

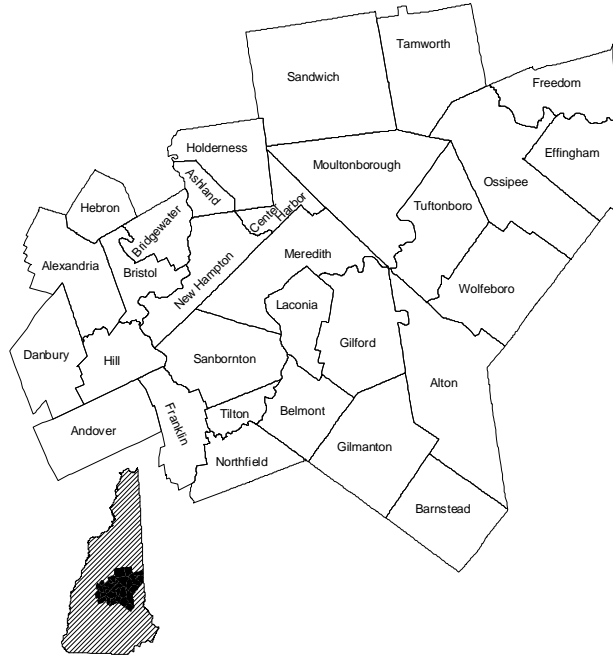
Smart Growth Audit: Barnstead, NH



June 2007

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I. The Need for Smart Growth

Since 1999, New Hampshire has grown at a rate of more than 16,000 people each year¹. Economically, this growth is often perceived as good for New Hampshire; it brings new jobs, new people, and new ideas. At the same time, however, it also brings new challenges.

Unmanaged, growth can become sprawl, which threatens to destroy the very qualities that make New Hampshire a great place to live. The term ‘smart growth’ is sometimes substituted for policies and techniques that prevent or counteract sprawl.

“Sprawl is a pattern of development that results when:

- we use more and more land for various human activities;
- the places where we conduct activities are farther apart, and tend to be in homogeneous rather than mixed-use groupings; and
- we rely on automobiles to connect us to those places.

Development or change in land use contributes to sprawl when:

- it increases the need or demand for motor vehicle trip miles per housing unit in the community;
- it increases the per-person or per-unit amount of land space devoted to cars; and
- it otherwise increases the per-person or per-unit consumption or fractionalization of land areas that would otherwise be open space.”²

Sprawling growth moves away from our town centers, leaving downtowns struggling. It spreads residential development across the rural landscape on large lots, eliminating the farms and woodlots of the working landscape - the pieces that are the very essence of rural character. The resulting pattern of development leaves islands of single uses widely spread apart from each other. In many areas the automobile becomes the only logical way of reaching these far-flung districts. Instead of the traditional mixed use patterns of development, where at least some residential development was directly accessible to downtowns that provided a variety of commercial, industrial, and institutional activities, we have residential subdivisions and office parks far outside of downtown. Instead of small-scale retail centers, we have stores and retail complexes hundreds of thousands of square feet in size, surrounded by acres of parking. In doing so, we are losing any traditional, distinctive New Hampshire character.³

¹ NH Office of Energy and Planning webpage, <http://nh.gov/oep/programs/DataCenter/Population/PopulationEstimates.htm> (visited 6/15/06).

² NH Office of State Planning, *Annual Report to the General Court and the Governor on Growth Management*, December 2001 p.2.

³ NH Office of State Planning, *Report to Governor Shabean on Sprawl*, December 1999. p. 1.

The NH Department of Environmental Services has studied the pattern of land use in New Hampshire and has this to say about its impact on the state's environment, "Sprawl describes a pattern of development characterized by increasing amounts of developed land per person, scattered, low-density development, and the fragmentation and loss of open space. Sprawl and other poor development practices impose significant negative impacts on air and water quality, reduce the quantity and quality of wildlife habitat, and limit recreational opportunities for area residents."⁴

Sprawl is expensive because it increases the cost of municipal services and thus taxes; it destroys the traditional land uses of forestry and agriculture; it makes us more dependent on the automobile, thus increasing traffic, congestion and air pollution; it increases water pollution through increased pavement; and it destroys the small town, rural character that is so important to many of New Hampshire's communities.

This type of development occurs not because of the ill will of developers or the ineffectiveness of government. Developers respond to market forces within the rules established by state and municipal governments. At times, however, the rules are not coherent, consistent or logically linked to the goals they are intended to realize. Sometimes rules designed for one desirable purpose have unintended, undesirable consequences. For example:

- Two acre zoning intended to preserve a rural setting results in the fragmentation of wildlife habitat;
- Land use regulations regulating odors intended to protect health in a residential area results in limits on farming that hastens the loss of large tracts of working open space.

The central focus of a Smart Growth Audit is to provide a useful link between the Principles of Smart Growth and their application in municipal land use practice.

This report is a first step for providing that link for the town of Barnstead. For Smart Growth to be effective implementation is required and it has to be dynamic with updates occurring at least every five to ten years along with the Master Plan.

⁴ Smart Growth webpage, NH Department of Environmental Services, <http://www.des.state.nh.us/wmb/was/smartgrowth.htm> (visited May 14, 2007).

II. What is Smart Growth?⁵

Change is occurring in New Hampshire - more people, more traffic, changing jobs, higher taxes, and various stresses on the environment. Given these pressures, it is understandable that taxpayers and communities often respond with a loud “STOP!” Growth management, tax caps, and budget cuts are all natural responses to situations that appear overwhelming.

