

THE TOWN OF DERRY, NEW HAMPSHIRE



**MASTER PLAN
MARCH 2010**

THE TOWN OF DERRY, NH MASTER PLAN

**Prepared for the
DERRY PLANNING BOARD**

**By the
SOUTHERN NEW HAMPSHIRE PLANNING
COMMISSION**



**Adopted
March 24, 2010**

ACKNOWLEDGEMENTS

The citizens, residents and business owners of Derry, NH

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Highway Safety Committee
Housing and Redevelopment Authority
Zoning Board of Adjustment
Derry Downtown Committee

COMMUNITY PROFILE SUBCOMMITTEES

Derry Downtown Subcommittee (now the Derry Downtown Committee)

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Community Center

Recreation and Leisure

Natural Resources

Economic Development

Planning and Rezoning

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Mary Anderson, Headmaster, Pinkerton Academy (Private High School)

George Sioras, Planning Director

Elizabeth Robidoux, Planning Clerk

Cheryl Lynch, Derry Public Library

Linda Merrill, Taylor Library

And

Michele Gagne, UNH Cooperative Extension

ADOPTION SIGNATURES

CERTIFICATION OF 2010 MASTER PLAN ADOPTION DERRY PLANNING BOARD DERRY, NEW HAMPSHIRE

In accordance with New Hampshire RSA 674:4, Master Plan Adoption and Amendment, and New Hampshire RSA 675:6, Method of Adoption, the Derry Planning Board, having held a duly authorized public hearing on the 2010 Derry Master Plan on March 24, 2010; the Board hereby certifies that the 2010 Derry Master Plan was duly adopted by a majority vote of the Board's members on March 24, 2010.

David Granese, Chairman

Virginia Roach, Vice-Chairman

Brian Chirichiello, Town Council

Gary Stenhouse, Town Administrator

John O'Connor, Member

Maureen Heard, Member

Frank Bartkiewicz, Alternate Member

Darrell Park, Alternate Member

Randy Chase, Administrative Rep.

Jan Choiniere, Secretary

Denise Neale, Town Clerk

Date of Signature by Planning Board

Date Filed with Town Clerk

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Chapter 1

INTRODUCTION

1.0 INTRODUCTION

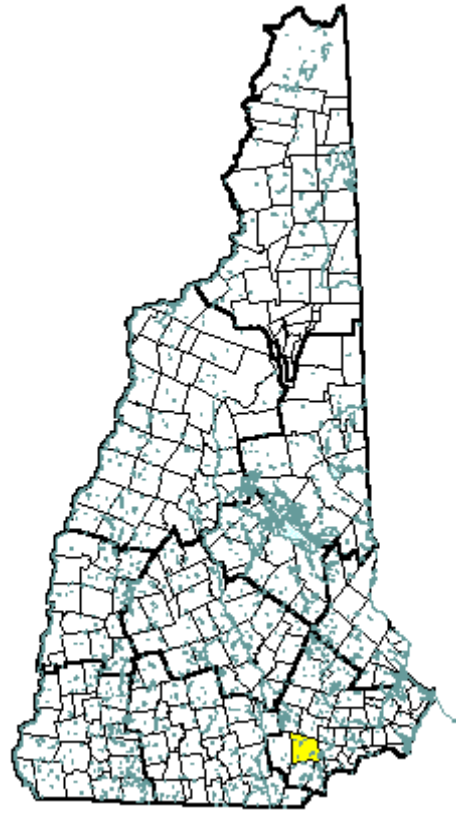
The purpose of a municipal Master Plan, as stated in the New Hampshire Revised Statutes Annotated (RSA) 674:2, is to “set down as clearly and practically as possible the best and most appropriate future development of the area under the jurisdiction of the planning board, to aid the board in designing ordinances that result in preserving and enhancing the unique quality of life and culture of New Hampshire, and to guide the board in the performance of its other duties in a manner that achieves the principles of smart growth, sound planning, and wise resource protection.”

The information compiled for the Master Plan needs to include sections on a general statement of the intentions of the Master Plan and land use. Additional recommended components are housing, transportation, utilities, community facilities, economic development, natural hazards, recreation, conservation and preservation, regional concerns, and implementation. The public is invited by the Planning Board to participate in the process. A Master Plan is typically updated every five to seven years.

A Town's Master Plan is the basis upon which the Zoning Ordinance, Site Plan Review Regulations, and Subdivision Regulations are written and revised. A Community Survey and Visioning Session are made available to residents of the Town to make sure that their concerns, comments, and suggestions are incorporated into the Master Plan.

The adoption of a Master Plan is essential for several reasons. First, a Master Plan is a legal pre-requisite to the adoption of a zoning ordinance. Specifically, under New Hampshire law (RSA 674:18), a Planning Board must adopt a Master Plan containing a vision section and a land use section before a municipal zoning ordinance is adopted.

Further, according to NH RSA 674:22, communities which wish to engage in regulating the timing of development through the establishment of growth limitations, must have adopted both a Master Plan and a capital improvements program or plan. Thus, a Master Plan is one of the cornerstones of an effective and legally defensible growth management policy.



The foundation of this Master Plan update is based upon extensive research and analysis of existing physical, economic and social conditions, as well as predictions about the future growth of Derry. Components of this analysis included:

- An existing land use summary
- A build-out analysis
- A town-wide community survey of all residents and property owners
- A community facilities survey
- A community profile facilitated by UNH Cooperative Extension

Other important sources of data included:

- U.S. Census
- N.H. Office of Energy and Planning
- N.H. Housing Finance Authority
- N.H. Department of Transportation
- N.H. Department of Revenue Administration
- N.H. Department of Employment Security/Economic and Labor Market Information Bureau

These documents, resources and data provide an understanding of the Town's existing land use, natural resources, and community facilities. An overview of recent economic, demographic, and housing trends and a projection of future needs in these important areas were also developed. The end result serves to document and identify the Town's assets and potential problem areas which will enable the implementation of ordinances and other planning measures to provide for the best and most appropriate future development of the community.

Based on this analysis, a vision statement and a set of goals and objectives targeting the important issues and features of the Town were identified. These goals and objectives are outlined in the following chapters:

- Demographic Trends
- Housing
- Economic Development
- Community Facilities
- Public Utilities
- Transportation
- Natural Resources and Open Space
- Historic and Cultural Resources
- Existing and Future Land Use

1.1. Community Survey

In the fall of 2008, a Community Survey was made available to the public at Town Hall, the Library, the Recreation Dept and via the Town website. A total of 1000 surveys were distributed and the town received 89 responses, for a return rate of 9 percent. Topics covered in the survey include the following:

- General Issues
- Respondent Profile
- Community Facilities and Services
- Regional Concerns
- Public Utilities
- Land Use
- Historic and Cultural Resources
- Natural Resources and Open Space
- Housing
- Transportation
- Economic Development
- Community Vision

The following questions and responses are those on the survey that relate to General Issues in the Town of Derry and the Respondent Profile. Survey responses pertaining to the rest of the subjects covered on the survey are found in their corresponding chapters.

What are the five most important issues that must be addressed in Derry over the next five years?

Issues	Respondents Out of 89 Total	Ranking Based on Percent
Reduce Tax burden	56	63%
Preserve Agricultural Land/Open Space	45	51%
Attract New Retail	42	47%
Protect Drinking Water Supply	38	43%
Attract office park	33	37%

Other important issues to be addressed

Downtown Revitalization	29	33%
Increase Commercial/Industrial Zones	22	25%
Improve Road Quality	22	25%
Decrease Rate of Residential Growth	21	24%
Protect Historic Properties/Sites	21	24%
Increase Availability of Sewer Services	16	18%
Increase Citizen Volunteerism	15	17%
Create Elderly Housing	15	17%
Increase Recreation Opportunities	15	17%

Create Work Force Housing	11	12%
Encourage Residential Growth to be Clustered	10	11%
Increase School Capacity/Facilities	10	11%
Increase Housing Variety	3	3%

Respondent Profile

Are you a Derry Resident or a Business Owner?

Respondent	Total	Percent
Resident	79	89%
Business Owner	0	0
Both	9	10%

If you are a resident, what part of town do you live in?

District	Total	Percent
District 1	20	22%
District 2	27	30%
District 3	21	24%
District 4	14	16%

What type of home do you live in?

Type of Home	Total	Percent
Single Family	69	78%
Apartment	5	6%
Townhouse/Condo	6	7%
Duplex	4	4%

Do you own or rent your home?

Status of Home	Total	Percent
Own	63	71%
Rent	8	9%

How long have you lived in Derry?

Years in Derry	Total	Percent
>20 years	39	44%
11-20 years	11	12%
1-5 years	20	22%
6-10 years	16	18%

How long do you plan to stay in Derry?

Stay in Derry	Total	Percent
>20 years	30	34%
11-20 years	24	27%
1-5 years	13	15%
6-10 years	15	17%
< 1 year	1	1%

What is your age group?

Age Group	Total	Percent
21-34	7	8%
35-44	15	17%
45-64	49	55%
65+	15	17%

How many persons are over the age of 18 in the household?

Adults 18+	Total	Percent
1	10	12%
2	54	66%
4	10	12%
3	7	8%
0	1	1%

1.2. Community Profile

The Our Town, Our Future Derry Community Profile was conducted as a result of the Planning Department's desire to update the town's Master Plan as well as enlist more citizen participation in the activities and needs of the community.

Over 150 community members came together on Saturday, April 4, 2009 to discuss the past, present and the future of Derry. Following is a brief summary of the conversation that took place during that day.¹ Please see Appendix A for the complete report.

Community Profile components discussed Saturday morning were subsequent issues outlined for work throughout the event:

- Informed Citizen Participation and Community Leadership
- Sense of Community
- Fostering Healthy Families, Individuals & Youth
- Lifelong Education & Learning
- Community Services, Facilities & Utilities
- Recreation & Cultural Heritage
- Working Landscape & Natural Environment
- Economic Vitality
- Growth and Development
- Transportation

Saturday afternoon small groups focused on the following seven themes to determine potential projects for Derry to work on:

- Protection of Natural Resources
- Community Support
- Leadership and Communication
- Planning
- Traffic/Transportation
- Economic Development
- Downtown
- Recreational & Leisure

Projects brought forward from the eight small groups above for the large group to vote on are listed below. The number of votes for each topic is listed in parenthesis:

Protection of Natural Resources

Implement Beaver Lake Watershed Management Plan as part of the town's Master Plan
(31 votes)

¹ University of New Hampshire Cooperative Extension. <http://extension.unh.edu/CommDev/CACPAP.htm>

Complete and enact the open space zoning amendment **(29 votes)**

Education of the community (adults & children) on environmental sustainability as a guiding principal **(24 votes)**

Community Support

Community Center virtual, physical, and/or both? **(35 votes)**

Form a Community Leadership Coalition – needs assessment and/or gap analysis **(29 votes)**

Marketing/Messaging Campaign – awareness raising **(4 votes)**

Leadership and Communication

Community and volunteer outreach coordinator **(38 votes)**

Consistent alignment with and communication of Master Plan **(25 votes)**

Leadership expectations/descriptions and development of community leaders **(11 votes)**

Planning

Development taskforce to review planning, zoning regulations for stricter requirements and more proactive enforcement **(52 votes)**

Derry 2030: the great vision **(13 votes)**

Compute the dollar value for commercial, open space, and residential costs in excess of revenue generated **(8 votes)**

Traffic/Transportation

Fix downtown traffic based on Traffic Study completed about 6 mos. ago; focus is on downtown – both getting thru and shoppers, diners **(46 votes)**

Sidewalks for Beaver Lake; Tsienneto; schools and other walkers **(24 votes)**

Review of traffic and speed controls and violators by Safety Committee **(1 vote)**

Economic Development

Develop comprehensive economic development vision and plan, inclusive of diverse locals **(58 votes)**

Develop monetary incentives to high tech prospects **(9 votes)**

Rezoning and infrastructure **(20 votes)**

Downtown

Town takes leadership role in purchasing and redeveloping property in downtown. For example, acquire property next to Adams Memorial for parking garage and land next to library **(51 votes)**

Create and promote a downtown identity through a physical gateway on Broadway and Merchant with promotions that connect downtown businesses and events **(12 votes)**

Beautify downtown through a blight ordinance and maintain and extend façade and stamped sidewalk, lighting & underground utilities **(27 votes)**

Recreation & Leisure

Encourage town Recreation Department to expand their involvement and improve their awareness-making **(23 votes)**

Improve town website/create e-mail list serve **(16 votes)**

Community calendar passed around and put in local newspapers **(30 votes)**

After the Our Town – Our Future community profile event was held on Saturday, April 4, 2009, a follow up meeting was held with approximately 50 residents in attendance on April 29, 2009. During that meeting, eight subcommittees were formed, Community Center, Downtown Committee, Economic Development, Leadership and Communication, Leisure and Recreation, Natural Resources, Planning and Rezoning, Traffic and Transportation. The goals formed include the following: develop a comprehensive economic development vision or plan, analyze traffic and safety studies, create a community and volunteer outreach coordinator, review planning and zoning regulations and find opportunities for improvement, purchase and redevelopment of property located in Derry's downtown, create a community wide calendar, create a community center, and to implement the Beaver Lake Management Plan.

Steering Committee Members:

David Nelson (chair), George Klauber (vice chair), Jack Robillard (secretary), Rick Metts, Neil Wetherbee, Cecile Cormier, Elizabeth Ives, Jack Dowd, Jack Robichaud, Nicole Ferrante, Ken Gould

Small group facilitators and recorders:

Mastora Bakhiet, Charlie Zoeller, Rizalina Ababa, Amanda Landry, Gordon Graham, Bina Contreras, Maggie Maxwell, Dylan Kreis, Jack Dowd, Elizabeth Ives, George Klauber, Bethany Hobbs, John Dowd, Margie Ives, Jillian Harris, Nicole Ferrante,

Marieka Buhlmann, Dan Reidy, Rick Alleva, Dave Nelson, Anna Baker, Claudia Boozer-Blasco

Town Support:

George Sioras (Community Development Director), Elizabeth Robidoux (Planning Clerk)

1.3. Regional Concerns

The interconnections between a community, its neighbors and the region it lies within will play a major role in shaping a community, which is why regional concerns are an important consideration when guiding the growth, development and planning for a municipality.

RSA 674:2 outlines required and suggested sections for inclusion in a Master Plan. For the regional concerns section, “Items to be considered may include but are not limited to public facilities, natural resources, economic and housing potential, transportation, agriculture, and open space. The intent of this section is to promote regional awareness in managing growth while fulfilling the vision statements.”

The following regional concerns emerged from the community profile in Derry:

1. Retain agriculture and farms.
2. Prevent watershed contamination.
3. Mitigate traffic issues.
4. Determine future feasibility of Exit 4A.

Local agriculture and agricultural preservation is a concern for every town in the region and has emerged as a concern from Derry that must be planned for on a regional basis in order to have the greatest success. Agriculture is addressed in Chapter 8, Natural Resources.

Watershed contamination and watershed health is another issue that must be addressed on a larger scale, because watersheds span many municipal and even regional borders. These concerns are also addressed in Chapter 8, Natural Resources.

Traffic and transportation is another issue that must be addressed regionally in order to have an impact on reducing the issues that currently exist. Chapter 7, Transportation addresses transportation concerns.

The future feasibility of Exit 4A is another issue that is addressed in Chapter 7, Transportation. The feasibility, benefits and challenges of this project must continue to be researched. This project has effects that cross municipal borders and so it is a regional concern for the Town of Derry.

1.4. Vision

The Town of Derry is a suburban bedroom community that attracts people with many cultural, historical, educational, recreational and economic opportunities. In order to maintain and improve upon these attractions, Derry will need to support and implement planning practices that encourage sustainable economic development while keeping natural resource, open space, rural and historic character in place. The many needs of the community will also need to be balanced with reducing the tax burden on residents. Attracting visitors and economic development and promoting Derry as the place to be will also be an important goal for Derry and will need to be carefully considered in all aspects of planning for the future of the Town.

The Town of Derry's vision for the future includes an attractive, thriving community that has a strong sense of cohesiveness in all aspects of community and government; a balance between open space preservation and development while maintaining the Town's rural character; improving and maintaining a healthy economy; improving sustainable growth and development practices that contribute to good health, attractiveness and economic development in town; continued preservation of important historical sites and buildings; an increased effort to reduce the residential tax burden; the creation of Derry as a destination and improving upon drawing visitors and increasing economic development at a sustainable rate.

The visions and statements presented in this section were compiled from the Survey and the Profile, the draft chapters of the Master Plan update, as well as the goals as stated by the various Profile Subcommittees. Visions that have been accomplished since the beginning of the Master Plan update process are not included in this chapter. Goals forwarded from the Profile Subcommittees or from the Community Survey have been designated in italics.

Community Vision

1. *Create a downtown committee made up of business owners, members of the Chamber of Commerce, and citizens. The purpose would be to address parking issues in the downtown, visions for the Veterans Memorial Building, the acquisition of the Masonic Temple and other available properties, and to hold a Civic Profile for Downtown that plans the downtown revitalization to be included in the CIP.*

Housing

1. A review of regional housing trends and an evaluation of affordable housing in Derry on a local level and a regional perspective shows Derry provides affordable and workforce housing in the majority of the town and that Derry meets and will continue to meet, its fair share of affordable housing in the reasonably foreseeable future.
2. *Provide single family and elderly housing.*

Economic Development

1. Discuss/review the recommendations of the 2008 Downtown Market Plan.
2. Create an Economic Development Plan for the town outlining strategies, activities and changes to existing regulations that will promote and sustain economic growth.
3. Consider extending water and sewer to the southwest area of Derry and to Route 28 South (Ryan's Hill area), with currently zoned commercial and industrial parcels in order to attract new businesses to these zones.
4. Consider widening the road in the area of Manchester Road/Route 28 in order to accommodate more traffic, which will support existing businesses and attract new ones to the area.
5. Continue to research the benefits, challenges and feasibility of Exit 4A. This project could have many benefits for Derry, including:
 - a. A direct access route to I-93 for commercial and industrial areas of town,
 - b. A bypass for the downtown, which will alleviate some of the current traffic problems and enhance the downtown area, and
 - c. Create more connections to existing commercial and industrial areas and open them up for more development.
6. Continue to implement the Capital Improvement Plan in order to address infrastructure needs and maintain and improve levels of service in town.
7. Prepare a commercial property inventory for determining what exists and where gaps can be filled.
8. Consider implementing impact fees to offset some of the indirect costs of new developments.
9. Participate in Regional Economic Development efforts.
10. Adopt the Community Revitalization Tax Relief Incentive for rehabilitation of under-utilized properties in downtown Derry.
11. Consider adopting a blight ordinance to address hazardous or dilapidated buildings, contaminated sites and support re-use and redevelopment of these properties.
12. Develop a "Buy Local" campaign as part of the marketing and branding initiatives in Derry in order to reduce the carbon footprint while at the same time strengthening Economic Development efforts.
13. Support the formation of an Independent Business Alliance.
14. Develop a database of properties in Derry that are available for commercial/industrial/economic development (grant funds).
15. Develop Planning Board mission statement and annual work plan to guide and prioritize Planning Board work.
16. Develop a citizen location referral program, to remunerate citizens for introductions between the town and business owners who relocate to Derry.
17. Form an Economic Development Committee with the purpose of developing a process for Town Council, the Planning Board and the Planning Department to prioritize and plan for future growth.
18. Revitalize the downtown.

Community Facilities

1. Acquire parking for the Adams Memorial Building.
2. Make decisions regarding the renovation of Veteran's Hall, or construct a new recreational facility.
3. Continue to maintain and upgrade town owned buildings as necessary.
4. Develop a comprehensive Fire Code that would include residential sprinkler requirements.
5. Develop consolidation and regional plans with surrounding Fire Departments and emergency agencies.
6. Purchase property with the intent of constructing a new fire station that would include a dispatch center and administrative offices.
7. Increase parking for Library patrons.
8. Finish the Rail Trail.
9. Create a senior center (partial funding has been obtained in the fall of 2009).

Public Utilities

1. Increase water and sewer on Rockingham Road from West Running Brook to vicinity of Berry Road and then to the Windham town line, including a pump station.
2. Continue energy reducing measures including following the Green Building & Vehicle Ordinance adopted in 2008.
3. Rehabilitate/pump replacement for Meadowbrook Community Well System.
4. Main upgrade and replacement program and other upgrades and repairs to booster stations.
5. Improve/expand water and sewer systems.

Transportation

1. Address the traffic and safety concerns at Danforth Circle, Tsienneto Road at Crystal and Route 102.
2. *Fixed, improved public transportation linking key areas.*
3. *Parking adjacent to the Adams Memorial Building.*
4. *Pedestrian friendly streets.*
5. *Funding of improvements.*
6. Continue/plan for short and long term improvements for the identified 8 problematic intersections.
7. Continue to request projects that mitigate traffic congestion be included in the NH DOT 10 year highway plan.
8. Continue work on the bike trail.
9. Continue involvement and participation in the regional transportation funding programs for local and state transportation projects.
10. Implement land use tools to manage access on a transportation corridor during the development process.

Natural Resources

1. Implement the strategies outlined in the Beaver Lake Watershed Management Plan.
2. Implement recommendations in the Derry Open Space Plan.
3. Adopt LEED regulations and green infrastructure.
4. Consider use of conservation subdivisions to conserve open space in Derry and to work toward implementing smart growth development and planning.
5. Continue to review and update the Land Advisory Report.
6. Work with federal, state, county and non-profit land trust organizations, as well as private landowners to purchase, obtain through donations, easements, or transfer of development rights, properties for protection from development.
7. Continue to participate in the New Hampshire current use program to support the preservation of open space, farmland and forest land.
8. *Develop a working group that will create and introduce environmentally-based educational programming into the school district, which will assist with the long term protection efforts and public education.*
9. Participate in the USDA Farm and Ranch Lands Protection Program as a sponsoring agency.
10. Continue long term protection efforts such as public education and outreach, IDDE and stormwater ordinance enforcement, and stormwater pollution prevention efforts.
11. Encourage an agricultural subcommittee on the Conservation Commission or the establishment of an agricultural commission to develop priorities and work towards agricultural preservation and sustainable agricultural practices.
12. *Protect the drinking water supply and aquifers, lakes and surface waters, wildlife habitats and corridors and forested areas.*
13. *Preserve agricultural land, open fields and prime wetlands.*
14. *Green marketing: energy, local, conservation, natural resources, recycling, commuting, gardening, noise.*
15. *Use of alternative energy sources by the town.*
16. *Communication and education of cost/benefit analysis of green/energy marketing.*
17. *Increased collaboration with all stakeholders: citizens and town government.*
16. *Establish a committee to introduce science programs around natural resources/environmental conservation in the Derry schools. Envision this being an environmentally-based program to teach sustainability and using natural resources in Derry as “classroom without walls”.*
 - a. *Stream Teams Program existed at Pinkerton in 2007, this is a goal of the Beaver Lake Watershed Management Plan, need to re-introduce program at Pinkerton.*
 - b. *Other programs in the future might include Project Learning Tree program (statewide program) to help support this goal.*
 - c. *School members – get school members on committee,*

- d. *Would like to become a subcommittee of conservation commission (accomplished 2009).*

Historic and Cultural Resources

1. Create a historic overlay district to protect historic sites and properties from abutting residential and commercial uses.
2. Protect the area around the Robert Frost Farm, creating zoning designations that are sensitive to the homestead.
3. Review and consider the recommendations contained in the 1986 Historic Preservation report prepared by Lynne Emerson Monroe.
4. Review and revisit the goals for Historic Preservation as set forth in the 2002 Master Plan.
5. *Link historic sites so that Derry becomes a destination.*
6. *Expand downtown parking to accommodate events.*
7. *Identify or create a location or facility that accommodates big venues.*
8. *Develop, market and promote additional and existing recreational and cultural resources and events.*
9. *Protect historical assets.*
10. *Commit to and create a clear vision of cultural heritage and recreational resources.*

Existing and Future Land Use

1. Consider a new Commercial/Industrial zone in the area north of Tsienneto Road and along Manchester Road in the area currently zoned Industrial III and Industrial IV. Lot sizes in the zone are 1 acre.
2. Consider rezoning and expanding the area along the Route 28 corridor in the southern portion of the town to commercial. Review current OMB districts in the South Range Rd/Frost Rd area and rezone back to residential, retaining some of the parcels as OMB/Medical uses.
3. Consider the use of a historic overlay district to protect sites and properties from abutting residential and commercial uses
4. Consider Revising Derry's zoning and subdivision regulations to allow and encourage Open Space Subdivisions/Residential Development as a means of implementing smart growth principles and preserving open space in the future
5. Continue to use the Town's Growth Management Ordinance to control and direct growth so that it is sustainable in the future
6. Implement recommendations of the Downtown Market Plan (2008) for strengthening economic development and character in the downtown area and review on a regular basis
7. Consider expanding the Downtown Market Plan for the development of an overall Economic Development Plan for the entire town and include a comprehensive review of current land uses to determine what strategies can be implemented to strengthen economic development in the Town of Derry

8. Implement recommendations of the Beaver Lake Watershed Management Plan in order to protect natural resources within the Beaver Lake Watershed
9. Consider a taskforce to review planning, zoning and code enforcement regulations on a regular basis for compliance with town Goals and vision
10. Consider developing a Cost of Community Services Study to determine how land uses should be balanced in the future in the Town of Derry
11. *Review planning and zoning regulations for more strict requirements and proactive enforcement.*
12. *Review the 16 zones to see if any can be combined, at same time review uses allowed in those zones.*
13. *Review of Code Enforcement process.*
14. *Improve communication between Boards/Committees and the public.*
15. *Review seasonable availability of water supplies lacking in certain areas of town.*
16. *Review the overlay zones in the downtown area.*
17. *Consider enacting Impact Fees for development.*

1.5 GOALS AND OBJECTIVES

The goals and objectives presented in this section were compiled from the vision statements noted above in the previous section. Goals judged to be obtainable in the next 10 years have been outlined, as well as the applicable objectives for each goal. Objectives are a series of potential policies and actions the Town can take to fully implement the visions and goals of the Master Plan.

1. Community Vision

Goal 1.1: Create a downtown committee made up of business owners, members of the chamber of Commerce, and citizens. The purpose would be to address parking issues in the downtown, visions for the Veterans Memorial Building, the acquisition of the other available properties, and to hold a Civic Profile for Downtown that plans the downtown revitalization to be included in the CIP.

Objective 1.1.a: Acquire property surrounding the existing Veteran's Hall and Adam's Memorial Building with the intent to provide additional parking and to construct a new Recreational Facility. This goal should be applied to any community facility requiring additional space or parking.

2. Regional Concerns

Goal 2.1: Mitigate traffic issues.

Goal 2.2: Prevent watershed contamination.

Goal 2.3: Retain agriculture and farms.

Goal 2.4: Determine future feasibility of Exit 4A.

3. Housing

Goal 3.1: Continue to adapt to the demand for affordable housing in Derry.

4. Economic Development

Goal 4.1: Revitalize the downtown.

Objective 4.1.a: Create an Economic Development Plan for the town outlining strategies, activities and changes to existing regulation that will promote and sustain economic growth.

- Objective 4.1.b: Discuss/review the recommendations of the 2008 Downtown Market Plan.
- Objective 4.1.c: Form an Economic Development Committee.
- Objective 4.1.d: Hold downtown merchant events that allow Derry merchants to sell wares in a pedestrian friendly environment.
- Objective 4.1.e: Invest in downtown structure, creating attractive pedestrian paths that lead to downtown businesses.
- Goal 4.2: Extend water and sewer to the southwest area of Derry and to Route 28 South (Ryan’s Hill area), with currently zoned commercial and industrial parcels in order to attract new businesses to these zones.
- Goal 4.3: Widen the road in the area of Manchester Road/Route 28 in order to accommodate more traffic, which will support existing businesses and attract new ones to the area (TIF project in progress 2010).
- Goal 4.4 : Continue to research the benefits, challenges and feasibility of Exit 4A. This project could have many benefits for Derry, including:
- a. A direct access route to I-93 for commercial and industrial areas of town,
 - b. A bypass for the downtown, which will alleviate some of the current traffic problems and enhance the downtown area, and
 - c. Create more connections to existing commercial and industrial areas and open them up for more development.
- Goal 4.5: Continue to implement the Capital Improvement Plan in order to address infrastructure needs and maintain and improve levels of service in town.
- Goal 4.6: Participate in Regional Economic Development efforts.
- Goal 4.7: Continue to seek economic development options such as the Economic Development Revitalization Zone Tax Credit (ERZ) for the areas specifically designated for economic development or expansion. Those areas include Route 28/Ryan’s Hill, Shute’s Corner, Webster’s Corner, portions of Crystal Avenue and Broadway, and the Manchester Road TIF district.
- Goal 4.8: Adopt a blight ordinance to address hazardous or dilapidated buildings, contaminated sites and support re-use and redevelopment of these properties.
- Goal 4.9: Develop a “Buy Local” campaign as part of the marketing and branding initiatives in Derry in order to reduce the carbon footprint while at the same time strengthening Economic Development efforts.

Goal 4.10: Support the formation of an Independent Business Alliance.

Goal 4.11: Develop database of properties in Derry that are available for commercial/industrial/economic development (grant funding has been provided).

Objective 4.11.a: Prepare a commercial property inventory for determining what exists and where gaps can be filled (In progress, as of October 2009, town is halfway through the process.)

5. Community Facilities

Goal 5.1: Continue to maintain and upgrade town owned buildings as necessary.

Objective 5.1.a: Make decisions regarding the renovation of Veteran's Hall, or construct a new recreational facility.

Goal 5.2: Develop a comprehensive Fire Code that would include residential sprinkler requirements.

Goal 5.3: Develop consolidation and regional plans with surrounding Fire Departments and emergency agencies.

Goal 5.4: Finish the Rail Trail.

Goal 5.5: Acquire parking for the Adams Memorial Building and increase parking for Library patrons.

Goal 5.6: Purchase property with the intent of constructing a new fire station that would include a dispatch center and administrative offices.

6. Public Utilities

Goal 6.1: a. Increase water and sewer on Rockingham Road from West Running Brook to vicinity of Berry Road.

b. Increase water and sewer to the Windham town line, including a pump station.

Goal 6.2: Continue energy reducing measures including following the Green Building & Vehicle Ordinance adopted in 2008.

Goal 6.3: Main upgrade and replacement program and other upgrades and repairs to booster stations.

7. Transportation

- Goal 7.1: a. Address the traffic and safety concerns at Danforth Circle.
- b. Address the traffic and safety concerns at Tsienneto Road at Crystal and Route 102.
- Goal 7.2: Fix and improve public transportation in order to link key areas.
- Goal 7.3: Pedestrian friendly streets.
- Goal 7.4: Continue to fund transportation improvements.
- Goal 7.5: Continue/plan for short and long term improvements for the identified eight (8) problematic intersections.
- Goal 7.6: Continue to request projects that mitigate traffic congestion be included in the NH DOT 10 year highway plan.
- Goal 7.7: Continue work on the bike trail.
- Goal 7.8: Continue involvement and participation in the regional transportation funding programs for local and state transportation projects.
- Goal 7.9: Implement land use tools to manage access on transportation corridors during the development process.

8. Natural Resources

- Goal 8.1: Implement the strategies outlined in the Beaver Lake Watershed Management Plan. (Appendix B)
- Goal 8.2: Implement recommendations in the Derry Open Space Plan.
- Objective 8.2.a: Consider use of conservation subdivisions to conserve open space in Derry and to work toward implementing smart growth development and planning.
- Objective 8.2.b: Work with federal, county and non-profit land trust organizations, as well as private landowners to purchase, obtain through donations, easements, or transfer of development rights, properties for protection from development.

- Objective 8.2.c: Continue to participate in the New Hampshire current use program to support the preservation of open space, farmland and forest land.
- Goal 8.3: Adopt LEED regulations and green infrastructure.
- Objective 8.3.a: Town use of alternative energy sources.
- Objective 8.3.b: Communication of cost/benefit analysis of green/energy marketing.
- Goal 8.4: Continue to review and update the Land Advisory Report.
- Goal 8.5: Protect the drinking water supply and aquifers, lakes and surface waters, wildlife habitats and corridors and forested areas.
- Goal 8.6: Preserve agricultural land, open fields and prime wetlands.
- Objective 8.6.a: Map preservation/conservation land so that residents are aware of the location of land available for public access.
- Goal 8.7: Establish a committee to introduce science programs around natural resources/environmental conservation in the Derry schools. This is envisioned as being an environmentally-based program to teach sustainability and using natural resources in Derry as “classroom without walls” (Achieved fall 2009 – program in progress at the Barka School).
- Objective 8.7.a: Reintroduce the Stream Teams Program at Pinkerton to meet the recommendations of the Beaver Lake Watershed Management Plan.
- Objective 8.7.b: Implement Project Learning Tree program (statewide program).
- Objective 8.7.c: Obtain collaboration with the Derry School Board and get school members on Environmental Education subcommittee.
- Objective 8.7.d: Environmental education committee should be a subcommittee of the conservation commission (accomplished October, 2009).
- Goal 8.8: Continue long term protection efforts such as public education and outreach, IDDE and stormwater ordinance enforcement, and stormwater pollution prevention efforts.

Goal 8.9: Encourage an agricultural subcommittee on the Conservation Commission or the establishment of an agricultural commission to develop priorities and work towards agricultural preservation and sustainable agricultural practices.

9. Historic and Cultural Resources

Goal 9.1: Review and consider the recommendations contained in the 1986 Historic Preservation report prepared by Lynne Emerson Monroe.

Goal 9.2: Review and revisit the goals for Historic Preservation as set forth in the 2002 Master Plan.

Goal 9.3: Commit to and create a clear vision of cultural heritage and recreational resources.

Objective 9.3.a: Protect historic assets.

Note: Planning Board is currently drafting a Historic Overlay District Ordinance that will protect historic sites and properties from abutting residential and commercial uses.

Goal 9.4: Promote and market existing and potential recreational events and cultural resource events.

Objective 9.4.a: Identify or create a location for large venues.

Objective 9.4.b: Link historic sites so that Derry becomes a destination.

Goal 9.5: Work with state and non-profit land trust for land preservation efforts.

10. Existing and Future Land Use

Goal 10.1: Consider a taskforce to review planning, zoning and code enforcement regulations on a regular basis for compliance with town Goals and vision.

Objective 10.1.a: Review planning and zoning regulations.

Objective 10.1.b: Determine if the 16 different zones can be combined.

Objective 10.1.c: Review uses allowed in each zone, including the downtown overlay zones.

Objective 10.1.d: Review Code Enforcement process.

Goal 10.2: Improve communication between Boards/Committees and the public.

- Goal 10.3: Consider a new Commercial/Industrial zone in the area north of Tsienneto Road and along Manchester Road in the area currently zoned Industrial III and Industrial IV. Lot sizes in the zone are 1 acre.
- Goal 10.4: a. Consider rezoning and expanding the area along the Route 28 corridor in the southern portion of the town to commercial.
- b. Review current OMB districts in the South Range Rd/Frost Rd area and rezone back to residential, retaining some of the parcels as OMB/Medical uses.
- Goal 10.5: Consider the use of a historic overlay district to protect sites and properties from abutting residential and commercial uses.
- Goal 10.6: Continue to use the Town's Growth Management Ordinance to control and direct growth so that it is sustainable in the future.
- Goal 10.7: Implement recommendations of the Downtown Market Plan (2008) for strengthening economic development and character in the downtown area and review on a regular basis.
- Goal 10.8: Consider expanding the Downtown Market Plan for the development of an overall Economic Development Plan for the entire town and include a comprehensive review of current land uses to determine what strategies can be implemented to strengthen economic development in the Town of Derry.
- Goal 10.9: Consider developing a Cost of Community Services Study to determine how land uses should be balanced in the future in the Town of Derry.

1.6 IMPLEMENTATION STRATEGIES

The following Implementation Schedule identifies the actions identified by the Derry Planning Board to help guide the Town in the carrying out this Master Plan's vision and many goals and objectives. All future projects are grouped by the section of the Master Plan in which it was identified.

Major groupings of project types include:

- Visioning
- Regional Concerns
- Housing
- Economic Development
- Community Facilities
- Public Utilities
- Transportation
- Natural Resources
- Historical and Cultural Resources
- Existing and Future Land Use

Additionally, to ensure effective implementation of each item the appropriate town department, board, or other agency was identified to take responsibility for the action. In many situations multiple groups are identified as sharing responsibility. Those groups identified herein are the:

- Town Council
- Planning Board
- Conservation Commission
- Parks and Recreation
- Fire Department
- Police Department
- Heritage Commission
- School Board

To develop the prioritized ranking of individual projects each Planning Board member used a spreadsheet of all implementation items to give each action a priority score ranging from three to one with three being the highest priority and one being the lowest. The scores of the individual Planning Board members were then averaged to generate the rankings presented here. The ranked scores were then reviewed and agreed upon by the Planning Board at the February 17, 2010 Master Plan Workshop Meeting. Priority was assigned such that any project scoring between 3.0 and 2.50 was high, 2.49 to 1.75 was moderate, and 1.74 and under was low. The actual numeric scores for each project can be viewed in Appendix C to this Master Plan.

Table 1.1: Implementation Schedule

Key:

TC – Town Council
PB – Planning Board
CC – Conservation Commission

PR – Parks and Recreation
FD – Fire Department
PD – Police Department

HC – Heritage Commission
SB – School Board

Visioning												
Chapter	Goal Number	IMPLEMENTATION ITEM	TC	PB	CC	PR	FD	PD	HC	SB	Priority	Timeline
V	1.1	Create a downtown committee	X	X							Moderate	Done
V	1.1a	Acquire property surrounding the existing Veteran's Hall and Adam's Memorial Building	X	X							Moderate	1-3 yrs
Regional Concerns												
Chapter	Goal Number	IMPLEMENTATION ITEM	TC	PB	CC	PR	FD	PD	HC	SB	Priority	Timeline
RC	2.1	Mitigate traffic issues.	X	X				X			Low	Ongoing
RC	2.2	Prevent watershed contamination		X	X						Moderate	Ongoing
RC	2.3	Retain agriculture and farms.		X	X				X		Low	Ongoing
RC	2.4	Determine future feasibility of Exit 4A (on State plan)	X	X							moderate	ongoing

Housing												
Chapter	Goal Number	IMPLEMENTATION ITEM	TC	PB	CC	PR	FD	PD	HC	SB	Priority	Timeline
H	3.1	Continue to adapt to the demand for affordable housing in Derry	X	X							Low	5 yr review
Economic Development												
Chapter	Goal Number	IMPLEMENTATION ITEM	TC	PB	CC	PR	FD	PD	HC	SB	Priority	Timeline
ED	4.1	Revitalize the downtown	X	X					X		High	1-3 yrs
ED	4.1a	Create an Economic Development Plan for the town	X	X							High	1-3 yrs
ED	4.1b	Discuss/review the recommendations of the 2008 Downtown Market Plan	X	X					X		High	1-3 yrs
ED	4.1c	Form an Economic Development Committee	X	X							High	1-3 yrs
ED	4.1d	Hold downtown merchant events	X	X							High	1-3 yrs
ED	4.1e	Invest in downtown structure, creating attractive pedestrian paths that lead to downtown businesses	X	X				X			High	1-3 yrs
ED	4.2	Extend water and sewer to the southwest area of Derry and to Route 28 South (Ryan's Hill area)	X	X					X		High	1-3 yrs
ED	4.3	Widen the road in the area of Manchester Road/Route 28 in order to accommodate more traffic	X	X							High	1-3 yrs

Chapter	Goal Number	IMPLEMENTATION ITEM	TC	PB	CC	PR	FD	PD	HC	SB	Priority	Timeline
ED	4.4	Continue to research the benefits, challenges and feasibility of Exit 4A	X	X							High	1-3 yrs
ED	4.5	Continue to implement the Capital Improvement Plan	X	X							High	1-3 yrs
ED	4.6	Participate in Regional Economic Development efforts	X	X							High	1-3 yrs
ED	4.7	Continue to seek economic development options such as the Economic Development Revitalization Zone Tax Credit (ERZ) for the areas specifically designated for economic development or expansion	X	X							High	1-3 yrs
ED	4.8	Adopt a blight ordinance	X	X			X				High	1-3 yrs
ED	4.9	Develop a “Buy Local” campaign	X	X							High	1-3 yrs
ED	4.1	Support the formation of an Independent Business Alliance	X	X					X		High	1-3 yrs
ED	4.11	Develop database of properties in Derry that are available for commercial/industrial/economic development	X	X	X				X		High	1-3 yrs
ED	4.11a	Prepare a commercial property inventory for determining what exists and where gaps can be filled	X	X	X				X		High	1-3 yrs

Community Facilities												
Chapter	Goal Number	IMPLEMENTATION ITEM	TC	PB	CC	PR	FD	PD	HC	SB	Priority	Timeline
CF	5.1	Continue to maintain and upgrade town owned buildings as necessary	X	X							Moderate	Ongoing
CF	5.1a	Make decisions regarding the renovation of Veteran's Hall, or construct a new recreational facility	X	X		X					Moderate	1-3 yrs
CF	5.2	Develop a comprehensive Fire Code that would include residential sprinkler requirements	X	X			X				Moderate	Ongoing
CF	5.3	Develop consolidation and regional plans with surrounding Fire Departments and emergency agencies	X	X			X				Moderate	ongoing
CF	5.4	Finish the Rail Trail	X	X	X	X			X		Moderate	1-3 yrs
CF	5.5	Acquire parking for the Adams Memorial Building and increase parking for Library patrons	X	X							High	1-3 yrs
CF	5.6	Purchase property with the intent of constructing a new fire station that would include a dispatch center and administrative offices	X	X			X				Moderate	3 – 5 yrs

Public Utilities												
Chapter	Goal Number	IMPLEMENTATION ITEM	TC	PB	CC	PR	FD	PD	HC	SB	Priority	Timeline
PU	6.1a	Increase water and sewer on Rockingham Road from West Running Brook to vicinity of Berry Road	X	X	X				X		Moderate	3- 5 yrs
PU	6.1b	Increase water and sewer to the Windham town line, including a pump station	X	X	X			X			Moderate	5-10 yrs
PU	6.2	Continue energy reducing measures including following the Green Building & Vehicle Ordinance adopted in 2008	X	X							Moderate	Ongoing
PU	6.3	Main upgrade and replacement program and other upgrades and repairs to booster stations	X	X							Moderate	ongoing
Transportation												
Chapter	Goal Number	IMPLEMENTATION ITEM	TC	PB	CC	PR	FD	PD	HC	SB	Priority	Timeline
T	7.1a	Address the traffic and safety concerns at Danforth Circle,	X	X				X			Low	1-10 yrs
T	7.1b	Address the traffic and safety concerns at Tsienneto Road at Crystal and Route 102	X	X					X		Low	1-10 yrs

Chapter	Goal Number	IMPLEMENTATION ITEM	TC	PB	CC	PR	FD	PD	HC	SB	Priority	Timeline
T	7.2	Fix and improve public transportation in order to link key areas	X	X		X					Moderate	Ongoing
T	7.3	Continue to make streets more pedestrian-friendly	X	X	X			X			Low	ongoing
T	7.4	Continue to research more funding sources for transportation improvements	X	X							Moderate	Ongoing
T	7.5	Continue to plan for short and long term improvements for the identified 8 problematic intersections	X	X				X			Moderate	Ongoing
T	7.6	Continue to request projects that mitigate traffic congestion to be included in the NH DOT 10 year highway plan	X	X				X			Moderate	Ongoing
T	7.7	Continue to work on the bike trail	X	X	X	X		X			Moderate	1-3 yrs
T	7.8	Continue involvement and participation in the regional transportation funding programs for local and state transportation projects	X	X							Moderate	Ongoing
T	7.9	Implement land use tools to manage access on a transportation corridor during the development process	X	X	X			X			Moderate	ongoing

Natural Resources												
Chapter	Goal Number	IMPLEMENTATION ITEM	TC	PB	CC	PR	FD	PD	HC	SB	Priority	Timeline
NR	8.1	Implement the strategies outlined in the Beaver Lake Watershed Management Plan	X	X	X						High	ongoing
NR	8.2	Implement recommendations in the Derry Open Space Plan	X	X	X						High	Ongoing
NR	8.2a	Consider use of conservation subdivisions to conserve open space in Derry and to work toward implementing smart growth development and planning.	X	X	X						Moderate	1-3 yrs
NR	8.2b	Work with federal, county and non-profit land trust organizations, as well as private landowners to purchase, obtain through donations, easements or transfer of development rights, properties for protection from development	X	X	X				X		Moderate	1-3 yrs
NR	8.2c	Continue to participate in the New Hampshire current use program to support the preservation of open space, farmland and forest land	X	X	X						Moderate	1-3 yrs
NR	8.3	Adopt LEED regulations and green infrastructure	X	X							Moderate	Ongoing
NR	8.3a	Town use of alternative energy sources	X	X							Moderate	ongoing

Chapter	Goal Number	IMPLEMENTATION ITEM	TC	PB	CC	PR	FD	PD	HC	SB	Priority	Timeline
NR	8.3b	Communication of cost/benefit analysis of green/energy marketing	X	X							Moderate	Ongoing
NR	8.4	Continue to review and update the Land Advisory Report	X	X	X						Moderate	Ongoing
NR	8.5	Protect the drinking water supply and aquifers, lakes and surface waters, wildlife habitats and corridors and forested areas	X	X	X						High	Ongoing
NR	8.6	Preserve agricultural land, open fields and prime wetlands	X	X	X						Moderate	Ongoing
NR	8.6a	Map preservation/conservation land so that residents are aware of the location of land available for public access	X	X	X						Moderate	Ongoing
NR	8.7	Establish a committee to introduce science programs around natural resources/environmental conservation in the Derry schools (fall 2009 program in process at Barka School)	X	X	X					X	High	Done
NR	8.7a	Reintroduce the Stream Teams Program at Pinkerton to meet the recommendations of the Beaver Lake Watershed Management Plan	X	X	X					X	High	Done
NR	8.7b	Implement Project Learning Tree program (statewide program)	X	X	X					X	High	Ongoing

Chapter	Goal Number	IMPLEMENTATION ITEM	TC	PB	CC	PR	FD	PD	HC	SB	Priority	Timeline
NR	8.7c	Obtain collaboration with the Derry School Board and get school members on Environmental Education subcommittee	X	X	X					X	Moderate	Ongoing
NR	8.7d	Environmental education committee should be a subcommittee of the conservation commission (accomplished October, 2009)	X		X					X	High	done
NR	8.8	Continue long term protection efforts such as public education and outreach, IDDE and stormwater ordinance enforcement, and stormwater pollution prevention efforts	X	X	X					X	Moderate	ongoing
NR	8.9	Encourage an agricultural subcommittee on the Conservation Commission or the establishment of an agricultural commission to develop priorities and work towards agricultural preservation and sustainable agricultural practices	X	X	X						Moderate	1-3 yrs

Historical and Cultural Resources												
Chapter	Goal Number	IMPLEMENTATION ITEM	TC	PB	CC	PR	FD	PD	HC	SB	Priority	Timeline
HC	9.1	Review and consider the recommendations contained in the 1986 Historic Preservation report prepared by Lynne Emerson Monroe	X	X					X		Moderate	1-3 yrs
HC	9.2	Review and revisit the goals for Historic Preservation as set forth in the 2002 Master Plan	X	X					X		Moderate	1-3 yrs
HC	9.3	Commit to and create a clear vision of cultural heritage and recreational resources	X	X	X	X			X	X	Moderate	1-3 yrs
HC	9.3a	Protect historic assets	X	X					X		Moderate	1-3 yrs
HC	9.4	Promote and market existing and potential recreational events and cultural resource events	X	X		X			X		Moderate	1-3 yrs
HC	9.4a	Identify or create a location for large recreational/cultural event venues	X	X		X			X		Moderate	1-3 yrs
HC	9.4b	Link historic sites so that Derry becomes a destination	X	X		X			X	X	Moderate	1-3 yrs
HC	9.5	Work with state and non-profit land trust for land preservation efforts	X	X	X				X		Moderate	1-3 yrs

Existing and Future Land Use												
Chapter	Goal Number	IMPLEMENTATION ITEM	TC	PB	CC	PR	FD	PD	HC	SB	Priority	Timeline
EFLU	10.1	Consider a taskforce to review planning, zoning and code enforcement regulations on a regular basis for compliance with town Goals and vision	X	X							Moderate	1-3 yrs
EFLU	10.1a	Review planning and zoning regulations	X	X							Moderate	1-3 yrs
EFLU	10.1b	Determine if the 16 different zones can be combined	X	X							Moderate	1-3 yrs
EFLU	10.1c	Review uses allowed in each zone, including the downtown overlay zones	X	X							Moderate	1-3 yrs
EFLU	10.1d	Review Code Enforcement process	X	X					X		Moderate	1-3 yrs
EFLU	10.2	Improve communication between Boards/Committees and the public	X	X	X	X	X	X	X	X	Moderate	1-3 yrs
EFLU	10.3	Consider a new Commercial/Industrial zone in the area north of Tsienneto Road and along Manchester Road in the area currently zoned Industrial 3 and Industrial 4. Lot sizes in the zone are 1 acre	X	X	X				X		Moderate	1-3 yrs
EFLU	10.4a	Consider rezoning the area along the Route 28 corridor in the southern portion of the town to commercial	X	X	X				X		Moderate	3-5 yrs

Chapter	Goal Number	IMPLEMENTATION ITEM	TC	PB	CC	PR	FD	PD	HC	SB	Priority	Timeline
EFKU	10.4b	Review current OMB district in South Range Rd. / Frost Rd. area and rezone back to residential, retaining some of the parcels as OMB/Medical uses.	X	X							Moderate	3-5 yrs
EFLU	10.5	Consider the use of a historic overlay district to protect sites and properties from abutting residential and commercial uses	X	X					X		Moderate	ongoing
EFLU	10.6	Continue to use the Town's Growth Management Ordinance to control and direct growth so that it is sustainable in the future	X	X							Low	ongoing
EFLU	10.7	Implement recommendations of the Downtown Market Plan (2008) for strengthening economic development and character in the downtown area and review on a regular basis	X	X	X	X					High	1-3 yrs
EFLU	10.8	Consider expanding the Downtown Market Plan for the development of an overall Economic Development Plan for the entire town and include a comprehensive review of current land uses to determine what strategies can be implemented to strengthen economic development in the Town of Derry	X	X		X					High	1-3 yrs

Chapter	Goal Number	IMPLEMENTATION ITEM	TC	PB	CC	PR	FD	PD	HC	SB	Priority	Timeline
EFLU	10.9	Consider developing a Cost of Community Services Study to determine how land uses should be balanced in the future in the Town of Derry	X	X	X						Moderate	2-4 years

Chapter 2

DEMOGRAPHIC TRENDS

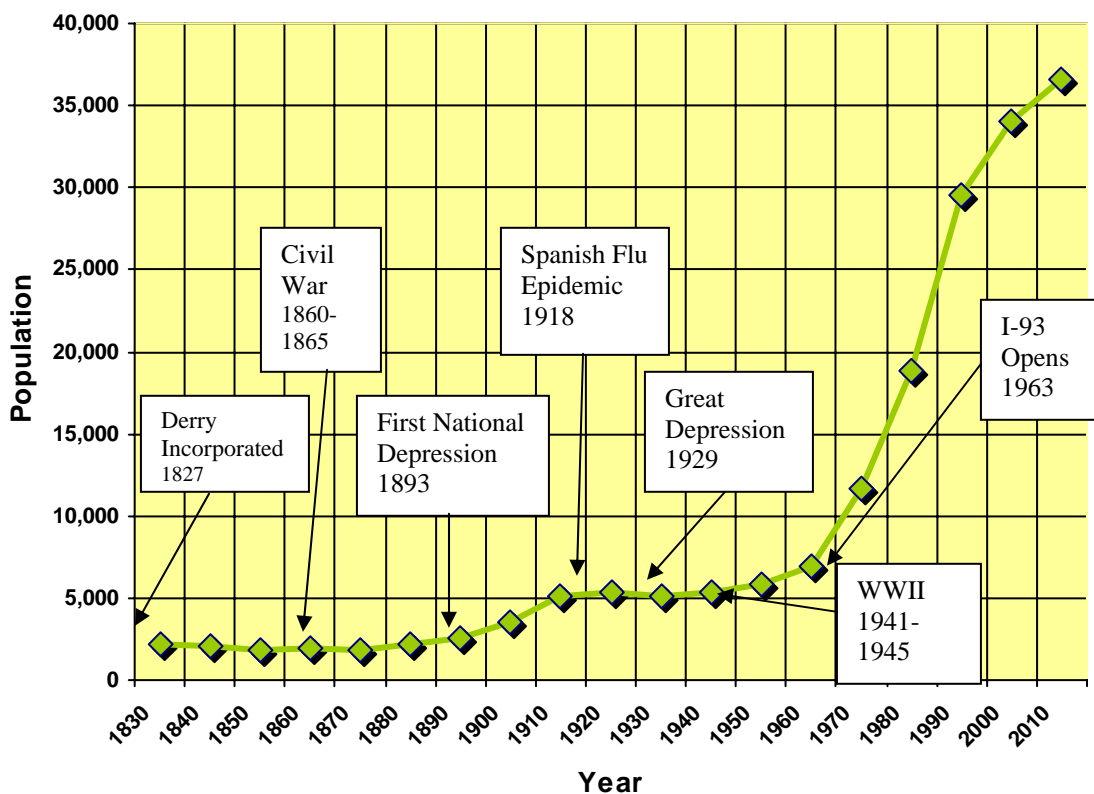
2.0 INTRODUCTION

The demographic and socio-economic trends that face a community are generally the keystone to the major decisions that need to be made in regards to issues such as economic development, land use, housing and growth.

This chapter will focus on all the different aspects of demographic trends, Population, Housing and Economic development. Comparisons between other towns, the county and the state will provide context and understanding of how Derry is doing overall within the region.

2.1 POPULATION GROWTH TRENDS

Figure 2.1: Historical Population, Town of Derry



Derry was incorporated in 1827 and the 1830 census showed that there were 2,176 people living in Derry at the time. Several key events, such as the Civil War, the First National Depression and the Great Depression, as well as the Spanish Flu Epidemic and WWII, kept the population from growing very rapidly until about the 1960's. After the opening of I-93 in 1963 up through the 1990's Derry experienced intense, rapid population growth, quadrupling in size from 6,987 to 29,603. In addition to the opening of I-93 other factors that contributed to this intense growth were Derry's proximity to major cities such as Boston and Manchester, as well as the post-war population boom. Since the 1990's population growth has slowed considerably due to factors such as "the bank failures and recession of the early 1990's and a series of growth management initiatives taken by the town throughout the past decade."¹

Table 2.2 (next page) shows a comparison of the historical population trends of Derry, Rockingham County, the Southern New Hampshire Region and the State of New Hampshire. Derry experienced double and sometimes triple the rate of growth than that of the County, Region and State from 1960 through 1990. From 1960 to 1970 Derry experienced an annualized growth rate of 6.8%, where the County's annualized growth rate was 4.2%, the Region's 1.4% and the State's 2.2%. The rates follow a similar pattern up until 1990. Since 1990 Derry's population growth rate has slowed and is actually much less from 2000-2008 than the County, Region and State, although it is ranked fourth in population within the State of New Hampshire as of the 2000 census.

As shown in Table 2.1 below, Derry's average annual population growth rate of 1.49 percent between 1990 and 2000 is similar to neighboring communities during this time period. Chester and Hooksett had the highest growth rates from 1990-2000, with 4.09% and 3.38%, respectively.

Table 2.1:
Comparison of Population Change, 1990 - 2000

Municipality	1990	2000	2008*	1990-2000		
				Absolute Change	Percent Change	Average Annual Percent Change
Derry	29,603	34,021	34,071	4,418	14.9%	1.49%
Auburn	4,085	4,682	5,085	597	14.6%	1.46%
Candia	3,557	3,911	4,085	354	10.0%	1.00%
Chester	2,691	3,792	4,621	1,101	40.9%	4.09%
Deerfield	3,124	3,678	4,366	554	17.7%	1.77%
Hooksett	8,762	11,721	13,483	2,959	33.8%	3.38%
Londonderry	19,781	23,236	24,567	3,455	17.5%	1.75%
Manchester	99,567	107,006	108,154	7,439	7.5%	0.75%
Area Totals	171,170	192,047	198,432	20,877	12.20%	1.22%

Source: U.S. Census 1990, 2000 SF-2, PCT1, *2008 OEP Estimates

¹ Planning Decisions, Inc. *Achieving Smart Growth in New Hampshire*.
<http://www.nh.gov/oep/programs/SmartGrowth/smart-growth/documents/overview.pdf>. Accessed 9/26/08

Table 2.2: Historic Trends, Town of Derry, SNHPC Region, Rockingham County and State of New Hampshire, 1960-2008

	Derry	Absolute Change	Percent Change	Annualized Growth Rate
2008*	34,071	50	0.1%	0.01%
2000	34,021	4,418	14.9%	1.5%
1990	29,603	10,728	56.8%	5.7%
1980	18,875	7,163	61.2%	6.1%
1970	11,712	4,725	67.6%	6.8%
1960	6,987	N/A	N/A	N/A

	SNHPC Region	Absolute Change	Percent Change	Annualized Growth Rate
2008*	261,791	12,953	5.2%	0.52%
2000	248,838	32,359	14.9%	1.5%
1990	216,479	44,501	25.9%	2.6%
1980	171,978	33,623	24.3%	2.4%
1970	138,355	17,289	14.3%	1.4%
1960	121,066	N/A	N/A	N/A

	Rockingham County	Absolute Change	Percent Change	Annualized Growth Rate
2008*	295,525	18,166	6.5%	0.65%
2000	277,359	31,514	12.8%	1.3%
1990	245,845	55,500	29.2%	2.9%
1980	190,345	51,395	37.0%	3.7%
1970	138,950	40,885	41.7%	4.2%
1960	98,065	N/A	N/A	N/A

	New Hampshire	Absolute Change	Percent Change	Annualized Growth Rate
2008*	1,315,000	79,450	6.4%	0.64%
2000	1,235,550	126,298	11.4%	1.1%
1990	1,109,252	188,777	20.5%	2.1%
1980	920,475	182,794	24.8%	2.5%
1970	737,681	130,894	21.6%	2.2%
1960	606,787	N/A	N/A	N/A

*2008 NHOEP Estimates

2.2 POPULATION GROWTH PROJECTIONS

There are an estimated 34,071 people in Derry as of 2008 and with the expansion of I-93, Derry can expect to experience more growth in the coming years, with a projected population of 40,430 in 2030 according to the Office of Energy and Planning. It is important that we plan well for this anticipated growth so that it follows the goals and objectives the town has outlined and so the intensity, patterns, and mix of land uses create a well-balanced, healthy and sustainable community.

Table 2.3 below shows projected populations for Derry, the County, and the State from 2008 through 2030 from the New Hampshire Office of Energy and Planning (NH OEP). These projections are based on the 2000 census and local projections are based on a community's historical share of its respective county's growth.

Table 2.3: Growth Projections 2007-2030

	2008 ²	2010	2015	2020	2025	2030
Derry	34,071	36,560	37,860	38,980	39,730	40,430
Rockingham County	295,525	308,200	320,500	331,200	341,870	351,690
New Hampshire	1,315,000	1,365,140	1,420,000	1,470,010	1,520,310	1,565,040

Source: NH Office of Energy and Planning

Table 2.4 below shows a comparative analysis of the NH OEP projections and those done by the Southern New Hampshire Planning Commission (SNHPC). The Commission methodology includes more localized data and assumptions about the Town and its surrounding area than does the OEP Procedure. The Commission makes its projections based on natural growth and net migration. The differences in projections are different by about 1%, but because the Commission's procedures are more sensitive to local situations the use of these results are recommended.

Table 2.4: Comparative Projections for Derry, 2010 - 2030

	SNHPC	NH OEP	% Difference
2010	37,283	36,560	-1.02%
2015	35,406	37,860	0.94%
2020	36,471	38,980	0.94%
2025	38,101	39,730	0.96%
2030	39,998	40,430	0.99%

Source, NH OEP Projections, SNHPC Projections

² NH OEP Estimates

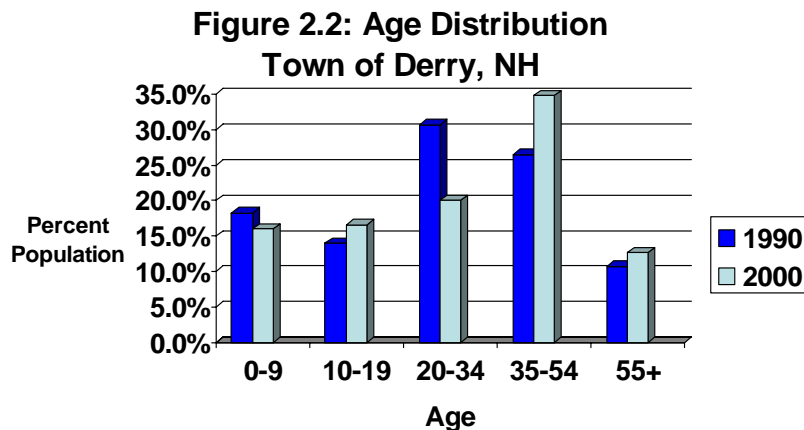
2.3 POPULATION CHARACTERISTICS

The characteristics of a community help to identify demographic and socio-economic trends and to further identify what needs a community might have to accommodate growth and to provide certain services to its population.

Population Age

Figure 2.2 below shows the age distribution for Derry from 1990 to 2000. The chart shows that the largest percentage of the population has moved from the 20-34 range to the 35-54 range. As the population ages and growth starts to slow down, it will be important for Derry to look at how these changes will affect the needs of the community in the future.

According to the 2000 Census, the median age in Derry was 34 years and this is slightly lower than compared to the median age in the State of 39 years.



Source: US Census 2000

Table 2.5: Age Distribution Comparison

	Derry		Londonderry		Manchester		County		State	
	1990	2000	1990	2000	1990	2000	1990	2000	1990	2000
0-9	18%	16%	18%	17%	14%	13%	16%	14%	15%	13%
10-19	14%	17%	16%	18%	12%	13%	13%	14%	13%	15%
20-34	31%	20%	24%	15%	30%	24%	27%	17%	26%	19%
35-54	26%	35%	32%	37%	22%	29%	29%	35%	27%	33%
55+	11%	13%	9%	13%	22%	20%	16%	19%	19%	21%

Source: US Census 1990 and 2000

Table 2.5 shows a comparison of the age distribution of Derry with neighboring towns in the region, Londonderry and Manchester and also with the County and the State. From this we can see that in both Derry and Manchester the age group with the largest percentage moved from the 20-34 range to the 35-54 range. In Londonderry the largest percentage stayed in the 35-54 range, along with the County and the State.

The aging of the population, not only in Derry, but throughout New Hampshire and New England signifies a significant change and highlights not only the aging baby boom generation, but the high out-migration of young adults that has been happening as well. “This exodus will leave New Hampshire with slowing workforce growth, declining numbers of children – the future workforce – and a population aging at an even faster rate due to increasing numbers of older residents.”³ With increasing numbers in the older population and decreasing numbers in the younger population, the prospects for economic growth diminish greatly, so this analysis is something that needs to be seriously considered in the future land-use and development decisions within each community in the state.

Population Density

The New Hampshire Office of Energy and Planning estimates the population density of Derry in 2008 at 962.5 persons/sq. mi. Table 2.6 below, shows that the population density of Derry has tripled in the last 37 years. This is more than the region, county and the State, which have seen slightly smaller increases in density closer to approximately double in the same time period.

Table 2.6: Population Density Comparisons

	1970 (Persons/sq. mi.)	2008* (Persons/sq. mi.)
Derry	311.9	962.5
SNHPC Region	282.4	533.59
Rockingham County	193.6	423.9
New Hampshire	79.7	157.6

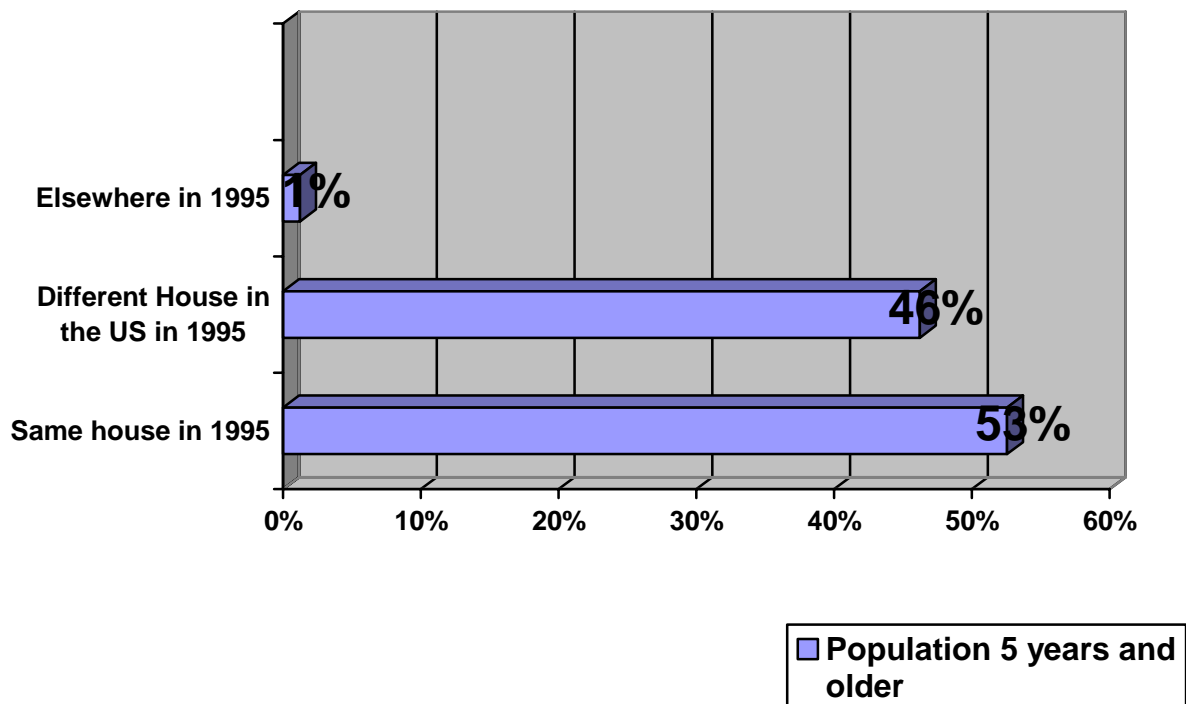
*NHOEP Estimates

Source: US Census, NH Office of Energy and Planning

³ Francese, Peter and Lorraine Stuart Merrill. *Communities and Consequences*. 2008.

Population Mobility

**Figure 2.3: Population Mobility 1995-2000
Town of Derry, NH**



Source: US Census 2000

From Figure 2.3, we can see that 53% of the town's population lived in the same house in 1995, when compared to 2000. This is a 9% increase from the 1990 census, when 44% of the population lived in the same house from 1985 to 1990. This change signifies the slowing in-migration that happened in the 1990's and a steadier population within the town.

Population Composition

Figure 2.4: Composition, Town of Derry, NH 1990

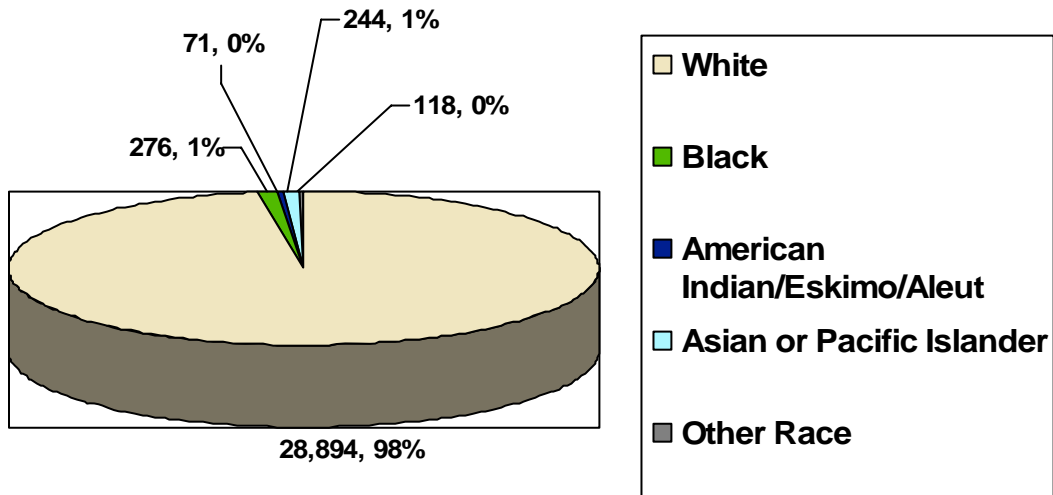
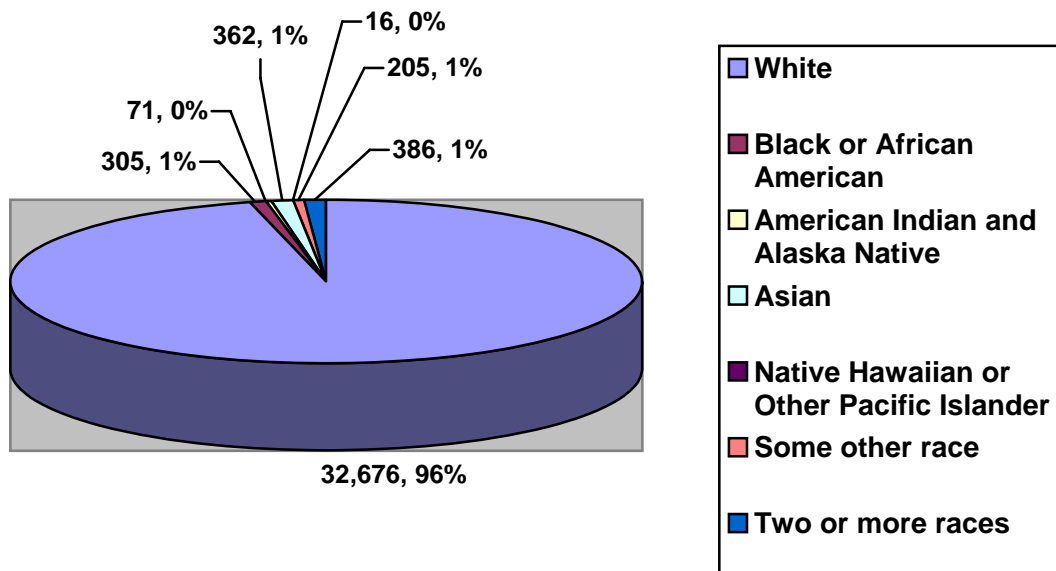


Figure 2.5: Composition, Town of Derry, NH 2000



Source: US Census 1990 and 2000

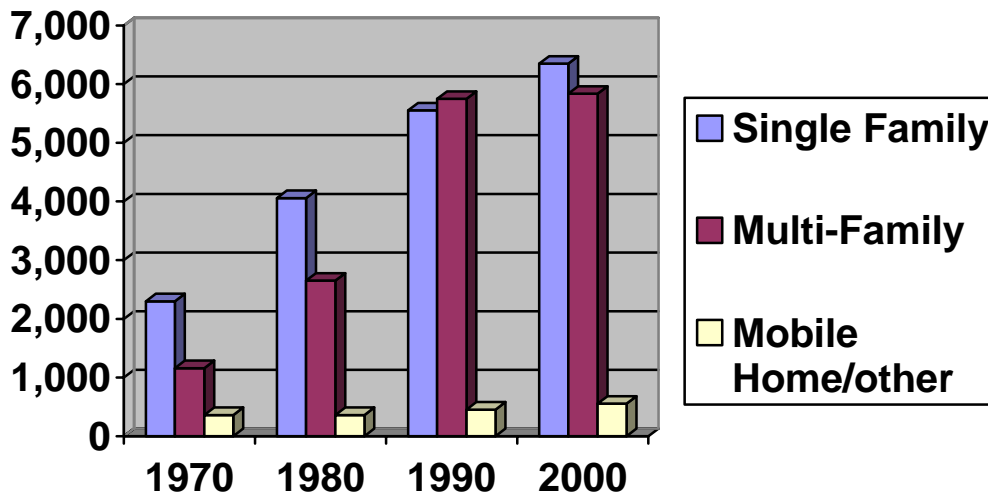
From Figures 2.4 and 2.5, we can see that Derry was only slightly more diverse in 2000 than 1990 with a decrease of 2% in the White population, which still composes a large majority of the town at 96% in 2000.

2.4 HOUSING

Housing Supply and Mix

A diverse housing supply is a crucial element to serving diverse needs within any community's population. Figure 2.6 shows the trend of housing supply mix from 1970 to 2000. In 1970 and 1980 the majority of the housing supply was single family and in 1990 multi-family housing units had climbed to 5,747, just above single family at 5,549. Multi-family housing development leveled off between 1990 and 2000 and single family began to climb again.

**Figure 2.6: Housing Supply and Mix,
Town of Derry, NH**



Source: US Census, Derry Building Dept.

Between 2000 and 2008, there were 362 Single Family residential building permits and 132 Multi-family permits issued. This is an increase of 5.7% single family units and 2.3% multi-family units. During this time there were also 96 permits issued for mobile homes and 124 units of assisted living permitted.

Table 2.7: New Residential Housing Starts (Permits Issued), 2000-2008

	Total Units (2000 census)	2000/ 2001	2001/ 2002	2002/ 2003	2003/ 2004	2004/ 2005	2005/ 2006	2006/ 2007	2007/ 2008
Single-Family	6,347	53	45	38	70	42	43	24	47
Multi-family	5,833	0	10	15	4	33	33	4	33
Mobile Homes	555	20	16	7	15	10	4	12	12
other	0	0	0	0	0	0	0	0	124
Total	12,735	12,808	12,879	12,939	13,028	13,113	13,193	13,233	13,449

Source: Derry Assessor's Office

Derry's housing stock is comprised mainly of mid-sized 4-5 room homes. Between 1990-2000 the percent of smaller 1-3 room homes either stayed the same or decreased slightly and for the bigger 6-9+ room homes there were slight increases in the percent of these in Derry.

Table 2.8: Rooms per Housing unit, 1990 – 2000

Rooms	1990	Percent of Total	2000	Percent of Total
1 room	134	1.1%	142	1.1%
2 rooms	329	2.8%	287	2.3%
3 rooms	1,135	9.6%	1098	8.6%
4 rooms	3,131	26.4%	2909	22.8%
5 rooms	2,501	21.1%	2558	20.1%
6 rooms	1,851	15.6%	2287	18.0%
7 rooms	1,473	12.4%	1722	13.5%
8 rooms	800	6.7%	1040	8.2%
9 rooms or more	515	4.3%	692	5.4%
Median (rooms)	N/A	N/A	5.3	N/A

Source: US Census 1990 and 2000

The average household size in Derry in 2000 was 2.74 persons per unit and has stayed approximately the same from 1990 when it was 2.73 persons per unit. These figures are higher than those of the County (2.63) and the State (2.53).

Tenure and Occupancy

In 1990, Derry had 6,761 (57%) owner-occupied units, 4,006 (34%) renter-occupied units and 1,102 (9%) vacant units, for a total of 11,869 units.

From the 2000 census, Derry had 7,978 (62.6%) owner-occupied housing units, 4,349 (34.2%) renter-occupied housing units and 408 (3.2%) vacant units, for a total of 12,735 units.

The difference in owner-occupied units from 1990 to 2000 is 1,217 (18%) and the difference in renter-occupied units is 343 (8.6%). Vacant units went down from 1990 to 2000 from a 9% vacancy rate to a 3.2% vacancy rate.

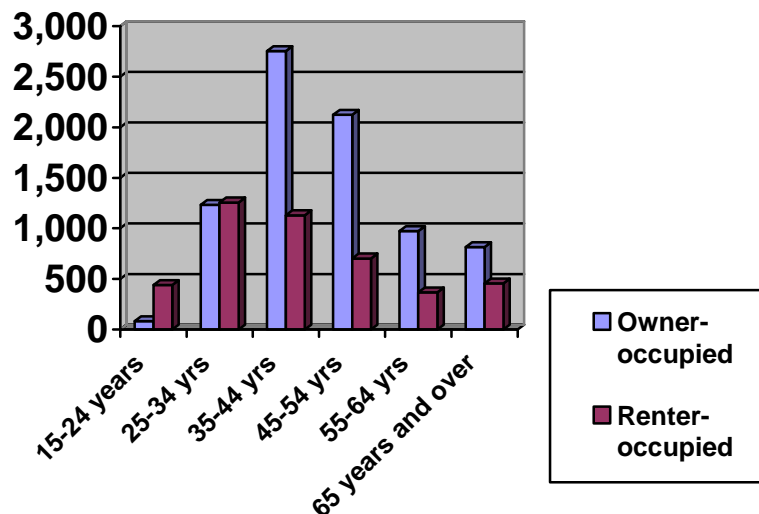
Table 2.9: Housing Occupancy Status - Total Household Units, 1990 - 2000

Type of Housing	Number of Units 1990	Percent of Total	Number of Units 2000	Percent of Total
Owner Occupied Housing	6,761	57%	7,978	62.6%
Renter Occupied Housing	4,006	34%	4,349	34.2%
Vacant or Seasonal Housing Units	1,102	9%	408	3.2%
Total	11,869	100%	12,735	100%

Source: 1990, 2000 U.S.Census

Tenure and Age

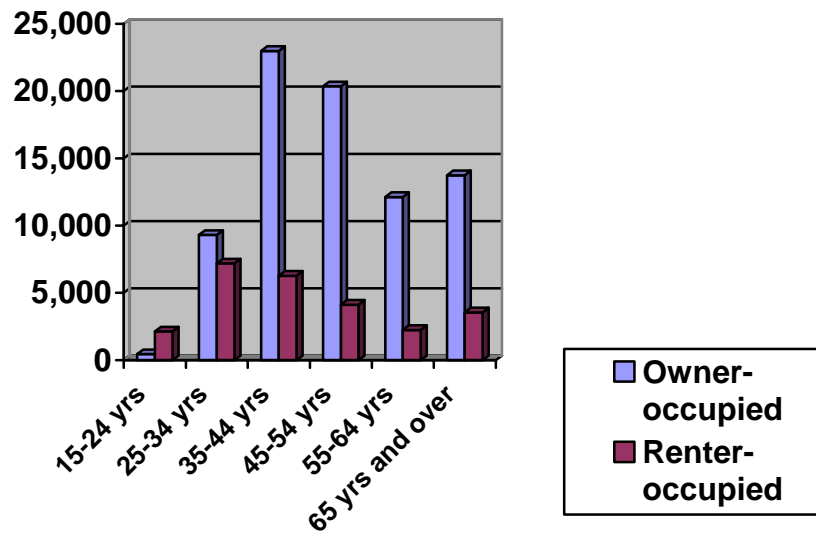
**Figure 2.7: Tenure and Age
Derry, NH Census 2000**



The majority of the renter-occupied population is in the 25-34 age range and the majority of the owner-occupied population is in the 35-44 age range from the 2000 Census.

