TOWN OF NEW BOSTON, NEW HAMPSHIRE



Open Space Plan

Cover photo of Joe English Road

Town of New Boston, New Hampshire

Open Space Plan

Prepared by the Southern New Hampshire Planning Commission and the New Boston Open Space Committee For the Town of New Boston

April 2008

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New Boston Open Space Plan

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Overview

Open space planning in New Hampshire is an ongoing activity led mainly by conservation commissions and planning boards. This Open Space plan will become part of the New Boston Master Plan. Volunteers from the Town of New Boston Open Space Committee (NBOSC) have created this Open Space Plan to:

- Outline the benefits of open space,
- Explain the need for both land protection and changes in land use practices,
- Prioritize its criteria for land preservation,
- Identify voluntary and regulatory strategies to maintain healthy and functional open space as the town continues to grow,
- Identify resources for land protection strategies, and
- Recommend actions to improve protection of open space in New Boston.

Between 2000 and 2005, New Boston has grown from a population of 4,138 to 4,970, an increase of 17.9%. The town's population is projected to increase to 5,450 by 2015, an increase of 9.6% (New Hampshire Office of Energy and Planning, NHOEP).

Development associated with this growth threatens the rural character and the existing open space of the town. Open space has economic, social, health, and environmental benefits; and this plan will help to realize those benefits while helping to preserve existing open lands as well as shape growth.

Open space provides many benefits for New Boston citizens, including:

- **Health:** Open space lands, particularly in the form of forested areas and aquatic buffers, filter pollutants out of the air, help prevent contaminated runoff, and protect the water supply that allows for continued growth and development.
- **Economic:** Cost of community service studies show that towns that maintain open land and manage growth save hundreds of dollars per family in infrastructure costs for roads, safety services, and other municipal expenses.
- Rural character: New Boston takes prides in its rural qualities, which add many aesthetic and lifestyle values, such as, for example, improved visibility of the night sky and its quiet, scenic and uncongested roads.
- **Recreation:** New Boston residents can benefit from a host of recreational opportunities afforded through open space.
- **Ecology:** Open space lands support and preserve the unique biodiversity and wildlife habitats contained in New Boston.

A series of Geographic Information Systems (GIS) maps, based upon data prepared through the Southern New Hampshire Planning Commission (SNHPC) have been developed to provide an inventory of current land resources within the town. These maps are provided in Appendix A. These maps are tools to be used by the public, Open Space Committees, Planning Boards, and the SNHPC to promote dialog and develop recommendations for land protection and for maintenance of land that is currently protected as town-owned lands. Areas having a concentration of open space values represent resource lands that should remain in their natural condition to preserve water quality, wildlife habitat, recreation opportunities, sustainable forest resources, historic settings, potential greenways, and the

scenic quality of the Town. Protecting these resource areas from development contributes to the quality of life in New Boston.

The Open Space Committee has developed criteria to help prioritize suitability of lands for protection. In most cases, these criteria are represented in the maps that inventory land resources within the town. By overlaying maps representing different conservation criteria, areas containing overlapping values can be identified, which increases the overall conservation value of these areas. A point system is used to help determine the level of protection that a given area deserves. By assigning points for meeting certain criteria, the presence of various desirable features adds to the "co-occurrence rating" or conservation value of the area. Points are awarded based on criteria including presence of certain wildlife, whether or not the parcel is part of an unfragmented region, contains wetlands, has agricultural value, or rates highly under the Forestland Evaluation and Site Assessment (FLESA) and Regional Environmental Planning Program (REPP) criteria.

FLESA is part of the United States Department of Agriculture Natural Resources Conservation Service and provides communities with a tool to assess their forest lands and natural resources. The FLESA assessment also helps to identify local goals, values, and economic strategies (http://www.nh.nrcs.usda.gov/technical/FLESA.html).

REPP was created by the Department of Environmental Services and is used to address environmental issues throughout New Hampshire through regional planning agencies. Natural resource planning is one of REPP's highest priorities. (https://www.airquality.nh.gov/REPP)

The intent of this Open Space Plan is to help to identify, prioritize, and protect remaining open spaces that help define the character of New Boston. The plan documents the need to protect open space and suggests strategies to promote the creation and maintenance of a functioning network of open lands, such as conservation easements, incentives for conservation subdivisions, and education about open space.

Town of New Boston, New Hampshire Goals and Key Actions for New Boston's Open Space

The New Boston Open Space Committee has identified the following goals and actions in creating this open space plan. These goals will serve as a guide for open space planning and conservation to benefit the Town of New Boston. Goals and objectives should be reviewed on a regular basis to be updated accordingly as the town develops and changes. These goals can only be met with the help of town residents in conjunction with town organizations and local boards and officials.

Vision Statement:

"To preserve, protect, and enhance the Town's scenic, recreational, open space and natural resources, as well as its environmentally sensitive areas, and where appropriate, to encourage the enjoyment thereof." (New Boston Master Plan)

Goals and Key Actions from the New Boston Master Plan

One of the four overall objectives of the New Boston Master Plan, approved by the town in 2007, is "to protect and conserve the Town's natural, historical, cultural, and environmental resources." This Open Space Plan responds in part to the following specific goals excerpted directly from the New Boston Master Plan:

Land Use Objectives

- To continue to refine the Town's open space/cluster development regulations and other innovative land use techniques.
- To encourage, develop and maintain wildlife corridors.
- To investigate means of protecting land on both sides of River Road and along the Piscataquog River and its branches.
- To create and adopt a growth management ordinance.
- To create and adopt an open space ordinance including a requirement for open space in all major subdivisions.
- To encourage preservation and maintenance of fields, forests, wetlands, mountain tops, hillsides, river views, river front, river beds, and stone walls through such strategies as transfer of development rights and density credits.
- To conduct a Cost of Community Services Study.
- To consider implementing new zoning districts based on performance zoning.
- To investigate and implement where appropriate a transfer of development rights program and the use of density credits.

<u>Agricultural Protection Objectives</u>

 To develop regulations that ensure the town continues to support farming and agriculture.

Smart Growth Objectives

• To foster the traditional character of New Hampshire downtowns, villages, and neighborhoods by encouraging a human scale of development that is comfortable for pedestrians and conducive to community life.

- To preserve New Boston's working landscape by sustaining farm and forest land and other rural resource lands to maintain contiguous tracts of open land and to minimize land use conflicts.
- To protect environmental quality by minimizing impacts from human activities and planning for and maintaining natural areas that contribute to the health and quality of life of New Boston by promoting low impact development and best management practices.

Conservation and Natural Resource Objectives

- To continue to develop and improve ordinances and regulations that protect New Boston's environmentally sensitive areas. These areas include, but are not limited to: steep slopes, wetlands, woodlands, floodplains, wildlife habitats and corridors, watersheds, drumlins, wetland buffers, and aquifer recharge areas.
- To determine development densities based on maintaining open space, rural character, future water needs, soil capability, Smart Growth Principles and other environmental criteria
- To create regulations to promote environmentally responsible construction practices including habitat-sensitive site design, low impact development, landscape design criteria, prevention of soil erosion and stormwater treatment.
- To encourage preservation of existing farmland and prime agricultural soils using environmentally responsible agricultural practices.
- To promote the awareness of public open spaces and natural resources including the awareness and preservation of existing Class A or B recreational trails established under RSA 231-A.
- To regulate development along scenic roads in order to preserve the natural and scenic character, including stonewalls and a forest buffer, and investigate participation in the Scenic Byways Program.
- To identify and preserve aquifers of such quality and quantity that may provide the Town of New Boston with future water supply sources.
- To identify, preserve, maintain and protect large areas of land which have been identified as having unique functions and values contributing to the economy and environmental well being of the community. Use of the information that has been developed under the Regional Environmental Planning Program may assist in this effort.
- To update the New Boston Water Resources Management Plan and the Town's Groundwater Conservation District zoning ordinance utilizing new maps and data.
- To implement shoreland protection regulations for the Middle Branch and remaining South Branch of the Piscataquog River and implement a riparian buffer study to protect undisturbed stream and river shorelines within New Boston.
- To utilize New Hampshire Fish & Game Wildlife Habitat Maps to delineate and map significant wildlife corridors.
- To conduct a Prime Wetlands study in accordance with RSA 482-A:15, as revised, and the Administrative Rules of the New Hampshire Department of Environmental Services (see Wt 700 Prime Wetlands laws), and implement the recommendations.
- To conduct and implement a Natural Resources Inventory (NRI) of New Boston's natural resources.

Forest Resource Objectives

- To encourage the maintenance of large contiguous parcels of forest lands in public and private ownership.
- To build coalitions between forest landowners and people/groups who desire to use forestland for recreation.
- To ensure that local land use decision making authority is based upon adequate natural resource information.
- To improve landowner understanding of the range of forest management choices and the economic and ecological implications of those decisions.
- To educate our community about the functions and values of forests and forestry.