Smart Growth says, “First, decide on your vision. Then explore the possible ways to achieve it.” In practical terms, Smart Growth consists of evaluating and shaping all new development and re-development initiatives according to the following eight principles:

1. Maintain traditional **compact settlement** patterns to efficiently use land, resources and infrastructure investments;
2. 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;
3. Incorporate a **mix of uses** to provide a variety of housing, employment, shopping, services and social opportunities for all members of the community;
4. Provide **choices and safety in transportation** to create livable, walkable communities that increase accessibility for people of all ages, whether on foot, bicycle, or in motor vehicles;
5. Preserve New Hampshire’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;
6. 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 communities and people in New Hampshire;
7. **Involve the community** in planning and implementation to ensure that development [supports] and enhances the sense of place, traditions, goals, and values of the local community; and
8. Manage growth locally in the New Hampshire tradition, but **work with neighboring towns** to achieve common goals and address common problems more effectively.

⁵ Text in Sections I and II is adapted from *GrowSmart NH Tool-Kit Project*, 2002, NH Office of Energy and Planning and Planning Decisions, Inc..
http://nh.gov/oep/programs/SmartGrowth/docs/chester_report.pdf pp. 3,4.

III. What is a Smart Growth Audit?

A Smart Growth Audit is an assessment of where the community stands regarding the Smart Growth Principles. To accomplish this several steps must be taken:

- Recent changes in the municipality's population and development are compiled along with projections for these trends.
- The community reviews the eight NH Smart Growth Principles and identifies which of these they support.
- The most recent Master Plan goals and objectives are reviewed for statements that support the Smart Growth Principles,
- The current local land use ordinances and regulations are reviewed for consistency with each of the town-supported the Smart Growth Principles.
- Suggestions are made regarding what steps the community might take to better implement the identified Smart Growth Principles.

This audit is based upon the most current documents available; Master Plan, 2002; Zoning Ordinances, 2007; Subdivision Regulations, 2004; Site Plan Review Regulations, 1994 and conversations with the Planning Board. Because the Master Plan is now five years old it is important to recognize that some of the goals and objectives from the Master Plan may already have been achieved. In fact, the Planning Board felt that a review of the Master Plan at this point in time could be quite helpful in highlighting accomplishments as well as items yet to be implemented.

IV. Smart Growth in Barnstead

A. Population and Development Trends

In the 1980s, the population of New Hampshire increased by 20%; then slowed to an 11% increase in the 1990s. The Lakes Region population grew at 17.6% in the 1980s and 15.8% in the 1990s. During this same timeframe, Barnstead grew at a much faster pace, 35.3% in the 1980s and 25.4% in the 1990s.⁶ According to the NH Office of Energy and Planning (NH OEP), Barnstead's 2005 estimated population was 4,507. NH OEP projects that the state population will grow at a rate of between 7% and 8% each decade through 2025, while Barnstead's population is projected to increase by approximately 14% during the next decade and slow to 9.5% growth the following decade, higher than the Belknap County projections of 11.4% and 7.5%. This level of growth will result in an additional 1,140 residents in Barnstead.⁷

NH OEP demographic projections are only available at the state and county levels.⁸ Statewide the percent of the population over 64 years of age is projected to double between 2000 and 2025, while the actual number of people under 25 is predicted to remain fairly constant. A similar pattern is anticipated for Belknap County with a slight decrease in the number of people under 25, while the percentage of Belknap County residents over 64 is projected to increase from 15.1% to 33.3%.

In 2000, median home values in Barnstead were among the lowest in the region, having dropped 5% during the 1990s. At the same time, Barnstead had 1,994 housing units, an increase of 7.1% from 1990. The percentage of these units that were seasonal was 26.5%, virtually the same as Belknap County and slightly below the Lakes Region average of 29.8%. Although duplexes, multi-family, and manufactured housing exist in Barnstead, single family housing represents 93% of the housing stock⁹. Between 2000 and 2005, Barnstead granted an average of 63 residential permits a year. In 2001, the town issued 139 residential permits, the third highest number of residential permits in the Lakes Region during the six year period (2000 – 2005).¹⁰

B. Barnstead's Smart Growth Principles

The Barnstead Planning Board reviewed the eight Principles of Smart Growth outlined by the NH OEP that apply to New Hampshire communities. The Board agreed that all of the Principles apply to Barnstead.

⁶ *Lakes Region Demographic Profile*, Lakes Region Planning Commission, 2003.

⁷ <http://nh.gov/oep/programs/DataCenter/Population/documents/pub05.xls>

⁸ <http://nh.gov/oep/programs/DataCenter/Population/documents/populationforcountiesbyageandsex.xls>

⁹ *Lakes Region Demographic Profile*, Lakes Region Planning Commission, 2003.

¹⁰ *Development Activities in the Lakes Region: 2007 Annual Report*, Lakes Region Planning Commission.

C. Smart Growth and Barnstead's Master Plan

This section outlines supporting master plan goals and objectives, land use regulations, and ordinance references for each Smart Growth Principle. This is followed by an analysis section that looks at how closely the guiding documents of the municipality are aligned with each Principle. Where appropriate, the analysis addresses some of the impediments to implementing Smart Growth and makes suggestions for improvement.

Efforts were made to link individual goal, objective, ordinance, or regulation references with one Principle; however, some repetition was necessary. Due to the interrelated nature of the Principles, there are some statements that play an important role in shaping the town's ability to implement multiple Principles. Some foster the Principle, a few run contrary to the Principle. For a complete list of the municipal statements and how they link to the Smart Growth Principles, please refer to the matrix that accompanies this report.

Key: Each statement is referenced using the following abbreviations (MP – Master Plan, ZO – Zoning Ordinance, SD – Subdivision, SP - Site Plan).

Statements in [brackets] were inserted by LRPC.

Statements found to run contrary to the principle are listed at the end of each section.

Smart Growth Principle 1:

Maintain traditional compact settlement patterns

Maintain traditional compact settlement patterns to efficiently use land, resources and infrastructure investments.

Summary:

The Barnstead Master Plan recognizes that growth will continue and calls for planning so that the town's rural character, natural and cultural resources, and tax rate will not be adversely impacted. There is a strong focus on the town's infrastructure. The growth referenced in the plan refers not only to residential but also commercial and industrial growth.