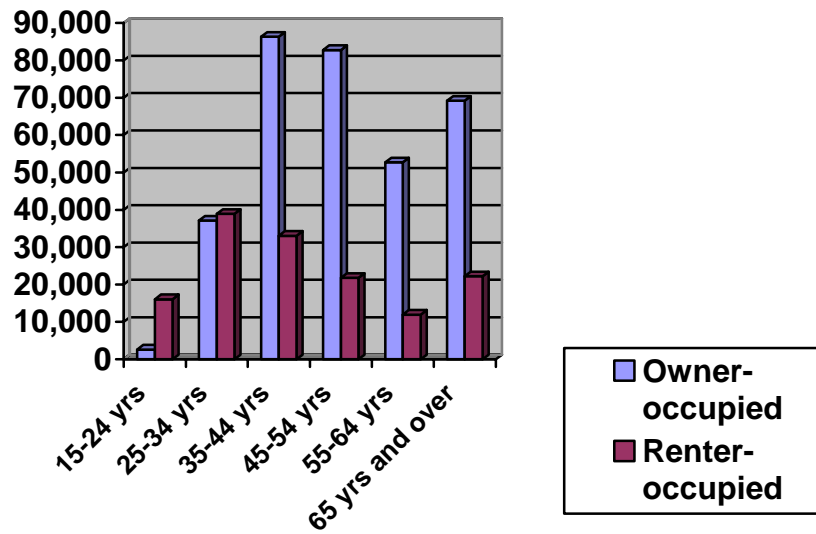
Compared to the County and the State in Figures 2.8 and 2.9 below we can see that they all follow similar curves, except that Derry's 65+ age group has slightly less owner-occupied housing units than the 55-64 age group, where in the County and the State the 65+ age group is slightly higher than the 55-64 age group.

**Figure 2.8: Rockingham County Tenure and Age
Census 2000**



Source: US Census 2000

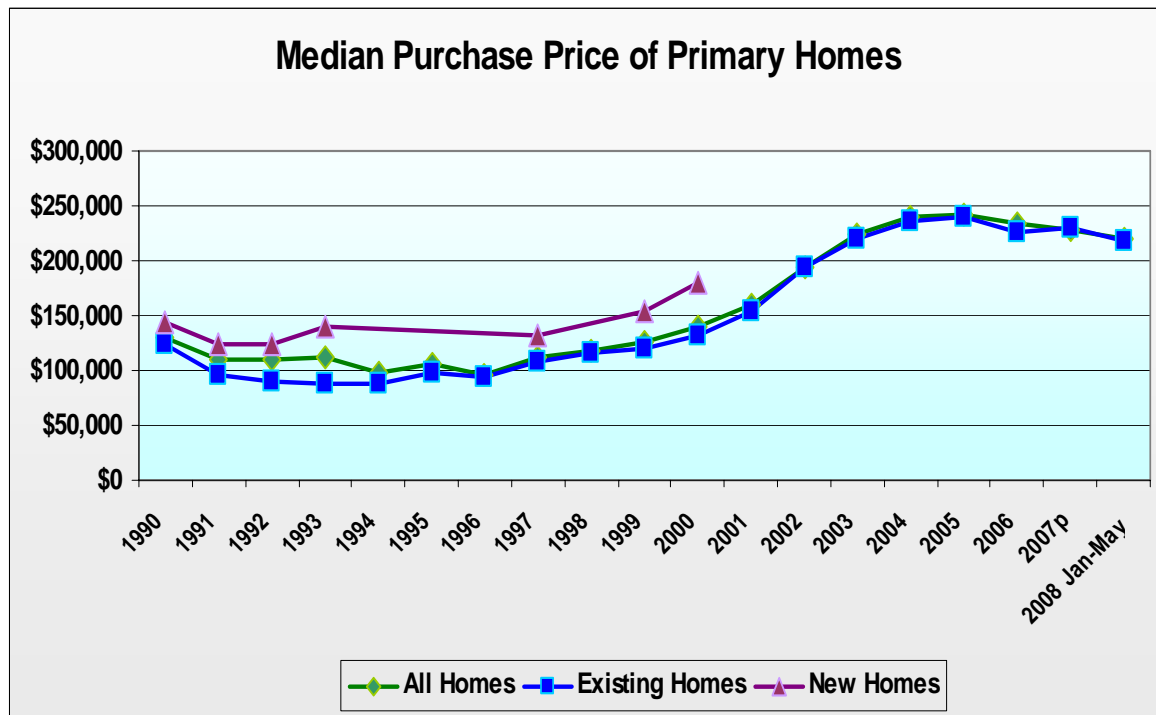
**Figure 2.9: New Hampshire Tenure and Age
Census 2000**



Source: US Census 2000

Housing Costs

Figure 2.10



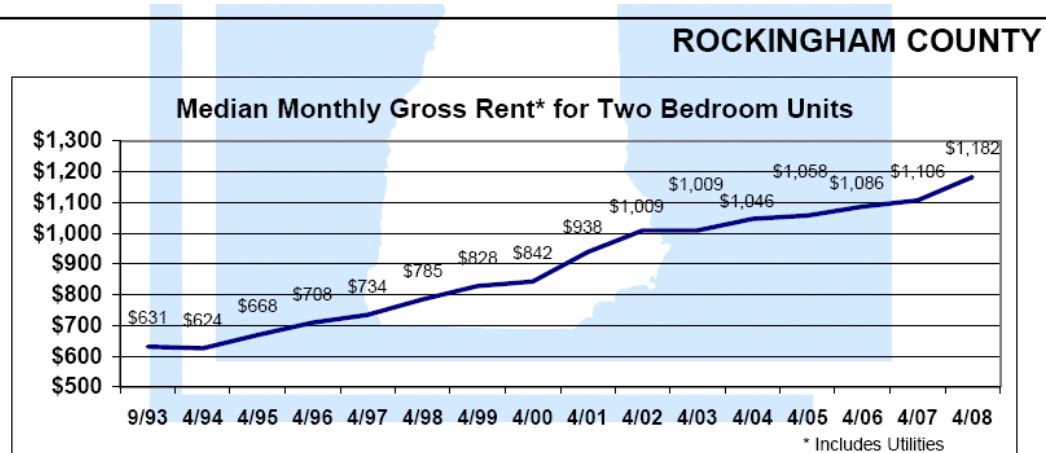
Source: New Hampshire Housing Finance Authority

From January to May 2008 the median home sales price of all homes in Derry was \$220,000. The median price has been declining since 2005 when it reached a high of \$243,000.

For Rockingham County, the median purchase price from January to May 2008 was \$286,000. This is down from a high of \$307,000 in 2005. For the State, the median purchase price from January to May was \$237,100, down from a high of \$250,000 in 2005.

Rental Costs

Figure 2.11



2008 Gross Rent (Includes Utilities)					
Unit Size (Bedrooms)	Sample Size	Rent Range		Median	
0	106	\$475	-	\$1,439	\$684
1	767	\$500	-	\$1,850	\$895
2	1,275	\$796	-	\$2,342	\$1,182
3	193	\$900	-	\$2,613	\$1,447
4+	18	\$1,266	-	\$3,310	****
All	2,359	\$475	-	\$3,310	\$1,042

Source: NHHFA, 2008 Residential Rent Cost Survey

In the 2008 Residential Rent Cost Survey performed by New Hampshire Housing Finance Authority (NHHFA), there was a median gross rent for all units in Rockingham County of \$1,042, including utilities, compared to \$797 in 2000. The median 2-bedroom rent in Rockingham County was \$1,182. There was not a sufficient sample size available for Derry and therefore Town specific information was not available.

2.5 ECONOMIC

Existing and Projected Employment

Table 2.10: Employment Growth 1990 - 2008

	Avg. Annual Employment			% Change	
	1990	2000	2008	1990-2000	2000-2008
Derry	6,433	8,807	8,243	37%	-6%
Rockingham County	93,950	129,522	137,191	38%	6%
State	497,266	605,931	628,819	22%	4%

Source: NH Dept of Employment Security, Covered Employment and Wage Archives

Table 2.10 shows a drop in employment from 2000 to 2008 in Derry and only mild increases in Rockingham County and the State. Derry had the biggest change going from a 37% increase between 1990 to 2000 to a -6% decrease between 2000 to 2008. The County had the biggest increase from 2000 to 2008 of 6% and the State had a slightly smaller increase of 4% during the same time period. These trends are similar to national trends that developed from the 2001 recession followed by a “jobless recovery” period and another recession that developed in 2007.

According to the latest employment projections, total employment in New Hampshire should grow by 96,445 jobs from 2006 to 2016, which is an increase of 13.9 percent over 2006. Job gains are expected to bring total employment in the state to 791,245. In comparison, employment growth in the U.S. over the same period is projected to be 10.4 percent, from 150.6 million jobs in 2006 to 166.2 million jobs in 2016.⁴ Jobs in healthcare, social services, computers and mathematics, and personal services are expected to grow at more than twice the average rate for all occupations. The occupations expected to grow at the fastest rate are in the areas of community and social services (31.6 percent), healthcare support occupations (30.5 percent), and computer and mathematical occupations (28.1 percent). New Hampshire has grown faster than any other New England state. This growth, however, is occurring at a decreasing rate, essentially leveling off between 2006 and 2007. The population of New Hampshire, and New England as a whole, is also rapidly aging.⁵

⁴ NHES. *New Hampshire Employment Projections by Industry and Occupation 2006-2016*

⁵ NHES. *New Hampshire Economic Analysis Report 2008*

Table 2.11: Unemployment Levels as of October 2008

Municipality	Civilian Labor Force	Number Employed	Number Unemployed	Unemployment Rate
Auburn	3,184	3,089	95	3.0%
Bedford	11,429	11,092	337	2.9%
Candia	2,643	2,555	88	3.3%
Chester	2,720	2,632	88	3.2%
Deerfield	2,265	2,201	64	2.8%
Derry	20,394	19,481	913	4.5%
Goffstown	10,360	10,052	308	3.0%
Hooksett	8,030	7,741	289	3.6%
Londonderry	14,710	14,191	519	3.5%
Manchester	62,524	59,874	2,650	4.2%
New Boston	3,013	2,932	81	2.7%
Raymond	6,167	5,903	264	4.3%
Weare	5,188	5,025	163	3.1%
SNHPC Region	152,627	146,768	5,859	3.8%

Table 2.11 shows unemployment levels as of October 2008 for all towns in the SNHPC Region. Derry is the highest at 4.5%, followed by Raymond at 4.3% and Manchester at 4.2%. Derry's unemployment numbers reflect the overall downturn in the economy that is affecting the entire region, state and nation. The national unemployment rate was 6.5% for October 2008. Job growth is expected to turn around as the state and national economies start to turn around. The planned infrastructure improvements of the I-93 Highway widening project should expand job growth opportunities into the future as well.

Commuting Patterns

Table 2.12: Employment by Place of Work - Derry, 2000

Place of Work	Persons	Percent
Derry	2,570	14.08%
Rockingham County (Outside of Derry)	5,592	30.64%
New Hampshire Outside Rockingham County	4,114	22.54%
Outside New Hampshire	5,975	32.74%
Total:	18,251	100%

From Table 2.12 we can see that the majority of workers in Derry commute either to another town in New Hampshire or out-of-state. Only 14.08 percent of the workers in Derry work in their community of residence, making it a commuter town. Derry's proximity to Boston, Manchester and Nashua as well as its access to I-93 are some of the key factors for this and make economic development a key issue for the town in order to develop a strong employment and tax base.

**Table 2.13: Travel Time to Work for Workers 16 Years and Over
(Excluding Those who Work from Home)**

Minutes	1990	Percent	2000	Percent
Less than 10 minutes	1773	11.06%	1,847	10.40%
10 to 14 minutes	1463	9.12%	1,837	10.34%
15 to 19 minutes	1575	9.82%	1,718	9.67%
20 to 24 minutes	1978	12.34%	2,505	14.10%
25 to 29 minutes	1105	6.89%	1,107	6.23%
30 to 34 minutes	2413	15.05%	2,718	15.30%
35 to 44 minutes	1831	11.42%	1,762	9.92%
45 to 59 minutes	1863	11.62%	2,094	11.79%
60 to 89 minutes	1868	11.65%	1,503	8.46%
90 or more minutes	166	1.04%	673	3.79%

Source: Census 2000 Summary File 3 (SF 3) - Sample Data, 1990 Summary Tape File 3 (STF 3) - Sample data

Table 2.14: Means of Travel, Workers 16 years and over

Drove alone, car/truck/van	84.9%
Carpooled, car/truck/van	9.7%
Public transportation	0.8%
Walked	1.4%
Other means	0.6%
Worked at Home	2.7%

Table 2.13 shows travel time to work from 1990 to 2000. For both 1990 and 2000 a majority of the town's commute time was 25 minutes or longer. Also, Table 2.14 shows that almost all commuters drove alone as their means of transportation. This data emphasizes that Derry is a commuter town and there needs to be a strong focus on attracting businesses to the town to develop a strong economic base and provide job opportunities as well.

Employment and Wage Data

Table 2.15: Employment and Wage data by Industry, Average Annual 2008⁶

Industry	Units	Average Quarterly Employment	Average Weekly Wage
Total, Private plus Government	672	8,243	\$770.24
Total Private	662	7,163	\$752.66
Goods-Producing Industries	102	1,107	\$1,095.93
Agriculture/Forestry/Fishing	n	n	n
Mining	0	0	\$0.00
Construction	n	n	n
Manufacturing	36	781	\$1,196.27
Service-Providing Industries	561	6,057	\$689.93
Utilities	n	n	n
Wholesale Trade	60	196	\$1,420.73
Retail Trade	91	1,258	\$486.66
Transportation and Warehousing	22	176	\$515.43
Information	n	n	n
Finance and Insurance	27	137	\$877.17
Real Estate and Rental and Leasing	21	131	\$597.77
Professional and Technical Service	67	227	\$1,126.78
Management of Companies/Enterprises	n	n	n
Administrative and Waste Services	47	245	\$592.50
Educational Services	n	n	n
Health Care and Social Assistance	77	1,799	\$882.84
Arts, Entertainment, and Recreation	13	120	\$288.42
Accommodation and Food Services	53	856	\$320.72
Other Services Except Public Admin	67	283	\$576.94
Unclassified Establishments	0	0	\$0.00
Total Government	10	1,080	\$886.87
Federal Government	3	59	\$1,011.19
State Government	4	35	\$606.53
Local Government	3	986	\$889.33

n = data does not meet disclosure standards

Source: Economic and Labor Market Information Bureau,
New Hampshire Employment Security

Table 2.15 shows employment and wage data by industry for Derry in 2008. The majority of Derry workers are in the service-providing industry, particularly in Health Care and Social Assistance, followed by retail trade. The highest average weekly wage is in the wholesale trade industry at \$1,420.73, followed by manufacturing at \$1,196.27. The lowest average weekly wage is in the Arts, Entertainment and Recreation industry at \$288.42, followed by the Accommodation and Food Services industry at \$302.21.

⁶ NH Dept. of Employment Security.

Business Establishments

Table 2.16: Top 25 Employers in Derry

Employer	Partial Address	City	Employer Size
Parkland Medical Ctr	Parkland Dr	Derry	500 - 999
Pinkerton Academy	Pinkerton St	Derry	250 -499
Wal-Mart	Manchester Rd	Derry	250 -499
Cedar Point Communication	Route 111 # 3	Derry	100 - 249
Fireye Inc	Manchester Rd	Derry	100 - 249
Pleasant Valley Nursing Ctr	Peabody Rd	Derry	100 - 249
Center For Life Management	Tsienneto Rd	Derry	100 - 249
Gilbert H Hood Middle School	Hood Rd	Derry	100 - 249
Hannaford Supermarket & Phrmcy	Manchester Rd	Derry	100 - 249
Shaw's Supermarket	Crystal Ave # 20	Derry	100 - 249
Haven Health Ctr of Derry	Chester Rd	Derry	100 - 249
Derry Medical Ctr	Tsienneto Rd # 100	Derry	100 - 249
Columbia Parkland Medical Ctr	Parkland Dr	Derry	50 - 99
East Derry School	Dubeau Dr	Derry	50 - 99
Derry Village Elementary School	S Main St	Derry	50 - 99
Grinnell Elementary School	Grinnell Rd	Derry	50 - 99
First Student Inc	Chester Rd	Derry	50 - 99
Merrimac Tile CO Inc	Tsienneto Rd	Derry	50 - 99
Betley Chevrolet-Buick-Geo Inc	N Main St	Derry	50 - 99
West Running Brook Middle School	W Running Brook Ln	Derry	50 - 99
Sanmina	Treasure Ln	Derry	50-99
Crotched Mountain Residential	Route 111 # 3	Derry	50 - 99

Source: NHetwork 2008

Table 2.16 shows Derry's top 25 employers. Many are related to the Health Care and Social Assistance Industry, which employs the most Derry workers and secondly related to retail trade which employs the second most Derry workers. The Town of Derry also has a high employment size in the Town that does not show up in the NHetwork data provided above.

Manufacturing

According the New Hampshire Department of Employment Security there were 781 manufacturing jobs in Derry in 2008 (Average Annual). This is down from 912 in 2006 and 1,750 in 2000, so the trend for this employment sector is going down.

The following Table, 2.17, shows the top employers for manufacturing in Derry and their industry sector.

Table 2.17: Top Manufacturing Employers in Derry, NH

Employer	Partial Address	Employer Size	Industry Sector - Industry Group
Fireye Inc	Manchester Rd	100 - 249	Computer and Electronic Manufacturing - Semi-Conductor and Electronic Components
Sanmina	Treasure Ln	50 – 99	Assembly of Printed Circuit Boards
JIC-ELCO CO	Island Pond Rd	50 - 99	Machinery Manufacturing - Other General Purpose Machine Mfg
Business Cards Express	Tinkham Ave	50 - 99	Printing and Related Support Activities - Printing and Related Support Activities
Insulectro Inc	Tinkham Ave	20 - 49	Computer and Electronic Manufacturing - Semi-Conductor and Electronic Components
Airmax	Tinkham Ave	20 - 49	Fabricated Metal Product Manufacturing - Architectural and Structural Metals
J & R Stamping	Thornton St	20 - 49	Fabricated Metal Product Manufacturing - Forging and Stamping
Precision Tool & Die Inc	Manchester Rd # 10	20 - 49	Miscellaneous Manufacturing - Medical Equipment and Supplies Mfg

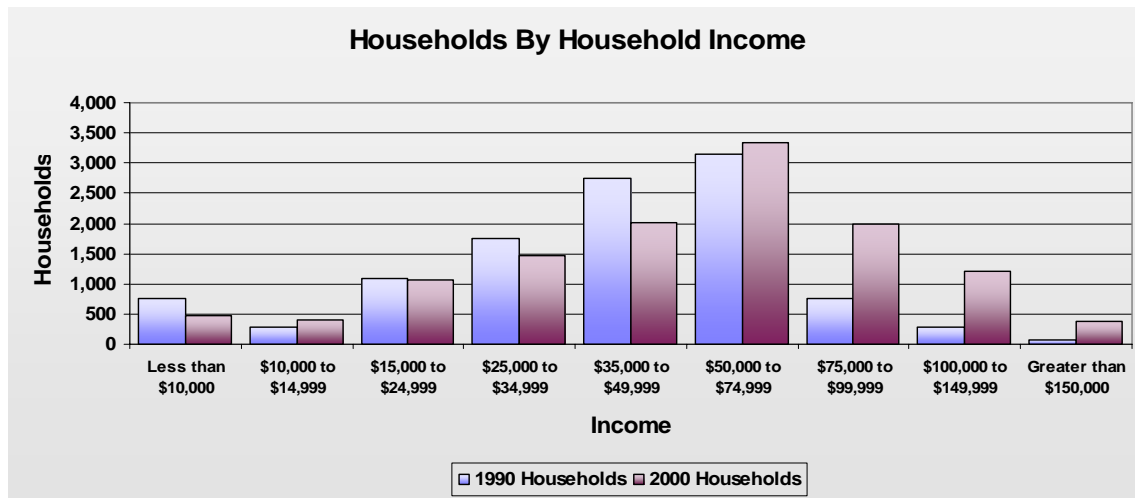
Source: NHnetwork 2008

Income Characteristics**Table 2.18: Households By Household Income**

Household Income	1990 Households		2000 Households	
Less than \$10,000	747	7%	483	4%
\$10,000 to \$14,999	279	3%	406	3%
\$15,000 to \$24,999	1,091	10%	1,070	9%
\$25,000 to \$34,999	1,752	16%	1,459	12%
\$35,000 to \$49,999	2,746	25%	2,010	16%
\$50,000 to \$74,999	3,151	29%	3,338	27%
\$75,000 to \$99,999	756	7%	1,989	16%
\$100,000 to \$149,999	280	3%	1,211	10%
Greater than \$150,000	75	1%	374	3%
Median HH Income	\$43,419		\$54,634	

Source: NHHFA, 1990 and 2000 US Census

Figure 2.12



Source: NHHFA

Table 2.18 shows the Household income for Derry and the region for 1990 and 2000. Derry trends toward the higher median household incomes in the region at \$43,419 for 1990 and \$54,634 for 2000 (US Census). Derry's median income is estimated at \$80,600 for 2008 (according to the US Dept of Housing and Urban Development - HUD data). The three largest income cohorts for Derry in 1990 ranged from \$25,000 – \$74,999. These top three cohorts moved up by 2000 and ranged from \$35,000 – \$99,999. The region followed a similar trend, except that in 1990, the third top cohort was “Less than \$10,000”.

Land Development Patterns

Table 2.19: Total Local Assessed Valuation by Property Type, Derry 2008

Type of Property	Total Local Assessed Valuation	Percent of Total
Residential	\$2,192,793,062	82.55%
Commercial/Industrial	\$446,181,828	16.80%
Other	\$44,098,778	1.66%
Exemptions	(\$26,740,044)	
Total Value	\$2,656,333,624	100.00%
Residential to Commercial/Industrial Ratio:		5:1

Source: NH Department of Revenue. 2008 Equalization Reports.

Table 2.19 shows the local assessed valuation by property type for Derry for 2008. Residential use is the highest at 82.55%; it also makes up the most acreage in Derry at 10,481 acres⁷. Commercial/Industrial makes up 16.8% of the total valuation and amounts to 1,214 acres. Other uses make up 1.66% of the total valuation and amount to 9,035 acres. Other uses include utilities, exempt property, Open Space and various types of farmland and forest land.

⁷ Derry, New Hampshire. Assessor's Office. MS-1 Report. March 18, 2009.

Table 2.20: SNHPC Region Town Valuations and tax rates

Name of Municipality	Town Valuation	Town Tax	Local Education Tax	State Education Tax	County Tax	Town Total	Tax Commitment
Auburn	\$685,674,771	\$2.26	\$9.09	\$2.26	\$0.94	\$14.55	\$9,801,578
Bedford	\$3,330,457,344	\$3.81	\$11.78	\$2.27	\$1.09	\$18.95	\$62,516,090
Candia	\$377,408,226	\$4.40	\$12.72	\$2.69	\$1.09	\$20.90	\$7,812,245
Chester	\$569,499,900	\$4.38	\$11.07	\$2.22	\$0.85	\$18.52	\$10,403,731
Derry	\$2,656,333,624	\$8.81	\$13.19	\$2.54	\$0.99	\$25.53	\$67,432,288
Deerfield	\$587,056,970	\$3.74	\$12.87	\$2.08	\$0.82	\$19.51	\$11,291,028
Goffstown	\$1,405,043,730	\$8.37	\$10.69	\$2.50	\$1.13	\$22.69	\$31,353,436
Hooksett	\$1,595,105,965	\$5.41	\$10.64	\$2.12	\$2.65	\$20.82	\$32,905,191
Londonderry	\$3,392,542,383	\$4.38	\$11.03	\$2.21	\$0.86	\$18.48	\$61,317,770
Manchester	\$9,718,783,150	\$8.05	\$5.98	\$2.28	\$1.04	\$17.35	\$166,700,585
New Boston	\$644,892,403	\$3.14	\$8.57	\$2.04	\$0.96	\$14.71	\$9,376,876
Raymond	\$987,746,905	\$4.45	\$11.56	\$2.13	\$0.86	\$19.00	\$18,430,076
Weare	\$921,443,209	\$2.76	\$10.04	\$2.11	\$0.99	\$15.90	\$14,420,954

Source: NH Department of Revenue, Municipal Services Tax Rates 2008

Table 2.20 shows the Town valuations and tax rates for the Region for 2008. Derry has one of the highest valuations of the region at \$2,656,333,624, coming in behind Manchester as the highest, Londonderry as the second highest and Bedford as the third. Derry also has the highest tax rate in the region at \$25.53. Goffstown has the second highest tax rate at \$22.69 and Candia the third at \$20.90.

Derry's valuation decreased by approximately 10.8% from \$2,979,467,632 in 2007 to \$2,656,333,624 in 2008. This is a symptom of the economic recession, starting in 2007-2008 and continuing presently. Derry, along with the rest of the Nation faces a challenging economy over the next few years and reducing taxpayer burden while balancing necessary town upgrades and services will be an important focus.

Chapter 3

HOUSING

3.0 INTRODUCTION

The Housing Chapter takes a look at local housing conditions, housing affordability issues and housing growth trends. Population and Housing are directly related to land use decisions and an analysis of the current and future state of housing helps prepare for future needs or issues.



Source: Beangroup.com

This chapter focuses on Regional Housing Trends, Affordable Housing and an evaluation of Affordable Housing in Derry on a local level and from a regional perspective. This information is pertinent to the recent Workforce Housing legislation in the State of New Hampshire and the role it plays in assessing local Housing trends and needs.

Community Survey

In the fall of 2008, a Community Survey was made available to the public at Town Hall, the Library, the Recreation Dept and via the Town website. A total of 1000 surveys were distributed and the town received 89 responses, for a return rate of 9 percent. The following questions and responses are those on the survey that relate to Housing in the Town of Derry.

Please indicate the level of importance you feel the town should give to the following housing types.

Housing Type	Very Important	Important	Somewhat Important	Not Important	Don't Know
Single Family	47%	30%	13%	8%	2%
Two-Family (duplex)	7%	20%	27%	42%	4%
Multi-Family (3+ units)	7%	11%	19%	59%	4%
Elderly Housing	22%	25%	29%	18%	6%
Manufactured	4%	7%	24%	61%	4%

(mobile) homes					
Townhouses or Condos	6%	23%	28%	39%	4%
Affordable/workforce housing	20%	21%	20%	36%	3%
Cluster Developments	14%	13%	24%	43%	6%

Does Derry need affordable/workforce housing?

	Total	%
Yes	36	44
No	33	41
Don't know	12	15

Where should affordable housing be located?

District	Total	%
District 1	15	26
District 2	14	24
District 3	15	26
District 4	14	24

Does Derry need elderly or assisted housing?

	Total	%
Yes	3	25
No	7	58
Don't know	2	17

Where should elderly housing be located?

District	Total	%
District 1	18	29
District 2	11	17
District 3	16	25
District 4	18	29

Should the town encourage cluster subdivisions?

	Total	%
Yes	3	27
No	5	46
Don't know	3	27

Where should cluster subdivisions be located?

District	Total	%
District 1	8	16
District 2	19	37
District 3	14	27
District 4	10	20

Is Derry's residential growth occurring...?

Growth Rate	Total	%
Just right	2	22
Too fast	7	78
Too Slow	0	0

The responses to the community survey show that the residents of Derry feel that Single Family Housing is very important, Elderly Housing is somewhat important and all other housing types are not important, including, Two-family, Multi-family, Manufactured Homes, Townhouses/Condos, Affordable/workforce housing and cluster developments.

Although residents of Derry feel that Affordable housing is not important going forward, they do feel that Derry needs affordable housing to stay at the level it is currently at and that it should be located in District 1 and District 3.

Although residents of Derry feel that Elderly housing is somewhat important, they do not feel as though Derry needs anymore elderly housing going forward. Residents feel as though this elderly housing should be located in District 1 and District 4.

Residents do not feel as though the town should encourage cluster subdivisions, but if they are developed they should be located in District 2.

Finally, a majority of the respondents felt that residential growth was occurring too fast in Derry.

3.1 REGIONAL HOUSING TRENDS

Parallel to the slowing population growth during the 90's, Derry's housing stock growth slowed as well. From 1990 to 2000 there was a percent change of only 7.3%. Compared to other towns in the region, it was above only Manchester at 3.5% in housing growth. From 2000 to 2008 Derry's housing growth increased by 2.7%, which was higher than just two other towns, Goffstown at 1.5% and Manchester at 1.4%. Compared to the region as a whole, Derry has had slower housing growth over this time period as well. From 1990 to 2000 the region saw a change of 10.7% compared to Derry's 7.3% and from 2000 to 2008 the region saw a change of 5.0% compared to 2.7% in Derry. These numbers are also do, in part, to a 1 year growth moratorium adopted in late 1994, a Growth Management Plan in 1996 and Derry's growth management ordinance in effect since 1999, which were all created to ease the burden on municipal services and infrastructure the town was seeing from the rapid population and housing growth in the previous decades.

Table 3.1: Housing Growth in Derry, 1990-2006

Municipality	Number of Housing Units			1990-2000		2000-2008	
	1990	2000	2008	Absolute Change	Percent Change	Absolute Change	Percent Change
Auburn	1,354	1,690	1,785	336	24.8%	95	5.6%
Bedford	4,156	6,401	7,255	2,245	54.0%	854	13.3%
Candia	1,192	1,384	1,495	192	16.1%	111	8.0%
Chester	924	1,247	1,487	323	35.0%	240	19.2%
Deerfield	1,227	1,406	1,710	179	14.6%	304	21.6%
Derry	11,869	12,735	13,080	866	7.3%	345	2.7%
Goffstown	5,022	5,798	5,883	776	15.5%	85	1.5%
Hooksett	3,484	4,307	4,926	823	23.6%	619	14.4%
Londonderry	6,739	7,718	7,934	979	14.5%	216	2.8%
Manchester	44,361	45,892	46,554	1,531	3.5%	662	1.4%
New Boston	1,138	1,462	1,691	324	28.5%	229	15.7%
Raymond	3,350	3,710	4,290	360	10.7%	580	15.6%
Weare	2,417	2,828	3,325	411	17.0%	497	17.6%
SNHPC Region	87,233	96,578	101,415	9,345	10.7%	4,837	5.0%

*Estimated based on Building Permits issued between 2000-2008

Sources: 1990 U.S Census SF-H1, 2000 U.S. Census SF1-H1, Derry Building Dept., SNHPC 2008 Annual Land Use Report

Derry comprises approximately 7.4% of the total land area for the region, but contains approximately 12.9% of the total housing units as of 2008. This is second only to Manchester which contains approximately 45.9% of the total housing units. After Derry, Londonderry contains the next highest amount of total housing units for the region at approximately 7.8%.

3.2 AFFORDABLE HOUSING

In the 2008 New Hampshire legislative session SB 342, (RSA 674:59), an Act establishing a mechanism for expediting relief from municipal actions which deny, impede, or delay qualified proposals for workforce housing, was passed. This act codifies *Britton v. Town of Chester*, 134 N.H. 434 (1991), where the Court determined that the state's planning and zoning statutes called for every municipality to provide a reasonable and realistic opportunity for the development of housing that is affordable to low and moderate income households, and particularly for the development of multi-family structures.

To determine if such opportunities exist, the collective impact of all local land use regulations must be considered, and workforce housing of some type must be allowed in a majority of land area where residential uses are permitted (but not necessarily multi-family in a majority of such areas). Recognizing that some municipalities have already done what is necessary under this law, the existing housing stock of a community is to be accounted for to determine if a municipality is providing its "fair share" of current and reasonably foreseeable regional need for workforce housing. Importantly, reasonable restrictions may still be imposed for environmental protection, water supply, sanitary disposal, traffic safety, and fire and life safety protection.¹

This new law defines affordable housing as housing, where no more than 30% of income is spent on housing (rent + utilities; or mortgage principal and interest, taxes, and insurance). It defines workforce housing as housing that is "affordable" for:

- A renter family of 3 making 60% of the area median income
- An owner family of 4 making 100% of the area median income

This does not include age-restricted housing or developments with greater than 50% of the units having less than 2 bedrooms. Also, multi-family housing is defined as 5 or more dwelling units.

As part of this Master Plan, the following evaluation of affordable housing in Derry is provided for the town to consider, relative to the new requirements for workforce housing in each municipality in the state.

3.3 ANALYSIS OF AFFORDABLE HOUSING IN DERRY

Rental Cost Affordability in Derry

The area median income (AMI) in Derry for FY2008 as determined by HUD is \$80,574. The maximum affordable rent for Derry would be \$1,208.61 (including utilities) using

¹ Salkin, Patty. *New Hampshire Enacts New Law Requiring Workforce Housing, Providing for Accelerated Review and a Builder's Remedy*. July 20, 2008. <http://lawoftheland.wordpress.com/2008/07/20/new-hampshire-enacts-new-law-requiring-...>

the new law's definition of no more than 30% of income for a renter family of 3 making 60% of AMI.

The 2008 median 2-bedroom rent in Rockingham County was \$1,182 (including utilities), which would require an estimated annual household income of \$47,280². This is 58.7% of the AMI.

From this we can see that the median 2-bedroom rent in Derry would be considered affordable under the new law.

Median Home Price Affordability Analysis

The median home price in Derry of \$220,000 for the first half of 2008 (Figure 2.10), would require an income of approximately \$77,868, assuming a term of 30 years with a 6.25% interest rate, 10% cash on hand for down payment and closing costs, an insurance rate of 0.50%, required PMI and Derry's 2007 property tax rate of \$22.10 per thousand. This is 97% of the area median income. With 20% cash on hand for a down payment, the required income decreases to approximately \$71,607. This is 89% of the area median income. With 5% cash on hand for the down payment and closing costs, the required income increases to \$80,998, which is 100.5% of the area median income.

Table 3.2: Required Income for 2008 Median Home Price in Derry

Median Home Price 2008	Cash on Hand	Income	Percent of AMI
220,000	5%	80,998	100.5%
220,000	10%	77,868	97%
220,000	20%	71,607	89%

Source: NHHFA Affordability Calculator, www.nhhfa.org

From this analysis we can see that the only category not within the affordability definition would be a family who only has 5% cash on hand for down payment and closing costs, but even this category is very close at 100.5%, when the definition of affordability is 100% of the area median income.

Area Median Income Affordability Analysis in Derry

The maximum housing purchase price for an owner family of 4 making 100% of the area median income would be approximately \$227,628³ (Table 3.3), based on the area median income of \$80,574, assuming 10% cash on hand for a down payment, a 6.25% interest rate, a 0.50% insurance rate, required PMI and Derry's 2007 property tax rate of \$22.10 per thousand.⁴ With 20% cash on hand for a down payment the maximum price increases to approximately \$247,567 and with only 5% cash on hand for a down payment and closing costs the price decreases to \$218,805. Table 3.3, also shows the number and

² Affordability based on 30% of income as the cap for combined rent and utilities

³ NHHFA affordability calculator.

⁴ Bealo, Peter. Workforce Housing Owner Occupied Housing, Workforce Housing Limits.

percent of housing units in Derry (based on the 2008 Assessment) that fall at or below the maximum house prices depending on cash on hand for down payment and closing costs.

Table 3.3, Maximum Affordable House Prices in Derry

Income	Cash on Hand	Maximum House Price	Housing Units in Derry below this price⁵	Percent Housing Units in Derry below this price
80,574	5%	218,805	5735	53%
80,574	10%	227,628	6375	59%
80,574	20%	247,567	7537	70%

Source: NHHFA Affordability Calculator, www.nhhfa.org

Table 3.4 shows an analysis of the housing stock in Derry and assessed home prices by price range. Figure 3.1, shows an analysis of where those home prices fall in relation to the workforce housing maximum affordable house prices.

From this analysis we can see that a majority of the housing units in Derry are affordable for all of these categories, based on the above assumptions and the definition of affordable according to the new law. Even with the lowest amount of cash on hand (5%), there are still 53% of the assessed housing units in Derry that are at or below the affordability threshold.

Even though it is important to realize that there are a number of assumptions in these calculations and that these are not hard and fast numbers for determining affordability, it still gives a good basis to begin analyzing if there is reasonable and realistic workforce housing opportunities within the town. According to this analysis of Derry those opportunities do exist within a majority of the town. It will also be important to determine if those opportunities will continue to exist within the reasonably foreseeable future as well. The following section focuses on a regional housing needs analysis and looks at where Derry falls within the current and future regional housing needs.

⁵ Derry Assessor's Office. Derry 2008 Assessment Data

Figure 3.1

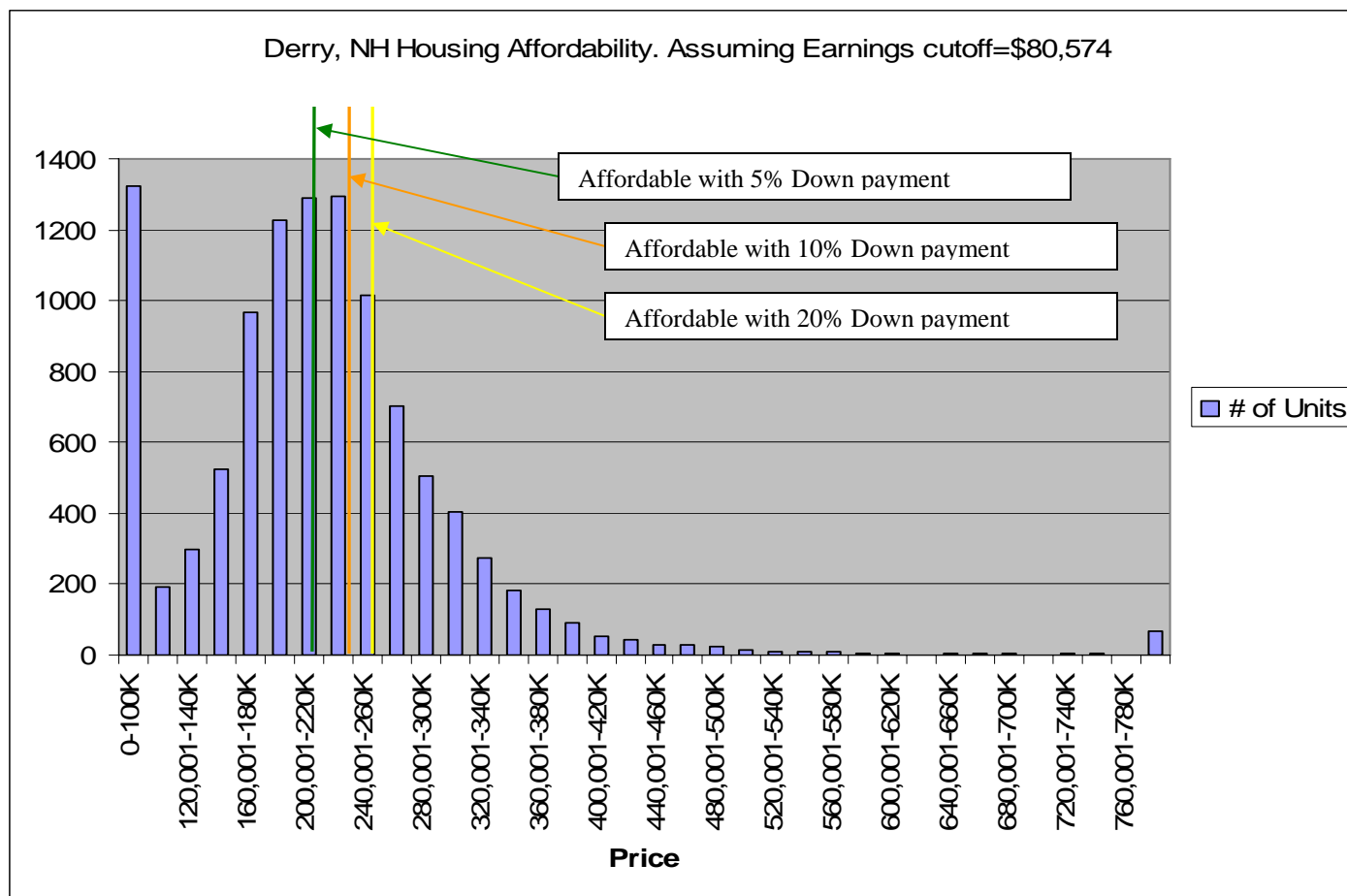


Table 3.4	
Housing	Stock
Price Range (\$)	# of Units
0-100K	1322
100,001-120K	191
120,001-140K	297
140,001-160K	523
160,001-180K	966
180,001-200K	1226
200,001-220K	1287
220,001-240K	1296
240,001-260K	1014
260,001-280K	701
280,001-300K	507
300,001-320K	403
320,001-340K	276
340,001-360K	181
360,001-380K	128
380,001-400K	90
400,001-420K	54
420,001-440K	43
440,001-460K	29
460,001-480K	29
480,001-500K	25
500,001-520K	15
520,001-540K	10
540,001-560K	10
560,001-580K	9
580,001-600K	6
600,001-620K	6
620,001-640K	0
640,001-660K	5
660,001-680K	6
680,001-700K	7
700,001-720K	2
720,001-740K	6
740,001-760K	3
760,001-780K	2
780000+	66
Total Units	10741

Source: Derry 2008 Assessment

3.4 REGIONAL FAIR-SHARE AFFORDABLE HOUSING

From a regional perspective it is useful to estimate the total number of low and moderate income (LMI) affordable units needed in a community. In fact, New Hampshire RSA 674:2 III, states that a Master Plan should contain a housing section which “addresses current and future housing needs of residents of all levels of income of the municipality and the region in which it is located, as identified in the regional housing needs assessment performed by the regional planning commission pursuant to RSA 36:47, II.”

Figures 3.2 and 3.3 (next page) show the low and moderate income (LMI) housing needs for the Southern New Hampshire Planning Commission’s 13 community region for 2000 and projected for 2010, from the *2005 Regional Housing Needs Assessment*. The Commission utilized a “fair share” formula developed by Bruce Mayberry of the New Hampshire Housing Finance Authority in order to determine the LMI housing needs of the communities within the planning region. The new NHHFA method developed four models (A through D) that each reviews a different level of need. All four of the models use a series of weighted factors to determine each community’s percent “fair share” of the region’s low income housing supply. These factors represent a community’s ability to support moderate and low-income housing and remain economically viable. Additionally, each model uses a separate set of factors to calculate the distribution of elderly or age 65 plus and family age households.

SNHPC chose to follow the method established by Bruce Mayberry and NHHFA, with a few modifications to best represent the region. SNHPC chose to calculate the fair share distribution using only Models A and B for two income levels: renters under 80 percent MAI (median area income) paying 30 percent or more to gross rent, and renters under 50 percent MAI paying 35 percent or more to rent. These need levels were each selected for specific reasons. Most rental housing assistance programs set their income limits at up to 80 percent of MAI and then subsidized rent in excess of 30 percent of the household’s income. A need level of 50 percent MAI paying 35 percent or more to rent is the second most restrictive of the suggested need levels and focuses on the most needy of all households in the region. While the need level of all renters paying 50 percent or more to gross rent includes fewer households, it may include families earning more than 80 percent MAI who chose to rent more expensive properties. Therefore, it may or may not be an accurate representation of greatest need.

Additionally, while the NHHFA model only calculated the fair share distribution for the region’s projected 2010 need, SNHPC chose to distribute units for the years 2000 and 2010 based on the two selected need levels. This provides a comparison of ideally what should be available today with what the region needs to plan for in the near future.

The last modification initiated by SNHPC was the inclusion of vacant residentially zoned land as an additional factor for calculating each community’s proportionate share of the region’s rental housing. Mayberry had not utilized this factor in his models because he wished to stress that the provision of new affordable rental units did not necessitate new construction. Rather, he chose to encourage communities to employ some of the non-

construction methods outlined in another section of the housing needs report to reach their ideal provision of low income housing. However, it is acknowledged that some units would be developed through new construction. Given the scarcity of vacant residential land in many SNHPC communities, this factor was added in our model to account for this development constraint.⁶

Figure 3.2

**Proportionate Distribution of Low and Very Low-Income Housing Needs
Renters Under 50% MAI and Overpay at 35%+**

Municipality	2000		2010	
	Number of Households	Fair Share Distribution	Number of Households*	Fair Share Distribution
Auburn	19	207	23	236
Bedford	78	768	94	884
Candia	7	249	8	283
Chester	13	231	16	263
Deerfield	29	376	35	430
Derry	976	644	1,174	796
Goffstown	265	496	319	582
Hooksett	198	434	238	518
Londonderry	135	858	162	981
Manchester	5,533	2,089	6,653	2,735
New Boston	36	334	43	380
Raymond	164	367	197	422
Weare	85	486	102	554
SNHPC Region	7,538	7,538	9,064	9,064

* Equals the 2000 number of households projected at a 1.8604% annualized growth rate, derived from the average of the four dwelling unit projections for renter occupied households as established in Table 9 of this report.

Source: SNHPC 2005 Housing Needs Assessment

⁶ SNHPC Housing Needs Assessment. January 2005.

Figure 3.3

**Proportionate Distribution of Moderate and Lower Income Housing Needs
Renters Under 80% MAI and Overpay at 30%+**

Municipality	2000		2010	
	Number of Households	Fair Share Distribution	Number of Households*	Fair Share Distribution
Auburn	19	272	23	314
Bedford	170	1,029	204	1,198
Candia	7	324	8	374
Chester	20	302	24	348
Deerfield	32	493	38	571
Derry	1,404	984	1,688	1,206
Goffstown	361	684	434	807
Hooksett	271	620	326	742
Londonderry	260	1,135	313	1,313
Manchester	7,923	3,499	9,527	4,430
New Boston	61	434	73	501
Raymond	241	489	290	569
Weare	131	634	158	732
SNHPC Region	10,900	10,900	13,106	13,106

* Equals the 2000 number of households projected at a 1.8604% annualized growth rate, derived from the average of the four dwelling unit projections for renter occupied households as established in Table 9 of this report

Source: SNHPC 2005 Housing Needs Assessment

According to the Commission's fair-share analysis Derry exceeds its "fair-share" of the region's LMI housing needs and will continue to exceed it as projected into 2010. The next update of the SNHPC *Regional Housing Needs Assessment* is due in 2010.

3.5 ZONING ORDINANCE REVIEW FOR THE ENCOURAGEMENT OF AFFORDABLE HOUSING IN DERRY

There are several provisions within the town Zoning Ordinance which have allowed Derry to provide for a variety of housing types in the residential districts. Currently, a large portion of the town is zoned for Medium to High Density Residential, Multi-family, Central Business District or Manufactured Housing. The Medium to High Density Residential zones allow for multi-family, condominiums, townhouses, duplexes, and apartments. The Central Business District allows for mixed-use development and high-density. These zones allow for density ranging from 12-18 units per acre. Also, smaller lot sizes are allowed when the lot is on municipal water and sewer. When both utilities are present one only needs a 10,000 sq.ft. lot and if one or the other is present, one can have a 15,000 sq.ft. lot.

The Multi-family Residential zone allows for high-density housing and there are also several Mobile-Home/Manufactured Housing Park districts. There are many existing multi-family apartment units in other zones, primarily Industrial and Commercial districts, that were built through variances, pre-existing uses, older zoning provisions or a court decision. Also, within the lower density areas there are scattered duplex units and subdivisions.

The areas of town zoned for Low to Low-Medium residential are mainly on the outlying parts of town that are not serviced by municipal water and sewer. The acreage requirement in these zones is for two and three acres, plus high-intensity soils based lot sizing. The Zoning Ordinance requires higher density development to have municipal water and sewer versus septic and wells. There are currently no plans in the town's Master Water and Sewer Plans to service these areas with utilities.

3.6 CONCLUSION

Based on the analysis of affordable housing in Derry, the regional fair-share analysis, and the zoning ordinance review, it is obvious that Derry is already working towards providing reasonable and realistic opportunities for workforce housing. According to the regional housing needs assessment, Derry is meeting and will continue to meet, its fair share of affordable housing in the reasonably foreseeable future.

Recommendations

- Continue to implement the Growth Management Ordinance to control rapid growth that is anticipated from the widening of I-93
- Continue to adapt to the demand for affordable housing in Derry
- Continue to support a variety of housing in town by allowing for two-family, multi-family, manufactured homes, townhouses/condos and other forms of high-density housing in those zones they are currently allowed in

Chapter 4

ECONOMIC DEVELOPMENT

4.0 INTRODUCTION

The Economic Development chapter will assist the Planning Board and the Planning Department in promoting and efficiently implementing policies, programs and actions for realization of the Town's economic development goals and objectives. These goals and objectives are being developed in conjunction with the Planning Board as part of the Master Plan community participation and visioning process.

Derry has many opportunities and strengths to further economic development efforts in the town. A strong economic base for Derry is important for quality of life and sustainable growth into the future. Derry faces a challenging economy, along with the rest of the nation, as an outcome of the present recession. These challenges must be met with an increased effort, as well as new and creative methods of supporting and growing existing businesses in town and drawing in new businesses and developments.

Strategies for economic development in Derry should focus on meeting the town's goals and objectives while still maintaining the rich cultural and historic heritage of the town and preserving open space and natural resources.

Community Survey

In the fall of 2008, a Community Survey was made available to the public at Town Hall, the Library, the Recreation Dept and via the Town website. A total of 1000 surveys were distributed and the town received 89 responses, for a return rate of 9 percent. The following questions and responses are those on the survey that relate to Economic Development in the Town of Derry.

Please indicate the level of importance that the town should give to the following economic development actions:

	Very Important	Important	Somewhat Important	Not Important	Don't Know
Attract New Office Development	53%	27%	17%	0%	3%
Attract New Small Scale Retail Development	38%	30%	20%	11%	1%
Attract New Large Scale Retail Development	34%	13%	22%	31%	0%

Attract New Light Industrial Development	49%	13%	9%	10%	0%
Develop New Industrial Park(s) in Town	42%	20%	14%	19%	5%
Continue Downtown Revitalization	41%	25%	15%	19%	0%

Is there a type of business that does not exist that you wish did?

Desire New Business	Total	%
Yes	67	85
No	12	15

What type of businesses should exist?

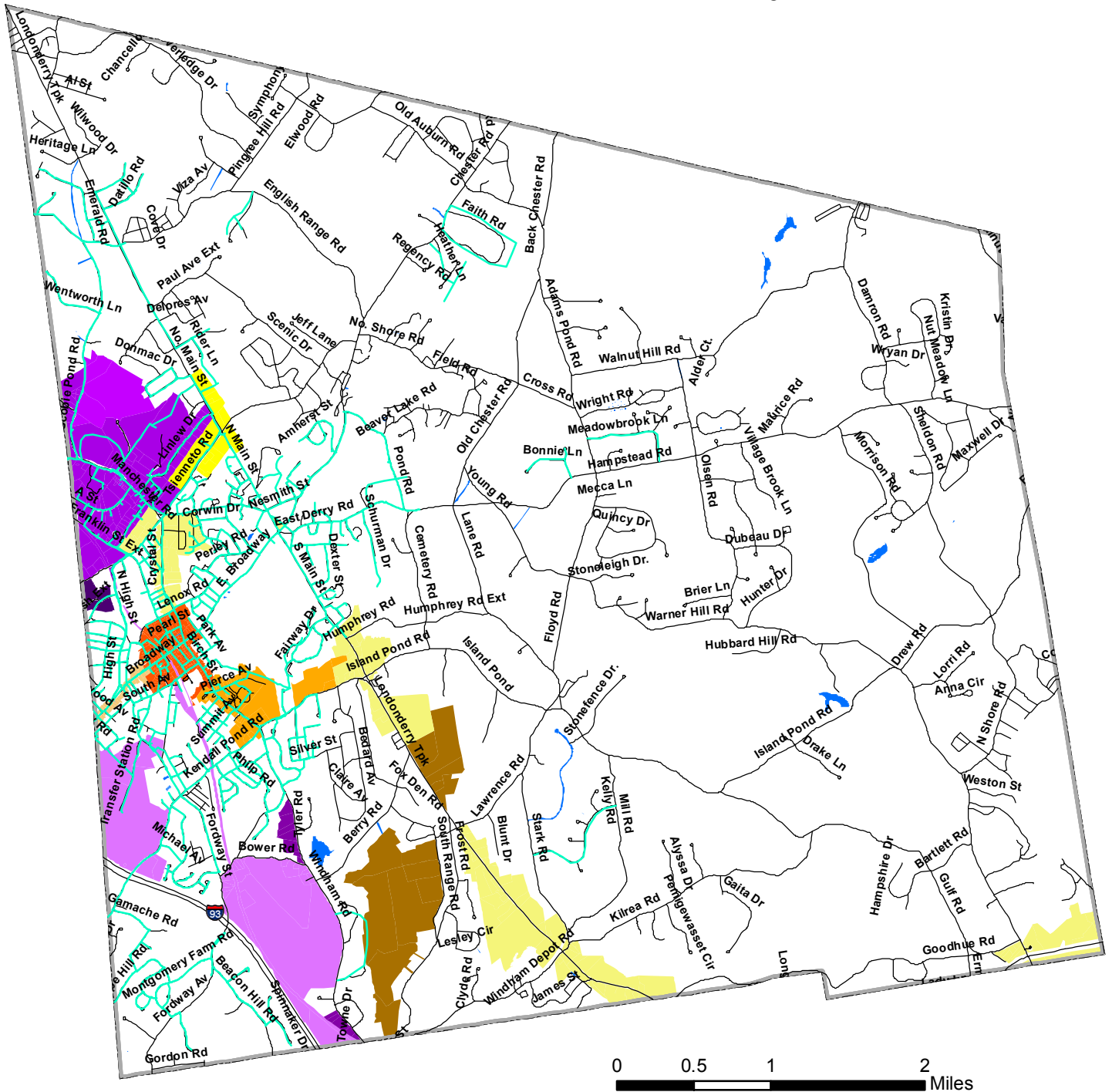
Type of Business	Total	%
Medical office	10	5
Manufacturing	33	14
Department store	34	15
General office	23	10
Light industry	40	18
Outlet store	21	10
Big box	15	7
Add restaurants	19	9
other	27	12

The responses to the community survey show that residents of Derry support attracting new businesses and industries to Derry. Those new businesses with the most support were office development, light industrial, an industrial park and downtown revitalization. Small and large scale retail development was also supported by a majority of respondents.

Respondents also favored attracting new types of businesses to Derry. Those types of businesses with the highest support were light industry, a department store and manufacturing.

From the results of the survey we can see that residents of Derry are mostly in favor of new commercial and light industrial development. Economic Development efforts will be most successful by not only attracting new businesses, but supporting those that exist already. Economic growth should be planned intelligently and thoroughly and should always be done in a manner that maintains community character and identity and that does not detract from the goals and objectives of other land use planning efforts in Derry.

Map 4.1 Municipal Water, Commercial and Industrial Zones in Derry, NH



Data Sources:
Town of Derry
NH GRANIT Digital Data (1:24,000)
NH Department of Transportation
SNHPC



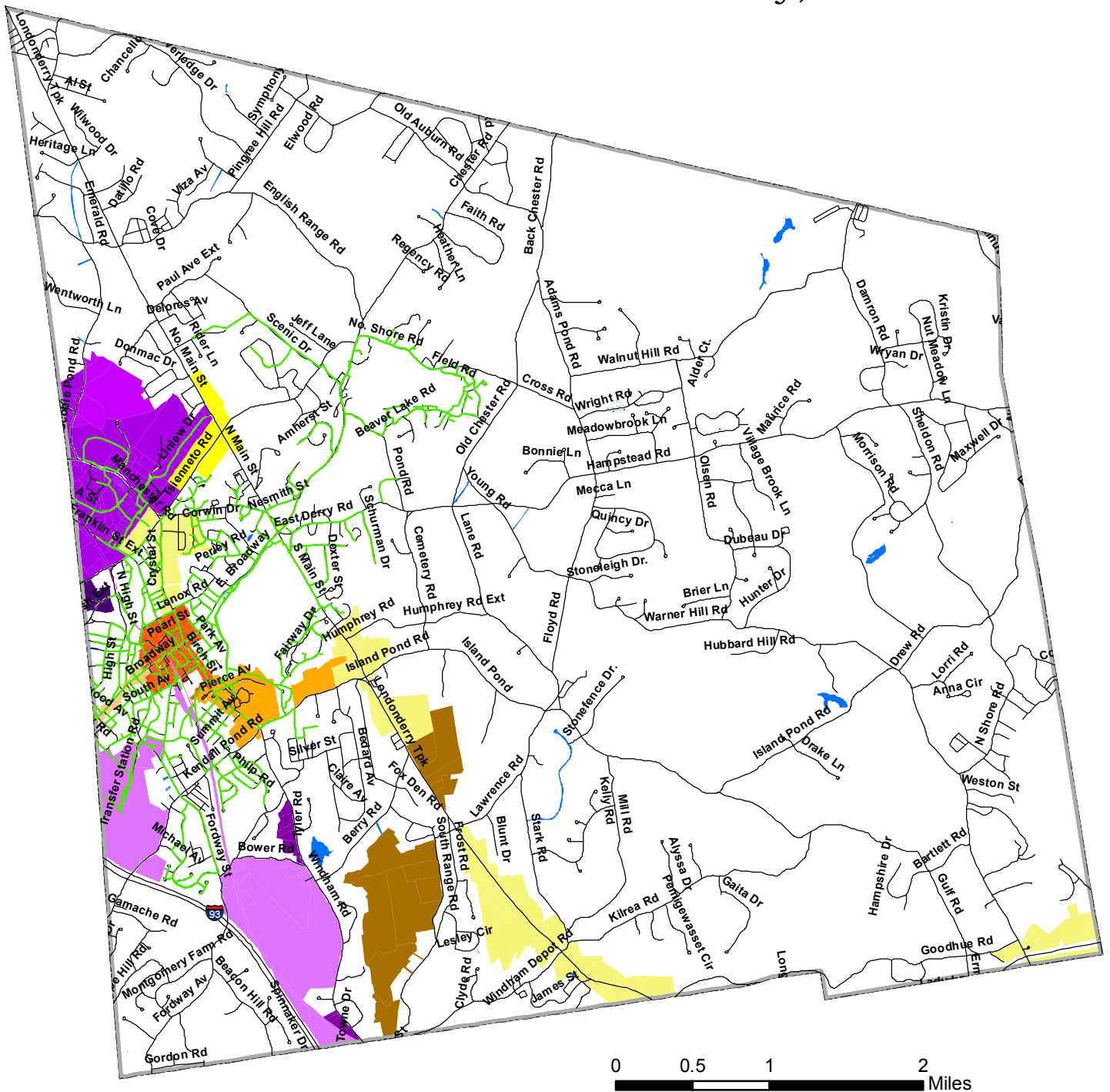
The individual municipalities represented on this map and the SNHPC make no representations or guarantees to the accuracy of the features and designations of this map.

Map Produced by GIS Service SNHPC 2009.
Contact: gis@snhpc.org; Ph: (603) 669-4664



Water Mains	Industrial District 4
Zoning	Industrial District 5
Water	Industrial District 6
Central Business District	Residential Districts
General Commercial	Office/Business District
General Commercial 2	Office/Medical/Business
Industrial District 1	Office/Research
Industrial District 3	

Map 4.2 Municipal Sewer, Commercial and Industrial Zones in Derry, NH



Data Sources:
Town of Derry
NH GRANIT Digital Data (1:24,000)
NH Department of Transportation
SNHPC



The individual municipalities represented
on this map and the SNHPC make no
representations or guaranties to the accuracy
of the features and designations of this map.

Map Produced by GIS Service SNHPC 2009.
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Sewer Lines	Industrial District 4
Zoning	Industrial District 5
Water	Industrial District 6
Central Buisness District	Residential Districts
General Commercial	Office/Buisness District
General Commercial 2	Office/Medical/Buisness
Industrial District 1	Office/Research
Industrial District 3	

Obstacles to Economic Development

Infrastructure, Land availability and Roads

One of the biggest obstacles to economic development in Derry is the lack of municipal sewer and water to parcels that are currently zoned commercial and industrial. Maps 4.1 and 4.2 show the Commercial and Industrial Zones, as well as the water and sewer lines in Derry. From this we can see that there are a number of large areas in the southwest portion and a small area in the southeast portion of Derry zoned either Commercial or Industrial, which do not have water and sewer infrastructure available to them. This can make it hard to attract businesses/industries to those areas.

Derry has few large parcels remaining in town which could be re-zoned to industrial or commercial. The Manchester Road/Route 28 area would attract more development if the road could be widened to at least 2 lanes for the entire length to accommodate more traffic. In addition, industrial zoned areas would be more attractive if they had direct access to I-93.

Marketing, Goals and Objectives

The Town of Derry has many assets for attracting economic development, but lacks a strong marketing and branding program which promotes these assets. The town should take advantage of the opportunities it has to offer new businesses and developments and sell itself as “the place to be”. Before Derry can market itself successfully though, the town needs to outline some economic goals and objectives, which include areas of town that should be the focus of economic development. Derry has done some important downtown revitalization recently, but extending this focus to other growth centers in town will be important to the economic development strategy that Derry develops going forward.

The Town of Derry recently completed a Downtown Market Plan¹ for enhancing the downtown. Some of the key recommendations included in this plan are:

- Create a downtown Derry Development Committee (DDDC)
- Create a Downtown Merchants Association (DMA)
- Fund and hire a Downtown Coordinator
- Fund and create a façade improvement program
- Utilize empty storefronts
- Implement the 2004 Parking Study/Purchase land for additional parking
- Develop Downtown way finding signage
- Improve municipal parking lot maintenance
- Promote Educational or Institutional Use downtown
- Find an alternate location for friendship center
- Improve storefronts and downtown atmosphere

¹ *Downtown Market Plan*. Derry, New Hampshire. 2008. RKG Associates Inc.

The recommendations in this plan should be implemented as part of the goals and objectives of the Master Plan in order to enhance existing downtown economic development and to attract new businesses to not only the downtown, but to Derry in general.

Potentials for Growth

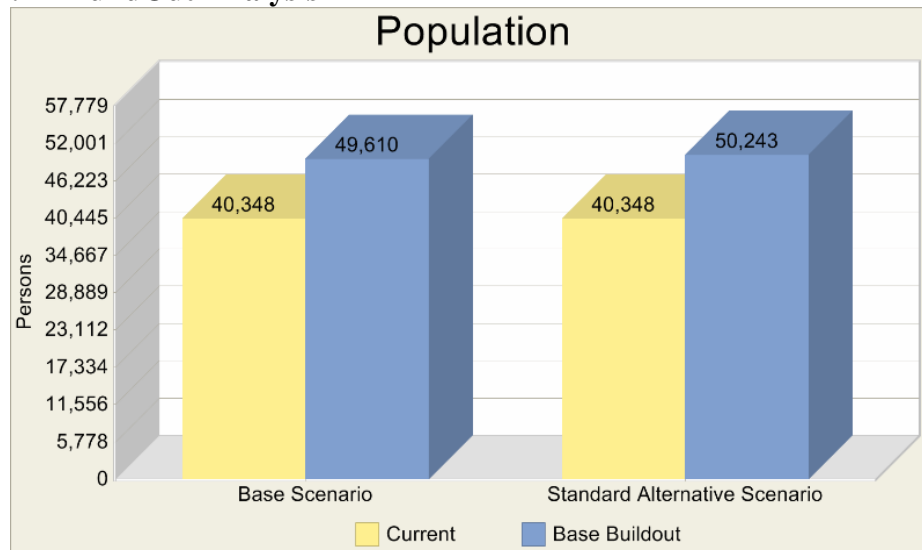
The Town of Derry is well-positioned to have a strong Economic Development program. Derry is ideally located on I-93, in close proximity to the Boston, Manchester and Nashua economic centers, as well as Manchester-Boston Regional Airport, Pease International Tradeport, Portsmouth and Boston Harbors. This proximity provides many opportunities for business on the local, regional, State, New England and International levels.

Derry has an attractive downtown, an excellent school system, which includes Pinkerton Academy (a public/private High School), as well as many recreational and cultural opportunities. Derry also offers excellent quality of life for its residents and provides an attractive location for any business or industry wishing to locate to the area.

With the widening of I-93 and the development of the Manchester-Boston Regional Airport Access Road currently in progress, the Town of Derry is positioned to experience noticeable growth in the near future.

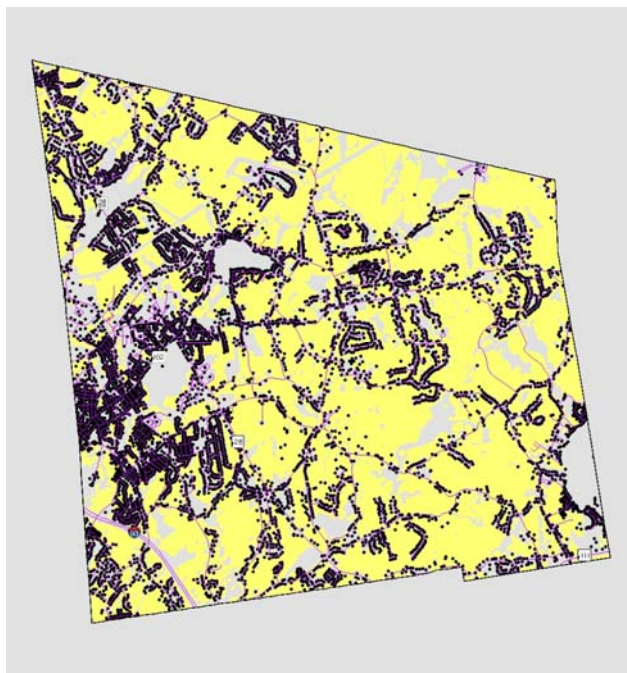
From the results of the build-out analysis, completed by Southern New Hampshire Planning Commission and based on current zoning, Derry could see a population of 49,610 – 50,243 at full buildout.² This would represent approximately a 46 - 47.5 percent growth rate beyond the current population of 34,071. The buildout analysis uses 3 different scenarios, involving different constraints and concentrations of density.

Figure 4.1 – BuildOut Analysis



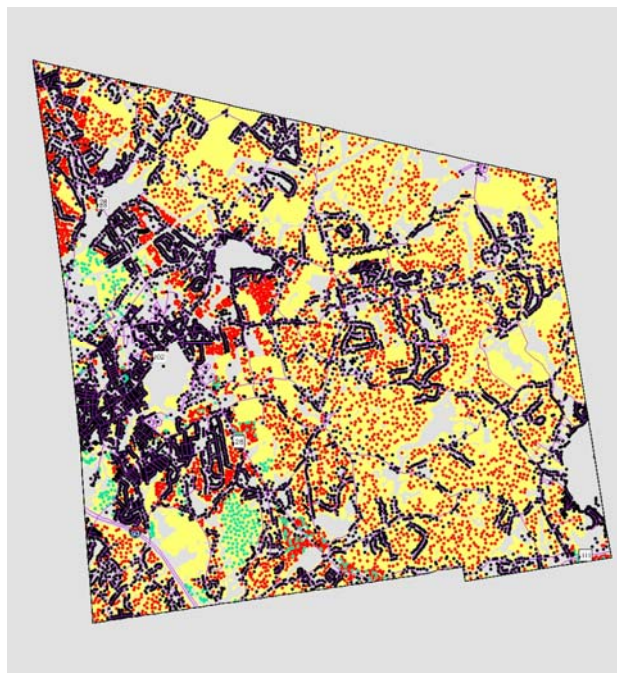
² See Appendix D for Full Buildout Analysis Report and details of buildout scenarios.

Figure 4.2 – Existing Buildings, Derry, NH



- Existing Buildings
- Buildable Lands

Figure 4.3 – Standard Alternative Buildout, Derry, NH



- Existing Buildings
 - Buildable Land
- Buildout Buildings**
- Commercial
 - Single Family Residential

Figures 4.2 and 4.3 show the existing concentration of buildings in Derry and what the future concentration would be with the standard alternative buildout. This provides an idea of where and what type of growth can occur under current zoning. It also shows where and how much growth can still occur in Derry's commercial and industrial zones. Derry's downtown is fairly built out already and doesn't have all the space the commercial and industrial zones surrounding the downtown and central business district have for more growth. The Town of Derry could benefit from this increased growth, which would provide a more diversified tax base and the creation of new jobs in town. These two things will have many positive affects on Derry, including reducing the property tax burden on residents, lessening commute times and traffic issues, and stimulating economic development.

Tax Base and Place in the Regional Economy

The economic base of any community can be defined as all the sources from which the town receives revenue. In general, the more diverse the economic base, the lower the per capita tax burden. In Derry, as with most surrounding communities, the primary source of revenue is property taxes, with the greatest percentage of those taxes coming from residential properties. Table 2.20 in the Demographic Trends Chapter illustrates the SNHPC Region Town Valuations and tax rates and compares the Town of Derry with the rest of the SNHPC region. In 2008, Derry's total tax rate was the highest in the SNHPC region at \$25.53. The Town of Derry has a long-standing tax cap on the town portion of the tax rate, which is currently \$8.81 for 2008. The School rate is \$13.19, state education tax rate is \$2.54 and the county rate is \$0.99.

Table 2.20 (pg.2-22) also shows the town valuations for 2008. Derry is valued at over \$2.6 billion. Manchester, Londonderry and Bedford have the three highest valuations, with Derry coming in fourth. In terms of Total Local Assessed Valuation by Property Type, Table 2.19 illustrates that the overall percent of the total tax valuation is 82.55 percent residential and 16.8 percent commercial/industrial. This represents a ratio of 5 to 1, which is a fairly good ratio. An ideal ratio would be in the order of 2 acres residential for every one acre commercial/industrial, which provides a balance between the two land uses and takes some of the tax burden off residential properties.

The relationship between tax base and economic development requires an analysis of tax revenues from different types of facilities such as commercial/industrial, mixed use, and residential. The costs of services may also prove to be tax positive or tax negative relative to the type of facility. Many fiscal impact studies have been conducted at the municipal level in New Hampshire and other states. In general, it has been found that commercial/industrial use is tax positive relative to the cost of community services while residential development is revenue negative relative to the tax base and the cost of services.

The results of the community survey indicate that the top issue for Derry residents is to reduce the residential property tax burden. From the results of the community survey, it is clear residents of Derry support increased commercial and light industrial uses as a

means to lower the tax burden that residents must pay as a result of high property tax rates.

On a statewide basis, it is important to note that, according to a new study³, in nearly every year of the past three decades, New Hampshire's state and local tax burden has ranked among the nations lowest. Estimated at 7.6 percent of income, New Hampshire's state/local tax burden percentage ranks 46th highest in the nation, well below the national average of 9.7 percent. Taxpayers in New Hampshire pay \$3,642 per capita in state and local taxes.⁴ These statistics are favorable to economic development efforts, in that, more businesses will be locating where their costs are low and the quality of life is high. Derry can take advantage of this asset, among many others, to attract new businesses to the area.

Industrial/Manufacturing Sector

According to the March 18, 2009 Derry MS-1⁵ report there are approximately 113 acres of improved industrial land and 100 acres of vacant industrial land. Together this represents approximately 1.03 percent of the total land in Derry of 20,729 acres. Almost half of the total Industrial land in Derry is still vacant. This leaves much more room for growth in this sector in Derry.

Chapter 2.5 – Economic data illustrates how manufacturing sector jobs are on a downward trend in Derry. This follows similar state and national trends in this sector. Although, one bright spot in the ongoing 2008-2009 recession is the growth in New Hampshire Biotech firms and jobs. “Biotech and medical-device manufacturers in the state are enjoying steady growth and hiring, spurred by a combination of technological leaps and the aging of the general population.”⁶

Table 2.15, Chapter 2.5, shows that the majority of Derry workers are in the service-providing industry, particularly in Health Care and Social Assistance. The top 25 employers include many health care and social assistance industries, including the Parkland Medical Center, Pleasant Valley Nursing Center, Center for Life Management, Haven Health Center of Derry, and Derry Medical Center.

Pulling in businesses that are aligned with already existing businesses in Derry is one way to increase economic growth. Taking advantage of the growth in the biotech and medical-device manufacturing sector should be a major economic development goal for Derry.

³ Daphne A. Kenyon, Ph.D. and Michael E. Bell, Ph.D. *Not As High as You Think: New Hampshire's Property Tax Burden*. 2008.

⁴ The Tax Foundation. *The Facts on New Hampshire's Tax Climate*. 2009

⁵ Office of the Assessor, Derry, New Hampshire. *MS1 Report*. March 18, 2009.

⁶ Paula Newton, president of the New Hampshire Bio-Medical Council. Kozubek, Jim. *NH biotech firms fuel growth in jobs*. Union Leader. March 22, 2009.

Village Center Planning and Development

The Village Plan Alternative (VPA) zoning and subdivision regulations adopted by the New Hampshire legislature in 2002 promote compact development with a mix of land uses, including residential, small-scale commercial, recreation and conservation in close proximity to one another within a neighborhood. These regulations are designed to implement the specific provisions of RSA 674:21.VI(a) to allow for the creation of new villages with mixed-use development that is scaled to the smaller populations and lower density of New Hampshire towns.

Adopting a VPA would respond to the economic, environmental and social consequences of conventional two-acre lot zoning that often segregates the locations of work, home, and recreation, and produces sprawling development patterns. The VPA addresses these economic, environmental and social consequences by promoting the smart growth principles of compact, mixed-use development, preserving the working landscape, and protecting environmental resources.

It sets forth the best examples of village design and Traditional Neighborhood Design (TND), scaled to a rural setting. Developing a VPA ordinance could include provisions to require design at the human scale by providing for pedestrian access, clear delineations of public and private spaces, and connections between residential and small-scale retail areas. Provisions are included in the VPA to protect open space, provide access to parks and recreation and preserve and enhance the rural, small town character of many New Hampshire towns.

The Town of Derry with areas currently zoned for higher density and/or mixed use development or the town's existing historic downtown area are ideal for a VPA ordinance or portions of such an ordinance, including the dimensional requirements or design standards.⁷

Currently, Derry has Architectural Design Review Regulations in place to preserve and protect the character and identity of the community through the kinds and styles of architecture developed. Derry should continue to use its Architectural Design Review as a way to further economic development efforts and attract people and businesses to town, as well as protecting the character and identity of the town. The Town of Derry might also consider adopting portions of the VPA to extend the village concept further outside the downtown and to promote continued smart growth efforts in town.

⁷ NHDES, NHARPC, NHOEP, NH Municipal Association. *Innovative Land Use Planning Techniques. A Handbook for Sustainable Development*. October 2008.

Review of existing regulations for the encouragement of economic development in Derry

Permitting and Approval Process

The Town of Derry currently has a Technical Review Committee (TRC) in place which helps to expedite the permitting and approval process and helps to make the regulatory process easier and more efficient. This is important, as a difficult permitting and approval process can hinder economic development and turn prospective businesses away.

Derry should also consider preparing a Development Guidebook as a means of making the site plan/subdivision approval process more efficient and easier to understand.

Impact Fees

Impact Fees are a one- time fee charged to new development for the construction or improvement of public facilities necessitated by that development. The fees must go towards costs directly attributable to growth as opposed to maintenance or quality improvement of existing facilities. Municipalities commonly use impact fees from residential development to pay for schools, but they can also be used for parks, libraries, water, sewer, and road improvements (RSA 674:21). Communities should be cautious not to impose large impact fees that may discourage companies from relocating to their town. Most of the communities in the SNHPC planning region use impact fees as shown on Table 4.1 below.

Table 4.1 - Types of Impact Fees Assessed for Neighboring Towns

Town	School	Police	Fire	Roads	Transfer Station	Library	Recreation
Auburn	No	No	No	No	No	No	No
Candia	No	No	No	No	No	No	No
Chester	No	No	Yes	Yes	No	No	No
Deerfield	Yes	No	No	Yes	Yes	No	No
Raymond	Yes	No	No	Yes	No	No	No
Epping	Yes	Yes	Yes	No	No	No	No
Fremont	Yes	No	No	No	No	No	No
Derry	No	No	No	No	No	No	No
Londonderry	Yes	Yes	No	Yes	No	Yes	Yes
Manchester	Yes	No	Yes	No	No	No	No
Bedford	Yes	No	No	No	No	No	Yes

Derry currently does not have impact fees, but imposes fair share off-site improvements depending upon the impact of the development on roads. The town's Public Works Department will work with the developer to determine what "fair share" is.

Chester is currently working on implementing highway and recreation impact fees. Candia will be adopting impact fees for roads and the transfer station in 2009. Manchester collects capital facilities impact fees for schools city wide, and for fire houses in two specific areas of the city.

The Town of Derry should consider developing impact fees in the near future. To encourage economic growth, a credit system could be implemented within the town's major economic growth areas.