Additional Objectives of this Open Space Plan

The New Boston Open Space Committee and Southern New Hampshire Planning Commission have established the following additional goals for this Open Space Plan:

- 1. Implement COST-EFFECTIVE means to preserve land to have the greatest overall tax and revenue benefits for New Boston citizens.
 - 1.1 Identify means of land protection to best utilize available funding and minimize tax burden to the Town.
 - 1.2 Identify resources and alternative funding sources offered by state, federal, and non-profit organizations.
 - 1.3 Explain the relationship between open space lands and tax revenues for the Town of New Boston.
- 2. Establish development, subdivision and zoning REGULATIONS AND ORDINANCES for New Boston to encourage smart growth, preserve open space, and make the Town economically sustainable.
 - 2.1 Adopt the Open Space Plan as an official part of the Town's Master Plan.
 - 2.2 Add new practices and techniques to the Town's Development Regulations that can help preserve the community's rural character and protect sensitive environmental features
- 3 Prioritize the CRITERIA the Conservation Committee, Planning Board, and Board of Selectmen will use when considering potential lands for open space preservation.
 - 3.1 Identify land protection priorities that guide appropriate levels of resource allocation for specific parcels.
 - 3.2 Protect New Boston's most sensitive natural areas, including wetlands, wildlife habitats (including wildlife corridors), forest stands, and agricultural areas to protect the environment and to balance growth and development with quality of life.
 - 3.3 Connect un-fragmented areas with guidance from local knowledge and preserve New Boston's scenic views, Class VI Road system, trails, and culturally and historically significant lands.
- 4 EDUCATE the residents of New Boston of the multiple economic, health, ecological, and recreational benefits of Open Space.
 - 4.1 Define "rural character" and establish open space as a significant component of rural character.
 - 4.2 Identify the economic benefits of open space to the town's tax base and land values.
 - 4.3 Identify the role of open space in clean water and good air quality.

- 4.4 Outline the recreational potential of open space lands through Class VI roads, trails, and parks.
- 4.5 Demonstrate the importance of open space for wildlife habitat.
- 4.6 Serve as a resource for landowners, Town officials, and other interested residents interested in learning how they can help preserve open space and New Boston's ruralcharacter.

Section 1:

Background and Introduction

The Town of New Boston has a history of appreciation for the protection of open space within its community. According to the 2006 Master Plan, the town of New Boston has 27,648 acres, 16% of which is protected land. Formed in 2003, the New Boston Open Space Committee has collaborated with the Planning Board, the Select Board, the Conservation Commission, the Forestry Committee, the Russell Foundation and the Piscataquog Land Conservancy (PLC) to work towards open space protection representing varied interests with a common goal. Below are the New Boston Regional Setting description and a history of the town. Information for both were taken from the New Boston master plan and the official town website, http://www2.new-boston.nh.us/Pages/index.

New Boston's Regional Setting

The Town of New Boston is located in the South-Central portion of New Hampshire in Hillsborough County, approximately 24 miles southwest of Concord, 17 miles west of Manchester, and 21 miles northwest of Nashua. Adjacent communities consist of the towns of Weare, Goffstown, Bedford, Amherst, Mont Vernon, Lyndeborough, and Francestown.

The Town of New Boston encompasses a total of 27,648 acres, or approximately 43 square miles. Primary highway access is provided by New Hampshire Routes 13, 136 and 77, which connect with Goffstown and Mont Vernon, Francestown, and Weare respectively.

New Boston is located relatively close to New Hampshire's so-called "Golden Triangle", the state's fastest growing residential, commercial, and industrial area, formed by the cities of Manchester and Nashua, and the Town of Salem. Although New Boston is experiencing significant growth with hundreds of new house lots approved or in the approval process, it remains one of the more rural towns within the Southern New Hampshire Planning Commission region.

A Brief History of New Boston

The land that is today known as New Boston was granted to John Simpson and 52 others by the Great and General Court or Assembly on January 14, 1736. Simpson and the other 52 settlers, who were originally from Boston, suggested naming the new township "New Boston." The name was later applied for the first time by the proprietors on April 16, 1751.

By 1740, on what was called Pine Plain, 60 buildings had been erected including houses, sawmill, and a meeting house which was later destroyed by fire.

By September 25, 1756 a first census recorded 59 persons within the New Boston Township, 215 cleared acres, 32 dwellings, 2 camp houses, 1 barn, 1 sawmill, 1 grain mill, a dam, and 6 frames not enclosed.

A second census was conducted in 1820. At this time New Boston had a population of 1,686 and the town had grown substantially to 16 school districts, 14 schoolhouses, 1 tavern, 3 stores, 25 sawmills, 6 grain mills, 2 clothing mills, 2 carding mills, 1 bark mill, and 2 tanneries.

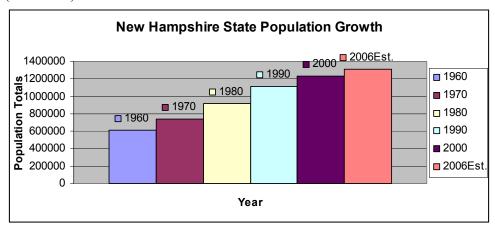
On May 12, 1887 the "Great Village Fire" started at noon from a spark from Abram Wason's cooper shop. As a result of the fire almost 40 buildings were destroyed as well as many permanent records kept for the town. The destroyed papers have resulted in gaps in New Boston's town history.

In 1893, the Boston and Maine Railroad came to New Boston, stopping at Parker's Station, the Depot, and Gregg's Mill. J. Reed Whipple was the man responsible for bringing the railroad to New Boston to supply his hotels in Boston with fresh produce. The railroad operated though the mid 1970's before it was abandoned. Today, the old railroad bed belongs to the town and serves as a walking path from the village area of New Boston to Goffstown.

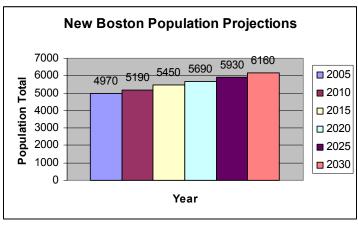
Today New Boston is the quintessential New England town with a rich history and an abundance of natural beauty, including three branches of the Piscataquog River and the striking Joe English Hill among many other hills and valleys.

Population Growth in New Hampshire and New Boston

Since 1960, the population of New Hampshire has grown from 606,921 persons to an estimated 1,315,000 in 2006, an increase of *over 100 percent*. The NH Office of Energy and Planning has projected additional population increases for New Boston of approximately 9% percent from 2005 to 2015, and another of 13% from 2015 to 2030. (US Census)



NH OEP, January 2007 Data



NH OEP, January 2007 Data

The housing stock in New Boston is predominantly single-family homes on large lots. Planning for projected future growth is not easy, but needs to balance open space conservation with inevitable population increases. Changes in allowable population densities, and zoning and subdivision regulations may be needed to find the right balance.

History of New Boston land protection and the New Boston Open Space Committee

In many areas of southern New Hampshire, land prices have more than doubled in the seven years from 1997-2004, making land protection increasingly expensive. New Boston community members have worked collectively towards local land protection for several decades, at least since Reverend Louis Swanson's efforts to protect groves along River Road in the 1930's. In 1990, working with the statewide Land Conservation Investment Program (LCIP), the town was able to permanently protect three riverside parcels totaling approximately 60 acres and a mile of riverfront.

In 2001, the New Boston Conservation Commission proposed the creation of a Joint Open Space Committee to identify ways to most effectively apply revenues from the Current Use Change Tax for land protection. Since then, the New Boston Open Space Committee (NBOSC), has worked to educate the public about land preservation, developing conservation priorities, identifying projects, and finding funding for open space protection. The committee developed this Open Space plan to publicize their work and outline implementation strategies.

Defining Rural Character

Residents of the Town of New Boston see open space as a significant component of rural character. Rural character can be defined quantitatively or qualitatively as briefly summarized below.

Quantitative: Based on the U.S. Census definition of "urban," a quantitative definition of "rural" could be described as follows:

A municipality is considered rural when the population density within the municipality is less than 145 persons per square mile (US Census 2004) or the municipality's total population is less than 2,500, unless more than 50 percent of the population lives in an urbanized area, as defined by the U.S. Census Bureau. All other municipalities are considered urban.

In 2003, a collaborative study by The Jordan Institute and Audubon Society of New Hampshire analyzed all 259 municipalities and unincorporated places in New Hampshire, categorizing them by number of housing units and whether there was municipal water service. New Boston was among the 41 percent (or 106) communities defined as "rural".

In 2005, the Society for the Protection of New Hampshire Forests updated their 1999 *New Hampshire's Changing Landscape* report. In that report, they chose the following densities to define a community's density:

Rural = less than 36 persons/sq mile Exurban = 36-144 persons/sq mile Suburban = 145-1,000 persons/sq mile Urban = more than 1,000 persons/sq mile

By these definitions, New Boston, with an estimated 5055 persons in 2007 and 43.2 square miles, has about 117 persons per square mile, falls within the "rural" or "exurban" range.

Qualitative: According to the Center for Rural America, "A relationship to nature is a key determinant of what is rural. When development destroys or seriously degrades the natural environment, it destroys the core basis for ruralness."

Rockingham Planning Commission land use planner, Jill Robinson, defines rural as involving working landscapes including forestry and agriculture where ways of life and livelihood are connected to stewardship of the land.