Goals and Objectives:

- Ensure that the quality of service of the town government is maintained at the same level during periods of rapid population growth. (MP Objective 1.1.3).
- Ensure safe opportunities for the disposal of town sewerage. (MP Objective 3.8.2)
- To ensure that the town is prepared to meet the needs for municipal sewer and water as growth occurs.(MP Goal 3.9)
- Determine when and if municipal sewer and water are needed. (MP Objective 3.9.1)
- To provide residents with a range of recreational opportunities in a central location. (MP Goal 4.1)
- Large lot development outside of the villages and clusters should be encouraged to reduce the number of automobile trips. (MP Objective 5.4.1).
- Scattered housing should be discouraged. (MP Objective 5.6.1)
- Housing in clusters or in village scapes should be encouraged. (MP Objective 5.6.2)
- Maintain the existing character of the town. (MP Goal 6.2)
- Develop land use regulations which foster logical development patterns. (MP Objective 6.2.1)
- To place housing in a manner which discourages sprawl. (MP Goal 5.6)

Ordinances and Regulations:

- Encourage the most appropriate use of land throughout the Town (ZO 1-2.2).
- If the building lot is to be serviced by off-lot wastewater and off-lot municipal or approved community water system, the sub divider may petition the Planning Board to approve a lot size less than the minimum, but would still be capable of accommodating a single family dwelling unit that meets all the setback requirements contained in section 4-2.03, 4-2.04, 4-2.05 and 4-2.06 of the Town of Barnstead Zoning Ordinance. (ZO 4-1.04).
- Promote a layout, which will shorten the network of streets and utilities, lessen the need for grading and tree removal, and reduce potential problems of drainage and erosion. (ZO 6-3.03)

- Statement of adequacy of utility systems for the provision of water service, fire protection, sewer service, and storm drainage where applicable. (ZO 6-5.03).
- [Open Space Preservation and Development] The minimum lot size for individual building lots within clusters shall be determined by the Planning Board to meet the objectives of this ordinance. (ZO 6-7.03)
- [Impact Fees] Ensure that adequate and appropriate facilities are available to individuals who may come to be located in the Town of Barnstead (ZO 13-1.02).
- [Impact Fees] Prevent scattered or premature development of land as would involve danger or injury to health, safety, or prosperity by reason of the lack of water supply, drainage, transportation, schools, fire protection, or other public services, or necessitate the excessive expenditure of public funds for the supply of such services (ZO 13-1.03).
- Provide against such scattered or premature subdivision of land as would involve danger or injury to health, safety, or prosperity by reason of the lack of water supply, drainage, transportation, schools, fire protection, or other public services, or necessitate the excessive expenditure of public funds for the supply of such services (SD 2.1).
- After consideration of the fiscal, traffic, and/or environmental impact studies, the Board may require the applicant to bear that portion of the cost of off-site improvements which bears a rational nexus to the needs created by, and special benefits conferred upon the subdivision. (SD 6.62).
- In developments where a municipal water supply system is to be provided and whose water source is outside the drainage basin of the proposed development, minimum lot sizes may be reduced by twenty percent (20%) of the minimum lot size established in the Zoning Ordinance. (SD 9)
- [Duplexes are allowed] (SD 9)
- Provision shall be made for the site to be serviced by necessary utilities which may include water for fire and domestic use, sanitary sewer, electrical, and gas. (SP 3.7)

Statements Contrary to Principle #1

- Prevent overcrowding of land, and avoid undue concentration of population (ZO 1-2.4 - Purpose).
- Every building lot shall have a minimum lot frontage of two hundred (200) contiguous feet on a road. (Amended 3/13/07 added contiguous) (ZO 4-2.03) [All zones]
- Buildings must set back fifty (50) feet from a right-of-way. (ZO 4-2.04) [All zones]
- Building must set back a minimum of thirty (30) feet from the side line. (ZO 4-2.05)
- Buildings shall be setback from the road a distance at least equal to the average distance from the road of the two buildings on either side thereof. Except when a lot is nonconforming, the building shall be setback fifty (50) feet from the rear and side property lines. (ZO 14-5.04)
- For duplex use, where the total number of bedrooms in the building shall not exceed five (5), the lot size shall be increased forty percent (40%) over the

amount established in the Zoning Ordinance.[YET] For single family homes with greater than four (4) bedrooms, the required lot size will be increased fifteen percent (15%) for each additional bedroom exceeding four (4). (SD 9)

Analysis:

Barnstead's Zoning Ordinance allows for some flexibility in terms of lot sizing if municipal sewer is available; this also appears to be the case for Open Space Preservation and Development projects. However, no sewer system exists in Barnstead, nor is one likely in the foreseeable future. The town is utilizing Impact Fees to help offset the costs of infrastructure expansion. The frontage and setback requirements in the Zoning Ordinances run counter to the idea of compact settlement, especially in the Village Areas.

The ability to reduce minimum lot sizes in some cases where municipal water is utilized is an option that the Planning Board should exercise to encourage the prudent use of resources (although the language defining 'the drainage basin' ought to be clarified). The town should also consider allowing greater flexibility regarding setbacks and road frontage.

The Planning Board considers Barnstead to have three villages – Barnstead Parade, Center Barnstead, and the Locke Lake development. The first two are 1.5 miles apart and have some mixed development. The Locke Lake development is on the northern edge of town and strictly residential. There is a public water system for residents of Locke Lake; all others depend upon private wells.

Smart Growth Principle 2:

Foster a human scale of development

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.

Summary:

The ideas expressed in the Barnstead Master Plan clearly point towards a town with a couple of village centers where buildings are fairly close together and it is easy to get around on foot. Also emphasized is the desire to preserve the historic and cultural character of the community and in fact the Master Plan even refers to the siting of housing as a tool for creating community.