Home Occupations and Businesses

Home occupations are an important component of the local economy of Derry. Home occupations or businesses are allowed in the Medium-High Density Residential District, Medium-High Density Residential District II, Medium Density Residential District, Low-Medium Density Residential District and Low Density Residential District.

The Town of Derry should continue to allow home based business as a permitted use in the residential zoning districts and consider allowing them in mixed use zoning districts as well. The Town should also consider targeting or promoting home business in mixed use compact village areas that traditionally were centers of home based economic activities in small towns and villages throughout New England in the 19th and 20th centuries. While the Town of Derry should focus efforts on marketing and outreach to attract business growth and development, planners and town officials should not forget the importance of home based occupation in planning for the town's economic future.

Future Re-use of Underutilized properties

There are several properties in the Town of Derry that are abandoned, vacant or underutilized and could be considered blight. Blight is defined as a person or thing that spoils or prevents growth.⁸ In the municipal sense, blight is a building, or property that has not been maintained and may sit empty, detracting from the community's character and giving a sense of vacancy. These properties may also be contaminated and considered brownfields. As a result, they can take away from economic development efforts and often it is in the best interest of the community to seek clean-up, redevelopment or re-use of the property.

A blight ordinance prohibits causing blight or allowing a blighted condition to continue. Ordinances usually define blight broadly, for example when the property is a fire hazard or site of criminal activity, has overgrown grass, or is in a dilapidated condition. Blight ordinances can apply to just buildings or to vacant lots as well.

A list of blighted properties can be required by the ordinance, subject to approval by the local legislative body. Blighted properties can then be subject to a fine or acquisition by the municipality, if deemed necessary and in the public interest.

⁸ Collin's Essential English Dictionary. 2nd Edition 2006 © HarperCollins Publishers 2004, 2006

RSA 155-B of the New Hampshire Statutes gives authority to the municipalities to address Hazardous and Dilapidated Buildings. “The provisions of this chapter are supplementary to other statutory and charter provisions and do not limit the authority of any city or town to enact and enforce ordinances on the same subject.”⁹

The Town of Derry may want to consider a blight ordinance to address hazardous or dilapidated buildings, contaminated sites and support re-use and redevelopment of these properties to further the economic development efforts of the town.

Grants/Funding Sources for Economic Development

Housing and Conservation Planning Program¹⁰

Municipalities often face conflicting pressures for managing growth: protecting the area’s natural resources and character, while meeting the housing needs of current and future residents. The Housing and Conservation Planning Program (HCPP) enables municipal leaders to obtain valuable financial and technical resources to help them develop local plans to make their communities better places to live, and to bring citizens together to help shape the future of their community. While the HCPP was recently established in 2007/08, it is currently zero funded in 2009. In the future, this program may be available for future funding.

Grant Types

The HCPP Program awards technical assistance grants to interested communities within four planning stages, each stage leading up to the implementation of a growth and development strategy that addresses housing and conservation together in an interrelated manner. These include:

1. Study housing and natural resource values, locations, and economic impacts;
2. Develop and adopt a town-wide Growth and Development Strategy;
3. Amend the Master Plan to be consistent with that Strategy; and
4. Implement the strategy through audits of and revisions to zoning, subdivision and site plan regulations.

RSA 79E – Community Revitalization Tax Relief Incentive

The Community Revitalization Tax Relief Incentive (RSA 79E) is aimed at spurring rehabilitation in downtowns and village centers. Any municipality within the state may adopt this incentive program with a majority vote of its legislative body. Once it is adopted, a property owner who wants to substantially rehabilitate a building located

⁹ 155-B:14 Local Acts and Charter Provisions. New Hampshire Statutes.

¹⁰ NHOEP. OEP Programs. <http://www.workforcehousingnh.com/documents/NHOEP%20-%20Housing%20and%20Conservation%20Planning%20Program.htm>. 04/15/09

downtown, or in a village center, may apply to the local governing body for a period of temporary tax relief. The law is structured to encourage not only rehabilitating downtown structures, but housing in the downtown area, as well.

The Town of Derry should consider adopting the Community Revitalization Tax Relief Incentive for rehabilitation of under-utilized properties in downtown Derry.

Rockingham Economic Development Corporation (REDC)

The Rockingham Economic Development Corporation (REDC) is a private, non-profit, 501(c)(3), regional economic development agency located in Exeter, NH. REDC was incorporated in 1994 and today serves communities, businesses and citizens of Rockingham County, NH to promote stronger local economies through a regional approach to sustainable economic development (see web site at: www.redc.com)

In communities with active local development groups and/or Chambers of Commerce, the REDC provides coordinated services, direct input and access to state, regional and federal agencies. The REDC also works directly with municipal officials and local businesses, either for a single project or on an on-going basis.

The 2008 Priority Project List included the Town of Derry's water and sewer expansion along Route 28, as well as road widening along this same route. Exit 4-A improvements and I-93 widening projects were also included on the project priority list. The Town of Derry works closely with the REDC on economic development projects in town and the Town Planner also serves on the board of directors.

In addition to providing assistance on the Route 28, Exit 4-A and I-93 projects, the REDC offers two regional loan funds: a Revolving Loan Fund (RLF) and an Intermediary Re-Lending Loan Fund (IRP) which may be used for real estate, construction, machinery and equipment and working capital to create jobs within Derry and other communities within the county.

Also, the REDC publishes an annual Comprehensive Economic Development Strategy (CEDS) for Rockingham County which is a process by which economic development stakeholders identify strengths, weaknesses and goals in the region. The CEDS also contains helpful economic data and trends analysis which would be helpful in developing an action-oriented economic development plan for the Town of Derry.

Community Development Block Grant Program

The Community Development Block (CDBG) Program funds projects that benefit low to moderate-income populations (80 percent or less of an area's median household income). The grants are allocated to states and large cities by the U.S. Department of Housing and Urban Development. Grants of up to \$500,000 are offered in the categories of housing, public facilities, and economic development.

Tax Increment Financing (TIF) Districts

TIF Districts are used by municipalities to use revenue gained through taxation of new development to pay for public improvements within the district. (RSA 162-K: 9-10). The incremental taxes that result from new development, expansion, or renovation in the district can be earmarked specifically for infrastructure, parking, or other public needs. All previously existing taxes are distributed as standard (to schools, the county, and the town). TIF districts come with several restrictions, such as specifications on renovations, developments, and use of funds collected. Currently, many towns in the SNHPC region are using TIF Districts as an economic development tool, including the City of Manchester, and towns of Hooksett, Bedford, Londonderry and Raymond.

The Town of Derry currently has 2 TIF districts in place, Route 28 and the Ash Street Corporate Park. This is a valuable tool that can be used in the future for economic development projects as well.

Economic Revitalization Zone Tax Credits (ER-Z Tax Credit) Program (Formerly CROP Zone)

ER-Z Tax Credits as designated by RSA 162-N:8 are “established to stimulate economic redevelopment, expand the commercial and industrial base, create new jobs, reduce sprawl, and increase tax revenues within the state by encouraging economic revitalization in designated areas”. They can be created in an area that has experienced population loss, houses a low income population, or contains abandoned, contaminated, or underutilized commercial or industrial land and buildings. Employers who make significant investments to improve facilities in these zones can apply for tax credits equal to the compensation paid to new employees resulting from the project created. The state of New Hampshire has set aside close to 1 million dollars for tax credits in the past several years for this program.

The SNHPC is currently assisting the Towns of Hooksett and Goffstown to designate ER-Z zones and will be assisting additional municipalities in the region as part of the development of the economic development plan for the region. Currently, only the City of Manchester has designated ER-Zs.

The New Hampshire Community Development Finance Authority (CDFA)

The CDFA works specifically to aid in housing, community and economic development for low – to moderate-income New Hampshire residents. Projects have ranged from affordable housing to economic revitalization and downtown village development. Assistance available includes tax credits, grants, and technical support and is available only to non-profit community or economic development organizations, housing authorities, and municipal entities.

Other Strategies

Greater Manchester Regional Economic Development Roundtable

Recognizing the growing population and economy of the greater Manchester area, a collaboration of economic development agencies and organizations are cultivating a cooperative project to oversee and promote regional business activities into the future. The goal is to create an Economic Development Commission allowing all towns and cities in the region to exchange ideas and market the region under one brand name “Metro Center.” While the group is still in its early stages, the New Hampshire Department of Resources and Economic Development and the Greater Manchester Chamber of Commerce are enlisting local governments, planners, and businesses of all sizes. The Metro Center collaboration can be a powerful tool to make the region visible to national and international audiences as well as offer resources to all participating businesses.

Business Incubators

A business incubator is a small office or industrial building, which start-up businesses can occupy at reasonable rates to encourage new business ventures in the area. These spaces can also offer a range of small business services including shared reception, copying, production facilities, etc. Incubators can be a good investment for towns looking to develop local commerce with minimum new development, environmental impact, or infrastructure demands. Studies show that the vast majority of firms that graduate from an incubator remain in business in the community (Business Incubation Work). There are only a few business incubators in the state of New Hampshire, including the Amoskeag Business Incubator in Manchester, Dartmouth Tech’s Incubator in Hanover, and the Monadnock Region Business Incubator Network (MRBIN) in Keene.

The Amoskeag Business Incubator hosts 15 small businesses, offering affordable office space and technical assistance for start-up businesses. Over 30 local service providers provide two free hours of consultation and discounts to incubator businesses while they are in the Incubator. Many of their programs are open to the public, and they receive funding from the City of Manchester. Julie Gustafson, manager of the Amoskeag Business Incubator, believes that incubators can work outside of Manchester but only with generous support from the community. Towns that are interested in encouraging this should first do feasibility studies to assess available resources. The Monadnock Region Business Incubator Network in Keene has initiated satellite office expansion for remote areas that cater to businesses native to the region, a technique that could be duplicated in the SNHPC region.

Encourage Buying Locally

Supporting local businesses strengthens the local economy and encourages local job creation, in addition to having environmental benefits too.

Listed here are some of the benefits to developing a “Buy Local” campaign in the Town of Derry:¹¹

1. Significantly more money re-circulates in the local economy when purchases are made at locally owned, rather than nationally owned businesses.

Locally owned businesses help keep more money in the community because local business owners spend more of the profits of their business where they live and locally owned businesses purchase from other local businesses.

2. Reduced environmental impact.

Shopping at locally owned businesses is more energy efficient. Locally owned businesses make more local purchases, thus reducing their transportation costs (and environmental impact).

3. Public benefits far outweigh public costs.

Local businesses require comparatively little infrastructure investment and make more efficient use of public services as compared to nationally owned stores entering the community.

4. Encourages investment in the local community

A growing body of economic research shows that entrepreneurs and skilled workers are more likely to settle in communities that preserve their one-of-a-kind businesses and distinctive character.

5. Non-profits receive greater support.

Non-profit organizations receive an average of 250% greater support from local business owners than they do from non-locally owned businesses.

Local Independent Business Alliance

An Independent Business Alliance (IBA) is a coalition of locally-owned independent businesses, citizens and community organizations united to support home town businesses in a community or geographic region. An IBA is a proven tool for helping maintain unique community character, ensuring continued opportunities for entrepreneurs, building local economic strength, and preventing the displacement of locally-owned businesses by chains. An IBA helps return decision-making ability over a community's future to the people who call it "home."

¹¹ www.livingeconomies.org

IBAs accomplish this through three focus areas:

- **Informing citizens** of the values provided by community-based businesses and their importance to the local economy, culture and social fabric. This helps residents view themselves as citizens, rather than as consumers, first by engaging them in active dialogue and decision-making about where they choose to spend their money.
- **Group branding, promotion and advertising** to elevate the collective profile of our community-based businesses to help level the playing field and bring to them some of the market advantages chains enjoy.
- **Creating strong relationships with local government and the media** to inform local decision-making and give a voice to the locally-owned independent business community and promote policy that supports community-rooted enterprise.¹²

An IBA in Derry could also play an important role in a marketing campaign, as well as a “Buy Local” campaign for Derry and could be the driving force behind those two initiatives. A collaborative, coordinated effort from both the local government and the local businesses in Derry will build the most success for Economic Development efforts in Derry and the formation of an IBA is one way to develop that effort.

Recommendations

- Implement the recommendations of the Downtown Market Plan (2008)
- Create an Economic Development Plan for the town outlining strategies, activities and changes to existing regulation that will promote and sustain economic growth.
- Consider extending water and sewer to the southwest area of Derry and to Route 28 South (Ryan’s Hill area), with currently zoned commercial and industrial parcels in order to attract new businesses to these zones.
- Consider widening the road in the area of Manchester Road/Route 28. This will accommodate more traffic, which will support existing businesses, and attract new ones to the area. (Approved and anticipated to begin FY 2011)
- Continue to research the benefits, challenges and feasibility of Exit 4A. This project could have many benefits for Derry, including:
 - A direct access route to I-93 for commercial and industrial areas of town
 - A bypass for the downtown, which will alleviate some of the current traffic problems and enhance the downtown area

¹² American Independent Business Alliance. http://amiba.net/about_ibas.html

- Create more connections to existing commercial and industrial areas and open them up for more development
- Continue to implement the Capital Improvement Plan in order to address infrastructure needs and maintain and improve levels of service in town.
- Prepare a commercial property inventory for determining what exists and where gaps can be filled.
- Consider preparing a Development Guidebook as a means of making the site plan/subdivision approval process more efficient and easier to understand.
- Consider implementing Impact fees to offset some of the indirect costs of new developments.
- Participate in Regional Economic Development efforts.
- Adopt the Community Revitalization Tax Relief Incentive for rehabilitation of under-utilized properties in downtown Derry.
- Consider adopting a blight ordinance to address hazardous or dilapidated buildings, contaminated sites and support re-use and redevelopment of these properties.
- Develop a “Buy Local” campaign as part of the marketing and branding initiatives in Derry in order to reduce the carbon footprint while at the same time strengthening Economic Development efforts.
- Support the formation of an Independent Business Alliance.
- Develop a database of properties in Derry that are available for commercial/industrial/economic development (grant funds).
- Develop a Planning Board mission statement and annual work plan to guide and prioritize Planning Board work.
- Develop a citizen location referral program to remunerate citizens for introductions between the town and business owners who relocate to Derry.
- Form an Economic Development Committee with the purpose of developing a process for Town Council, the Planning Board and the Planning Department to prioritize and plan for future growth.
- Revitalize the downtown.

Chapter 5

COMMUNITY FACILITIES

5.0 INTRODUCTION

Derry's Community Facilities and Municipal Service Provision continues to strive to keep pace with a growing community. With the implementation of a growth management plan, a 30-year Capital Improvement Plan and the subsequent adoption of a growth management ordinance, the town has been better able to meet the needs of the community in the past decade, but there are still needs for updating and upgrading outdated buildings to provide the community of just over 34,000 people with the necessary community services. The following chapter looks at Derry's current community facilities and outlines recent improvements as well as short and long-term needs.

Community Survey

In the fall of 2008, a Community Survey was made available to the public at Town Hall, the Library, the Recreation Dept and via the Town website. A total of 1000 surveys were distributed and the town received 89 responses, for a return rate of 9%. For Community Facilities the survey asked respondents to rank town departments, facilities and services as excellent, good, adequate or poor by checking the appropriate box. Respondents were asked to indicate "Don't Know" if they were uncertain. Responses from the survey are included at the end of the appropriate section.

5.1 Schools

The Derry Cooperative School District has five elementary schools, two middle schools and high school students attend Pinkerton Academy, a public academy. Figure 5.1 below, shows the current and projected enrollment for the Derry Cooperative School District, Grades 1-8. Currently enrollment is at 3,510 students for the 2008-09 school year and is on a downward trend. Projections are made out to 2021 and it is projected to start going up again starting in 2013-2014.



Ernest P. Barka Elementary School, Derry, NH

Derry Cooperative School District Enrollment – Current and Projected
Figure 5.1

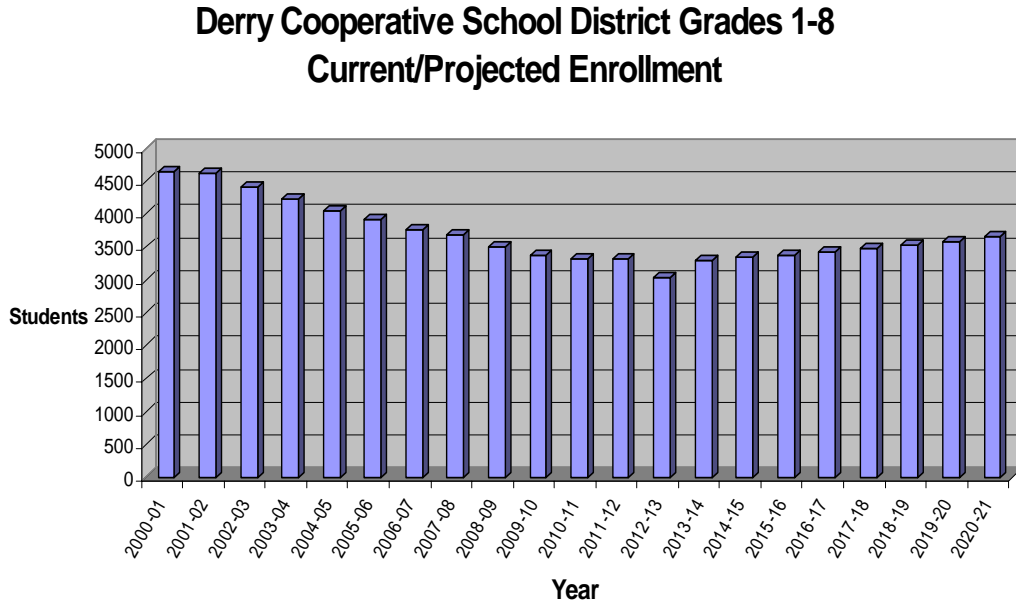
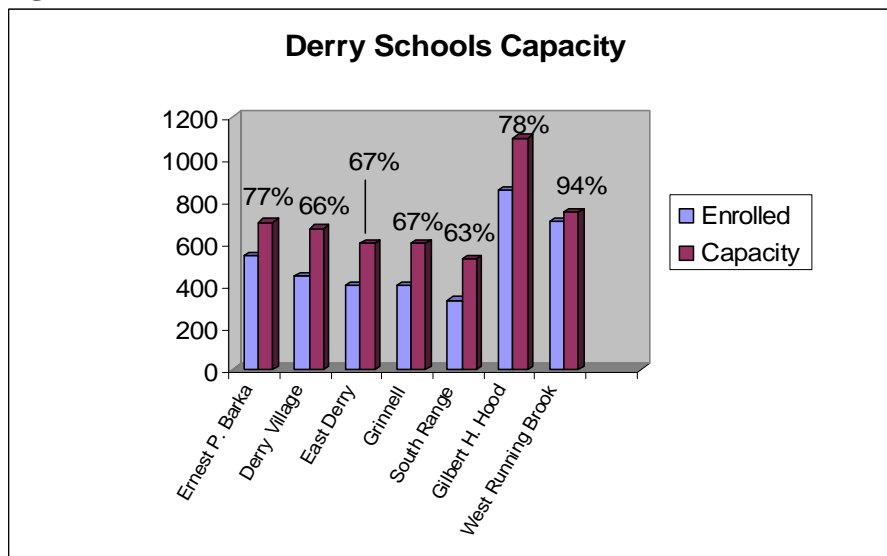


Figure 5.2 below, shows that all the schools in Derry are within their capacity and have some room for more growth. West Running Brook Middle School is the closest to capacity at 94%, but still has slight room for more students. With enrollment numbers currently on a downward trend schools should have sufficient room to accommodate growth should that trend start to go upward again, as projected in the next decade.

Capacity

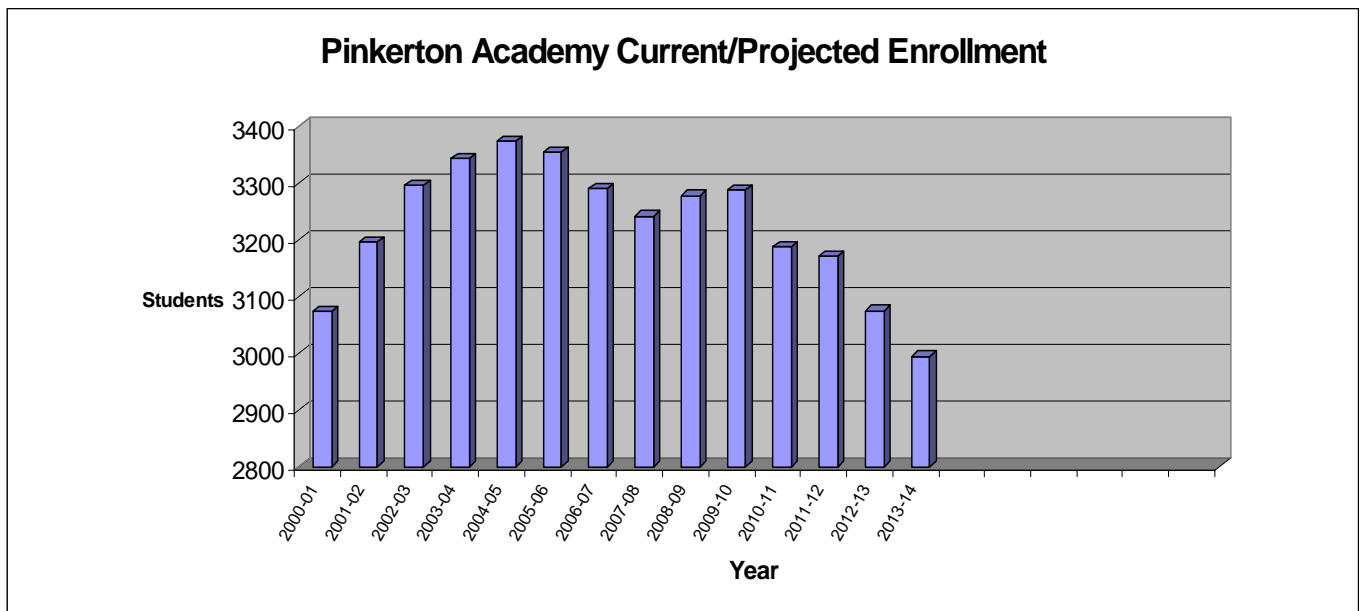
Figure 5.2



The Charles Floyd Elementary School, which held grades 1-3, closed in 2004 and the Ernest P. Barka Elementary School opened for grades K-5. The Grinnell Elementary School had a two-room kindergarten space added for the beginning of the 2008-09 school year. Gilbert H. Hood Middle School, grades 6-8, had renovations and additions completed for the 2004-05 school year. South Range and Derry Village Elementary Schools both had additions and renovations completed in the fall of the 2000-01 school year.

The District does not anticipate any substantial improvements to existing facilities through 2015, only general maintenance. There are no anticipated major equipment or personnel needs beyond current staffing as well.

Pinkerton Academy Enrollment – Current and Projected
Figure 5.3



Pinkerton Academy currently has 3,278 students enrolled in the 2008/09 school year and that number is projected to increase slightly to 3288 in the 2009/10 school year. Enrollments are projected to the 2012/13 school year where it is anticipated that there will be 2,994 students enrolled. Current projections indicate that enrollment will continue to decrease and should level off and remain at approximately 2,800 students. A new building is being planned which will alleviate the need for the 40+ year old portable classrooms (20) that are currently being used. At that point, the facilities should then be adequate to meet the enrollment.

The Academy defines capacity as is calculated by determining the number of rooms that are needed to meet the needs of the classes that are offered. According to this calculation the Academy is at approximately 95% capacity. The ideal occupancy number in the

education world is 85% to give flexibility in scheduling and less movement of teachers to and from different rooms.

In 2003 the Spaulding Arts and Humanities Center was built. With the new freshman building that is planned, a wing dedicated to expand career and technical education classes and programs is also anticipated. In the short-term a Culinary Arts Program as well as expansion of the Allied Health and Engineering Programs is also anticipated. In the long-term, the Academy anticipates adding additional Honors and Advanced Placement Classes.

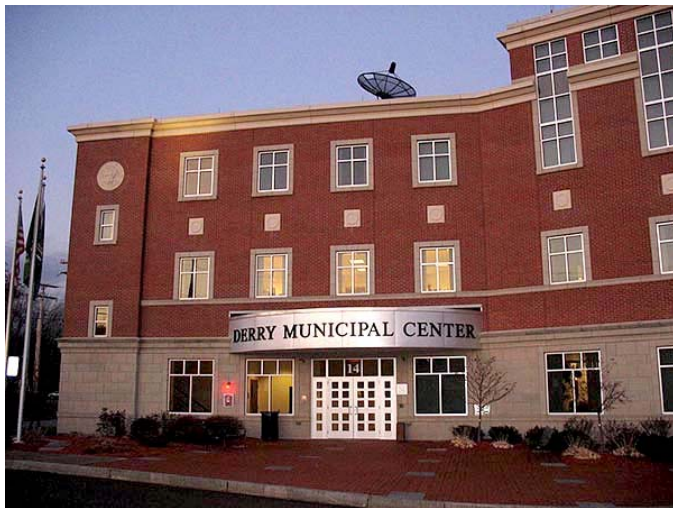
Community Survey Responses

Schools	Total	
Adequate	22	25%
Don't know	5	6%
Excellent	18	21%
Good	36	42%
Poor	5	6%
Grand Total	86	

5.2 Municipal Buildings

Municipal Center

A new Town municipal center was built and has been occupied since 2002. It houses Town Administration, Assessing, Buildings and Grounds, Business Development, Cable 17, Code Enforcement, Finance, Fire Department Administration, Human Resources, Human Services, Planning, Tax Collector, Town Clerk, Public Health, Public Works, Water and Wastewater.



Derry Municipal Center, Source: WBUR 90.9

There are nine part-time employees and fifty-one full-time employees who work at the Derry Municipal Center. No major problems exist as of 2008 and minor storage issues are expected to be addressed in the period through 2015.

Community Survey Responses

Health Dept.	Total	
Adequate	20	23%
Don't know	40	46%
Excellent	5	6%
Good	16	19%
Poor	5	6%
Grand Total	86	

Zoning Board of Adjustment	Total	
Adequate	24	29%
Don't know	38	46%
Excellent	15	18%
Good	6	7%
Poor		
Grand Total	83	

Website/ Technology Department	Total	
Adequate	29	33%
Don't know	13	15%
Excellent	4	5%
Good	28	32%
Poor	13	15%
Grand Total	87	

Town Clerk	Total	
Adequate	27	31%
Don't know	15	17%
Excellent	17	20%
Good	25	29%
Poor	3	3%
Grand Total	87	

Town Administration	Total	
Adequate	25	29%
Don't know	13	15%
Excellent	5	6%
Good	28	33%
Poor	15	17%
Grand Total	86	

Planning Office	Total	
Adequate	18	22%
Don't know	21	25%
Excellent	6	7%
Good	16	19%
Poor	23	27%
Grand Total	84	

Planning Board	Total	
Adequate	26	30%
Don't know	19	22%
Excellent	5	6%
Good	21	24%
Poor	16	18%
Grand Total	87	

Conservation Commission	Total	
Adequate	21	26%
Don't know	14	17%
Excellent	13	16%
Good	27	33%
Poor	6	8%
Grand Total	81	

Business Development	Total	
Adequate	18	22%
Don't know	24	29%
Excellent	2	2%
Good	7	8%
Poor	32	39%
Grand Total	83	

Building Dept.	Total	
Adequate	24	28%
Don't know	24	28%
Excellent	6	7%
Good	24	28%
Poor	8	9%
Grand Total	86	

Supervisors of the Checklist	Total	
Adequate	15	18%
Don't know	29	35%
Excellent	16	19%
Good	22	27%
Poor	1	1%
Grand Total	83	

Tax Assessing and Collection	Total	
Adequate	35	41%
Don't know	11	13%
Excellent	7	8%
Good	18	21%
Poor	15	17%
Grand Total	86	

CTV	Total	
Adequate	24	29%
Don't know	17	20%
Excellent	8	10%
Good	28	34%
Poor	6	7%
Grand Total	83	

Town Council	Total	
Adequate	24	28%
Don't know	15	17%
Excellent	1	1%
Good	17	20%
Poor	30	34%
Grand Total	87	

Human Services	Total	
Adequate	20	23%
Don't know	37	44%
Excellent	8	10%
Good	16	19%
Poor	3	4%
Grand Total	84	

Veterans Hall

The Veterans Hall in Derry serves as a gymnasium and offices for the Parks and Recreation Division. There have been no major improvements other than the replacement of gym lighting in 2005. There are major problems with several building systems including HVAC, structural and electrical. The building has a serviceable smoke detection system, but it is not sprinkled. The building is also not adequately insulated. The facility is outdated for the population of the community and



Derry Veterans Hall, Source: WBUR 90.9

the gymnasium and parking areas are inadequate for their level of use as well. The Town is considering a couple different options to either renovate or build a new facility at the present time.

Other Municipal Buildings



Derry Upper Village Hall

Other municipal buildings in town are the Adams Memorial Building, the Marion Gerrish Community Center, and the Rider House. No major improvements have been made to these buildings since 2001. The Marion Gerrish Community Center may require electrical upgrades in future years, but otherwise no major improvements are needed in the foreseeable future to any of these buildings except the Upper Village Hall.

The Upper Village Hall (closed to the public and vacant since 2005) was sold to East Derry Village Improvement Society (EDVIS) in 2009. The building had several major deficiencies including electrical, structural, and HVAC with cost estimates at well over \$800,000 to renovate and bring the building to Code.

5.3 Buildings and Grounds Division

The Buildings and Grounds Division is under the supervision of the Superintendent of Operations. One crew chief and four custodians oversee the routine maintenance of the Municipal Center, the Animal Control Building, the Police Station, Adam's Memorial Building, and Veteran's Hall. In addition to these buildings, this division is also called upon to support repairs to other facilities throughout town as well as setting up and breaking down at polling places during elections. The Adam's Memorial Building was renovated in 1999/2000 and is presently fully occupied. The facility has inadequate parking and consideration should be made as to acquiring adjacent parcels to remedy the situation. The Animal Control Building recently had a new roof installed and does not have any immediate needs. Facility needs for the Municipal Center, the Police Station and Veteran's Hall are discussed above.

5.4 Highway Department and Cemetery Division

The Highway Department and the Cemetery Division are also under the supervision of the Superintendent of Operations. The division has one crew chief, ten full time Machine Equipment Operators and one part-time laborer. In addition, within Public Works, this division receives support from the Engineering Division and support staff. During the summer months the workforce is supplemented by 6 to 8 temporary employees. The division is responsible for the routine maintenance of approximately 165 miles of roadway, 19 miles of sidewalk, 4 miles of bike paths, 7 signalized intersections, 3200 storm drains and 23 acres of cemetery.



**Forest Hill Cemetery,
Derry, NH**

The pavement maintenance program which has been in place since 1986 has allowed this division to make great strides in improving the overall roadway network over the past 20 years. This was possible through a regular financial commitment by the Town Council. Unfortunately, in the past couple of years, escalations in construction costs have outpaced the funding provided for pavement maintenance. Without an increase in spending on roadways, the degradation of Derry's roadway network is inevitable.

A new Highway Garage and salt shed were constructed in 2007. The new garage is 18,000 square feet with an additional 2000 square feet of mezzanine space. The new salt shed has capacity for approximately 3000 tons of salt. These new facilities should satisfy the building needs of the Highway Division for the next decade and beyond. A cemetery expansion project was also completed in 2007. The new section should give the Town of Derry capacity for burials for the next 20 to 25 years or more.

Community Survey Responses

Cemetery Division	Total	
Adequate	20	24%
Don't know	33	39%
Excellent	8	9%
Good	23	27%
Poor (blank)	1	1%
Grand Total	85	

Road Maintenance	Total	
Adequate	33	39%
Don't know	2	2%
Excellent	5	6%
Good	31	36%
Poor (blank)	14	17%
Grand Total	85	

5.5 Transfer Station

The Town has a mandatory recycling program that has been in place since 1990. Residents are responsible for transporting waste to the Transfer Station or for hiring a private company with a valid permit and who complies with the mandatory recycling ordinance.

In 2002 “Recycling Boulevard” was created in an effort to become more user friendly for the public. This allows easier access for the residents and better separates large appliances and items from the trash/commingle disposal area. A second drop off point was established in an effort to expedite the waiting times for residents. This second drop off point was quickly abandoned for resident use as confusion was more prevalent and more manpower was needed to monitor materials being dropped off. The area has now been converted to a drop off point for commercial haulers with paper.

Disposal and tipping fees are currently \$73 per ton (2008). In 2007 the Town generated 9,297.14 tons of solid waste. Compared to 1997 where the Town generated 14,954 tons of solid waste, this represents a 38% decrease in the amount of solid waste generated since that time, even with a slight increase in population (See Table 5.1).

Although there has been a decrease in solid waste generated, participation in the mandatory recycling program is an on-going task. The Transfer Station facility, which was built in the 1980’s, is also in need of an upgrade to accommodate the increased population and the increased recycling programs and to create a more efficient operation for the high volume days.

Table 5.1: Derry Solid Waste Generation, 1997-2007

Solid Waste Generated: 1997-2007											
1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	% Change
14,954.00	14,328.00	14,881.00	13,937.91	12,154.69	10,086.12	10,522.96	10,533.16	9,932.86	9,731.32	9,297.14	-38%

Community Survey Responses

Transfer Station	Total	
Adequate	14	16%
Don't know	5	6%
Excellent	21	24%
Good	41	47%
Poor (blank)	7	7%
Grand Total	88	

5.6 Sewer and Water

The Central Business District, along with the immediately surrounding area in the West Central section of Derry is served by Municipal Sewer and Water. The town has a wholesale water supply purchase agreement with Manchester Water Works for Water. For septage, the town has an inter-municipal agreement with Allenstown to receive Derry septage. Municipal sewer and water is overseen by the Department of Public Works, which is located in the Municipal Center in Derry. For service area maps and more information on sewer and water in Derry, please see Chapter 6, Public Utilities.

Community Survey Responses

Sewer	Total	
Adequate	20	24%
Don't know	37	44%
Excellent	9	11%
Good	15	18%
Poor (blank)	4	5%
Grand Total	85	

Water	Total	
Adequate	16	18%
Don't know	32	37%
Excellent	12	14%
Good	24	28%
Poor (blank)	3	3%
Grand Total	87	

5.7 Police Department

The Derry Police Department consists of 59 Sworn Personnel, 5 Dispatch, 8 Clerical, 2 Animal Control Personnel, and 3 Part-time Personnel. The Department often has insufficient manpower to address all areas of law enforcement concerns within the community and will need to add approximately 8-10 officers beyond the current authorized strength to address problems such as cyber crime and street level issues.

The Town added a 4,000 square foot addition in 2006 and remodeled offices to the Police Department. Within 10 years it will likely be necessary to add onto the building again to provide space for police operations and investigations. The facility will also need a new roof in the next few years as well as updating the HVAC system in the old portion of the facility.

The following is a summary of the Calls for service from 2001-2008:

2001 25804
2002 26151
2003 24546
2004 28180
2005 27214
2006 24395
2007 22411
2008 22136

Derry has four Sectors, or Districts and Mutual Aid Assistance with Chester, Londonderry, Windham, Salem, Manchester, Rockingham County, Hampstead, Auburn, Hudson, Atkinson, Sandown and Pelham.

Community Survey Responses

Police Dept	Total	
Adequate	19	22%
Don't know	2	2%
Excellent	26	30%
Good	34	39%
Poor (blank)	6	7%
Grand Total	87	

Animal Control	Total	
Adequate	26	30%
Don't know	23	26%
Excellent	12	14%
Good	25	29%
Poor (blank)	1	1%
Grand Total	87	

5.8 Fire Department and Emergency Services

Prior to 2005 Derry consisted of 2 Fire Precincts, Derry and East Derry. The East Derry Fire Precinct voted to dissolve and consolidate with the Derry Fire Department. The consolidation was finalized and occurred at 12:01 am on July 1, 2005. Rescue/Ambulance and Fire Departments were consolidated at this time as well.

Currently, the Derry Fire Department has 84 full-time employees, including 7 full-time employees in the Dispatch/Communications Bureau and 1 full-time uniformed mechanic and 1 civilian Director of EMS. The Department also has 1 part-time secretary and 3 part-time dispatchers. Primary responsibilities are as follows:

- i) Fire suppression and EMS- **72 FT**
- ii) Inspections- **2 FT**
- iii) Mechanical Repair and Maintenance- **1PT**
- iv) Dispatch, Communications and IT - **7 FT 3 PT**
- v) Administration- **2 FT 1 PT**

The following is a summary of calls for service from 2001-2008:

Table 5.2: Derry Fire and Rescue Calls for Service 2001-2008

Year	Fire & Rescue	ALS	BLS	Transports	Non-Transports
2001	5604	2142		1812	566
2002	5000	2530		1893	616
2003	5395	3422		2633	764
2004	2408	2979		2422	557
2005	2247	2842		1986	90
2006*	3720	1422	772	2009	708
2007	3034	1473	602	2075	741
2008	5195**	757	1548	2305	626

The information in the above chart is from the Derry Town Reports and the East Derry Fire District report and represents fiscal not calendar year information.

** The two fire departments merged on July 1, 2005 which was the start of FY2006. Records for all calls were consolidated for a 2004 report*

*** Change in software and reporting began in 2008*

The Derry Fire Department along with the Town had a historic event occur in 2005 when the East Derry Fire Precinct voted to dissolve and consolidate with the Derry Fire Department. When the consolidation occurred, the two East Derry fire stations were included in the consolidation with the Derry Fire Department. Also the Town sold the fire station located on West Broadway that had operated continually as a fire station since 1898. The station was sold to a local family that intended to remodel and operate a pub and grill at the station. The building remains as a fire station in character.

Though a committee was formed and plans were beginning to develop in 2005 and 2006 to build a new fire station to replace Station 1 on West Broadway, the Station was never built. A decision as to the location was not able to be determined and the plan to build a new fire station was delayed. Currently, the town has four stations.

The Derry Fire Department participates in the Border Area Mutual Aid pact. This includes twenty five fire departments in both Massachusetts and New Hampshire along the I-93 corridor. The Derry Fire Department also has automatic aid agreements with the towns of Londonderry and Windham, and is currently negotiating automatic aid agreements with other communities.

The town is also a member of the Southeastern New Hampshire Hazardous Materials Mutual Aid District. As a member the Department provides specially trained staff, houses district owned equipment, and provides dispatching.

Table 5.3: Border Area Mutual Aid Pact

Atkinson Fire Department	Goffstown Fire Department	Manchester Fire Department	Chelmsford Fire Department	Westford Fire Department
Auburn Fire Department	Hampstead Fire Rescue	Merrimack Fire Rescue	Dracut Fire Department	
Bedford Fire Department	Hooksett Fire Department	Nashua Fire Rescue	Lawrence Fire Department	
Candia Fire Department	Hudson Fire Department	Pelham Fire Department	Lowell Fire Department	
Chester Fire Department	Litchfield Fire Department	Salem Fire Department	Methuen Fire Department	
Derry Fire Department	Londonderry Fire Department	Windham Fire Department	Tyngsboro Fire Department	

Since 2001 the Derry Fire Department has made numerous improvements to its four stations, along with equipment upgrades. The following is a summary of the improvements made for the Fire Department over the past decade.

Central

2001

- Roof replacement
- 42 Circuit panel & 30 circuit load center
- Crew Bathrooms
- Apparatus floor heat

2003

- Replaced hose tower & SCBA room roofs
- Station & apparatus signs
- PSNH lighting

2004

- New dispatch center
- Remodel visitors bathroom
- Paint interior
- New office trailer
- Paint wood trim & metal roof

2005

- Carpet & tile dayroom
- Training tower removal

2006

- Wellness area remodel
- Kitchen remodel
- Kitchen suppression
- Fire alarm upgrade
- HVAC replacement

2007

- Paint interior
- Parking lot paving
- Apparatus door motors replaced
- Second egress from apparatus floor
- Remodel fitness room
- Tile kitchen floor
- Carpet & rubber floor for bedrooms
- Carpet admin trailer
- Fencing for dumpster enclosure

Station 1

2004

SOLD

Island Pond Station

2001

- Apparatus floor heat
- Replaced doors and windows

2002

- Living quarters heat

2003

- Paved front apron

2004

- Trim and soffit repaired
- Visitors bathroom remodel
- Paint interior

2006

- Crew bathroom remodel
- Kitchen remodel
- Bedroom remodel
- Decon area
- PSNH lighting
- Well pump replacement
- Replace overhead doors w/openers

2007

- Parking lot replacement
- Fencing (108 ft)
- Kitchen suppression system
- Emergency generator replacement (swap out of used generator from police)

Hampstead Road Station

2006

- SCBA area remodel
- Wellness area
- PSNH lighting
- Dayroom/Front office/Foyer remodel
- Paint outside metal
- Removed fire tower

2007

- Apparatus floor separator
- Exterior door/window replacement

- Electrical system code compliance upgrade

- Replace overhead doors w/ openers & photo-eye

2008

- Replaced and upgraded heating system
- Insulated apparatus bay area
- Remodel kitchen

English Range Station

2007

- NH Electrical co-op lighting

With regard to the Department's current ability to respond to fires and conduct daily operations, the following is a summary of problems or issues that need to be addressed.

Stations

- Some areas of Town are outside of the 4 minute response times as recommended by NFPA 1710 Standard for initial company response times
 1. Improper Concentration of Resources (location of stations for initial response)
 2. Inadequate Distribution of Resources (location of fire stations and resources in order to support other fire stations on initial incident as well as support for simultaneous incidents)

Staffing

- Inadequate staffing on all engines as per NFPA 1710 Standard 3 personnel versus 4 personnel per apparatus.
- Inadequate staffing on ladder truck as per NFPA 1710 Standard Currently 1 firefighter responding on ladder truck versus 4 personnel.
- Inability to respond to simultaneous calls when there is a working fire, major accident, technical rescue, or multi-causality medical incident.
- No Fire Marshal. Currently the oversight of all fire codes, inspections and plan reviews are conducted by inspectors assigned to the Bureau.
- No Deputy/Assistant Fire Chief which directly impacts operational efficiency.
- No Training /Safety Officer which directly impacts operational efficiency and Department health and safety.

Training

- No fire training ground which makes it difficult for firefighters to maintain basic skills or obtain advanced skills.

Water Resources

- Currently only about 30% of the Town is supported with a municipal water supply thus requiring the use of water tankers and the use of cisterns and dry hydrants/ponds.

In regards to short-term goals for the Fire Department the following is a summary:

- A Deputy Chief: currently the Derry Fire Department does not have a deputy or assistant fire chief. Besides the administrative and operational duties expected of a Fire Chief, the Chief has to directly supervise the Fire Prevention Bureau, EMS and Communications Divisions. Other administrative tasks are assigned to the Battalion Chiefs who work shift work (24 hours on duty /72 hours off duty including weekends). This situation has created a significant back log of administrative tasks and created many organizational inefficiencies. Most departments of similar size have both a Deputy and Assistant Fire Chief. This is an acute short-term need.
- Training Officer: Currently the role of training officer is assigned to a Battalion Chief who works shift work, is responsible for shift supervision and incident command, and therefore has limited time available to the development, scheduling, and implementation of training programs. A staff training officer can oversee the development and administration of training programs and would also be able to assume the role of health and safety officer for the department. Furthermore a staff training officer would have the ability to interact on a daily basis with all shifts, not just the shift he/she is assigned to.
- Fill current vacancies and maintain shift staffing at 18. This allows for improved ability to respond to simultaneous calls.
- Locate and purchase property to build a fire station to relocate the Central station at 131 East Broadway. This new station site should be adequate to build a fire headquarters that includes a Dispatch center as well as administrative offices.
- Complete the Derry Fire Department Strategic Plan and Fire Accreditation which would allow for both internal and external review of current distribution of resources and assessment of future resource needs including fire station locations.
- Continue to fund and use the Capital Improvement Plan.
- Develop a comprehensive Fire Code that would include Residential Fire Sprinklers.

In regards to long-term goals for the Fire Department the following is a summary:

- Additional firefighters to increase staffing on the engines and ladder to comply with NFPA 1710 and allow for four fighters per Engine Company. Four person engine and truck companies allow for increased safety and efficiency of operations.
- A Fire Training Facility that includes a Class “A” burn building with training tower, a concrete trench rescue simulator, an LP Gas/Flammable liquids training simulator, and a flashover simulator. The entire facility would be phased in over

the long-term and would be a regional use facility that can be used by fire, police, hazmat, and EMS personnel.

For example, the Class “A” burn building is a steel, multi-room, multi-level structure where class “A” combustibles can be burned to generate controlled amounts of heat and smoke. This structure can be used by firefighters to practice such basic skills as search and rescue; can be used by Police departments to simulate forcible entry and search of hostile subjects; by hazmat personnel to mimic hazardous materials production facilities; or combined fire, police, hazmat, and EMS drill involving an illicit drug lab.

Currently the closest such facility is in Concord, which has limited availability, and when used by Derry Fire Personnel requires the expenditure of overtime funds to backfill and maintain minimum shift staffing.

- Locate and purchase property to build a fire station in order to relocate the Hampstead Road Station. As the land in East Derry becomes developed a more effective location that will meet the needs of that area of Town will need to occur.
- Continue to fund and use the Capital Improvement Plan.
- Develop consolidation and regional plans with surrounding fire departments and emergency agencies. As revenue sources become more limited, Fire/EMS Safety Agencies are going to need to develop long-term agreements that cover consolidation and regionalization of services. Other areas that could be considered would include regional training, regional resources and supplies, and developing a consortium for equipment purchasing.

Community Survey Responses

Fire Dept	Total	
Adequate	12	13%
Don't know	2	2%
Excellent	42	47%
Good	28	31%
Poor (blank)	3	3%
Grand Total	87	

5.9 Libraries

Taylor Library



The Taylor Library, located in the East Derry Upper Village Historic area, was established in 1878 through a bequest from Emma and Harriet Taylor. It is registered in the National Register of Historic Places. The library has 2 full-time employees and 4 part-time employees. The library is open Monday through Friday, 35 hours per week.

Taylor Library, Derry, NH

The following is an estimated use of the library by patrons for 2001-2008:

2001	11,180
2002	11,310
2003	12,455
2004	13,510
2005	14,800
2006	14,462
2007	15,865
2008	21,776 (for 10 months, Jan-Oct)

Since 2001, there have been only minor repairs to the Library, but no major structural changes. Programming has increased slightly to accommodate increased demand from the community. As of January 2008 the library is automated and the removal of the old card catalog system will free up a little space on the main floor.

The Taylor Library continues to be in need of renovation and expansion. “In its current 1,300 square foot space, Taylor Library ‘is bursting at the seams.’ A new 3,500 square foot expansion has been proposed that will allow the library's square footage to keep pace with its growing demands.”¹ Since 2001 an architect has been hired to draw up plans for a small addition to the back of the library.

With the expansion, the library could become ADA compliant. Patrons who have wheelchairs, walkers, strollers, etc., have difficulty getting in and out of the library and

¹ Taylor Library. <http://www.taylorlibrary.org/web/expansion.html>. Accessed 12/31/08

there is not enough staff to help these patrons during busy times. The expansion would also allow more children per story hour. Currently story hour is limited to 12 children because of space constraints and fire codes.

The library currently has 20,369 volumes spread between the main floor, the attic and the basement. The expansion will allow for more floor space to house all of these books, as well as upgrading the older portion of the building and the heating and cooling systems. The expansion would also include handicapped accessible bathrooms, work space, office space, and separate children's and adult space, as well as public access computers.

The addition was to have been started in the fiscal year 2009, but has since been delayed due to budget constraints. The addition will also require more money in the library's budget to cover the costs of employees, utilities, insurance, furniture, etc.

Short term needs include the possible replacement of a 10-year old copier, an older air conditioning system, printers and a fax machine. Long term needs include the addition, for which the library continues to implement fund raising and pursue grants.

Community Survey Responses

Taylor Library	Total	
Adequate	13	15%
Don't know	32	37%
Excellent	18	21%
Good	18	21%
Poor (blank)	5	6%
Grand Total	86	

Derry Public Library

There are 9 full-time and 20 part-time employees at the Derry Public Library. They staff a 23,000 sq. ft., two-story building that is open to the public 59 hours per week. The winter hours of operation are Monday - Thursday, 9:30 a.m. to 8:30 p.m.; Friday & Saturday, 9:30 a.m. - 5:00 p.m. The library is closed on Sunday. Due to the staffing constraints caused by summer vacations the library is also closed on Saturdays during the months of July and August.



Derry Public Library, Derry, NH

The following table is an estimated use of the library by patron visits from 2002-2008:

2002	146,466
2003	148,433
2004	147,539
2005	150,940
2006	155,292
2007	156,286
2008	155,586

The total number of items in the collection is currently at 122,186, which is a nice sized collection for a population of just over 34,000 residents. However, membership in GMILCS, Inc. (pronounced "gee-milks") gives patrons access to over 1,000,000 items. GMILCS, Inc. is a non-profit consortium of twelve public and academic libraries in New Hampshire connected through an integrated library system (Polaris), sharing a common borrower's library card, sharing resources, sharing experiences and working cooperatively to purchase access to online resources. The consortium serves the libraries of Amherst, Bedford, Derry, Goffstown, Hooksett, Manchester, Merrimack, Milford, Salem and Southern New Hampshire, New England College and the New Hampshire Institute of Art. In regards to materials, library patrons use the Derry Public Library at a rate of 13,000 to 14,000 items per month, including, books, magazines, DVDs, and audios. Other items available include databases, e-books and Internet capabilities. 29 separate databases are available 24/7 from the libraries website.

The following is a summary of improvements to the Library facility from 2001-2009:

2001-2002

- Additional shelving for NH Room (2001 or 2002)
- Signage on main floor (Feb 2002)
- Installation of high speed internet (Comcast) for staff and the public (April 2002)
- Installation of surge protection on all air handler motors in the ceiling (Nov 2002)
- Upgrade of children's area and meeting room with new carpeting and paint (April 2002)
- Installed ductwork in study rooms (Sept 2002)

2003

- Rehabilitation of technical services room involved paint, carpet and the purchase of office equipment for the re-configured work area.
- Installation of new furnace

2004

- Installation of paved driveway behind the library to ease and improve access to our rear entrance as well as the park. This was a cooperative effort with the Highway dept.
- Parks and Recreation and the library
- Installation of Category 5 wiring

2005

- Installation of new air conditioning compressor 2005
- Installation of railings on handicap ramp 2005
- Installation of wireless network August 2005

2006

- New shelving for CD, VHS, and DVD formats (ongoing)
- Cleaning of underground oil storage tank (Sept 2006)
- Repainting of bricks on the outside of building
- Repair and restoration of the chimney in the MacGregor building Resurface main entrance outside
- Insulation of attic in old building and ceiling area over director's office (August 2006)
- Restoration and repair of the historic MacGregor window
- Upgrade GMILCS communications line with G-4 high speed line (March 2006)
- Gasified wood burning fireplace
- Hardwire exhaust fan in janitor's closet to run 24/7

2007

- Replaced three lavatory sink faucets (ongoing)
- Installation of alarms on underground oil storage tank (Dec 2007)
- Upgraded shelf end-panels to accommodate display racks

2008

- Installation of "dead end" sign to keep traffic flow and speed on Marlboro Road at a minimum
- Inventory of art Grogan
- Installation of additional safety sensors in elevator door
- Installation of new, heavy duty carpet in main entrance foyer
- Fire alarm attenuators (installed in bathrooms as well)
- Installed static IP for Comcast
- Repair and maintenance of the neoprene flat roof - ongoing (Old building section - Sept 2008)
- Replacement of several sections standing seam metal roof due to rust. (Sept 2008)
- Continued maintenance of standing seam metal roof - ongoing.
- Replacement of the four large green grid metal windows: Director's office, serpentine window on adult level and bay windows on adult and children's levels.
- Lowering height of Children's Desk for staff ergonomic reasons as well as clear lines of visibility for whole room. (August 2008)
- Reference desk widened to accommodate two chairs and people working at the desk comfortably. (August 2008)

2009

- Building security panel updated and main keypad replaced. Preparation for monitoring trouble alarms for "no heat," also "low pressure" in the dry sprinkler system.
- Envisionware installation January 2009 - automated patron computer reservation and print management system.

Ongoing

- Continual update of all of the valves in HVAC systems @ 2/yr intervals
- Endless improvements to the underground oil tank to satisfy DES safety requirement, i.e. overfill alarms; underground oil tank cathodic protection

The library has recently invested in Polaris, which is sophisticated and powerful software that maximizes online services for patrons, while enabling efficient staff functions. The library was able to cost effectively implement this software because of the GMILCS consortium, of which they are a part. Member libraries share the cost of server maintenance, training, and ongoing upgrades. Also recently implemented is a PC Reservation and Print Management system called Envisionware, which electronically manages 11 public access computers for Internet and word processing functions. Patrons are able to access timed sessions and automated print release and payment accommodations so that availability does not become an issue to library patrons during the day.

The newest portion of the library building has been open to the public 19 years, since February of 1990. With a plan in place to go from a 5,000 sq. ft. facility to a 23,000 sq. ft. facility, the trustees and administrators of the library realized they needed a thorough analysis and a strategic plan to get the maximum use of this new space. The result of that goal setting and long range planning prior to opening the expanded facility was to create a public resource for all ages.

The mission of the library is as follows:

*Derry Public Library supports the freeflow of information
essential to maintain a democratic society by promoting
lifelong learning opportunities for community residents of
all ages to fulfill their academic and personal interests*

The following is a summary of the libraries current problems and needs:

Library Access:

Parking continues to be an issue with the library. More parking and a safer, better planned parking lot is needed. The walk to the library from the municipal parking lot (which is 2/3 full most of the time) is a long one, for both senior citizens and moms with small children. The congestion that the library's traffic creates on Marlboro Road is unsafe. Visibility is very poor while walking between parked cars and when backing into traffic. Currently the library only has 13 parking spaces (two of which are handicapped

restricted) on a dead end road. If property on Marlboro Road becomes available, either adjacent to the library or across from it, it should be pursued by the Town for purchase. This additional parking would also benefit those using MacGregor Park.

In regards to library hours, a perennial request from patrons for many years has been to include Sunday openings, but cost of staffing has always been prohibitive. According to the NH Public Library Standards, as authorized by RSA 201-D: 10, there are three (3) classifications for libraries standards: Associate Library, having the lowest standards for hours and staffing, Certified, and Accredited, having the highest standards. In order to be designated an "Accredited Library" for a population of over 30,000, the library should be open not less than 70 hours and have a Full-time Equivalent (FTE) of not less than 24 employees. Derry Public Library is currently open only 59 hours with a FTE of 17.7 employees and is therefore far below the Accredited standard.

“While proud of our accomplishments and our standing in the community of libraries, it has been difficult for our staff to be spread so thinly in an age of expanded use of the facilities and its collections,” says Cheryl Lynch, Derry Public Library Director.

Facilities:

The 19 year old building that houses the library is in need of some improvements. Although it has been continually updated and maintained there are major infrastructure needs that must be addressed in the very near future. The lower level of the library that houses the meeting rooms and children's services areas received a partial renovation in 2002. It was carpeted and painted and the stacks were rearranged. The main floor has not had an update since its construction in 1989. The Board of Trustees anticipates FY10 being the planning year for renovations on this floor, with renovations to occur in FY 11. The needs include a reconfiguration of the space based on revolving usage patterns measured over the last 20 years. For comfort and energy efficiency the space is in need of new or refurbished windows, new and improved lighting (for energy efficiency and functionality), carpeting, paint, additional seating, additional wireless accommodations and hardwired Internet access (especially electrical connections for workstations and laptops). Also, space is needed for more Internet access points, laptops and small meeting spaces for three or fewer people.

The following is a summary of short and long-term needs/goals for facilities:

FY10

- Main floor rehabilitation with paint, carpeting and floor plan redesign.
- Trouble alarm for furnace/low heat.
- Trouble alarm for low pressure in dry sprinkler system.
- Install connections for trouble alarms on furnace.
- Install building security system with cameras.
- Upgrade lighting throughout building with newer technology for increased light levels and energy efficiency.
- Rehab or retrofit all double hung windows in the building (old and new buildings).

- Install digital setback thermostats with independent fan control.
- Redo apron around oil tank (it is leaking).
- Replace the two leaking valves on HVAC system.
- Replace vertical blinds.
- Replace pump on hot water tank.

FY015

- Purchase additional land for parking.
- Repave current parking lot and driveway.
- Replace or repair concrete sidewalks.
- Fix drainage at rear entrance.
- Fix drainage at front entrance.
- Install snow catchers on metal roof above main entrance.
- Redo shrubbery at front of building.
- Install attic ventilation.

Collections:

The library needs to increase the amount of allocations for materials in all collections, with more materials being purchased in electronic formats. Migrating to more electronic formats is necessary so that the library does not continue to need more space to store its expanding collection. In turn, more equipment needed to deal with these types of materials will also be needed, as well as increasing the skill levels of staff as well. The library also needs to expand by having the capability to offer more remote access with more downloadable materials.

Personnel:

The following is a summary of short and long-term needs/goals for personnel:

FY10

- Part-time acquisitions clerk (25 hours, no benefits) to free up web master to do more technology troubleshooting/diagnostics, planning, purchasing and work with appropriate consultants/install/repair people. Web master would then have some public teaching responsibilities.

FY015

- Increase coverage for nights in children's to get dual coverage for that floor.
- Full-time building custodian/supervisor (An increase of 12 hours plus benefits to current person.)
- Part-time Young Adults/children's librarian to float between two floors and also to do coordinated programming with children's for 5-7th graders (Supervised by adult reference department)
- Part-time book processor and copy cataloger.
- Part-time community outreach/ publicity person. (25 hours, no benefits)

Equipment:

- Additional hard wired Internet access computers.
- Electronic books/Kindle
- Flat panel TVs for promotional displays (adult floor, children's room and meeting room)

Community Survey Responses

Derry Library	Total	
Adequate	10	11%
Don't know	5	6%
Excellent	38	43%
Good	34	39%
Poor (blank)	1	1%
Grand Total	88	

5.10 Parks and Recreation

The Parks and Recreation Division consists of 8 full-time employees, 1 part-time employee and 65 seasonal employees. The Division provides services and recreational opportunities for all age demographics, ranging from pre-school through senior citizens. The majority of participant / program enrollees are between the ages of five and twelve years of age.

The following is a summary of the Parks and Recreation improvements made since 2001:

Parks

Alexander-Carr Park

- Constructed a 35' x 30' addition onto the existing Lodge facility; expanded deck area; completed numerous interior renovations and upgrades to the facility.
- Paved sections of the bike path from Pierce Avenue to Birch Street

Hood Park

- Constructed a second story addition to the Boat House structure for waterfront storage
- Installed a new playground structure and swings, complete with perimeter fencing and picnic area
- Purchased new seasonal aluminum dock structure and raft
- Drafted an erosion control phase plan; erected two retaining walls; removed trees and completed extensive grade work to create additional usable park area
- Reclaimed parking lot and access roadway to the waterfront
- Paved the section of the bike path through the park out to Mitchell Avenue
- Replaced chain link fencing adjacent to the basketball courts; replaced the perimeter boards and posts for the hockey rink
- Installed an irrigation system
- Installed a shuffle board court (funded by the Derry Rotary Club)

Gallien's Beach

- Purchased new seasonal aluminum dock structure and raft
- Installed a heating system in the building for expanded facility usage
- Installed a small tot play structure

Don Ball Park

- Completed Phase 2 of the Humphrey Road master plan, creating two adjacent practice areas; expanding the park's access road through onto Westerly Drive
- Brought electrical service to all fields; installed irrigation systems at all ball fields
- Transformed the original multipurpose field into a "game only" field; the field was laser graded, top-dressed and new turf/sod installed
- Through an adopt-a-field program/initiative, a sports lighting system was installed at the practice fields (funded by the Derry Demons and Wolverines)
- Constructed a two story press box and grandstand/bleachers at the Game Field (funded in conjunction with the Derry Demons and Wolverines)
- Paved access road ways, parking lots, and walkways throughout the park
- Replaced all wooden playground structures with upgraded apparatus/slides/etc
- Installed a Splash Pad water spray park

MacGregor Park

- Completed several key landscape projects and improvements
- Installed an irrigation system
- Erected the Iraq/Afghanistan Veterans' Monument and courtyard

Veterans & O'Hara Ball Fields

- Installed professional ball field lighting systems at Veterans and O'Hara ball fields
- Replaced and extended chain link, mesh safety netting, and backstops at both Veterans and O'Hara ball fields.
- Reclaimed and paved the access road and parking lot at O'Hara and Veterans Fields
- Constructed a new two story concession/announcing booth at O'Hara Field, complete with restroom facilities and other amenities. A long term lease agreement was initiated with Derry Little League with a formalized repayment schedule

Rider Ball Fields

- Installed an irrigation system at Rider Field #1
- Constructed a second multipurpose field (Rider 2) at the Rider Field complex, complete with irrigation, fencing and other amenities.

- Installed sports field lighting system at Rider Field #1

Dog Park

- Created an off-leash Dog Park facility with numerous amenities and site specific fixtures (small dog area, gazeboes, agility equipment, etc).

School Ball Fields

Buckley Field (behind Hood Middle School)

- Refurbished, expanded and laser graded the practice section; extended existing irrigation system to this new section
- Replaced back stops and perimeter fencing at the baseball and softball fields
- Created a skinned, dirt infield at the softball field

Derry Village Fields (Derry Village, Smith, Bastek)

- Installed catch basins and completed other drainage improvements along Smith baseball field
- Installed a well, electrical service and irrigation system for Bastek Field
- Replaced all chain link fencing {perimeter and outfield} and backstops at Smith and Bastek Fields; replaced backstop at Derry Village Field

Barka Field

- Constructed a large soccer field behind Barka Elementary School. Through an adopt-a-field initiative with the Derry Soccer Club, the area was laser graded and new turf/sod installed, complete with electrical service, an irrigation system, and extended fencing

General Division Initiatives

- Forged several public-private partnerships and collaborations to fund subsequent facility and field improvements
- Adopted a turf management program where all irrigated ball fields and park areas are fertilized / aerated seasonally in order to improve overall turf/playing conditions
- Created various pocket park and garden areas by incorporating these small areas into the maintenance schedule. Such areas include: the Grist Mill; the Town Pound on East Derry Road; and triangles/traffic islands located on Folsom Road, Nesmith Street, and Grandview Avenue. The Division has also assumed oversight of the Adopt-a-Spot program formerly coordinated by the Executive Department.

Recreation

- Expanded aquatics programming to include morning and late afternoon classes/sessions
- Expanded preschool programming to offer classes for children under two years of age
- Implemented a girl's fast pitch softball clinic
- Incorporated a judo program for children and adult levels
- Expanded adult programming/fitness to include t'ai chi, yoga, Bone Builders {fitness/osteoporosis prevention class}, and outdoor volleyball
- Expanded special events for senior citizens, including additional special events such as an ice cream social, luau, and other outings/dinners.
- Expanded tennis program to include tennis camps
- Incorporated a Travel Basketball League into its fall/winter programming regiment
- Increased participation / administration of town-wide community events. The Division now coordinates the Downtown Trick-or-Treat and Very Derry Holiday events {formerly coordinated by Derry Main Street Corp}. The Division has also introduced a pumpkin festival and various fundraising/social events at the Dog Park. By staff participating in various committees, the Division's role in Derryfest, Frost Festival, and the Memorial Day Parade has increased significantly
- Expanded bus / day trips to include more family outings and opportunities
- Expanded seasonal concession services to the Don Ball Park
- Expanded rental opportunities to the Alexander-Carr Lodge for meetings, functions, banquets, etc.

The Division has made significant strides in addressing and meeting facility upgrades at the various park and ball field locations. This has been accomplished through the CIP, as well as expanding maintenance service to include fertilization of irrigated ball fields.

The construction of a new Recreation complex is the Division's top priority for long and short-term needs. Veterans Hall is not an adequate facility to provide the necessary space and services for a population of 34,000+ residents. The building is in dire need of major structural and mechanical repairs and upgrades. The Division cannot meet the scheduling and facility usage demands for existing programming and rental requests; therefore, expanding services and programming is not feasible. A new complex is the ultimate short and long term solution in order to meet current and future needs of the Division.

Community Survey Responses

Parks and Rec Dept.	Total	
Adequate	17	20%
Don't know	5	6%
Excellent	24	27%
Good	40	46%
Poor (blank)	1	1%
Grand Total	87	

Rec Programs for Seniors	Total	
Adequate	20	23%
Don't know	39	46%
Excellent	5	6%
Good	14	16%
Poor (blank)	8	9%
Grand Total	86	

Recreational Areas/ Facilities	Total	
Adequate	20	23%
Don't know	7	8%
Excellent	21	25%
Good	32	38%
Poor (blank)	5	6%
Grand Total	85	

Rec Programs for Youth	Total	
Adequate	20	24%
Don't know	16	19%
Excellent	14	16%
Good	29	34%
Poor (blank)	6	7%
Grand Total	85	

Recommendations

- Acquire parking for the Adam's Memorial Building
- Make decisions regarding the renovation of Veteran's Hall, or construct a new recreational facility
- Continue to maintain and upgrade town-owned buildings as necessary
- Develop a comprehensive Fire Code that would include residential sprinkler requirements
- Develop consolidation and regional plans with surrounding Fire Departments and emergency agencies
- Purchase property with the intent of constructing a new fire station that would include a dispatch center and administrative offices
- Increase parking for Library patrons
- Finish the Rail Trail
- Create a senior center (partial funding obtained fall 2009)

Chapter 6

PUBLIC UTILITIES

6.0 INTRODUCTION

The Town of Derry has municipal water and sewer service in the Central Business District and the immediately surrounding West Central section of town. The towns electrical providers include PSNH, National Grid/Granite State Electric Company (GSEC), Unitil Energy Systems, Inc. (UES) (formerly Concord Electric Company and Exeter and Hampton Electric Company), and the New Hampshire Electric Cooperative, Inc. (NHEC). Major Cable/Internet/Phone providers include Comcast and Verizon. The purpose of this section is to document existing service conditions in Derry in order to determine where expansion or improvement may be needed to accommodate future growth and development.

Community Survey

In the fall of 2008, a Community Survey was made available to the public at Town Hall, the Library, the Recreation Dept and via the Town website. A total of 1000 surveys were distributed and the town received 89 responses, for a return rate of 9%. The following questions and responses are those on the survey that relate to Public Utilities in the Town of Derry.

Should the Town increase the availability of municipal water service?

Yes	No	Don't Know
35%	24%	35%

Should the Town increase the availability of municipal sewer service?

Yes	No	Don't Know
47%	18%	30%

How should these improvements be funded?

Private Development	TIF districts	Taxes	Water/Sewer rates
36	19	11	32

6.1 WATER

The town has a wholesale water supply purchase agreement with Manchester Water Works, which provides approximately 159,000 people in the towns of Manchester, Auburn, Bedford, Goffstown, Hooksett, Londonderry and Derry with water from Lake Massabesic, which is located in Manchester and Auburn. Derry services approximately 17,000 customers in town, as well as parts of Londonderry and Windham. Water is stored in a 4 million gallon atmospheric storage tank. Most of Derry's water system is gravity; however there are 5 water booster stations which service areas of Derry at higher elevations.¹ As of 2007, Derry had 68 miles of water mains, 3,966 service connections and 575 fire hydrants² (See map of Derry's water service area at the end of this chapter). Table 6.1 below, shows water consumption and capacity in Derry for the past 10 years. Consumption is currently on a downward trend from 2001/02 when it reached a high of 1.92 Million Gallons per Day (MGD). The maximum daily capacity continues to be 3.32 MGD.

Table 6.1: Derry Water Consumption and Capacity, Fiscal Years 1998-2007³

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Daily Avg. Water Consumption (MGD)	1.74	1.74	1.92	1.92	1.92	1.4	1.38	1.36	1.32	1.28
Maximum Daily capacity (MGD)	2.1	3.32	3.32	3.32	3.32	3.32	3.32	3.32	3.32	3.32

The majority of the population in Derry is serviced by private, individually owned wells. There are also some satellite water systems owned and operated by Pennichuck Water Works, as well as a few private community wells. Figure 6.1 shows areas of Derry serviced by Pennichuck, or with private water systems.



Water Storage Tank



Lake Massabesic



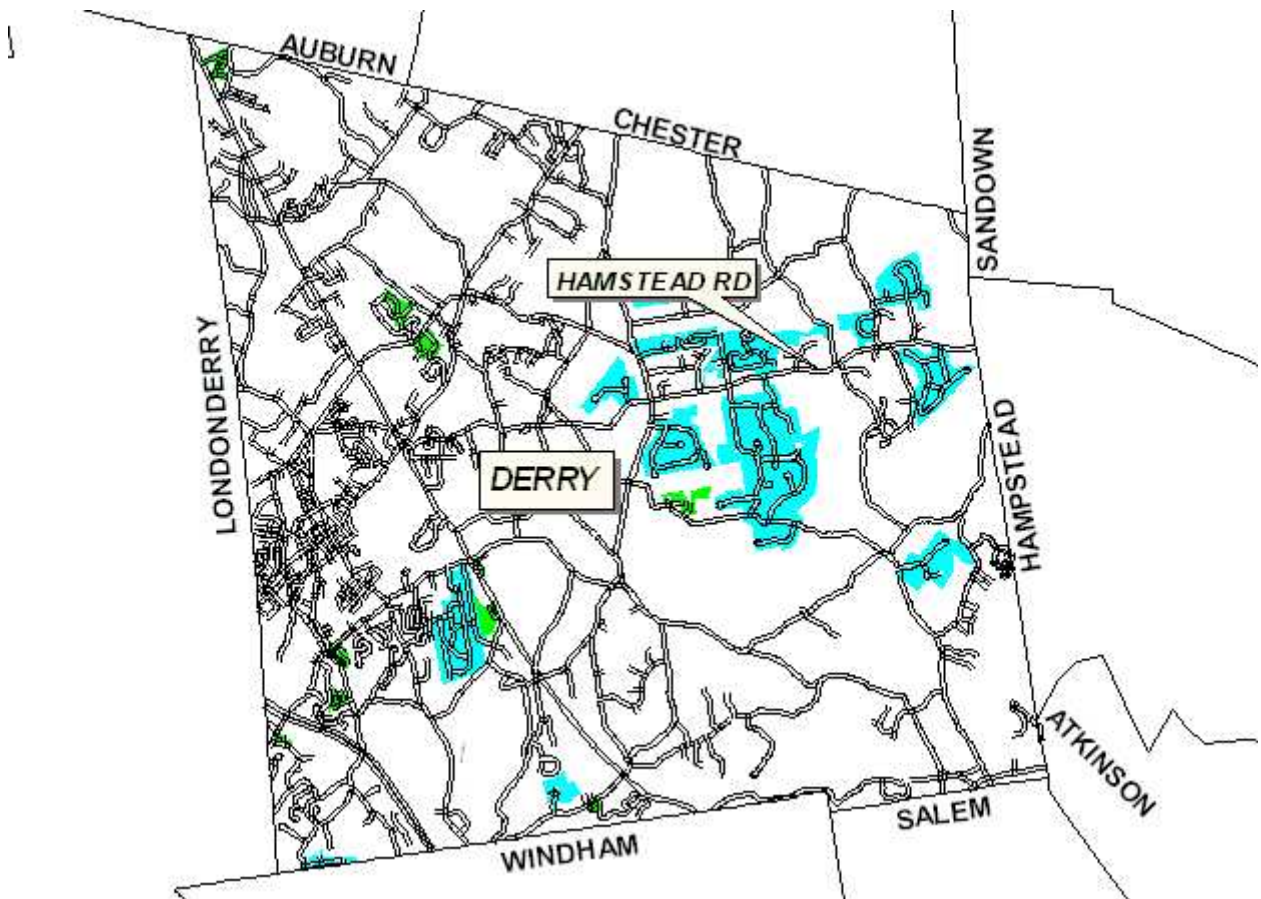
Manchester Treatment Plant

¹ Town of Derry, New Hampshire. 2008 Water Quality Report. http://derry-nh.org/dpw/water/ccr_reports/core/CORE%202008.pdf

² Town of Derry, New Hampshire. Comprehensive Annual Financial Report for the Fiscal Year Ending June 30, 2007.

³ Town of Derry, New Hampshire. Comprehensive Annual Financial Report for the Fiscal Year Ending June 30, 2007.

Figure 6.1: Pennichuck Water Works and Private Water Systems in Derry, NH



The sky blue areas highlighted above are SATELITE WATER systems owned and operated by Pennichuck Water Works. Many of these systems were acquired from Consumers Water Inc in 1997. The areas highlighted in green are other small private water systems or Trailer Parks that purchase water through the Core System or from on-site community wells. All of Pennichuck's water systems supply water through community wells within the developments.⁴

Currently the town has plans in the 2009-2014 Capital Improvement Plan (CIP) to extend municipal water service farther south on Rockingham Road/Rt. 28 from the West Running Brook/Winter Hill Rd area to the vicinity of Berry Rd. Subject to this extension there are also plans in the CIP for a Warner Hill Road tank and main construction of a 3.25 MGD tank, which would service predominantly the East/Central Derry customers including an existing community water system. Also included in the CIP are items such as the vehicle replacement program, rehab and pump replacement for the Meadowbrook

⁴ Derry Water Department. <http://www.derry.nh.us/dpw/water/pennichuck/pennichuckbase.html>

as the vehicle replacement program, rehab and pump replacement for the Meadowbrook Community Well System (approved February 2009), Water Main upgrade and replacement program and various other upgrades and repairs to booster stations. Funding for these projects includes water receipts, bonds and grants.

Source Water Protection

Source water protection involves preventing the pollution of the groundwater, lakes, rivers and streams that serve as sources of drinking water for local communities. Communities often take for granted that a plentiful supply of high quality sources of drinking water, whether they are from groundwater or surface water, or both, will always be available. However, these natural resources are vulnerable to depletion and contamination and as such need to be protected.

The New Hampshire Department of Environmental Services evaluated the existing source water assessment data available for all the active public water systems within the community. This section is a summary of NH Department of Environmental Services assessments of the vulnerability of each source used by the public water system(s) located in Derry. There are three types of public water supply systems identified within the NH DES Source Water Assessment Report for the Town of Derry, NH. These systems include:

- Community Systems: a public water system which serves at least 15 services connections used by year-round residents or regularly serves at least 25 year-round residents
- Non-Transient/Non-Community Systems: a public water system designed to serve at least 25 people, for at least 6 months per year. Examples include day care, schools, and commercial property
- Transient/Non-Community Systems: a public water system designed to serve at least 25 people, for at least 60 days per year. Examples include restaurants, campgrounds, motels, recreational areas, and service stations

The Assessment found that there were a total of 60 wells, of which 46 were community wells, 9 were transient and 5 were Non-Transient. Please see Appendix E for the full report and ranking. Each water system is ranked according to susceptibility to the following water contaminant sources:

Detects: Confirmed detections of certain contaminants (after treatment) of suspected human origin, not including disinfection byproducts.

Well/Intake: The integrity of the well (if a groundwater source) or the intake (if a surface water source).

KCSs: Known contamination sources in the vicinity of the source. This includes any site known to DES where contaminants are known or very likely to have been released to the ground, and where remediation is not complete.

PCSs: Potential contamination sources in the vicinity of the source. This includes any site known to DES where contaminants are known or very likely to be used in significant quantities, but where there are no known releases to the ground.

Highways/RRs: The presence of numbered state highways or active railroads in the vicinity of the source.

Pesticides: Whether or not pesticides have been routinely applied in the vicinity of the source. This is based on the presence of land parcels owned by registered pesticide applicators.

Septics: The presence or density of septic systems and sewer lines in the vicinity of the source.

Urban Land Cover: The percentage of urban land cover in the vicinity of the source, based primarily on satellite images. *This criterion does not apply to sources serving transient systems.*

Ag Land Cover: The percentage of agricultural land cover in the vicinity of the source (in the Wellhead Protection Area (WHPA) or within 300 ft of surface water in the Hydrologic Area of Concern (HAC))

Animals: The presence of concentrations of 10 or more animal units in the vicinity of the source.

Lagoons: The presence of wastewater treatment lagoons or spray irrigation sites in the vicinity of the source.

Dry Discharge: The presence of dry-weather stormwater discharge sites in the vicinity of the source. *Only a handful of surface sources were valuated for such discharges; no discharges were found.*

Sanitary Radius: The presence of development not associated with the well within the sanitary radius (within 75 to 400 ft of the well). *Applies only to groundwater sources serving community and non-transient systems.* Of particular concern are sewer lines, septic systems, or storage of regulated substances in this area.

Trophic status: The projected trophic (nutrient) status of the source as predicted by a computer model using a future land development scenario for the watershed. *This criterion applies only to 24 lakes, ponds, and reservoirs included in the phosphorus loading study.*

The biggest areas of concern for the wells in Derry are Highways and Railroads, Septics and Agricultural Land Cover. These categories had the highest number of High and Medium rankings for all of the wells in Derry.

Derry has adopted a Groundwater Resource Conservation District as a means to preserve and maintain existing and potential groundwater resources and primary groundwater recharge areas within this district, known as "aquifers," from adverse development, land use practices or depletion. This is to be accomplished by regulating land uses which would contribute polluted water and pollutants to designated aquifers identified as being needed for present and future public and private water supply.⁵ (See map of Groundwater Resource Conservation District at the end of this chapter)

6.2 SEWER

The Derry Wastewater Treatment Plant capacity is currently 3 MGD. In 2007 the town entered into an inter-municipal agreement with Allenstown for private septic system disposal. The town plans to extend sewer service to the Barkland Acres and Sunset Acres Developments, off of Rt. 28 in the center of town. As of June 30, 2007 the Town of Derry had 46 miles of sanitary sewers, 18 miles of storm sewers, 1 Treatment Plant and 2,995 service connections.⁶ (See map of Derry's Wastewater service area at the end of this chapter)

Table 6.2: Derry Sewer Rates and Capacity, Fiscal Years 1998-2007⁷

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Daily Avg. Treatment (MGD)	2.1	2.25	1.7	1.92	1.92	1.71	1.63	1.66	1.88	1.75
Maximum Daily capacity in gallons (MGD)	4	4	3	3	3	3	3	3	3	3

Table 6.2 above, shows sewage rates and capacity from 1998-2007 in Derry. The town has stayed under the 2 MGD mark since 2000. For the fiscal year 2007, the town produced 1.75 MGD as the daily average treatment and the town maintains a 3 MGD capacity.