Rural areas include a mix of different settlement densities interspersed with unmanaged areas and economic uses such as tree farms, managed forests, and active agriculture. As opposed to suburbs, rural towns include mixed land uses, mixed incomes, and mixed ages. The NBOSC also discussed what rural is *not*; rural communities do not have traffic congestion, traffic lights, ambient light that blocks out the night sky, or wide, straight, paved roads abutting posted land. Above all, the natural landscape and areas of open space predominate over the built environment and the town maintains a sense of community facilitated through many places, events, and opportunities for citizens to meet and interact.

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¹ Karl N. Stauber, PhD. Economic Review, 2nd Quarter, 2001, p 36-37

Determining Future Character

As evident by these comments, open space is an important component of rural character. Residents move to New Boston because of the open landscape, privacy, and New England small town charm. Large tracts of open space and open spaces between developed places are important characteristics of rural communities that set them apart from other types of communities. New Boston today is rural. But, what will the character of New Boston be in the future? It could remain rural, or the town's character could change to become a village, small town, or suburb. According to the town's master plan, maintaining open spaces and a variety of land uses is a priority for the Town of New Boston as it grows.

Misconceptions About Open Space

Although open space is often misconceived as a burdensome expense to a community, residents in many towns with open space preservation usually pay fewer taxes than towns with greater development. Open space lands cost towns very little in the way of services compared to residential developments. In the long term, open space is a financial positive for a town.

New Hampshire has a 100+ year history of land protection initiatives, starting with the White Mountain National Forest in 1901. The answers to the questions below come from a century of experience and data.

Does the cost of land protection eventually come back to the taxpayers?

The costs of open space land are rarely attributable to a single source, and property tax increases due to open space protection are typically negligible. Three costs are associated with open space land: purchase/acquisition, taxes, and <a href="mailto:ma

Town purchase or easement: The Town of New Boston has committed 50% of its land use change tax to land protection, at the discretion of the Conservation Commission. Land Use Change Tax is issued when a parcel's use is changed from that which it is currently assessed for to certain other uses, such as a house lot. These funds can be used towards conservation easements or direct purchase of land. In the case of conservation easements, the land owner continues to pay current use taxes on the land, resulting in no loss of taxes. If the town purchases the land, that parcel is removed from the tax rolls. Several state programs may help defer the tax losses of these purchases. In some cases, very small, short-term tax increases resulting from the purchase of open space are passed on to residents.

<u>Private Land Trust:</u> The U.S. Fish and Wildlife Service states: "A land trust is a nonprofit organization established for the purpose of protecting land resources, such as agricultural land, open space, and wildlife habitat." Land trusts typically accomplish these goals by accepting donated conservation easements and enforcing the development restrictions contained in the easements. (Source: U.S. Fish and Wildlife Service Website, http://www.fws.gov) The Town often works with Piscataquog Land Conservancy to

acquire easements on conservation lands. The Piscataquog Land Conservancy maintains stewardship over the land, and the land owner continues to pay taxes. Easements may be donated or purchased with funds from a land trust or grants secured by the trust, and may or may not also involve funds from the Town of New Boston.

<u>Conservation Subdivision:</u> Implemented through regulatory measures, this method costs the least to implement. The developer purchases the land, retains at least 50 percent as open space, and sells the remaining land as house lots. In most cases, the open space land is placed under a conservation easement with covenants to conserve the land. The land may be owned by a Homeowner's Association consisting of all residents of the subdivision, the members are required to pay dues, which go towards taxes on the land, monitoring, and maintenance costs.

What are the tax benefits associated with land protection?

Landowners who donate development rights or offer a bargain sale of their land to a municipality or land trust may enjoy federal tax benefits that can replace some of the financial benefits of selling the land. Additionally, open space land does not increase (and in many cases may decrease) residents' taxes based on infrastructure savings and improved property values.²

Is the two-acre minimum lot size currently required in New Boston an important measure for maintaining rural character and open space?

Hypothetically, a 3,000-acre town with a two-acre lot minimum could have 1,500 homes distributed evenly throughout the town, forcing the need for roads, police, fire, rescue, and school bus services to all reaches of the community. In some municipalities, the cost of providing services to a large-lot residence located at the fringe of the community can be \$10,000 more than one located in a more urban core.³ Furthermore, such a town has no lots larger than 2 acres, essentially wiping out the health, recreational, social, and economic benefits that accompany larger tracts of open space. In the alternate hypothetical situation, the same town has 1,500 homes located on 1,500 or fewer acres, clustered into conservation subdivisions, each containing large tracts of open space land. The town provides concentrated services to these areas, which results in considerable savings, and 1/2 or more of the town remains as open space lands, many of which connect to form larger, unfragmented open space areas.

Do conservation or open space subdivisions cost more for the town?

Development and town design oriented around open space is actually a cost-saving mechanism on two levels. First, these developments are planned according to specific regulations regarding lot location, land preservation, and construction of infrastructure. As no infrastructure is required on the open space land, it costs less to bring roads and services into these developments. Second, houses located near open space or in conservation subdivisions have higher property values and are more desirable than

Primer. (Washington, D.C.: Author, 1998).

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² Trust for Public Land, *Managing Growth: The Impact of Conservation and Development on Property Taxes in New Hampshire*, 2005, http://www.tpl.org/content_documents/nh_managing_growth_report.pdf. ³ International City/County Management Association, *Why Smart Growth: A*

similar houses not located near open space.⁴ This could mean that the tax revenue that the town gains from conservation subdivisions will exceed that of a subdivision of equal population without conservation land, resulting in a higher tax base for New Boston.

Why should the rural town of New Boston be concerned about losing open space? New Hampshire is the fastest growing state in New England, with annual population increases of 13,000 expected to continue throughout the next two decades. With the expansion of I-93, more of this growth will be directed to the towns surrounding the I-93 corridor, including New Boston. The New Hampshire Office of Energy and Planning predicts a 26 percent population increase for New Boston from 2000 to 2010, meaning that New Boston will see many new residential developments taking over its current wealth of undeveloped land.

⁴ David J. O'Neill, *The Smart Growth Tool Kit* and PFK Consulting, *Analysis of Economic Impacts of the Northern Central Rail Trail* (Annapolis, Maryland: report prepared for Maryland Greenways Commission, Maryland Department of Natural Resources, 1994).

Section 2: Benefits of Open Space

Open space offers many economic, social, and environmental benefits. It provides a town with much more than scenic landscapes and open fields. Open space can promote environmental security in areas that, if otherwise built on, would have damaging runoff, flooding, and groundwater contamination. By alleviating the risk of flooding it prevents the town from paying for costly repairs due to flood damages. In addition to preventing naturally caused damages, open space provides the town's residents with basic human needs such as a sense of place, well being, and personal health through opportunities for outdoor recreation and physical activity. Open space throughout town also increases the desirability and value of surrounding homes and lands. Open space is a positive use for town land with benefits far outweighing negative outcomes.

Open Space and Recreation

Lands that offer personal or socially interactive recreation, whether active or passive recreation, are essential elements of the open space system. Access should be provided at a variety of appropriate places where development of such access will not compromise the character of the area.

The Town of New Boston recognizes the opportunity to provide responsible recreation for all types - walkers, skiers, snowshoeing, people with strollers or wheelchairs, horseback riders, mountain bikers, hunters and anglers. New Boston has a network of trails ranging from rustic paths to dirt roads existing on town lands, some with access granted on private conservation easements. Further study is needed to evaluate trail use and to suggest a recreational network to serve the spectrum of trail users in this town.

Class VI roads are a significant resource for New Boston. These currently provide recreational opportunities for New Boston citizens and are often functionally used as trails. The town currently has the opportunity to develop policies for open space in the future, of which Class VI roads can be an important contributor to rural quality of life when preserved for recreational use.

Advancing recreational opportunities in New Boston may also expand the social network of the town. Residents can meet neighbors while hiking a trail, hold gatherings at town-owned recreational areas, and work together to improve public open spaces.

Aesthetics

A prime reason that people move to New Boston is to live amid the beautiful scenery of the rural, wooded town. With cleared agricultural lands, rivers and streams, and a rolling terrain, the Town of New Boston offers many scenic viewscapes that residents associate with the character of the town. Compared to nearby cities and towns whose sky is filled with lights from houses and businesses, constellations are still visible in New Boston's night sky.

The alternative to preserving land for its aesthetic value is to create a town characterized by billboards, parking lots, and fences rather than fields, trees, and hills. Aesthetic landscapes lend appeal to the town and provide economic benefits as well. As delineated in Section 4, several studies indicate that land values bordering open space are higher than those in developed neighborhoods, suggesting that people are willing to pay for the aesthetic value derived from open space protection.

Air Quality

The trees in forested areas absorb pollutants such as ozone and sulfur dioxide, leaving the air noticeably cleaner. A single acre of trees takes in about 2.6 tons of carbon dioxide each year, removing some of the pollutants released by vehicles (American Forestry Association). As development progresses, construction and traffic will increase air pollution and formerly forested land may be cleared for buildings.

Open space preservation is integral in maintaining air quality in New Boston. The older, larger trees (ones with diameters greater than 30 inches) currently residing in New Boston's forests, can remove up to 70 times more pollution from the air than trees with diameters less than three inches, meaning that trees cleared for development and replaced by new trees would contribute less to air quality. Additionally, trees trap the particulate pollution that causes asthma and respiratory problems.