Goals and Objectives:

- To preserve and maintain the historical and cultural character of the village centers. (MP Goal 1.4)
- Preserve the historic character of the village centers (MP Objective 1.4.1)
- Preserve the cultural character of the village centers. (MP Objective 1.4.2)
- Barnstead should designate two villages – Barnstead Parade and Barnstead Center – and these villages should be, because of density, transit friendly. These villages will also have mixed use and be pedestrian friendly to reduce the number of automobile trips. (MP Strategy 5.2.1.1)
- To place housing to create community. (MP Goal 5.9)

Ordinances and Regulations:

- Existing undersized lots not meeting the Zoning Regulations of the Town, which are to be developed near populated or wetland areas in the Town of Barnstead, will be required to have a holding tank or chemical toilet with gray water leaching field, meeting the required specifications of the Department of Environmental Services Regulations of the State of New Hampshire. (ZO 3-1).
- On lots forty thousand (40,000) square feet or less where the width of the lot is less than two hundred (200) feet, the required side yard setbacks may be reduced six (6) inches for every two (2) feet of width that is less than the required two hundred (200) feet, with the limitation that a minimum of fifteen (15) feet shall not be exceeded. (ZO 3-1).
- The design of the Open Space Preservation and Development shall be directed toward establishing a sense of place. Inward-oriented placement of buildings, well-defined public and private spaces, sidewalks and resting sites are desired. (ZO 6-6.03B).
- Any such business must provide off-road parking. (ZO 8-1.02).
- [Town adopted a Growth Management Ordinance in 2003; ordinance expires in 2009.] This limits the number of Building permits to a 'sustainable rate of development'. (ZO Section 12).
- Provide for the harmonious development of the municipality and its environs (SD 2.2)

- Include provisions which will tend to create conditions favorable to health, safety, convenience, or prosperity (SD 2.10)
- Streets shall be related to the topography, with curvilinear alignment whenever practical. (SD 7.A.1.)
- [Flexible commercial and industrial lot sizing for businesses with residential quality sewage] (SD 9)

Statements Contrary to Principle #2

- Without regard to size, each building lot in the Town of Barnstead shall be capable of siting an on-lot sewage disposal system that meets the approval of the Water Division as found in New Hampshire Code of Administrative Rules Env-Ws 1000 (Env-Ws1000). The minimum lot size for a single-family unit shall be two acres, eighty-seven thousand and one hundred and twenty (87,120) square feet. (ZO 4-1)
- In the design review process for an Open Space Preservation and Development the applicant(s) and the Planning Board shall recognize the special nature of this form of development. Because of the nature of the areas in which Planned Unit Developments may be built, the development should be integrated into the surrounding neighborhood in such a way that several visual qualities between old and new are complimentary. [Awkward language - impediment?] (ZO 6-6.01)

Analysis:

There are several methods through which Barnstead's ordinances and regulations encourage human scale development; there are also a number of policies that discourage such development.

On small lots denser development is promoted through flexibility regarding setbacks. Likewise, flexibility in sizing of clustered and multi-family lots, and for some commercial and industrial projects based on the type of effluent produced, encourages human scale development. The Open Space Preservation and Development ordinance has some marvelous language and suggestions to encourage community building. Recognizing the need for off-street parking for commercial interests and discouraging the unnatural use of straight roadways promotes human scale transportation in villages. The Growth Management Ordinance enables the town to ensure that the development which is occurring does so at a manageable pace.

Sections of the Zoning Ordinances and Subdivision Regulations indicate that there is not flexibility in the two-acre minimum lot size. Although the language of the Open Space Preservation and Development Ordinance is intended to promote compatibility and acceptance of such projects into the community, parts of the language are confusing and the requirements cumbersome.

Smart Growth Principle 3:

Incorporate a mix of uses

Incorporate a mix of uses to provide a variety of housing, employment, shopping, services and social opportunities for all members of the community.

Summary:

The statements in the Barnstead Master Plan clearly and concisely indicate a desire to encourage a variety of housing options and promotion of mixed uses within the community

Goals and Objectives:

- Ensure that uses which complement each other are allowed together. (MP Objective 1.2.3)
- Promote mixed-use housing in a village setting. Commercial and residential in the same structure. (MP Objective 5.3.1).
- Promote co-housing and family compounds. (MP Objective 5.3.2).
- To place housing to support industry. (MP Goal 5.8).
- Housing on small lots in village settings should be located near industrial areas. (MP Objective 5.8.1).
- The Villages should have mixed use housing, have a variety of human need suppliers, and be pedestrian friendly (MP Objective 5.9.1).
- To promote housing for the elderly. (MP Goal 5.10).
- Allow multi-family housing for a housing complex defined for elderly under HUD guidelines. (MP Objective 5.10.1).
- Allow in-dwelling apartment without separate entrances for family members. (MP Objective 5.10.2).
- Provide for mixed-use pedestrian friendly districts where people can live and work. (MP Objective 1.2.2)

Ordinances and Regulations:

- [Allows for Manufactured Housing] (ZO 5-1).
- [Residential-Agricultural Districts]...while allowing mixed residential housing and industrial, commercial uses in harmony with the area. (ZO 14-7.01).
- Require, in proper cases, that plats showing new streets or narrowing or widening of such streets submitted to the Planning Board for approval shall show a park or parks suitably located for playground or other recreational uses (SD 2.6).
- Village districts are established to retain cultural and historic centers that provide mixed residential and commercial land uses. (ZO 14-5.01).
- [Suburban Districts] For multi-family residential use, the minimum lot size shall be proportionately smaller per dwelling unit than the lot size established in the Zoning Ordinance (SD 9A)

Statements Contrary to Principle #3

- All uses other than single-family residential housing shall be prohibited. (ZO 14-6.03).