Currently the town has plans in the 2009-2014 CIP that include extending wastewater service farther down Rockingham Road from Bradford Street to the vicinity of Berry Road and then Phase 2 will include extending it the rest of the way down Rockingham Road to Ryan's Hill/Windham Town Line. This project will include a pump station as well. Other items in the CIP include the vehicle replacement program and various upgrades and repairs to the Treatment Plant and pump stations in town. Funding for these projects includes water receipts, bonds, capital reserves and grants. Potential Additional External Funding Sources are in Table 6.3 at the end of this chapter.

⁵ Town of Derry, New Hampshire. Town Code. Article VIII. 165-60 through 165-69.

⁶ Town of Derry, New Hampshire. Comprehensive Annual Financial Report for the Fiscal Year Ending June 30, 2007.

⁷ Town of Derry, New Hampshire. Comprehensive Annual Financial Report for the Fiscal Year Ending June 30, 2007.

6.3 PRIVATE UTILITIES

Electrical Service

Electric service is provided to the majority of the Town by Public Service of New Hampshire (PSNH). PSNH serves 211 communities in New Hampshire and has over 475,000 customers. PSNH headquarters is located in Manchester. The town also has 3 other electrical service providers in town, National Grid/Granite State Electric Company (GSEC), Unil Energy Systems, Inc. (UES) (formerly Concord Electric Company and Exeter and Hampton Electric Company), and the New Hampshire Electric Cooperative, Inc. (NHEC).

Derry has an ordinance that requires all utilities for proposed new subdivisions to be installed underground per specifications of the utility companies involved. Developers must contact the utility companies to coordinate development design, so that it takes into account appropriate easements and does not interfere with proper roadside drainage.

Natural Gas

There are three gas distribution utilities and one steam distribution utility serving approximately 112,000 customers in the state of New Hampshire. National Grid NH and Unil/Northern Utilities are natural gas distributors. New Hampshire Gas Corp. is a propane air gas distributor. Concord Steam Corp. is a steam distributor.

Natural Gas is available in Derry from National Grid NH. As of October 2008 National Grid NH served approximately 84,000 customers in southern and central New Hampshire plus a few more in the City of Berlin in northern New Hampshire. National Grid NH continues to maintain natural gas operations facilities in Nashua, Manchester and Tilton and a regional corporate operations center in Waltham, Massachusetts.

Figure 6.2

Natural Gas, Propane and Steam Utilities in NH
Communities Served

KeySpan Energy Delivery (Natural Gas)			Northern Utilities, Inc. (Natural Gas)			NH Gas Corp. (Propane)	Concord Steam Corp. (Steam)
Allenstown	Derry	Loudon	Atkinson	Hampton	Plaistow	Keene	Concord
Amherst	Franklin	Manchester	Dover	Hampton Beach	Portsmouth		
Auburn	Gilford	Merrimack	Durham	Hampton Falls	Rochester		
Bedford	Goffstown	Milford	East Kingston	Kensington	Rollinsford		
Belmont	Hollis	Nashua	East Rochester	Madbury	Salem		
Berlin	Hooksett	Northfield	Exeter	Newington	Seabrook		
Boscawen	Hudson	Pembroke	Gonic	North Hampton	Somersworth		
Bow	Laconia	Sanborton	Greenland	Pelham	Stratham		
Canterbury	Litchfield	Tilton					
Concord	Londonderry						

Source: NH PUC

Telephone, Cable Television, Internet

Comcast is the major provider in the region and for the Town of Derry for cable television and for high speed cable internet access. Fairpoint is one of the major providers of land line phone service along with Comcast. In New Hampshire, registered public utilities include incumbent local exchange carriers (FairPoint and seven independent telephone companies), approximately 30 active competitive local exchange carriers, and over 100 in-state toll providers. The New Hampshire Public Utilities Commission does not regulate cable television, wireless/cellular, out-of-state long distance or Internet service providers.

6.4 ENERGY

Promoting and incorporating energy efficient measures in town buildings, activities and ordinances has many benefits to the town, including reducing operating costs and cutting carbon emissions. The Town of Derry has undertaken several projects recently to promote energy efficiency in municipal buildings. In Fiscal Year 2004/05 energy use in the Municipal Center was cut dramatically, natural gas was reduced by 70% and electricity by 15%. This was done by instituting simple policies such as putting computers in sleep mode, turning thermostats down/up after business hours and installing energy efficient lighting.

The Fire Department also instituted some voluntary measures to promote energy efficiency at Derry Fire Stations. These include installing occupancy sensors, energy efficient lighting and turning lights off in unoccupied areas.

Derry recently adopted a “Green Building and Vehicle Ordinance”. The language in that ordinance reads as follows:

Vehicle Purchases

- A. The Town of Derry shall give preference to alternative fuel and hybrid vehicles when purchasing or leasing a vehicle to be used by any department of the Town. Exceptions to this standard shall be granted when alternative fuel vehicles do not provide the performance needed to meet the needs of a specific department. An example of such a vehicle that may be exempted would be emergency response vehicles.*
- B. As technology continues to develop, the Town Administrator or Town Administrator designee shall, from time to time, reexamine the Town's vehicle fleet to see if other types of alternative fuel vehicles can be purchased to fit performance requirements and to enhance the energy efficiency of the Town's vehicle fleet.*

Construction

- A. All new construction, and all major renovations to any existing structure's exterior or interior, completed or funded in full or in part by the Town of Derry, must meet basic*

LEED certification standards as prescribed by the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Green Building Rating System. When upgrading or conducting minor repairs to an existing Town-owned or Town-funded facility, repairs and upgrades will be done in a manner consistent with LEED certification standards. The Town shall strive to meet higher LEED certification standards when it is able to do so without increasing the budget for a given project.

- B. This article does not exempt the Town from meeting all land development control regulations but instead sets additional minimum standards that must be achieved during the planning and construction process for any town-owned building.*
- C. The Town of Derry will work with business owners as well as local, Town, state and federal agencies to promote, assist, and encourage business owners in building in an environmentally friendly and environmentally responsible way in order to provide a healthy environment for employees and the public. In addition, each year the Town Administrator will examine ways to incorporate and deploy environmentally friendly technology throughout the Town in order to decrease long-term costs for Derry as well as decrease carbon emissions.*
- D. The requirements of this article can be overridden by a 2/3 majority vote of the Town Council.*

This ordinance will help Derry to continue to make energy efficiency a priority in town, while they continue to work towards reducing energy use, not only for the Municipal Center, but for town departments such as Public Works, Police and Fire.

EPA Region One Energy Challenge

The Community Energy challenge is an opportunity for municipalities across New England to identify simple and cost-effective measures that increase energy efficiency and renewable energy use while reducing air pollution and saving money.⁸ As a part of this regional effort Environmental Protection Agency (EPA) is challenging all New England communities to save money and reduce air pollution by assessing their energy use, taking action to improve energy efficiency, and seeking out renewable energy choices. EPA will provide technical assistance to every community that chooses to take the challenge.

PSNH Energy Rebate Program

Each year, PSNH has limited funds available to provide incentives or rebates to customers investing in energy-efficient electric technologies. PSNH's Energy Service Program is a series of energy conservation programs and services available to large

⁸ <http://www.epa.gov/region1/eco/energy/energy-challenge.html>

commercial and industrial customers. This program is designed to help PSNH customers lower their operating costs through joint investment in electrical energy conservation.

Some areas where PSNH provides rebates are for energy efficient products in lighting, heating, cooling, water heating, motor efficiency, weather stripping and caulking, as well as refrigeration. PSNH has program rebates for both large business retrofit as well as small business retrofit. If a business is operating aging, inefficient equipment and systems PSNH can help better the efficiency of a facility through services including installation of variable frequency drives, replacement of motors, air compressors and lighting upgrades. Rebates are also available for custom projects. Technical assistance is also offered through the Retrofit Program, including project evaluation, measure identification, equipment monitoring, and energy audits.

PSNH also offers energy rebate programs for public schools. PSNH has developed the New Equipment & Construction/Schools Program to promote energy efficiency, protect the environment, and increase the economic vitality of NH. All public schools, grades K-12, are eligible for this New Equipment & Construction Program. PSNH offers prescriptive and custom rebates designed to help municipalities purchase and install energy efficient equipment.

Promote Transit Oriented Development

Transit oriented development (TOD) refers to a method of regulating land use that concentrates commercial and residential growth around transit centers in order to maximize access to transit and encourage the use of non-motorized transportation. TOD is a strategy that has broad potential in both large urban and small communities using bus or rail transit systems. It focuses compact growth around transit stops, increasing population density around transit centers thereby capitalizing on transit investments by bringing potential riders closer to transit facilities and increasing ridership.

TOD can be described as development, generally within half a mile of a transit station that provides sufficient densities, mixes of activities and convenient pedestrian linkages to support significant transit ridership. Focusing development in proximity to transit stations can create interesting and functional urban centers, diminish environmentally damaging urban sprawl, and play a major role in realizing regional development strategies. In New Hampshire, TOD principles may be applicable to Park and Ride facilities, which could be considered nodes around which higher density development is concentrated.⁹

Derry could benefit from promoting transit oriented development by not only reducing the town's carbon footprint, but also reducing car trips and traffic congestion as well. Although the ideal conditions for implementing TOD may not currently exist in Derry, the town has the beginning characteristics of a successful TOD in that higher density zones are already in close proximity to a major highway and a Park and Ride Facility

⁹ NHARPC, NHOEP, NHDES, NHMA. Innovative Land Use Planning Techniques. October 2008.

(Exit 4, Londonderry). Derry's downtown is also part of these zones that are close to the highway and park and ride and would be an ideal starting place for long range TOD plans.

Encourage Buying Locally

Supporting local businesses not only strengthens the local economy and increases local jobs, as described in Chapter 3, Economic Development, but also decreases the communities carbon footprint by reducing the distance products need to travel to get to the local community and in turn decreasing greenhouse gas emissions.

Buying local food helps to support farmers, in turn making their farms more viable and financially sustainable. Supporting local farms also helps to preserve farmland, which has many environmental benefits. Long-range environmental benefits include wildlife habitat, clean air and water, flood control, groundwater recharge and carbon sequestration.

There are several opportunities for towns to encourage the purchase of locally grown products. Towns can play an instrumental role in the success of a local farmers' market. Although not every town can or should hold a farmers' market, those communities with the appropriate setting, such as a town green, along with willing farmers and a strong customer base can be a recipe for a successful farmers' market. Towns can also encourage 'Farm-to-Institution'; town officials can facilitate discussions and encourage stakeholders to work toward these goals. Town officials can also publicly recognize and applaud institutional administrators that are successful in this endeavor. Towns can encourage 'buy local' principles as they set their own bidding and purchasing procedures for food service programs under their administration.

There is also an opportunity to highlight local farm products and destinations. Local product guides are an increasingly popular way to highlight local farms and food products. Brochures often include maps identifying farm stands, pick-your-own farms, farmers' markets and other retail opportunities, along with their hours of operation and available products. The same type of information can also be placed on a town Web site to reach an additional audience. Developing a local product guide may be a good project for a town agricultural commission or advisory board. This same information could be broadcast on local TV to reach additional audiences and promote farms.¹⁰

¹⁰ *Planning for Agriculture*. American Farmland Trust, Connecticut Conference of Municipalities.

Energy Efficiency Action Goals:

The following is a non-exhaustive list of action goals that the Town of Derry should strive towards in creating a sustainable, energy efficient future:

- 1) Take the EPA Region One Community Energy Challenge Pledge and commit to reducing energy consumption by a minimum of 10% over the course of the next 5-10 Years.
- 2) Take advantage of the PSNH Energy Rebate Program and invest in energy-efficient electric technologies in order to reduce energy consumption.
- 3) Promote a comprehensive public transportation system including creation or expansion of bus lines, public rail transportation, shuttles, car sharing, and safe and attractive bicycling and walking facilities with an emphasis on energy efficiency and use of renewable fuels; (*Promote Transit Oriented Development*).
- 4) Increase and promote use of alternative energy sources such as wind, solar and geothermal.
- 5) Continue to implement and enforce the town's Green Building and Vehicles Ordinance, seeking opportunities for energy efficiency in all town facilities and operations.
- 6) Encourage and promote "buying locally" in order to reduce the town's carbon footprint and consider the creation of a town farmer's market.
- 7) Implement a public education campaign to promote energy conservation.
- 8) Collaborate with local groups and other communities on innovative ways to be more energy efficient.
- 9) Encourage energy efficient design and development within town ordinances and subdivision regulations.
- 10) Develop and implement a plan to further reduce solid waste and increase recycling.

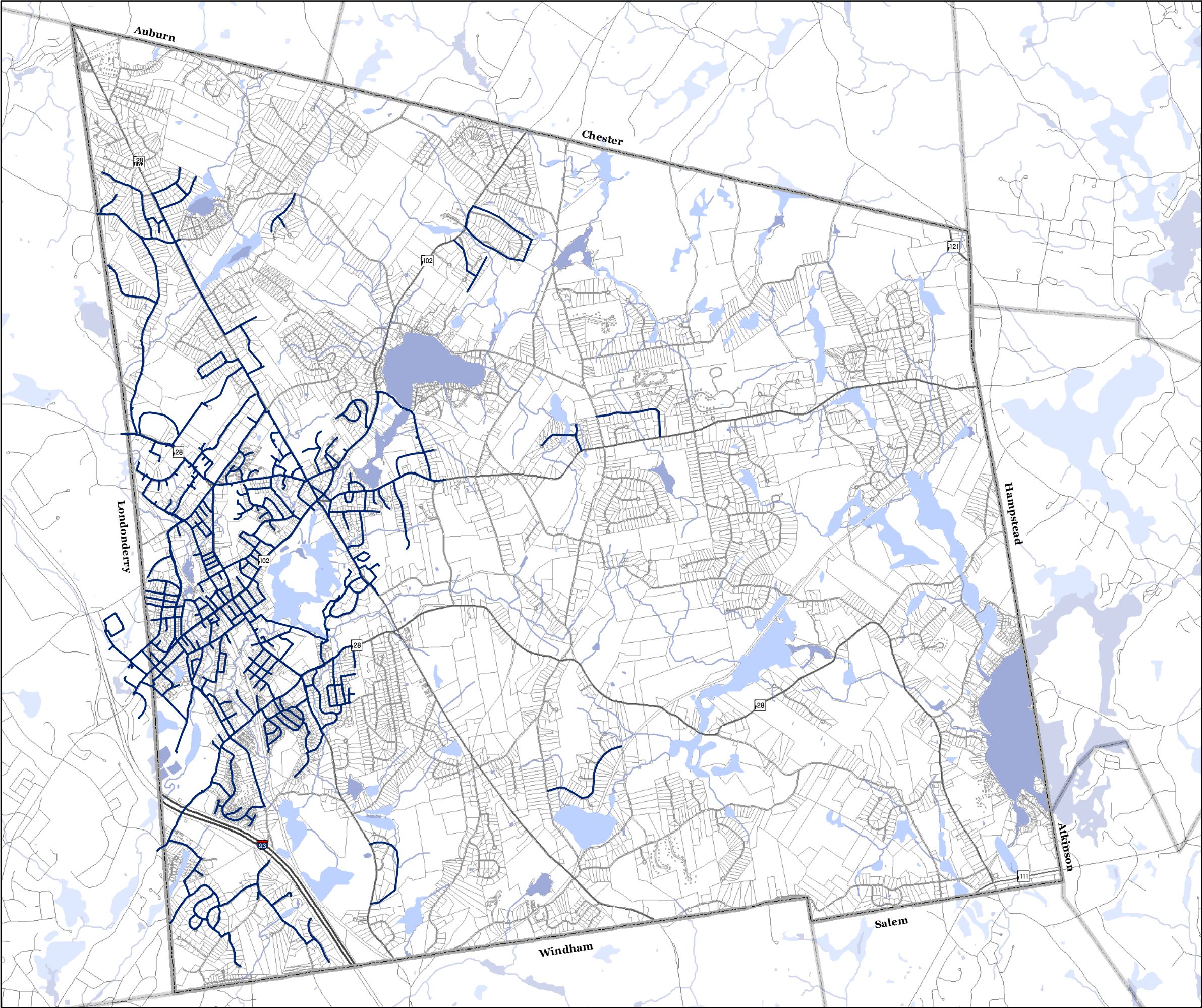
Potential Funding Sources for Town Projects

Table 6.3: Potential External Funding Sources for Town Projects

Funding Source/Program	Town Eligibility
DES State Revolving Loan Fund Program (SRF)	Town should qualify for low interest loan for eligible portions of the project. Formal application and Town approval of all project funds is required
DES State Aid Grant (SAG)	Town should qualify for 20% grant on all eligible portions of the project (additional 10% available if average residential annual sewer user fee is 20% higher than the State's average)
DES State Aid Grant PLUS	A municipality may be reimbursed by the state an additional 10 percent of eligible costs, derived from the acquisition and construction of septage treatment facilities, which results in increased septage and /or treatment capacity to meet the septage disposal needs of their residents.
US Economic Development Agency (EDA) Public Works and Economic Development Program	Public Works and Economic Development investments help support the construction or rehabilitation of essential public infrastructure and facilities necessary to generate or retain private sector jobs and investments, attract private sector capital, and promote regional competitiveness, including investments that expand and upgrade infrastructure to attract new industry, support technology-led development, redevelop brownfield sites and provide eco-industrial development.
Public Service New Hampshire Energy Rebate Program	Depending on the design, Town should qualify for rebate for measures taken to provide and enhance energy efficiency for new facilities

Recommendations

- Increase water and sewer on Rockingham Road from West Running Brook to the vicinity of Berry Road and then to the Windham town line, including a pump station
- Continue energy-reducing measures including following the Green Building and Vehicle Ordinance adopted in 2008
- Rehabilitation and pump replacement for Meadowbrook Community Well System
- Main upgrade and replacement program and other upgrades and repairs to booster stations
- Improve and expand the water and sewer systems



Water Lines

Town of Derry

Legend

- Water Lines
- Town Boundary
- Parcel

Waterbodies

- Lake/Pond
- Swamp/Marsh
- Rivers and Streams

Roads

- Highway
- Major Roads
- Minor Roads
- Class VI
- Private Roads

0 0.375 0.75 1.5 Miles

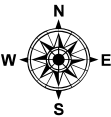
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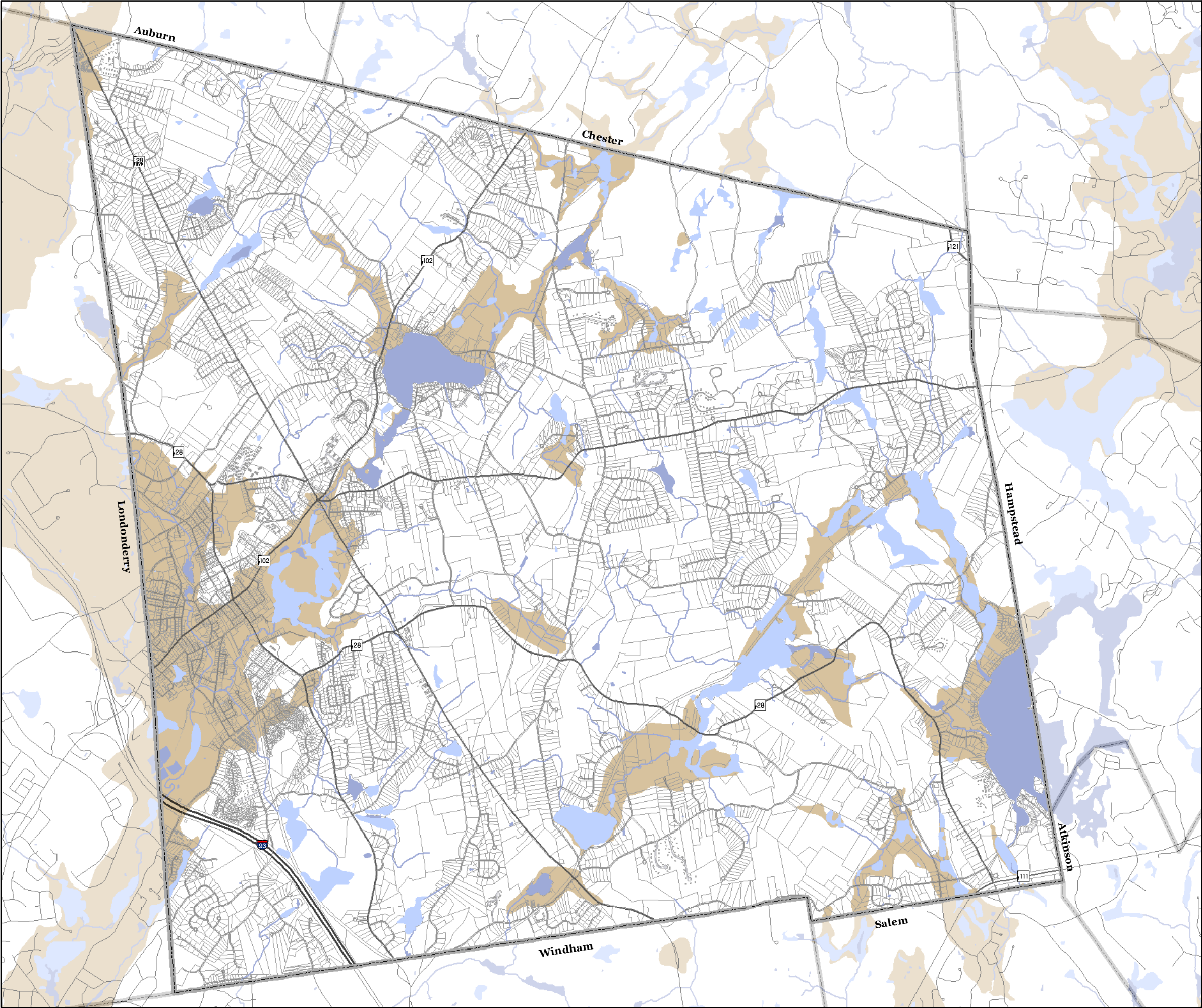
Data Sources:
Granit Digital Data (1:24,000)
NH Department of Transportation
Individual Community Parcel Data

The Town of Derry and the SNHPC make no representations or guaranties to the accuracy of the features and designations of this map.

Map produced by SNHPC February 2009.

This map is designed for planning purposes only. It is not to be used for legal boundary determinations or for regulatory purposes.





Map 6.2

Groundwater Conservation District

Town of Derry

Legend

- Stratified Drift Aquifer
- Town Boundary
- Parcel

Waterbodies

- Lake/Pond
- Swamp/Marsh
- Rivers and Streams

Roads

- Highway
- Major Roads
- Minor Roads
- Class VI
- Private Roads

0 0.375 0.75 1.5 Miles

0 2,950 5,900 11,800 Feet

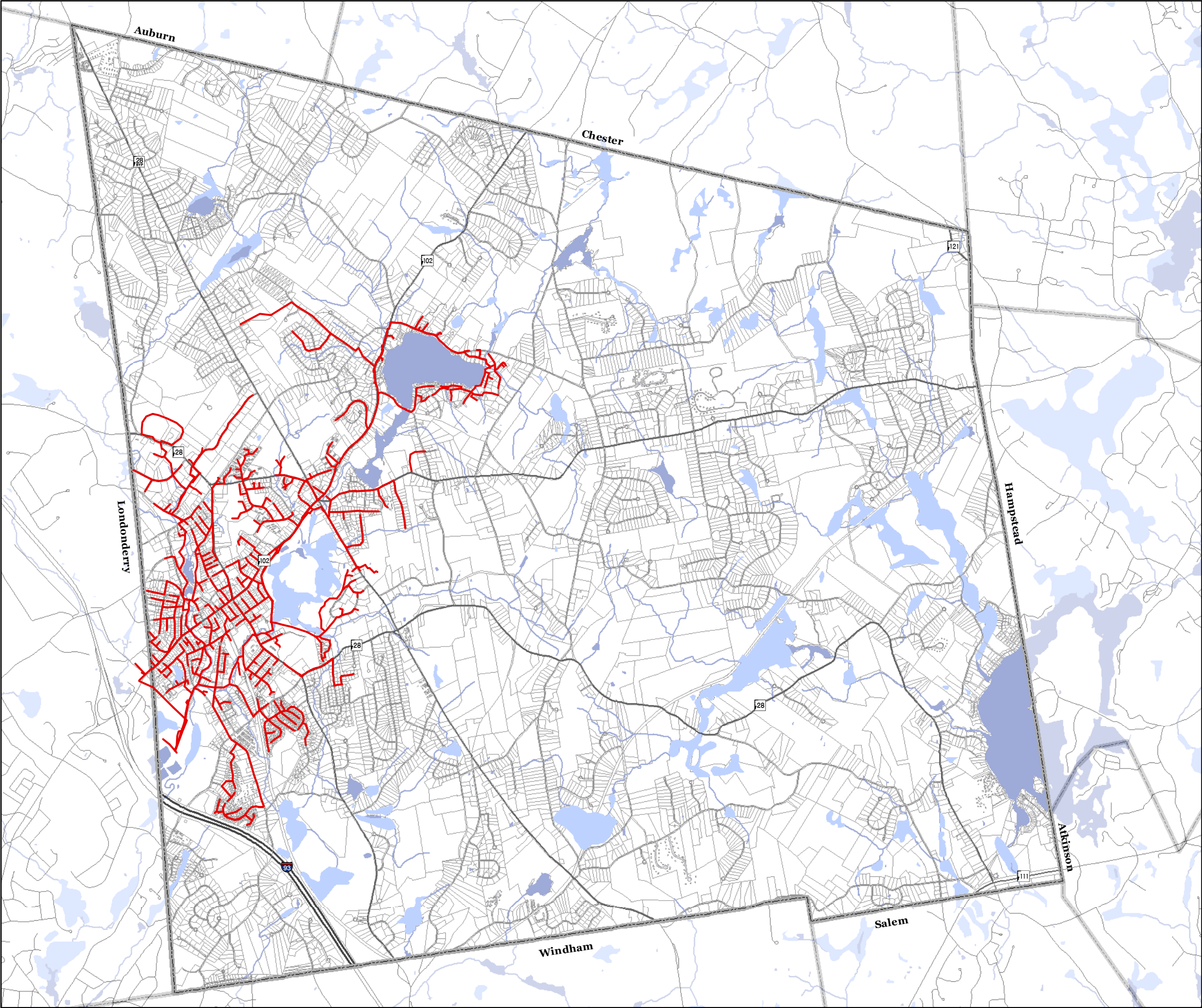
Data Sources:
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NH Department of Transportation
Individual Community Parcel Data

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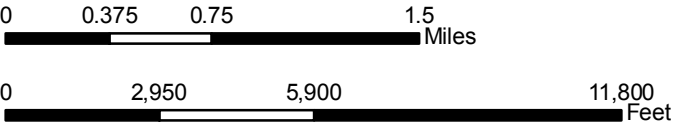
Map 6.3

Sewer Lines

Town of Derry

Legend

- Sewer Lines
- Town Boundary
- Parcel
- Waterbodies**
- Lake/Pond
- Swamp/Marsh
- Rivers and Streams
- Roads**
- Highway
- Major Roads
- Minor Roads
- Class VI
- Private Roads



Data Sources:

Granit Digital Data (1:24,000)

NH Department of Transportation

Individual Community Parcel Data

TheTown of Derry and the SNHPC make no representations or guaranties to the accuracy of the features and designations of this map.

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Chapter 7

TRANSPORTATION

7.0 INTRODUCTION

The purpose of this chapter is to identify highway and other transportation issues of concern to Derry officials and residents and to recommend proposed actions. While transportation planning is a local and state responsibility, most long range transportation planning occurs at the regional and state levels. Because of the important connection between use and transportation, this chapter will devote, when appropriate, some discussion and analysis to transportation concerns in the context of land use issues. Local officials and planning board members have expressed concern with transportation improvements that tend to promote haphazard growth (i.e., sprawl) and would like to learn how creative land use tools can be effectively used to prevent sprawl and manage and preserve transportation improvements.



Since the 1960s, Derry's proximity and convenient access to Interstate Route 93 have contributed to the town's evolution into a predominantly bedroom residential community. According to the 2000 Census, approximately 80% of employed local residents commute to other communities for work and about 33% of this group commutes to communities outside of New Hampshire for employment.

Accessibility for those who live and work in Derry depends on an efficient transportation network. Additionally, it is likely that the local road and highway network will remain the primary transportation mode for the foreseeable future. Because of economic and environmental considerations, there is local interest in improving and expanding increasingly popular alternative forms of transportation such as sidewalks, walking trails, bicycle paths and public transportation.

The continued maintenance and expansion of the local road network, parking, sidewalks, pedestrian amenities, bicycle transportation systems and public transportation plays an important role in Derry's effort to maintain quality of life and to plan for future growth. This chapter provides a focus and direction regarding these concerns and issues.

Community Survey

In the fall of 2008, a Community Survey was made available to the public at Town Hall, the Library, the Recreation Dept and via the Town website. A total of 1000 surveys were distributed and the town received 89 responses, for a return rate of 9%. The following questions and responses are those on the survey that relate to Transportation in the Town of Derry.

Which road or intersection in town:

a. Poses the most serious threat to safety?

102/28/Pinkerton/Tsienneto	1
Crystal & 102	2
Folsom at South Ave	1
Hampstead/Olsen & Hampstead/Floyd	1
Hood Commons at Crystal	1
Ross' Corner, Pinkerton, Tsienneto Rd, Manchester Road	1
Windham Depot Road, Rt. 28	2
Crystal Ave & Birch Street, Adams Pond/E. Derry rd.	1
Scobie Pond Road	1
Route 102	1
Pinkerton & Tsienneto	2
Rotary at 102 and 28, Ross's Corner	1
Hood Plaza/Crystal Avenue, Birch Street - Crystal/Broadway; Kendall Pond/Phillip Rd; Aladdin Village/Kendall Pond	1
Rotary	19
Tsienneto and Bypass	1
Broadway/Crystal/Birch	1
28/Kilrea	1
Route 28 and 102	2
Intersection Floyd/Adams Pond/Hampstead	1
All okay	1
Adams Pond & Hampstead Road	1
111/Island Pond Rd, 28/Broadway	1
Pinkerton Street/Rte 28	1
Crystal Avenue/West Broadway	1
Kilrea/Rte 28	1
Berry Road, 28 Junction	1
Kilrea & Rockingham Road	1
Crystal Ave at Broadway	1
Tsienneto and North Shore and 102	1
Floyd & Lane	1

Birch & East Broadway	1
Nashua Road	1
Tsienneto Road / Rt. 28	1
102/N. Shore Road	1
102/Crystal Avenue; 102/Bypass 28; Traffic circle	1
Tsienneto Road/Pinkerton St/102	1
102 & Birch Street	1
Route 102/Birch Street/Rt. 28 Bypass	1
Broadway/Crystal Ave	1
Crystal & Broadway	1
Traffic Circle	1
Route 28/Lawrence; Franklin/North High	1
Rte 28 from before rotary, north to intersection	1
Crystal/Birch & Rotary	1
Rotary, Kilrea Road, Scobie Pond	1
Pinkerton/Tsienneto	1
Rotary, Rte 28, Broadway, Exit 4	1
Rotary (The circle of death rotary)	1
Grand Total	70

b. Has too much traffic, considering the design and surrounding setting?

Broadway & Tsienneto	3
By Pass 28, also Downtown, Rt. 28	1
Crystal & 102, 28 North	1
Hampstead Rd.	1
Rotary	8
Rt. 28	1
Windham Depot Road, Rt. 28	1
Yes	6
Way too much	1
Too fast, too much, need lights	1
Growth of traffic will continue, must absorb	1
Birch & Crystal, Traffic circle	1
Kendall Pond Road, Birch Street, Crystal Ave, Broadway	1
Birch Street	2
Rte 28	2
Downtown, Broadway	1
Manchester Road	2
Rte 28, Broadway	1
None	1

So. Main Street during morning, afternoon, evening	1
Kendall Pond/Fordway	1
Downtown lights	1
Kilrea and Rockingham Rd	1
Broadway/Birch/Crystal Avenue	3
East Derry General Store area	1
Downtown and East Derry General Store	1
Around Pinkerton	1
Tsienneto Rd	3
28 from Clam Haven to Circle	1
Floyd Road	1
Rt. 102 Downtown	2
Broadway	2
102/Fordway	1
Circle, especially in early morning	1
Crystal Ave/Birch Street	1
Tsienneto Rd near Shaw's	1
Rte 28 Wal-Mart	1
Crystal Avenue	1
Broadway/Crystal Avenue	1
102 Traffic Circle	1
Grand Total	61

What is the most pressing transportation problem facing Derry?

Data	Total	%
Road quality	9	10%
Speeding	23	26%
Lack of public transit/bus	45	51%
Road maintenance program	10	11%
Traffic volume	45	51%
Lack of bike lanes	21	24%
Lack of sidewalks	28	31%
Heavy trucking	9	10%
Insufficient police	7	8%
Improve pedestrian safety	18	20%
Lack of parking	21	24%
Narrow side streets	3	3%
Road flooding	3	3%
School traffic	13	15%
Traffic violations	9	10%
Total Respondents	89	

Do you feel there needs to be more bicycle and pedestrian opportunities in Town?

More opportunities?	Total	%
Yes	53	65
No	21	25
Don't know	8	10

Are Derry's streets safe for bicycles and pedestrians?

	Total	%
Yes	17	20
No	62	73
Don't know	6	7

What do you feel is the general year round condition of roads in Derry?

Conditions	Total	%
Excellent	6	7
Good	34	39
Adequate	43	48
Poor	5	8

What major routes do employed members of your household use to get to work?

Roads	Total	%
Tsienneto	29	13
Route 121	2	1
Route 102	42	19
Birch	9	4
Route 111	16	7
Folsom	7	3
North High	4	2
Route 28 Bypass	35	16
Route 28 / Ryan's Hill Rd	25	11
Crystal	15	6
Manchester	8	3
Windham	10	5
Island Pond	12	6
Ash St. Exit	8	3

The respondents cited a number of roads or intersections that pose a threat to safety in Derry, but by far the one with the most concerns is the rotary. The rotary was also cited by the most by respondents as having too much traffic, considering the design and surrounding setting. Respondents feel that the most pressing transportation problems

facing Derry are the lack of public transit or a bus, the lack of sidewalks in town and the traffic volume. Residents feel that there needs to be more bicycle and pedestrian opportunities in town and that currently the streets are not safe for bicycles and pedestrians. Residents feel that the general condition of the roads in town is adequate.

Major routes used by residents in Derry include Route 102, Route 28 Bypass and Tsienneto Road.

Community Profile

Through the “Our Town-Our Future Community Profile” conducted on April 4, 2009, the following transportation-related issues were identified:

- Folsom Road intersection accidents
- Exit 4A status
- Volume of traffic on Route 102
- Left turn challenges
- Speed of traffic
- Speed limits set too high
- Issues with cut-through-roads
- Enforcement of traffic laws
- Poor driving habits- i.e., cell phone use while driving
- Absence of sidewalks in areas, near Country Club Estates
- Sidewalks on Tsienneto Road, from Post Office to Ross’ Corner on Route 102
- Balance safety and rural character
- Can’t walk on bike paths
- Sidewalks around Beaver Lake
- Funding of Improvements
- Resolve status of private roads
- Use of PSNH right-of-way by off road vehicles (risk to property owners)
- Better off-road vehicle (snowmobile, ATV, etc.) lines
- Different needs in high-density vs. rural areas
- Noise issue on ATV’s
- Need more state regional local communication and coordination

7.1 TRAFFIC CIRCULATION

As noted in the SNHPC Regional Comprehensive Plan, “the largest volumes of traffic flow occur in and between major traffic generator locations, including areas with concentrations of business, industry, airport-related functions”¹ such as NH 28 (Crystal Avenue) and retail and manufacturing areas. The town’s location and accessibility to the Interstate highway system has encouraged the location of commercial activities. With immediate access to Interstate 93 from Exits 4 and 5, residents can easily travel to the

¹ SNHPC Regional Transportation Plan

north and to Massachusetts for employment, recreational or shopping purposes. Proximity to Manchester-Boston Regional Airport provides additional travel options. Major town routes such as NH 102 (Broadway), NH 28 (Crystal Avenue) and NH Bypass 28 (Londonderry Turnpike) provide easy access to/from the Interstate system as well as other portion of the state highway system.

7.2 ROADWAY CLASSIFICATION - ADMINISTRATIVE CLASSIFICATION

Guidelines for administrative classification of roadways in the State of New Hampshire are based on information contained in *New Hampshire Planning and Land Use Regulation*. Highways under state maintenance and control include Class I, II, and III highways while Class IV, V and VI highways are under the jurisdiction of municipalities. The administrative roadway classification as defined in *New Hampshire Planning and Land Use Regulation* is as follows:

- Class I highways consist of all existing or proposed highways which are part of the primary state highway system excepting all portions of such highways within the compact sections of 27 towns and cities listed in RSA 229:5, V.
- Class II highways consist of all existing or proposed highways on the secondary state highway system, except those portions of such highways which are within the compact sections of 27 towns and cities listed in RSA 229:5, V.
- Class III, Recreational Roads consist of all roads leading to, and within, state reservations designated by the legislature.
- Class III-a, highways consist of new boating access highways from any existing highway to any public water in the state.
- Class IV, Town and City Streets consist of all highways within the compact sections of 27 towns and cities listed in RSA 229:5 V. The extensions of Class I and Class II highways through these areas are included in this classification.
- Class V, Town Roads consist of all other traveled highways which the town has the duty to maintain regularly.
- Class VI, Un-maintained Highways consist of all other existing public ways, including highways discontinued as open highways, highways closed subject to gates and bars, and those highways which have not been maintained by the Town in suitable condition for travel for a period of five years or more.
- Scenic Roads are special town designations (by vote of the town meeting) of any road, other than a Class I or Class II highway, where the repair, maintenance, reconstruction, or paving work shall not involve or include the

cutting or removal of trees, or the destruction of stone walls, except as provided for under RSA 231:158.

Table 7.1 - Approximate Highway Mileage

Class I	13.4 miles
Class II	12.0 miles
Class IV	9.6 miles
Class V	152.3 miles
Class VI	7.2 miles
Other	25.4 miles

Source: NHDOT (2009)

According to information (2009) provided by the NHDOT, there are 219.9 miles of roadways in the town. As indicated in Table 7.1, Class V (Town Roads) comprises the largest amount of mileage in the town with approximately 152.3 miles. Other notable roadway mileage in the town includes Class II roads (Secondary State Highway System) with 12.0 miles, Class I roads (Primary State Highway System) with 13.4 miles and Class VI roads (Un-maintained Highways) with 7.2 miles.

7.3 PROBLEM INTERSECTION LOCATIONS

In July, 2009, the Derry Planning Department submitted the following list of eight problematic intersections identified by town officials, citizens, business owners and the general public during the April 2009 Community Profile Meeting for consideration in the Master Plan update:

- Route 102 (East Broadway)/Crystal Ave./Birch Street
- Route 28(Manchester Road)/Tsienneto Road/Folsom Road
- NH 102/North Main Street/South Main Street/East Derry Road
- Kilrea Road/ Windham Depot Road/ NH 28
- NH 102/Tsienneto Road/North Shore Road
- NH 102/Fordway
- Fordway/Kendall Pond Road
- NH Bypass 28/English Range Road/ Scobie Pond Road

The SNHPC completed a detailed evaluation these locations, including a description of existing issues and proposed short and long-term improvements.

NH 102 (East Broadway)/Crystal Avenue/Birch Street

NH 102 (East Broadway)/Crystal Avenue (NH 28)/Birch Street (NH 28) is a four-way signalized intersection located in the central portion of the Town. East Broadway (NH 102) runs in an east-west direction and Birch Street and Crystal Avenue serve as northbound and southbound minor intersection legs. The eastbound and westbound NH 102 and southbound Crystal Avenue approaches consist of an exclusive left turn lane and

a through/right turn lane while the northbound Birch Street approach consists of a single general purpose lane. The area near the intersection is dense commercial development and parking is located on the west NH 102, south Birch Street and north Crystal Avenue intersection legs.

The NH 102/Crystal Avenue/Birch Street intersection currently experiences significant traffic congestion during peak hours. This congestion is the result of a combination of factors including significant local and through traffic volumes, commercial traffic including parking maneuvers and curb cuts located in close proximity to the intersection. All of these factors combine to reduce the capacity of the intersection. Intersection capacity is particularly limited on the northbound Birch Street approach, which consists of a single general purpose lane.

The NHDOT and the Town of Derry are currently collaborating on a project to reconstruct the NH 102/Crystal Avenue/Birch Street intersection. The project will include signalization improvements and a widening of the northbound and southbound intersection approaches. The southbound Crystal Avenue approach will be widened to include three lanes (exclusive right and left turn lanes and a through lane) and the northbound Birch Street approach will be expanded to include an exclusive left turn lane and a through/right turn lane. The project is scheduled for the fall of 2009.

NH 28 (Manchester Road)/Folsom Road/Tsienneto Road

The NH 28/Folsom Road/Tsienneto Road intersection is a four-way signalized intersection located just north of the central business district of the Town. NH 28 runs in a north-south direction providing access between the central business district and Londonderry while Folsom Road and Tsienneto Road serve as eastbound and westbound minor intersection legs. The northbound NH 28 intersection approach consists of exclusive left and right turn lanes and a through lane and the southbound approach consists of an exclusive left turn lane and a through lane as well as exclusive southbound right turn bay that is not controlled by the intersection signals.

The eastbound and westbound Folsom Road and Tsienneto Road approaches consist of exclusive left and right turn lanes and a through lane. The exclusive right turn lane on the westbound Tsienneto Road approach is signalized while the exclusive right turn lane on the eastbound Folsom Road approach is STOP sign controlled. The intersection has an actuated signal controller. The NH 28/Folsom Road/Tsienneto Road intersection currently experiences significant traffic congestion during peak



NH 28 Looking North at Folsom Road

hours as a result of significant local and through traffic volumes. The NHDOT, the Town of Derry and private developers are currently collaborating on a project to widen the

segment of NH 28 from south of the NH 28/Folsom Road/Tsienneto Road intersection to north of the intersection of NH 28 and Ashleigh Drive. The project will also include signalization improvements at three locations including the NH 28/Folsom Road/Tsienneto Road intersection. At this location, an additional southbound left turn lane and an additional northbound through lane will be added along with improvements to the traffic signals. The project is scheduled for 2010. Additional long-term strategies to improve operations at this location could include the I-93 Exit 4A project that would incorporate this location as a portion of the preferred alternative.

NH 102/North Main Street/South Main Street/East Derry Road

Traffic is processed by a traffic circle located just east of the town center which serves as the junction of NH 102 (Chester Road), North and South Main Street (NH 28 Bypass) and East Derry Road. Each of the five legs of the traffic circle is Yield-sign controlled and pedestrian crossings are located on the north and south portions of the traffic circle. One pedestrian crossing extends through the center island of the traffic circle, which is approximately 70 feet in diameter. The internal circulatory roadway of the traffic circle is approximately 40 feet wide and curb cuts for businesses are located on the eastbound and northbound approaches.

The NH 102/North Main Street/South Main Street/East Derry Road traffic circle currently handles significant volumes of traffic on a daily basis and congestion is particularly evident during peak hours. Additionally, the current design allows vehicles to negotiate the traffic circle at higher speeds. These factors, along with additional congestion created by curb cuts on the traffic circle, results in traffic safety and efficiency issues. This intersection has been listed as the highest accident location identified among those included in this chapter.



Southbound Approach to NH 102/Main Street/East Derry Traffic Circle

Potential mitigation at this location could include reconstruction of the current traffic circle to incorporate a more limited roundabout design, which could be completed on a temporary basis to allow for a trial operation. Construction of a more conventional signalized intersection could also be utilized to address existing issues. This redesign would likely require consideration of alternatives to incorporate the westbound East Derry Road approach into the design of a conventional four-legged intersection. Additional long-term strategies to improve operations at this location could include other projects (i.e., NH 102 access management and I-93 Exit 4A) designed to alleviate traffic congestion on the existing NH 102 corridor.

NH 28/Kilrea Road/ Windham Depot Road

NH 28/Kilrea Road/Windham Depot Road is a four-way un-signalized intersection located in the southern portion of the Town. NH 28 acts as the major intersection leg running in a north-south direction linking Derry with Windham to the south and Londonderry to the north. Windham Depot Road and Kilrea Road act as stop sign controlled minor eastbound and westbound intersection legs. In the vicinity of the intersection, NH 28 is approximately 27 feet wide with one foot gravel shoulders. Speed limits on NH 28 are posted at 45 miles per hour near this intersection and flashing red/yellow warning lights are currently in operation at this location.

The NH 28/Kilrea Road/Windham Depot Road intersection currently experiences significant peak hour delays on the eastbound and westbound Windham Depot Road and Kilrea Road minor intersection legs. These delays are the result of significant traffic volumes on NH 28. Traffic on the minor intersection legs is currently in excess of 100 vehicles during peak hours. Additionally, sight distance from the minor intersection legs looking south on NH 28 is limited to approximately 485 feet by the crest of a hill located south of the intersection.



NH 28 Looking South at Kilrea Road

The NHDOT and the Town of Derry are currently collaborating on a project to construct improvements at this intersection through the use of Highway Safety Improvement Project funding. The planned improvements, which include signalization of the intersection, are scheduled for 2010.

NH 102/Tsienneto Road and NH 102/North Shore Road

NH 102/Tsienneto Road and NH 102/North Shore Road are two three-way un-signalized intersections located in the northern portion of the Town. At the NH 102/Tsienneto Road intersection, NH 102 runs in a north-south direction and acts as the major intersection leg while Tsienneto Road acts as an eastbound STOP sign controlled minor leg. At the NH 102/North Shore Road intersection, NH 102 runs in a north-south direction and acts as the major intersection leg while North Shore Road acts as a westbound STOP sign controlled minor leg. These two intersections, which are located approximately 200 feet apart, are currently utilized as a portion of a NH 102 bypass by traffic traveling between the western and central portions of the town. In the vicinity of the intersection, NH 102

is approximately 27 feet wide with one foot gravel shoulders. Speed limits on NH 102 in the area are posted at 40 miles per hour.

Operations at the NH 102/Tsienneto Road and NH 102/North Shore Road intersections are characterized by significant NH 102 through traffic and peak hour turning movements. This traffic combines with limited sight distances to create traffic safety and efficiency issues at these locations. Sight distance looking north on NH 102 from North Shore Road is limited to approximately 615 feet by roadside vegetation and roadway curvature. Sight distance looking south on NH 102 from Tsienneto Road is limited to approximately 535 feet by roadside vegetation. Additionally, northbound left turns from NH 102 at Tsienneto Road result in through traffic utilizing the roadway shoulders at this location.



NH 102 Looking West at Tsienneto Road

Short-term strategies for improving traffic safety and efficiency at this intersection include clearing vegetation on the north side of NH 102 south of Tsienneto Road and on the south side of NH 102 north of North Shore Road in this area. Long-term strategies to improve safety and efficiency at this location could include redesign to eliminate a southbound passing zone on NH 102 in this area and engineering studies to determine if widening NH 102 to include a northbound left turn lane at Tsienneto Road is warranted.

NH 102/Fordway

NH 102/Fordway is a four way signalized intersection located adjacent to the central business district of the Town. At the NH 102/Fordway intersection, NH 102 runs in an east-west direction acting as the major intersection legs while Fordway serves as the northbound minor leg. Madden Hill Road is a narrow local roadway which acts as a one-way southbound minor intersection leg. In the vicinity of the intersection, NH 102 is approximately 42 feet wide with two foot paved shoulders. Traffic signals at the intersection are currently operated by an actuated controller. Operations at the NH 102/Fordway intersection are characterized by peak hour congestion resulting from significant through and local traffic volumes on NH 102. This portion of the NH 102 corridor currently provides access to local properties in the area and also serves as a principal arterial route for through east-west traffic.

Through the awarding of a State Planning and Research grant, the SNHPC recently completed an Access Management Plan for the portion of the NH 102 corridor including this intersection. The Plan outlined strategies for improving traffic safety and efficiency at this intersection including re-stripping the eastbound and westbound NH 102

approaches to include exclusive turning lanes, modifying intersection phasing and timing and closing the southbound Madden Hill Road approach. More long term strategies for improving the safety and efficiency of the NH 102 corridor in this area included specific access management strategies such as limits on maximum number of driveways per lot, development of frontage or service roads, shared driveways and internal connections between lots. The town is also continuing to pursue the I-93 Exit 4A project which is designed to relieve traffic on NH 102 and promote the safe and efficient movement of people, goods and services. Businesses in downtown Derry will benefit from the completion of the I-93 Exit 4A project through the reduction of traffic and related congestion and improved accessibility.

Fordway /Kendall Pond Road

Fordway /Kendall Pond Road is a four-way un-signalized intersection located in the southwestern portion of the Town. Fordway, which runs in a north-south direction in this area, provides a connection between the central portion of the town and Windham to the south. Kendall Pond Road runs in an east-west direction between Londonderry to the west and NH 28. All four approaches at the Fordway /Kendall Pond Road intersection are STOP-sign controlled. In the vicinity of the intersection, both Fordway and Kendall Pond Road are approximately 27 feet wide and provide one travel lane in each direction.

Significant traffic volumes, including heavy vehicle traffic, currently travel through the Fordway St /Kendall Pond Road intersection during peak hours. This significant traffic, combined with stopping and starting caused by the STOP-sign traffic control design, creates driver confusion and safety issues. Safety issues also result from the proximity of Blackjack Lane to the intersection. Blackjack Lane, which provides access to a trailer park, is a private road which acts as a fifth STOP-sign controlled intersection leg to complicate operations at this location.

Visibility for drivers on the southbound Fordway and westbound Kendall Pond Road approaches is also limited by roadside vegetation.



Fordway Looking North at Kendall Pond Road

Short-term strategies for improving traffic safety and efficiency at this intersection include striping stop bars for the intersection approaches and clearing vegetation on the north side of Kendall Pond Road west of Fordway and on the east side of Fordway north of Kendall Pond Road. More long-term strategies to improve operations at this location could include engineering studies designed to determine 1) if intersection signalization should be considered and 2) if intersection safety and efficiency could be improved by

developing a two-way STOP-sign controlled intersection through the creation of a major intersection leg on Fordway or Kendall Pond Road.

NH 28 Bypass/English Range Road/Scobie Pond Road

NH 28 Bypass/English Range Road/Scobie Pond Road is a four-way un-signalized intersection located in the western portion of the Town. NH 28 Bypass, which runs in a north-south direction in this area, provides a connection between the towns of Auburn, Londonderry and the City of Manchester to the north and NH 28 to the south. English Range Road runs in an east-west direction between NH 28 Bypass and NH 102 to the south. The westbound English Range Road and eastbound Scobie Pond Road intersection approaches are STOP-sign controlled. In the vicinity of the intersection, NH 28 Bypass is approximately 35 feet wide with 5-foot paved shoulders. All intersection approaches at this location provide one travel lane in each direction. Flashing red/yellow warning lights are currently in operation at this intersection. Speed limits on NH 28 Bypass in this area are posted at 45 miles per hour.

Significant volumes of traffic currently travel through the NH 28 Bypass/English Range Road/Scobie Pond Road during peak hours. A noticeable portion of this traffic consists of travel from the eastbound and westbound minor intersection legs that is utilizing Scobie Pond Road and English Range Road to bypass NH 102 in the central portion of the town. These heavy side street movements combine with NH 28 Bypass traffic and limited sight distance looking north to create safety issues. Sight distance looking north on NH 28 Bypass from the minor intersection legs is limited to approximately 590 feet by the crest of a hill.



NH 28 Bypass Looking North at English Range Road

Short-term strategies for improving traffic safety and efficiency at this intersection include additional warning signage and increasing enforcement to reduce vehicle speeds on NH 28 Bypass in this area. Long-term strategies to improve operations at this location could include reconstruction of the roadway to remove the roadway crest on NH 28 Bypass north of the intersection and other projects (i.e. NH 102 access management and I-93 Exit 4A) designed to alleviate traffic congestion on the existing NH 102 corridor.

7.4 TRAFFIC VOLUMES

The SNHPC regional traffic counting program and regional travel demand model were used to compile and develop existing and projected traffic volumes on the town roadway network. The existing volumes were developed using data gathered from the regional traffic counting program. Traffic volumes for the existing condition were projected to a 2026 “horizon” year utilizing a growth rate derived from the regional travel demand model. As included in the SNHPC Regional Transportation Plan, the 2026 traffic projections assume the completion of significant transportation projects such as the widening of I-93, the Bedford-Manchester-Londonderry-Merrimack Airport Access Road and the I-93 Exit 4A project. Existing (2007) and projected (2026) average annual traffic volumes (AADT) on selected roadways in the Town are shown on Maps 7.1 and 7.2 (at the end of this chapter) and in Table 7.2 below.

Table 7.2
Existing (2007) and Projected (2026) AADT Traffic Volumes

Description	2007 Traffic Volumes	2026 Traffic Volumes
NH 102 East Broadway West of NH 28 Bypass	15200	16400
NH 102 East Broadway East of NH 28 Crystal Ave	13000	13100
NH 102 Nashua Road at Derry T/L	24000	21000
Folsom Road South of NH 28	11000	25000
Pinkerton Street South of Tsienneto Road	9700	12400
NH 28 Bypass North Main Street North of Pinkerton Street	7800	4500
NH 28 Bypass South Main Street South of East Derry Rd	11000	11900
Fordway St South of NH 102 West Broadway	7700	10000
NH 28 Bypass North Main Street North of Tsienneto Road	12000	8000
Scobie Pond Road West of NH 28 Bypass Londonderry TPK	3500	2300
Kendall Pond Road West of Derryfield Road	5900	5400
English Range Road East of NH 28 Bypass Londonderry TPK	3400	2500
High Street North of Beacon Street	2700	3100
Hampstead Road East of Floyd Road	6300	10500
A Street West of NH 28 Manchester Road	2500	4900
NH 28 Birch Street South of Wilson Avenue	12000	14700
Tsienneto Road North of Pinkerton Street	15000	16000
Tsienneto Road West of NH 102 Chester Road	5800	10900
Gulf Road South of Island Pond Road	1200	1300
Island Pond Road East of NH 28 Tpk	6000	7900
Lawrence Road East of NH 28 Londonderry Tpk	1700	2100
Drew Road East of Island Pond Road	800	1200

The State of New Hampshire Ten Year Transportation Improvement Plan includes an evaluation of existing traffic congestion and operational data for the State highway system and information on Derry major highway links is included in this evaluation. In the document, congestion is measured by level of service, which is an indication of how

well traffic flows on the highway system. Level of Service (LOS) is expressed by a letter grade with LOS A representing little or no congestion and LOS F representing a roadway link operating at capacity. Information presented for Derry indicates that portions of NH 102, NH 28 Bypass and NH 28 in Derry are reported as operating with moderate congestion (LOS C & D) and the portion of I-93 within the town is reported as operating at capacity (LOS E & F).

7.5 TRAFFIC ACCIDENTS

Crash data for Derry for the period 2003 to 2005 was obtained from the NHDOT. According to the data, a total of 1,799 accidents occurred in the Town during this three-year period. The highest accident total was recorded in 2005 when 696 accidents were reported and the lowest accident total reported was 438 in 2004. Approximately 47 percent of the total accidents reported resulted in personal injuries. A summary of the accident totals for the years 2003 to 2005 is presented in Table 7.3 below.

Table 7.3
Total Reported Accidents
2003-2005

Year	Total Number of Accidents Reported
2003	665
2004	438
2005	696

Source: NHDOT

Crash data for the period 2003 to 2005 was also used to identify high accident intersection locations within the Town. Map 7.3 and Table 7.4 present a listing of the high accident intersection locations for this period. The table indicates that, during this period, NH 102/North Main Street/South Main Street/East Derry Road (Traffic Circle) experienced the greatest number of crashes with 47 reported accidents. Additionally, the intersections of NH 28 (Manchester Road)/A Street and NH 28 (Manchester Road)/Linlew Drive and NH 28/English Range Road/Scobie Pond Road intersections reported 28 and 26 accidents respectively.

Table 7.4
Intersection Accident Locations
2003-2005

Location	2003	2004	2005	Total
Adams Pond Road at Hampstead Road	5	3	4	12
NH 28 Crystal Avenue at Pearl Street	6	4	2	12
Island Pond Road at Lawrence Road	3	4	3	10
NH 28 Manchester Road at A Street	7	10	11	28
NH 28 Manchester Road at Linlew Drive	9	7	10	26
NH 28 Manchester Road at Scobie Pond Road	9	9	8	26
Bypass 28 North Main Street at Pinkerton Street	6	5	7	18
Bypass 28 North Main Street at Tsienneto Road	5	7	7	19
Pinkerton Street at Tsienneto Road	7	5	7	19
NH 28 Rockingham Road at Kilrea Road	7	8	2	17
South Avenue at Railroad Avenue	5	4	2	11
Chester Road at Tsienneto Road	3	8	3	14
Folsom Road at Franklin Street	5	7	6	18
North Main Street at Nesmith Street	5	5	8	18
NH 102/North Main Street/South Main Street/East Derry Road	9	18	20	47

Source: NHDOT

In the three year period from 2003 to 2005, a total of 9 reported fatal accidents occurred in Derry. Table 7.5 identifies the location of these accidents and when they occurred.

Table 7.5
Total Reported Accidents
2003-2005

Year	Fatalities	Location
2003	1	NH 28 at Daniel Road
2004	4	Rockingham Road 280 F/N Mark Ave
		St. Charles Street at Aiken Street
		Interstate 93 at mile marker 9.8
2005	4	Adams Pond Road at Hampstead Road
		Back Chester Road 2000 F/N Old Chester Road
		Chester Road 600 F/W Old Auburn Road

7.6 BRIDGES

Based on information contained in the NHDOT Municipal Redlist report and additional information obtained from the Town of Derry, there is currently one bridge structure being monitored in Derry. The structure carrying Florence Street over Shields Brook in the southeast portion of the Town is a structurally-deficient bridge included on the NHDOT's Municipal Redlist bridge summary. The inclusion of the bridge on the Redlist identifies it as a structure requiring more frequent inspections because of known

deficiencies such as poor structural condition, weight restriction or type of construction. This bridge, which is owned and maintained by the municipality, was most recently inspected in October 2008. The Town of Derry began repairs to the structure in August/September 2009. The project, scheduled for completion in November 2009, involves closing the bridge for four to six weeks.

Additionally, the Town of Derry is currently conducting a project to replace the bridge carrying Fordway over Beaver Brook. Improvements are required to replace the existing structurally-deficient bridge with a new structure that can safely carry current statutory loading requirements. Design of the improvements is anticipated in December 2009 and construction is scheduled to begin in the spring of 2010. The rehabilitation of the bridge carrying South Avenue over Shield Brook has been identified as an eligible State Bridge Aid project. The design of the improved structure is underway and construction is currently scheduled for late 2010 or spring 2011.

7.7 OTHER TRANSPORTATION MODES

The single-occupant automobile is the primary mode of transportation for the majority of travel in the SNHPC region, including the Town of Derry. Even though the town is almost exclusively dependent on personal vehicles for transportation purposes, the town can encourage the use of alternative modes of transportation by continuing its participation in planning processes sponsored by the SNHPC. These processes are designed to address various goals contained in the SNHPC Regional Transportation Plan including “[T]o assist in the development of a safe, secure, efficient, accessible, and coordinated multi-modal transportation system that provides for the cost-effective movement of people and goods within and through the region”. The following sections present information on various alternative modes of transportation in Derry and in the SNHPC region.

Ride Sharing

The nearest Park and Ride facilities are located in Londonderry at Exit 4 and 5 off of I-93. These facilities are used predominantly for north/south travel as a commuter option into Massachusetts. Additionally, the NHDOT has a free commuter matching services dedicated to finding an alternative way for commuters to travel to and from work. The NHDOT rideshare program uses “Geographical Computer Matching” providing commuters with resources and information regarding alternatives to the single occupancy vehicle including carpools, vanpools, busses and trains.

Public Transportation

There is currently no regularly scheduled fixed-route bus service in Derry. Through the SNHPC and RPC, the town of Derry is involved in an effort initiated by the New Hampshire Department of Health and Human Services and the NHDOT to coordinate community transportation. In 2006, the NHDOT, under the guidance of the Governor’s Task Force on Community Transportation, began a statewide coordination study of

human services transportation. The study grew from the results of the Statewide Transit Coordination Study. The Task Force was developed to carry on the work originally begun in the Coordination Study and develop an action plan to modify the organization of community transportation in the State and improve service efficiency and quality. Based on the recommendations of the study, the State would be broken down into eight to ten Community Transportation Regions, each composed of a Regional Transportation Council (RCC) made up of funding agencies, service providers and other stakeholders. Derry is currently included in Region 9 and as a result, can participate in the development of the RCC for this region.

Since October 2006, the mobility demands of seniors and others who need transportation has been met through the formation of the Cooperative Alliance for Regional Transportation (CART). CART is the product of a five-year planning process that resulted in the establishment of the alliance through enabling legislation passed by the NH General Court in June 2005. CART has been designed to 1) coordinate existing agencies currently providing van services to senior citizens, the disabled and other transportation-dependant people in the area and 2) expand the level of service available by leveraging federal transit funds available to the region. CART currently provides transportation for residents of a seven-town service area and also provides out-of-region rides to medical destinations in Manchester and Plaistow in New Hampshire and Haverhill, Methuen and Lawrence, Massachusetts. CART is fully certified by the Federal Transit Administration (FTA) and receives federal FTA funding. Derry, as one of the towns included in the service area, has committed to participating in the program.

The Salem Employee Trip Reduction Integration Program, which is designed to mitigate congestion on the NH Route 28 corridor, includes establishment of a fixed-route bus service between Salem and Derry, which is the largest source of commuters to jobs in Salem outside of the town of Salem itself. A study undertaken by the town of Salem includes a plan to organize and establish a fixed-route transit system is nearing completion. The transit component of the SE-TRIP project is funded by a \$920,000 CMAQ grant.

Bicycling

The SNHPC recently assisted the NHDOT in an update of the State Bicycle Route Maps, last updated in 2001. The update was designed to create user friendly bicycle maps to increase the use of this alternative mode of transportation. The NHDOT asked each State regional planning commission to recommend bicycle routes in their region and evaluate them through a public process. In November 2006, the SNHPC sent out a Request of Action to member communities for input on recommended changes and/or additions to the existing routes.

The SNHPC received recommendations from member communities which were forwarded to the State Bicycle Map Update Steering Committee. The steering committee met on several occasions to review the work and ensure that the all recommendations and suggestions were addressed. To identify the bicycle routes, the steering committee

reviewed several different layouts including information such as color schemes for topography, state parks and level of riding difficulty. In early 2007, public meetings were held to display the maps and receive comments. Following this process, the steering committee met to review public comments and address any remaining issues. The updated maps, which also include transit and passenger rail information, were released to the public in April 2008.

A number of roads in Derry are currently designated as part of the Statewide Bicycle Route System. State highways in Derry currently designated as Recommended Bicycle Routes (paved) includes a short portion of NH 102 from approximately Nesmith Street to English Range Road. Local roads in Derry included as Recommended Bicycle Routes (paved) include Ash Street, English Range Road, Back Chester Road, Walnut Hill Road, Lawrence Road, Frost Road, Gulf Road and Drew Road.

Air Transportation

Derry residents have access to passenger air services from Manchester-Boston Regional Airport (approximately 13 miles), Logan Airport (approximately 44 miles), and the Portland International Jetport (approximately 99 miles). Several major carriers currently serve both Manchester-Boston Regional Airport and Portland International Jetport.

Passenger Rail Service

The Amtrak Downeaster offers five round-trip journeys every day between Boston and Portland. Derry residents have access to this service via station stops in Dover and Exeter. The Downeaster is operated through funds made available by the Northern New England Passenger Rail Authority.

The SNHPC, working to establish inter-city rail service to the area, has participated, along with the Governor's Office, the City of Manchester and Manchester-Boston Regional Airport, in a Passenger Rail Task Force. The New Hampshire Rail Transit Authority, comprised of members from various municipalities and organizations within the State including the SNHPC, is also now addressing the significant hurdles remaining to the establishment of service.

In conjunction with the reconstruction of Interstate-93, NHDOT in cooperation with the Massachusetts Executive Office of Transportation, FHWA and FTA, conducted a Transit Investment Study to identify what transit investments are needed and feasible to accommodate future travel demand within the I-93 corridor. NHDOT provided oversight to the study along with a Stakeholder Committee that included SNHPC. The study, which began in August 2006, included the development of the Purpose and Needs statement, setting goals and objectives, identifying issues, developing and implementing a Public Involvement Plan, collecting and analyzing data, and developing the initial alternatives. A second phase, which included refining alternatives, developing draft recommendations, and developing the travel demand model and alternative analysis, was followed by development of a strategic plan. The study included evaluation of passenger

demand for station locations at numerous including Derry and general station recommendations. The final strategic plan included phased implementation of a “Bus On Shoulder” alternative and pursuit of funding and bi-state agreements for development of a future rail alternative.

7.8 TRANSPORTATION ISSUES

Regional Transportation Plan and Funding

Through involvement and participation in the regional transportation planning program managed by the SNHPC, Derry has input into the development of funding for local and state transportation projects. Existing federal and state funding sources include:

1. State Aid Construction funds are provided for improvement of sections of the state secondary, Class II highways. The ratio of state to town matching funds is based on the assessed valuation of the municipality and varies from a 2 to 1 ratio in small towns to a 1 to 1 ratio in large municipalities.
2. Highway Block Grant Aid funds are apportioned to all cities and towns on a yearly basis for the construction, reconstruction and maintenance of Class IV and V highways on a formula based on population and mileage.
3. Federal Aid Bridge Replacement funds are available for replacement or rehabilitation of town bridges over 20 feet in length. State Bridge Aid funds may be used to match these funds.
4. The DOT’s Bureau of Municipal Highways funds can be used for local roadway improvements in need of prompt attention.
5. In special circumstances, a community may receive congressionally mandated funds for special projects. When a member of the US Congress is interested in a particular project, the representative can insert special legislation for the project into the transportation authorization bill.

The 2007 Town of Derry Zoning Ordinance describes the Town’s impact fee ordinance for public capital facilities. The ordinance gives the town the authority to assess impact fees on public road systems and rights of way to compensate for the affect the new development will have on the town’s existing road network. The ordinance includes the Planning Board’s authority to require a fee payer to construct an off-site improvement that is “necessitated by the new development itself and which would not otherwise be constructed by the Town (e.g. streets, turning lanes, curbs, sidewalks, street lights, street signs, traffic signals, or other off-site improvements)”.

Access Management/Roadway Design

Communities throughout New Hampshire are becoming increasingly concerned with the relationship between transportation and land use. Without proper planning and recognition of this relationship, a cycle can be created where transportation improvements lead to new land use, subsequent traffic increases and the need for further improvements. Haphazard and unplanned development along highway corridors also results in increased traffic congestion and travel times. Balancing mobility and access needs requires coordination of land use planning and planning of the adjacent transportation infrastructure. Communities can adopt a more proactive management of their local and state highways by adopting appropriate land use tools prior to new development.

Access management, which involves the planning and coordination of access points between a roadway and adjacent property, includes consideration of factors such as the location, spacing, design and number of access points. Access management generally includes treatments such as maximum number of driveways per lot, development of frontage or service roads, shared driveways and internal connections between lots. These tools are utilized to develop proper continuation of streets, separation of through and local traffic and provision of driveway connections to adjoining lots of similar use. A well-developed access management plan will balance the mobility and access needs of the roadway to improve through traffic and enhance safe and efficient access to properties. Businesses as well as the community at-large will also derive economic benefit from improved access and connectivity resulting from the implementation of such techniques. The SNHPC has previously assisted the City of Manchester to develop an access management plan for the NH 28 corridor and recently provided assistance to the Town of Derry on a plan for the NH 102 corridor.

Planning for good access management involves cooperation between State and local authorities. NH RSA 236:13 authorizes the NH DOT to regulate and grant access to state highways and provides a permitting process that examines a number of factors including sight distance, number of permitted driveways, drainage requirements and minimum geometric standards for commercial driveways. In addition, the town can rely on its general planning and land use authority under NH RSA 674 and 675 to manage highway access. The following specific land use tools can be used to manage access on a transportation corridor during the development process:

Zoning

- 1 Adequate setbacks should be required to allow for flexibility in locating driveways, future frontage road construction and to accommodate for future widening for sidewalks and bicycle paths;
- 2 Increasing the frontage reduces the potential number of access points on the corridor;
- 3 Inappropriate signage can create visual confusion and create potential traffic hazards;

- 4 An Access Management Overlay District can address a number of issues such as encouragement of joint access, interconnecting driveways, spacing of driveways and limitation on new driveways;
- 5 A Mixed Use Zoning approach can reduce the number of vehicle trips.

Site Plan Review

- 1 Minimum distances between driveways;
- 2 In order to minimize the number of driveways, shared driveways should be encouraged for adjacent sites;
- 3 In anticipation of future developments, proposed developments under site plan review should incorporate interconnecting driveways in order to promote vehicular and pedestrian access between adjacent lots;
- 4 On site circulation should be planned to accommodate pedestrians who prefer to park and walk from one shop or business to another;
- 5 Require extensive landscaping and buffering as an access management tool.

The town currently enforces construction standards for driveways that specify criteria such as sight distances, driveway widths and number of allowable driveways per lot. Additional information regarding access management is available in “Innovative Land Use Planning Techniques – A Handbook for Sustainable Development” prepared by NHDES in association with the NH Association of Regional Planning Commissions, the NH OEP and the NH Local Government Center. The town can also provide a safe, efficient roadway network while minimizing its footprint on the open landscape through the use of cluster developments and other site design alternatives that emphasize more efficient use of land and interconnectivity of roadway networks.

Network connectivity refers to the extent of the directness of connections in the roadway network. A roadway network with a high degree of connectivity is characterized by minimal dead-ends or cul-de-sacs and one or more connections along most roads. Increased connectivity provides travelers with route options resulting in a greater distribution of all vehicle trips. Network connectivity refers not only to streets within a neighborhood but also to connections with arterials and links to other portions of the Town.

A roadway network demonstrating a high level of connectivity discourages through traffic volumes and provides a sense of security for travelers. It is typically associated with cul-de-sacs if designed with short blocks, “T” intersections, narrower travel lanes and other features that provide traffic calming. The adoption of standards or goals for street connectivity during subdivision design can lead to increased safety and connectivity. Improved network connectivity can also improve pedestrian accessibility and emergency access. New connections with existing cul-de-sacs also provide improved vehicular and pedestrian access.

The benefits of improved network connectivity can work in a rural setting through the establishment of a community vision for development patterns. Planning a future street

network also provides an opportunity to develop a connected transportation network for pedestrians, bicyclists and vehicles. A well-planned street network with fewer streets also creates opportunities for more open space, retains rural character and reduces maintenance costs.


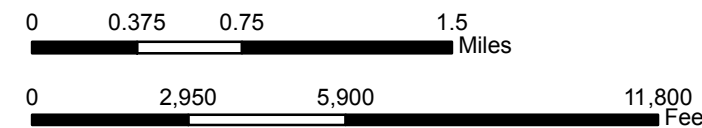
In 2007, the SNHPC collaborated on development of alternative geometric roadway design standards for low volume residential streets. The standards were developed to 1) incorporate the concept of low-impact design as a means of promoting the construction of sustainable residential neighborhoods and 2) promote the creation of aesthetically enhanced residential environments while recognizing the needs of motorists to safely and efficiently travel low volume residential streets. The intent of these standards is to create low-impact residential neighborhoods with enhanced “livability” for residents that realize complimentary relationships between a neighborhood and its streets.

Recommendations

- Address the traffic and safety concerns at Danforth Circle, Tsienneto Road at Crystal and Route 102.
- Continue to plan for short and long term improvements for the identified 8 problematic intersections.
- Continue to request projects that mitigate traffic congestion be included in the NH DOT 10 year highway plan.
- Continue work on the bike trail.
- Continue involvement and participation in the regional transportation funding programs for local and state transportation projects.
- Implement land use tools to manage access on a transportation corridor during the development process.

2007 AADT

2007
Annual Average Daily Traffic

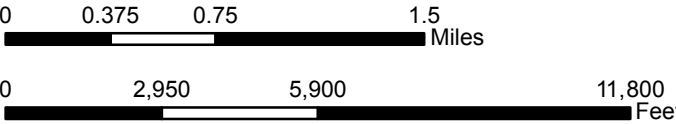


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Map 7.2

2026 Projected AADT
Town of Derry

2026
Annual Average Daily Traffic

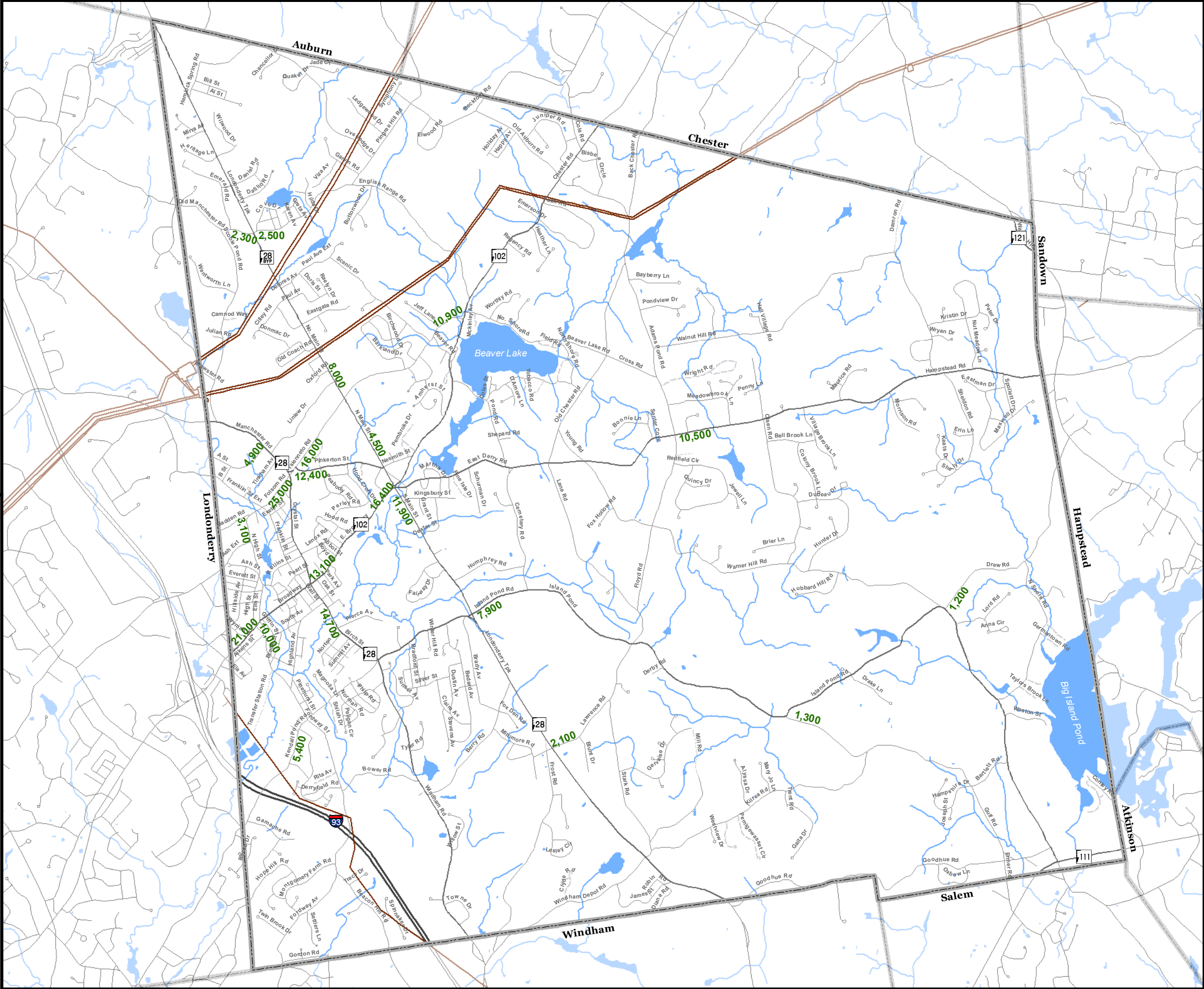


Data Sources:
Granit Digital Data (1:24,000)
NH Department of Transportation
Individual Community Parcel Data
Natural Resources Conservation Services Soil Survey

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Map produced by SNHPC May 2009.