Water Quality and Quantity

New Boston residents receive their drinking water from underground aquifers through private wells. Wells can be subject to runoff pollution from salted roads and parking lots, pesticides, antifreeze, and other toxins of developed lands. Forested areas can retain up to 90 percent more of the rainfall than pavement and roofs, filtering the chemicals from entering the water system (Trust for Public Land 2005).

Vegetated buffers physically protect a stream, river, vernal pool, or pond by providing shade and removing debris and polluting nutrients. Buffers usually contain three zones: the innermost *streamside zone*, from the shoreline to 25 feet back of forested shade to enhance stream quality; the *middle zone*, 50-100 feet from the streamside zone, often a managed forest with some clearing for trails or open areas, and the *outer zone*, usually around 25 feet from the middle zone, but often expanded to protect adjacent wetlands and any floodplain.



Developed lands include impervious areas, including structures with roofs, driveways, and parking lots that shed water and concentrate the runoff into surface waters. Trees, meadows, scrub areas, and agricultural lands allow water to recharge back into underground supplies, maintaining base flow in rivers and streams, lakes and ponds, and wetlands. Without such recharge, droughts are more likely, as well as flooding during

severe rainfall or snow melt. The risk of flooding is familiar to anyone who lived in New Boston during the spring of 2006 and 2007.

Sustained water quality and quantity are vitally important to support all ecological functions. Undeveloped land supports the health of water bodies as well as the network of rivers and streams that provide corridors vital for wildlife movement, food, and shelter. By protecting valuable water resources, open space lands not only contribute to the health and economic benefits of the town, but they protect wildlife habitats as well.

Biodiversity⁵

Biodiversity, which is the balance of interacting processes among the many plants, animals, fungi, algae, bacteria, and other microorganisms in our environment, is integral to human survival. The complex natural world provides elements that support human life, such as enriched soil to grow food, oxygen to breathe, and purified water to drink. The balance of maintaining these processes and protecting the habitats in which they occur is vital to supporting all life on Earth. However, as habitats are lost due to development of land or invasive and non-native species, this balance of biodiversity is threatened.

Biodiversity is important to maintain for economic as well as ecological reasons. Plants are sources of food, medicine, fuel, fibers, timber, and more. Furthermore, plants and animals pollinate fruit and vegetables, control pests, and add nutrients to the soil as part of their natural functioning.

New Hampshire's wildlife attracts visitors from around the country who come to the region to bird-watch, hunt, fish, and hike amidst the fall foliage. In New Hampshire, 88 percent of the population participates in wildlife-related activities and this brings millions of dollars to local communities.

Forest Economy

Forests contribute to the local economy in many ways, including employment, forest-based manufacturing, recreation, and tourism. Many New Boston residents earn an income from managing forests and harvesting forest products such as timber, maple products, Christmas trees, and firewood. Yield tax income from some of these activities contributes revenue to the town. Fishing, hunting, and other recreation activities contribute revenues. The forest protects a living natural history museum for visitors, in addition to mill sites; there are Native American artifacts, early European settlement artifacts, cellar holes, ancient highways, and over 400 miles to stone walls in New Boston.

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⁵ From Wildlife Habitats, Fall 1996, University of New Hampshire Cooperative Extension.

Section 3: Wildlife

Rare Species and Natural Communities

New Hampshire's Natural Heritage Inventory (NHI)⁶ has assessed the Rare Species and

Exemplary Natural Communities of New Boston based on state and federal status as well as rarity of the species in the community. Table 2 lists those species that are endangered or threatened.

These inventories identify sites that contain habitats for rare, endangered and threatened natural species. The NHI was used to determine species that are currently on the endangered list that are located within New Boston

Table 2: NHI Inventory			Locations in Town in
Species or Community Name	Type of Species		the last 20 years
Small Footed Bat	Mammals	Endangered	1
Pied-billed Grebe	Bird	Endangered	1
Brook Floater	Mollusk	Endangered	4
Coast-blite Goosefoot	Plant	Endangered	Н
Common Tern	Bird	Endangered	1
Fern-leaved False Foxglove	Plant	Threatened	2
Cooper's Hawk	Bird	Threatened	1
Eastern Hognose Snake	Reptile	Threatened	1
Marsh Elder	Plants	Threatened	3

There are some rare black gum trees living in "basin swamps" in New Boston. The black gum tree (Nyssa sylvatica) is a hardwood in the tupelo family that may grow up to 75-80 feet tall and may live over 400 years. Spotted turtles and Blanding's turtles are also found in New Boston.

Wildlife Crossings

The New Hampshire Fish & Game publishes Coarse Filter Wildlife Habitat maps, which combine features such as riparian corridors, wetlands, unfragmented lands of natural land cover, and disturbed lands to determine areas that are best suited towards animal habitats.

Wildlife crossings are a simple way to help connect wildlife habitat through consideration in zoning and planning. Wildlife crossings are small parcels of land, usually underneath or across roadways that connect fragmented wildlife habitats and allow wildlife to breed, find food, and migrate to find new habitats. The most important environmental features to consider in terms of wildlife habitat are unfragmented tracts of land with natural land cover. Small blocks of open space expose more borders to development, thereby threatening species habitat



⁶ New Hampshire Natural Heritage Bureau. *Rare Plants, Rare Animals, and Exemplary Natural Communities in New Hampshire Towns*. Concord, New Hampshire: Division of Forests and Lands

inside. Also important are undeveloped riparian zones, which have a rich array of species habitat. Wildlife crossings can be as simple as constructed passages through or under roadways that connect two wildlife habitats.

Wildlife sightings can be one of the most thrilling and satisfying experiences of living in a rural area. If New Boston is to protect the irreplaceable biological diversity and abundance of wildlife, the Town must reduce fragmentation and maintain the health and vitality of its forest communities.

New Hampshire Fish and Game Department has just completed a statewide Wildlife Action Plan (WAP) for both game and important non-game species. Because of the importance of wildlife to rural economies, additional federal funding is expected to support a wide range of activities in local communities so that wildlife populations remain healthy as the state grows.

Section 4:

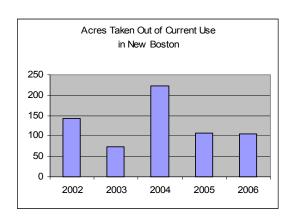
The Cost of Sprawl and Economic Benefits of Open Space Protection

The Costs of Sprawl

In a document produced by the Southern New Hampshire Planning Commission titled *Sprawl and Smart Growth Choices for Southern New Hampshire Communities*, it is estimated that the consumption of residential land within the 13 communities in the SNHPC region exceeded what was needed for population growth (Please see the above document at the SNHPC website www.snhpc.org for more information on this topic). From 1986 to 2000, residential acreage was consumed at *twice* the population growth rate, and commercial acreage was consumed at *three times* the population growth rate. In 1982, New Hampshire had 0.41 developed acres per person, and by 1997, that figure had increased to 0.55 developed acres per person. These figures are higher than those for New England as well as those for the United States as a whole.⁷

During the past 20 years, many communities in New England have required larger lots in their zoning ordinances for single family homes than were really necessary. These communities have felt that, if larger lots were required, fewer homes would be built, and that would decrease sprawl and its accompanying traffic problems. However, large lot zoning has resulted in the subdivision of larger tracts of land which drastically depletes its value for open space or other common public areas. New Boston's zoning ordinance currently requires a minimum lot size of two acres. The basic minimum yard dimensions require a 200 foot front with 50 foot setback from the front and 20 feet on all other sides. Lot dimensions and restrictions are further explained the New Boston zoning ordinance.

"Overall, the state is converting 13,000 acres of open space per year to roads, houses, businesses, and commercial development."



The subdivision of land significantly reduces open space and often removes the potential even for current use of land. The graph below illustrates the recent spike in approved subdivisions (with an approved subdivision containing one or more lots). Please see the above document at the SNHPC website www.snhpc.org for more information on this topic.

⁷ State of New Hampshire, Environment 2000.

⁸ Conserving Your Land, Center for Land Conservation Assistance 2004, 1.

As stated earlier, multiple studies have found sprawling development to be more expensive for municipal, county, and state governments than open space. Twenty-five years of studies cite millions of dollars saved through smart growth management as opposed to sprawl. A summary of some of these studies can be read on the following page as released by the Michigan Land Institute in January 2005. These studies confirm New Boston's fiscal experience where tax rates have grown faster than the population has increased. The per-person cost of town services, such as education, firefighting, policing, and road maintenance, increases as more land is developed. Now that few buildable lots on town road frontage remain, subdivisions more frequently require new road construction, which further increases road maintenance expenses to the town.

Sprawl has been and will continue to be a problem for most communities. Many towns have developed both regulatory and non-regulatory answers to encourage more compact, less sprawling development. Potential regulatory measures for New Boston are addressed in Section 8.