Analysis:

Language found in the ordinances and regulations indicate the permission of manufactured housing, duplexes, promotion of mixed residential and commercial uses in the Villages, as well as flexibility in clustered and multi-family lot sizing. Flexible lot sizing for multi-family projects should encourage this type of development in Village Areas.

In some parts of town single-family housing is the only type of development permitted. There are a couple of types of housing (for the elderly, in support of industry) that may require some specific incentives in the ordinances or regulations to promote such development.

The town has purchased land behind the current Town Hall. Several uses have been proposed for this area, including a mix of commercial, residential, and municipal services. This and several other creative uses of land in the village areas were developed in the Center Barnstead Revitalization Design Charrette of July 2006. The town should take steps to implement elements of this plan that promote mixed use development in the village areas.

Smart Growth Principle 4:

Preserve New Hampshire's working landscape

Preserve New Hampshire'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.

Summary:

Language in the Barnstead Master Plan repeatedly states the desire to maintain a rural character in Barnstead and encourage working agriculture. The town also recognizes that sprawling development can adversely impact both of these community features. Barnstead is home to several hay and horse farms along with growers of Christmas trees, strawberries, and blueberries.

Goals and Objectives:

- Ensure that conflicting uses are separated... (MP Objective 1.2.3)
- Ensure that lot size requirements are appropriate to maintain the rural character of Barnstead. (MP Objective 1.3.1).
- To ensure that future housing is constructed so it does not destroy the town's rural character, nor adversely harm the environment, nor cause an undo drain on the country's energy and agricultural resources. (MP Goal 5.7).
- Limit the growth of scattered housing. (MP Objective 5.7.1).
- Explore the feasibility of creating zones that do not allow scattered housing as one tool for maintaining the town's rural character. (MP Strategy 5.7.1.1).
- Encourage housing types that promote agriculture and industry. (MP Objective 5.7.2).

Ordinances and Regulations:

- [Residential-Agricultural Districts] The purpose of this section is to establish districts of larger lot sizes that provide a rural character (ZO 14-7.01)
- [Town has Open Space Preservation and Development article.] (ZO Section 6)
- For Open Space Preservation and Developments, the overall density of lots or dwelling units within the parcel shall be determined by using the lot size established in the Zoning Ordinance and computing a soil carrying capacity of all allowed soils found in the parcel proposed for the subdivision. (SD 9B)

Analysis:

Barnstead does have an Open Space Preservation and Development Ordinance which, if utilized could maintain significant segments of town as Open (rural) Space. Prioritization of open space and natural resources could be enhanced through the development of a natural resources inventory and unfragmented lands analysis and then referencing these in the ordinances and regulations. The town should also consider dedicating its land use change tax to the purchase and maintenance of open space.



One of the first statements in the Master Plan addresses keeping incompatible uses separate. Although Barnstead does have zoning, the town might consider the adoption of an Agricultural Ordinance, which makes it clear what is expected of those in the agricultural community, developers, and other residents regarding buffers, operating practices, and expectations. This can reduce conflicts down the road. A Model Agricultural Ordinance is being provided to the Planning Board as guidance.

Smart Growth Principle 5:

Provide choices and safety in transportation

Provide choices and safety in transportation to create livable, walkable communities that increase accessibility for people of all ages, whether on foot, bicycle, or in motor vehicles.

Summary:

NH Route 28 is a major north-south corridor that connects residents in the southeastern Lakes Region with the I-93 corridor. This artery carries between 6,000 and 10,000 vehicles per day. According to the Lakes Region Demographic Profile, in 2000 less than 15% of Barnstead's residents worked within the town, leading to a great deal of time spent on the road. Barnstead's Master Plan emphasizes the need for a variety of transportation options and clearly recognizes the links between land use and transportation.



Development of a hiking network throughout the community and linking with neighboring towns is a recommendation of the plan that is compatible with this Principle.

Goals and Objectives:

- Provide for the siting of industry and business in areas close to transportation facilities and without substantial impacts on residential development. (MP Objective 1.2.1).
- To provide transportation opportunities to residents which reduce dependence on individual private motor vehicle transportation. (MP Goal 2.3).
- Provide residents with opportunities for carpooling. (MP Objective 2.3.1).
- Provide residents with public transportation opportunities. (MP Objective 2.3.2).
- Work with other communities and the State to establish a demand/scheduled transportation service to Pittsfield and Concord. (MP Strategy 2.3.2.1).
- To provide trails and sidewalks for non-motorized and motorized use. (MP Goal 2.6).
- Create sidewalks and trails connecting important town places to form walking connections. (MP Objective 2.6.1).
- Increase access to trail systems for the town's residents. (MP Objective 4.2.1).
- Work with local and regional groups to develop larger scale, multi-town trail networks. (MP Objective 4.2.2)
- To place housing in a manner that prevents highway congestion. (MP Goal 5.4).

Ordinances and Regulations:

- Lessen congestion on the streets (ZO 1-2.4).
- The Impact Statement shall include a Statement of effect on pedestrian and vehicular traffic on abutting street. (ZO 6-5.02).

- The plan of Open Space Preservation and Development shall provide continuity of open space throughout and around the tract. Trails and bicycle paths are desired. (ZO 6-6.03E).
- Streets within the Open Space Preservation and Development should be related to project overall town plans for vehicular circulation improvement. (ZO 6-6.03F).
- Require the proper arrangement and coordination of streets within subdivisions in relation to other existing or planned streets or with features of the official map of the municipality (SD 2.3).
- Require suitably located streets of sufficient width to accommodate existing and prospective traffic and to afford adequate light, air, and access for fire-fighting apparatus and equipment to buildings, and be coordinated so as to compose a convenient system (SD 2.5).
- A complete Subdivision application requires a Traffic Study. (SD 6A9).
- Proposed Plan shall include: A circulation plan of the interior of the lot showing provisions for both auto and pedestrian circulation. An access plan showing means of access to the site and proposed changes to existing public streets including any traffic control devices necessary in conjunction with the site development plan. (SP 2.2H).
- Proposed plan shall include: Traffic access to the site from the town streets shall ensure the safety of vehicles and pedestrians. (SP 3.1).
- Proposed plan shall include: Improvement to existing streets shall include signal devices if necessary because of increased traffic generated by the development. (SP 3.2).
- Circulation (vehicle and pedestrian) and parking including loading facilities shall be designed to ensure the safety of vehicles and pedestrians on the site. (SP 3.3).