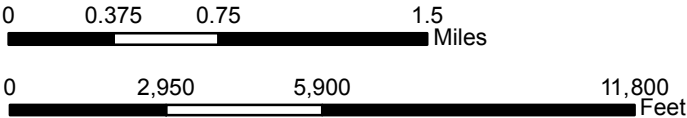
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High Accident Locations

Town of Derry

● Accident Locations

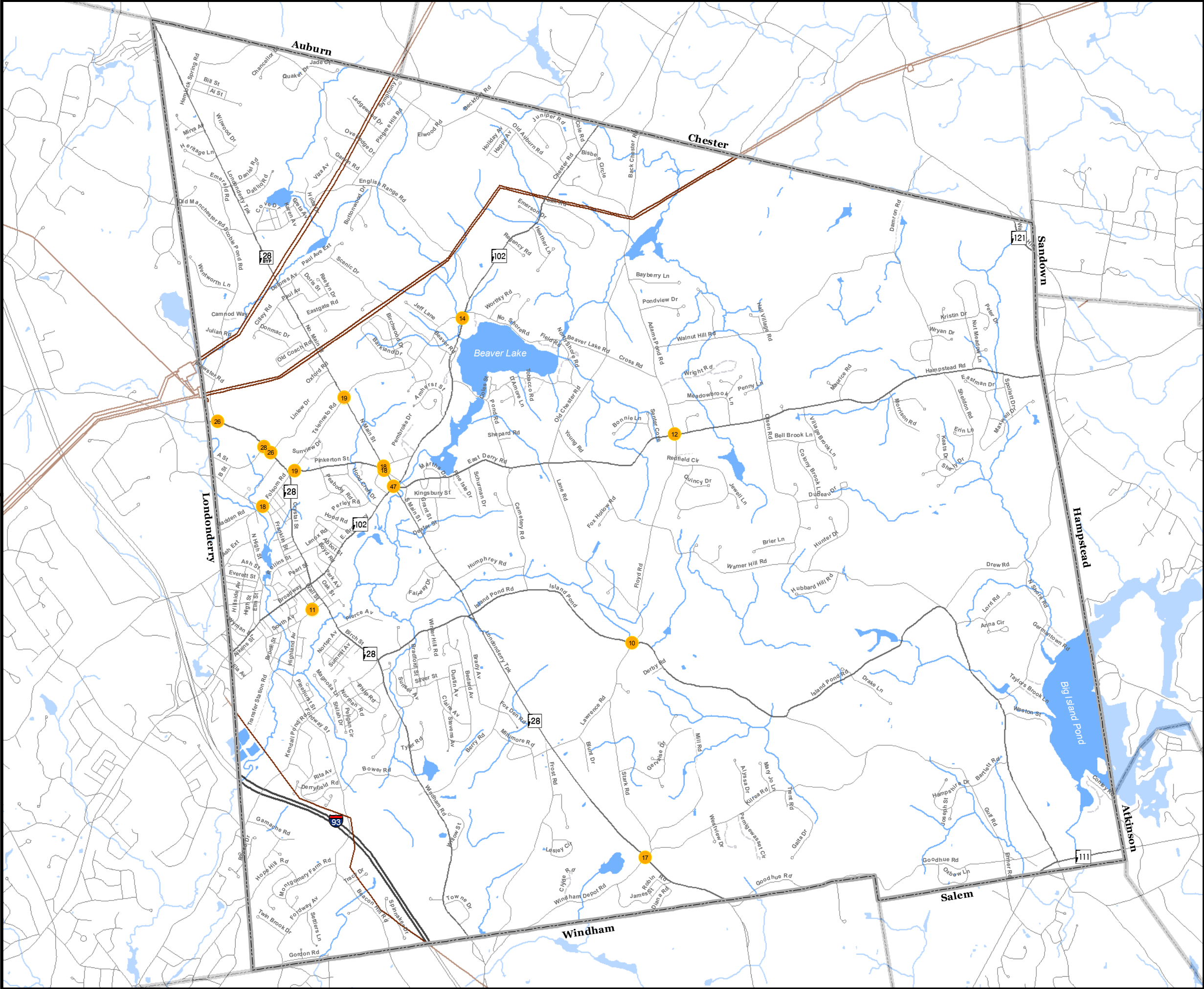


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NH Department of Transportation
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Chapter 8

NATURAL RESOURCES

8.0 INTRODUCTION

Derry's natural resources are an important consideration in estimating the town's capacity for growth and development potential. Natural resources such as slope, soils, vegetation, wildlife and water resources add to Derry's character, provide recreational opportunities and contribute to the quality of life for Derry residents. Steep slopes and wetlands, for example are less suitable for development, while better drained, flatter



areas are more suitable. Thus, the natural resources base of Derry provides an important factor as the basis for the local land use decisions. The following is a description and analysis of Derry's natural resource base.

Source: Beaver Lake Watershed Partnership

Community Survey

In the fall of 2008, a Community Survey was made available to the public at Town Hall, the Library, the Recreation Dept and via the Town website. A total of 1000 surveys were distributed and the town received 89 responses, for a return rate of 9 percent. The following questions and responses are those on the survey that relate to Natural Resources in the Town of Derry.

How important to you is the preservation of additional open space in Derry?

Additional Open Space	Total	%
Very Important	7	58
Important	2	17
Somewhat Important	2	17
Not Important	1	8
Don't know	0	0
Total	12	100

How should open space preservation be funded? (Select all that apply)

Funding for Open Space	Total	%
Through Donations	72	81
Through Grants	68	76
Through Easements	51	57
Through current use change tax fund	32	36
Through a bond issue	19	21
Through general tax revenue	18	20

The majority of the respondents felt that it was very important to preserve additional open space in Derry and they felt that this should be funded through donations, grants and easements.

Please indicate the level of importance you feel the Town should devote to the following natural resource and open space protection methods:

Natural Resources and Open Space	Very Important	Important	Somewhat Important	Not Important	Don't Know
Protect drinking water supply and aquifers	72%	18%	7%	0%	0%
Protect lakes and other surface waters	63%	25%	8%	0%	0%
Promote fish and wildlife management	39%	36%	19%	2%	0%
Protect wildlife corridors and habitats	51%	27%	17%	5%	0%
Preserve and protect forested areas	49%	28%	18%	1%	0%
Preserve agricultural lands	53%	24%	17%	2%	0%
Preserve open fields	49%	25%	16%	6%	1%
Maintain outdoor recreational areas	45%	29%	20%	2%	0%
Protect prime wetlands	49%	29%	15%	5%	0%
Discourage hillside and steep slope development	38%	25%	10%	6%	0%
Preserve open space through conservation easements	33%	26%	15%	6%	3%
Preserve open space through outright purchase of land	26%	20%	26%	15%	1%

The majority of respondents felt it was very important to protect drinking water supply and the aquifers and to protect lakes and other surface waters. About half to more than half of the respondents felt it was very important to protect wildlife corridors and habitats, preserve and protect forested areas, preserve agricultural lands, preserve open fields and to protect prime wetlands. The respondents did not feel it was as important to maintain outdoor recreational areas, promote fish and wildlife management, discourage hillside and steep slope development, or preserve open space through conservation easements or outright purchase of land.

Community Profile

During the Our Town – Our Future community profile event held on Saturday, April 4, 2009, residents expressed a desire to protect natural resources. On April 29, 2009, a follow up meeting was held with approximately 50 residents in attendance. During that meeting, eight subcommittees were formed. The goals are to develop a comprehensive economic development vision or plan, analyze traffic and safety studies, create a community and volunteer outreach coordinator, review planning and zoning regulations and find opportunities for improvement, purchase and redevelopment of property located in Derry's downtown, create a community wide calendar, create a community center, and to implement the Beaver Lake Management Plan. One of the subcommittees was the Natural Resources Committee, which developed the following goals or projects with the intent of engaging Derry citizens in sustainable care of its natural resources.

Projects that have been targeted include implementing the Beaver Lake Watershed Management Plan as part of the town's Master Plan, completing and enacting the open space zoning amendment and educating the community (adults and children) on environmental sustainability as a guiding principal¹.

The Beaver Lake Watershed Management Plan was carefully researched and developed over a two-year period by the Beaver Lake Watershed Partnership and paid for by a grant given by the New Hampshire Department of Environmental Services and funded by the Environmental Protection Agency. The Beaver Lake Improvement Association, made up of residents and friends of Beaver Lake and home to the Beaver Lake Watershed Partnership, acts as stewards of the plan and has taken on and carried out many of the outlined goals. However, the BLWMP is a long-term plan and should be in the care of the town.

The Natural Resources Committee would like to see the enactment of the proposed Open Space Ordinance as part of the Town of Derry Zoning Ordinance. This ordinance was prepared over a series of Planning Board workshops during 2007 and 2008. The draft ordinance would need to be approved by Town Council before it can be included in the Zoning Ordinance. The Natural Resources Committee also recommends the adoption of the Open Space Plan which is a long term plan to connect green space in the Town of Derry. The drafting of the plan was funded by the New Hampshire Department of Transportation as part of the Community Technical Assistance Program and is a much needed tool for the long term health of Derry's ecosystem.

¹ The following information regarding projects and goals has been supplied by the Natural Resources Committee.

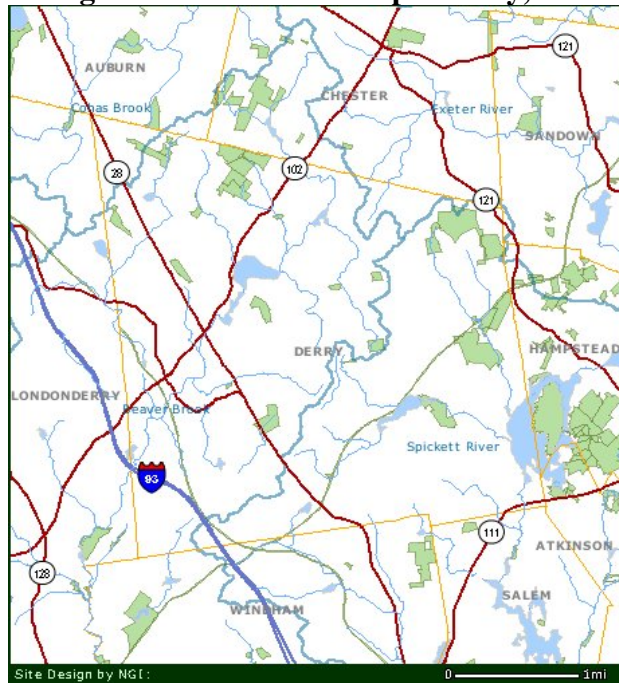
As a third goal, the Natural Resources Committee recommends the establishment of a commission or committee to work to create and introduce to the school district environmentally based educational programming. This program would teach sustainability and an understanding of environmental issues, while utilizing the town's natural resources as a classroom without walls. The Committee recommends this group include members of the Conservation Commission, the Beaver Lake Improvement Association and the members of the school district (teachers, Superintendent, and School Board members). Teaching the children of Derry to care for and value the resources in their own backyard will in turn sustain all three parts of the Committee's goals and protect Derry's natural resources for generations to come.

8.1 Topography and Slopes

The Town of Derry is located in the south-central portion of the State of New Hampshire in Rockingham County. Derry is bordered by the towns of Chester and Auburn to the north, the Town of Londonderry to the west, the towns of Windham and Salem to the south, and the towns of Atkinson, Hampstead and Sandown to the east. It is located about 10 miles southeast of the City of Manchester and about 13 miles northeast of the City of Nashua.

According to the United States Census Bureau, the Town of Derry has a total area of 36.7 square miles, of which 35.8 square miles is land and 0.9 square miles is water, comprising 2.45% of the town. Derry is drained by Beaver Brook. Elevations in the town range from 282 feet above sea level to 605 feet above sea level at the top of Warner Hill, the highest point in town, where one can see the Boston skyline on a clear day. Derry lies almost fully within the Merrimack River Watershed, with a small section along the northern border of town lying in the Piscataqua River Watershed. The urban part of the town, defined as a census-designated plan (CDP), covers an area of 15.7 square miles, which is about 42.8% of the town. 15.4 square miles of the CDP is land, and 0.2 square miles of it is water. Derry is crossed by Interstate 93, New Hampshire Route 28 and New Hampshire Route 102. Primary highway access is provided in part by U.S. Interstate 93, which runs north-south through the southwestern part of Town. Route 28 Bypass connects Derry with Auburn to the north and Windham to the south, and Route 102 provides access to Londonderry to the west and Chester to the east.

Figure 8.1 - Location Map – Derry, NH



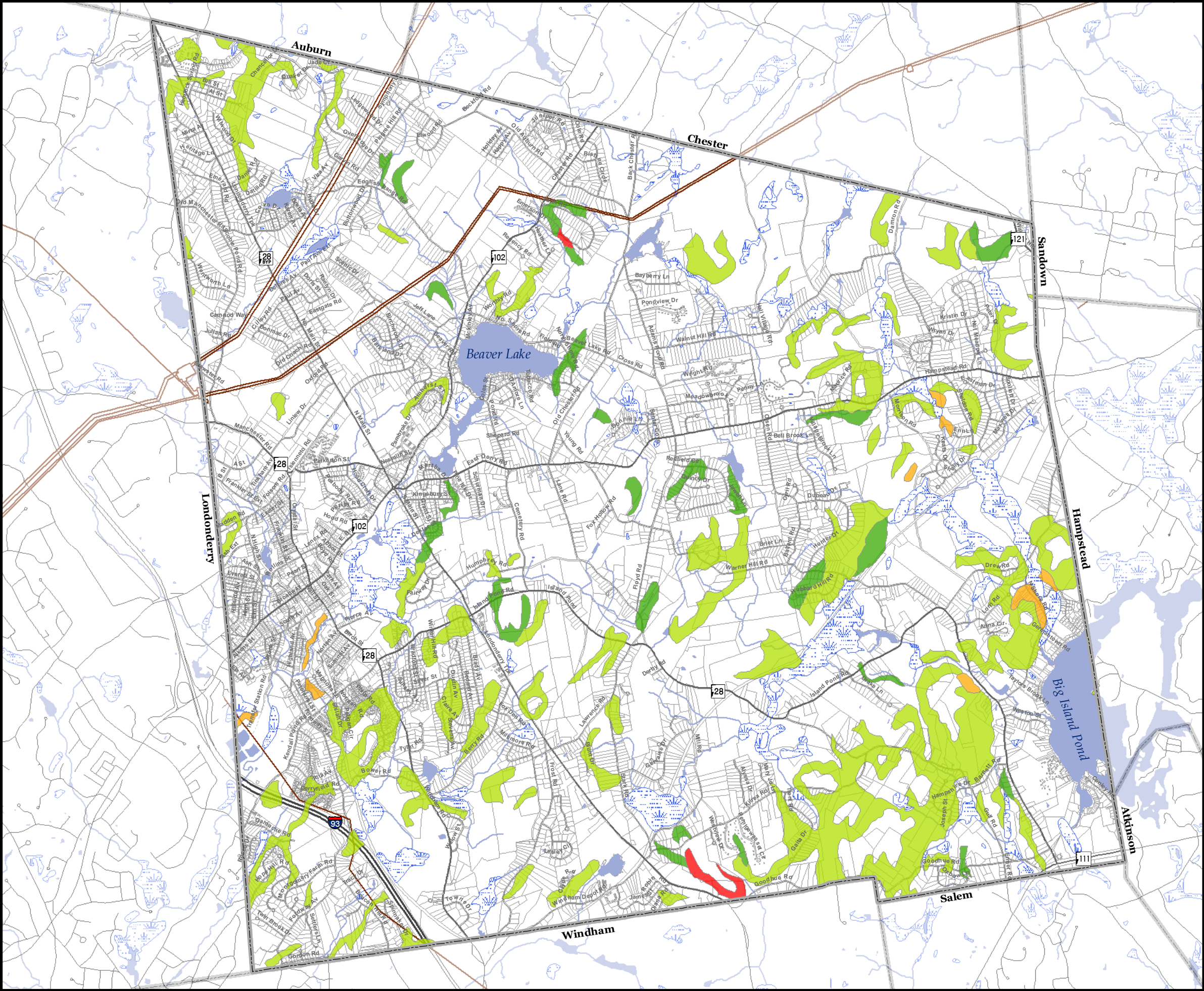
Location Map of Derry, New Hampshire²

The principal watercourses within the Town of Derry are Beaver Brook and Hornes Brook. Beaver Brook originates at the outlet of Beaver Lake and flows in a southwesterly direction for four miles before entering the Town of Londonderry. Hornes Brook originates at Hornes Pond in Derry and flows in a southerly direction before emptying into Beaver Brook.

The Beaver Brook floodplain ranges in width from 20 to 2,900 feet. This floodplain is primarily open or wooded, with some residential and commercial development. The Hornes Brook floodplain ranges in width from 20 to 350 feet, and consists of residential and commercial development. The floodplains of the remaining streams in Derry average 350 feet in width. They are wooded and contain sparse residential development.

The Town is characterized by stratified and unstratified material deposited by a receding glacial ice sheet. Irregular slopes, coarse soils, occasional outcrops of bedrock, and boulders are common.

² Map courtesy Complex Systems Research Center



Map 8.1

Steep Slopes

Town of Derry

Town Boundary

Parcel

Utility Lines

Rivers and Streams

Steep Slopes

15% - 25%

15% - 35%

15% - 60%

25% - 35%

Waterbodies

Lake/Pond

Swamp/Marsh

Roads

Highway

Major Roads

Minor Roads

Class VI

Private Roads

00.3750.751.5

Miles

02,9505,90011,800

Feet

Data Sources:
Granit Digital Data (1:24,000)
NH Department of Transportation
Individual Community Parcel Data
Natural Resources Conservation Services Soil Survey

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Map 8.1 above shows the areas of steep slopes in the Town of Derry. As we can see from this map there are very few areas with slopes over 25% (red). The Land Development Control Regulations in Derry define slopes as “The average steepness of the land surface under consideration. For the purpose of determining lot size categories, slope shall be determined by slope factors used by the National Cooperative Soil Survey soil classification (where B=0-8%; C is greater than 8% and less than 15% and less than 25%; and E is greater than or equal to 25%).”³

8.2 Wetlands

Soils in Derry are very acid and are associated with swamps and wetlands. Wet swamp areas and kettle-hole ponds serve as the headwaters for many streams in the area. These swamps and ponds provide large amounts of natural storage and reduce peak discharges.

As defined by the United States Environmental Protection Agency (EPA) “wetlands are areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.”

Map 8.2 (following pg. 8-9) shows the wetlands in Derry, as designated by the National Wetland Inventory and those designated as prime wetlands by the Town. RSA 482-A: 15 allows municipalities to designate “prime wetlands” within their community because of their fragility, size, uniqueness, or unspoiled character.

Prime Wetlands Designation⁴

Prime wetlands are designated by a municipality according to the requirements of RSA 482-A: 15 and Chapter Env-Wt 700 of the DES administrative rules. The municipality chooses to evaluate the wetlands within its boundaries. Typically, the evaluation method used is Method for Comparative Evaluation of Nontidal Wetlands in New Hampshire (1991) or Method for the Evaluation and Inventory of Vegetated Tidal Marshes in New Hampshire (Coastal Method) (1993). Field and “desktop” data are used for the evaluation process. The municipality evaluates the functions and values of the identified wetlands. Once the community has selected wetlands to designate as prime, the municipality holds a public hearing before the residents of the community vote on the designation. Once the municipality approves the wetlands for designation as prime, the municipality provides to the DES Wetlands Program a copy of the study and tax maps with the designated prime wetlands identified. DES will review the submission from the municipality to ensure that it is complete and in accordance with Env-Wt 702.03.

³ Town of Derry, NH. Land Development Control Regulations. July 16, 2008.

⁴ New Hampshire Department of Environmental Services. Wetlands Bureau.

Permitting

Once the submission is considered complete, DES will apply to any future projects that are in or within 100 feet of a prime wetland the rules and law that are applicable. All projects that are in or within 100 feet of a prime wetland are classified as major projects. All major projects require a field inspection by DES and all prime wetland projects require a public hearing to be conducted by DES.

Existing Protections

New Hampshire RSA 482-A: 1-482-A: 15⁵ requires a permit from the Wetlands Bureau for all construction, dredging, excavation, filling, or removal of soil in or from wetlands. Under the permit review process, the applicant must show that the proposed project, either alone or in conjunction with other human activity, will not impair the effectiveness of the value of the wetland's natural functions.

In addition to state and federal regulations, Derry has adopted a Wetlands Conservation Overlay District, a Floodplain Development District, a Groundwater Resource Conservation District and a Conservation Corridor Overlay District. The purpose of these Districts is described below.

Wetlands Conservation Overlay District⁶

By the authority granted in RSA 674:16-17 and 674:20-21, and in the interest of public health, convenience, safety, and the general welfare, the Wetlands Conservation Overlay District is established in order to regulate the use of land areas subject to extended periods of high water table, flooding, or standing water. It is the intent of this district to:

- A. Prevent the development of structures or other land uses on naturally occurring wetlands which would contribute to the pollution of surface water and groundwater.*
- B. Prevent the alteration of natural wetlands which provide flood protection, recharge of groundwater supply, or augmentation of stream flow during dry periods.*
- C. Prevent unnecessary or excessive expenses to the Town to provide and maintain essential services and utilities which could arise because of inharmonious use of wetlands.*
- D. Encourage those uses that can be appropriately and safely located in wetland areas.*
- E. Create an undisturbed and natural buffer to the prime wetlands.*
- F. Protect unique and unusual natural areas.*
- G. Protect wildlife habitats and maintain ecological balances*

Floodplain Development District

⁵ Full details about state wetland regulations are available at www.des.state.nh.us/wetlands

⁶ Town of Derry, NH. Zoning Ordinance. July 5, 2007.

All proposed development in any special flood hazard areas shall require a permit. The Building Inspector shall review all building permit applications for new construction or substantial improvements to determine whether proposed building sites will be reasonably safe from flooding.

Groundwater Resource Conservation District

By the authority granted under RSA 674:21, I (j), Environmental characteristics zoning, and RSA 674:16, Grant of power, as amended, and in the interest of the public health, safety and the general welfare, the Groundwater Resource Conservation District (GRCD) is established to protect, preserve and maintain existing and potential groundwater resources and primary groundwater recharge areas within this district, known as "aquifers," from adverse development, land use practices or depletion. Derry's Master Plan, 1994 update, adopted June 1994, and the Water Resource Management and Protection Plan, adopted 1989, propose such protection.

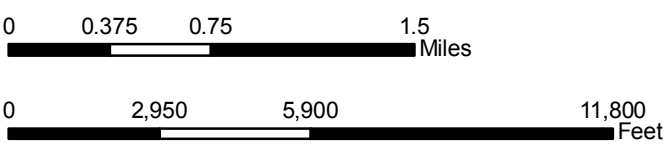
This is to be accomplished by regulating land uses which would contribute polluted water and pollutants to designated aquifers identified as being needed for present and future public and private water supply.

Conservation Corridor Overlay District

The purpose of this article is to regulate uses in important wetland and watershed areas. The objective is to prevent the destruction of watershed areas and wetlands which provide flood protection, recharge of groundwater supply, and augmentation of stream flow and to protect the community against the costs that may be incurred when unsuitable development occurs in swamps and marshes, along watercourses, or in areas subject to floods. In the event of conflict between the requirements of this article and the permitted uses within a zoning district, the requirements of this article shall take precedence.

Prime Wetlands
Town of Derry

- Prime Wetlands
- National Wetland Inventory
- Rivers and Streams
- Lake/Pond
- Town Boundary
- Parcel
- Utility Lines
- Roads**
 - Highway
 - Major Roads
 - Minor Roads
 - Class VI
 - Private Roads

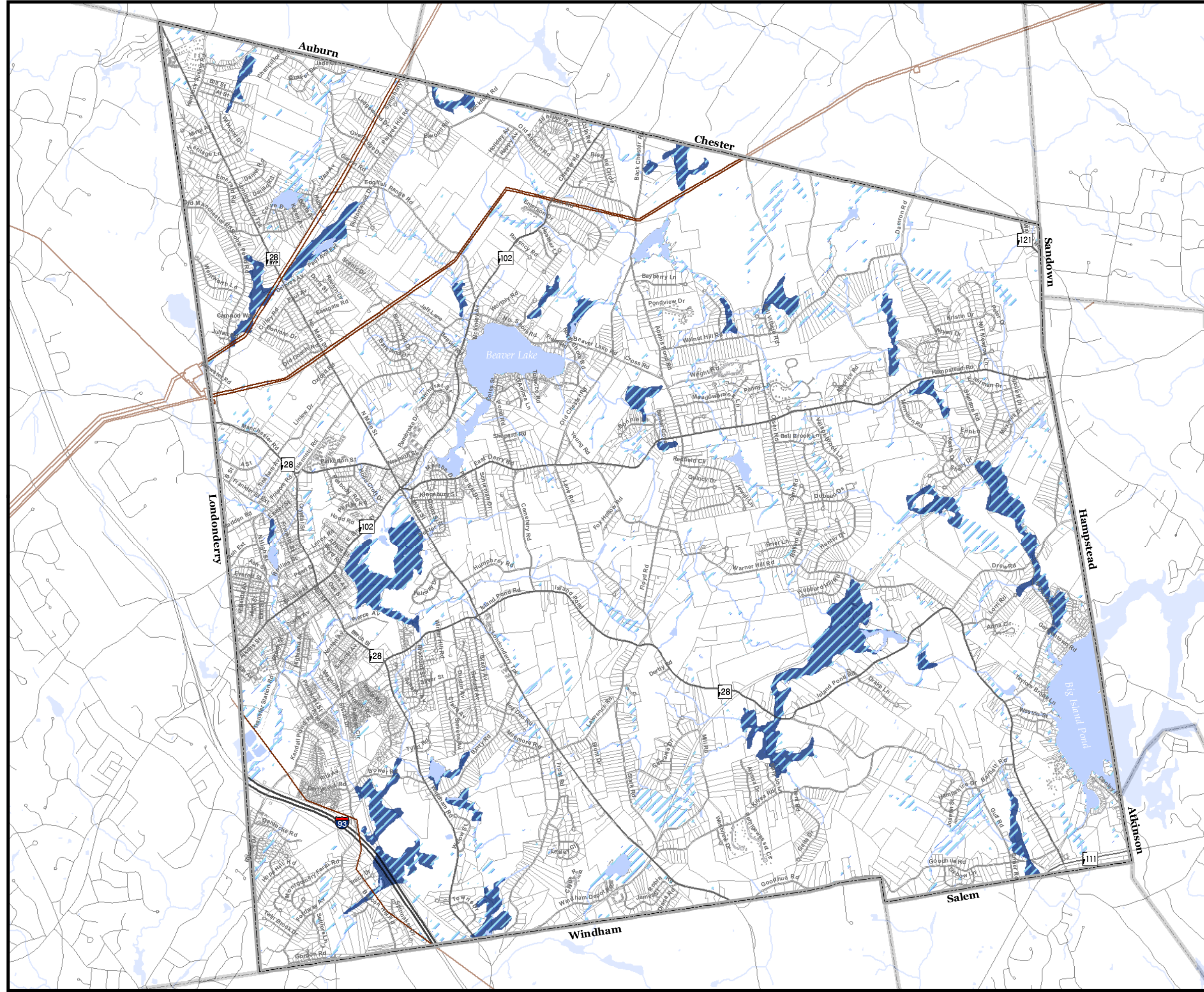
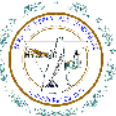




Data Sources:
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8.3 Soils

The properties and characteristics of soils play an important role in land use decisions. They also play an important role in determining how a town will develop. Soils form through the interaction of five major factors: time, climate, relief, parent material, and biological forces. The relative influence of each of these factors determines the kind of soil that can be found throughout Derry.

The October 1994 “Soil Survey of Rockingham County, New Hampshire,” prepared by the U.S. Department of Agriculture, Soil Conservation Service (now known as the Natural Resources Conservation Service) contains some of the most important natural resource data available for Derry. The soil survey classifies soil types by such factors as compaction, erosion potential, fertility, moisture content, permeability, pH, structure, and texture. It also provides sound, scientific information that can be used to help evaluate the capability of land to support development, agriculture, wastewater systems, recreation, wildlife, forestry and open space.

Soil Potential Ratings

In 1987, the Rockingham County Conservation District, working with local, regional and state officials developed soil potential ratings indicating the relative ranking of a given soil for development. The overall potential is based on the suitability rating for three uses: septic system absorption fields; dwellings with basements; and local roads and streets. This soil potential rating information is shown on map 8.3 (following pg. 8-11). Many communities use this map as a guide in the review of development proposals to regulate the placement of septic systems, dwellings and roads on slopes generally exceeding 15 percent.

The “Soils Potential for Development” handbook lists detailed development potential estimates for each type of soil found in Rockingham County.⁷ A total of five soil potential categories are identified on Derry’s Soil Potential for Development map. These categories range from very high to very low based on a number of factors. These factors include depth to bedrock, depth to water table, flooding potential, permeability of the septic system absorption field, slope, and stone content of the surface.

Very-high potential means site conditions and soil properties are favorable. Installation or management costs are low, there are few or no soil limitations, soil properties are similar to those in reference soil.

High-potential means site conditions and soil properties less favorable than reference soil. Costs to overcome soil limitations are slightly higher than for very-high potential.

⁷ Soil Potential for Development, Rockingham County, New Hampshire, US Department of Agriculture, Soil Conservation Service, May, 1987.

Medium-potential means site conditions and soil properties are below the reference soil, the very-high potential soil, and the high potential soil. Costs of measures to overcome soil limitations are significant.

Low-potential means site conditions and soil properties are significantly worse than those of the reference soil. Costs of measures to overcome soil limitations are very high.

Very-low potential means there are severe soil limitations. The costs of measures to overcome the limitations are extremely high or prohibitive

The reference soil for a septic system absorption field is on a five percent slope. The depth to high-water table and bedrock is more than 10 feet. Stones and boulders make up less than three percent of the surface. Percolation rate is 12 to 15 minutes an inch. The area is not subject to flooding.

The reference soil for a dwelling with basement is well-drained; that is, the water table is more than six feet below the surface, and is not subject to flooding. Bedrock is deeper than six feet. Stones and boulders make up less than three percent of the surface. Slopes are less than eight percent.

The reference soil for a local road or street is on a two percent slope. Depths to bedrock and the water table are greater than six feet, rocks and stones make up less than three percent of the surface. The area does not flood.

Soils-based Lot Sizing

The Town of Derry determines minimum lot sizes in un-sewered areas of town by soil type. Appendix F shows the specific lot sizes by soil type and the following is how the zoning ordinance reads in regards to soils-based lot sizing:

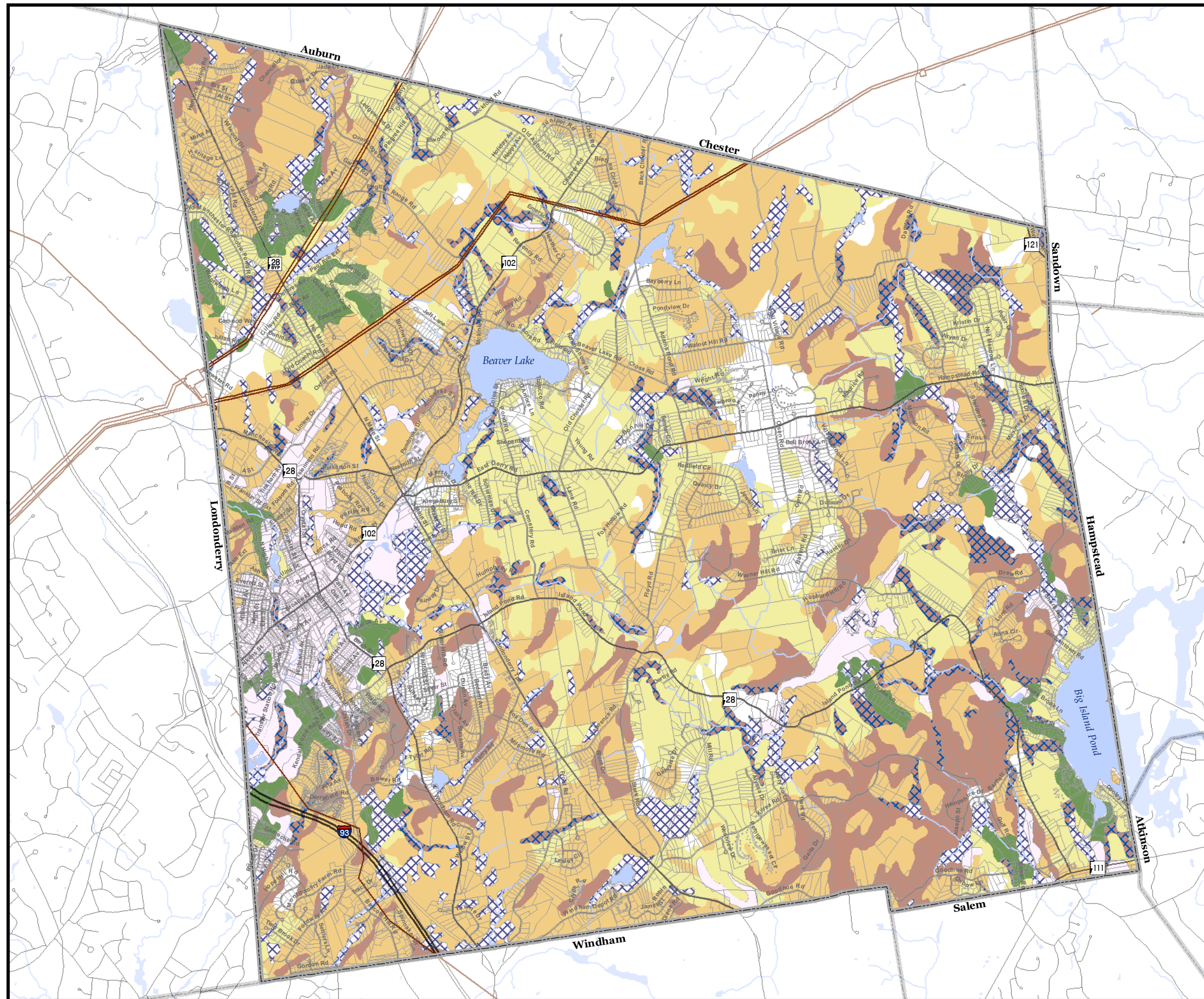
*Minimum lot sizes, un-sewered areas. In the absence of municipal sewerage facilities, minimum lot sizes within all subdivisions shall, in addition to meeting the requirements of Chapter 165, Zoning, for the district wherein the subdivision is proposed, also meet the lot area requirements specified in Table A, Minimum Lot Area by Soil Type..*⁸(Table A can be found in appendix F)

⁸ Town of Derry. Zoning Ordinance. July 5, 2007.

Map 8.3

Soil Potential for Development

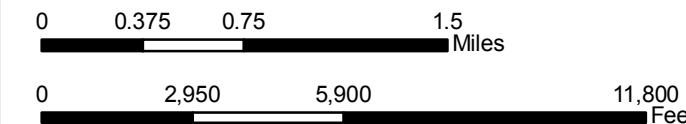
Town of Derry



- Lake/Pond
- Rivers and Streams
- Town Boundary
- Parcel
- Utility Lines
- Roads**
 - Highway
 - Major Roads
 - Minor Roads
 - Class VI
 - Private Roads

- Soil Potential Ratings for Development***
 - Very High
 - High
 - Medium
 - Low
 - Very Low
 - Low - Poorly Drained Wetland Soil
 - Very Low - Very Poorly Drained Wetland Soil

*Soil Potential Ratings were calculated from the Soil Potential for Development; Rockingham County Report from the Rockingham County Conservation District 1987

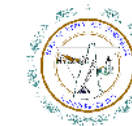


Data Sources:
Granit Digital Data (1:24,000)
NH Department of Transportation
Individual Community Parcel Data
Town of Derry

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8.4 Agricultural Lands

Derry's prime agricultural land is an important part of the town's character and heritage, providing a scenic element as well as a local source of fresh food production. There are approximately 279 acres of Town Easement Protected Property that are made up of mostly prime agricultural land and forests.

Rowenfare Farm is 129 acres located in the Northern Edge of Town on Old Auburn Rd. This is a privately owned farm with an agricultural easement preventing it from being developed. This property was protected in part by a New Hampshire Land Conservation Investment Program (LCIP) and by the town of Derry.

Bliss farm is 80 acres located in the center of town bordered by Cross Rd. and Young Rd. property. This is privately owned land with a conservation easement preventing the land from being developed. Some of this land is currently being farmed.

Grinnell farm is 70 acres located within the Island Pond Road, Cemetery Road, and Humphrey Road area. This is privately owned land with a conservation easement. Some of this land is currently being farmed. The town of Derry has purchased the easement on the property from the Grinnell Family.

Derry's farms have been an integral part of its character and its heritage, contributing scenic pastoral landscapes as well as a local source of fresh food and produce. As elsewhere throughout New England, farms in Derry are severely threatened, essentially requiring some form of intervention in order for both their pastoral landscapes and farming business to survive. Farming faces threats from weather, insects, an unpredictable market, development, and conflict with neighbors as development brings more and more residences closer to farming activity. At the same time, there is a growing awareness of the importance of locally-based food production to life in New England and its economy, as the fragility of the region's dependence upon food imported from away becomes ever more apparent, coupled with the growing instability of those far-away food sources. Preservation of farmland and agricultural activity emerged as a major priority in Derry's planning process. Derry supports local agriculture through participation in the current use taxation policy. An expanded program of support for preserving agriculture and farmland is outlined in the Recommendations section of this Chapter.

Important Agricultural Soils

In Rockingham County there have been 91 soil types identified. 13 of those are considered Prime agricultural soils, 10 are considered agricultural soils of statewide importance, and 13 are considered agricultural soils of local importance. These designations are based on soil characteristics and refer to their suitability for agriculture. Prime, statewide important, and locally important soils are defined respectively by the Farmland Protection Policy Act of 1981, a state commission, and County Conservation District Boards. See Map 8.4 below for a map of Derry's important Agricultural soils.

Map 8.4

Important Agricultural Soils

Town of Derry

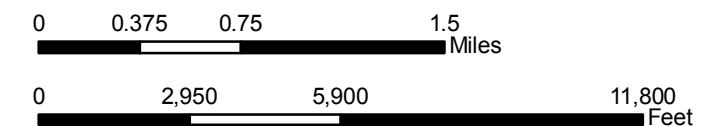
Farmland and Important Soils

- Prime Farmland
- Farmland of Local Importance
- Farmland of Local Importance and Hydric
- Farmland of Statewide Importance
- Hydric Soils

- Lake/Pond
- Rivers and Streams
- Town Boundary
- Parcel
- Utility Lines

Roads

- Highway
- Major Roads
- Minor Roads
- Class VI
- Private Roads

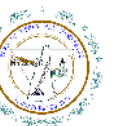


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Existing Protections

In the New Hampshire State Development Plan, one of the goals is to,

“Protect and preserve New Hampshire’s land and water resources including farms, forestlands, wildlife habitats, water resources, air quality, and other critical environmental areas.”

Strategies to achieve this goal include,

- “Encourage the establishment of municipal agricultural commissions.”
- “Establish state and local tax credits for agricultural activities and uses.”
- “Provide assistance to municipalities to ensure that their local land use ordinances and regulations are farm friendly.”
- “Develop model ordinances for the protection of agricultural land and existing agricultural operations; provide assistance to municipalities to tailor such ordinances to meet local needs and conditions.”

New Hampshire also supports agriculture through its Right to Farm Law (Chapter 432: Soil Conservation and Farmland Preservation), which protects farmers and ranchers from nuisance lawsuits and helps to keep farms economically viable by discouraging neighbors from filing lawsuits against agricultural operations. This statute also allows for the purchase of development rights as a means of protecting agricultural lands, stating “Development rights of agricultural lands may be acquired by any governmental body or charitable corporation or trust which has the authority to acquire interests in land. The restrictions arising from the acquisition of the development rights may be enforced by injunction or other proceeding. Representatives of the holder shall be entitled to enter such land in a reasonable manner and at reasonable times to assure compliance with the restriction.”⁹

Other ways of protecting agricultural lands and keeping them viable include: Agricultural Conservation Easements, Transfer of Development Rights Programs, Mitigation Programs, Tax Relief Programs, Tax Incentives for Conservation Easement Donations, Agricultural Economic Development, and Farmland Assistance Programs.

Agricultural Conservation Easements

The most common tool for farmland protection is an agricultural conservation easement. A conservation easement is a deed restriction that landowners voluntarily place on part or all of their land. The easement limits development in order to protect the land’s natural resources. This type of easement is specifically designed for agricultural land and can be

⁹ <http://www.gencourt.state.nh.us/rsa/html/XL/432/432-mrg.htm>

donated or sold to a public agency or qualified conservation organization through a “Purchase of Development Rights” (PDR) Program. Once the development rights are sold or donated through a conservation easement, they are in effect “retired”, usually in perpetuity.

The farmer benefits from the sale of the agricultural conservation easement and a lower tax rate on their property. The cost of doing this to the farmer is that most easements are attached to the land for perpetuity, meaning they apply to all future owners of the land and the same restrictions apply to the land for them as well. The value of the land is also lowered with an easement because of the restrictions, specifically on development, that are attached to it.

This tool is beneficial to the farmer who places value on keeping the land for agricultural use, possibly for passing down to future generations, or who simply would like to keep the land as it is in perpetuity because of the value they place on agricultural viability and preservation.

New Hampshire Land and Community Heritage Investment Program

The New Hampshire Land and Community Heritage Investment Program (LCHIP) is an independent state authority that makes matching grants to NH communities and non-profits to conserve and preserve New Hampshire’s most important natural, cultural and historic resources.

Among other projects, LCHIP funds may be used by eligible applicants for the acquisition of real property in fee simple and the acquisition of easement interests in real property.

Tax Relief Programs

RSA 79-A is New Hampshire’s Current Use Taxation Statute, which allows for farm, forest and open space land to be assessed at its use value, rather than its fair market, or highest and best use value for the purposes of local property taxation. This statute states,

"It is hereby declared to be in the public interest to encourage preservation of open space, thus providing a healthful and attractive outdoor environment for work and recreation of the state's citizen's, maintaining the character of the state's landscape, and conserving the land, water, forest, agricultural and wildlife resources."

Derry participates in the State’s current use taxation program in support of local agriculture. This is an important element of a successful agriculture viability campaign and Derry should continue to participate in this program.

When land that is in current use is converted to another use, the landowner pays a current use change penalty for doing so. Undeveloped land is not as readily available as it once was and therefore New Hampshire is seeing an increase in the current use change

penalties being paid to convert current use lands to other uses. In order for this program to keep being effective municipalities must create a mechanism for mitigating the loss of current use/preservation lands to development. One way to do this is to direct all or a portion of the current use change penalty to the local conservation fund to protect additional land in town, in affect, mitigating the loss that was incurred from the current use change. The Town of Derry currently allocates 100% of the current use penalty tax to the Conservation Fund.

Federal Tax Incentives

Another form of tax relief for farmers comes through federal tax incentives enacted in 2006 to promote donations of conservations easements by private landowners. These incentives were extended through 2009 through the 2008 Farm Bill. This tax incentive has helped to conserve millions of acres of farms across the United States.

The incentive, which applies to a landowner's federal income tax, will:

- Raise the deduction a donor can take for donating a voluntary conservation agreement from 30% of their income in any year to 50%.
- Allow farmers and ranchers to deduct up to 100% of their income.
- Increase the number of years over which a donor can take deductions from 6 to 16 years.

The amount of the donation is the difference between the land's value with the agreement and its value without the agreement.

Agricultural Economic Development

An important component to increasing support for local agriculture is an economic development piece. Promoting local agriculture through a "Buy local" campaign is the best way to increase awareness of local agriculture and its benefit to the local economy and as a local food source. Municipalities can support local agricultural producers by implementing and supporting a campaign that promotes local agricultural producers among other local businesses.

Farmland Assistance Programs

The USDA funds several conservation programs each year to assist farmers with natural resources management and stewardship of their land. Programs include:

- Agricultural Management Assistance Program
- Environmental Quality Incentives Program
- Grassland Reserve Program
- Wetlands Reserve Program
- Wildlife Habitat Incentives Program

The USDA also funds the Farm and Ranch Lands Protection Program, which is another Purchase of Development Rights Program. Landowners must work with a sponsoring entity to apply to the program, such as the State of New Hampshire, a municipality, a land conservation organization or a tribal organization. The program then matches funds provided by the sponsoring entity.

8.5 Groundwater Resources

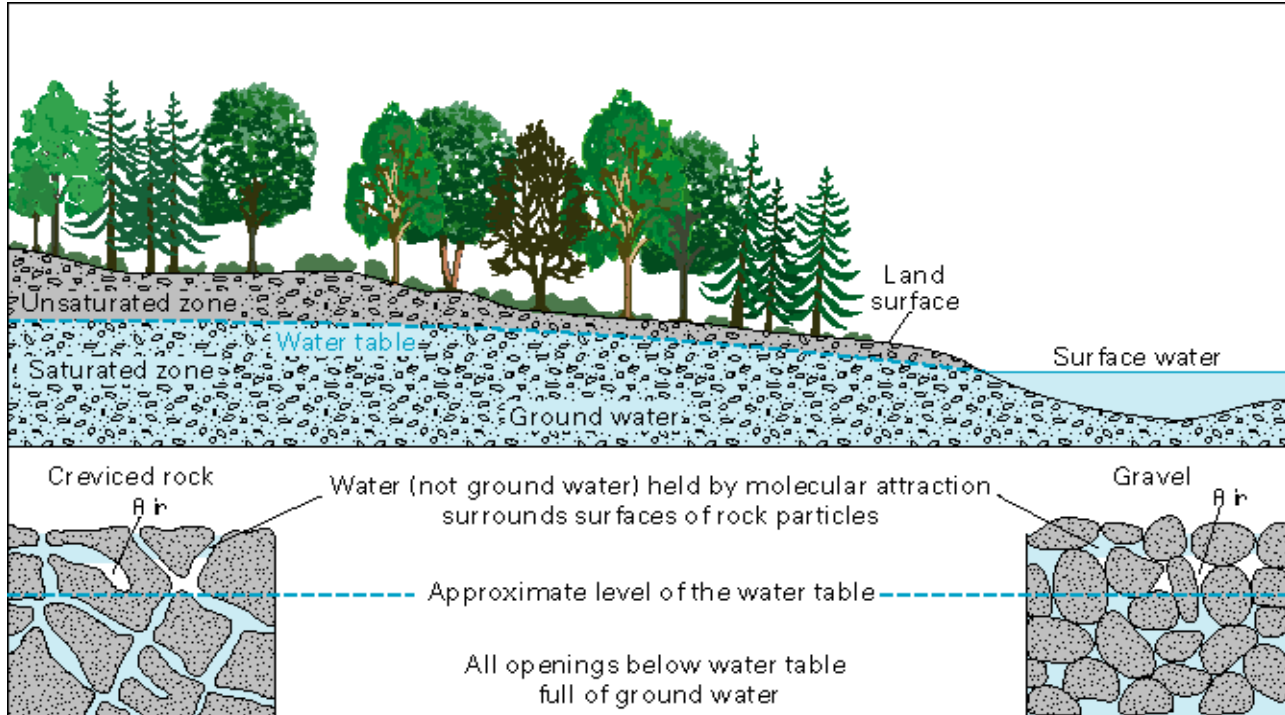
Groundwater is the water stored within the soil and bedrock. Groundwater resources are also known as aquifers. An aquifer consists of underground soil or rock that groundwater is easily able to move through. Aquifers typically consist of gravel, sand, sandstone, or fractured rock. Aquifers are water-bearing rock or soils that are capable of yielding enough water for human consumption. Typically, they are located in bedrock or in surficial deposits. There are generally three types of aquifers, the till aquifer, stratified drift aquifer, and fractured bedrock aquifers. Stratified drift and bedrock in the saturated zone below the water table are the most capable of yielding usable quantities of water. Most of the drinking water supply in Southern New Hampshire is served by a series of stratified drift aquifers. Stratified drift aquifers are made up of deposits of sand and gravel located above the bedrock. Although these aquifers are more effective in water transmission than are bedrock aquifers, stratified drift aquifers are much more susceptible to contamination.

Stratified drift aquifers coarse texture allows for large volumes of water to be stored, and they therefore have the potential to yield large volumes of water for public water supplies. Bedrock aquifers are made up of fractured rock or ledge. Groundwater may be stored within the fractures, and wells drilled into extensive fractures may yield high amounts of groundwater. On the other hand, wells that do not hit a fractured area are likely to come up dry. Generally speaking, bedrock aquifers yield smaller volumes of ground water than wells drilled into stratified sand and gravel.¹⁰

In New England, is it not uncommon to see ground water emerging from a hillside or seeping out of a road cut; a familiar sight during winter is the water that freezes on rock cuts along local highways. Topography, geology, soils, vegetation and land use all affect the rate of water storage and loss. The average depth of groundwater for this area typically ranges from 8 to 20 feet. However, not all ground water can be drawn into wells which must be located in aquifers. As land use expands, water and its source are becoming increasingly important and it is vital to understand where our aquifers are located and to take steps to insure that the aquifers are not altered to the extent that future use is affected.

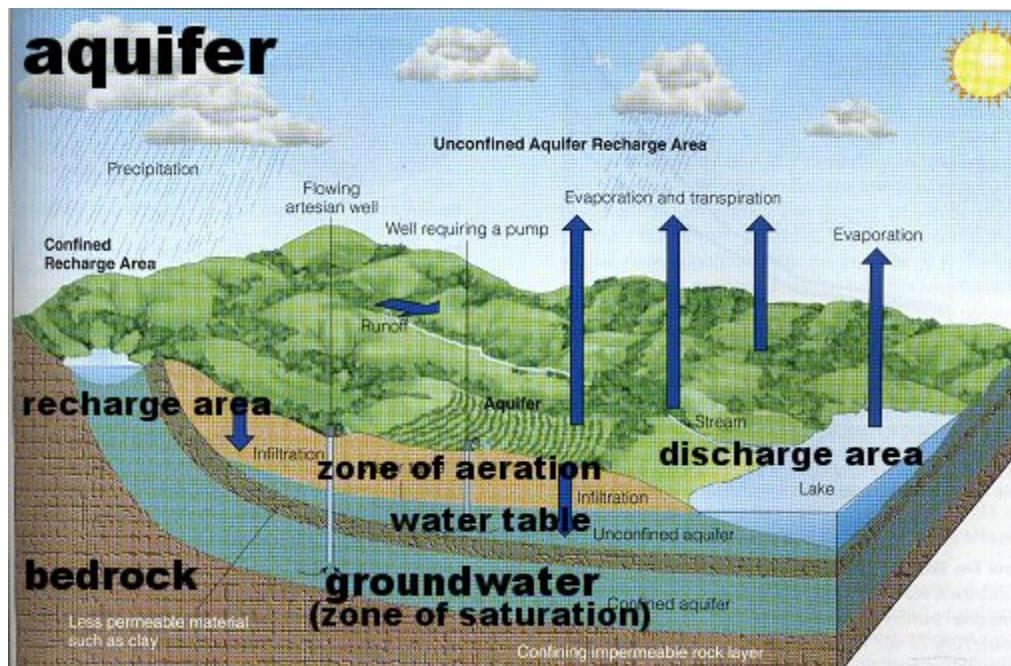
¹⁰ NH OEP, Technical Bulletin #9, Winter, 1992

Figure 8.2: Groundwater Illustration



Source: USGS¹¹

Figure 8.3: Aquifer Illustration



Source: Miller, G. Tyler. Living in the Environment. 12th ed.¹²

¹¹ <http://ga.water.usgs.gov/edu/earthgwaquifer.html>

¹² Miller, G. Tyler. Living in the Environment. 12th ed. Brooks/Cole, Wadsworth Gr. 2002.

The US Geological Survey conducted an aquifer assessment which identified 5.2 square miles, or 15% of Derry is underlain by a stratified-drift aquifer. The Town has identified the following areas of stratified drift and till covered bedrock. Stratified drift is considered good material for wells, where till covered bedrock is not. As seen in the table below, the majority of Derry's aquifer is till covered bedrock. These areas are not necessarily suitable for public wells unless they are drilled deep through the bedrock through many fractures. In addition, coarse grained stratified drift readily absorbs precipitation and is therefore important for recharge areas.

Table 8.1 – Aquifer Assessment – Town of Derry, NH¹³

Buried Coarse-Grained Stratified Drift:	9.2 acres	0.398%
Coarse-Grained Overlaying Fine Grained Stratified Drift	304.68 acres	1.31%
Coarse-Grained Stratified Drift	1725.10 acres	7.45%
Fine Grained Stratified Drift	1206.43 acres	5.20%
Till-Covered Bedrock	19,840.58 acres	85. 6%

Map 8.5 (following pg. 8-19) shows the disposition of the aquifers in the Town of Derry.

Existing Protections

As described in Chapter 6, Public Utilities, Derry has adopted a Groundwater Resource Conservation District as a means to preserve and maintain existing and potential groundwater resources and primary groundwater recharge areas within this district, known as "aquifers," from adverse development, land use practices or depletion. This is to be accomplished by regulating land uses which would contribute polluted water and pollutants to designated aquifers identified as being needed for present and future public and private water supply.¹⁴ (See map of Groundwater Resource Conservation District at the end of Chapter 6)

New Hampshire RSA 485, the Safe Drinking Water Protection Act, regulates groundwater generally. RSA 485-C, the Groundwater Protection Act, enables municipalities to protect valuable groundwater if those municipalities allow regular inspection of potential contamination sources to ensure that best management practices are in place.

Wellhead Protection Areas

The purpose of wellhead protection is to prevent the contamination of groundwater used for drinking water. A *wellhead protection area* (WHPA) is the area surrounding a public water supply well from which water and contaminants are likely to reach the well. DES recognizes WHPAs for community water systems and for non-transient, non-community water systems, but not for transient systems (See Chapter 6, Public Utilities for

¹³ GRANIT Digital Data, UNH, NHOEP

¹⁴ Town of Derry, New Hampshire. Town Code. Article VIII. 165-60 through 165-69.

information on Source Water Protection). See Map 8.5 below for Derry's Aquifers and wellhead protection areas.

Storm water Management Program

As a Phase II Municipal Separate Storm Sewer System (MS4) community, the Town of Derry developed a Storm Water Management Program. The program included public education and outreach, public involvement, illicit discharge detection and elimination (IDDE), construction site stormwater runoff control, and post-construction stormwater management in new and redevelopment. The IDDE program included the development of a stormwater ordinance that prohibits non-stormwater discharges so as to maintain and improve the quality of receiving waters into which the stormwater outfalls flow, including lakes, rivers, streams, ponds, wetlands and groundwater. It also establishes minimum requirements and procedures to control adverse effects of increased post-development stormwater runoff, decreased groundwater recharge, and non-point source pollution associated with new and redevelopment.

Beaver Lake Watershed Management Plan

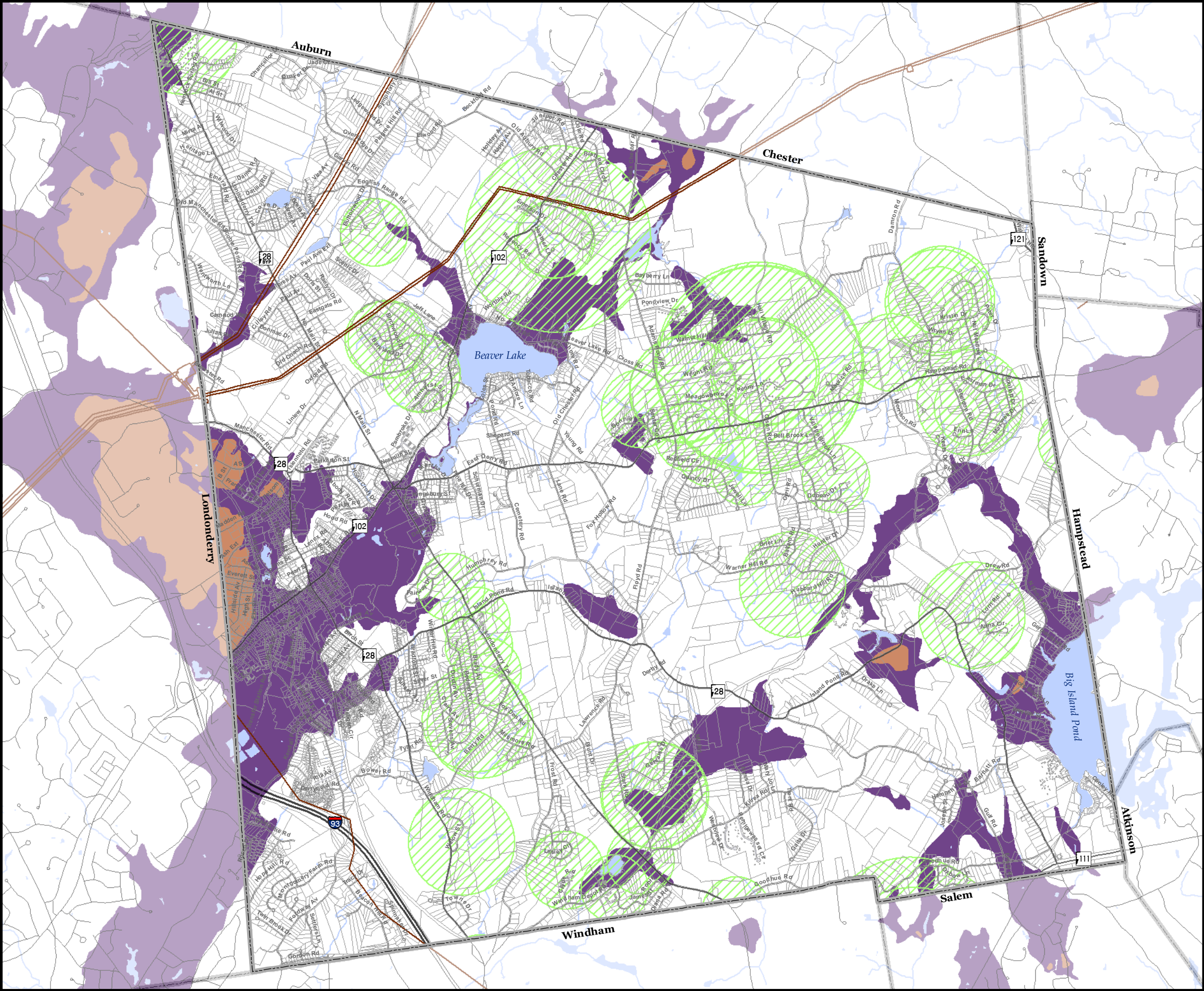
The Beaver Lake Watershed Partnership has developed the Beaver Lake Watershed Management Plan to improve watershed health. The Partnership's members include town officials, lake and watershed groups, schools, planning commissions, and individuals who have joined together to help improve watershed health. The Beaver Lake Watershed contains parts of Derry, Auburn, and Chester. The plan focuses on five key watershed areas:

- Open Space, Land Use and Growth Management
- Water Quantity
- Water Quality
- Biological and Habitat
- Recreation

Examples of the recommendations in the plan include:

- Conducting field work and surveys with the Stream Teams (Pinkerton Academy students and other volunteers);
- Working with town officials to implement zoning changes and create innovative programs;
- Creating outreach tools including brochures, fact sheets, and "door hangers;" and
- Speaking to community and civic groups on watershed management and inviting the Beaver Lake Watershed Partnership to present at events

Protecting watershed health along with groundwater resources is an important priority for environmental and community health. It is recommended that the Town of Derry adopt and implement the Beaver Lake Watershed Management Plan as a means of protecting watershed health and groundwater resources in the town.

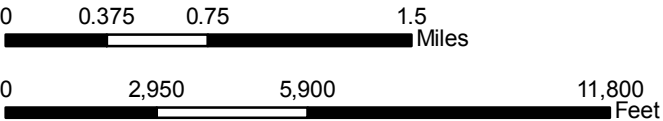


Map 8.5

Aquifers

Town of Derry

- Wellhead Protection Areas
- Aquifers and Related Surficial Material**
 - Stratified Drift Aquifer
 - Glacial Till
 - Lake/Pond
 - Rivers and Streams
 - Town Boundary
 - Parcel
 - Utility Lines
- Roads**
 - Highway
 - Major Roads
 - Minor Roads
 - Class VI
 - Private Roads



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8.6 Conservation Lands

New Hampshire RSA, Title 3, Chapter 36A, establishes the responsibility and authority of Conservation Commissions. Section 36-A:4 of the statute states “the Conservation Commission may receive gifts of money and property in the name of the town, and the town may appropriate money as deemed necessary for the purposes of open space protection.”

The Derry Conservation Commission consists of 7 regular members and 4 alternates, appointed by the Town Council for a 3 year term. The Commission is responsible for the proper stewardship, utilization, and protection of the natural resources of Derry. Today, 2,016 acres of land have been protected by outright town purchase, granted as gifts, provided as part of development easements, are deed restricted, or are owned by the state.

Derry has experienced tremendous growth over the last 25 years. The 1980 census placed Derry’s population at 18,875. The 2000 census places the number of residents at 34,021. That number is relatively unchanged today. Impacts of rapid growth include increased demand for services, a need for more infrastructure and a loss of open space. As a result of the dramatic growth, Derry adopted a growth management ordinance in 1996. Part of this process included rezoning parcels from residential to commercial, industrial, and office/medical/business zones. The town also began purchasing land with the express intent of preserving land for open space/conservation and recreational use.

In March of 2004, the residents approved a non-binding referendum to expend up to \$6 million for land acquisition, which led to the formation of a Land Advisory Committee. The Committee was charged with developing recommendations to help the town achieve the goals of the 2002 Master Plan with regard to the preservation of open space and farm land, as well as increasing recreational land for all ages. The Committee held 25 meetings between June 2004 and March 2005. The outcome was a written report which outlined specific criteria to be met for parcels considered for acquisition by the town. There are different criteria for the different land uses which include recreational use, conservation or open space, and economic development.

The Conservation Commission continues to pursue lands in town that have been targeted through the Land Advisory Committee Final Report. The Commission has made admirable headway in preserving ecologically sensitive areas for the purpose of providing forest products, improving wildlife habitat, and providing recreational opportunities. Preserved areas of note include the Town Forest located on Ballard/Oleson Roads, the Cole Marsh/Joshua Morse property, Broadview Farm, the Corneliusen Farm property and the Albert Doolittle Conservation Area. The Commission provides detailed information on each of the conservation areas on the town website.

8.7 Forests

Forest systems constitute the natural vegetation for most of New Hampshire's landscape. They play a critical role in water and nutrient recycling, microclimate regulation, watershed protection, flood control, soil conservation, carbon sequestration, and air purification. Forests also provide important wildlife habitat and contribute to recreation and tourism, education and overall human quality of life. Large areas of unfragmented forest are better able to function ecologically than smaller ones.

"As the profitability of forest management on smaller parcels declines, it can be anticipated that some landowners may be induced to further subdivide or develop their land, particularly if they cannot pay the property taxes. The opportunity to practice economically and ecologically sound forest management is a vital force in retaining the forest land base—for forestry and so many other purposes. The economics of forest management matters in this era of conversion, fragmentation and parcelization. It matters for wildlife, clean water, and our livelihoods and quality of life in our rural communities."¹⁵ There are not many areas in Derry that are maintained strictly for the purpose of forestry. Although some residents do practice forestry management, the numbers have been steadily declining over the years. The Derry Assessor's Office has reported that over the last year (FY2008), only three Intent-to-Cut forms have been filed. The total estimated board feet to be cut ranges anywhere from 10,000 to 70,000 board feet. Typically, the final cut is less than half of what is estimated. In 2008, only 13,000 board feet of timber were cut. The Assessor's history shows that Derry's forests have been cut over at least 3 times in the last 80 years.

Derry has two large tracts of land that contain contiguous forest area. The most notable forests are Ballard State Park (128.3 acres) and the Weber Memorial Forest (203.1 acres). Maintaining such large tracts of land provides good habitat for rare and endangered species. The Ballard State Forest is home to one of only two known surviving American Chestnut trees in New Hampshire. In the fall of 2008, pollinated seeds from this tree were collected and sprouted. The American Chestnut Foundation hopes that the eight sprouts produced from this endeavor will produce blight resistant trees. At one time the American Chestnut tree was found along the eastern coastline from Maine to Florida. One hundred years ago, an imported fungus from Asia wiped out approximately 40 billion trees. The tree in Derry is one of the only surviving true strains of American Chestnut.

Rare species and plants

The NH Natural Heritage Bureau¹⁶ documents occurrences of exemplary natural communities and rare plant and animal species in the State. The natural communities represent relatively intact and undisturbed examples of native plant communities. Rare plants and animals fall into four categories: endangered, special concern, threatened, and

¹⁵ *New Hampshire's Vanishing Forests*, Sara Thorne/Dan Sundquist, April, 2001

¹⁶ Full information is available at the Natural Heritage Bureau website, www.nh.gov/dred/divisions/forestandlands/bureaus.

monitored. The following rare species or plants of very high or extremely high importance are found within the Town of Derry. The Ballard and Weber Memorial Forests provide a large area of protection for these species.

Table 8.2 – Rare Species and Plants in the Town of Derry, NH

		Listed	Importance	# Found In Town	# Found In State
Natural Terrestrial	Community –				
	Dry Appalachian Oak (Hickory Forest)		Very High	1	15
Plants					
	Downy Arrowwood	Endangered	Extremely High	2	7
	Downy False Foxglove	Endangered	Very High	1	11
	Dwarf Huckleberry	Threatened	Very High	1	10
	Giant Rhododendron	Threatened	Very High	1	13
	Larged Whorled Pogonia	Endangered	Very High	1	4
Vertebrates – Mammals					
	New England Cottontail		Extremely High	1	20
Vertebrates – Birds					
	Grasshopper Sparrow	Threatened	Very High	1	12
	Red Shouldered Hawk		Very High	1	1
	Sedge Wren	Endangered	Very High	1	4
Vertebrates – Reptiles					
	Blanding’s Turtle		Very High	2	119
	Eastern Box Turtle		Very High	1	6
	Spotted Turtle		Very High	2	70
	Wood Turtle		Very High	1	114

8.8 Wildlife

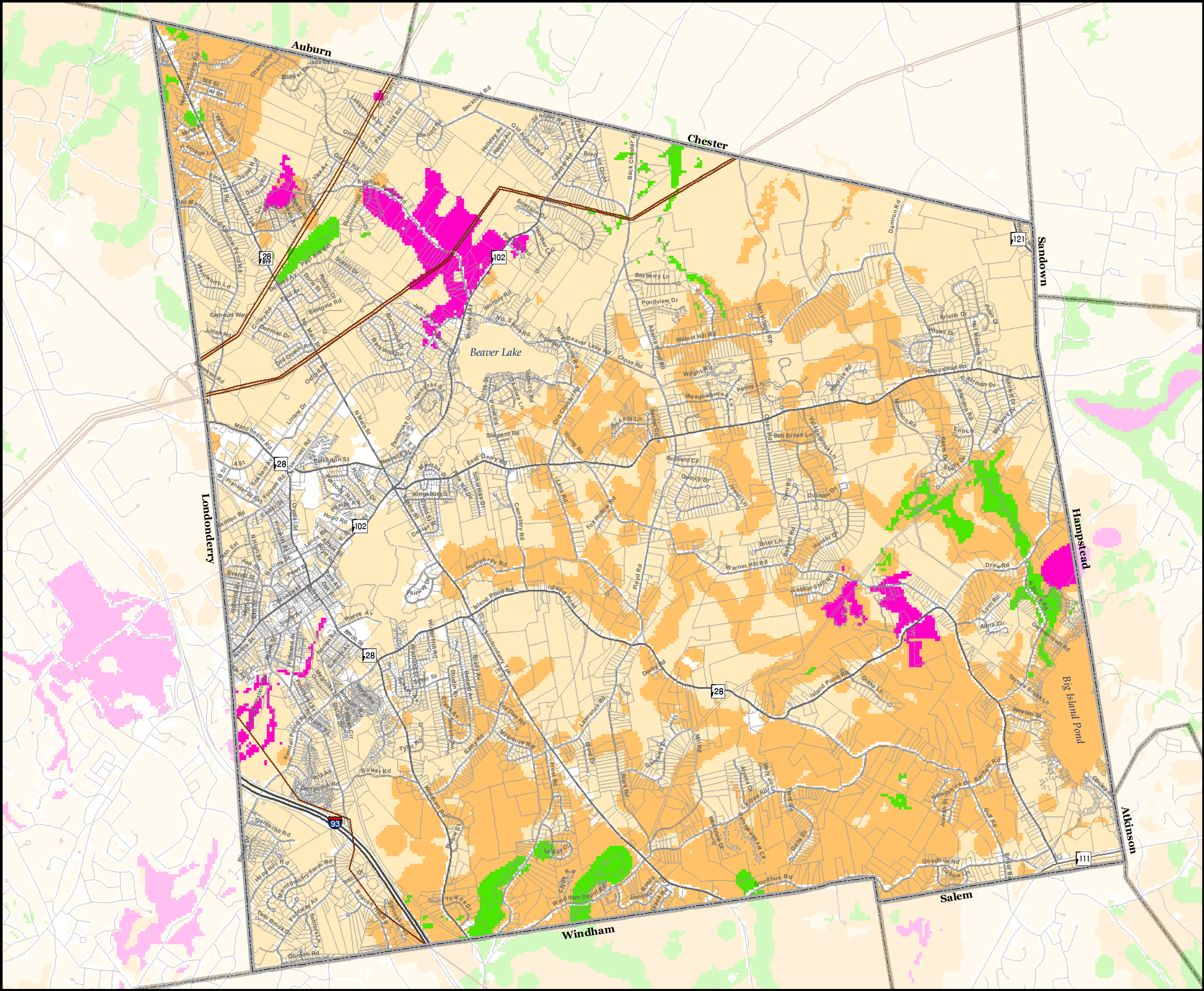
In Derry, natural wildlife habitats act as a large part of the town’s rural character as well as providing a place for various species to thrive. A habitat is generally defined as the area needed to provide sufficient water, food and shelter in order to survive and reproduce. Within these habitats, it is primarily the vegetation that grows naturally within the region that provides food and shelter. Increasing residential development can negatively affect wildlife habitats and activities; however, with careful planning by local governments, the negative impacts humans have on wildlife can be significantly reduced. Planning strategies such as cluster housing with extensive tracts of uninterrupted open space in between each development is one of the best methods to preserve natural habitat. Much of Derry’s residential area is in more urban areas, with the open tracts of land in the outlying, rural areas of Derry. Therefore, Derry must work hard to preserve the current open land and remaining natural habitat.

Wildlife, in all its myriad forms, can be thought of as the pathways that move energy and nutrients within and between ecosystems, thus playing a critical role in ecosystem

functioning. Every species requires adequate habitat. NH Fish and Game has evaluated the major habitat types in New Hampshire and ranked identified habitat blocks for quality based on size, distance, and various other factors. They identified the top 10% of areas of each habitat type within the state, and then again within each eco-region.

Important wildlife habitat in Derry includes 568 acres of what is considered Tier 1, or highest quality habitat. Of that amount 4% has been placed in conservation. 503 acres are considered Tier 2 or highest quality habitat by biological region. Of that amount, 12% has been placed in conservation. 7,481 acres in Derry have been designated Tier 3, or other significant habitat on a regional scale as part of the Wildlife Action Plan. Of those acres, 4% has been placed in conservation. Tier 4 habitat includes that which is considered locally significant, but has yet to be fully evaluated by NH Fish and Game. Derry has 2,909 acres that would be considered a Tier 4 habitat. 14% of that amount has been placed in conservation. See Map 8.6 below for important wildlife habitat identified by NH Fish and Game through the Wildlife Action Plan.

The Town of Derry currently protects wildlife habitat through existing regulations such as the Groundwater Resource Conservation District, Conservation Corridor Overlay District, Wetlands Conservation Overlay District, and will also provide protection through the Open Space Plan which is currently being developed as part of CTAP. The Town of Derry also has an Environmental Coordinator on staff who oversees the Stormwater Ordinance.

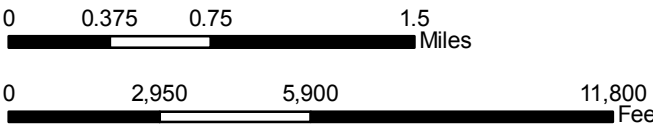


Map 8.6

**Wildlife Action Plan/
Important Wildlife
Habitat**

Town of Derry

- Wildlife Action Plan Habitats**
- Tier 1 - Highest Ranked Habitat in NH
 - Tier 2 - Highest Ranked Habitat in Biological Region
 - Tier 3 - Supporting Landscapes
 - Habitat not top ranked
- Roads**
- Highway
 - Major Roads
 - Minor Roads
 - Class VI
 - Private Roads

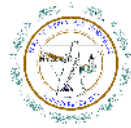


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8.9 Open Space

New Hampshire Natural Services Network

The New Hampshire Natural Services Network (NSN) is a GIS-based tool identifying lands that provide important ecological services that are difficult and expensive to replicate. Loss of these services affects human health, safety, quality of life and economic opportunity. Created by a collaborative of planning and natural resource professionals, this tool can be adapted for use at multiple scales and refined to incorporate additional data. This framework provides the opportunity to focus on areas of interest using a consistent, state wide data set.

The four components of the NSN are water supply lands, economically important soils, important wildlife habitat and floor storage lands. More information regarding the NSN and its reports is available from the New Hampshire Audubon Society in Concord, New Hampshire.

Open Space Plan

The Town of Derry Conservation Commission, in collaboration with Southern New Hampshire Planning Commission representatives and the Derry Planning Director, worked on an Open Space Plan. This plan was prepared by the Derry Open Space Task Force. Funding assistance was provided through the New Hampshire Department of Transportation Community Technical Assistance Program (CTAP). The CTAP program was established by the NHDOT to assist communities along the I-93 corridor in anticipation of the projected growth as a result of the highway widening with technical assistance and long-term planning initiatives.

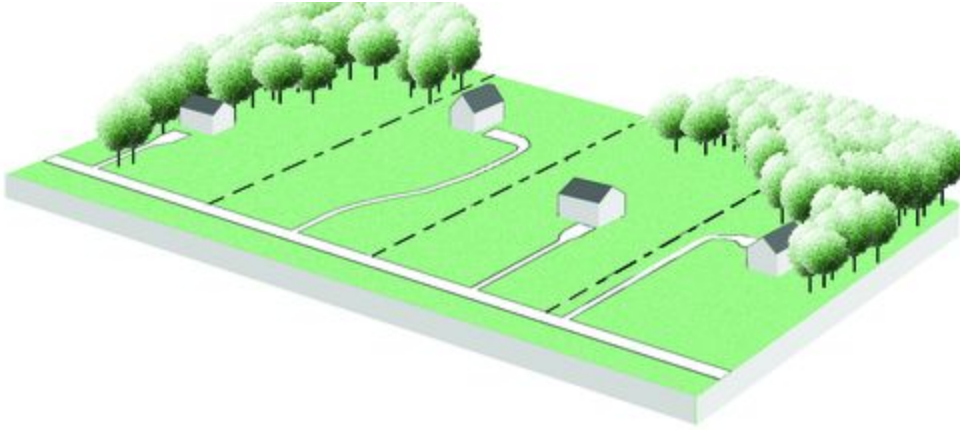
The Plan was approved by the Open Space Task Force and Conservation Commission and by the Derry Planning Board in September of 2009. The Plan is incorporated by reference into this Master Plan document.

Conservation Subdivision

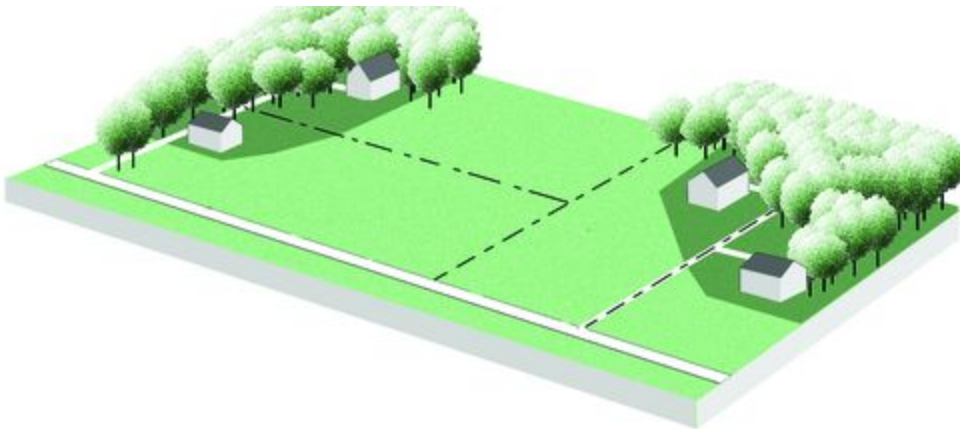
Conservation Subdivision, also called Open Space Subdivision or Open Space Residential Design, is another tool to conserve open space/conservation lands in Derry while still allowing for development. For this type of development, a substantial amount of the site remains as permanently protected open space while the homes are located on the remaining portion of the site. Under this approach, the community works with the applicant to fit the development into the landscape in a way that maximizes the protection of important natural and cultural amenities on the site and maintains the character of the community.¹⁷ Conservation subdivisions have many economic, environmental and social benefits and are a good way to start implementing smart growth development and

¹⁷ NHDES. *Innovative Land Use Planning Techniques*. October 2008

planning. An example of how a Conservation subdivision differs from a conventional subdivision is illustrated below.¹⁸



In a conventional subdivision a key view is lost when this parcel is subdivided, as well as a large amount of open space.



Using a Conservation subdivision approach, the same number of dwelling units is allowed in this subdivision while still protecting the view and open space through the use of regulations which require changes to the proposed lot boundaries and setbacks.

¹⁸ Photo source: Smart Growth Vermont,
<http://www.smartgrowthvermont.org/toolbox/tools/subdivisionregulations/> (Accessed 081409)

8.10 Construction Materials

In 1989, the state revised RSA 674:2, Master Plan Purpose and Description, to require that each municipal Master Plan identify known sources of sand and gravel to meet future needs. Sand and gravel suitable for commercial use with minimal processing are assessed on the following properties: gradation of grain sizes, thickness of the deposit, and content of rock fragments. A soil rated by the Natural Resources Conservation District (NRCS) as a “probable” source of sand and/or gravel has a layer of clean sand or gravel or a layer of sand or gravel that is no more than 12 percent silty fines. The layer must be at least three feet deep and contain no more than 50 percent by weight of large stones. Each soil is evaluated to a depth of five or six feet. Soils not meeting these standards are rated as improbable sources. Coarse fragments of soft bedrock, such as shale or siltstone, are not considered useful. “New Hampshire has been glaciated several times in recent geologic history, and the resulting surficial materials directly affect all forms of land use. As a result, NHGS mapping has focused on completing geologic mapping of these surficial materials. The engineering properties of these surficial deposits have significant implications for highway and building-foundation construction and for waste management. In addition, much of the water supply for the state’s communities is derived from surficial deposits.”¹⁹ Surficial deposits are generally defined by geologists as sand, gravel, soils, rocks and other loose material that lie on top of bedrock, which is also known as ledge.