Economic Consequences of Sprawl

Government and academic studies consistently find that sprawl is much more expensive than compact patterns of development

- 1974 The Costs of Sprawl, a three-volume report by the Real Estate Corporation for the White House Council on Environmental Quality, concluded that compact development patterns were much less expensive and environmentally damaging than sprawling residential and commercial development. It is one of the most significant critiques of sprawl ever published.
- 1997 Fiscal Impacts of Alternative Land Development Patterns in Michigan: The Costs of Current Development Versus Compact Growth, by Rutgers and Michigan State Universities, found that, in the 18 communities studied, land consumption and costs for infrastructure and municipal services were far less expensive when Smart Growth principles replaced sprawling patterns of development.
- 1997 The Cost of Sprawl, published by the Maine State Planning Office, found that residents of fast growing "new suburbs" were paying many "hidden costs," including higher taxes, homeowners insurance, and school construction costs. Although its student population declined by 27,000 from 1975 to 1995, the state spent \$727 million to construct and maintain new suburban schools. Although Maine's population declined 10 percent in the 1980s, its residents drove 57 percent more miles, highway costs increased by a third, local governments added 100 miles of new roads annually, and police employment increased by 10 percent, even with a 20 percent fall in the crime rate. (http://www.maine.gov/spo/landuse/docs/CostofSprawl.pdf)
- 1998 The Costs of Sprawl Revisited, prepared for the National Research Council, analyzed nearly 500 studies of the fiscal, economic, and environmental effects of sprawl and concluded that while "most of the American public is not unhappy with the current patterns of development in metropolitan areas it simply can no longer afford it." (http://www.nas.edu/trb/index.htm)
- 2000 The Costs of Sprawl 2000 concludes that even modest new Smart Growth policies would save 4.4 million acres of farmland, \$12.6 billion in sewer and water expenses, \$109 billion in road construction costs, and \$420 billion in private sector development costs. (http://www.national-academies.org/trb/bookstore, or to download full report http://guliver.trb.org/publications/tcrp/tcrp_rpt_74-a.pdf)
- 2000 The Costs of Sprawl in Pennsylvania, published by 10,000 Friends of Pennsylvania, reported that costs for infrastructure and housing are significantly higher in sprawling regions than in planned-growth areas. Compact development can save up to 25 percent of road and utility

- construction and up to 20 percent of water and sewer costs. Applied to local road construction, "the savings would be \$52 million per year." (http://www.10000friends.org/ Web_Pages/News/Costs_of_Sprawl_in_Pennsylvania.pdf)
- 2000 The Costs and Benefits of Alternative Growth
 Patterns: The Impact Assessment of the New Jersey State
 Plan, published by Rutgers University, found a state plan that
 encourages settling in existing communities could save local
 governments \$161 million by 2020, conserve 100,000 acres
 of farmland, save \$870 million in road construction costs,
 and eliminate \$1.4 billion in water and sewer development.
- 2002 Growth in the Heartland: Challenges and Opportunities for Missouri, a Brookings Institution report, found that Pettis County, located near Kansas City, will gain 3.6 percent in tax revenue thanks to population increases and development. But its costs will rise 6 percent, generating a \$2.4 million deficit unless the county raises taxes. (http://www.brookings.edu/es/urban/missouri/abstract.htm)
- 2003 The Fiscal Cost of Sprawl: How Sprawl
 Contributes to Local Governments' Budget Woes, by
 Environment Colorado Research and Policy Center, concludes that "sprawling development does not generate
 enough tax revenue to cover the costs it incurs...If growth
 patterns do not change in the Denver area...sprawl will
 cost local governments S4.3 billion more in infrastructure
 costs than Smart Growth." (http://www.environmentcolorado.org/reports/fiscalcostofsprawl12_03.pdf).
- 2003 The Jobs Are Back In Town: Urban Smart Growth and Construction Employment, by the Washington-based research group Good Jobs First, found that metro areas with concentrated growth had 30 percent more construction activity than areas that encouraged sprawl, and concluded that Smart Growth generates more residential, commercial, and transportation construction jobs than sprawl does. (http://www.goodjobsfirst.org/pdf/backintown.pdf)
- 2004 Investing in a Better Future: A Review of the Fiscal and Competitive Advantages of Smarter Growth Development Patterns, by the Brookings Institution, found that in Kentucky's Shelby County, which managed its growth, the cost of additional police, fire, highways, schools, and solid-waste services for every 1,000 new residents added \$88.27 to an average family's expenses. But in Pendelton County, which allows sprawling development patterns, those same services added \$1,222 per family 13 times as much. (http://brookings.edu/metro/publications/200403_smartgrowth.htm)

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The Economics of Open Space

Common misconceptions hold that open space programs are expensive for municipalities, but dozens of studies over the past few decades have shown that communities that curb sprawl and implement smart growth principles, *including land preservation*, spend considerably less money than towns with sprawl. Towns with widely-distributed residential development and continued construction of new residential areas have giant costs of infrastructure construction, including water, roads, and utilities.

In 2005, the Trust for Public Land (TPL) released a study entitled, *Managing Growth: The Impact of Conservation and Development on Property Taxes in New Hampshire.* The Trust for Public Land (TPL) is a non-profit national land conservation organization that works to preserve land for outdoor passive recreation, community gardens, historical sites, and other rural lands. Their goal is to maintain quality living areas for future generations. Looking at the unique relationship between property taxes and municipal revenue in New Hampshire, the study addressed the concern that land conservation increased property taxes. A description of the system of taxation in New Hampshire leads to a better understanding of the concerns over the expenses of conservations lands.

Who pays for land protection?

Acquiring conservation lands by direct purchase represents a known cost to the buyer, which in the case of a municipality is borne by the taxpayers. Municipalities purchasing conservation lands should clearly communicate the benefits of open space, and residents should understand the costs and benefits of the purchase. However, there is a hidden cost of land acquisition in the form of lost tax revenue. In New Hampshire, there are measures in place to help account for this tax base loss and avoid making residents pay the difference.

Open space land in New Boston is most likely to be obtained through purchase or conservation easement acquired by the Town or through a private conservation group. Open space land may also be protected through conservation subdivisions. In each situation, the cost is covered in different manners:

- **Private conservation groups:** Private conservation groups tend to acquire conservation easements, in which the owner continues to pay current use taxes on the land.
- Conservation subdivision: Open space land in conservation subdivisions is often owned by a Homeowner's Association and protected with covenants or an easement. The taxation values are low but the cost in town services is lower compared to developing all of the land in the original tract.
- Municipal lands: When a municipality purchases land, they do not pay property
 taxes to themselves, so the property is removed from the tax roll. However, most
 open parcels receiving a Current Use tax assessment would have negligible
 impact on town revenues should the town acquire the land and maintain it as open
 space.

The state and federal governments also have measures in place to account for municipal tax revenue lost through state and federal open space land acquisition:

- Federal lands: If the federal government purchases land in New Hampshire, they do not pay taxes but rather pay two annual fees. One fee goes directly to the town's school district and the other to the town as a Payment In Lieu of Taxes (PILT). If the fees do not equal the amount of taxes the town would receive on that land under current use, the state will pay the difference. However, these fees often exceed the current use taxation values.
- State lands: The state pays the municipality the amount of taxes they would receive under current use value of the land.

Long-term Benefits

The TPL report shows that towns with more permanently protected lands either have long-term tax benefits or the residents pay lower property tax than towns with fewer permanently protected lands. The strongest indication of lower taxes comes in the form of commercial developments, which can offset the financial demands coming from residential development. In the long term, however, increased commercial and industrial development have not been demonstrated to reduce taxes greatly, presumably because commercial and industrial development typically create jobs, which attract additional residents. The residential growth that often accompanies commercial and industrial growth can reduce or eliminate the tax advantages that the commercial and industrial land use may appear to have if considered in isolation. All else being equal, the TPL study emphasizes land protection does *not* result in higher taxes and generally results in lower taxes, dispelling the myth that land protection is costly over the long run.

The report notes that the conservation of a single parcel does not have a large effect on the amount of development that will occur in towns. However, the strategic placement of certain conserved parcels can influence the direction and location of development, with the possible effect of confining development to proximate areas, which would ease the construction and servicing of infrastructure to new development.

Several academic studies have also examined the relationship between open space and property values, indicating that properties bordering open space increase in value due to the quality-of-life increases associated with open space. Jacqueline Geoghegan's 2002 study of Howard County, Maryland, determined that land values on land located next to "permanent" open space increase three times more than land located near "developable" open space. 10

⁹ Trust for Public Land, *Managing Growth: The Impact of Conservation and Development on Property Taxes in New Hampshire*, 2005, http://www.tpl.org/content_documents/nh_managing_growth_report.pdf.

Geoghegan, J., L.A. Wainger, and N.E. Bockstael. 1997. Spatial landscape indices in a hedonic framework: an ecological economics analysis using GIS. *Ecological Economics* 23(3): 251-264. Geoghegan, Jacqueline. 2002. The value of open spaces in residential land use. *Land Use Policy* 19: 91-98. Hobden, David W. G.E. Laughton, and K.E. Morgan. 2004. Green space borders—a tangible benefit? Evidence from four neighborhoods in Surrey, British Columbia, 1980–2001. *Land Use Policy* 21(2): 129-138.

Does Open Space Pay?

A study conducted during the mid 1990s by Philip A. Auger, Extension Educator, Forest Resources, University of New Hampshire Cooperative Extension, looked at the cost of community service for residential, commercial, industrial, and open space land uses within the communities of Stratham, Dover, Fremont, and Deerfield. In each community, residential land use expenditures *exceeded* revenues by an average of approximately 12 percent. Conversely, for open space land use, revenues *exceeded* expenditures. The results of this study, published in 1996, still ring true today as evidenced by a similar study for the Town of Brentwood, NH. This small town in southeastern New Hampshire had a population of 3,197 in 2000. Tax revenue generated from residential property in this town fell short of the cost of school and town services by 17 percent, while revenue from open space lands exceeded town service costs by 17 percent.