Statements contrary to Principle #5

- Minimum Road Standards: Pavement width - twenty-two (22) feet (SD 7A2b)

Analysis:

Although NH Route 28 is a major arterial through the middle of town, the Village Districts are somewhat off of this high speed road. Many of the ordinances and regulations that Barnstead has in place encourage this Smart Growth Transportation Principle. Most of these statements reflect the recognized link in the Master Plan between land use and transportation. The key to achieving the goals and objectives in the Master Plan is implementing the existing land use ordinances and regulations.

Where practicable, the town should consider allowing the construction of roads that are less than 22 feet wide as a means of encouraging slower vehicle speeds. From the perspective of local application, members of the Planning Board could recall only three developments in the last several years that required the construction of new roads, the result of significant road building in the 1970s.

Walking and biking trails should be required elements of an Open Space Preservation and Development project. Incentives should be granted for those which connect to paths on abutting properties as well as for opening the land up to other residents.



The Planning Board is interested in the development of walkways connecting NH Route 126 and the elementary school along Maple Street and there was discussion of connecting Center Barnstead with Barnstead Parade with walking/biking trails. The New Hampshire Safe Routes to Schools Program http://www.nh.gov/dot/bureaus/planning/SRTS_home.htm may be able to assist Barnstead in both the planning and construction of walkways for children to get to school. The New Hampshire Trails Bureau <http://www.nhtrails.org/> at Department of Resources and Economic Development has guidelines for the planning and development of recreational trails, their staff can also meet with the town to address local needs. The Bureau also administers grants under the Recreational Trails Program. Materials related to these resources have been provided to the Planning Board.

Smart Growth Principle 6:

Protect environmental quality

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 communities and people in New Hampshire.

Summary:

Environmental quality is an important focus of the Barnstead Master Plan with more than a dozen statements in support of this topic. It begins with a nice description of specific items to protect. It links the maintenance of rural character and the protection of natural resources, including aquifers, with the control of development through innovative Land Use Controls and land conservation. Tools mentioned include local regulation and review as well as education.

Goals and Objectives:

- Protect scenic views and vistas, stonewalls and unique tree stands along our town and state roads. (MP Objective 1.3.2).
- To protect the natural resources of the Town of Barnstead. (MP Goal 1.5).
- Develop legislative strategies to protect the natural resources of Barnstead. (MP Objective 1.5.1).
- To ensure that housing placement maintains open space. (MP Goal 5.1).
- Promote cluster housing development in town to protect open space. (MP Objective 5.1.1).
- To place housing in a manner that aids in the preservation of our scarce natural resources. (MP Goal 5.2).
- Housing should be placed to take advantage of wood lots and natural conditions (MP Objective 5.2.2).
- House owners should be encouraged to use solar techniques and extensive insulation. (MP Objective 5.2.3).
- Prevent the loss of wetlands and their associated values. (MP Goal 6.1).
- Create stronger local regulation and review processes when and if there is a need and community support.. (MP Objective 6.1.1).
- Educate landowners about existing wetland regulations and their associated responsibilities. (MP Objective 6.1.2).
- Protect town aquifers to ensure that future needs can be met.. (MP Goal 6.4).
- Ensure that accurate and up-to-date aquifer information is utilized in town planning. (MP Objective 6.4.1).
- Maintain the overall quality of life of the community by protecting open space. (MP Goal 6.5).
- Protect open space in the town through easements and acquisitions. (MP Objective 6.5.1).

Ordinances and Regulations:

- Conserve natural resources (ZO 1-2.8).
- Protect groundwater resources from adverse development or land use practices (such as, but not limited to, the disposal or storage of solid wastes, sludge, subsurface waste disposal, road salting materials, gas or other petroleum products) that might reduce the quality and quantity of water that is now and will be, in the future, available for use by the municipality, individuals and industries (ZO 1-2.9).
- There must be fifty (50) feet between the nearest edge of any building and the high water line. There must be at least two hundred (200) feet of shoreline frontage for each dwelling unit. Shoreline frontage shall be measured from side boundary to side boundary along a straight line or a series of fifty (50) foot lines where the lot meets a body of water at the high water line. (ZO 4-2.06)
- To improve residential subdivision design and to increase flexibility in subdivision design with consideration given to:
 - A. Preservation of the natural and scenic qualities of the land being subdivided;
 - B. To reduce the visibility of the development from adjacent roads and abutting land by buffers and natural characteristics of the land. (ZO 6-3.0))
- To preserve open space, wetland, agricultural land, tree and other vegetative cover, scenic vistas, and wildlife habitat. Avoid development of portions of sites, which have poor soil conditions, high water tables, are subject to flooding, or have excessive steep slopes. (ZO 6-3.02)
- Individual lots, buildings, streets, and parking areas shall be designed and situated to minimize alteration of the natural site features. (ZO 6-4.03)
- Prominent landscape features should be respected in the plan. Viewsheds, ecologically sensitive areas, ridgelines, and wet areas should remain vacant. A topographic map shall be prepared and existing landscape features and planned landscaping shown. If steep slopes are considered for development, engineering detail must be submitted for review. (ZO 6-6.03)
- At least fifteen (15) percent of the tract's developable land shall be set aside as common open space. Common open space will not include: undevelopable land, roads, parking areas, or any structures. A condition of the cluster development approval shall be that common open space may not be further subdivided or utilized for expanded residential construction. (ZO 6-7.07)
- [Have Shoreland Protection Ordinance.] (ZO Section 7)
- Where existing, a natural woodland buffer shall be maintained within one hundred fifty (150) feet of the public boundary line. [Larger buffer than CSPA.] (ZO 7-5)
- All subsurface waste disposal systems must be designed and installed in accordance with the Department of Environmental Services, Division of Water Supply and Pollution Control publication "Subdivision and Individual Sewage



