could potentially benefit from this grant program.<sup>84</sup> Many of the Open Space priority lands have water, either running or standing, within their boundaries. Through the North American Wetlands Conservation Fund, the federal government will match 1:1 any non-federal monies raised to protect these open spaces. Any of Hanover's priority lands with water are eligible for this federal money.<sup>85</sup>

### **Recommendations**

- Education and public motivation for open space conservation would be effective uses of the limited funds currently available. Because local public and private money is at the heart of funding efforts, good public education and relations are critical to meeting open space goals for the future.

### **Summary**

A conservation easement is a development restriction placed on a property that preserves the scenic and open-space value and natural resources of the land in perpetuity. It is a very powerful tool for preserving open space, and would most likely be the more widely used technique in Hanover. Conservation easements are advantageous because they are relatively inexpensive to install, are extremely effective in preventing development, and are legally binding in to the future, even if land ownership changes hands. Easements are attractive to the grantors because of numerous property, income and estate tax incentives that derive from the donation of part of the rights to the land, while still allowing the landowners to maintain their private property rights. They are

attractive to the grantee organization because they require minimal land management while completely protecting open space value.

Conservation easements have been used extensively for open space protection. There are numerous examples from Vermont, New York, and New Hampshire that illustrate the particular intricacies to each easement's goals. Easements are flexible enough to accommodate the wishes of most landowners and powerful enough to satisfy open space needs of Hanover.

Outright acquisition of important land is a more direct technique for open space conservation. Acquisition is accomplished through complete or partial donation of land, or land purchased directly by the Town or conservation organizations. There are a number of tax incentives from land donations according to the different methods of donating land for conservation purposes. In the case of Hanover, funds are limited to the point that outright purchase of open space land is prohibitively expensive for the Town. Private entities, such as the Conservation Council, can raise the money to buy certain sensitive lands; however, this avenue amounts to a small percentage of the land identified in the Open Space Plan. Donation or bargain sale would be much more practical for Hanover. Because ownership of the land is completely transferred in these situations, responsibility in terms of land management for the Town or conservation organization is greater than in the case of easements. It must be ensured that land bought by the public for conservation in the present does not revert to becoming developed in the future if housing and monetary pressures become too great.

Funding for these projects will need to come from outside sources. Land trusts and local conservation groups are the most reliable source of funding, personnel, information and volunteers. State and federal grant programs can be used to stretch local monies by supplying matching-funding type deals.

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<sup>1</sup>Little Traverse Conservancy. *What is a Conservation Easement?* 2 April 2001.

<<http://www.landtrust.org/ltc/easement.htm>>

<sup>2</sup>Baldwin, Melissa. "Conservation Easements: A Viable Tool for Land Preservation." *Land and Water Law Review*, University of Wyoming College of Law. 32 (1997): 105.

<sup>3</sup>Schear, Peggy, and Thomas W. Blaine. *Conservation Easements*. Ohio State University Fact Sheet, Land Use Series (CDFS-1261-98) 1 April 2001. <<http://www.ag.ohio-state.edu/%7Eohioline/cd-fact/1261.html>>.

<sup>4</sup>Schear and Blaine.

<sup>5</sup>Baldwin, 97.

<sup>6</sup>Baldwin, 99.

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