While each town in New Hampshire has a unique blend of land uses, revenues and expenditures, these studies point out some fiscal consistencies that are likely to apply in most circumstances. One of these is that residential land use very often costs communities more than they generate in revenues. Traditional residential housing brings with it a tremendous cost load for community services, roads, landfills and schools. Open space lands contribute to the stability of community tax rates. This has been supported by other well-documented fiscal impact studies in New Hampshire communities, including Milford and Londonderry.

The publication, *Managing Growth in NH*, notes that, on average, taxes on the median value home in New Hampshire communities are:

- Higher in more developed towns,
- Higher in towns with more year-round residents, and
- Higher in towns with more buildings (more value of buildings)

Funding Land Conservation

New Boston has already taken a vital step in ensuring that some of its open lands remain permanently in their natural states. The Town has allocated 50 percent of the land use change tax income to the Conservation Commission for the purpose of preserving conservation lands. However, to maximize the economic, social, and environmental benefits of open space, the Town must find additional means of land preservation.

For funding-based land acquisition, the Town can continue to work cooperatively with land trusts and private non-profit conservation organizations to pool financial resources and expand conservation efforts. The Piscataquog Land Conservancy works specifically with New Boston and surrounding communities to conserve land in the Piscataquog watershed area. As a community-based organization composed of many townspeople, P.L.C. serves as an important mobilizing and organizing resource. The Russell

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¹¹ Brentwood Open Space Task Force. *Does Open Space Pay in Brentwood? Part 1: Housing Growth and Taxes.* May 2002.

Foundation, a private non-profit group, has provided guidance, monetary and personnel support for our efforts.

The Trust for Public Land and the Nature Conservancy are both national land trust organizations active in New Hampshire, which can provide resources and assistance to preservation projects. Additional state resource organizations include the Society for the Protection of New Hampshire Forests and the Audubon Society. For more information on funding and strategies, see Section 6 on Implementation.

Comment:

Section 5:

Open Space Priorities for New Boston

There are a significant number of areas in New Boston that are desirable locations for open space preservation. The New Boston Open Space Committee has not specified any individual lots for protection; rather, they have focused on areas desirable as open space based on the land's attributes. These priorities and other significant considerations for assessing open space potential are described in the following section, with areas of high value to the town described at the end.

Primary Criteria for Acquisition and Protection of Open Space

The NBOSC considers the following criteria priorities in terms of land protection:

- 1. Protect New Boston's most sensitive natural areas, in particular; aquifers, vernal pools, streams, lakes, and associated wetlands and upland areas. Other considerations include wildlife habitats and corridors, old growth forest stands, and agricultural soils.
- 2. Connect areas unfragmented by roads or development.
- 3. Preserve the natural and cultural resources provided by New Boston's scenic views, Class VI road system, trails, and culturally and historically significant lands.
- 4. Continue to work with P.L.C. and other land trusts and state and federal agencies.

These priorities will be considered for individual parcels as they become available for open space protection, as the Town works to best allocate its limited financial resources. Additionally these priorities will guide the Conservation Commission's larger efforts to match its own conservation strategies with those of state and regional conservation groups.

Additional Criteria

While the NBOSC will use the above criteria first when considering land for open space protection, the following are additional criteria that may be considered by the commission:

- **Potential linkages to existing open space**, to recreation facilities, and to similar areas in adjacent communities.
- Environmental sensitivity and importance of the parcel such as the presence of wildlife corridors, unique habitat, and endangered, threatened and rare species, and scenic qualities.
- Location in areas that do not have enough public open space or are threatened by continued development. Will the acquisition of the parcel help preserve enough forest cover to maintain water quality of a sub-watershed and undisturbed storm water runoff? Will it provide additional recreational opportunities in an area of the Town in need of such features?
- **Town-wide versus special group benefit**. Would the acquisition of this parcel benefit the Town as a whole or a select group of residents in need of additional opportunities?

- Outdoor recreation potential. This is related to providing additional athletic fields as well as providing areas for greenways and trails that provide opportunities for hiking, walking, running, skiing, and biking.
- Cost and availability of the parcel. This should account for the amount residents are willing to pay to purchase open space (in the form of increased taxes) and the availability of funding sources that would be available if a particular property were targeted for acquisition.
- The financial impact that removing the parcel from development will have on the Town. For example, a residential parcel may cost the Town in services while a commercial property may be a positive contribution to the tax base (see previous summary detailing cost of residential service versus open space costs and benefits).
- Aesthetic benefits to the general public and the preservation of the Town character.

Co-Occurrence

A natural resources Co-Occurrence Analysis is an important tool in identifying and prioritizing areas for protection. The Analysis identifies high-value natural resource areas and maps them, with multiple levels of unique resource data overlaid spatially using geographical information system software (GIS) to display on one comprehensive map. The Analysis applies numerical values to selected resource factors, with higher values and darker colors indicating land that should be prioritized for protection. The following are the twelve resource factors considered in the New Boston Co-Occurrence Analysis:

Co-occurrence Model Point System:

Priority	Points Awarded
Adjacent to already protected parcel,	2
or within one lot of already protected lands	1
Part of a larger unfragmented area or greenway corridor	2
(polygons over 25 acres within unfragmented land set of	
Wildlife Action Plan ¹²)	
Parcels greater than 25 acres in size	1
Contains or abuts significant water resources	1
(5+ acres lakes and 3 rd order rivers from	
GRANIT's NH Hydrology Dataset ¹³)	
Contains or abuts 4 th or 5 th order rivers	
Contains NWI designated wetland ¹⁴	
Contains dry soils with agricultural value	1
(by digital photo-analysis or at least Moderately Well Drain	ned
Soils from Hillsboro soil survey from NH GRANIT)	
Contains or is frequented by significant or rare animals or plant	ts1

¹² NH Fish and Game Department, "New Hampshire Wildlife Action Plan". Submitted October 1, 2005, approved Spring 2006.

¹⁴ U.S. Fish and Wildlife Service, "National Wetlands Inventory". http://www.fws.gov/nwi/

New Hampshire GRANIT Hydrology Datasets. http://www.granit.unh.edu/

(parcels with at least 25% Tier 1 or Tier 2 habitat
according to Wildlife Action Plan)
Contains or abuts Class VI road or public trails
(from 2007 DOT road data ¹⁵)
FLESA identified priority parcel
REPP identified priority parcel

This weighting systems places a highest priority on protecting areas as large as possible by targeting parcels in the Town's remaining unfragmented areas and encouraging expansion of areas already partially protected. Other priorities not available for Co-Occurrence Analysis are evaluated by site observation and other means. The completed Co-occurrence map is shown in Appendix A.

¹⁵ New Hampshire Department of Transportation. <u>http://www.nh.gov/dot/index.htm</u>

Section 6: Implementation Strategies

The New Boston Open Space Committee recognizes that the preservation of open space is closely tied to Smart Growth Principles and that the largest threat to open space may be New Boston's current growth patterns. The Committee recommends the adoption of smart growth principles appropriate for New Boston, which are outlined here. Specific recommendations on the most effective and cost-efficient tactics to preserve open space and rural character can be found later in this chapter.

Smart Growth Principles to Reduce Cost of Sprawl and Preserve Open Space

Many communities throughout New Hampshire have begun to embrace the concept of "smart growth" with promising results, although in reality it is a return to the distinctive practices of colonial New England. These practices reflect a time when land uses were mixed, homes were often clustered into villages, and good land was fenced for pasture and agriculture. Woodlands were accessed by a network of woods roads, and rough land was left open and unmanaged.

Since New Boston will continue to grow, the community can choose its future character and manage this growth by directing it to areas that can sustain more dense development. Since large open space areas provide many other ecological and economic services, a better place to direct growth may be into village areas and existing developed areas, or into more condensed new development.

Getting to Smart Growth: 100 Policies for Implementation presents a series of ten Smart Growth Principles along with ten policies for each principle. While some of these principles and policies may not yet work for New Boston, several can work and have been tried in other communities in the region with great success. The following could work in New Boston:

Principle 1: Foster distinctive, attractive communities with a strong sense of place. New Boston has a strong history of preserving its community character. Smart growth seeks to foster the type of physical environment that creates a sense of civic pride, and supports a more cohesive community fabric. For example, planting trees is a simple yet fundamental way of adding to the beauty, distinctiveness, and material value of an area by incorporating the natural environment or historical features into the build environment.

Principle 2: Preserve open space, farmland, natural beauty, and critical environmental areas. New Boston is already doing this through the development of this Open Space Plan and the work of the Conservation Commission. Open space supports smart growth goals that bolster local economies, preserve critical environmental areas, provide recreational opportunities, and guide new growth into existing villages. Networks of preserved open space and waterways can shape and direct urban form while



preventing haphazard conservation (conservation that is reactive and small-scale). Open space can increase local property values, provide tourism dollars, and reduce the need for local tax increases.