Currently, the Town of Derry has only one active excavation site. The entire parcel contains 159 acres, of which 3 acres is approved for excavation. The material is being used for fill at a residential construction site located elsewhere in New Hampshire.

The Derry Planning Board has incorporated into its Land Development Control Regulations a requirement for minimum lot area by soil type. High intensity soil survey mapping is required and shall be prepared by a certified soil scientist in accordance with those standards established in the publication entitled High Intensity Soil Maps for New Hampshire.

The Town also has a plan to protect the Beaver Lake watershed area. In 2007 a plan was prepared for the Beaver Lake Watershed Partnership called the Beaver Lake Watershed Management Plan. Support for the plan was provided by a grant from the NH Department of Environmental Services with funding from the US Environmental Protection Agency under Section 319 of the Clean Water Act. The Beaver Lake Watershed Management Plan was adopted by the Planning Board in September 2009 and will be referenced and included as part of the Master Plan Update document.

¹⁹ Summary of StateMap, Geologic Mapping Program in New Hampshire

Recommendations

- Adopt and Implement the Beaver Lake Watershed Management Plan.
- Implement the recommendations of the Derry Open Space Plan.
- Adopt LEED regulations and green infrastructure.
- Continue to review and update the Land Advisory Report.
- Work with Federal, state, county, and non-profit land trust organizations as well as private land owners to purchase, obtain through donations, easements, or transfer of development rights properties for protection from development.
- Encourage an agricultural subcommittee on the Conservation Commission or the establishment of an agricultural commission to develop priorities and work towards agricultural preservation and sustainable agricultural practices.
- Continue to participate in the New Hampshire current use program to support the preservation of open space, farmland and forest land.
- Participate in the USDA Farm and Ranch Lands Protection Program as a sponsoring entity.
- Consider the use of open space/conservation subdivisions to conserve open space in Derry and to work towards implementing smart growth development and planning.
- Develop a working group that will create and introduce environmentally-based educational programming into the school district.
- Continue long term protection efforts such as public education and outreach, IDDE and stormwater ordinance enforcement, and stormwater pollution prevention efforts.

Chapter 9

HISTORIC AND CULTURAL RESOURCES



Robert Frost Farm¹, Derry, NH

9.0 INTRODUCTION

The Town of Derry is rich in historic and cultural resources. The town has had a unique past that includes separation from Londonderry, growth as a major contributor to the shoe industry, the original home of the Hood Creamery, a tourist destination, birthplace of notable historic personages, a place of inspiration to a well known poet, and the location of one of the largest private high schools in the United States. Derry also has wonderful cultural opportunities available at the Adams Opera House, the Stockbridge Theatre, and the Robert Frost Farm homestead.

Historic and cultural resources are important in determining the future land use within the town. It is important to balance growth with the preservation of historical character and enhancement of cultural opportunities so that the very things that make the town unique are retained as the town grows.

The Historic and Cultural Resources Chapter of the Master Plan includes a review and analysis of the Town of Derry's local historic and cultural resources and includes recommendations for how these resources could be protected by the town.

Community Survey

In the fall of 2008, a Community Survey was made available to the public at Town Hall, the Library, the Recreation Dept and via the Town website. A total of 1000 surveys were distributed and the town received 89 responses, for a return rate of 9 percent. The following questions and responses are those on the survey that relate to Historic and Cultural Features in the Town of Derry.

¹ Photo source: www.robertfrostfarm.org

Should the town continue to promote the protection of historic and cultural sites?

	Number of Responses	Percent of Responses
Yes	79	89%
No	2	2%
Don't Know	2	2%

Indicate the level of importance the Town should give to the following historic and cultural preservation methods

	Very Important	Important	Somewhat Important	Not Important	Don't Know
Recognize Historic Structures	49%	38%	7%	5%	1%
Create a Historic District	21%	19%	32%	28%	0%
Purchase Historic Buildings	26%	17%	30%	26%	1%
Demolition Review Ordinances	20%	27%	26%	12%	15%
Conduct a Historical Resource Survey	31%	25%	26%	13%	5%

What three features in Derry do you feel have the greatest historic significance or preservation value?

	Number of Responses	Percent of Responses
East Derry Upper Village Hall	9	10%
Adams Memorial Building/ Opera House	5	6%
Robert Frost Farm	3	3%
Marion Gerrish Center/ 32 W. Broadway/Taylor Mill	2	2%

The majority of respondents felt the town should continue to promote the preservation of historic and cultural resources, but were more ambivalent on how to reach that goal. While many felt it was very important to recognize historic structures, they were not certain whether it should be through the creation of a historic district or through the outright purchase of buildings. The majority of those responding did feel it was important to conduct a Historic Resource Survey of properties within the Town of Derry. A survey of this type was conducted in the 1980s which identified over 875 buildings constructed prior to World War II. Please see Appendix G for more details on the 1986 Historic Preservation report prepared by Lynne Emerson Monroe.

9.1 Historical Setting²

Derry was originally settled in 1719 by a group of 16 families, originating in Aghadowney, County Londonderry, Ireland. They were led by their pastor, Reverend James McGregor and were able to secure a 114 square mile land grant called Nutfield. The land was comprised of what is now known as Derry, Londonderry, portions of Windham, Manchester, Salem, and Hudson. During this year, the colonists planted the first potato in United States soil in the common field on the banks of West Running Brook. In 1722, the colonists became incorporated under the name Londonderry. The town was primarily agricultural. Flax was a popular crop, and linen produced on the home looms was sold all over New England. The quality was so good, that in 1748, the Town meeting required that all linen produced in town be marked with the town's name. Londonderry Linen is claimed to be the first trademarked product in America.

Throughout the 18th century, pieces of the original Nutfield grant broke away to form separate towns. The state government, on July 2, 1827, signed a law which allowed the division of two sparring factions, and the Town of Derry separated from Londonderry.

Derry's development has historically been linked to regional transportation patterns. The first village in town was located in East Derry (Upper Village), and contained the first church, tavern and stores. This area was located along the east/west stagecoach road to Portsmouth. With the opening of Londonderry Turnpike (Route 28/By-Pass 28), the area known as Derry Village became more populated. The mercantile center developed closer to Londonderry in the area known as Derry Depot or West Derry about 40 years later when the railroad came to town. Each of the town centers has survived surprisingly intact and preserves the architectural styles of each period.

In 1870, Colonel William Pillsbury moved his shoe factory from Londonderry to the Broadway section of town, closer to the railroad. He purchased an existing factory which had been vacant for 2 years. Prior to Pillsbury's move, that part of town was home to a single store, a hotel, a lumber mill, 5 houses and a railroad depot. Soon, the streets of West Derry were lined with new stores, churches and houses. The HP Hood Company manufactured all of its butter from its Broadway creamery and rushed it daily to Boston by train. Millions of shoes were manufactured in Derry each year and shipped to 5 continents. During the late 1800's, many of Derry's farms were abandoned and people worked in the factories. By 1900, three quarters of the town's population lived and worked within walking distance of Broadway.

² Information obtained from Richard Holmes, Town Historian as noted on the Town of Derry website ((2009); Wikipedia, and Newell, Harriet Chase, *Houses of West Derry, New Hampshire*, 1963; Newell, Harriet Chase, *Outlying Districts of Derry*, 1965, and report by Lynne Emerson Monroe, Town of Derry 1986 Master Plan



Upper Village Hall-National Register of Historic Places

Some of the abandoned farms were purchased as summer homes. The streetcar also became popular at this time and the railroad brought summer tourists to the lakes and ponds of Derry. Trolley lines connected Derry to Manchester and Chester. Cabin colonies grew on Island Pond and Beaver Lake. Beaver Lake Lodge survived as an architectural resource from this time period as did many of the cabin colonies. Other resources, such as the Beaver Lake Pavilion did not.

During the early 1900's the shoe industry began to move to the southern states, and the HP Hood Company moved to Massachusetts. The last operating shoe factory in the Broadway area, known over the years as the ELF, the Woodbury and finally the Chelmsford, was destroyed by fire in 1960 and not rebuilt. Three other shoe factories remained active: Jodi Shoe on Maple Street, Derry Shoe at Ross' Corner, and Klev-Bros Shoe Company on Manchester Road. The last of these closed in 1989.

In 1963, I-93 opened. As a result, the population of Derry doubled within a decade, tripling within 20 years. Land that was once pastured to hundreds of cows has become apartment units. Pinkerton Academy, a private high school established in 1814, is the largest such school in the United States.

Notable residents of Derry include poet Robert Frost, astronaut Alan B. Shepard, Governor Charles Miller Floyd, signer of the Declaration of Independence Matthew Thornton, General John Stark and General George Reid, generals in the Revolutionary War.

Sites of Historical and Cultural Significance

The Town of Derry Zoning Ordinance defines 'historic structures' as any structure that is listed in the National Register of Historic Places, or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register, contributes to historical significance of a registered historic district or an area qualified to be determined as a historic district, or listed on the state inventory of historic places.

Sites of interest in Derry include the First Parish Church, Pinkerton Academy, Taylor Sawmill at Ballard Pond, the Alan Shepard House, the Robert Frost Farm, Pinkerton Academy, Forest Hills Cemetery, the Derry Museum of History, and the Taylor Library.

Sites of Cultural and Historical Significance	Date	Location	Comments
The Derry Museum of History	1976	Adams Memorial Building	Originally housed in the upper floor of 32 W. Broadway when that building was the fire station, moved in 2004. Now under the management of the Derry Heritage Commission
Adams Memorial Building	1903	29 W. Broadway	Opera House/museum
Matthew Thornton House	1737	2 Thornton Street	Private residence
Robert Frost Homestead	1884	Rockingham Road	State owned
First Parish Church	1769	59 E. Derry Road	Church
Pinkerton Academy	1814	North Main Street	Private high school
Adams Female Academy	1824	Lane Road	1 st academy solely for women, closed 1886.
Taylor Sawmill	1805	240 Island Pond	Last operating up and down sawmill in New Hampshire
Alan Shepard House	1825	56 East Derry	Birthplace of Alan Shepard
Taylor Library	1878	49 E. Derry Road	National Register of Historic Places
General Stark Monument	1897	Stark Road	Moved from Stark to the corner of Stark and Lawrence 2009
Marion Gerrish Community Center	1895	39 W. Broadway	Originally the West Side School, now serves as a community center
Original Central Fire Station	1899	32 W. Broadway	Converted to restaurant in 2005
Forrest Hills Cemetery	1722	Cemetery Road	
Beaver Lake Lodge			
Benjamin Chase Mill			Age 55 and older housing units, former woodworking factory
Upper Village Hall	1876	52 E. Derry Road	Vacant
Moore-Scott House	1738	Windham Depot Road	Home of one of the original settlers
Veteran's Memorial Hall	1928	29 W. Broadway	Recreation Center
General George Reid house	1730	19 Kilrea Road	Private residence
Ancient Town Forest	1937	Ballard Road	28 acres, obtained from A. Merrill
Town owned land	1875	146 A & B Warner Hill	Historic site of old witch hazel mill, owned by Gould Witch Hazel Company.
Town owned land	1720	52 North Shore Road	Site of David Cargill Grist Mill and the two Adams Mills-land dates back to this date. Historic Site
Town Pound	1869	93.5 Hampstead Road	Town pound, land dates back to this date
Pinkerton Tavern	1800's	Manchester Road	Currently a restaurant

9.2 Protection of Historic and Cultural Resources

The Town of Derry has an active Heritage Commission made up of 5 regular members and three alternates. The Commission meets on the second Monday of the month, bi-monthly, at the Adams Memorial Building. The Commission is responsible for preserving Derry's past for the future generations. Derry is also fortunate to have a wonderful Museum of History, which is located in the Adams Memorial Building. The Museum contains numerous artifacts, documents and photos of the past eras of Derry. It also contains an extensive library and map collection. During the drafting of the 2002 Master Plan, goals were set forth from the Historic Preservation Group as follows:

- Allow a member of the Heritage Commission to sit with the Planning Board and ZBA as an ad-hoc, non-voting member when those boards are discussing any matter that deals with historical or cultural concerns.
- Allow the Heritage Commission to request a two week delay in the razing or altering of any public or private building or site which the Commission views as historically or culturally important to the Town of Derry.
- Consult the Heritage Commission in the design of new construction.
- Consult the Heritage Commission when town owned property is to be razed, disposed of or altered.
- Consult the Heritage Commission in the selection of names for public buildings, parks or athletic fields.

The Commission also had recommended actions to promote historic areas of town, such as developing a trail linking historical locations, providing Certificates of Merit for citizens who preserve and promote the town's history and giving descriptive names to new developments, identifying special corners, hills, clusters, cross-roads, ranges mills, and the like.

Currently, Derry has only one historic district. It would be beneficial to identify sites and resources that should be protected from encroaching development. Commercial and industrial development can co-exist with historic preservation with careful and thoughtful planning. The town should consider overlay districts with the intent of preserving historic sites and properties from abutting residential and commercial uses, utilizing appropriate buffers and innovative planning techniques.

Historic Preservation Easements³

Historic preservation easements are recorded easements that protect significant historic, archeological, or cultural resources. The easements are attached to the deed of the property so that future landowners are aware of and become responsible for the details of the easement. There are several benefits to donating an easement on a property. The property owner is allowed to retain private ownership and obtain potential financial benefits. An easement gives the organization to which it is conveyed legal authority and

³ www.nps.gov/hps/TPS/tax/easement.htm

responsibility to enforce the easement. Historic preservation easements typically prohibit the owner from demolishing or making alterations to the property without prior review, consultation and approval by the easement holder. For example, an owner may need to comply with certain architectural guidelines that prohibit façade alterations or construction of additions. Owners may also have to maintain the property in a certain physical condition. Things to consider prior to placing a property into an easement is if the property has been designated as historically significant through a National Register listing, is the property in a registered Historic District, how specific would the easement be in order to protect the property and are there any economical benefits to the property owner.

The National and State Registers of Historic Places

The National Register of Historic Places is perhaps the most commonly known list of designated historic sites. The National Register is maintained by the National Park Service and contains more than 80,000 listings. Listings on the Register are eligible for special tax benefits, preservation assistance, and acknowledgement that the property has national, state or community significance. Properties must meet certain criteria to be considered for designation. Essentially, properties are generally at least 50 years old and are associated with significant events or people in the past, or exhibit distinctive characteristics of a historical time period or architectural style. Properties on the New Hampshire Register are eligible for the same types of benefits as the National Register, only the source of funding, planning assistance, and tax benefits are at the state level, rather than federal. The National Park Service has created a publication that guides communities through the federal application process⁴. The New Hampshire Division of Historical Resources offers guidance to communities that desire to apply to the State Register.⁵



Moore-Scott House – National Register of Historic Places

⁴ Visit www.cr.nps.gov/nr/publications/bulletins/nrb39/

⁵ Visit www.nh.gov.nhdhr/

The National Register of Historic Places lists the following for Derry: the East Derry Historic District (roughly bounded by Cemetery, Hampstead and Lane Roads), Adam's Memorial Building, Matthew Thornton House, Robert Frost Homestead and the Upper Village Hall. The New Hampshire Register lists the Upper Village Hall and the Moore-Scott House, located on Windham Depot Road.

National Historic Landmarks

National Historic Landmarks are places that hold a great deal of significance for all Americans. They are designated by the Secretary of the Interior and nominated by the National Park Service. Landmarks can be buildings, districts (villages or communities), sites without built structures, uninhabited structures, or objects. There are fewer than 2500 designated landmarks nationally, and only about 20-25 new landmarks are designated per year. To be designated a National Landmark, areas must be associated with historic events, people or ideals, be prime examples of design or construction, or exhibit a way of life.

The Matthew Thornton House was listed on this Register on November 11, 1971. The Robert Frost Farm was listed on May 23, 1968. There are only 22 designated sites in New Hampshire to date.

State Historic Markers Program

The New Hampshire Historical Markers Program commemorates New Hampshire's places, people, or events of historical significance. The New Hampshire Division of Historic Resources, with the help of the NH DOT, administers the program. Marker requests can be made by communities, organizations, or individuals and must be accompanied by accurate documentation including footnotes, a bibliography, copies of supporting research and a petition signed by at least 20 citizens. Marker preference is given to public locations, except in the case of express written consent by private owners.⁶ To date, there are 204 historic markers in New Hampshire, 3 of which are located in Derry: the General John Stark (#48); the Robert Frost (#126) and the Scotch-Irish Settlement marker (#58).

The Town of Derry also has a monument commemorating the birth place of General John Stark, which is located on Stark Road, about a half mile down from the corner of Lawrence and Stark Roads. The monument reads, "Birthplace of Gen. John Stark, 728, The hero of Bennington 1777, Erected by the Molly Reid Chapter, D.A.R., 1897". In the spring of 2007, the Molly Reid Chapter of the D.A.R., granted permission to a local developer to move the monument to the corner of Lawrence and Stark Road, into the "sheep pen" as part of a housing development project. The purpose was to move the marker to a more protected location as the marker sits at the very edge of the right of way.

⁶ Visit www.state.nh.us/markers

Preserve America

The Preserve America Program was created in 2004 by the White House; the First Lady serves as the Honorary Chair. Preserve America Communities are those which “preserve and use their heritage resources for community economic, educational, and cultural benefit and development.” Designated communities are allowed to display the Preserve America logo, are included in the Preserve America directory, and receive a Preserve America Community road sign. Additionally, some communities are eligible to receive funding to support planning, development, implementation or enhancement of heritage programs. To date, more than 700 communities in all 50 states have been designated Preserve America Communities, including Hooksett, and Keene, in New Hampshire.⁷

Historic Landscapes

The National Park Service National Historic Landscape Initiative⁸ is not a list of designated properties, but rather a resource for the preservation of landscapes. It provides publications, workshops, technical assistance and national policy direction. Landscapes are an essential part of how New Englanders identify with the region; the image of the New England village would be incomplete without landscapes. By protecting landscapes, communities can provide enjoyment for their citizens and an improved quality of life. Landscapes are more than just open space; they include residential sidewalks, lawn and trees, as well as agricultural fields, forests and stones.



Broadview Farm, P. Dionne photo

Landscapes in Derry that should be preserved include J&F Farms, Broadview Farm, the Corneliuson apple orchards in the English Range Road area, the East Derry Village neighborhood, West Running Brook area in the vicinity of Humphrey Road and Route 28, the horse farms located on Island Pond Road (now or formerly known as the Gunter and Killam properties), the Radford property which is the General Reid farm, Ballard Pond area, and they Sawyer property on Island Pond Road.

⁷ Visit [www.http://www.preserveamerica.gov/](http://www.preserveamerica.gov/)

⁸ Visit <http://www.nps.gov/history/HPS/hli/>

The Corneliusen parcel was protected with a joint effort from the Derry Conservation Commission and the Trust for Public Lands. Funding sources included an LCHIP grant, a Farm Protection Program grant, a Land and Water Conservation Fund grant, money from the Derry Conservation Commission Land Conservation account, money voted from the Town Council, a wetlands mitigation donation from Parkland Medical Center, and donations from a local ad hoc group, Save Our Neighborhood. In addition, Phil Ferdinando put an easement on 38 acres of adjoining prime agricultural land, in return for fee simple interest on approximately 30 acres of the Corneliusen property.

In the past two years, the Derry Conservation Commission was successful in purchasing development rights to nearly 100 acres of prime agricultural soils, owned by Phil Ferdinando, ensuring local fresh produce to be available now and into the future. The funds for the two projects also came from the DCC Land Protection Fund. Preservation of farm land is important for food production, as well as preservation of water quality and quantity, protection of critical wildlife habitat and improvement in the general overall quality of life for all citizens in town.

Historic American Building Survey

The Historic American Buildings Survey is a program that works toward preservation through documentation. The program documents important architectural sites throughout the nation. The survey was originally performed by professional architects when it began during the Great Depression in the 1930s. The information collected is compiled in the Library of Congress and also includes the Historic Landscape collection. There are a number of buildings in New Hampshire that are listed on the Historic American Building Survey; 77 of which are in Rockingham County⁹. None of the listings are in Derry.

Scenic Byways Program

There are currently 3 National Scenic Byways in New Hampshire and 12 State Scenic Byways. A scenic byway is a designation that highlights the state's most beautiful vistas and landscapes based on the recognition of its scenic, historic, cultural, natural, recreational, and archeological qualities. Furthermore, NH RSAs 231:157 and 231:158 allow towns to make scenic road designations.¹⁰ Any town road, other than a Class I or II highway, can be designated a scenic road by petition of 10 or more people. A local scenic road designation can be useful for the protection of natural landscapes, since roadway repair or maintenance cannot disturb or harm trees or stone walls without written consent of the responsible Board. Derry currently has 2 roads designated as scenic: Stark Road and English Range Road.

English Range road still exhibits the strong agricultural characteristics of Derry prior to the housing boom. The Conservation Commission was successful in obtaining land and easements along this road that preserve an old apple orchard and the property is known as

⁹ For more information on HABS, please see http://memory.loc.gov/ammem/collections/habs_haer/index.html

¹⁰ For the locations of the National and State scenic byways, visit www.byways.org/browse/states/NH.

the Corneliusen property. Stark Road has lost some of its scenic character over the years. There are other roads in Derry that would qualify to be designated as scenic, Cemetery Road being one of them.

9.3 Archeological Sites and Programs

There has been human habitation in New Hampshire for at least the past 10,000 years. Our knowledge of settlements and archeological sites is limited, however, because most of the State has not been fully explored. The New Hampshire State Conservation and Rescue Archeology Program (NH SCRAP) is hesitant to describe known archeological sites on a map because people have a tendency to assume blank space on a map equates to the absence of archeological significance. This is not the case in New Hampshire; the blank space simply means the area has yet to be explored.

There are a few generalizations about potential archeological sites that communities can use to determine preservation efforts. Generally, SCRAP has found that sites tend to be within 300 feet of rivers or other water bodies. Areas near waterfalls or rapids pose a good chance of hosting former settlements. Settlements have also been known to occur on high ground near wetlands or swamps because these areas provided good resources for hunters and gatherers. A slope grade of 20 percent or greater can rule out a site, since steep slopes are not attractive for habitation. These environmental guidelines are imprecise indicators of settlement because the environmental landscape of the State has changed many times over the last 10,000 years. Unfortunately, there is no predictable model to determine settlement areas in New Hampshire.

9.4 Design Guidelines

In 2005 the Derry Planning Board made findings of fact with regard to the character of the Town¹¹. The Board found that the town contains a historic downtown area, multiple commercial and industrial districts, attractive residential neighborhoods, beautiful rural landscapes replete with unique, natural and cultural resources, and an excellent architectural tradition, a colorful history and much visual appeal. Preserving and enhancing these features is integral to maintaining the character and identity of the community. Building designs that are indifferent to the traditions of the town and region, aggressively seek the attention of passing motorist, do not consider the quality of the pedestrian environment, or are erected at the lowest possible cost without due concern for aesthetics harm the character of the community, depress property values and impair quality of life. Well crafted design standards can promote building design that is functional, economical, attractive and harmonious. Quality development and sustainable economic development are not mutually exclusive; they are interdependent.

With these findings in mind, the Planning Board adopted Architectural Design Regulations, pursuant to RSAs 674:16, 674:21, and 674:44. The regulations also furthered goals set out in previous Master Plans. Architectural design review is required

¹¹ Town of Derry, Land Development Control Regulations, §170-80

as part of Site Plan review for all non-residential structures and for multi-family structures, including new construction, building additions and alterations to buildings if the alterations affect the exterior appearance of the building. Different areas of town are subject to varying degrees of conformity to the regulations. The Central Business District and Traditional Business Overlay District are subject to very high compliance as these districts encompass the downtown area. Multi-Family Residential, Medium High Density Residential are subject to high compliance, as well as the Office Business and Office Medical Business Districts. General Commercial and the various Industrial Districts are subject to a medium-high level of compliance. Architectural applications are submitted with the Site Plan Review application and applicants are encouraged to be creative, while keeping in mind design elements and the nature of the surrounding buildings and special features of historic, cultural or community interest adjacent to the development. Design elements to be considered are building scale and proportion, massing, the roof lines, building façade, fenestration, the entrance, building materials, color and lighting.

9.5 Funding

There are many advantages to designating areas or structures as historic or of cultural value, but it is important to understand that any site is vulnerable to loss. Timing is critical in historic preservation efforts. Increases in residential and commercial development can put properties and historic areas at risk. The citizens in the Town of Derry should be educated about the advantages and disadvantages of historic preservation. But it is not enough to want to save a property or an area; there needs to be funding for the preservation. There are options available to assist communities and property owners in this effort. Federal funding can be obtained through Preserve America Grants, Save America's Treasures Grants, Transportation Enhancement Funding, Transit Enhancement Funding, National Scenic Byways Grants, Farm and Ranch Lands Protection Program, and the National Center for Preservation, Technology and Training Grants¹². More locally, state funding is available through New Hampshire Preservation Alliance grants such as the Preservation Services Grant Program and the Barn Assessment Grant Program. Funds are also available through the Moose Plate Grants, LCHIP and occasionally through the New Hampshire Housing Finance Authority, Community Development Finance Authority, Community Development Block Grants, and the Cultural Facilities Grant Program¹³.

¹² For more information see <http://www.achp.gov/funding-general.html>

¹³ For more information see <http://www.nhpreservation.org/html/howto7.htm>

Recommendations

- Create an historic overlay district to protect historic sites and properties from abutting residential and commercial uses.
- Protect the area around the Robert Frost Farm and create zoning designations sensitive to the homestead.
- Work with state and non-profit land trust for land preservation efforts.
- Revisit the recommendations contained in the 1986 Historic Preservation report prepared by Lynne Emerson Monroe (See Appendix G).
- Revisit the goals for Historic Preservation as set forth in the 2002 Master Plan.

Chapter 10

EXISTING AND FUTURE LAND USE

10.0 INTRODUCTION

This chapter of the Master Plan describes the existing and preferred future land use patterns for the Town of Derry. Many factors influence land use patterns, including natural resource constraints and opportunities, agricultural and forestry resources, transportation, as well as the need for residential, commercial and industrial development. This chapter also includes a summary of the results of a Build-Out Analysis and presents recommendations on preferred future land use patterns based on these results and the vision and goals outlined in this Master Plan.

Community Survey

In the fall of 2008, a Community Survey was made available to the public at Town Hall, the Library, the Recreation Dept and via the Town website. A total of 1000 surveys were distributed and the town received 89 responses, for a return rate of 9 percent. The following questions and responses are those on the survey that relate to Land Use in the Town of Derry.

Do you feel that adequate amounts of land have been zoned for the following uses?

Land Use	Too Much	Just Right	Not Enough	Enough but wrong location	Don't know
Residential – Single Family	24%	46%	20%	0%	10%
Residential – Two and Multi-family	56%	25%	10%	1%	8%
Residential – Cluster Housing	41%	15%	20%	1%	23%
Residential – Rural	5%	47%	35%	0%	13%
Residential – 55+ Housing	23%	22%	36%	3%	16%
Commercial – Business and Office	7%	17%	61%	1%	13%
Commercial - Retail	9%	26%	50%	5%	10%
Industrial – Manufacturing	8%	12%	64%	1%	15%

Industrial – Sand and Gravel Excavation	9%	22%	18%	5%	46%
Industrial – Industrial Parks	5%	14%	61%	3%	17%

The majority of respondents felt that the amount of Residential – Single family land in Derry was “Just Right”. For Residential – Two and Multi-family, as well as Residential – Cluster Housing, the majority of respondents felt that there was “Too Much”. For Residential – Rural the majority of respondents felt that the amount of land was “Just Right”. The majority of respondents felt that there were “Not enough” of the following types of land: Residential – 55+ Housing, Commercial – Business and Office, Commercial – Retail, Industrial – Manufacturing, Industrial – Industrial Parks. Finally, the majority of respondents felt that the amount of land for Industrial – Sand and Gravel Excavation in Derry was “Just Right”.

If you feel that zoning for a particular use is in the wrong location, what would you suggest?

- Better protection along Rte 28, environmental inspection of automobile row
- Change it! Look at Londonderry building businesses everywhere; we need to do the same
- Don't separate groups so much for instance you might have sand and gravel excavation, other industrial, commercial and residential
- Keep the road between Applebee's and Wal-Mart free of more commercial growth and increased traffic. Build towards Ryan's Hill
- more in-depth surveys, demographic polling of what people want
- Move low income housing out of downtown and make downtown more of a tourist draw
- Near water & recreation e.g., Hood park and automobile waste - the rust contaminates the water supply
- Open meeting with public input
- Open up Bypass 28 for commercial zoning
- Protect the Robert Frost Farm from commercialization. Create a large buffer on either side. The stage acreage across from the building is a start.

- Take unoccupied buildings and turn them into something that would help the community (like for the homeless)
- Used car section at Ryan's Hill is ugly. Bring in water
- Utilize areas near I93
- We need to spread out retail areas and provide adequate parking to attract business that would normally go to malls
- Zoning should be one place for Industrial and one place for homes, not scattered all over. It is two separate things.

Please indicate the level of importance that the Town should give to the following land use development methods for guiding future growth in Derry:

Land Use Development	Very Important	Important	Somewhat Important	Not Important	Don't Know
Allow commercial and residential use on the same lot or building	13%	17%	29%	32%	9%
Allow commercial and residential in the same zoning district	15%	21%	33%	26%	5%
Allow commercial and industrial in the same zoning district	22%	38%	17%	11%	12%
Concentrate development into already developed areas in order to preserve rural character elsewhere	44%	29%	13%	11%	3%
Encourage clustered residential subdivisions	23%	15%	21%	31%	10%
Permit higher residential density as a bonus for the creation of affordable/workforce housing	9%	25%	11%	44%	11%

The majority of respondents felt that allowing commercial and residential use on the same lot or building was “not important”. For allowing commercial and residential in the same zoning district, the majority felt that this was “somewhat important”. Respondents felt that allowing commercial and industrial in the same zoning district was “Important”. They also felt that concentrating development into already developed areas in order to preserve rural character elsewhere was “Very Important”. The majority of respondents

felt that encouraging clustered residential subdivisions was “Not Important” and they felt the same way about permitting higher residential density as a bonus for the creation of affordable/workforce housing.

10.1 Existing Land Use

The following is a listing and description of the land use categories found in Derry and shown on the Existing Land Use Map. (See Map 10.1)

Single Family Residential: Land and buildings where residential dwelling units are found. This includes only areas of single family homes.

Multifamily Residential: Land and buildings containing residential dwellings where only multifamily units exist.

Agricultural: Any area of land, including structures thereon, that is used for agricultural purposes, including forestry. This includes the raising of cows, horses, poultry, and other livestock; horticulture and orchards; logging of a forest, woodland, or plantation; selling of products primarily grown or raised directly on such land; and the building, altering or maintaining of woods roads, agricultural roads, skidways, landings, fences, drainage systems, and farm ponds.

Commercial: Commercial service includes barber, hairdresser, health spa, beauty parlor, shoe repair, shoe shine, laundry, laundromat, dry cleaner, photographic studio, and businesses providing similar services of a personal nature.

Industrial: Land uses that are used for the purpose of producing goods.

Mining: Privately owned active or inactive mining operations

Transportation: Land specifically designed and used for transportation purposes by automobile, bus, bicycle, and pedestrian. This includes the major thoroughfares of Interstate 93, Route 28 and Route 102.

Utilities: Land used specifically for energy related infrastructure and development.

Recreation: Land used for general recreation including but not limited to, performing arts, museums, sporting activities, ball fields, camping and hiking, natural areas, and concert halls, etc.

Public and Quasi Public: Establishments and facilities supported by and/or used exclusively by the public or non-profit organizations. These include fraternal, religious, charitable, educational (schools) and some governmental uses and buildings such as Post Offices, etc.

Open Water: All surface waters, including streams, rivers, ponds and lakes both natural and impoundments.

Vacant Land: Land which is currently undeveloped or not built upon.

Brush or Transitional Between Open and Forested: Undeveloped land with little vegetation which comprises transitional areas between open and forested areas.

Barren Land: Undeveloped land with little or no vegetation.

Mixed Developed Uses: Developed land that is comprised of a mix of uses

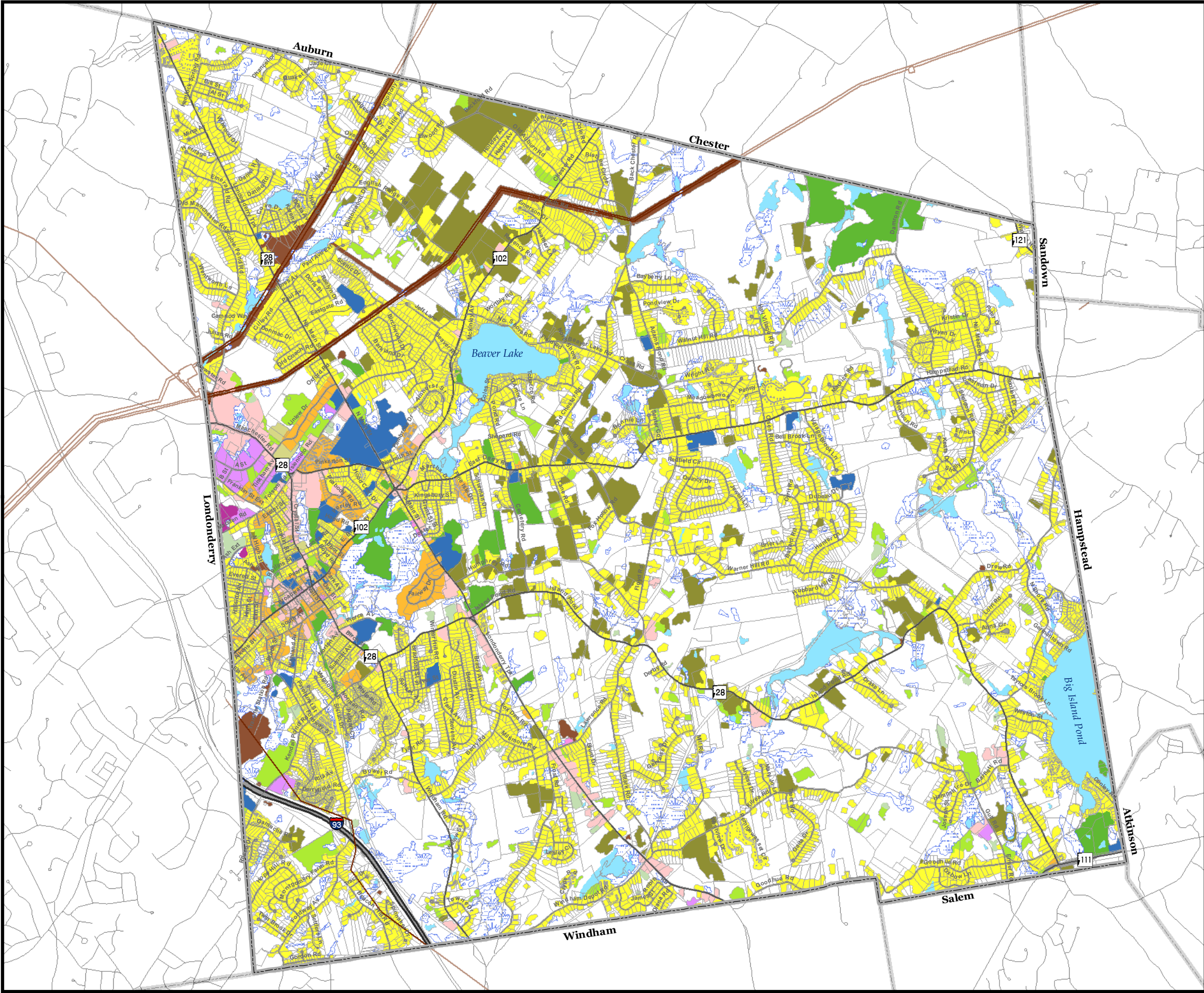
Wetlands: “Wetlands are areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.”¹

Forest Land: Undeveloped land with a dense covering of trees

The Existing Land Use Map for the Town of Derry was created by the SNHPC as part of the Community Technical Assistance Program (CTAP) /I-93 Corridor Project in southern New Hampshire. The land use was digitized based off of high-resolution (1 foot), color, leaf-off, digital ortho-photography, drawn at a minimum scale of 1:2,400 (1” = 200’). The land use was classified following the New Hampshire Land Use Mapping Standard, which was created by GRANIT staff at the Complex Systems Research Center (CSRC), University of New Hampshire, in consultation with the New Hampshire Office of Energy and Planning (NH OEP) and the nine Regional Planning Commissions (RPCs) in the state.

The New Hampshire Land Use Mapping Standard is based on the standard United States Geological Survey (USGS) Anderson Level II land use coding. For more information see the document at <http://landcover.usgs.gov/pdf/anderson.pdf>. In the mid 1990’s the NH OEP led an effort to coordinate a New Hampshire land use mapping standard that included Level III, and Level IV codes to the USGS structure. The GRANIT staff, in cooperation with the NH OEP and the RPC’s further modified the standard to reflect current data sources and current mapping needs based on discussions and a pilot project. The resulting standard uses the four levels, resulting in a four digit code. There were 58 land use categories that were classified for this project.

¹ US EPA



Map 10.1

Existing Land Use

Town of Derry

Existing Land Use*

- | | |
|---|--------------|
| Multi-Family Residential | Recreation |
| Single Family Residential | Vacant Land |
| Commercial | Agricultural |
| Public and Quasi-Public | Forest Land |
| Industrial | Utilities |
| Mining | Open Water |
| Transportation | Wetlands |
| Mixed Developed Uses | Barren Land |
| Brush or Transitional Between Open and Forested | |

* Land Use interpreted April 2007 from 1 foot resolution Sanborn Orthophotography 2005.

- Town Boundary
- Parcel
- Utility Lines
- Roads**
- Highway
- Major Roads
- Minor Roads
- Class VI
- Private Roads

0 0.375 0.75 1.5 Miles

0 2,950 5,900 11,800 Feet

Data Sources:
Granit Digital Data (1:24,000)
NH Department of Transportation
Individual Community Parcel Data
SNHPC

The Town of Derry and the SNHPC make no representations or guaranties to the accuracy of the features and designations of this map.

Map produced by SNHPC May 2009.

This map is designed as part of the Towns Master Plan and is for planning purposes only. It is not to be used for legal boundary determinations or for regulatory purposes.

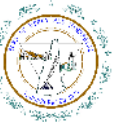


Table 10.1: Existing Land Use Area

Land Use	Acres	% of Town
Agricultural	1,142.79	4.92%
Barren Land	70.64	0.30%
Commercial	383.96	1.65%
Forest Land	10,485.14	45.14%
Industrial	99.93	0.43%
Mining	14.09	0.06%
Mixed Developed Uses	7.45	0.03%
Multi Family Residential	315.89	1.36%
Open Water	839.58	3.61%
Public/Quasi-Public	258.47	1.11%
Recreation	441.96	1.90%
Single Family Residential	6,501.24	27.99%
Transitional open and forested	418.73	1.80%
Transportation	587.57	2.53%
Utilities	302.69	1.30%
Vacant Land	21.83	0.09%
Wetlands	1,333.61	5.74%
Total	23,225.56	100.00%

Table 10.1 above provides a breakdown of the Town of Derry's 2005² existing land use. From this breakdown we can see that the predominant land uses in Derry are Forest Land and Single Family Residential, followed by Transportation, Wetlands and Agricultural. In calculating the area, only the developed portions of the parcels were counted, as opposed to counting the entire parcel area. It is also important to note that vacant land is defined differently using this approach, since Forest Land, Barren Land, Transitional open and forested, etc. are broken out and in some instances those types of land uses could also be defined under the vacant land category. For this analysis they are broken out to give a more complete picture of the land uses in the Town of Derry.

Undeveloped or Vacant Land in Derry comprises approximately 21.83 acres of the town. This does not include Forest Land, transitional or Barren land, which may or may not be developable, depending on ownership and topography.

Additionally there are approximately 839.58 acres of open water and 1,333.61 acres of wetlands that occupy a portion of the town. Together these represent approximately 9.3% of the town.

Besides Forest land, the Town of Derry is predominantly residential. Residential growth has slowed down dramatically in Derry since a 1 year growth moratorium adopted in late 1994, a Growth Management Plan in 1996 and Derry's growth management ordinance in

² 2005 Color, leaf off, Orthoimagery

effect since 1999, which were all created to ease the burden on municipal services and infrastructure the town was seeing from the rapid population and housing growth in the previous decades. From 2000 to 2008 Derry gained 242 new dwelling units, or 1.9%. Between 2000 and 2008 Derry also gained 836,259 square feet of non-residential development, or 12.1% of the total regional non-residential development during that time period, the majority being Commercial.

Regional Land Use Data

The Southern New Hampshire Planning Commission compiles regional land use data on an annual basis. This analysis helps to draw comparisons through time of how the region is growing and developing. From the 2008 SNHPC Land Use Report we can see that dwelling units in Derry expanded from 12,838 units in 2000 to 13,080 units in 2008. This is a 1.9% change and Derry had approximately 4% of the regional growth for this time.

Table 10.2 – Dwelling Unit Expansion, SNHPC Region, 2000 vs. 2008

Municipality	2000	2008	2000-2008		Percent of SNHPC Region
			Absolute Change	Percent Change	
Auburn	1,603	1,785	182	11.4%	3.0%
Bedford	6,394	7,255	861	13.5%	14.4%
Candia	1,379	1,495	116	8.4%	1.9%
Chester	1,272	1,487	215	16.9%	3.6%
Deerfield	1,471	1,710	239	16.2%	4.0%
Derry	12,838	13,080	242	1.9%	4.0%
Goffstown	5,483	5,883	400	7.3%	6.7%
Hooksett	4,245	4,926	681	16.0%	11.4%
Londonderry	7,431	7,934	503	6.8%	8.4%
Manchester	45,236	46,554	1,318	2.9%	22.0%
New Boston	1,395	1,691	296	21.2%	4.9%
Raymond	3,811	4,290	479	12.6%	8.0%
Weare	2,862	3,325	463	16.2%	7.7%
SNHPC Region	95,420	101,415	5,995	6.3%	100.0%

Table 10.3 – Total Developed Area, SNHPC Region, 2000-2008

Municipality	Total Land Area	2000				2008				2000 - 2008 % change in Total Developed Area
		Total Residential	Total Non-Residential	Total Developed Area	Total Vacant Area	Total Residential	Total Non-Residential	Total Developed Area	Total Vacant Area	
Auburn	18,437.8	3,157.8	4,722.4	7,880.2	10,557.6	3,632.4	4,816.7	8,449.1	9,988.7	7.2%
Bedford	21,156.1	9,279.3	2,345.3	11,624.6	9,531.5	10,771.4	5,160.3	15,931.7	5,224.5	37.1%
Candia	19,557.1	4,736.3	2,840.8	7,577.1	11,980.0	5,333.3	2,864.7	8,198.0	11,359.1	8.2%
Chester	16,618.0	3,186.8	2,124.5	5,311.3	11,306.7	3,845.7	2,171.5	6,017.2	10,600.8	13.3%
Deerfield	33,347.7	4,470.8	2,982.2	7,453.0	25,894.7	5,696.7	3,055.5	8,752.2	24,595.5	17.4%
Derry	23,225.6	8,690.6	2,735.9	11,426.5	11,799.1	9,373.1	2,903.7	12,276.8	10,948.8	7.4%
Goffstown	24,064.5	5,487.8	2,927.6	8,415.4	15,649.1	6,741.2	2,989.9	9,731.1	14,333.4	15.6%
Hooksett	23,760.7	3,320.5	5,646.9	8,967.4	14,793.3	4,163.1	6,052.4	10,215.6	13,545.2	13.9%
Londonderry	26,958.2	7,396.8	5,057.6	12,454.4	14,503.8	7,923.8	6,335.1	14,259.0	12,699.3	14.5%
Manchester	21,815.3	6,138.9	9,258.0	15,396.9	6,418.4	7,132.2	10,330.6	17,462.8	4,352.4	13.4%
New Boston	27,653.7	3,050.6	3,598.4	6,649.0	21,004.7	4,194.7	3,662.0	7,856.7	19,796.9	18.2%
Raymond	18,943.5	4,966.1	1,242.7	6,208.8	12,734.7	5,845.9	1,655.3	7,501.2	11,442.3	20.8%
Weare	38,464.3	4,484.6	5,543.6	10,028.2	28,436.1	6,167.3	5,659.7	11,827.0	26,637.3	17.9%
SNHPC Region	314,002.6	68,366.9	51,025.9	119,392.8	194,609.8	80,820.8	57,657.6	138,478.4	175,524.2	16.0%

The 2008 SNHPC Land Use Report also analyzes land area, residential, non-residential, developed and vacant land for each community in the region. The methodology used to track this data is parcel-based, meaning the entire parcel on which a building or residence sits is counted when determining the land area for developed versus vacant parcels.

As indicated in Table 10.3 above, the total land area for Derry is 23,225.6 acres, approximately 36 square miles. In 2000, total Residential land was 8,690.6 acres or approximately 37 % of the town. This increased to 9,373.1 acres by 2008, or 40% of the town. Non-Residential land in 2000 was 2,735.9 acres or approximately 12% of the town. This increased to 2,903.7 acres by 2008, or 12.5%.

Developed area was 11,426.5 acres in 2000 or approximately 49% of the town. This increased to 12,276.8 acres by 2008 or 52.9%. Total vacant area in 2000 was 11,799.1 acres or 50.8%. This decreased to 10,948.8 acres by 2008 or 47.1%. From this table we can see that Derry has seen a slight increase in development from 2000-2008 and that the majority of that development has been residential land.

Zoning Ordinance Analysis

The Town of Derry has 16 Zoning Districts and 6 Overlay Districts. The Zoning Districts are described briefly as follows³:

Industrial I (IND I), Industrial III (IND III), Industrial IV (IND IV)

Industrial I, III, and IV are established for more intense industrial uses, such as, chemicals, plastics, transportation equipment, freight terminal, and fuel and storage tanks, among others. These zones are located in the west central and southwest areas of town, close to Interstate 93 access.

Industrial V (IND V)

The Industrial-V District is established for the purposes of encouraging particular non-residential uses of an industrial nature that are less intense than those uses allowed in Industrial Districts I through IV. To carry out the purposes of this zone, certain prohibitions, restrictions, limitations and requirements are deemed to be necessary and appropriate.

Industrial VI (IND VI)

This district allows for the establishment of office and light manufacturing employment opportunities in the community and takes into consideration vehicular and truck access and the availability of municipal water and sewer.

Low Density Residential (LDR)

The minimum lot area required shall be three acres, or larger, as shall be determined by the “Soils Based Lot Size Determination” provisions of Chapter 170, Land Development Control Regulations. Minimum frontage is 200 feet and minimum lot width is 200 feet at the 35 foot setback line.

Low/Med Density Residential (LMDR)

The minimum lot area required shall be two acres, or larger, as shall be determined by the soils based lot size determination provisions of Chapter 170, Land Development Control Regulations. Minimum frontage is 150 feet and minimum lot width is 150 feet at the 35 foot setback line.

³ September 10, 2009 Town of Derry Zoning Ordinance

Medium Density Residential (MDR)

The minimum lot area required shall be one acre, or larger as shall be determined by the soils based lot size determination provisions of Chapter 170, Land Development Control Regulations. Minimum frontage is 125 feet and minimum lot width is 125 feet at the 35 foot setback line.

Medium High Density Residential (MHDR)

When served by municipal water or municipal sewer, the minimum lot area required shall be 15,000 square feet per dwelling unit. When served by both municipal water and municipal sewer, the minimum lot area required shall be 10,000 square feet per dwelling unit. When served by a community water system, the minimum lot area required shall be one acre (43,560 square feet) per dwelling unit. When served by either municipal water or municipal sewer, or by both, the minimum lot frontage required shall be 100 feet. When served by a community water system, the minimum lot frontage required shall be 125 feet. Minimum lot width when served by either municipal water or municipal sewer, or by both, the minimum lot width required shall be 100 feet at the 35 foot front setback line, or 100 feet at the front lot line. When served by a community water system, the minimum lot width required shall be 125 feet at the 35-foot front setback line.

Medium High Residential II (MHDR II)

When served by municipal water or municipal sewer, the minimum lot area required shall be 15,000 square feet. When served by both municipal water and municipal sewer, the minimum lot area required shall be 10,000 square feet. When served by a community water system, the minimum lot area required shall be one acre (43,560 square feet). When served by either municipal water or municipal sewer, or by both, the minimum lot frontage required shall be 100 feet. When served by a community water system, the minimum lot frontage required shall be 125 feet. Minimum lot width required when served by either municipal water or municipal sewer, or by both, shall be 100 feet at the 35 foot front setback line, or 100 feet at the front lot line. When served by a community water system, the minimum lot width required shall be 125 feet at the 35-foot front setback line.

General Commercial (GC)

Minimum lot areas with public sewer in the General Commercial zone are 30,000 square feet and without public sewer; one acre, plus 10,000 square feet for each 200 gallons per day of sewage effluent after the first 200 gallons per day, unless the owner can show adequate plans for sewage disposal on a smaller lot. Minimum frontage is 125 feet and minimum lot width is 125 feet at the 35 foot front setback line.

General Commercial II (GC II)

To encourage those uses that best fit the infrastructure and land within said district and will provide a potential to increase Derry's commercial tax base and provide employment opportunities to Derry residents. Minimum lot areas with public sewer in the General Commercial zone are 30,000 square feet and without public sewer, one acre, plus 10,000 square feet for each 200 gallons per day of sewage effluent after the first 200 gallons per day, unless the owner can show adequate plans for sewage disposal on a smaller lot. Minimum frontage is 200 feet and minimum lot width is 200 feet at the 35 foot front setback line.

Central Business District (CBD)

The Central Business District is established for the purpose of encouraging appropriate uses within an area of the community where the predominant character has been and will continue to be historical, municipal, cultural, residential, and commercial. It is intended that the types of land use activities that would be allowed within the district would not have a severe detrimental impact on existing historical, residential uses, or traditional commercial, or cultural uses which continue to be maintained in the district. In order to promote this purpose the Planning Board, as set forth in this section shall be authorized to adopt architectural design regulations for this district.

Multi-Family Residential (MFR)

Permitted uses in the Multi-Family Residential District include Single family detached dwellings, Two-family dwellings, Multi-family dwellings and Accessory apartments. Multi-Family dwellings are defined as having more than 2 units per building and they are required to be connected to the municipal water and sewer systems. Minimum lot area for multi-family dwellings shall be 3,630 square feet per dwelling unit, with a minimum lot frontage of 150 feet and minimum lot width at the 35 foot setback line of 150 feet as well. Multi-family dwellings shall not exceed 60 feet in height. For Multi-family dwellings, an additional requirement is also that at least 15% of the gross lot area shall be provided for recreation space.

Manufactured Housing Park Development (MHPD)

The purpose of this district is to allow the use of manufactured housing units under conditions which are intended to enhance affordable housing opportunities.

Office Business District (OBD)

The Office/Business District is established for the purpose of permitting appropriate uses to occur within an area of the community where the predominant character has been, and will possibly continue to be, subject to change as a result of the growth which has affected the Town as a whole, and as a result of the influence exerted by the increased traffic volume on West Broadway. It is intended that the types of land use activities

which would be allowed within this district should not greatly aggravate an already serious traffic problem on West Broadway, nor should they have a severe detrimental impact on the existing residential uses which may continue to be maintained in the district. For these reasons, certain prohibitions, restrictions, limitations, and requirements are deemed to be necessary and appropriate.

Office Medical Business (OMB)

The Office/Medical/Business District is established for the purpose of encouraging appropriate uses to occur within an area of the community where the predominant character has been, and will continue to be, influenced by Parkland Medical Center and ancillary healthcare related uses. It is intended that the types of land use activities which would be allowed within this district will not have a severe detrimental impact on the existing residential uses which may continue to be maintained in the district. For these reasons, certain prohibitions, restrictions, limitations, and requirements are deemed to be necessary and appropriate.

Office Research and Development (ORD)

The Office/Research & Development District is established for the purpose of encouraging particular nonresidential uses to occur within areas of the community. It is intended that the types of land use activities which would be allowed within this district will not have a severe detrimental impact on the existing residential uses which may continue to be maintained in the district. For these reasons, certain prohibitions, restrictions, limitations, and requirements are deemed to be necessary and appropriate. All development proposals shall be subject to review and approval by the Planning Board in accordance with Chapter 170, Land Development Control Regulations.

Zoning Overlay Districts

Neighborhood Commercial (NC)

Neighborhood Commercial are floating districts within residential. “It is the intent of the Town of Derry to create zoning districts within the town to be known as Neighborhood Commercial or NC districts. An NC district is intended to provide an opportunity for the development of limited retail sales and service facilities in the proximity of residential neighborhoods, thus minimizing unnecessary traffic congestion in the major shopping areas within the town as well as helping to reduce national fuel consumption. It is intended that any such facilities will be designed to blend harmoniously with the residential areas in which they are located and will be spaced such that they will afford convenience to the neighborhoods in which they are located, but will not create substantial or continuous commercial districts.”

Floodplain Development District

“The regulations in this district shall apply to all lands designated as special flood hazard areas by the Federal Emergency Management Agency (FEMA) in its Flood Insurance Study of the County of Rockingham, NH dated May 17, 2005 or as amended, together with the associated Flood Insurance Rate Maps (FIRM) dated May 17, 2005 or as amended, which are declared to be a part of this chapter and are hereby incorporated by reference.”

Groundwater Resource Conservation District (GRCD)

“By the authority granted under RSA 674:21 I(j), Environmental Characteristics Zoning and RSA 674:16, Grant of Power, as amended, and in the interest of the public health, safety and the general welfare, the Groundwater Resource Conservation District (GRCD) is established to protect, preserve and maintain existing and potential groundwater resources and primary groundwater recharge areas within this district, known as “aquifers,” from adverse development, land use practices or depletion. Derry's Master Plan-1994 Update, adopted June 1994, and the Water Resource Management and Protection Plan, Adopted 1989, proposes such protection. This is to be accomplished by regulating land uses which would contribute polluted water and pollutants to designated aquifers identified as being needed for present and future public and private water supply.

Conservation Corridor Overlay District

“This area, to be known as the ‘Conservation Corridor,’ shall be all lands in the 100-year flood plain determined by the Federal Insurance Administration's Flood Insurance Rate Maps (FIRM) and the Flood Boundary and Flood Insurance Study of the County of Rockingham, NH, dated May 17, 2005 or as amended, on file with the Town Clerk, Planning Board and Building Inspector. These maps, as well as the accompanying "Flood Insurance Study of the County of Rockingham, NH, are incorporated herein by Reference. The purpose of this article is to regulate uses in important wetland and watershed areas. The objective is to prevent the destruction of watershed areas and wetlands which provide flood protection, recharge of ground water supply, and augmentation of stream flow, and for the protection of the community against the costs that may be incurred when unsuitable development occurs in swamps, marshes, along watercourses, or in areas subject to floods. In event of conflict between the requirements of this Article and the permitted uses within a zoning district, the requirements of this Article shall take precedence.”

Wetlands Conservation Overlay District

“By the authority granted in RSA 674:16-17 and 674:20-21, and in the interest of public health, convenience, safety, and the general welfare, the Wetlands Conservation Overlay District is established in order to regulate the use of land areas subject to extended periods of high water table, flooding, or standing water. It is the intent of this district to:

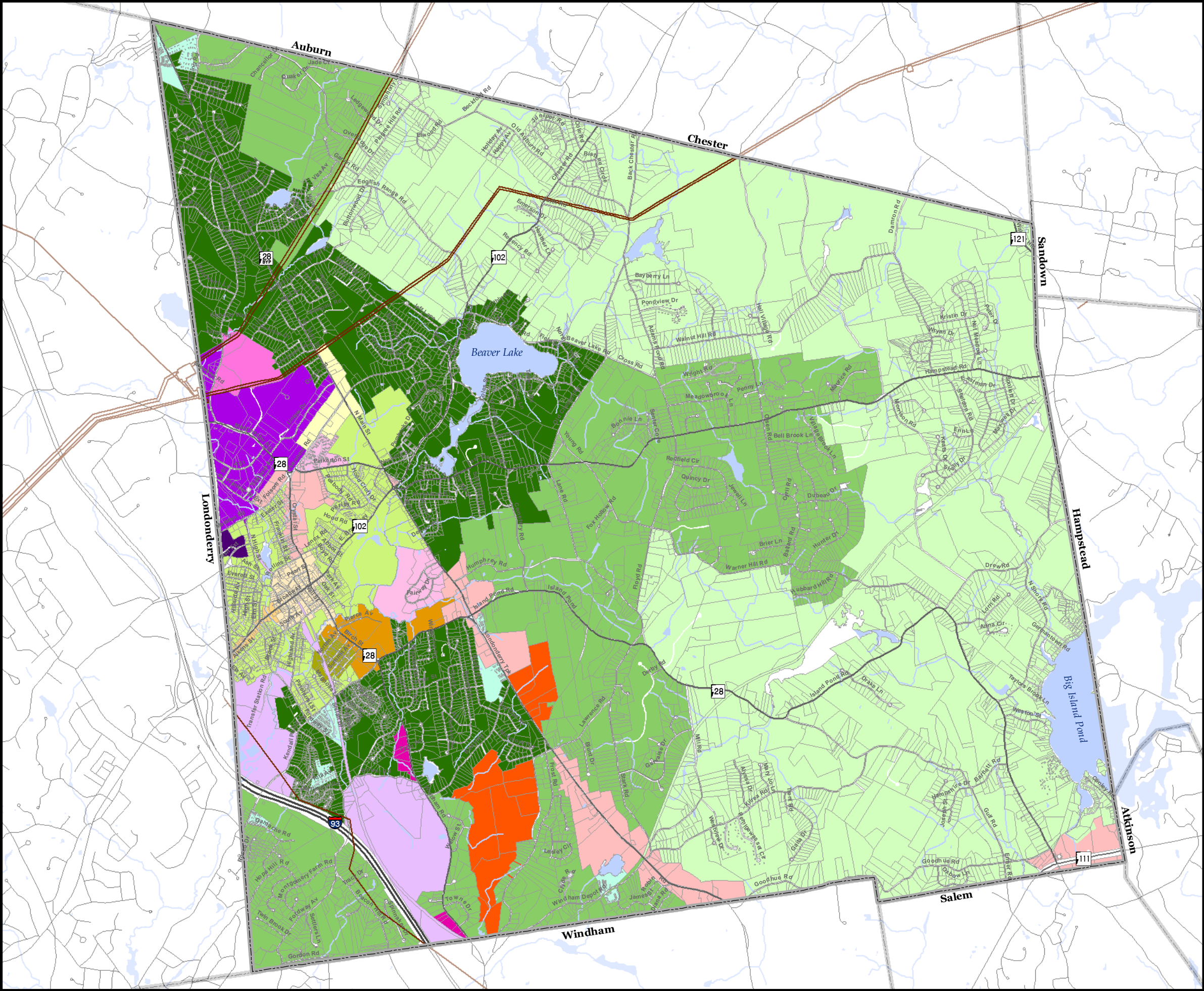
- A. Prevent the development of structures or other land uses on naturally occurring wetlands which would contribute to the pollution of surface and groundwater.
- B. Prevent the alteration of natural wetlands which provide flood protection, recharge of ground water supply, or augmentation of stream flow during dry periods.
- C. Prevent unnecessary or excessive expenses to the town to provide and maintain essential services and utilities which could arise because of inharmonious use of wetlands.
- D. Encourage those uses that can be appropriately and safely located in wetland areas.
- E. Create an undisturbed and natural buffer to the prime wetlands.
- F. Protect unique and unusual natural areas.
- G. Protect wildlife habitats and maintain ecological balances.

Independent Adult Community Overlay District

The purposes of the Independent Adult Community Overlay District are:

- “1. To provide for residential developments that meet the growing needs of persons 55 years of age and older, including the need for quality housing, open space, recreational facilities or the desire to remain proximate to families and roots.
- 2. To encourage innovations in residential developments so that the growing demand for housing may be met by a greater variety in type, design and layout of dwellings, while conserving open space within such a development.
- 3. To recognize that developments housing older persons typically generate lower average rates of vehicular traffic, water usage and sewer usage than other types of residential developments, and have less impact upon the public school system and a lower average number of residents per dwelling unit.
- 4. To encourage flexibility in site planning which will respect and conserve natural resources, such as streams, ponds, floodplains, wooded areas, steep slopes, and other areas of significant beauty or importance to the environment.
- 5. To provide for patterns of development around the perimeter of a tract that are compatible with neighboring development while allowing greater flexibility within the interior of the tract.

The provisions of this Section are adopted pursuant to the authority of RSA 674:16 and RSA 674:21, and shall overlay and supplement the other regulations of the Town of Derry Zoning Ordinance for the purpose of establishing provisions under which independent adult community developments may be permitted by the Planning Board within certain zoning districts.”













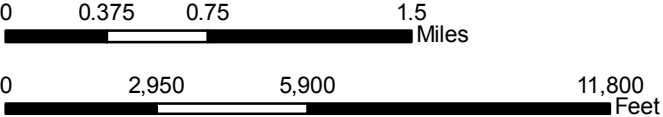
Map 10.2

Zoning

Town of Derry

	Zone	Acres	% of Town
	Central Business District	87	0.4
	General Commercial	566	2.7
	General Commercial 2	76	0.4
	Industrial 1	558	2.6
	Industrial 3	97	0.5
	Industrial 4	381	1.8
	Industrial 5	31	0.1
	Industrial 6	17	0.1
	Low Density Residential	9,959	46.7
	Low-Medium Density Residential	4,952	23.2
	Medium Density Residential	2,998	14.1
	Multi-Family Residential	146	0.7
	Medium-High Density Residential	804	3.8
	Manufactured Housing Park District	138	0.6
	Medium-High Density Residential 2	33	0.2
	Office/Business District	15	0.1
	Office/Medical/Business	123	0.6
	Office/Research and Development	353	1.7
	Totals	21,335	100

-  Lake/Pond
-  Rivers and Streams
-  Town Boundary
-  Parcel
-  Utility Lines
-  Highway
-  Major Roads
-  Minor Roads
-  Class VI
-  Private Roads

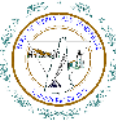


Data Sources:
Granit Digital Data (1:24,000)
NH Department of Transportation
Individual Community Parcel Data
Natural Resources Conservation Services Soil Survey

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Map produced by SNHPC May 2009.

This map is designed as part of the Towns Master Plan and is for planning purposes only. It is not to be used for legal boundary determinations or for regulatory purposes.



Zoning Districts

Map 10.2 shows the current zoning for the Town of Derry and includes how many acres and the percentage of the town is in each district. From this map we can see that a majority of the town is Low, Low-Medium and Medium Density Residential. Together these districts make up approximately 84% of the town. The five Industrial districts together make up approximately 5% of the town and the Commercial/CBD districts together make up approximately 3.4% of the town. Office/business/Medical/Research and Development districts make up approximately 2.3% of the town and Multi-Family/Medium-High1&2 and Manufactured Housing together make up approximately 5.3% of the town, making those high-density residential districts the second greatest portion of the town.

Table 10.4 - Town of Derry Current Zoning

	Zone	Acres	% of Town
	Central Business District	87	0.4
	General Commercial	566	2.7
	General Commercial 2	76	0.4
	Industrial 1	558	2.6
	Industrial 3	97	0.5
	Industrial 4	381	1.8
	Industrial 5	31	0.1
	Industrial 6	17	0.1
	Low Density Residential	9,959	46.7
	Low-Medium Density Residential	4,952	23.2
	Medium Density Residential	2,998	14.1
	Multi-Family Residential	146	0.7
	Medium-High Density Residential	804	3.8
	Manufactured Housing Park District	138	0.6
	Medium-High Density Residential 2	33	0.2
	Office/Business District	15	0.1
	Office/Medical/Business	123	0.6
	Office/Research and Development	353 ⁴	1.7
	Totals	21,335	100

⁴ Majority of Office/Research and Development land in Derry is State-owned

Previous Land Use Recommendations

In order to develop future land use recommendations, it is useful to look at recommendations for the town in the previous Master Plan and analyze whether the town has been or is achieving those goals and if not, what can be done differently going forward. From the 2001 Master Plan the following goals were developed for land use and growth:

- Preserve Derry's overall pattern of land use that concentrates development in the Downtown and west central sections of the Town, with open lands and sparser development in the east section of the community, avoiding the tendency toward suburban sprawl.
- Continue to guide the amount of growth that is sustainable, given Derry's environment, level of service, and to its desired character, as outlined in its growth management ordinance.
- Integrate Town goals for open space, recreation, economic development, downtown revitalization, with land use policies and regulatory tools where appropriate.
- Continue to review zoning regulations to assure consistency with Town objectives and evolving policies on land use.

Since 2001, Derry has been working to implement these goals. Land use patterns have been preserved so that development and density are concentrated in the downtown and west central sections of the Town and so that open lands and low density remain in the outlying and mainly in the East sections of Town. The Town of Derry still has its growth management ordinance in affect to continue to guide sustainable amounts of growth. The Town strives to integrate goals into land use policies and regulatory tools where appropriate and zoning regulations are reviewed and revised as necessary to maintain consistency with Town objectives and evolving land use policies.

The following implementing action was cited in the 2001 Master Plan,

- Revise Derry's zoning and subdivision regulations to allow and encourage open space residential development for a range of households, including moderate and one-income households.*[Ed.note: The Master Plan Housing Subcommittee recommended this, observing that, while Derry has provided more than its share of low-to-moderate income housing, a significant needs still exists for moderate income residents and starter homes.]*

This action is also recommended for the Town to consider going forward, as it has not been implemented since the 2001 Master Plan.

The 2001 Master Plan also cited the following implementing action:

- Consider creating an agriculture district that gives preference to agricultural preservation.

Actions to strengthen agricultural preservation in town are also recommended going forward in order to keep this valuable resource from being lost to development.

10.2 Build-Out Analysis

A buildout is a tool that allows planners to estimate future development based on different scenarios. This buildout is an analysis of existing adopted municipal policy. The buildout method allows for the potential testing of alternative land use regulation, open space planning and major development scenarios. A buildout consists of one or more scenarios. This buildout contains three scenarios: base, standard alternative, and community alternative. The process is designed with the capability for conducting future alternative scenario testing. Comparing various scenarios allows planners to test the effects and consequences of new zoning ordinances. Changing setbacks, densities and building restrictions can significantly alter a buildout. The analysis of results allows planners to evaluate the effectiveness and viability of changes to the zoning code.

Scenarios are an analysis about what might be. They are not predictions about what will occur, but they are possible futures based on what already exists, on current trends, and on the values and on the preferences of a community. A buildout is a planning tool to allow community decision makers to understand the impacts of growth under a set of land use rules. In addition, the Community Specified scenarios do not necessarily represent official policy goals or a plan for the community, but are merely a test of one alternative growth scenario.

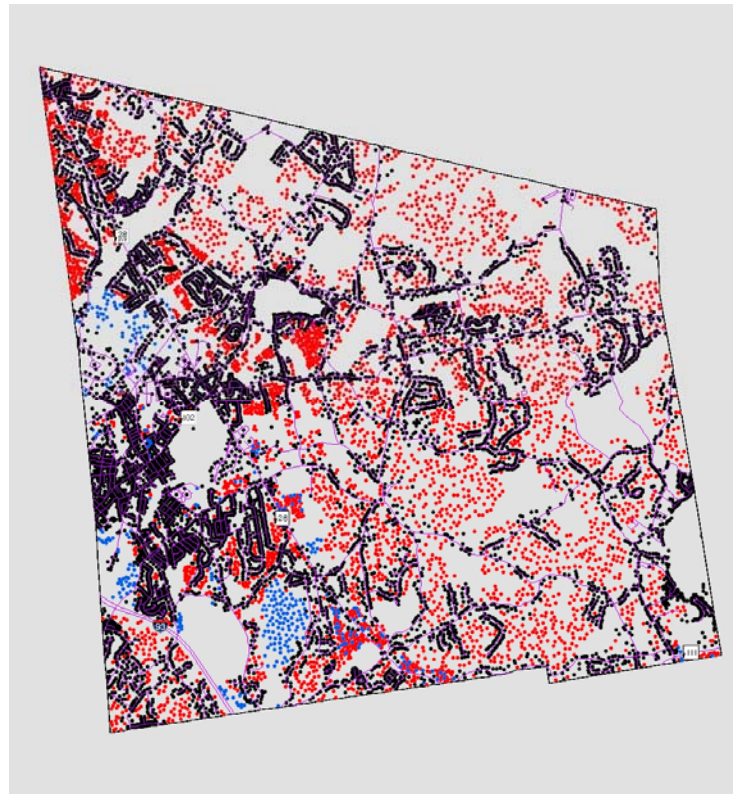
The three scenarios analyzed for the Town of Derry are described and shown on the following maps. More detailed descriptions and the full Build-Out Report can be found in Appendix D.

Build-Out Scenario 1: Base Buildout

This scenario is a maximum development buildout under current regulations. Density, setbacks and lot coverage are applied from zoning regulations and the standard constraints of wetlands, 100-year floodplain and conservation lands are applied.

Base Buildout

- Existing Buildings
- Buildout Buildings**
- Commercial/Industrial
 - Single Family Residential

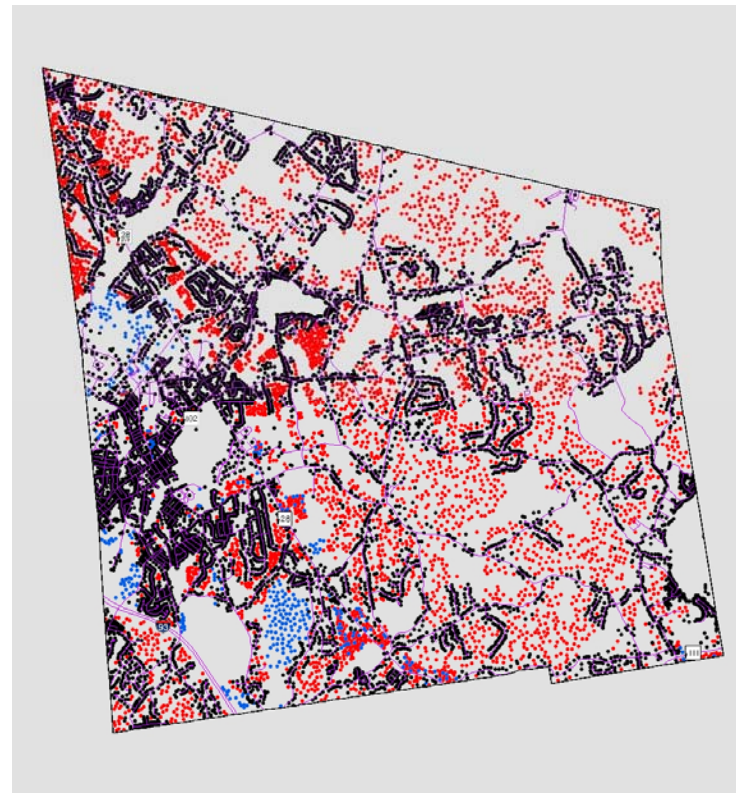


Build-Out Scenario 2: Standard Alternative Buildout

This scenario applies the Natural Services Network (NSN) layer as an additional development constraint. Adjustments to allowable densities are made to maintain an equal number of new housing units and non-residential square feet. This growth neutral method is conducted by increasing density in concentric rings based on distance from one or more community centers.

Standard Alternative Buildout

- Existing Buildings
- Buildout Buildings**
- Commercial/Industrial
 - Single Family Residential



Build-Out Scenario 3: Community Scenario Buildout

The third buildout scenario is an opportunity for each community to specify factors or issues unique to the municipality and to test their own alternatives. The Derry Community Scenario consists of a new Commercial/Industrial zone in the area north of Tsienneto Road and along Manchester Road in the area currently zoned Industrial 3 and Industrial 4. Lot sizes in the zone are 1 acre.

An additional zone called Future Commercial was added along the Route 28 corridor in the southern portion of the town. Densities in this zone consist of 30,000 ft² for lots with municipal sewer. Lots without municipal sewer are 1 acre.

Community Scenario

- Existing Buildings
- Buildout Buildings**
- Commercial/Industrial
 - Single Family Residential

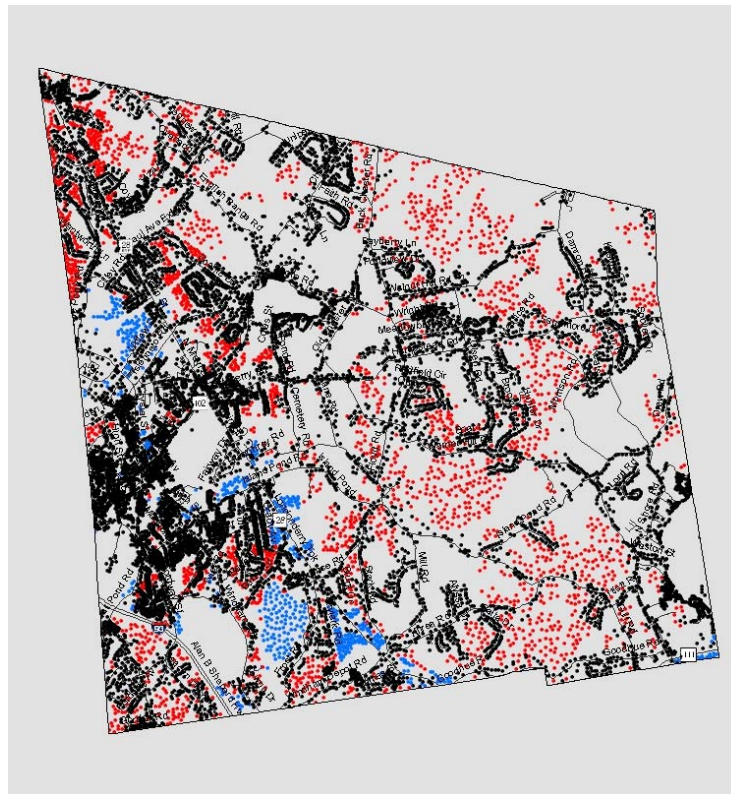


Table 10.5 – Buildout Analysis

Category	Indicator	Units	Current	Base Buildout	Percent Change	Standard Alternative Scenario	Percent Change	Town Scenario	Percent Change
Buildout	Developed Residential Acres	Acres	6,985	15,776	126%	13,134	88%	12,911	85%
	Developed Non-Residential Acres	Acres	1,685	2,383	41%	2,121	26%	2,391	42%
	Residential Dwelling Units	d.u.'s	15,761	19,379	23%	19,626	25%	18,083	15%
	Commercial Floor Area	sq. ft	3,790,144	4,787,034	26%	4,663,012	23%	5,161,229	36%
Demographics & Employment	Population	Persons	40,348	49,610	23%	50,243	25%	46,292	15%
	School Kids Population	School Kids	7,626	9,376	23%	9,496	25%	8,749	15%
	Labor Force Population	Workers	16,498	20,286	23%	20,544	25%	18,929	15%
	Commercial Jobs	Jobs	4,605	5,817	26%	5,666	23%	6,271	36%
	Jobs to Housing Ratio	Jobs/d.u.	0.29	0.3	3%	0.29	0%	0.35	21%
Environmental & Open Space	Open Space Supply	Acres	20,253	10,764	-47%	13,667	-33%	13,620	-33%
	Impervious Surfaces	Percent	6.3	12.3	95%	10.4	65%	10.7	70%
Land Use Characteristics	Total Density	Persons/mi²	840	1033	23%	1046	25%	964	15%
	Residential Housing Density	d.u./Acre	2.26	1.23	-46%	1.49	-34%	1.4	-38%
	Residential Development Footprint	Acres/d.u.	0.44	0.81	84%	0.67	52%	0.71	61%
	Recreation Density	Ft²/person	417	339	-19%	335	-20%	363	-13%
	Housing Proximity to Recreation	Miles	0.61	0.73	20%	0.74	21%	0.72	18%
	Housing Proximity to Community Centers	Miles	3.2	3.2	0%	3.2	0%	3.2	0%
	Housing Proximity to Amenities	Miles	0.68	0.74	9%	0.77	13%	0.73	7%
	Walkability	Percent	3.12	2.65	-15%	2.72	-13%	2.8	-10%
	Housing Proximity to Transit	Miles	0	0	n/a	0	n/a	0	n/a
	Employment Proximity to Transit	Miles	0	0	n/a	0	n/a	0	n/a
Municipal Demands	Fire & Ambulance Service	Calls/Years	3,228	3,969	23%	4,019	25%	3,703	15%
	Police Service	Calls/Years	51,242	63,005	23%	63,808	25%	58,791	15%
	Solid Waste Demand	Annual Tons	21,788	26,790	23%	27,131	25%	24,998	15%

Category	Indicator	Units	Current	Base Buildout	Percent Change	Standard Alternative Scenario	Percent Change	Town Scenario	Percent Change
Water & Energy Use	Total Energy Use	mbtu/hh/yr	2,189,046	2,619,220	20%	2,649,498	21%	2,535,341	16%
	Residential Energy Use	mbtu/hh/yr	1,810,790	2,141,474	18%	2,184,129	21%	2,020,250	12%
	Commercial Energy Use	mbtu/hh/yr	378,256	477,746	26%	465,369	23%	515,091	36%
	Residential Water Use	mgals	1340	465	-65%	509	-62%	297	-78%
Transportation	Vehicles	Vehicles	29,000	35,657	23%	36,112	25%	33,273	15%
	Vehicle Trips per Day	Trips/Day	127,027	158,872	25%	161,700	27%	147,375	16%
	Annual CO Auto Emissions	Grams/Yr	17,522,963	22,226,395	27%	22,174,329	27%	20,518,569	17%
	Annual CO2 Auto Emissions	Tons/Yr	362	459	27%	469	30%	424	17%
	Annual NOx Auto Emissions	Grams/Yr	1,098,585	1,393,462	27%	1,424,053	30%	1,286,392	17%
	Annual Hydrocarbon Auto Emissions	Grams/Yr	2,213,342	2,807,237	27%	2,869,068	30%	2,591,720	17%

Table 10.5 shows a comparison for each buildout scenario analyzed and how the Town of Derry might change for a number of different indicators. In terms of buildout, The Base Buildout would have the biggest increase in developed residential acres going from 6,985 currently to 15,776 at full buildout for a change of 126%. The Town Scenario would have the least increase at 12,911 at full buildout for a change of 85%. In terms of developed non-residential and commercial floor area the Town Scenario would have the greatest increase in both of these indicators, with a 42% increase in developed non-residential acres and a 36% increase in commercial floor area.