Disposal System Design Rules" New Hampshire Code of Administration Rules
Env-Ws 1000. (ZO 7-6)

- All construction and/or development activities shall incorporate design standards for erosion and sedimentation control, which at a minimum reflect the requirements set forth in the Town of Barnstead Subdivision Regulations and Site Plan Review Regulation. (Amended 3/13/07) (ZO 7.7.01)
- Buildings should be placed in such a manner as to minimize impact on habitat and at such a location as to have the least impact on the watershed.] (ZO 7-8.03)
- Parcel coverage by impervious cover shall not exceed twenty (20) percent. (ZO 7-8.04)
- [Have Open Space Preservation Development within Shoreland Protection section] (ZO 7.10)
- A minimum of sixty (60) percent of the total parcel shall remain as permanent open space, which shall be in a conservation easement in perpetuity. (ZO 7-10.02)
- Parcel coverage by impervious cover including building footprint, impervious roadway or other impervious cover shall not exceed twenty (20) percent of the parcel. (ZO 7-10.03)
- [Aquifer Recharge District] This district is intended to protect groundwater quality in stratified drift aquifers that are delineated as potential groundwater recharge areas identified by the United States Geological Services and shown on the Town of Barnstead Recharge District Map. (ZO 14-3)
- Provide for open spaces of adequate proportions (SD 2.4).
- Require that proposed parks shall be of reasonable size for neighborhood playgrounds or other recreational or conservation uses (SD 2.7).
- Environmental Impact Statement is required. (SD 6A)
- Aquifer recharge protection districts are to be shown on subdivision plans. (SD 6A)
- Shown for all Major Subdivisions (≥ 4) Locations and dimensions of all property to be dedicated or reserved for parks, playgrounds, or open space. The subdivision shall, at the discretion of the Board, preserve in their natural condition important natural features such as watercourses, wetlands, agricultural land, slopes greater than fifteen (15) percent, large or unique trees, wildlife habitat, or ledge outcroppings. (SD 6C)
- Shown for all Major Subdivisions (≥ 4) Natural features that provide buffers between lots within the subdivision, and buffers between the subdivision and abutters shall be preserved whenever possible. The clearing of natural vegetation within the subdivision shall be conducted in such a manner as to preserve the above buffers. Clear-cutting of vegetation is prohibited except where necessary for road construction. No person shall commence the construction of roads within the proposed subdivision by clearing the land of natural vegetation, placing any artificial fill thereon, or otherwise altering the land, nor shall he do any other act or acts which alter the natural state of the land or environment, unless the subdivision plan has been approved by the Board. (SD 6C)
- Required of all Major Subdivisions (≥ 4) Landscape Plan (SD 6D)
- Required of all Major Subdivisions (≥ 4) Stormwater Plan (SD 6D)

- The proposed subdivision shall not cause any off-site increases in drainage, either during construction or once construction is completed. (SD 6DD)
- Measures shall be taken to minimize impermeable areas and provide for adequate infiltration. (SD 6DE)
- No subdivision plans or site plans shall be granted approval unless they include measures for erosion and sediment control. (SD 6D)
- For single family homes with greater than four (4) bedrooms, the required lot size will be increased fifteen percent (15%) for each additional bedroom exceeding four (4). (SD 9)
- Each lot shall have a minimum area and a minimum frontage as required by the Zoning Ordinance to assure such additional area as is needed for on-site sanitary facilities and to insure ground water quality protection [RSA 674:36 II(i)]. (SD 9)
- Map shall include: Natural features such as streams, marshes, lakes, or ponds (SP 2.1F).
- Map shall include: The size and location of all existing public and private utilities and all existing landscaping. (SP 2.1H).
- Proposal shall include: A storm drainage plan including plans for retention and slow release of storm water where necessary. (SP 2.2G)
- Landscaping and screening shall be provided with regard to adjacent properties, the public highway and within the site including interior landscaping of large parking areas, (over three double rows). (SP 3.4)
- Storm drainage of the site shall be designed for a 25-year flood and if the existing drainage system to which the site drainage system will be connected is inadequate, provisions shall be made for retention and gradual release of storm water in order to meet the 25-year flood demand. (SP 3.5)
- Provision shall be made for protection of natural features. (SP 3.8)
- Provision shall be made for water supply, wastewater disposal, and solid waste disposal. (SP 3.11)
- Environmental factors [are to be considered]. (SP 3.12)

Statements Contrary to Principle #6

- [Environmental Impact Assessment could be perceived as cumbersome.] (ZO 6-5)
- [Aquifer Recharge District] This district overlays all other zoning districts. [The wording of the boundaries and zoning precedence could be clarified to reduce confusion.] (ZO 14-3)
- [Conditional Use Permits] The following uses are permitted upon approval of a conditional-use permit issued by the Planning Board with any other conditions attached by the board. Sewage disposal system for a single or two family residential dwelling with a minimum of three (3) acres. [Is this intended for dwellings LESS THAN 3 acres?] (ZO 14-3.02B)
- Prescribe minimum areas of lots so as to assure conformance with local Zoning Ordinance, and to assure such additional areas as may be needed for each lot for on-site sanitary facilities (SD 2.9)

Analysis:

Barnstead's Zoning Ordinances, and Subdivision and Site Plan Regulations have a total of more than three dozen statements focusing on the protection of Natural Resources. The town has several important elements already incorporated into their ordinances and regulations, such as Shoreland Protection Ordinance, impervious surface limitations, Aquifer Recharge District, and Open Space Preservation and Development article. Some statements identified are general, most are fairly specific and most of the statements were interpreted as supporting Principle #6.