Principle 3: Make development decisions predictable, fair, and cost effective. Most conventional zoning codes offer relatively broad guidelines to define the size and use of buildings. A point-based performance evaluation system helps communities to evaluate projects in terms of the smart growth benefits they provide. Projects that fail to meet a desired point level can be redesigned during negotiations with planning staff to achieve a higher score. Density bonuses may be used as incentives to encourage smart growth projects. Adding such growth incentives now can ensure compact, controlled development rather than the sprawling development that might come later without such regulations.

The above principles describe traditional New England land use. Current land use practices follow early 20th century zoning intent to separate land uses, important when heavy industry was prevalent, loud, and polluting. Today, with increasing population, economic activity, land conversion, traffic volume, and energy prices, such traditional land uses once again make economic and planning sense.

Summary of Recommendations

The primary actions recommended for New Boston by the New Boston Open Space Committee are as follows:

- 1. Research and propose development regulations and guidelines, open space incentives, and educational programs to encourage developers to implement smart growth principles, preserve open space, and make the Town economically sustainable.
 - Investigate Smart Growth Principles and propose measures to preserve open space.
 - Look for incentives encouraging developers to include open space in their projects and build according to Smart Growth Principles.
 - Consider areas of the Town where increased density will be allowed in exchange for protecting specific rural features.
- 2. Implement cost-effective funding strategies to preserve land that have the greatest overall tax and revenue benefits to New Boston citizens.
 - Strengthen relationships with local, state, and federal agencies to obtain grants and technical assistance with conservation easements.
 - Educate landowners and town officials about funding sources that support conservation goals.
 - Increase available funds for open space projects.
 - Work with P.L.C. and other land trusts and state and federal agencies to develop a natural greenway and trail system connecting protected lands.

- 3. Use the priorities and criteria established in this Open Space Plan when considering potential lands for open space preservation.
 - Protect New Boston's sensitive natural areas (wetlands and the uplands that support them, wildlife habitats, forests, steep slopes, and agricultural soils).
 - Connect unfragmented areas.
 - Preserve the natural and cultural resources (scenic views, Class VI Roads, trails, and culturally and historically significant lands).
- 4. Develop communications strategies to share knowledge concerning the benefits of open space and gain informed support from the residents of New Boston for taking the necessary actions to preserve open space.
 - Encourage the reading, discussion, adoption, and continuous improvement of the Open Space Plan.
 - Foster dialog between landowners, Town officials, land trusts, and government agencies about implications and techniques for open space preservation.
 - Create opportunities to learn about open space benefits and preservation techniques via literature, seminars, and other educational programs.

The remainder of this section delineates techniques and strategies for fulfilling these recommendations. To help meet New Boston's Open Space Goals, the following is a variety of tools and techniques that communities throughout New Hampshire have used for land protection. Dorothy Tripp Taylor describes many of these tools and techniques in more detail in the handbook "Open Space for New Hampshire, a Tool Book of Techniques for the New Millennium." The handbook also refers to associated state laws and regulations, sample communities that have used these methods, and where to acquire technical assistance and additional written documents on each method. If the Town of New Boston is interested in acquiring additional information on any of the following, this resource should be utilized. This section describes some of the key ways of implementing land protection programs, but more of the techniques described in the above Tool Book can be found in Appendix E.

Voluntary Land Protection

There are two primary types of voluntary land protection. The first is the gift or sale (or combination) of land or conservation easements. The second is Conservation Subdivision options.

A voluntary conservation easement involves the donation or sale of the development rights over the land. The landowner makes the decision that they wish to prohibit development on their land and preserve the natural state. They donate or sell the development rights to the town or a land trust as the easement holder; this group is then responsible for easement stewardship. The owners continue to use their land and pay property taxes on it. However, some or all of the value of any donation can be deducted from federal income taxes.

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¹⁶ Taylor, Dorothy Tripp. Open Space for New Hampshire, a Tool Book of Techniques for the New Millennium. Manchester, NH Wildlife Trust, 2000.

Conservation Easements

A conservation easement permanently restricts development rights on open space or agricultural land. Any landowner can donate or sell a conservation easement to the easement holder (usually a non-profit land trust or municipality). The easement holder does not hold development rights (the rights are extinguished), but rather they are responsible for stewardship and enforcement of the conditions of the easement. The easement becomes part of the deed defining the property and transfers to any new owners of the property in perpetuity.

An easement should be tailored to the specific parcel of land and the values of the landowner, meaning existing structures and activities remain in place. This could include archaeological excavations, agriculture, and public events.

An easement *does not necessarily* signify public use; rather, the landowner can determine the best use of the land, including granting permission for community recreation and use. The landowner continues to hold all legal rights and responsibilities of ownership of the land, except those explicitly excluded by the easement as agreed by the landowner.

A Conservation Subdivision is a residential or mixed-use development in which a large portion of the development site is set aside as unfragmented, permanently protected open space, with the buildings clustered on the remaining portion of the land. This approach could yield roughly the same number of building lots in the development, yet preserve much more open space. Specific criteria that developers must meet to have a Conservation Subdivision vary by town. Some of the main advantages of this arrangement include its efficiency and low cost relative to other protection methods, and its ability to maintain rural character while still allowing development. Drawbacks include resistance from residents concerned with increased density on the developed land and more complex governance of the resultant open space.

Another form of voluntary conservation subdivisions exists as the "Village Plan Alternative," as described in RSA 674:21. This stipulates that a developer must locate all development on 20 percent of the development property to allow for maximum open space. The open space area will be under a recorded conservation easement. The Village Plan area is subject to all ordinances and regulations with the exception of density, lot size, and frontage and setbacks.

Regulatory Land Protection

Another approach to land protection involves the use of zoning or municipal regulations to prohibit unnatural disturbance or total development of each parcel. Regulatory measures are perhaps the most cost-efficient means of land preservation, and if

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¹⁷ NH DES, Innovative Land Use planning Techniques: A Handbook for Sustainable Development, Village Plan Alternative Subdivision. 2007

implemented according to the open space priorities of the town, can be extremely effective in curbing sprawl and protecting land. The two primary methods of regulatory land preservation are Conservation Subdivisions and growth management ordinances. Additionally other subdivision ordinances may be added to zoning regulations in order to reflect priorities on smaller scales.

A Conservation Subdivision *requirement* has the same result as conservation subdivision option but the requirement regulates that qualified development *must* be in conservation subdivisions. This ordinance would lower the lot size of houses built in new subdivision developments in New Boston. However, it would also significantly increase the amount of conserved open space.

Growth Management Ordinances are often used by municipalities experiencing population growth at a rapid pace whose public facilities and services cannot keep up. They function by placing short or long-term caps on new residences or population numbers. Under certain circumstances, a town can adopt regulations to control the rate of development. In New Hampshire, a town must have both a master plan and a capital improvement plan before it can adopt any ordinances controlling the timing of development. In certain rapid growth situations, slowing the rate of development can give a community time to update its master plan, develop infrastructure, and consider ways to conserve open space. Methods include limiting the number of building permits, or an interim growth moratorium allowing the planning board to halt or severely limit development for up to one year.

Frequently Asked Questions about Regulatory Measures

Do conservation subdivisions involve a taking without compensation?

No, for two reasons. The first is that no density is taken away. Developers can still build at full permitted density for the municipality's current zoning, but houses are condensed onto smaller lots so that at least half of the land is left as open space. Second, no land is taken for public use, since the neighborhood or the developer owns and manages the open space land (except in rare cases that are negotiated with the town).

What are the ownership, maintenance, and tax issues?

In the case of a conservation subdivision, the land most commonly belongs either to the original landowner (who can pass the land to heirs and keep it under conservation easement) or the Homeowner's Association (which consists of all residents in the neighborhood and minimizes facilities to keep dues low). The landowner or Homeowner's Association is responsible for taxation, generally the same as a normal subdivision, and maintenance. In other cases the municipality or a private land trust maintains the land or an easement on the land.

How do conservation subdivisions differ from clustering?

Clustering uses the same principle of decreasing lot size in exchange for more open space. However, clustering requires less land be set aside for conservation and makes no specifications as to what land is to be conserved nor how. Conservation subdivisions are planned to preserve natural or historical features and create green space throughout the community.

Some rural towns require all developers to submit an alternative conservation plan along with conventional patterns of development. These conservation plans take open space, environmentally sensitive parcels, lot size, and profitability into consideration. Most regulations for alternative conservation plans require that certified landscape architects or similarly qualified experts help to craft the plan based on soil type, drainage, and environmental features. While the developer may choose either the traditional or conservation plan, if approved, these towns have found that once developers create an alterative plan, a great number carry through with the conservation design due to the many advantages it offers.

While New Boston could achieve the greatest degree of open space protection for the lowest cost by mandating Conservation Subdivisions, the Town may instead choose to offer incentives to encourage developers to build according to Smart Growth Principles. The following are some of the most effective incentives:

- **Density bonuses**: Subdivisions that use innovative protection can receive density bonuses allowing them to build more houses on the existing developable land than would otherwise have been allowed in the subdivision.
- Reduction of minimum lot standards: Reducing requirements for elements of the subdivision allows the builder to have more flexibility in design and ultimately save money. The incentives could allow for exceptions in frontage, yard area, height, setback, and landscaping.