In terms of demographics and employment, the greatest increase in population would be with the Standard Alternative Scenario, going from 40,348⁵ currently to 50,243 at full buildout for an increase of 25%. The Town Scenario had the least increase in population at 46,292 at full buildout for an increase of 15%. The school kids indicator was similar, with the Standard Alternative Scenario having an

⁵ Current population is derived from building data from the Town of Derry (verified with 2005 Color, leaf off, Orthoimagery) multiplied by the average household size from the 2000 Census for the purposes of this build-out analysis

increase of 25% and the Town Scenario having an increase of 15%. For Commercial jobs the Town Scenario buildout has the greatest increase going from 4,605 currently to 6,271 at full buildout, for an increase of 36%.

In terms of Environmental and Open Space, the standard alternative and the town scenario both have equally less decreases in open space supply, with decreases of -33% each. The base buildout had the biggest decrease in open space supply at -47%. It also had the greatest increase in impervious surfaces with a 95% increase from the current 6.3% of the town.

In terms of Land Use Characteristics, the total density along with residential housing density increases the most with the Standard Alternative Scenario. The greatest increase for residential development footprint is with the Base Buildout Scenario which shows an 84% increase, compared to 52% with the Standard Alternative Scenario and 61% with the Town Scenario.

The greatest increase for municipal demands (Fire, Police and Solid Waste Demand) is shown with the Standard Alternative Scenario and the least amount of increase is seen with the Town Scenario.

For Water and Energy Use the Town Scenario has the least amount of increase in each indicator, except for Commercial Energy Use. This is due to the added commercial zones in the Town Scenario.

For the Transportation category, the least amount of increases in each indicator listed are seen with the Town Scenario and the highest increases are seen with the Standard Alternative Scenario.

10.3 Preferred Future Land Use Pattern

The analysis of Table 10.5 shows that overall the Town Scenario will meet the goals and vision of the Town of Derry for a majority of the indicators and is the preferred future land use pattern from the three scenarios analyzed. The purpose of this analysis is to provide the Town of Derry with a planning tool that can be used in an advisory nature to guide the future growth and development of the Town as well as assist the Planning Board in developing and improving the Town's land use regulations.

The Derry Community Scenario consists of a new Commercial/Industrial zone in the area north of Tsienneto Road and along Manchester Road in the area currently zoned Industrial III and Industrial IV. Lot sizes in the zone are 1 acre.

An additional zone called Future Commercial was added along the Route 28 corridor in the southern portion of the town. Densities in this zone consist of 30,000 ft² for lots with municipal sewer. Lots without municipal sewer are 1 acre.

In consideration of the historical and cultural resources in the area along Route 28 where a future commercial zone was added in the Town Scenario Buildout, the town should consider a historic district overlay zone to preserve these types of resources in town, while allowing the integration of commercial development which fits with the character of the Town. When establishing a historic overlay zone it is important to coordinate preservation regulations and zoning rules. The purpose of the historic district overlay zone is "to encourage the preservation, restoration, and rehabilitation of buildings of historical, architectural or cultural value and to preserve and prevent the loss of significant historic elements, buildings and sites, located within non-residential districts."⁶ The preferred future land use pattern for Derry is shown on the following map.

⁶ Westport, CT Zoning Regulations. Sept. 26, 2009.

Map 10.3

Future Land Use

Town of Derry

- Future Commerical/Industrial District
- Future Commercial District
- Central Buisness District
- General Commercial
- General Commerical 2
- Industrial District 1
- Industrial District 3
- Industrial District 4
- Industrial District 5
- Industrial District 6
- Low Density Residential
- Low-Medium Density Residential
- Medium Density Residential
- Multi-Family Residential
- Medium-High Density Residential
- Manufactured Housing Park District
- Medium-High Density Residential 2
- Office/Buisness District
- Office/Medical/Buisness
- Office/Research and Development

- Lake/Pond

Rivers and Streams

Town Boundary

Parcel

Utility Lines
- Roads

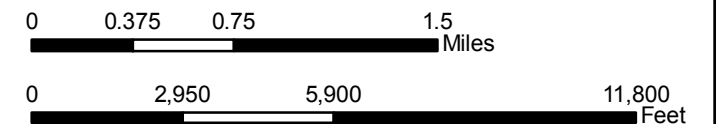
Highway

Major Roads

Minor Roads

Class VI

Private Roads



Data Sources:
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 NH Department of Transportation
 Individual Community Parcel Data
 Natural Resources Conservation Services Soil Survey

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Map produced by SNHPC November 2009.

This map is designed as part of the Towns Master Plan and is for planning purposes only. It is not to be used for legal boundary determinations or for regulatory purposes.



Recommendations

The Community Survey and Community Profile conducted as part of this Master Plan update provided a number of themes that were important to residents of the Town. From the Community Survey, the top five issues that residents were concerned about addressing were:

- Reducing the tax burden
- Preserving Agricultural Land/Open Space
- Attracting New Retail
- Protecting Drinking Water Supply
- Attracting an office park

The following themes developed from the Community Profile:

- Protection of Natural Resources
- Community Support
- Leadership and Communication

- Planning
- Traffic/Transportation
- Economic Development
- Downtown
- Recreational & Leisure

In terms of future land use the following recommendations should be considered for the Town of Derry in order to address some of these issues and themes. Recommendations for addressing those issues and themes not directly related to land use are found in their related chapters.

- Consider a new Commercial/Industrial zone in the area north of Tsienneto Road and along Manchester Road in the area currently zoned Industrial 3 and Industrial 4. Lot sizes in the zone are 1 acre.
- Consider rezoning and expanding the area along the Route 28 corridor in the southern portion of the town to commercial. Review current OMB districts in the South Range Rd/Frost Rd area and rezone back to residential, retaining some of the parcels as OMB/Medical uses.
- Consider the use of a historic overlay district to protect sites and properties from abutting residential and commercial uses.

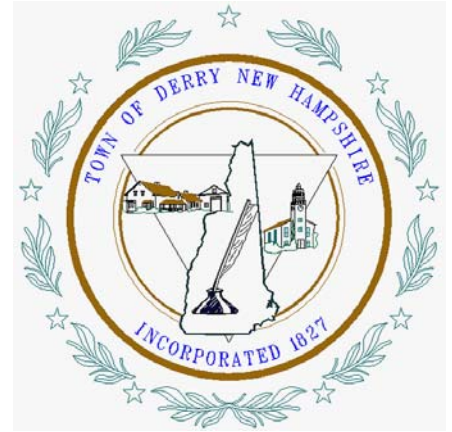
- Consider Revising Derry's zoning and subdivision regulations to allow and encourage Open Space Subdivisions/Residential Development as a means of implementing smart growth principles and preserving open space in the future.
- Continue to use the Town's Growth Management Ordinance to control and direct growth so that it is sustainable in the future.
- Implement recommendations of the Downtown Market Plan (2008) for strengthening economic development and character in the downtown area and review on a regular basis.
- Consider expanding the Downtown Market Plan for the development of an overall Economic Development Plan for the entire town and include a comprehensive review of current land uses to determine what strategies can be implemented to strengthen economic development in the Town of Derry.
- Implement recommendations of the Beaver Lake Watershed Management Plan in order to protect natural resources within the Beaver Lake Watershed.
- Consider a taskforce to review planning, zoning and code enforcement regulations on a regular basis for compliance with town Goals and vision.
- Consider developing a Cost of Community Services Study to determine how land uses should be balanced in the future in the Town of Derry.

Appendix A

Community Profile Report



UNIVERSITY of NEW HAMPSHIRE
COOPERATIVE EXTENSION



Derry Our Town-Our Future Community Profile Report

**Derry, New Hampshire
April 4, 2009**

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The Community Profile model was developed with the assistance of:

University of Vermont Cooperative Extension: *Bill McMaster and Bob Townsend*

University of New Hampshire Cooperative Extension: *Jerry Howe*

Vermont Department of Housing and Community Affairs: *Peg Elmer*

Upper Valley Lake Sunapee Regional Planning Commission: *Vicki Smith*

Tufts University, Center for Environmental Management, Consortium for Regional Sustainability: *Elizabeth Kline*

New Hampshire Charitable Foundation: *Tom Deans and Deborah Cowen*

Vermont Community Foundation: *Eddie Gale*

Sustainable Seattle: *Alan Atkisson*

University of Vermont Center for Rural Studies: *Fred Schmidt*

Community Innovations: *Jeff Bercuvitz*

The Upper Valley: 2001 & Beyond Steering Committee Members: *Don Bourdon, Delia Clark, Ann Crow, Geoff Dates, Harrison Drinkwater, Charlotte Faulkner, Phil McLane-Bradley, Deecie McNelly, Walter Paine, Betty Porter, Bob Rosenblum, Barry Schuster, Mike Smith, and Vicki Smith* and with generous donation of time and expertise from: *Jackie Clement, Ed Delhagen, Susan Edsall, Maureen Hart, and Anne Peyton*

OVERVIEW OF COMMUNITY PROFILES

The Community Profile is a process by which communities take stock of where they are today and develop an action plan for how they want to operate in the future. Whether the issue is a quality school system, an air pollution problem, lack of adequate affordable housing or solid waste disposal, the need for effective problem-solving skills is the same. A community must have strong leaders, from all sectors, who are able to work together with informed involved citizens to reach agreement on issues. The Community Profile assists communities to develop their problem-solving ability. It is a self-evaluation tool that draws heavily on the collective wisdom of the participants and is not a test or a comparison between communities. It provides a method for citizens to affirm community strengths, identify concerns and problems, and then to help a community structure collaborative approaches to meet these challenges creatively, set directions for the future, and manage change.

The original Civic Profile emerged from the Governor's Commission on New Hampshire in the 21st Century as a process and a mechanism that communities could use to strengthen their civic infrastructure. The National Civic League, along with several university studies, identified those qualities that make a community work - that help communities plan for the future and survive such dramatic change as extreme population growth, plant shut-downs or military base closings.

In 1995, the League of Women Voters in the Upper Valley, working with UNH Cooperative Extension and UVM Cooperative Extension, identified ten key qualities that help a community to work well and sustain its social, economic, and environmental health for the future. This is the model that was adapted by the University of New Hampshire Cooperative Extension and are the "tools" of the community's self-assessment.

Creating a Community Profile in Derry

The Our Town-Our Future Derry Community Profile was conducted as a result of the Planning Department's desire to update the town's Master Plan as well as enlist more citizen participation in the activities and needs of the community.

Small group facilitators and recorders:

Mastora Bakhtiet, Charlie Zoeller, Rizalina Ababa, Amanda Landry, Gordon Graham, Bina Contreras, Maggie Maxwell, Dylan Kreis, Jack Dowd, Elizabeth Ives, George Klauber, Bethany Hobbs, Margie Ives, Jillian Harris, Nicole Ferrante, Marieka Buhlmann, Dan Reidy, Rick Alleva, Dave Nelson, Anna Baker, Claudia Boozer-Blasco

Town Support:

George Sioras (Community Development Director), Elizabeth Robidoux (Planning Clerk)

Steering Committee:

David Nelson (chair)
George Klauber (vice chair)
Jack Robillard (secretary)
Rick Metts

Neil Wetherbee
Cecile Cormier
Elizabeth Ives
Jack Dowd

Nicole Ferrante
Ken Gould

**UNH Cooperative Extension
Derry Community Profile
April 4, 2009
Agenda**

7:30 Sign-In & Dunkin' Donuts Breakfast

8:30 Welcome – Michele Gagne, UNH Cooperative Extension; Dave Nelson, Steering Committee Chair; and George Sioras, Community Development Director

- Overview of Community Profile process
- Who is here?

Mosaic and Vision

- What is Derry like now?
- What do we want Derry to be like in the future?

Historical Overview: Rick Holmes

- Where has Derry been?

9:15 Presentation of Community Profile components

- Effective Community Leadership
- Informed Citizen Participation
- Sense of Community
- Fostering Healthy Families, Individuals and Youth
- Lifelong Education and Learning
- Community Services, Facilities, and Utilities
- Recreation and Cultural Heritage
- Working Landscape and the Natural Environment
- Economic Vitality
- Growth and Development
- Transportation

9:30 Break/Move into small groups

9:45 Small group discussions of components

Random assignments to small groups, one component per group

- Strengths of Derry in the component area
- Weaknesses of Derry in the component area
- What would you like to see in the future?
- What are the 5 key issues that need to be addressed?

11:00 Break

11:15 Small group reports

- Each of the eleven small groups report to the large group, three minutes each

11:45 Lunch

12:30 Selection of key issues

1:15 Selection of small groups

1:30 Small groups meet for key issue discussion

- Define the problem or opportunity
- Project goals – identify what you want to accomplish
- Identify potential projects/solutions
- Evaluate potential projects using impact-feasibility grid
- Select 3 projects to bring to the full group

3:00 Full Group: report back from small groups

3:15 Voting

- Which projects do you think we should move forward on?
- Which is the most important project for Derry right now?

4:00 Formal adjournment

Community Profile Saturday Morning

The Community Profile was conducted at West Running Brook Middle School on Saturday April 4, 2009. Approximately 150 citizens attended.

The event began on Saturday with a donuts, muffins and coffee donated by Dunkin Donuts. Michele Gagne from UNH Cooperative Extension, and David Nelson, Co-Chair of the Steering Committee, gave an overview of the profile process and an introduction to the goals for the day. The goal of the Profile is strengthening community involvement; its key idea is sustainability - balancing economic and environmental factors while thinking about the impacts of our actions for the next seven generations. George Sioras, Derry's Community Development Director gave an overview of how the Profile will feed into the Master Plan.

We spent a few minutes meeting each other, learning how long we had lived in town, where we lived and where we work. We were then asked to offer descriptions of what our town was like right now and what we would like it to be like in the future. Adjectives and phrases were called out and recorded on large easels labeled "NOW" and "FUTURE" at the front of the room. Here are the results:

THE MOSAIC - What is Derry like today?

- Rail trail needs paving
- No homeless shelter
- Great recycling program
- Spot zoning/miss matched zoning
- Very fragmented
- Lacking unique small businesses
- Younger on-average than rest of country
- No formal Senior Center
- Good community center for people to meet
- Where are the rest of the civic minded today
- Transient
- Biased to build new and not restore old
- Nice beach here – Galliens Beach
- Helpful volunteers
- Not ethnically diversified
- Lack of public transportation
- Lacking in teen centers
- Two great venues for performing arts
- Lots of traffic
- Undeveloped commercial opportunities
- Not enough industry
- Shrinking Main Street
- Inability to be self- sustaining
- Lack of continuity to physical appearance and structure
- Great Parks and Recreation Department
- Wonderful dog park
- Not exploiting excellent locations for business
- Political apathy

- Poetry center
- Excellent after-school clubs at schools
- Lots of churches
- Dog pound needs to be updated
- Argumentative
- Stagnant
- Overpopulated
- Underappreciated
- Beautiful
- Diversified
- Disengaged
- Littered
- Great recreation
- Tattoo parlors and pharmacies
- Good downtown restaurants
- Pedestrian unfriendly
- Over-taxed
- Still a bedroom community
- Not reaching its potential
- Unrestricted
- Great schools
- Educating children is the biggest business
- Full of collaborating agencies
- Historic gems
- Expensive schools
- Helpful social agencies
- Lacking in green space and environmental awareness
- Aging
- Good library
- Unfriendly to veterans
- Lots of high density housing
- Location, location, location - conveniently located
- Lack of parking near arts venues

THE VISION – What do we want Derry to be like in the future?

- Emergency shelter in Derry
- Effective study of municipal efficiency
- Buy more local
- Approval of open space ordinance
- Attracting more business
- Revitalize downtown that is available
- Adding a college for lifelong learning
- Strengthening requirements for signage and maintaining appearance of buildings
- Better regional transportation
- Encourage and educate on recycling
- Town funds support the arts

- Businesses that people travel to work to come to Derry through tax incentives
- Supporting families and family life activities
- Protect Hall and conservation land behind it
- Better regulations on wetlands
- Approval of the conservation overlay district
- Community service to pick up litter
- State representatives take more active role in representing issues of Derry
- Develop E. Derry in recognition of Allen Shephard
- Keep Derry clean
- Bowling alley, skate park and teen center
- Expansion of sewer and water
- Truly public high school that supports special needs students
- Balance rural character with development
- Free downtown Wi-Fi
- Support green building
- Reduce taxes
- Town council more responsive to people's needs
- Improved communication in and out
- Farmer's and crafter's market
- Positive free youth program (local)
- Balanced development between East and West
- More cultural diversity
- Bicycle friendly transportation system
- Save historical buildings
- Create Derry as a destination for tourism
- Need for a hotel
- Ice rink or pool
- Expand library or create a satellite location
- Increased opportunities and participation in community activities
- Address drug problem through public education and policing
- End of spending money on Exit 4A
- Protect local water supply
- Alleviate traffic on Broadway
- Motivate and expand volunteerism
- Improve residential zoning to protect property values
- Livestock ordinance
- Preservation of open spaces and agricultural soils/lands
- Successful/ proactive strategy
- Need I – 93 widening
- Land acquisition for public purposes downtown
- Reduce residential speed limit to 30 MPH or less
- Converting East Broadway to a Historic District

The history of Derry, as narrated by Richard Holmes

The origin of the Town of Derry goes back to the ancient Kingdom of Scotland. There for a hundred generations, the ancestors of the founders of our Town were farmers, herdsman and weavers. There, from the misty Isle of Skye to the Port of Leigh, they struggled to survive on their small, rocky farms. In the 17th century the British put down a rebellion and confiscated much of Northern Ireland. This rich farm land - the Ulster Plantation - was offered to outsiders at very low rents. Soon thousands of Scots were sailing across the Irish Sea to claim this fertile land. With them they also brought to Ireland their Presbyterian faith and their Scottish culture. Our Town's ancestors settled around the Town of Aghadowey in County Londonderry. To history these people would become known as Ulster Scots or Scotch Irish.

For many years all went well. In 1689, the native Irish rose up to reclaim their land. For months thousands of Ulster men and women were under siege in the fortified City of Londonderry. There, they were forced to survive by eating dogs, cats and mice. Finally on the 105th day, 12 year old Jamie McGregor, on the cathedral tower, fired a signal canon. This let the imprisoned people know that he had just seen the British ships break through the barriers on the River Foyle. Soon those ships would be unloading barrels of food at the quay; the siege was over! McGregor would later go on to become the founder of our Town.

The years that followed were not all that good for the Ulster Scots. The King was threatening to sharply raise their land rents. Most of the Presbyterian Churches in Ulster were closed and given to Anglican pastors. The Scots weren't even allowed to serve as teachers for their own children, or to hold any public office. The British also turned over the collecting of taxes to brutal "tax farmers." In addition, the Presbyterians were required to pay a tithe of 10% of their income to the Church of England.

In 1718, a tiny Presbyterian congregation in Aghadowey decided that enough was enough; they would immigrate to the New World. These sixteen families, led by their Pastor Rev. James McGregor, boarded the good ship Robert and arrived in Boston on August 4, 1718. Here they found considerable hostility by the British colonists in Massachusetts. In time, however, they were able to secure a 100 square mile grant of land far into the northern wilderness. This uninhabited frontier land had previously been named Nutfield because of its many nut trees and wide expanse of marshy grasslands. On April 11, 1719, the sixteen families finally arrived at their new homes and knelt in prayer on the shores of Beaver Lake to thank God for giving them this land. Here they could raise their families, and live free from cultural, economic and religious oppression.

In 1722 they appealed to the royal government in Portsmouth to become a town. They threw off the old name of Nutfield and instead called their new town Londonderry - after their old home in Northern Ireland. This land included what is now the towns of Windham, Derry and Londonderry as well as portions of Salem, Manchester and Hudson. Here on their common field they planted what is claimed to be the first crop of potatoes in North America. To make money, almost every home had a patch of flax growing in their yards. From every house could be heard the sounds of looms making cloth. Their linen was sold all over New England. Even George Washington and Thomas Jefferson wore clothes made from Londonderry Linen. Soon however, weavers from other towns were making linen of inferior quality and claiming it was real, honest-to-goodness Londonderry Linen. To prevent their cloth from hurting the reputation of our weavers, the Town meeting in 1748 required that all locally made

linen be marked with our Town's name. Londonderry Linen is claimed to be the first trade-marked product in America.

During the Revolutionary War, the overwhelming majority of the townsfolk were decidedly on the side of the patriot cause. Men from our Town served first at Bunker Hill and continued on bravely to the end of the war at Yorktown. Matthew Thornton - from what is now Derry Village - was a signer of the Declaration of Independence. General John Stark who latter said "Live Free Or Die" was born here, as was General George Reid who served longer than any other Patriot leader except one - his best friend General George Dearborn who had enlisted one day earlier. There were a few from our town who remained loyal to the king. Foremost of these Tories was Colonel Stephen Holland who, while serving as our selectmen, was actually a major British spy.

During the years since 1719, our men and women have fought in a dozen wars. From the time of the French and Indian War, the Civil War and onto the current conflicts against terrorism, our sons and daughters have fought bravely and with pride. Too many of these warriors did not survive to return to Derry and grow old surrounded by friends and family in their hometown. The names of these Derry heroes are inscribed on a war memorial in East Derry and at the McGregor Park in West Derry.

Throughout the 18th century, pieces of the original Nutfield grant broke away to form separate towns. In 1825-1827 there were efforts made to separate the remaining area into 2 separate towns. There was considerable agitation both for and against the split. Finally, after much political rancor and ill will, the division was approved by the state government and signed into law on July 2, 1827. A new town was born which took the name of Derry - the original name of Londonderry in Northern Ireland which means a hill covered with oak trees.

The town maintained an agriculture-based economy until 1870 when Colonel William Pillsbury began shoe factories in the Broadway section of Town. Prior to Pillsbury, that part of Derry was home to a single store, a hotel, a lumber mill, 5 houses and a railroad depot. As the decades passed, Broadway began a remarkable growth because of the booming shoe factories. Soon the streets in western Derry were lined with new stores, churches and houses. Trolley lines were built to connect Derry to Manchester and Chester. One of our shoe factories claimed to be the longest wooden building in the country! The H.P. Hood Co. manufactured all of their butter from their Broadway creamery and rushed it daily to Boston - only an hour away by train. Each year millions of shoes were manufactured in Derry and shipped to 5 continents. By 1900 three-quarters of the Town's population lived and worked within walking distance of Broadway.

During the early 20th century, the shoe industry began to move to the southern states and the Hood Company moved its operations to Massachusetts. In 1960, the last of our Broadway shoe factories was destroyed in a fire. More and more of our working men and women were now forced to drive to Manchester or to Massachusetts to find employment. A few of our local stores and apartment buildings actually closed and were boarded up. The population of Derry from 1900 to 1960 remained relatively unchanged as too many of our young people decided against remaining in Derry. They saw their futures lying in other towns. We were defiantly a part of the North-East Coast rust belt. Derry was commonly perceived to be a town in decline with its best days behind it.

All this would change in July 1963 when Interstate Highway I-93 opened. Within a decade, our population doubled, and in 20 years it tripled. Derry's population now is about 5 times larger then it was in 1963. With this increased population and prosperity came both problems and opportunities. Our former fields and forests were quickly turned into housing developments. The land that was once was

pasture to a thousand cows is now the home to hundreds of apartment units. Once all of our shopping was done in the small stores on Broadway; now the many malls of Derry supply the needs and wants of our citizens. Each year more and more of our citizens find employment within the industrial parks of Derry. Once our children were educated in one of a dozen primitive one-room school houses; now our youth attend large, well appointed modern schools with state-of-the-art technology in every classroom. Pinkerton Academy, our Town's high school, is the largest such school in America.

For nearly 300 years we have been a town and a community. During those years, hundreds of thousands of hard working men and women have called Derry home. We have also been home to many remarkable men and women who have gained national reputation. Among those that have not been previously mentioned are: Mary Lyon, a pioneer in the education of women; Robert Frost, America's favorite poet; Buddy Stewart, a pioneer of jazz; Robert Rogers, a military innovator; Alan B. Shepard, America's first man in space; George "Lefty" Tyler, the star pitcher with the "Miracle Braves" of 1916; Samantha Brown, the star of many travel television shows; and Trish Dunn-Luoma, a multi-medal winning Olympian.

THE ELEVEN COMPONENTS

After we developed a mosaic and vision for Derry and digested some of the history, Michele Gagne introduced us to the idea of discussing Derry within the framework of 11 qualities which can be used to profile a community. These topics, drawn from the work of the National Civic League and adapted by UNH Cooperative Extension, are important components of any successful community. These components make a community work well now and sustain the cultural, economic and environmental health and vitality for the long-term future.

Civic Infrastructure

- Effective Community Leadership
- Informed Citizen Participation
- Sense of Community

Community Infrastructure

- Fostering Healthy Families, Individuals and Youth
- Lifelong Education and Learning
- Community Services, Facilities and Utilities
- Recreation and Cultural Heritage

Environment

- Working Landscape and the Natural Environment

Economy

- Economic Vitality
- Growth and Development
- Transportation

Next, 11 small groups were randomly formed, one group for each of the components. The small groups adjourned to various rooms where community trained facilitators led the groups in their discussions and recorders made notes on large tablets. Each group considered the definition of their component and examined the statements to be considered for their component to begin the discussion. Participants were asked to list the strengths of Derry as they saw them, and then to list its concerns. Next the groups gave some thought to the problems and issues they thought were important to the town's future. Finally, each group was asked to identify five key issues that need to be addressed by the town. These were brought back to the whole group and highlighted in three-minute summations presented by a member of each small group before lunch.

1. Effective Community Leadership

Facilitator: Rizalina Ababa Recorder: Charlie Zoeller

Spokesperson: not noted

Participants: Ann Anderson, Maria McKenna, Kimberly Bavaro, John Meyer, Neil Wetherbee, Erich Whitney, Kevin Stefanilo, Darrell Park, Bill Fortier, Faye Fortier

Statement of Purpose:

Healthy communities have, and develop, public leaders who work together to enhance the long-term future of the community. Community leadership must be responsive, honest, efficient, enlightened, fair and accountable. It should have the ability to bring the community together to participate in open, neutral dialogue on important issues.

Leaders should be representative of their community and be able to envision an economically secure, environmentally sound and social viable future. Leaders should understand the challenges facing the community and be able to take advantage of opportunities within the community and in cooperation with neighboring ones. Leadership should empower community members to assist in resolving community issues.

Statements a community should consider:

- Our leadership actively recruits, trains and empowers new leaders.
- Leadership represents diverse community interest (age and gender groups, length of time they have resided in the community, culture, etc).
- Community leadership demonstrates knowledge, accountability, professionalism, innovation and is results-oriented.
- Leaders involve local citizens in identifying community goals and resolving community issues.
- Leadership seeks out opportunities to exchange information with citizens about community issues.
- Community leadership is proactive, dealing with critical issues before they become crises.
- Leaders demonstrate long-range (20+ years) thinking. They understand the impacts of their actions on the long term health and vitality of the community.
- Leaders share the responsibilities of the community with its members and empower others to help find solutions.
- Leaders are willing to consider and use creative methods for addressing challenges, and look for regional solutions where appropriate.
- Leaders discuss issues with other leaders in the region.

Group Response – Strengths:

- Diversity of ideas
- Experienced leaders
- Caring leaders
- Passion
- Concern for youth involvement
- Intestinal fortitude/tolerance in facing lots of contention
- Maintain focus
- Wide spectrum of qualified volunteer leaders

Group Response – Challenges:

- Not enough support for maintaining the old – too much emphasis on starting new
- Executing successful economic development consistent w/ Derry's assets and location
- Not enough pro-active vision and planning, stop being mostly reactive (railroad, I-93)
- Requires community consensus
- Elected leaders need to reserve time and energy for long-term needs/vision – not spend all time on immediate and minute
- Communication/coordinating efforts – i.e. Interfaith group, Episcopal church and Temple, rotary clubs
- Vision of leaders – progress
- More open-minded
- Balance economic development and small town feel or become city? More diverse or stay rural?
- Identity of Derry? 1 or 2 – Can we be 1?
- Can we go forward until we are 1?
- Perception – West Derry is the ugly and neglected stepsister?
- Voter apathy

Vision for the Future:

- Involvement of more young adults (20's, 30's)
- Develop clear community vision
- Improve forum, leadership council communication among community leaders (political, non-profit, business)
- Town council offer alternative times, venues, workshops
- Elected leaders more responsive to community needs rather than vocal (special interests, minority)

Key Issues for Now and the Future:

1. Identify broad community vision and issues – identity crisis
2. Develop effective ways to engage community members thru communication strategies
3. Pro-activity → Vision
4. Leadership Council/Forum (political, non-profit, businesses)
5. Balancing need for economic development w/ small town-ness

2. Informed Citizen Participation

Facilitator: Elizabeth Ives

Recorder: George Klauber

Spokesperson: Mark Connors

Participants: Janice DelPozzo, Denyce Ellis, Corrine Safron, James Webb, Michelle Keaney, Maureen Heard, Mark Connors, Marianne Page, Barbara McCarthy

Statement of Purpose:

In a healthy community, citizens actively participate through voting in the local elections, serving on local boards, attending public hearings, and being involved in civic organizations and community activities. The increasing complexity of municipal operations is limiting the ability of government to meet community needs, escalating the importance of active citizen involvement and volunteerism.

All sectors within a community – private, public and nonprofit-must each take responsibility for the community's civic education and exchange information with the public. All citizens need to develop knowledge and skills to contribute to community life. Shared problem solving and planning for the future as a community increase local pride and commitment.

Statements a community should consider:

- Citizens know how the system works and it is easy for newcomers to learn how to get involved in the community.
- People find out easily what is going on in the community.
- We have a _____ level of volunteerism and philanthropy in the community.
- Civic education efforts involve the entire community.
- Schools, churches, youth and civic groups provide citizen education and promote community service.
- Citizens are actively recruited and involved in major projects.
- Citizens volunteer to serve on local boards and committees.
- Participation is proactive instead of reactive, facing community issues before they become crises.
- Civic organizations and local businesses actively contribute to community functions.
- Citizens have the information they need to make good decisions.
- There is both adequate and balanced media coverage of local events and issues.
- Local communities and boards communicate well with each other, the public and with boards and committees throughout the region.
- Local citizens are actively involved in civic and business organizations and clubs that involve interaction with residents of neighboring communities.

Group Response – Strengths:

- Derry CATV
- Emergency communication
- Nutfield News – good (free)
- New website!
- SE Human Service Council (agencies)
- Derry News
- Community Center use of bulletin board

- Flashing dot signs
- Derry Mom's club
- Clubs do service in community (Rotary, Scouts, lots of groups)
- Schools send info home
- Library – bulleting board
- Town Hall – bulletin board
- Level of volunteerism
- Pinkerton gets students involved
- Pinkerton gets organizations involved
- Parks and Recreation gets people involved
- The more people participate the more they get involved
- Derry Fest
- Veterans organization gets people involved

Group Response – Challenges:

- Voter apathy = lack of volunteerism
- Derry is a bedroom community
- How do we let people know “what’s in it for them” to get involved?
- We need to get recognition for people
- People do not know how to get involved to what they do where do they go to get involved
- Educate people that they can get involved w/o it becoming a long-term commitment
- How to work through bringing change about – how do you facilitate a change
- Overcoming projects
- Lack of funds to complete project
- Town leaders – negativity and argumentative
- People are concerned about getting involved/acceptable public meetings
- Get people out to vote
- The same people get involved in most volunteering in community
- Rental properties – not “Roots” to community
- Limit growth/rental property
- No incentives to get people involved
- Elected people must do more outreach
- Politics Rule – local elected people do not outreach to citizens or groups
- Finding out about volunteering activities
- People do not know about local TV
- No local “Welcoming Info”
- Disjointed info on all
- “Central Clearing House” for all groups
- When people get involved and there is no follow through and support by town or citizenry

Vision for the Future:

- Adapt and USE the Town Master Plan
- Plan what the town does using the Master Plan as a guide
- Centralized info some way to use what we have to communicate to the public
- Better participation and involve citizenry to have public meetings be more welcoming and inclusive
- Citizens empowered to have a stake in their community

- Show results – why and what is the outcome. Build enthusiasm.
- Consistent outreach to public
- Give citizens reason to have a stake in community – foster this

Key Issues for Now and the Future:

1. Communication – to the public regarding opportunities to contribute, general town info, decisions by elected people, events, organizations
2. Involvement by citizenry and elected officials a stake in their community
3. Have a Master Plan, accept it, use it. “Our Master Plan” is our contract with the government. Make it a living document.
4. Apathy – people don’t or will not get involved
5. Get people involved early when they move into town (Renters vs. Owners) secondary taxpayers vs. tax payers

3. Sense of Community

Facilitator: Marieka Buhlmann Recorder: Dan Reidy Spokesperson: not noted

Participants: Maria LeBel, Ed Muller, Glenn Villiard, Kelly Mahoney, John O'Connor, Lori Dunkerley, Ray Fontaine, Leona McNeill, Jennifer Books

Statement of Purpose:

A sense of community is an intangible yet vital component of a healthy community. It encompasses elements such as image, spirit, character and pride, along with processes such as communication, inter-group relations and networking.

A community is made up of different people with different interests, experiences and backgrounds. These characteristics may divide a community into natural groups but there must be cooperation among them if the community is to work well as a unit. Increased communication and understanding of different perspectives among groups and within the community as a whole is an important factor in establishing a sense of community.

Villages, towns, and cities with a sense of community include those wherein all members: contribute to and hold a common vision for the future; respect and celebrate their heritage, diversity, and resources; share information, and; develop and sustain an abundance of social networks and relationships.

Statements a community should consider:

- There is adequate communication among diverse groups in the community such as natives/newcomers, summer/year round residents, young parents/retirees, as well as business community, commuters, etc.
- Groups like the above are involved in identifying community goals and in resolving community issues.
- The community's heritage is celebrated regularly.
- There is a common vision for our community among members.
- Community members often put aside their differences to work for the common good of the community.
- All groups know how to become involved in the community.
- Formal and informal forums exist for sharing ideas and resolving public issues.
- Collective decisions which represent broad input are reached and implemented.
- The self image of the community is a positive one.
- Social and cultural diversity are celebrated in the community.
- Local government is inclusive of all groups in its long-term planning and visioning efforts.
- Community members are proud of the community's character.

Group Response – Strengths:

- Volunteer groups
- Downtown is there
- Little League –parade, serious and fun
- Parks and Recreation Dept

- Swimming lessons, kids activities for all age groups –great programs
- Eastman Building
- Concerts –something every weekend brings everyone together
- Website, Nutfield News
- Community Gardens and Community Center
- Adams Memorial Opera House
- Schools are a resource for information
- Frost festival
- Parades
- Derry Fest
- Girls and Boy Scouts (community service, spaghetti suppers)
- Church suppers
- Library services
- Christmas Polar Express
- Seasons, New England, Historical, Maple Sugaring, Trick or Treat, 4th of July
- Derry beaches, Beaver Lake
- Stockbridge Theatre
- Reverse 911 for emergencies for land lines
- Community for Better Derry Association of Derry Taxpayers
- Social/service organizations
- Welcome Home monument
- Derry Clean up – community-wide

Group Response – Challenges:

- Trash pick-up – No trash on streets
- Taxes – high
- Getting pride for the community
- Government structure fractures town
- Divide between East Derry and Derry – need to work as a single town
- Neglect of conservation land – preservation of green space
- Single family homes vs multi and lack of a stake – yet renters here today too
- Customer service lacking from some municipal departments
- Communicate effectively to get word out for what people find important – different people motivated in different ways – two way street
- Bedroom community
- Promote local business, products, crafts, farmers markets
- Downtown – better looking and consistent
- Local merchants don't like postings in their stores
- Bring businesses into town
- Negative stories and editorials need to respect each other - value differences
- Lack of attendance at town council meetings
- Community volunteerism, getting involved
- Battling “nothing will change – so why get involved?”
- People are busy
- Commuter town/bedroom community
- No environmental organization – educational
- Closing the MET
- No/limited funding for culture

Vision for the Future:

- Better communication
- Bulletin board
- Use schools
- Can use website
- Cable 17 – bulletin board
- Multiple methods necessary
- Unified message
- E-mail sign ups
- Something @ car registration
- Road-side clean up teams
- Fund/grants for historic preservation and conservation lands and enforcements
- Knowing what needs to be done so people can help
- Canvas neighborhoods to promote and seek volunteers
- Farmers Market w/crafts, etc. downtown to get people downtown – people like fresh, locally grown produce, etc.
- Open Space in West Derry
- Pocket parks – but not just downtown
- Cluster housing- keeping housing close to preserve land
- Re – evaluate zoning
- Tax incentive for downtown businesses to do façade improvements: good for economic development
- Community Garden: Broadway Farm (knowledge about, appearance, access)
- Funding

Key Issues for Now and the Future:

1. Communication, inclusive, community
2. Open space
3. Respectful dialogue that is inclusive
 - More opportunities
 - Leaders and residents and organizations
4. Community/Farmer's Market – community bulletin board
5. Community Pride
 - Trash pick-up
 - Identity
 - Historical Sites
 - Unity

4. Fostering Healthy Families, Individuals and Youth

Facilitator: Bina Contreras Recorder: Maggie Maxwell

Spokesperson: not noted

Participants: Robert Gorham, Erika Mahon, Donna Villiard, Gordon Krantz, Caroline McNamara, Chris Peterson, Craig Bulkley, Paul McKenna, George Fodor, Paul Doolittle, Ed Reimitis

Statement of Purpose:

Most communities face a variety of challenging social issues, such as substance abuse, domestic abuse, poverty, and other concerns related to the elderly, youth and families. Addressing these concerns effectively takes the coordinated efforts of the public, private, and nonprofit sector.

Support services such as adequate child day care, comprehensive after-school, youth, teen and senior programs, preventative health and substance abuse programs, parenting and family support programs, and effective human service networks help strengthen the social fabric of a community. Aided by effective communication, compassionate leadership, active citizen participation, and inter-group cooperation, a comprehensive package of supportive services will enable a community to nurture healthy community member.

Statements a community should consider:

- There are _____ local and/or regional programs available addressing the social issues of our youth, teens, seniors, parents and families.
- The health and social services are accessible, adequate and provided in an equitable manner.
- The three sectors work together to provide a comprehensive package of programs.
- The majority of programs are of _____ quality.
- Community services are “cradle to grave”, addressing the entire age spectrum of the community.
- Local government provides an array of services for the community’s neediest members.
- There is adequate information about the available services and many community members utilize them.
- Many of the services allow families to participate together.
- Local government is responsive to emerging needs of community members.
- Local government considers and utilizes alternative methods of service delivery.

Group Response – Strengths:

- The Upper Room – for at risk teens
- Excellent school system – Pinkerton Academy
- Very well educated population
- Active/diverse Parks and Recreations
- Boys & Girls Club – after school programs (basketball, healthy living) healthy kids
- Excellent scouting programs
- The Garrish Ctr – Community Ctr. Meals on Wheels
- Diversified youth population
- EMS
- Humane Society – foster animals, food
- Familiar faces

- Excellent selection of churches
- CATS – Teen Safety Prevention (driving, suicide)
- Community working on Senior Center
- Safe community
- Programs through Parks and Recreation (for seniors)
- Good nursing home facility
- Good senior housing
- Healthy Adult Ed. Program
- Hospice Services – Service Link
- Community Caregivers
- Youth health ed. – elementary area
- Helpful neighbors
- Derry Track Club
- Parkland Hospital (Classes, Health Fair)
- Natural Resources – trails
- Relay for Life
- Active rotaries – E.D.V.I.S.
- Summer concerts
- Derry Police Department (counseling, family support services, school presence, responsive)
- Opera House & Theatre

Group Response – Challenges:

- C-A-R-T hours not always convenient
- Transportation program expensive
- Families not qualified for other transportation programs have very limited access to transportation services
- Encouraging older people to stay in Derry
- High tax rate
- Lack of a teen center
- Lack of parental education or education not reaching right population demographically, physically inaccessible programs don't meet family needs
- Working to build community isolation
- Bowling Alley – useful for all ages
- Need more community bike trails
- Bedroom community – lack of connection
- Communicate strengths so they are used
- Promoting healthy lifestyles
- More social events for all community members
- Pooling resources & services more holistically
- Rate of foreclosures
- More support groups
- Commuter/community separation

Vision for the Future:

- Huge senior center/ pre-senior program (evening activities, transportation, open longer hours)
- Teen center: Bowling Alley, pool, paved bike path – everywhere, ice rink, skate park
- Library twice size of current one open 24/7
- East Derry library – children's library

- Better website
- Working farmers market
- Friendship center moved out of downtown
- Pet store
- Expand the Upper Room – neighborhood gathering
- High speed rail – Boston → Derry: improve quality of life
- Recognize sub-abuse and bring in services

Key Issues for Now and the Future:

1. Community Campus – Elders & Teen Center
2. Transportation
3. Money/tax structure. Attract commercial/industrial enterprise
 - More family oriented attraction/ make Derry more multi-functional
 - Acknowledge challenges we face
4. Availability of social services
5. Neighborhood development

5. Lifelong Education and Learning

Facilitator: Bethany Hobbs

Recorder: John Dowd

Spokesperson: not noted

Participants: Nancy Barbour, Mary Ellen Hannon, Patricia Hutchins, Susan Kopetz, Jean Roalsvig, Sandy Shapiro, Jona Bostwick, Paula Frank, Brad Ek

Statement of Purpose:

Education is a lifelong endeavor, much more extensive than just the K-12 school system. It starts at home, continues through childhood and the teen years, and progresses throughout adult life. People of all ages need to develop knowledge and skills in order to improve the quality of their own lives and those of their families, and to contribute more effectively to community life.

Programs of higher education and lifelong education provide local business with a pool of trained employees. Other formal and informal learning opportunities allow community members to discover hidden talents and develop an array of interests and skills. Lifelong learning allows citizens to manage their lives more effectively in a changing economy and to participate in increasingly complex municipal operations with greater knowledge and skill.

Statements a community should consider:

- Educational opportunities are easily accessible and provided equitably.
- Lifelong educational opportunities, including formal and informal academic, vocational, artistic, and spiritual meet the community's needs.
- School planning is forward thinking and is open to regional solutions.
- There is a plentiful pool of skilled labor for local businesses to draw from.
- The level and quality of adult literacy programming in the community is _____.
- The public school facilities adequately meet community members' needs.
- There is a (n) _____ level of quality preschool and daycare opportunities in the community.
- There is good communication and cooperation between the municipal government and the local public school board.
- Local and regional employers actively support and are involved in the local K-12 public schools.
- The community supports and values high quality K-12 public school education.
- There is a support network for community members who home-school their children.

Group Response-Strengths:

- Existing Adult Learning program – diverse course offering
- Libraries
- Strong curriculum at Pinkerton
- Parkland – CERT
- State education programs – Fish/Game
- Town recreation programs
- Boys/Girls Club
- After school programs
- Accessibility to school programs

- Free GED program
- Partnerships w/education
- Vocational Coop
- Community support for schools
- Upper Room

Group Response-Challenges:

- Lack of time
- Access to technology
- Promotion
- Transportation
- Funding
- Mac/PC (access)
- Working parents – commuting
- Lack of central meeting location
- Not ethnically diverse – lack of awareness/education
- Class division

Vision for the Future:

- Central facility
 - Teen/Senior
 - Dance Hall Recreation Center
- Town wide transportation
- Tax credit for volunteers
- Partnerships w/local businesses
- Mentoring
- Local Community College
- Computer lab in Library
- Unlimited pool of teachers

Key Issues for Now and the Future:

1. Transportation (for after school programs and involvement of youth with working parents)
2. Facility (central location)
3. Resources – computer lab
4. Curriculum
 - Funding
 - Strong adult education
 - Training around diversity/ethnicity/awareness raising for socio-economic class issues
5. Libraries (consolidation)

6. Community Services, Facilities and Utilities

Facilitator: Mastora Bakhiet

Recorder: Maggie Maxwell Spokesperson: not noted

Participants: Lee Maloney, Beth Morris, Mary Eisner, Albert Dimmock, Frances Rose Gage, Leigh Hernandez, Christine Irvin, Janet Conroy, Nancy Ek

Statement of Purpose:

A community provides many essential facilities and services to its members – public facilities such as municipal buildings, schools, sidewalks, roads, libraries, a recycling center and cemeteries as well as services and utilities such as police, fire, ambulance, highway maintenance, water and sewer. These key functions consume the majority of tax dollars and sharply influence the community's quality of life.

Statements a community should consider:

- Public facilities and services such as _____ are needed in our community.
- The community's road system is adequate and well-maintained. The use of traffic controls (signs, lights, speed limits, police, etc.) is well planned and coordinated.
- Our public water source is protected.
- Our community does a great job of reducing, recycling, and disposing of its wastes.
- The town has a plan for financing the maintenance, expansion and replacement of its public facilities.
- The community is open to regional solutions for future infrastructure needs.
- Public buildings such as schools and town offices are adequate for our needs.
- Our public buildings are accessible to people with disabilities and are energy efficient.
- The community is easy to travel around by foot and bicycle.

Group Response – Strengths:

- Those that volunteer such as cleaning roads – Girl/Boy Scouts
- Volunteers on our PB, Zoning, Heritage Commission
- MGCC
- Good, expanded water system (Lake Massabesic)
- Good schools
- Private community wells
- Excellent highway department
- Recycling center
- Parks and Recreation
- Sewage systems
- Water and sewer paid by users
- Libraries – interlibrary @ Mills
- Executive Conservation Commission - open space/zoning
- Meals on wheels
- CART transportation
- Hospital
- Churches – and all that they do

- Public safety: ambulance, fire, police
- Community Health Services – CHS
- -Community Caregivers and the Upper Room
- Parkland – senior group, outreach w/education programs
- Beautiful arts facility - Opera House, Adams Memorial Opera House
- Pinkerton Academy
- Forest Hills Cemetery – historic section
- Location next to Rt. 93
- History Museum
- Chamber of Commerce

Group Response – Challenges:

- Need to get people civically involved: volunteers, voting, running for office
- Lack of communication i.e. town paper updates – improve communication
- Notify people about CH 17 – about its updates on the town
- Encouraging people to become involved
- Challenge for people to meet our taxes
- Maintain Derry character while recognizing growth: the balance
- Bring up Veterans benefits to \$500 point
- Traffic gridlock particularly downtown Derry
- Housing for homeless
- Downtown parking
- Stinky water
- How do we keep Derry affordable for the elderly?
- Special Education
- Activities for teens
- A formal Senior Center
- Keep water pure, keep air clean, environmental safety, salted roads
- Updated dog pound
- Public transportation
- Sidewalk conditions i.e. West Broadway and no sidewalks (North Side)
- Litter – trash bags, Give a Hoot Don't Pollute
- Care for elderly during emergencies

Vision for the Future:

- Improve, expand sewer and water systems
- Expand bike path
- Unique businesses
- Linking our historical sites so we become a destination
- Senior and Teen Centers a reality
- Parking next to Adams Memorial Opera House
- Make Derry walker friendly with more sidewalks
- Bigger dog pound
- Fixed, improved public transportation linking key areas
- Use existing buildings instead of building new – ex. Floyd School
- Annual opinion survey by Town Council
- Homestead exemption for elderly to state review

Key Issues for Now and the Future:

1. Keep seniors here – taxes, emergencies, services, transportation
2. Community involvement – communication, voting
3. Pedestrian friendly –sidewalk maintenance, expansion, parking – sidewalks in all planning buildings
4. Plan for expansion i.e. water, sewer, traffic control
5. Maintain character/balance growth
6. Look at seniors, teens, homeless and low income families

7. Recreation and Cultural Heritage

Facilitator: Jill Harris

Recorder: Nicole Ferrante

Spokesperson: not noted

Participants: Betsy Burtis, Rebecca Morris, Eleanor Strang, Luis Hernandez, Greg Woychik, Mary Till, Charles Stewart, John Gleason, Marion Willis

Statement of Purpose:

Recreation and cultural activities nurture the body and soul of a community – individual and team sports, outdoor activities, arts, crafts, music, dance, theater, holidays, festivals and celebrations. Recreational opportunities allow community members to experience and appreciate the community's diversity of natural and human resources. Cultural activities reflect and build a community's positive sense of itself and strengthen the fabric of social interactions within the community.

Statements a community should consider:

- Our community celebrates itself in many different ways, including _____.
- There is a wide array of recreational opportunities available to community members.
- There are special cultural centers, events and festivals within the community.
- There is a high level of awareness about and accessibility to available recreational opportunities.
- Our cultural events bring together and celebrate the community's diverse population.
- Many of the recreational opportunities allow community members to experience the community's natural resources.
- The community preserves and enhances what is special and unique about its cultural heritage.
- Children, youth and seniors are encouraged to participate in cultural events.
- Citizens are part of larger regional cultural events.

Group Response – Strengths:

- Teamwork
- Two art venues "Performing"
- Robert Frost Farm
- Historic District
- Attempts for programs
- Playground & venues
- Library & free programs
- Active rail trail in development
- Summer music series
- Events
- Beaches & Lake, Hood Park/Pond, Galliens Beach
- Community center
- Diversity of religious and spiritual
- History Museum
- East Derry Church
- Forrest Hills Cemetery
- Available historic resources, houses, buildings
- Parks and Recreation

- Veterans Hall
- Pinkerton Academy
- Thanksgiving Parade
- Rich cultural heritage & center of Southern NH
- Trails and conservation land
- Hood Farm & Golf Course
- Upper Room
- Boys & Girls club
- Many town parks
- Senior Center in development
- Generational diversity
- Holiday Parades
- Derry Fest
- Frost Festival
- Sports programs for all ages
- Volunteers

Group Response – Challenges:

- Lack of downtown parking for events
- High turnover rate for business & events “need support”
- Lack of community vision that includes support for recreation and cultural heritage
- Property acquisition for Library and downtown parking
- More parking for cultural events and commercial property
- Marketing for public lots “parking” more signage and visibility and safety
- Handicap accessibility for disabled and elderly in general
- Need an indoor space for large meeting rooms and community center
- Multipurpose space
- More funding for recreation events/community programs outside of school for youth
- Lack of big “public” venue downtown in Derry
- Existing performing centers; too small or lack of a convenient location
- Need financial support for cultural and museum projects
- Need an accurate map of Derry
- Functioning Chamber of Commerce – location, vision
- Better marketing and public awareness by the Chamber about facilities, programs and hours
- People don’t have time to volunteer/need of volunteers because of commuters – “bedroom community”
- Better 4th of July celebration w/music @ McGregor Park during the day leading up to fireworks
- Need more community cohesion to attract residents to events
- Need overall community pride
- Need to publicize accomplishments, better public relations, heritage/advantages – emphasize the positives
- Prioritize recreation and cultural heritage to create a better sense of community

Vision for the Future:

- Use Pinkerton as a platform for resources
- Develop relationships between leaders
- Location/facility that accommodates big venues (site for fireworks and big events)

- Expand additional parking facilities downtown to accommodate events (safe parking, publicize)
- Center for Lifelong Learning
- Need to “build” Senior Center
- Finish rail trail
- Town pool and skating rink

Key Issues for Now and the Future:

1. Parking – safe, publicized, accessible, ample for the downtown area; community events, recreational events – “Doesn’t take away from area”
2. Stronger commitment and clearer vision of cultural heritage and recreation resources
3. Develop, market, and promote additional and existing recreational cultural resources and events
4. Repair/maintain/replace – facilities for recreation, cultural needs
 - Vets Hall
 - Upper Village Hall
 - Others
5. Large multipurpose public venue in an accessible location for community events

8. Working Landscape and the Natural Environment

Facilitator: Anna Baker Recorder: Claudia Boozer-Blasco Spokesperson: not noted

Participants: Dan Allen, John Burtis, Mary Joe Dalton, Paul Dionne, Caitlin O'Neil, Denise Walderich, Elizabeth Cary, Leigh Hutchinson, Steve Palmer, Selma Gould

Statement of Purpose:

Natural resources and historical assets of a community contribute significantly to the quality of life for residents and play an integral part in defining community character. Streams, rivers, walking trails, working farms, forest, clean air, historic buildings and bridges, wildlife and open land help to determine a community's personality and contribute to the everyday pleasures of community life. A sustainable community recognizes the importance of these assets and takes appropriate measures to assure their continuance.

Statements a community should consider:

- The community has recently inventoried its natural base.
- There is broad community interest and participation in protecting key natural resource and historical assets.
- Steps have been taken to provide long-term land protection to assure functioning natural resource systems.
- The local economy and population are putting stress on those natural resource systems.
- There are ways to increase the resilience of the local natural resource systems to allow them to respond to diverse or changing conditions, such as _____.
- Current systems, such as waste management, are handled in a way that preserves the integrity of natural systems in the community without damaging the integrity of natural systems elsewhere.
- Existing businesses are environmentally sound.
- Public water sources are protected.
- Some of these natural resource features are unique or in some way important regionally or statewide.
- Natural resource and open space contribute to the economic vitality of the community.
- Critical resources are being negatively impacted by competing land uses.
- Steps have been taken to establish regulatory controls and promote voluntary actions to assure the continued availability of natural resources.
- The community has addressed regional natural resource features and issues with surrounding communities.

Group Response – Strengths:

- Rural character even though populated state: saved 1,000 acres of land in 16 years; strong Conservation Commission; protected agricultural land; town supports these initiatives – ex. grant money
- Transfer station and recycling opportunities have improved
- Beaver Lake Improvement Association exists
- As a result of understanding costs of open-space vs. commercial, has been able to testify before planning group

- Awareness that open space can save money
- All is accessible in short distance
- Paul Dionne is a strength!
- Rick Holmes and his historical knowledge a strength – shares with schools
- More trees in town now compared to 1776
- Children more environmentally sound and aware
- Having clean water, important open space helps protect this – preserving wildlife important
- Robert Frost Farm
- Variety of churches get along
- Bus service availability – promotes environmentally friendly mindset
- Have available commercial space
- East Derry Historical Society and Upper Village Hall has potential
- Library is excellent
- Air is cleaner here
- Diversity of business means you don't have to travel too far
- Many organization exist that focus on preservation

Group Response – Challenges:

- Educate public regarding the cost savings of open space vs. residential development
- Resources/expertise to help with grants/money on these issues
- Partnerships strengthened between Conservation, Library, and Recreation Department
- Not enough volunteers to participate about these issues--people are busy, dual-incomes, many other commitments
- Recognize different groups in town have different purposes and missions – confusion with roles – challenge when don't have a clear direction of preserving natural resources and misinformation and don't understand
- Have Community Profiles more often
- Sometimes Conservation and Recreation have different objectives
- Off-road vehicles – detrimental to environment vs. individual rights
- Old/unused buildings might become unsafe
- Need to pay for services – ex. Fire Department
- Need to determine what services are needed
- Education about the need to pay for services – taxes have to cover these
- To get more people recycling and composting – to reduce waste in streams
- Staying current with solution to issues--what's happening nationally
- Keeping air, water, Beaver Lake clean
- Clean industries will keep air and water clean
- Responsible energy use by town – solar, wind, environmentally sound solutions
- Encouraging people to grow gardens and buy local
- Only so much time that volunteer can give to issues
- Protect the children on streets with big trucks – need to enforce speed limits
- Parents need to know where their children are playing
- Commuter light rail through Derry
- Prioritizing all these issues among town leadership, commercial interests, personal/family interests
- Save East Derry Upper Village Hall
- More advertising and usage of buses
- Litter problem – trash on sides of road- wish more volunteering to pick up trash

- Teach people not to litter
- Town government to think about resources and stimulus money for preserving open-space vs. Exit 4A

Vision for the Future:

- Partnerships – linked organizations very effective together – town government included
- Continued protection of natural and historic resources
- Green marketing – energy, local, conservation, natural resources, recycling, commuting, gardening, noise
- Historical asset protection
- Energy conservation
- City/town services reflecting population and ability to pay
- Stop drain of \$ federal and state
- Safety
- Effective communication
- Community Volunteer Coordinator on staff
- More bike paths, rail trail
- Town makes commitment to expend more for tax payments
- Town looking for alternatives energy sources – ex. oil for energy, solar, uses for methane—there's hot air to tap into!

Key Issues for Now and the Future:

1. Preservation of historical assets
2. Protection and appropriate utilization of natural resources
3. Communication and education of cost-benefit analysis of commercial, residential, open space and green marketing (bus, gardens, recycling, carpools, etc.)
4. Increased collaboration, planning, and implementation among all stockholders, including citizens and town government
5. Increased leadership on alternative energy production and usage – town as a role model

9. Economic Vitality

Facilitator: Amanda Landry

Recorder: Gordon Graham

Spokesperson: not noted

Participants: Christina Grover, Kathy Mercer, Doug Newell, Wendy Smith, Marilyn Sullivan, Katherine Prudhomme-O'Brien, Steve Barry, Bob Conlon, Ken Gould, Deb Paul, Catherine Whooten, Donna Green

Statement of Purpose:

The private, public and non-profit sectors are all important in attracting new investment and in developing new businesses that suit the character of the community and meet its needs. The need to sustain successful workplaces is an important factor to the health of a community. The more often money circulates within the community before leaving, the more the community benefits.

A healthy community includes access to a variety of environmentally sound businesses, industries, and institutions that provide reasonable wages and benefits to workers, engage in family-friendly policies, provide workers with opportunities to develop marketable skills, and contribute to the overall well-being of the community.

Statements a community should consider:

- A variety of businesses, industries and institutions make up the economic base of the community and the region, such as _____.
- We have a diverse economic base. No one sector or one employer dominates; there is a wide variety of sectors and employers.
- Existing businesses are environmentally sound.
- There are locally available educational opportunities to provide residents with skills that match the needs of local businesses.
- Local government works well with the local businesses to enhance the economic vitality of the community.
- There are business services lacking in the community, such as _____.
- There are many types of jobs available to residents in terms of security, wage levels, skill levels, and benefits, examples _____.
- Community members patronize downtown businesses on a regular basis and value the local businesses.
- Wages allow the majority of the population to enjoy a reasonable lifestyle.
- Local government supports and promotes local businesses.

Group Response – Strengths:

- Two churches have food banks and food kitchen
- Community safety net
- Human service network supports people who need help
- Entrepreneurial spirit
- Expertise
- First responders – strong (emergency) they're full time
- Include mix use
- Room for growth

- Affordable
- Good access transportation (buses, airport, highway)
- Not a lot of polluting industry
- A lot of healthcare oriented facilities
- A lot of civic groups/clubs for all ages
- Efficient planning and permitting process
- Pinkerton/Parkland
- 93/Airport
- Downtown (Central) identified center present
- A lot of history/heritage
- Good public recreation
- Infrastructure supports health-friendly businesses
- Good public utility infrastructure
- Highly educated workforce
- Good place to raise a family
- Safe in terms of no crime
- Good libraries
- Hospitals
- Availability of retail outlets
- Networking of business owners downtown
- Strong care of civic volunteerism

Group Response – Challenges:

- Zoning doesn't consider/protect value of existing uses
- Too much multi-family/multi-use zoning
- Community involvement
- Maintain improvement effects/projects
- Not enough code enforcements
- Loss of manufacturing/industry in towns (high paid jobs)
- Citizens don't have influence on how Pinkerton spends their tax \$
- Educational funding is a challenge for Derry
- Cost of education is shifted onto tax payers
- Parents don't have influence on child's education
- DDC + Chamber not doing enough for local businesses
- Local businesses have trouble staying open – high turnover rate with downtown businesses
- Loss of jobs
- Shift of becoming a bedroom community
- Lack of parking
- Lack of hometown pride
- Pinkerton is not “sticky” (Doesn't carry over to surrounding community--people do not stay in Derry. They come to Pinkerton for their child's education and then leave.)
- Highest tax rate in state
- Maintaining sufficient influence in state government to draw for share

Vision for the Future:

- More non-polluting, goods-producing high salary, tax positive businesses in town
- Leadership program to get new blood in committees and government
- Beautiful Derry Program

- More symmetry to make things in town flow more easily
- More non-goods producing/high tech knowledge based business (highest paying)
- Small businesses incubator that's responsive to small business needs
- Small businesses should be in empty store fronts
- Transportation system, non-polluting systems - people can ride bikes, local bus system, walking/sidewalks
- Balance of business in town – diversity between big/small
- Increase single-family housing stock in proportion with multi-family stock
- Formulate Heritage Commission--keep more traditional
- Single – family/starter-home housing

Key Issues for Now and the Future:

1. Untapped resources and opportunities
2. Capitalize more on downtown
3. More balance/diversified tax base – high tax rate
4. Better communication/support/cooperation between town and business owners
5. Need leadership program/development in Derry
6. Planning and encourage new usage and protecting value of existing users

10. Growth and Development

Facilitator: Dylan Kreise Recorder: Jack Dowd Spokesperson: Bob Letourneau

Participants: Tate Conlon, Brenda Keith, Robert Letourneau, Dan McKenna, Eva Standress, Fred Tompkins, Dennis Wiley, Brenda Willis, Shannon McKenna, Kevin Coyle

Statement of Purpose:

A community can more effectively manage its growth through the prudent use of local zoning ordinances and planning regulations that guide how land is divided, used and developed. These tools allow the community to regulate the development of residential areas, commercial districts, and the town center. These are key considerations in managing growth while maintaining community character.

Another important factor in the development of a healthy community is the diversity of housing. This encompasses availability, affordability, and location, all of which affect the lives of community members, especially the elderly, disabled and low-income families.

Statements a community should consider:

- The community's zoning and planning regulations are updated regularly and reflect a broad spectrum of residents' vision of the community in 5, 10 and 20 years.
- There is adequate affordable and rental housing for the elderly and disabled.
- There is adequate rental housing in the community.
- Land use regulations and land protection efforts are preserving an adequate amount of open space in the community.
- Current zoning regulations favor protecting the character of key sections of the community over new commercial development.
- There is adequate housing for young families and/or single-parent families.
- Our zoning regulations are designed to counteract sprawl.
- Municipal government works well with landowners to promote land protection and sustainable development while respecting private property rights.
- Residential housing is planned so that negative effects on traffic, public schools, sewer and water systems, and wildlife habitats are minimized.
- Areas of natural beauty and historic importance are well protected by zoning regulations and land protection efforts.
- Our community commits financial resources toward protecting valuable natural resources.

Group Response – Strengths and Weaknesses:

- Downtown is a vital need to continue, can become weak if not continued
- Location of Derry is beneficial history is an important part of marketing
- Geographic location of Derry many people came because of location – ability to manage growth
- Adequate/affordable low income housing
- Have enough adequate space for education – High School is a strength
- Regulations have been formed in events like this one. Zoning – reached by community consensus

- Several large conservation areas – Doolittle Farm, Sawpoint Farm
- Performing Arts venues in town, several prestigious events – very available to citizens
- New construction in town
- Enough areas preserved in community – conservation did a great job (community involvement needed)
- Growth management ordinance has been a great success – NH smart growth
- Parks and Recreation doing a great job for youth and seniors
- Spend our money wisely. Derry – cost per student is very good. School Board and Pinkerton have been very efficient
- Great group of volunteers in the community – Marion Gerrish, Civic Organization etc., school volunteers – state recognition means self perpetuating
- Community events are well attended – Frost Festival and Derry Fest among many others
- Airport

Group Response – Challenges:

- Using existing and zoned properties for development (Exit 4A for traffic relief, need more than exit)
- Property taxes a major challenge. C/I vs. residential (zoning) potential is in the future, zoning needs to be looked at
- More uniformed signage for downtown
- Need to follow through with plans – lack of incentives in NH for community/industrial development
- Traffic problems: rotary – downtown- several other areas (RT -28)
- Derry – Tax rate higher than other area towns. Apartment complexes are a burden need alternative housing – more than our share of workforce housing.
- How the state funds education method of taxing locally (mean other than property taxes)
- Economic development is #1 for smart growth, bring in more jobs – high tech
- How do we bring in economic development with high tax rate

Vision for the Future:

- Make a plan that people will follow – Master Plan being updated. Transportation plan: do reality checks on what is
- How we want to see Derry in 10 years
- More shopping places – like Loop, Kohl's, Target, Super Wal-Mart would have been good
- More marketing of existing businesses bring the people here
- Revitalization of downtown
- Policeman on white horse
- Updated signs to market where the parking is
- Possible Main St. program for downtown make it a destination point

Key Issues for Now and the Future:

1. Economic development
2. Transportation/traffic
3. Downtown (revitalization)/rezoned plan
4. Tax issues
5. Conservation/land issues

11. Transportation

Facilitator: Rick Alleva

Recorder: Dave Nelson

Spokesperson: not noted

Participants: Wendy DeSaulniers, Tod McKenna, Gretchen Fodor, Carl Accardo, Joan Crimlisk, Diane Stefanilo, Riccardo Buzzanga, Lloyd Webster

Statement of Purpose:

A community's strategic location and economic importance bring many people to live, work, and shop here. Roads get most of us where we need and want to go, and most people drive their own cars for convenience. However, more vehicles sharing the road results in increased highway maintenance, air pollution, and traffic congestion. Alternatives to automobile travel include pedestrian and bicycle travel, and bus and rail transportation.

Statements a community should consider:

- Our current road system is adequate and meets the needs of the residents and visitors.
- The use of traffic controls (signs, lights, speed limits, police, etc.) is adequate throughout residential and commercial areas.
- It is easy to get around on foot and by bicycle in our community.
- The community encourages car pooling, and helps make it work for people by providing information and accessible parking areas.
- Parking is adequate in the commercial areas.
- Tradeoffs, such as maintenance, pollution, and congestion are considered when widening main roads or building new roads.
- Public transportation would ease some of the traffic problems.
- Residents and visitors would use public transportation if it was available.

Group Response – Strengths:

- Highway – I93, RT 111, RT 102
- Excellent road maintenance
- Beginning of bike trail
- Derry rail trail
- Public transportation depots in Derry
- Logan vs. Manchester airport
- Network specialty busses
- Elderly-facility based
- Special needs
- Derry Recreation Department trips/busses
- Sidewalks downtown
- Circle ok except at rush hour
- Snow plowing
- Interesting topography – biker friendly roads
- Public transport (bus to Boston) is used
- Non-profit groups private bus transport for activities
- Boys and Girls Club bus

- Informal car pooling
- Rail right-of-way potential for re-use
- I-93 widening
- Opportunity to fill empty seats on return commuter busses
- Handicap parking spaces
- No parking meters
- Available parking lot capacity
- Active policing- traffic control
- Rotaries a big advantage (but not ours, too small)
- Gas stations – lots
- Ski mobile trails

Group Response – Challenges:

- Folsom Rd. intersection accidents
- Exit 4A – big debate -not helpful
- Volume of traffic on RT 102
- Left turn challenges
- Traffic is fast
- Speed limit is too high
- Issue w/ cut – through roads – enforcement
- Where’s the cop when needed?
- Bad drivers, inconsiderate – cell phone use
- Absence of sidewalks in areas, near country club estates
- Sidewalks on Tsenietto, from Post Office to Ross’ Corner onto RT 102
- Balance safety and rural character
- Can’t walk on bike paths
- Sidewalks around Beaver Lake
- Funding of improvements
- Resolve status of private roads
- Use of PSNH right-of-way by off road vehicles (risk to property owners)
- Better off-road vehicle (snowmobile, ATV, etc.) lines
- Different needs hi-density vs. rural areas
- Noise issue on ATV’S
- Need more state regional local communication and coordination

Vision for the Future:

- Secondary impact of I93 widening – planning
- More community involvement
 - Broader participant base
 - Outreach to youth
- Vital downtown, as a destination
- Network of walk/bike paths – need to be safe
- Separate network of ATV trails
- Attention to detail
 - Sign maintenance
 - Sign placement
- Bigger traffic circle
- Better traffic management

Key Issues for Now and the Future:

1. Existence and widening of I-93 and its impact
2. Traffic management
 - Speed limits
 - Speed enforcements
 - Danforth Circle
 - Safety
3. Balance between safety vs. convenient access
 - Commerce
 - Recreation
 - Urban/hi-density
 - Rural
4. More non-auto transportation
 - Walking
 - Biking
 - Snow mobile
 - ATV
5. - Recognition of multiple transport resources, unique to Derry

Saturday Lunch

The 11 easels from the small groups were arrayed across the front of the room, each bearing a list of the key issues for that topic area. This portion of the day began with short presentations from a member of each of the groups, explaining their group's list. The entire group worked together to evaluate and refine this list. After some discussion, 8 themes emerged as important to study for the future of Derry. This list is presented below.

Themes

1. Economic Development
2. Traffic & Transportation
3. Leadership & Communication
4. Planning
5. Downtown
6. Leisure & Recreation
7. Community Center
8. Natural Resources

PROJECT IDENTIFICATION AND EVALUATION

After lunch, participants each chose which of the 8 themes they would like to discuss further and broke into small groups accordingly. Each topic attracted enough people to form a small working group.

The task of each group was to think about problems that existed in each theme and then to brainstorm possible solutions/answers to the issue identified. We did that by thinking out loud for half an hour or so about “problems” and “goals.” Then we suggested solutions, from practical to fanciful to idealistic. The next step was to evaluate the reality of each possible solution/project using the following impact/feasibility grid.

IMPACT:

How much will it matter?

High	1	2	3
Moderate	4	5	6
Low	7	8	9
	Low	Moderate	High

FEASIBILITY: How possible is it in our community?

Using the grid above, we copied each of our proposed solutions onto sticky notes. For each solution, the group decided together what the feasibility and impact of the solution would be. Then we placed the sticky note in the appropriate box.

Based on the grid, each group chose three solutions and wrote them up as proposals on their easel to be presented to the large group. Some groups chose only proposals with high impact/feasibility ratings, while others chose projects from a variety of ratings. Small projects, which were highly feasible but of low impact, were favored by those who wanted to start small and accomplish something quickly. Long term, difficult projects had advocates who were willing to commit to longer struggles with high rewards. Many of the groups proposed a combination of proposals. Verbatim notes from each of the groups are presented below.

Key Issue #1 Economic Development

Facilitator: Rizalina Ababa Recorder: Charlie Zoeller Spokesperson: Doug Newell

Participants: Beverly Ferrante, Albert Dimmock, Frances Rose Gage, Leigh Hernandez, Darrell Park, Craig Bulkley, Paul McKenna, Luis Hernandez, Carl Accardo

Clarification of the problem/issue to be addressed:

- Only change in State tax system can provide tax relief in Derry
- Derry lacks marketing plan and effort
- Develop incentives to promote business relocation to Derry including rezoning
- Change Rental/Commercial tax rates
- Downtown small businesses need better/more support from the Town
 - Communication between business DEDC, Chamber and Town
- Retention of existing businesses downtown and improve diversification
- Derry needs Economic Development vision
- What types of Economic Development will have significant impact to ease tax burden?
- Even with vastly increased business development, property tax rate not likely to be effected significantly
- Derry needs comprehensive Economic Development vision and plan to attract and keep business here – small and large
- Absentee landlords downtown

Possible Solutions:

- Promote/leverage Pinkerton in marketing Derry and Stockbridge Theater
- Town or locals buy downtown properties
- Add satellite college campus
- Zoning review for economic development
- Recruit talented volunteers from Derry to develop vision
- Collaboration among those with divergent perspectives, “ideologies”, affiliations
- Draw talent from Derry and beyond to implement
- Identify high tech prospects
- Downtown revitalization elemental

Project Evaluations:

High Impact/High Feasibility

- Draw talent from Derry and beyond to implement

High Impact/Moderate Feasibility

- Add satellite college campus
- Downtown revitalization elemental

High Impact/Low Feasibility

- Town or locals buying downtown building in place of absentee landlords

Moderate Impact/High Feasibility

None noted

Moderate Impact/Moderate Feasibility

- Promote/leverage Pinkerton in marketing Derry and Stockbridge Theatre

Moderate Impact/Low Feasibility

None noted

Low Impact/High Feasibility

None noted

Low Impact/Moderate Feasibility

None noted

Low Impact/Low Feasibility

None noted

Key Issue #2 Traffic & Transportation

Facilitator: Marieka Buhlmann Recorder: Dan Reidy Spokesperson: not noted

Participants: Nancy Ek, Brad Ek, Riccardo Buzzanga, Lloyd Webster

Clarification of the problem/issue to be addressed:

- Broadway from I-93 to traffic circle
- Bike/rail trail to downtown and to East and North with snowmobiles
- Exit 4A and funding
- More transportation options create more socioeconomic and economic development
- Broadway one-way going out in AM, one-way going in PM
- Pedestrian and walking, sidewalks, Beaver Lake, Tsienneto Rd, ATV and snowmobile trails get people out of their cars-use these networks
- Traffic management-speed, review and enforcement
- Public transportation for elderly and after schoolers

Possible Solutions:

- Fix Exit 4
- Continued support of rail trail completion for economic development and non-auto transport into downtown area
- Exit 4A not a solution to downtown Derry traffic
- Knowledge of traffic study results-done 6 months ago
- CART Cooperative Alliance for Regional Transportation \$2/one-way trip strategy to promote sidewalks for school-walkers
- Sidewalks for Tsienneto
- Examine ways to transport school kids from after school programs including athletics (middle school and high school) to a common neighborhood locations
- Review by traffic safety committee speed on rural roads and yielding and red light violations-better enforcement

Project Evaluations:

High Impact/High Feasibility

Not noted

High Impact/Moderate Feasibility

Not noted

High Impact/Low Feasibility

Not noted

Moderate Impact/High Feasibility

Not noted

Moderate Impact/Moderate Feasibility

Not noted

Moderate Impact/Low Feasibility

Not noted

Low Impact/High Feasibility

Not noted

Low Impact/Moderate Feasibility

Not noted

Low Impact/Low Feasibility

Not noted

Key Issue #3 Leadership & Communication

Facilitator: Bina Contreras Recorder: Maggie Maxwell

Spokesperson: not noted

Participants: George Fodor, Maureen Heard, Greg Woychik, Elizabeth Cary, Leigh Hutchinson, John Meyer, Neil Wetherbee, Bob Oxford, Betsy Burtis

Clarification of the problem/issue to be addressed:

- Increase community involvement improve communication, voting, inclusivity
- Have Master Plan be a living document
- Get people involved early
- Respectful, inclusive dialogue
- Leadership counsel/forum
- Community pride
- Effective ways to engage community members through communication strategies
- Cooperation between town and business owners
- Need leadership development program
- Inform public about how to be involved
- Apathy
- Town role model-energy production and usage
- Definition and scope of vision in order to communicate--we have something to say
- Leaders need to listen
- Methodology of communication-diverse range
- Coordination of information to effectively communicate needs, opportunities
- Master Plan not communicated or used by town leadership
- Too many people do not receive the message-even when it is communicated
- Vision needs to be communicated and understood
- How do we resolve disagreement and still stay on track in working toward our vision?
- Recognize other forms of leadership in the community
- Fragmented leadership

Possible Solutions:

- Community coordinator
- Clarifying avenues/development of community plan (revising)
- Welcome materials
- Unofficial ombudsman
- Leadership development "Leadership Derry"
- Volunteer outreach: RSVP program, youth volunteer program, volunteer appreciation
- Have town council examine plan and determine its usefulness
- Develop mission and vision statement for Derry
- Executive summary of Master Plan
- Communication of Master Plan
- Job descriptions, qualifications/competencies for appointed officials
- Town referendums

Project Evaluations:

High Impact/High Feasibility

- Volunteer outreach; RSVP Program; Youth Program; Volunteer Appreciation
- Job descriptions/competencies for appointed officials

High Impact/Moderate Feasibility

- Alignment of goals and objectives to Master Plan
- Community coordinator
- Development and revision of a comprehensive communication plan

High Impact/Low Feasibility

- Executive summary of a Master Plan
- Develop a town mission and vision statement

Moderate Impact/High Feasibility

None noted

Moderate Impact/Moderate Feasibility

- Leadership development program
- Welcome folder materials

Moderate Impact/Low Feasibility

- Unofficial ombudsman
- Town referendums to settle issues

Low Impact/High Feasibility

None noted

Low Impact/Moderate Feasibility

None noted

Low Impact/Low Feasibility

- Communication of Master Plan

Key Issue #4 Planning

Facilitator: Mastora Bakhiet

Recorder: Margie Ives

Spokesperson: not noted

Participants: Janet Conroy, Donna Green, Steve Barry, Bob Conlon, Deb Paul, Catherine Whooten, Marion Willis, Charles Stewart, Joan Crimlisk, Diane Stefanilo, Kevin Stefanilo, Ken Gould

Clarification of the problem/issue to be addressed:

- No long term vision, expansion dictated by this year's proposals
- Identify what has not been done in the planning for the town
- What is the vision and where are we on the Master Plan?