There are a few Zoning Ordinances and a couple of Site Plan Regulations that appear to run contrary to the intent of the Principle. This is due either to a statement being too vague, contradicting a statement found elsewhere in town documents, or as being cumbersome to implement. While the Master Plan begins with some fairly specific statements about what environmental features to protect, the Site Plan Regulations could do a better job of identifying what those features are; a Natural Resources Inventory would be a useful guide for such purposes. It is recommended that the Planning Board clarify the wording in the Zoning Ordinances regarding Aquifer Recharge Districts and Conditional Use Permits.

As it currently exists, Barnstead's Open Space Preservation and Development (OSPD) Ordinance is voluntary; yet there are no incentives to encourage the use of this method. Anyone wishing to construct such a development must follow a number of extra steps including the completion of an Environmental Impact Statement. To date, only one development has utilized this ordinance. Typically a community will grant some sort of density bonus in exchange for the extra effort required to comply with the rules (or it is required of all development). As the Planning Board revises the OSPD Ordinance, it should make this a very attractive option for those developing land in Barnstead.

The Subdivision Regulations call for expansion of lot sizes when residences have more than a certain number of bedrooms. The presumption is that this is to accommodate greater septic filtration, forcing all larger homes onto larger parcels. The required lot size increase also appears to be an even greater increase for duplexes than for single-family homes, running contrary to the concept of compact settlement patterns.

Smart Growth Principle 7:

Involve the community

Involve the community in planning and implementation to ensure that development retains and enhances the sense of place, traditions, goals, and values of the local community.

Summary:

The town seeks and listens to community input. There is reference to opinions expressed in the Master Plan survey and the need to hear from many voices prior to the development of public facilities.

Goals and Objectives:

- The Recreation Committee should create a long-term plan for developing recreational facilities on the Stevens property. Input should be provided through public hearings as well as by local professionals such as landscapers. (MP Strategy 4.1.1.1).
- Address the support within the survey and at public hearings for the preservation of scenic views and vistas, stonewalls, etc. within the town. (MP Objective 6.3.1).

Ordinances and Regulations:

- None applicable.

Analysis:

In late 2006 the town was selected to host a Planning Charrette by Plan NH. This two and a half day brainstorming process brought professional planners from around the state in to facilitate public discussions on planning issues in town. The ideas that surfaced in this process were built into the resulting recommendations.

Planning Board meetings are held regularly, posted, and open to the public. Meeting minutes are posted on the town website. Citizens should be encouraged to stay abreast of regional natural resource, economic, and transportation projects.

Smart Growth Principle 8:

Manage growth locally in the New Hampshire tradition, but work with neighboring towns

Manage growth locally in the New Hampshire tradition, but work with neighboring towns to achieve common goals and more effectively address common problems.

Summary:

Language directing the town to work with neighboring communities on transportation, recreation, and infrastructure projects is found in the Master Plan.

Goals and Objectives:

- Work with the Lakes Region Planning Commission Transportation Technical Advisory Committee to ensure that Barnstead state road needs are on the priority list for action. (MP. Strategy 2.5.1.2).
- The town should establish a regional maintenance service providing it is effective and efficient growth (MP. Objective 3.1.1).

Ordinances and Regulations:

- [The language regarding factors and actions related to a project of regional impact is clear.] (SD 11)

Analysis:

Current regulations do not specifically relate to the Master Plan statements. Barnstead does have regular representation at Transportation Technical Advisory Committee meetings and should participate in the upcoming Belknap-Merrimack Transit Study.

V. Suggestions for a Smart Growth Future for Barnstead

The 2000 Master Plan for Barnstead contains numerous goals and objectives supporting a variety of Smart Growth Principles, especially regarding environmental protection.

Barnstead's ordinances and regulations are the rules that govern the activities of residents, land owners, developers, and the Planning Board regarding the use of land. These are the tools that the community uses to achieve its goals. Although these documents contain a number of rules encouraging Smart Growth, there also appear to be some regulations and a number of ordinances that discourage Smart Growth Principles.

There are three steps that the town should consider if it wishes to better implement Smart Growth Principles.

Step 1: There are several situations where the Master Plan supports the Smart Growth Principle but there are ordinances or regulations which hinder the implementation of those goals and objectives. The Planning Board should address these inconsistencies through changes to the ordinances or regulations.

Step 2: Master Plans should be revised every five to ten years (NH RSA 674:3.II); Barnstead's is now about five years old. It is an appropriate time for the Planning Board to take a look at those goals and objectives which have been identified as inconsistent with Smart Growth Principles. They should be carefully evaluated to determine whether these are things which the town really strives to attain. Any necessary changes should be made during the Master Plan update process.

Step 3: Upon adoption of an updated Master Plan, any ordinances and regulations which may work contrary to the new goals and objectives should be revised.

Specific areas to focus on include:

- Revision of the Open Space Preservation and Development ordinance so that it is the development option of choice.
 - It should either be mandatory or have incentives built in to it (such as higher lot density) to encourage its use
 - Consider increasing the amount of land put in conservation to 50%
 - Require Environmental Impact Statements of standard developments and consider reducing this requirement on Open Space Preservation and Development projects
 - Develop a Natural Resources Inventory for referencing specific features to earmark for preservation
- Encouragement of higher density development and preservation of interconnected open space through flexibility of minimum lot requirements;
- Clarifying ordinances and regulations by eliminating areas of contradiction.

Examples of how other communities in New Hampshire have implemented Smart Growth Principles can be found at the NH OEP Smart Growth website
<http://nh.gov/oep/programs/SmartGrowth/smart-growth/principles.htm>.