• Reduction in road design standards: As another incentive to save money and increase flexibility, the Town could allow for reductions in road width, parking, and signage standards. In a subdivision with more compact development, driving speeds would be reduced, allowing for safe road variations. Federal standards exist for low volume rural roads. Reduction in road dimensions should be considered for any future subdivision that meets the low volume criteria.

Transfer of Development Rights

Transfer of development rights (TDR) is a market based technique that encourages the voluntary transfer of growth from places where a community would like to see less development (called sending areas) to places where a community would like to see more development (called receiving areas). The sending areas can be environmentally-sensitive properties, open space, agricultural land, wildlife habitat, historic landmarks or any other places that are important to a community. The receiving areas should be places that the general public has agreed are appropriate for extra development because they are close to jobs, shopping, schools, transportation and other urban services.

TDR is driven by the profit motive. Sending site owners permanently deed-restrict their properties because the TDR program makes it more profitable for them to sell their unused development rights than develop their land. Developers buy the development rights and use them to increase the density of receiving site projects; they do that because these larger projects are more profitable than the smaller projects allowed when development rights are not transferred. In addition to making property owners and developers happy, TDR solves a seemingly intractable dilemma for communities: it gives them a way to achieve critical land use goals using little or no public funding. (1999 "Transfer of Development Rights Update", APA National Planning Conference,

http://design.asu.edu/apa/proceedings99/PRUETZ/PRUETZ.HTM)

Other ordinances can be effective at smaller scales. These reflect the ideal characteristics of the Conservation Subdivision but can be implemented piece by piece.

- Reduced density for conventional developments: House lots in New Boston currently require a minimum of two acres per lot. This may be used to determine the maximum number of houses that could be built on a subdivided parcel. The developer could use Smart Growth Principles that essentially increase density in a certain area (less than 2 acres per house lot) in exchange for more open space in another. Should the developer choose not to use this approach, and instead spread the houses across larger lots, the Town might require a reduction of the total number of houses allowed in the subdivision (more than 2 acres per house lot).
- Maximum setbacks and street widths: By regulating that that houses be built
 within a certain distance from the road, the Town can maximize the amount of
 open space contained contiguously behind each lot rather than leaving disjointed
 green space between the road and the building.
- Expanded buffer zones for wetlands, riparian corridors, and special wildlife habitat on all new developments: By requiring developers to consider and

- protect particularly sensitive and valuable areas, the Town can preserve its resources at little or no cost.
- Reduction or elimination of the Current Use Change Tax: Converting open space under current use into house lots, developers can incur an expensive tax payment to the Town. However, the Town might decide that if certain conservation criteria are met in the development, the change tax might be reduced or eliminated. In many cases, the open space benefit would be more immediate and cost effective than collecting the tax and using it to fund other conservation projects.

Purchase

The final method of open space protection is through the purchase of the land or acquisition of development rights to that land. Depending on the needs of the landowner and sources of available funding, land and development rights can be purchased at varying cost to the town.

In the case of an **outright purchase**, the town buys the property at market value from the current landowner. There are no tax benefits or exceptions for either party, and the Town no longer receives taxes on the land. This is the most costly method of land protection but requires no special arrangements with the landowner and leaves future use of the land completely in control of the Town.

A **bargain sale** is an agreement of discounted sale of property to the Town. The landowner agrees to sell his/her land below market value, and the difference between fair market value and the sale price becomes a tax-deductible charitable donation. Bargain sales are also useful for the landowner in minimizing the liability of a long-term capital gains tax associated with selling a large estate. After the sale, the Town retains all rights and responsibilities over the land.

Finally, the Town can purchase or acquire **conservation easements** over the land, which means the owner still maintains ownership and tax responsibility but is prohibited from developing the land. The Town purchases development rights, which is usually calculated to be the fair market value of the land for development purposes minus the value of the land for open space or agricultural purposes. The Town gains the responsibility of easement stewardship, which means monitoring the land to ensure that the agreements of the easement (generally a lack of development or disturbances) are being followed.

Combining Strategies

While these methods are described independent of other strategies, they can be creatively combined to protect more land for less money. For more information on combining strategies and more implementation ideas and details, see Appendix E.

Outreach and Landowner Contact

The Town of New Boston is working towards open space preservation for the public good of all citizens as expressed by New Boston citizens, but the conservation interests and cooperation of landowners and developers is essential. The NBOSC is committed to

identifying critical protection areas based on natural resource co-occurrence value, large parcels of land, and "hot spots" in town without identifying specific landowners or parcels. The Town faces the challenge of reaching out to residents to persuade them of the importance and the benefits, both social and economic, of open space. Public education campaigns are the first important step in outreach.

With community outreach and cooperation of the P.L.C., the Russell Foundation, the Conservation Commission, and other land conservation organizations, some landowners and developers will be more eager to conserve their land through easements, conservation subdivision options, and sale of property. Landowners with accurate information about the benefits of open space and the economic and tax implications to them are more likely to want to conserve their open space. Therefore, preparing information and making it readily available can be one of the most effective ways to conserve open space.

Potential Schedule and Costs for Implementation

It is recommended that the New Boston Open Space Committee oversee the implementation of the Open Space Plan. The following basic steps can guide the implementation process:

- Identify and prioritize key conservation resource areas of New Boston to pursue acquisition and protection.
- Work with Town officials to organize and develop sources of funding, including the issuance of bonds
- Assist the Conservation Commission in the development of an overall management plan for conservation land and existing Town-owned property.

In addition, the Planning Board and Conservation Commission should continue to recommend changes to the Town's zoning, subdivision and site plan regulations and adopt other mechanisms that give the Town more authority to create permanent, useable open space in and near new developments, if appropriate.

Action Plan for Implementation

	- Th	- u	n .
Recommended	Time	Funding	Primary
Actions	Frame	Source	Responsibility
Adopt the Open Space Plan as an official part of the Town's Master Plan.	Update of Master Plan	General Fund	Planning Board (PB)
Research and propose possible amendments to the Town's development regulations to align growth of the Town to goals presented in the Open Space Plan. In particular, start by further investigating the following: • Adoption of regulations supporting Smart Growth Principles. • Consider incentives to developers for preserving open space and Smart Growth development	2008- 2010 Long term	General Fund	Open Space Committee (NBOSC) Conservation Commission (CC) PB
Establish conservation easements on existing forests owned by the Town.	Mid-term		PB CC Forestry Committee
Increase the portion of Current Use Change Tax used for conservation purposes to 100%.	Short- term		Selectmen
Research alternative funding methods, including possibility of a capital reserve fund or a bond issue for purchasing land or conservation easements.	Ongoing	General Fund	NBOSC and CC
Pursue means of land protection offered by state, federal, and non-profit agencies. • Educate citizens about tax benefits of conservation easements, land donations, and bargain sales. • Forge partnerships with local, state, and national land trusts to connect with additional funding sources. • Identify and work to obtain grants for agricultural land protection, forestry, water resource	Ongoing	Grants, Conservation Fund	NBOSC

protection, wetlands, scenic roadways, cultural and historic resources, and wildlife habitats. • Continue to improve knowledge and practices in creation and use of conservation easements. • Encourage communication among landowners. Distribute criteria determined by the New Boston Open Space Committee as well as other relevant information to the parties making land acquisition decisions, including the Planning Board, the Conservation Commission, the Select Board, the Zoning Board, and developers.	Short-term	NBOSC
Outreach to landowners with information and educational opportunities about preserving their open land: • Develop information on conservation easements. • Encourage private forest owners to join the New Hampshire Tree Farm Program, which promotes sustainable forest management practices. • Work with New Hampshire Fish and Game on the implementation of the Wildlife Action Plan.	Short term	NBOSC
Outreach to townspeople on values of open space and recreational opportunities within New Boston: Prepare an inventory and map of significant recreational areas, trails, and historic sites in New Boston.	Short term	NBOSC
Continue to work with P.L.C. and other land trusts and state and federal agencies to develop a natural greenway and trail system. • Expand partnerships with Conservation Commissions in surrounding towns.		СС

APPENDIX A: MAPS AND PLANS AND PROGRAMS

Existing Maps Related to Open Space in New Boston

A number of maps have been created to assist the Town of New Boston with the task of open space planning. The following is a list of these plans, strategies and maps, with a brief summary of each.

1. New Boston Base Map

- Identifies state, local, and class VI roads.
- Displays local hydrography and town boundaries.
- Map shows all basic town features including parcel boundaries.

2. Land Cover Map

 Map displays town's varying vegetation, water ways, tree species, wetlands, and agricultural land cover.

3. Protected New Boston Lands Map

- Map features conservation parcels.
- Features also include roadways, hydrography, and political boundaries.

4. Unfragmented Lands Map

- Shows all land parcels not divided by road ways.
- Map also shows major wetlands in town.

5. Wetlands Composite Map

• All town wetland areas and water bodies are shown in this map.

6. Development Constraints Map

• All town political boundaries, land use, hydrology, wetland, and slope features that restrict or limit development and/or certain types of growth.

7. Co-Occurrence Map

- A natural resources Co-Occurrence Analysis is an important tool in identifying and prioritizing areas for protection.
- The Analysis identifies high-value natural resource areas and maps them, with multiple levels of unique resource data overlaid spatially using geographical information system software (GIS) to display on one comprehensive map.

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