Possible Solutions:

- Vision of impact of expanded I-93, the population pressure
- Make Derry a destination to visit and for shopping
- Compute dollar value of commercial and open space CF to residential housing cost, find out worth of town
- Create synergy between Londonderry and Derry
- Seek funding for a cost analysis of community/operating staff/resident and of town services
- Tax problem-foreclosures
- Define Derry 2030-goal in Master Plan
- Put together task force in six months to revisit procedures, policies, rules and regulations for development
- Put results together for public: town website goal for task
- Zoning and planning process considering existing uses (ex. new senior housing unit traffic impact)
- Zoning to stay in compliance with planning and enforcement
- Liaison reports from Town Council at Town Council meetings
- Stricter zoning requirements proactive code enforcement

Project Evaluations:

High Impact/High Feasibility

Not noted

High Impact/Moderate Feasibility

Not noted

High Impact/Low Feasibility

Not noted

Moderate Impact/High Feasibility

Not noted

Moderate Impact/Moderate Feasibility
Not noted

Moderate Impact/Low Feasibility
Not noted

Low Impact/High Feasibility
Not noted

Low Impact/Moderate Feasibility
Not noted

Low Impact/Low Feasibility
Not noted

Key Issue #5 Downtown

Facilitator: Jillian Harris Recorder: Nicole Ferrante Spokesperson: not noted

Participants: Gordon Graham, Phil Picillo, Mary Eisner, Chris Peterson, Shannon McKenna, Michelle Keaney, Jona Bostwick, Eleanor Strang, Kelly Mahoney, John O'Connor

Clarification of the problem/issue to be addressed:

- Absentee landlords
- Traffic congestion
- Parking for special events/community facilities
- Be able to do a variety of things downtown (destination shopping)
- Parking
- Continue expanding façade of entire downtown and street scape
- Publicize parking “signage”, safety in lots, accessibility
- Lack of police presence
- Balancing bringing people downtown with traffic congestion by redirecting pass through traffic
- Expanding commercial development
- Improving aesthetics
- Vision beyond Broadway
- Utilized unused/neglected space
- Land acquisition for parking and expansion
- Improve the gateway
- Winter maintenance

Possible Solutions:

- Improve winter/snow maintenance through DPW (sidewalks/parking lots)
- Program to financially support businesses to maintain and improve façade and signage
- Attract new businesses to shop locally by: Derry dollars-chamber-taste of Derry
- Promote businesses you already have
- Farmers/community market: change legislation to make it easier for it to happen
- Coordinate police protection especially on nights of events/activities
- Acquire property next to Adams Memorial for parking/garage
- Brown sign on I-93 for historic district for Derry
- Welcome to Derry Downtown sign at entrance
- Extend and pave rail trail into downtown
- Maintain and extend stamped brick and lighting and underground utilities
- Blight ordinance
- Purchase vacant property/redevelop for community downtown
- Create bypass to downtown for through traffic
- Improve parking signage
- Murals on vacant walls
- Acquire property for parking at library and McGregor Park

- Involve community service groups to beautify downtown
- Tie in promotions between downtown events and businesses
- Blue light for emergency contact similar to those at colleges

Project Evaluations:

High Impact/High Feasibility

- Blight ordinance
- Attract new businesses by and promotion of exiting
 - Derry dollars
 - “Taste of Derry” type of event
- Tie in promotions between downtown events and downtown businesses
- Improve snow/winter maintenance program (DPW)

High Impact/Moderate Feasibility

- Farmers Market/Community Fest with arts/crafts
- Town should purchase and assume leadership role in redevelopment of vacant properties
- Maintain and extend the lights and stamped brick and underground utilities

High Impact/Low Feasibility

- Program to financially support businesses to maintain and improve façade and signage
- Acquire property next to Adam’s Memorial for parking garage
- Create bypass to downtown for through traffic

Moderate Impact/High Feasibility

- Extend and pave the rail trail into downtown
- Improve parking signage
- Involve community service groups to beautify downtown
- “Welcome to Derry” sign as the gateway (archway) to downtown
- Murals on vacant walls

Moderate Impact/Moderate Feasibility

- Acquire property for parking at library and McGregor Park
- Coordinate Police protection, increased presence for community events

Moderate Impact/Low Feasibility

- Blue light/emergency contact buttons
- Brown sign on 93 for “Historic Derry”

Low Impact/High Feasibility

None noted

Low Impact/Moderate Feasibility

None noted

Low Impact/Low Feasibility

None noted

Key Issue #6 Leisure & Recreation

Facilitator: Anna Baker Recorder: Bethany Hobbs Spokesperson: Mark Connors

Participants: Andy Yasment, Christine Irvin, Kevin Coyle, Mark Connors, Lori Dunkerley, Ray Fontaine, Leona McNeill, Steve Palmer, Erich Whitney

Clarification of the problem/issue to be addressed:

- Access, transportation
- Connect neighborhoods to green space
- Plan to make vision a reality systematic approach to making it happen
- Need to develop visual art, musical art, but where, need to develop
- Make a check box to show priority (“a place to live”) stuff to do here would cancel the need to commute to activity
- Communicating available activities
- Rail/trail signs
- Website development
- Gap between schools and programs offered (superintendent controls decisions of what’s in schools)
- Promotion of sports teams
- Cooperation with business sector
- Open space/paired with recreation and leisure
- Use of conservation lands-not necessarily advertised space to be used
- “LCHIP” \$=passive recreation
- difference between corporate and private world “we need to do something to drive the people in”
- awareness as: a big issue
- fundraising-raising money for parks, lack of “wanting it to happen” negative attitude people would rather volunteer than give money
- sense of community-it can mean more than one thing “the place to be”-Derry
- ability to give to everything
- need a pool, especially for teenagers and seniors

Possible Solutions:

- Community calendar to hang on walls, put up around town
- Website, make an online area more collaborative
- Email/listserv to send messages about sign-ups
- Kiosks in the library-more computers in town to access the website
- Sign up fair for spring sports, cross market summer, fall, winter
- Use Derry Fest: have a volunteer group at the festival to advertise activities
- Town responsible for putting out public/private events, putting out a list (recreation department). Hard copy and online list.
- Give accountability to town council
- Community fair along the bike path (trail cleanup April 18)

- Town employees more involved in marketing
- Nurture of town Master Plan-connecting with NGO's
- More grant money; outside of town budget-who would do this? New position?
- Monthly meeting to share ideas
- Activities fair
- Car registration
- Location of fair?
- 10K race (new uses of resources)
- information centers
- community TV station
- Newspaper advertises? Calendar-good for newspaper--town sponsored

Project Evaluations:

High Impact/High Feasibility

- Community calendar--hard copy passed out around town and in newspaper
- Local news involvement enhanced
- Increase accountability to town council for making public/private events more well-known, specifically Recreation Department

High Impact/Moderate Feasibility

- Website availability with calendar developed collaboratively
- E-mail/list serve with activities and calendar
- Website/list serve
- Town employees more involved with marketing of events, activities

High Impact/Low Feasibility

- More grant money

Moderate Impact/High Feasibility

- Monthly meeting to share ideas (cross marketing of organizations)

Moderate Impact/Moderate Feasibility

- Information kiosk in town in various places
- Kiosks in the library with computers to access town web site
- Sign up for fairs each season (activities, sports)
 - advertising, location of fair, logistics

Moderate Impact/Low Feasibility

None noted

Low Impact/High Feasibility

- Involve community TV station
- 10K race (new use of resources) to raise interests encourage people to discover them (the activities)

Low Impact/Moderate Feasibility
None noted

Low Impact/Low Feasibility
None noted

Key Issue #7 Community Center

Facilitator: Dylan Kreis Recorder: Jack Dowd Spokerpersion: not noted

Participants: Nanci Collica, Diane Gavrish, Brenda Guggisberg, Katherine Prudhomme-O'Brien, Gordon Krantz, Caroline McNamara, Gretchen Fodor, Kimberly Bavaro, Elizabeth Ives

Clarification of the problem/issue to be addressed:

- Need money
- Community supports the citizenry. Single parents, resources like skating rink, pools, having one center. Bring people together esp. teens and seniors.
- Transportation to bring people to different center. Getting kids home.
- Awareness of how we can help one another
- Community that is aware of needs and connects people to the services
- To cultivate a community that is more supportive and more aware of the needs of its citizens

Possible Solutions:

- Bring resources into community
- Transportation
- Non profit to get the message out through a newsletter or web site regarding how to get involved
- A means to network different organizations to form a coalition of organizations
- Community being more walk-able
- 211 resource line
- Town information packet all the information about Derry navigating Derry
- Senior center/teen center need help funding is needed (community center)
- Adult life long learning
- Woman shelter, homeless center
- Community survey-a system that brings us together
- Using businesses to get information to public i.e. barber shops, etc
- Wellness fair for seniors and teens to distribute information and could also do screening
- Coalition is needed to get message out (Derry Community Action Group)
- Southern NH human services-2nd Thursday each month

Project Evaluations:

High Impact/High Feasibility

Not noted

High Impact/Moderate Feasibility

Not noted

High Impact/Low Feasibility

Not noted

Moderate Impact/High Feasibility

Not noted

Moderate Impact/Moderate Feasibility

Not noted

Moderate Impact/Low Feasibility

Not noted

Low Impact/High Feasibility

Not noted

Low Impact/Moderate Feasibility

Not noted

Low Impact/Low Feasibility

Not noted

Key Issue #8 Natural Resources

Facilitator: Claudia Boozer-Blasco Recorder: David Nelson Spokesperson: Ed Riemitis, Marianne Paige, Paul Doolittle

Participants: Carl Bannon, Paul Doolittle, Ed Reimitis, Marianne Page, Paula Frank, Mary Till, Jennifer Books, Selma Gould, Dan Allen

Clarification of the problem/issue to be addressed:

- Land development laws/regulations
- Financial resources for open space acquisition
- Enforcement staff (paid staff)
- Maintenance staff (paid staff)
- Documentation of problems
- Lack of awareness of multi-use rules for conservation land
- Lack of an open space ordinance-cluster development (the good kind)
- Lack of awareness by homeowners in watersheds
- Lack of awareness of cost-benefit analysis of developed vs. non-developed land
- Lack of a comprehensive aquifer protection regulation
- Lack of sustainability as a guiding principle

Possible Solutions:

- Garner monetary resources
- Implement Beaver Lake Watershed Management Plan
- Conservation Commission recommended to Planning Board to include in Master Plan
- Communication and marketing plan to raise awareness of existing resources
- Aquifer protection and large water withdrawal ordinance
- Work with schools to integrate awareness with curriculum and involve parents
- Complete and enact the open space ordinance
- Involvement of school children in environmental issues
- Hire paid staff to handle environmental issues and coordinate volunteers

Project Evaluations:

High Impact/High Feasibility

- Implement Beaver Lake Watershed Management Plan (BLMP)
- Conservation Commission recommend to Planning Board to include BLMP to be included in new Master Plan

High Impact/Moderate Feasibility

- Aquifer protection & large water withdrawal ordinance
- Complete & enact the open space ordinance

High Impact/Low Feasibility

- Garner monetary resources
- Hire paid staff to handle environmental issues & coordinate volunteers

Moderate Impact/High Feasibility

- Work with schools to integrate awareness with curriculum and involve parents

Moderate Impact/Moderate Feasibility

- Involvement of school children in environmental issues
- Communication & marketing plan raise awareness of existing resources

Moderate Impact/Low Feasibility

None noted

Low Impact/High Feasibility

None noted

Low Impact/Moderate Feasibility

None noted

Low Impact/Low Feasibility

None noted

PROJECT SELECTION

We returned to the large group to hear from a member of each small group who presented the projects that the group had come up with.

Every participant voted in each category for the project for each group to work on first. The projects receiving the most votes were then to be discussed in small groups in the follow-up meeting scheduled for April 29th. The list of project ideas follows.

Protection of Natural Resources

- Implement Beaver Lake Watershed Management Plan as part of the town's Master Plan (**31 votes**)
- Complete and enact the open space zoning amendment (**29 votes**)
- Education of the community (adults & children) on environmental sustainability as a guiding principal (**24 votes**)

Community Support

- Community Center--virtual, physical, and/or both? (**35 votes**)
- Form a Community Leadership Coalition – needs assessment and/or gap analysis (**29 votes**)
- Marketing/messaging campaign – awareness raising (**4 votes**)

Leadership and Communication

- Community and volunteer outreach coordinator (**38 votes**)
- Consistent alignment with and communication of Master Plan (**25 votes**)
- Leadership expectations/descriptions and development of community leaders (**11 votes**)

Planning

- Development of a taskforce to review planning, zoning regulations for stricter requirements and more proactive enforcement (**52 votes**)
- Derry 2030: the great vision (**13 votes**)
- Compute the dollar value for commercial, open space, and residential costs in excess of revenue generated (**8 votes**)

Traffic/Transportation

- Fix downtown traffic based on Traffic Study completed about 6 mos. ago; focus is on downtown – both getting thru and shoppers/diners (**46 votes**)
- Sidewalks for Beaver Lake; Tsienneto; schools and other walkers (**24 votes**)
- Review of traffic and speed controls and violators by Safety Committee (**1 vote**)

Economic Development

- Develop comprehensive economic development vision and plan, inclusive of diverse locals (**58 votes**)

- Develop monetary incentives to high tech prospects **(9 votes)**
- Rezoning and infrastructure **(20 votes)**

Downtown

- Town takes leadership role in purchasing and redeveloping property in downtown. For example, acquire property next to Adams Memorial for parking garage and land next to library **(51 votes)**
- Create and promote a downtown identity through a physical gateway on Broadway and Merchant with promotions that connect downtown businesses and events **(12 votes)**
- Beautify downtown through a blight ordinance and maintain and extend façade and stamped sidewalk, lighting & underground utilities **(27 votes)**

Recreation & Leisure

- Encourage town Recreation Department to expand their involvement and improve their awareness-making **(23 votes)**
- Improve town website/create e-mail list serve **(16 votes)**
- Community calendar passed around and put in local newspapers **(30 votes)**

ACTION GROUPS

After the voting, the groups were to focus in on the top project from each group. These are listed below.

1. Implement Beaver Lake Watershed Management Plan as part of the town's Master Plan
2. Community Center virtual, physical, and/or both?
3. Community and volunteer outreach coordinator
4. Development taskforce to review planning, zoning regulations for stricter requirements and more proactive enforcement
5. Fix downtown traffic based on Traffic Study completed about 6 mos. ago; focus is on downtown – both getting thru and shoppers/diners
6. Develop comprehensive economic development vision and plan, inclusive of diverse locals

CONCLUSION

All the action groups will meet as a large group again on April 29, 2009, 7-8:30 pm at the Derry Municipal Center (3rd floor) to begin to establish goals and objectives to accomplish the individual projects.

The meeting was adjourned at 4:00 p.m.

APPENDIX

Community Profile Participants

Nanci Collica	Doug Newell	Steve Palmer
Diane Gavrish	Wendy Smith	Carl Bannon
Brenda Guggisberg	Marilyn Sullivan	Paul Doolittle
Katherine Prudhomme-O'Brien	Robert Gorham	Ed Reimitis
Gordon Krantz	Erika Mahon	Marianne Page
Caroline McNamara	Donna Villiard	Paula Frank
Gretchen Fodor	Tate Conlon	Mary Till
Lee Maloney	Brenda Keith	Jennifer Books
Beth Morris	Robert Letourneau	Selma Gould
Gordon Graham	Dan McKenna	Janet Conroy
Phil Picillo	Eva Standress	Donna Green
Mary Eisner	Fred Tompkins	Steve Barry
Chris Peterson	Dennis Wiley	Bob Conlon
Shannon McKenna	Brenda Willis	Deb Paul
Michelle Keaney	Janice DelPozzo	Catherine Whooten
Jona Bostwick	Denyce Ellis	Marion Willis
Eleanor Strang	Corrine Safron	Charles Stewart
Kelly Mahoney	James Webb	Joan Crimlisk
John O'Connor	Barbara McCarthy	Diane Stefanilo
Ann Anderson	Bob Oxford	Betsy Burtis
Maria McKenna	George Fodor	Rebecca Morris
Bill Fortier	Maureen Heard	John Gleason
Faye Fortier	Greg Woychik	Maria LeBel
Kimberly Bavaro	Elizabeth Cary	Ed Muller
John Meyer	Leigh Hutchinson	Glenn Villiard
Erich Whitney	Nancy Barbour	Wendy DeSaulniers
Kevin Stefanilo	Mary Ellen Hannon	Tod McKenna
Beverly Ferrante	Patricia Hutchins	Nancy Ek
Albert Dimmock	Susan Kopetz	Brad Ek
Frances Rose Gage	Jean Roalsvig	Riccardo Buzzanga
Leigh Hernandez	Sandy Shapiro	Lloyd Webster
Darrell Park	Andy Yasment	Dan Allen
Craig Bulkley	Christine Irvin	John Burtis
Paul McKenna	Kevin Coyle	Mary Joe Dalton
Luis Hernandez	Mark Connors	Paul Dionne
Carl Accardo	Lori Dunkerley	Caitlin O'Neil
Christina Grover	Ray Fontaine	Denise Walderich
Kathy Mercer	Leona McNeill	

Community Profile Facilitators/Recorders

Elizabeth Ives	Maggie Maxwell	Jillian Harris
Mastora Bakhtiet	Dylan Kreis	Nicole Ferrante
Rizalina Ababa	Jack Dowd	Marieka Buhlmann
Charlie Zoeller	George Klauber	Dan Reidy
Neil Wetherbee	Bethany Hobbs	Rick Alleva
Amanda Landry	Bethany Hobbs	Dave Nelson
Gordon Graham	Margie Ives	Anna Baker
Bina Contreras	Ken Gould	Claudia Boozer-Blasco

Community Profile Steering Committee

David Nelson (chair)

George Klauber (vice chair)

Jack Robillard (secretary)

Rick Metts

Neil Wetherbee

Cecile Cormier

Elizabeth Ives

Jack Dowd

Nicole Ferrante

Ken Gould

Appendix B

Beaver Lake Watershed Management Plan



Beaver Lake Watershed Management Plan

Prepared for the Beaver Lake Watershed Partnership
by
naturesource communications
in partnership with
Gomez and Sullivan Engineers, PC
August 2007



Dedication

This Plan is dedicated to Carol Madden, a wonderful Beaver Lake Watershed Partner and for many years a smiling and happy face with the Derry Parks and Recreation Department. Carol and her husband, Bob, were omnipresent in so many volunteer activities. She was always willing to be a part of any community initiative and she was always humble about her myriad and Herculean efforts. She was missed beginning on the day that she lost her battle with cancer in 2006. Thank you, Carol, for all that you have done for the Beaver Lake Watershed and your community.

Acknowledgements

This plan truly belongs to the Beaver Lake Watershed Partnership. For the last two years, many dedicated volunteers have participated in meetings where they rolled up their sleeves and wrote sections. Thank you to the many partners including

- Town of Auburn
- Town of Chester
- Town of Derry
- Beaver Lake Improvement Association
- Harantis Lake Homeowners Association
- NH Department of Environmental Services
- Southern NH Planning Commission
- Pinkerton Academy

A special thanks to the Core Group members who served as the project's Steering Committee:

- Jo Columbus, Harantis Lake Homeowners Association
- Alan Côté, Town of Derry
- Margie Ives, Derry Conservation Commission
- Steve Landry, NH Department of Environmental Services
- Lisa Lavalley, Pinkerton Academy
- Tim Pellegrino, Beaver Lake Improvement Association
- George Sioras, Town of Derry
- Robert Tompkins, Beaver lake Improvement Association
- Michele L. Tremblay, naturesource communications
- Mark Wamser, Gomez and Sullivan Engineers, PC

A heartfelt thanks to Steve Landry, NH Department of Environmental Services, a patient, generous, and always supportive funder and partner.

On the cover

Jenny Dickey Brook, in the Beaver Lake watershed

Visit the Partnership at BLWP.net



Support for the Beaver Lake Watershed Management Plan was provided by a grant from the NH Department of Environmental Services with funding from the US Environmental Protection Agency under Section 319 of the Clean Water Act.

August 2007

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Executive Summary

The Beaver Lake watershed (the watershed) is located in the Towns of Auburn, Chester, and Derry, NH. The watershed drains approximately 10.5 square miles (mi²), concluding at the outlet of Beaver Lake Dam in Derry, NH. The Beaver Lake Watershed drainage area for Auburn, Chester, and Derry is 0.044, 2.78, and 7.72 square miles, respectively. Over the last 50 years, the characteristics of the watershed have changed dramatically due to an explosion of population and business development growth. To put this growth into perspective, between 1960 and 2000, the total population of all three watershed towns increased by an average of 355%, from 9,332 to 42,495 people. Much of this growth was spurred by employment opportunities in the metropolitan Boston area, and convenient access to Boston via Interstate 93 from those living in the watershed area. With development and growth have come considerable changes in the watershed characteristics.

The landscape within the watershed has changed considerably in the past four decades. In 1962, over 7.7 mi² of the 10.5 mi² Beaver Lake Watershed was forested. By 1998, forested land was reduced to 5.9 mi², a 23% reduction. Alternatively, residential land increased from 299 acres (0.47 mi²) in 1962 to over 1,656 acres (2.6 mi²) in 1998, a 454% increase. In short, forest and open lands have been displaced with urban growth and development.

In December 1992, the NH Department of Environmental Services conducted a diagnostic and feasibility study on Beaver Lake. The findings pointed to increased nutrient loading into the lake from poorly maintained roads, over-fertilized lawns, and land use changes resulting in polluted runoff into the tributaries to Beaver Lake and directly to the Lake. It should be noted that in 1989-1990 a sewer line was installed around Beaver Lake, which assisted in reducing the pollutant loading from several failed septic systems. While the sewer line marked improvement to Beaver Lake, Volunteer Lake Assessment Program testing at Beaver and Harantis Lakes showed that nutrient loading from other sources to the tributaries and the lake continued. It was clear that a watershed approach was the best way to address the continued increases in nutrient loading in the watershed.

The change in land use over time has impacted the Beaver Lake Watershed at varying levels. The resources that have been affected include water quantity, water quality, open space and land use, biological and habitat, and recreation. Because many watershed residents were concerned with how land use changes that were creating polluted runoff were impacting their watershed resources, they sought input from the NH Department of Environmental Services on their options for support for a watershed management plan. The purpose of the Beaver Lake Watershed Management Plan was for watershed citizens to collectively identify issues and design solutions. Ultimately, the Plan is a springboard for having real, on-the-ground changes in the watershed. Boards, Commissions, Councils, and others from the Towns of Auburn, Chester, and Derry; members of the Beaver Lake Improvement and Harantis Lake Property Owners Associations; and students and faculty of Pinkerton Academy forged the Beaver Lake Watershed Partnership. Since 2006, the Partnership has been routinely meeting to identify issues and areas of concern and form watershed-wide recommendations.

Relative to this Plan, Section 1 provides background on the watershed approach, support for the project, and the intended outcome for the Plan. Section 2 describes the evolution of the Partnership, including the Stream Teams, its structure, and a summary of BLWP meetings and events. Section 3 provides background or context for each of the recommendations with goals, objectives, and activities as well as the resources required to implement them. The Plan's resource recommendations focus on watershed resources with the five sub-sections: Open Space, Land Use, Growth; Water Quantity; Water Quality; Biological and Habitat; and Recreation. There are twelve goals in the combined five sub-sections. Within these twelve goals, there are twenty-three objectives. There are seventy-eight activities planned within the objectives. Section 4 contains recommendations for implementing the Plan's goals, objectives, and activities along with potential sources of funding. The appendices include references, resources, and a matrix of land use ordinances for the Towns of Auburn, Chester, and Derry.

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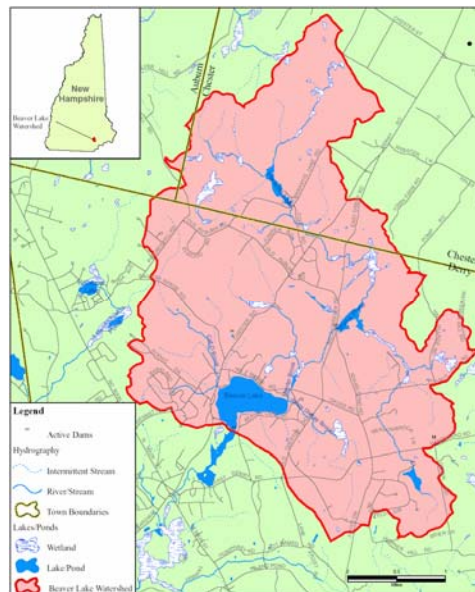
Acronym	Definition
BLIA	Beaver Lake Improvement Association
BLW	Beaver Lake Watershed
BLWP	Beaver Lake Watershed Partnership
HLPOA	Harantis Lake Property Owners Association
IHA	Indicators of Hydrologic Alteration
GIS	Geographic Information Systems
mi ²	square miles
msl	mean sea level
NHDES	New Hampshire Department of Environmental Services
NHDOT	New Hampshire Department of Transportation
USGS	United States Geological Survey

Section 1: Introduction

What is the Watershed¹ Approach?

Since the late 1980s, watershed organizations and federal/state agencies have moved toward managing environmental, land, and water resources using a watershed approach. The watershed approach requires developing a framework for environmental and land management that focuses public and private efforts to address the highest priority problems within hydrologically-defined geographic areas (watersheds). For this project, the Beaver Lake watershed is defined as a 10.5 square mile (mi²) drainage area terminating at the Beaver Lake Dam in Derry, NH as shown in the inset. The watershed includes portions of the following towns: Auburn, Chester, and Derry.

Using a watershed approach to restore impaired waterbodies is beneficial because it addresses the problem in a holistic manner. In addition, stakeholders in the watershed are actively engaged in selecting management strategies that can be implemented to solve problems within their living environment. In the case of the Beaver Lake watershed, the stakeholders—those living in the watershed community—include local people from the three towns that have forged the “Partnership”.



What is a watershed management plan?

The *Beaver Lake Watershed Management Plan* (Plan) was truly locally driven through the efforts of the Partnership.

Through a series of “hands-on” meetings the Partnership divided into resource groups, specifically water quality, water quantity, recreation, land use, and biological and habitat. Building on public input from the first Partnership meeting, members brainstormed and identified issues of concern and methods to address those concerns. The individual resource groups crafted goals, time-bound and measurable objectives, and specific activities. Activities were identified along with intended outcomes and resources (time and money). The Plan clearly identifies issues and concerns within the watershed, and identifies how to address the concerns. The Plan is intended to be a working document that will be continually updated and implemented.

Why does the Plan need to be locally driven?

As noted above, individuals that live and utilize the resources within the watershed crafted the Plan. It was critical that the Plan was developed by individuals in the watershed; however, as importantly it was vital to have the municipalities intricately involved in developing the Plan. In the case of the Beaver Lake watershed, governmental officials from Auburn, Chester, and Derry participated in developing the Plan. Because the majority of the watershed is located in Derry, the Derry municipal government officials were very involved in crafting the Plan. Having the municipalities involved was important as some recommendations in the Plan can only be enacted through the towns.

What is the intended outcome of the Plan?

The intended outcome of the Plan is real and sustained improvement in the Beaver Lake watershed. In addition, the Partnership is striving to ensure that the surface waters in the watershed meet their state designated uses². The NH Department of Environmental Resources (NHDES) established the

¹ A watershed consists of all the land that drains water, sediment, and other material to a common point. Land elevation, not political borders, defines watershed boundaries.

² Designated use - An element of a water quality standard, expressed as a narrative statement, describing an appropriate intended human and/or aquatic life objective for a water body. Designated uses for a water body may include: recreation, shellfishing, water supply and/or aquatic life habitat.

designated uses in the watershed. NHDES examines the suitability of a water body for the uses based on the physical, chemical, and biological characteristics of the water body, its geographical setting and scenic qualities, and economic considerations. The goal of the Plan is to ensure that on-the-ground action results in having surface waters in the basin meet their designated uses.

Who funded the development of this Plan?

Funding for this project was provided in part by a grant from the NH Department of Environmental Services with funding from the US Environmental Protection Agency under Section 319 of the Clean Water Act. As required by the grant, matching funds were provided through in-kind services provided by the various groups, individuals, and organizations that comprise the Beaver Lake Watershed Partnership.

Section 2: Building Community Support

Event chronology

Full Partnership meetings held at the Marion Gerrish Community Center in Derry

January 30, 2006

March 27, 2006

June 26, 2006

August 7, 2006

June 18, 2007

Beaver Lake Watershed Management Plan “First Look” event at Pinkerton Academy in Derry

January 10, 2007

State of the Watershed event at Pinkerton Academy in Derry

August 28, 2007

These events have been attended by over numerous areas residents, business owners, and local officials. In addition to the full Partnership meetings, the Core Group has met numerous times in the Derry Municipal Building to design agendas and manage the project budget and grant from the NH Department of Environmental Services. The Core Group functions as a Steering Committee and tackles the more detailed work that the Partnership assigns to it in between their meetings. The Core Group also reviewed public comments and incorporated them into Watershed Management Plan drafts.

To date over 30 Pinkerton Academy students and over a half dozen faculty have volunteered for the Beaver Lake Watershed Partnership Stream Teams. From the summer of 2006 through mid-summer 2007, the Stream Teams have conducted 30 surveys; assessing 45% of the Beaver Lake watershed's streams.

Planning Process

Since the inception of the Partnership, the planning process has been public and inclusive. The Partnership includes the Towns of Auburn, Chester, and Derry, Beaver Lake Improvement Association, Harantis Lake Property Owners Association, and Pinkerton Academy.

The process began with a kick-off meeting where local residents, business owners, and public officials were asked to identify geographic areas about which they were concerned in the watershed as well as to share their observations and other local knowledge. The kick-off meeting included participants listing areas of issue or concern in the watershed and documenting them. During subsequent meetings, several presentations on a variety of topics provided the Partners with further information on new technologies and planning tools.

The results from the brainstorming sessions and subsequent meetings were separated into the categories of biological and habitat; open space, land use, and growth; recreation; water quality; and water quantity. The Partners then crafted overarching goal(s) for each section. Using a logic model approach, the Partners drafted measurable and time-bound objectives and activities for each goal and identified resources required to complete them along with the desired outcomes for each one.

In January 2007, the Partnership presented the “First Look” draft to approximately 30 participants. The Partnership presented demographic and other background information as context for the plans recommendations (goals, objectives, and activities). The participants' comments and questions were addressed and recorded. The Partnership revised the Plan for review at its June 2007 meeting and began planning the August 2007 State of the Watershed event.

The Partnership invited the public to the meetings, which were publicized through media outlets including the *Derry News*, *Union Leader*, and *Lawrence Eagle Tribune*, flyers and posters, through BLWP.net, and on the towns' websites.

Section 3: Recommendations

Goals, Objectives and Activities

In the following section is a general description of the Beaver Lake Watershed and background information. Following the description are five topic headings as follows:

- Open Space, Land Use, Growth
- Water Quantity
- Water Quality
- Biological and Habitat
- Recreation

For each topic heading an introductory section is provided to offer some context or framework on the major issues that are specific to the resource of concern. For example, relative to land use and growth, background on population growth and changes in land use over time within the Beaver Lake watershed is provided. Similarly, for water quantity, long-term flow trends were evaluated relative to land use changes in the watershed. These introductory sections are subsequently followed by a series of goals, objectives, and activities that were collectively developed by the Beaver Lake Partnership through numerous meetings.

General Description of the Beaver Lake Watershed

The Beaver Lake watershed is located in southern NH, within 15 miles of both Manchester and Nashua, the state's two largest cities. As shown in Figure 1³, the watershed covers portions of Derry, Chester, and Auburn. For purposes of this study, the Beaver Lake watershed terminates at Beaver Lake Dam, which controls the discharge from the lake. The formation of Beaver Brook starts at the dam outlet and continues southerly through Londonderry, along the town divides of Windham and Hudson, through Pelham, and empties into the Merrimack River in Lowell, MA. The drainage area of the Beaver Lake watershed is 6,756 acres (10.5 mi²), while the drainage area of the entire Beaver Brook watershed is 94.7 mi². The contributing drainage area from each town within the Beaver Lake watershed is summarized in Table 1.

Table 1: Breakdown of Beaver Lake Watershed Acreage by Town

	Derry	Chester	Auburn	Total
Contributing drainage area of each town	4,945 acres (7.7 sq miles)	1,782 acres (2.8 sq miles)	29 acres (<1 sq mile)	6,756 acres (10.5 sq miles)
Percent of contributing drainage area of each town	73%	26%	< 1%	100%

Starting in the northern portion of the watershed, the 19-acre Harantis Lake is located in Chester. The Harantis Lake Property Owners Association (HLPOA) owns and operates the 13.5 foot-high, 150-foot long dam (State ID No. 044.05) that creates the lake. The HLPOA operates the dam as run-of-river, meaning the amount of water entering the lake from tributary inflow essentially equals the discharge below the dam. There are flashboards affixed to the dam that raise the lake level and remain intact year-round. The dam has no low-level outlet, thus the elevation of the lake cannot be artificially lowered. In short, the dam does not impact the timing and magnitude of natural streamflow.

Discharge from Harantis Lake flows southerly through several wetlands of varying size before emptying into Adams Pond in Derry. At the outlet of Adams Pond is a 9 foot-high, 190-feet long dam (State ID No. 063.01) that impounds the pond. Per NH Dam Safety records, the dam is privately owned. It is assumed that the dam is operated as run-of-river, similar to Harantis Lake. Besides inflow from Harantis Lake, Adams Pond receives inflow from two other unnamed tributaries as well as local runoff. Flow emanating from Adams Pond, called Manter Brook, eventually flows into Beaver Lake. Besides Manter Brook there are two other main brooks that drain into Beaver Lake including Cat-O-Brook, and Jenny Dickey Brook. The drainage areas of major tributaries to Beaver Lake and their percent contributions to the watershed are summarized in Table 2.

³ All figures appearing in Section 3 are included at the end of Section 3.

Table 2: Drainage Areas of Tributaries to Beaver Lake

Brook Name	Drainage Area (sq miles)	Percent of Drainage at Beaver Lake Dam
Manter Brook	7.8	74%
Jenny Dickey Brook	1.2	11%
Cat-O-Brook	1.2	11%
Cat-O-Swamp, Comeau's Beach Brook, Route 102 Inlet, Development Brook, Beaver Lake Ave Culvert, Clark Brook	0.3	<4%

At the downstream end of the watershed is the Beaver Lake Dam (State ID No. 063.03), which impounds the 140-acre Beaver Lake. The dam is 8-feet high and 190-feet long and is owned and operated by the Town of Derry.

Shown in Figure 2 is a topographic map of the watershed. As the map illustrates, one of the highest elevations in the watershed is along the northern rim, in Chester. The highest elevation in this portion of the basin is 609 feet mean sea level (msl). The topography is equally high (approximately 600 feet) in the most southern portion of the watershed at "Lookout Tower" on Warner Hill in Derry. The elevation of Beaver Lake itself is approximately 287 feet msl. Overall, there is roughly 300+ feet of topographic relief in the basin.

Climate

The Beaver Lake watershed is located in Rockingham County. The climate of the region is characterized by moderately warm summers, cold snowy winters, and ample rainfall. The Atlantic Ocean which lies approximately 24 miles to the east of the Beaver Lake watershed occasionally affects the area weather, but the region is more commonly influenced by air moving from the interior due to the prevailing northwesterly winds.

The mean monthly temperature of the area is 46°F. The mean temperature of the coldest month, January, is 21°F and the mean warmest temperature is 70°F in July. Nights are very often cool and comfortable even during the summer months. Precipitation in the Beaver Lake Watershed area averages 39.4 inches per year, including the water equivalent of snowfall (averages since 1895). Snow is present usually from mid December to the end of March.

Soils

Shown in Figure 3 is a soils map of the Beaver Lake Watershed. Overlying bedrock are the soils of the region, the direct result of erosion and surficial deposition occurring since the retreat of the glacial ice sheet. The soils tend to reflect the underlying geologic types from which they were derived. The properties of these deposits, and the soils which have developed from them, affect the hydrology of the area. The most important aspects relative to hydrology are drainage and erodability. Drainage refers to the soil's ability to absorb water, while erodability refers to how easily the soil is eroded by water moving over its surface. In general, the better a soil's internal drainage, the lower is its potential for erosion.

The Beaver Lake Watershed soils are described as well drained to very poorly drained soils on glacial till, with gently rolling or nearly level topography. The composition of the soils includes Canton, Hollis, and Woodbridge types in the ratio of 45%, 25%, and 10% respectively.

Canton type soils tend to be deep, well drained and formed over glacial till. Water drains through these soils at a moderate rate. These soils are suited for vegetable or fruit gardening, if well irrigated and managed, and are fair for forestry uses. The potential for wildlife habitat is good for both open land areas and wooded. These soils also have few limitations for developmental purposes, as attested by the rash of new homes and buildings in the area.

The Hollis type of soil can be excessively drained, and is believed to have formed in a thin layer of till over bedrock. This bedrock causes the vertical migration of water to be restricted. Crops on these soils may require irrigation in times of low precipitation, and the soil is considered a poor candidate for forestry due to the closeness of the bedrock. It is also considered poor for both wooded and open land wildlife habitat, and presents severe limitations for development.

Woodbridge soils are characterized as deep, moderately well-drained, and formed in compact glacial till. This compact till has contributed to the existence of a distinct hardpan layer, which is located approximately two feet below the ground surface, and forms a perched water table during the wet seasons. Water does move through this hardpan layer, but slowly.

These sites are considered prime farmland if they are non-stony and occur on gentle slopes, but care must be taken to prevent erosion. Good farming uses for them include hay and pasture land, corn silage, and vegetable or small fruit production. Woodbridge soils also offer good productivity for forestry practices and good wildlife habitat both in open and wooded areas. However, the presence of a high water table and hardpan layer is an important concern when considering these for development.

Open Space, Land Use, and Growth Management

One of the major changes in the Beaver Lake watershed over the last few decades has been the rapid conversion of undeveloped lands into developed lands. The conversion of undisturbed lands to urban areas has a direct bearing on several variables including water quality, water quantity, wetlands, terrestrial habitat, and aquatic habitat. To help understand changes in water quality and quantity, it is important to understand what changes have, and continue to occur, in the Beaver Lake watershed. Thus, background on population and land use trends, and how these trends impact the Beaver Lake watershed resources is provided.

Population Trends

The interstate highway system was constructed in the late 1950s (NHDOT). Interstate 93 (I-93), which passes through Derry is an important northeast transportation corridor, connecting metropolitan Boston and fast-growing cities in southern NH. The construction of I-93 changed many southern NH towns by providing better access to the nearby big cities for employment, entertainment and other needs. People from Boston and its surrounding towns became attracted to southern NH towns for its rural charm and lower taxes. However, the construction of I-93, along with other factors, contributed to a population explosion throughout southern NH.

US Census Bureau⁴ data were obtained for Derry, Chester and Auburn for each decade between 1920 and 2000. Shown in Table 3 are the populations and the populations per square mile of land within each town. It should be noted that the land areas are based on the entire town, and not that portion of town within the Beaver Lake watershed.

Table 3: Population Statistics in Derry, Auburn and Chester from 1920 to 2000

Decade	Population			Land Area in each Town (Population/Land Area)		
	Derry	Chester	Auburn	Derry-35.4 mi ²	Chester- 26.0 mi ²	Auburn- 25.5 mi ²
1920	5,382	652	652	152	25	26
1930	5,131	653	736	145	25	29
1940	5,400	702	807	153	25	32
1950	5,826	807	1,158	165	31	45
1960	6,987	1,053	1,292	197	41	51
1970	11,712	1,382	2,035	331	53	80
1980	18,875	2,006	2,883	533	77	113
1990	29,603	2,691	4,085	836	104	160
2000	34,021	3,792	4,682	961	146	184

As Figure 4 shows between 1960 and 2000, there was a population surge- particularly in Derry. In Derry, the population per square mile of land escalated from 197 people/square mile in 1960 to 961 people/square mile in 2000, an increase of 388%. Along with the population growth came additional infrastructure to support the growth including: residential housing development, business development, increased numbers of roads, and other supporting infrastructure. The increased development also placed more pressure on land and water (drinking water, wastewater, etc) resources as described next.

More recently, there have been discussions about widening I-93 to permit greater traffic capacity to and from southern NH. A panel assembled by the New Hampshire Department of Transportation (NHDOT) estimates the proposed project would bring an additional 40,000 residents-above and beyond already-projected population growth trends to southern NH. Based on recent per-capita land consumption rates in NH, this population growth could eliminate 50,000 or more acres of farms, forests, wetlands, and open space. Thus, even greater pressures will ultimately be placed on undeveloped lands within the Beaver Lake watershed and throughout the southern I-93 corridor.

⁴Reference:http://en.wikipedia.org/wiki/Historical_U.S._Census_Totals_for_Rockingham_County,_New_Hampshire

Land-Use Trends

There has been, and continues to be, a shift in the land use trends in the Beaver Lake watershed. To have a sense of how land usage has changed in the watershed, historic topographic maps were reviewed for the area immediately surrounding Beaver Lake. Shown in Figure 5 is a comparison of topographic maps from 1905 and 1988 (ideally a more up-to-date topographic map is preferred, but 1988 is the most recent).

As Figure 5 shows, increased development has occurred in several areas around Beaver Lake, however, this same phenomenon exists throughout the watershed- primarily in the Derry portion. As the red circles in the figure show former wetlands are now occupied by houses and roads.

Using Geographic Information Systems (GIS) land use changes in the Beaver Lake watershed between 1962 and 1998 were quantified and mapped. Land use data is available from the national land use/land cover (LULC) database. Shown in Figure 6 are Plan maps depicting the land use classifications (forested, residential, open space, etc.) for 1962 and 1998. Land use acreages were computed for each land use classification in 1962 and 1998. The acreages were then used to determine the percentage of land use (for each land use classification) in the Beaver Lake watershed as shown in Figure 7.

Table 4 summarizes the major changes in the watershed land use characteristics. The largest change in land use is the loss of forested and agricultural land, coupled with a large increase in residential land. Between 1962 and 1998, forested land decreased by 1,111 acres, agricultural land decreased by 419 acres, while residential land increased by 1,357 acres. Whereas in 1962 residential land occupied 4% of the watershed area, in 1998 it represents 25% of the watershed. Keep in mind that the most recent land use classification data is based on 1998 data, which is over 9 years old. Thus, between 1998 and 2007, residential land use has most likely increased further based on the population growth.

Table 4: Land Use Trends in the Beaver Lake Watershed between 1962 and 1998

Land Use Classification	1962		1998	
	Land Area (acres)	Percentage of Beaver Lake Watershed	Land Area (acres)	Percentage of Beaver Lake Watershed
Forested land	4,933 acres	73%	3,822 acres	57%
Agricultural land	954 acres	14%	535 acres	8%
Residential	299 acres	4%	1,656 acres	25%

Goal 1: All watershed towns share the same vision for protecting the watershed and coordinate their approach to regulations and protections.

Objective: The Beaver Lake Watershed Partnership shall conduct a watershed planning charette to facilitate a shared vision for protecting the watershed among participating towns by 2007.

Supporting Activities

- Initiate joint meetings between neighboring town Planning Boards and Conservation Commissions with assistance of Regional Planning Commission.
- Conduct outreach campaign to build awareness of Beaver Lake Watershed Partnership charette.

Outcomes

- Unified vision for the Beaver Lake watershed that provides clear guidance on revising zoning ordinances and other land use regulations.

Resources

- Retain a facilitator and seek local donations and fund raising contributions.
- Community Technical Assistance Program (CTAP) funding through Regional Planning Commissions for Beaver Lake Watershed Partnership.

Goal 2: The watershed is protected through land use policies that minimize adverse impacts to the Beaver Lake watershed.

Objective: The Beaver Lake Watershed Partnership shall identify approaches to improve land use regulations and enforcement and develop recommendations for watershed towns.

Supporting Activities

- a. Conduct meeting(s) with watershed code enforcement officers to provide them with information and resources to better protect shoreland areas.

Outcomes

- Improve enforcement and notify appropriate town and state officials relative to violations of town land use regulations and ordinances.
- Action taken by appropriate town and state officials to enforce violations of town land use regulations and ordinances.

Resources

- Town enforcement officers.

Objective: The Beaver Lake Watershed Partnership shall identify key areas of the watershed, particularly around streams that feed into the lakes, for the purpose of prioritizing land for acquisition and/or conservation easements, in a report submitted to the towns by June 2008.

Supporting Activities

- a. By 2007, identify and develop a program for land conservation actions through easements, fee simple land purchase and/or other tools with assistance from organizations such as Seacoast Land Trust of New Hampshire, etc.
- b. Identify land use activities in the watershed area to determine where to implement appropriate Best Management Practices.

Outcomes

- Report submitted to towns by June 2008.

Resources

- Obtain assistance in developing report from towns and town conservation commissions in 2007 budget process.

Goal 3: Land use in the Beaver Lake watershed is consistent with watershed protection.

Objective: By 2009, the Beaver Lake Watershed Partnership shall develop for Auburn, Chester, and Derry recommendations for long-term planning and zoning regulations designed to protect the watershed.

Supporting Activities

- a. Review current land use and regulatory provisions to determine if they are effective in protecting the watershed.
- b. Develop and distribute survey instrument to seek feedback from landowners. Create and implement public outreach campaign to assure that surveys are broadly distributed and completed.
- c. Develop recommendations to update land use, zoning, and growth management ordinances and open space plans for Derry, Chester, and Auburn.

Objective: By 2010, the Beaver Lake Watershed Partnership shall seek consensus among stakeholders as to the appropriate buffers, setbacks, and other regulations as it relates to development in the watershed.

Supporting Activities

- a. Present recommendations to Planning Boards, Zoning Boards of Adjustment, and Conservation Commissions relative to appropriate buffers, setbacks, and other watershed protection regulations.
- b. Include recommendations in Master Plan and other town governance documents.
- c. Draft warrant articles and land use regulations and other governance documents for consideration at Town Meeting and Council, as appropriate, by Fall of 2008.
- d. Design and conduct outreach campaign to inform voters and other citizens about the purpose and intent of the warrant articles and land use regulations and other governance documents.

Outcomes

- Adopted town warrant articles to protect the Beaver Lake watershed.
- Local governance documents include recommendations from the Beaver Lake Watershed Partnership.

Resources

- Technical assistance from Town Planners and Planning Coordinators and Regional Planning Commission by Fall 2008.

Goal 4: All non-prime wetlands within the Beaver Lake watershed have greater buffer protection.

Objective: By the end of 2007 Auburn, Chester, and Derry adopt wetlands buffer ordinances

Supporting Activities

- a. Map and document wetlands for watershed including vernal pools.
- b. Each watershed community holds a joint workshop between Planning Boards and Conservation Commissions to discuss buffer ordinances.
- c. Draft model ordinance for the watershed.
- d. Assure that model ordinance is adopted by Beaver Lake watershed towns.

Outcomes

- Model ordinance that is adopted by Beaver Lake watershed towns.
- Funding and personnel for fieldwork, map production, and ordinance development and adoption.

Goal 5: Auburn, Chester, and Derry have Open Space Ordinances.

Objective: By the end of 2007, watershed towns draft and adopt Open Space Ordinances

Supporting Activities

- a. Review open space ordinances throughout New Hampshire.
- b. Review current zoning ordinances and land development control regulations.

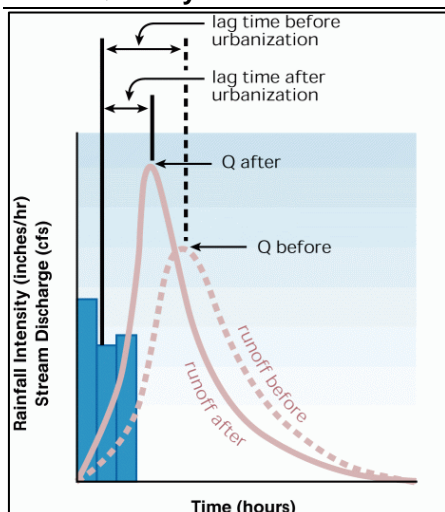
Outcomes

- Adopted open space plans and ordinances in Auburn, Chester, and Derry.

Resources

- Funding and personnel for research and development of plans and ordinances.

Water Quantity

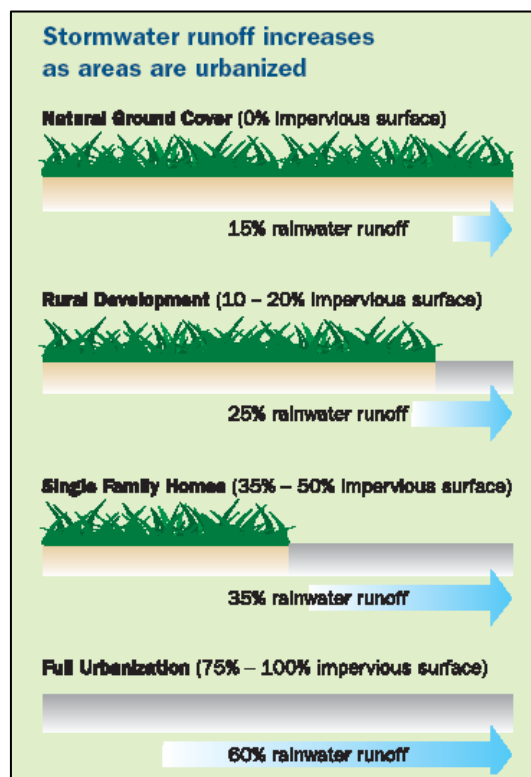


Land use conditions in a watershed can have a direct bearing on the magnitude, volume, and attenuation of runoff. Increased urbanization in the form of paved surfaces (parking lots, driveways, roads), and buildings (roofs) leads to greater degrees of impermeability, which impacts the watershed's runoff characteristics. Impervious surfaces and impermeable soils with low infiltration rates prevent water from infiltrating into the ground, leading to an increased volume and rate of stormwater runoff. The rate of runoff increases not only due to impervious surfaces, but also the channeling of road and pavement runoff into stormwater collection systems. Stormwater systems deliver flow to a receiving stream much faster than an undeveloped watershed.

Increased development within a watershed can also result in the loss of vegetative cover, forest cover, and wetlands, which is the case in the Beaver Lake watershed. These features of the watershed provide a buffer, allowing water to infiltrate into the ground and eventually appear as base flow⁵ (groundwater). A watershed that is stripped of vegetation and forested land will experience a faster rate and volume of runoff than the same "pristine" or undeveloped watershed. Less infiltration occurs reducing the amount of water available to recharge aquifers and feed streamflow during periods of dry weather. The loss or filling in of wetlands due to development (which has occurred over the years in the Beaver Lake watershed) also has a direct bearing on runoff volumes. Wetlands serve a vital role in reducing the impacts of flood flows by acting as "sponges," which store and then slowly release flood waters over time.

Increased development not only affects water quantity, but also quality. Development increases the concentration and types of pollutants carried by runoff. Runoff from roofs, parking lots, and lawns picks up and transports a variety of pollutants to downstream waterbodies. The cumulative impact of increased development has a direct impact on stream flow, stream morphology (plan, profile and dimension), degradation of aquatic habitat, and water quality impacts.

Specific to the Beaver Lake watershed the heavy development over the past few decades has reduced the amounts of rainfall infiltration while the magnitude and volume of stormwater runoff increases (these assertions will be demonstrated later). It should also be noted because the receiving streams such as Manter Brook, Jenny Dickey Brook and Cat-O-Brook are receiving higher peak flows than prior to heavy development they are continually adjusting over time. Channel adjustments occur to accommodate increased flow by eroding their streambanks. The eroded streambank sediments are transported downstream and ultimately deposit in slow moving waters such as wetlands, Adams Pond or Beaver Lake. The changes to the brooks may also impact aquatic habitats, water depths/velocities and vegetation along the stream banks.



⁵Base Flow: Base flow is that part of the stream discharge that is not attributable to direct runoff from precipitation or melting snow; it is usually sustained by groundwater.

Hydrologic regimes are vitally important in determining the composition, structure, and function of aquatic, wetland riparian ecosystems (Richter, et al). To identify the impact of human disturbance⁶ on the hydrologic regime, the Nature Conservancy has developed a software program called “The Indicators of Hydrologic Alteration” (IHA) (Richter, B., Baumgartner, J., Powell, J., and Braun, D.). The IHA method assesses the degree of hydrologic alteration attributable to human influence within a watershed. The IHA software relies on long term flow data and generates various flow statistics. The flow statistics evaluate the timing, duration, frequency, magnitude and rate of change of flow conditions. The program has the ability to assess hydrologic changes associated with activities such as dam operations, flow diversion, groundwater pumping, or intensive land-use conversion.

To determine how land use changes and human disturbances have impacted streamflow, flow data from the Beaver Brook gauge (see Table 5) was used in the IHA analysis. Although the Beaver Brook gauge is located further downstream from the Beaver Lake watershed (terminating at Beaver Lake Dam), it is a good indicator of overall streamflow conditions.

Table 5: Data on US Geological Survey Gauge on Beaver Brook

Gauge No.	Gauge Name	Drainage Area	Period of Record	Gauge Elevation
010965852	Beaver Brook at North Pelham, NH	47.8 square miles	10/01/1986-current	150 feet msl

To assess long term changes in the Beaver Brook streamflow pattern, it is desirable to have an equally long period of flow data. With the population growth starting in the 1960s, having flow data on Beaver Brook dating back to the 1960s would be ideal. However, flow trends in Beaver Brook were limited to the available period of record- October 1, 1986 through September 30, 2006, 20 years.

Although the IHA software computes numerous flow statistics, some of the key findings are highlighted to illustrate trends in peak and low flows in the Beaver Brook watershed.

Instantaneous Peak Flows - Shown in Figure 8 are the annual instantaneous peak flows on Beaver Brook along with a trend line. As the figure shows, the general trend is that peak flows are increasing over time. Keep in mind that although the graph terminates in 2006, peak flows over 2,500 cfs were observed on Beaver Brook during the May 2006 “Mother’s Day” flood and over 1,650 cfs during the April 2007 flood. Peak flows are likely increasing in the watershed as more open or forested land is being converted to residential housing or businesses. As noted above, conversion of forested lands to development increases the amount of impervious surfaces, which leads to greater peak flows.

Summer Low Flows - Shown in Figures 9 and 10 are the mean August flow and base flow index⁷ for Beaver Brook. Based on the available period of record, the trend is showing both the mean August flow and base flow index is decreasing over time. Again, this is a function of decreased infiltration into soils (because over time impervious surfaces in the watershed have steadily increased) that appears as base flow during dry weather periods.

Goal 1: The current flow regime in the Beaver Lake watershed is maintained for the protection of aquatic, recreation, wetland, wildlife, and aesthetic resources.

Objective: By the end of 2007, quantify the annual and seasonal magnitude of flow in the Beaver Lake watershed to document the current flow regime.

Supporting Activities

- a. Review existing hydrologic data sources, such as the Beaver Lake Diagnostic and Feasibility Study.

⁶ Human disturbances may include: changes in land use, construction of dams, water supply withdrawals, out of basin water transfers, etc. Essentially, human disturbances represent any change in the watershed that impacts natural streamflow patterns.

⁷ The base flow index is the 7-day minimum flow divided by the annual mean flow.

- b. Conduct an analysis of the US Geological Survey Gage No. 010965852 Beaver Brook at North Pelham, NH. Gage Period of Record: 1986-2004. Drainage Area=47.8 sq mi. [Note: In February 2006, the USGS installed a gage on Beaver Brook at the outlet of Kendall Pond in Derry for a NHDES Total Maximum Daily Load (TMDL) study].
- c. Explore feasibility of purchasing, installing, maintaining, and monitoring a flow gage (staff gage) at the outlet at Beaver Lake Dam, Meadow Dam, Eustis Memorial Dam (at Harantis Lake) or another location in the Beaver Lake watershed⁸.

Objective: By the end of 2007, conduct a watershed budget⁹ evaluation to determine the net loss (water leaving the watershed) or gain (water transferred out of the watershed) of water in the Beaver Lake watershed on an annual and seasonal basis¹⁰.

Supporting Activities

- a. Contact Derry Department of Public Works to determine how much water is brought into the watershed for water supply and where it is discharged (treatment plant, septic systems). Also determine what sections of town are on public water supply, estimate water use (gallons per capita per day) and estimate the amount transferred out of the watershed to the wastewater treatment plant.
- b. Identify what sections of the Towns of Auburn, Chester, and Derry in the watershed are on private wells and septic systems.

Outcomes

- Quantify the current flow regime in the Beaver Lake watershed.
- Quantify the sources of water entering and leaving the Beaver Lake watershed.
- An established curriculum with PA and/or identification of “staff gage watchers” for long-term monitoring of staff gages.

Resources

- Staff gage or continuous flow monitoring gage.
- DES interns, paid staff, or volunteers to monitor and maintain staff gage or continuous flow monitoring gage.
- USGS flow monitoring gage data.

Goal 2: The current flow regime in the Beaver Lake watershed is maintained by managing development.

Objective: By the end of 2010, determine how past land use changes have impacted the Beaver Lake flow regime.

Supporting Activities

- a. Evaluate historical flow data (1986 is the oldest available data) and identify any trends between the magnitude of seasonal, peak, and base flows resulting from land use changes over time.
- b. Conduct literature search to document how increased development impacts the timing, magnitude, and duration of flow.
- c. Using the long-term flow data coupled with long-term land use trends, develop a report quantifying the relationship with land use and stream flow.

Objective: By the end of 2008, or to coincide with the Auburn, Chester, and Derry Master Plans

⁸ It should be noted that in NHDES' Diagnostic/Feasibility study of Beaver Lake nine inflowing tributaries and two outlets were monitored for streamflow. Thus, it may be possible to relocate some of the flow metering sites to ensure consistency with streamflow measurements obtained in the early 1990's.

⁹ Budget refers to the net loss or gain in water in the Beaver Lake watershed. The “budget” accounts for the magnitude of water entering the Beaver Lake watershed from sources outside the watershed (such as potable water supply) resulting in a net gain of water. The “budget” also accounts for the magnitude of water leaving the watershed (such as stormwater and sewer collection facilities) resulting in a net loss of water.

¹⁰ NHDES conducted a Diagnostic/Feasibility (D/F) study of Beaver Lake in the early 1990s. As part of the D/F a hydrologic budget was conducted relative to inflows to only Beaver Lake. The study did not address the loss of water from the Beaver Lake watershed.

development, assure that ordinances are in place to manage land development such that there is no net change in the magnitude and timing of runoff (flow) between pre- and post- development.

Supporting Activities

- a. Establish a committee to recommend/develop/modify town land development rules and regulations.

Objective: By the end of 2008, or to coincide with the Auburn, Chester, and Derry Master Plans, determine how future land use changes, using build-out analysis, could impact the Beaver Lake watershed flow regime.

Supporting Activities

- a. Review town build-out analysis to determine the percent of impervious surface.
- b. Predict how build-out analysis could impact the flow regime via simplified runoff calculations.

Outcomes

- Town officials (Planning Boards, Zoning Boards of Adjustment, etc) understand the importance and impact of land development on flow in the Beaver Lake watershed.
- The impact of land use activities on flow is understood and town ordinances are enacted to preserve the watershed budget (magnitude, timing, frequency).

Resources

- Historical flow and land use data of the Beaver Lake watershed.
- Auburn, Chester, and Derry build-out analyses.
- Town officials, such as Zoning Board of Adjustment and Planning Board members' participation in potential development of land-use ordinances.

Goal 3: The public is aware of how their actions impact river/brook flows in the Beaver Lake watershed and what actions the public can take to improve water resources.

Objective: Initiate and continuously raise the public's awareness on the hydrologic process (where water comes from) and how human intervention (dam operations, water withdrawals, land development, etc) impacts natural streamflow.

Supporting Activities

- a. Obtain historic water level data for Harantis Lake, Beaver Lake, and Adams Pond, if available, to show how gate operations impact water levels and downstream flow.
- b. Obtain information on when the impoundments are purposely lowered and refilled, and compare the timing of the events with USGS gage flows on Beaver Brook. Also determine who manages the dams and gate operations.
- c. Identify and modify curricula, such as Interactive Lake Ecology and Project WET, for Beaver Lake watershed schools to support water conservation.
- d. Modify and adapt Watershed Steward Program and promote it within the watershed.

Outcomes

- A well-educated public.
- An established curriculum with Pinkerton Academy for long-term monitoring.

Resources

- Water level data records on Harantis Lake, Beaver Lake, and Adams Pond, if available.
- Public educational materials.

Water Quality

Land use within a watershed ultimately impacts—either positively or negatively—the quality of the runoff and, in turn, impacts streamflow and lake water quality. For example, watersheds in northern NH tend to have relatively good water quality because they have forested watersheds and relatively low rates of development. Alternatively, watersheds with heavy rates of agricultural, residential and/or commercial development tend to have poorer water quality because of large land use contributions to watershed runoff.

As watersheds are developed, runoff increases as the amount of impervious area increases. In addition, erosion and sedimentation increase as soils are distributed and vegetation is removed. Increased runoff combined with increased erosion results in an increased delivery of phosphorus—a major contributor to algal populations and decreasing water clarity—as a soil attachment.

Land use has the most direct connection to water quality in a watershed. In general, the following broad categories can directly impact water quality: faulty septic systems, agricultural use (livestock), soil erosion and sedimentation, and land use development. Relative to septic systems, as noted earlier, residential development around the periphery of Beaver Lake historically used septic systems for wastewater disposal. However, in 1989-1990, Derry expanded the sewer system to include residents around the lake. Although the sewer system brought marked improvement to the Lake, Volunteer Lake Assessment Program testing at Beaver and Harantis Lakes showed continued nutrient loading from other sources to the tributaries and the lake.

Some locations in the Beaver Lake watershed contain livestock (such as horses) that are located in close proximity to streams, lakes and ditches. Surface runoff from pastures and grazing areas is another source of pollutant loading to nearby streams and lakes. The eroded sediments carry attached phosphorus to the surface waters as an additional source of nutrients. Excessive phosphorous contributes to declining water quality because it is the limiting nutrient needed for abundant algae growth and it can upset lake ecosystems.

Soil erosion and sedimentation are major pollutants to lakes and streams and directly affect water quality. Soil erosion consists of the availability, detachment and transport of soil particles into a lake or stream. In the case of the Beaver Lake watershed increased development has resulted in sediment erosion of previously forested lands. Overland flow carrying eroded sediments pick up contaminants that are subsequently transported to receiving waters. For example, one of the major concerns is Jenny Dickey Hill Road, which continually erodes, carrying sediments and other pollutants to Beaver Lake.

Overall, development has a profound impact on water quality. As with the other land use impacts discussed above, a primary impact from development is the contribution of phosphorus and other contaminants. When attached to soil, phosphorus can be carried to water bodies from erosion and runoff from land and impervious surfaces (paved surfaces that water runs off instead of percolating through). Phosphorus is a general soil nutrient that in excess in a lake can cause severe algal blooms and oxygen depletion leading to degradation of water quality and diminished aesthetic and recreational enjoyment.

Wetlands serve many vital roles relative to diminishing high flows and filtering contaminants. However as shown earlier, some wetlands within the Beaver Lake watershed have been drained and filled to accommodate residential development. Restoring drained wetlands, or protecting existing wetlands, is a unique opportunity to reduce water quality impacts from large land areas upstream from the wetlands.

Goal: Waterbodies in the Beaver Lake watershed support their designated uses and exhibit no impairments.

Objective: By 2009, erosion and contaminant loading from development and roads in the Beaver Lake watershed is reduced by 50%.

Supporting Activities

- a. Identify and quantify areas of erosion and contaminant loading from roadways in sensitive areas, such as Jenny Dickey Hill Road.
- b. Prioritize highly sensitive areas and develop and implement Best Management Practices to reduce erosion and contaminant loading.

- c. Develop watershed protection recommendations and ordinances for construction of new roads and driveways.
- d. Develop outreach campaigns targeted to developers and homeowners to provide them with models and resources for low impact development principles.
- e. Work with NH Department of Transportation, local road agents, and departments of public works to establish low-salt and alternative winter treatment for roads in sensitive areas.
- f. Eliminate detention ponds' post-development runoff so that it does not exceed pre-development runoff.
- g. Work with NHDES and USGS to expand pilot project, *Effects of Urbanization on Stream Quality* (see References section) to the Beaver Lake watershed.
- h. Apply results of expanded pilot project to help form recommendations for stormwater management and other practices.

Outcomes

- NH Department of Transportation, local road agents, and departments of public works adopt low impact principles relative to road construction and maintenance.
- BMPs are implemented on roads and driveways in highly sensitive areas.

Resources

- Grant programs to implement BMPs.
- Grant programs to implement outreach campaigns.

Objective: By 2008, outreach campaigns will be conducted in the Beaver Lake watershed to increase awareness of and compliance with ordinances and voluntary water quality protection measures.

Supporting Activities

- a. Raise community awareness of the benefits of land conservation easements and purchases for protection of water quality.
- b. Develop speaker's bureau and presentations that can be provided upon request to area groups such as civic organizations, town boards, and schools.
- c. Develop media materials on the importance of land use protection relative to water quality.
- d. Development awareness of waterfowl feeding ordinance and encourage compliance through outreach programs

Outcomes

- More informed public relative to water quality issues
- Public feeding of waterfowl feeding is reduced or eliminated

Resources

- Funding and paid or volunteer staffing for developing presentations and media materials

Objective: By 2007, increase by 20% the quantity of contaminants and hazardous waste diverted from residential and business properties to appropriate disposal outlets.

Supporting Activities

- a. Work with Beaver Lake watershed towns to increase awareness of contaminants and hazardous waste and their effects on water quality.
- b. Work with Beaver Lake watershed towns to increase hazardous collection days and better advertise their availability.
- c. Conduct random sampling in high-use commercial and industrial areas for hazardous materials.
- d. Include contaminant sampling of waterbodies near high-use commercial and industrial areas during routine building inspections.

Outcomes

- Hazardous waste sites are remediated
- Increased municipal and homeowner participation in hazardous waste collection days

Resources

- Contractors and sites for waste disposal
- Municipal support for household hazardous waste days

Objective: By 2008, increase water quality sampling and watershed assessment by 100%, evaluate findings, and regularly publish results.

Supporting Activities

- a. Increase participation in Volunteer Lake Assessment Program (VLAP) to include all Beaver Lake watershed lakes and ponds (beyond the current programs conducted in Beaver and Harantis Lakes).
- b. Increase number of VLAP tributary monitoring sites in Beaver and Harantis Lakes.
- c. Add bacteria sampling at VLAP monitoring sites in Beaver and Harantis Lakes.
- d. Begin assessing Beaver Lake watershed rivers and streams with the Volunteer River Assessment Program.
- e. Develop Beaver Lake watershed / water quality curriculum for and with Pinkerton Academy that can be transferred to other watershed schools.
- f. Establish permanent monitoring stations for Stream Teams habitat assessment
- g. Continue Stream Teams watershed assessment activities.
- h. Implement Weed Watcher and algal observation programs in Beaver Lake watershed waterbodies.
- i. Develop procedure and network for water quality impairments (such as fish kills) documentation and reporting.
- j. Create online, GIS-based, data search tool for reporting water quality testing results.

Outcomes

- Greater number of monitoring sites and sampling parameters.
- Increased understanding of Beaver Lake watershed health.

Resources

- Funding and paid or volunteer staffing for conducting water quality surveys and creating data management tools.

Biological and Habitat

The rapid increase in human population and rate of development in the Beaver Lake watershed is placing significant stress on the native, aquatic and terrestrial wildlife populations. Land that was once habitat for wildlife species is being converted into residential and commercial subdivisions, roads, and other uses. The development of land and related activities impact both the quantity and quality of wildlife habitat. The loss of aquatic and terrestrial habitat through the conversion of land from its natural state to a developed landscape represents the single greatest impact of increased human activity on native wildlife within the Beaver Lake watershed.

Development eliminates or significantly changes many important habitat features found in a natural area, thus reducing or eliminating the habitat value of that area. For example, a diverse wildlife population depends upon the natural diversity of native plants found in most undeveloped areas. Development often changes the vegetative community, making it more difficult for many native species to survive. Those species able to survive in urban settings may thrive, but the rest are forced to find new territory or die.

Habitat fragmentation is a less obvious consequence of development, reducing both the quantity and quality of habitat. Fragmentation is a process whereby large tracts of the natural landscape are gradually developed and subdivided until only patches of original habitat remain. The patches are often too small and too far apart to support the basic survival and reproductive needs of many wildlife species during various stages of their life-cycle or in different times of the year. In addition to the detrimental impacts to terrestrial and aquatic wildlife within the watershed, landscape disturbances caused by development can also serve to introduce invasive species into natural habitats, further degrading the quality of remaining habitat areas.

More than 60 water bodies in the central and southern parts of the state are infested with invasive aquatic plants, such as variable milfoil, fanwort and water chestnut. Plants such as purple loosestrife, common reed and glossy buckthorn dominate many acres of the state's freshwater marshes and forested wetlands in these areas. Both Auburn and Derry have infestations of invasive aquatic plants in Lake Massabesic and Big Island Pond, respectively. Another five municipalities that border the Beaver Lake watershed have invasive aquatic infestations in lakes and ponds. The abundance of public access facilities and the increasing number of boats and trailers in New Hampshire each year increases the threat of spreading exotic, non-native species into the Beaver Lake watershed. Once invasive species are introduced, managing and controlling them is a significant challenge as well as a costly one.

In addition to the threat of introducing invasive terrestrial and aquatic species into the watershed as a result of conversion of open space, the structural habitat of aquatic systems can also be significantly degraded by modifications associated with roads and development. The roads, driveways, rooftops, and highly manicured, compacted lawns account for the increase in impervious surfaces within a watershed. Impervious surfaces are areas where infiltration of water into the underlying soil is prevented. Research in recent years has consistently shown a strong relationship between the percentage of impervious cover in a watershed and the health of the receiving stream. Scientists generally agree that stream degradation consistently occurs at relatively low levels of imperviousness (10 to 20%). Roadways and other impervious areas channel pollutants directly into streams without being filtered during transport through the soil.

The preservation of open land, including open fields, woods, wetlands, farms, and undisturbed wild areas for both terrestrial and aquatic life, is critical to assure that the Beaver Lake watershed will remain diverse, healthy, and ecologically functional for generations of watershed residents to come.

Goal 1: All aquatic habitats within the Beaver Lake watershed are free from invasive species.

Objective: By 2007 the BLWP secures six additional volunteers to participate in the Lake Host Program

Supporting Activities

- a. Continue participation in Lake Host Program at Beaver Lake.
- b. Actively recruit volunteers at the BLIA annual meeting.
- c. Create and air a public service announcement (PSA) on Derry Community Television and other media outlets.

- d. Create and post recruitment poster at relevant public and private locations throughout the Beaver Lake Watershed.

Objective: By the end of 2007 the Auburn, Chester, and Derry Conservation Commissions, as well as the Harantis Lake Homeowners Association are participating in the DES Weed Watcher Program

Supporting Activities

- a. Promote Weed Watcher Program at conservation commission meetings.
- b. Encourage attendance at NH Watershed Conference and NH Association of Conservation Commissions Annual Meeting where Weed Watcher Program is being promoted.

Outcomes

- Limit introductions of invasive species in the Beaver Lake watershed.

Resources

- Funding and personnel to participate in Weed Watcher and Lake Host Programs.
- Funding and personnel to create and distribute public service announcements.

Goal 2: The Beaver Lake watershed benefits from a net increase in protected land that supports wildlife connectivity and continuity and fish passage.

Objective: By the end of 2010, at least 10% of all stream crossings will support fish and wildlife passage.

Supporting Activities

- a. Complete inventory of all culverts and stream crossings to assess their ability to support fish and wildlife passage using protocols being developed by The Nature Conservancy.
- b. Evaluate, prioritize, and recommend Best Management Practices and designs for existing and new stream crossings in the Beaver Lake watershed.

Objective: By the end of 2007, develop criteria for identifying and prioritizing lands for protection.

Supporting Activities

- a. Research Comprehensive Wildlife Strategy and identify areas in the Beaver Lake watershed named in the report that support exemplary natural communities.
- b. Plan and host tri-town Conservation Commission workshop designed to work toward development of criteria.
- c. Use existing data and conduct, as necessary, inventories of bird, macroinvertebrate, and other wildlife population data as indicators of pesticide use and other impacts.

Objective: By 2010, 700 acres will be conserved via an easement or fee simple purchase for the protection of fish and wildlife.

Supporting Activities

- a. Relevant Auburn, Chester, and Derry land use committees will provide recommendations on prioritization on acreage to conserve.
- b. Auburn, Chester, and Derry governments and nonprofits will negotiate with landowners to secure conservation easements and land conservation purchases in the Beaver Lake watershed.

Outcomes

- Conservation easements or fee simple purchase of 700 acres of land

Resources

- Funding to purchase easements or land title and to support acquisition fees
- Funding and personnel to conduct indicator species data and other surveys and inventories as necessary

Recreation

Diverse recreational opportunities are an important part of life in the Beaver Lake watershed. Activities include motorboating, waterskiing, horseback riding, paddling, fishing, bird watching, hiking, hunting, and biking. Engaging in these and other outdoor activities helps residents and visitors connect to the watershed and learn more about its ecology. These diverse recreation opportunities should be supported, developed, and well managed in the Beaver Lake watershed.

Sound watershed management is the key to maintaining access to, and the quality of, these recreational opportunities. One example is that invasive species can be introduced to lakes and streams by boats, boat trailers, and bait that are carried from one waterbody to another. For instance, non-native plants can get snagged on boat trailers, boats, and on fishing gear when used in an infested lake. When that equipment is deployed in a new waterbody, the invasive plants can take root there and propagate.

In some waterbodies, excessive boat wakes can cause erosion to shorelands and disturb loon and other birds nesting habitats as well as fish and amphibians. Well-designed and maintained boat access sites are crucial so that polluted runoff to waterbodies is eliminated or minimized.

Trails are important as access for hikers, cyclists, horseback riders, and birdwatchers. It's important to design and maintain trails so that they do not add to polluted runoff in the Beaver Lake watershed.

Goal: The waterbodies in the Beaver Lake watershed support diverse recreation opportunities that are environmentally responsible.

Objective: Work with stakeholders to develop policies, programs, and incentives that encourage environmentally responsible water recreation uses in the watershed.

Supporting Activities

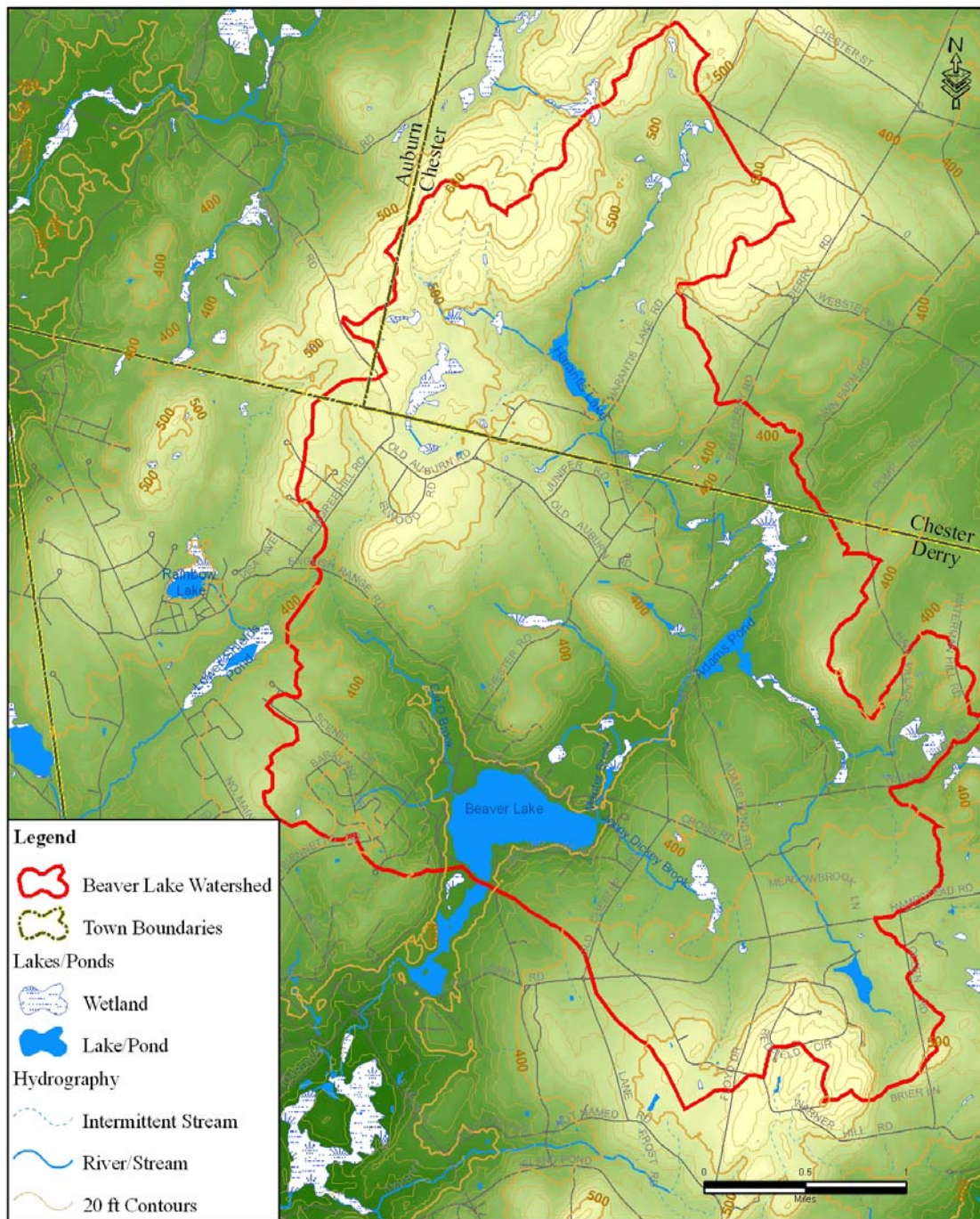
- a. Survey current recreational habits such as those related to boat speeds, navigation patterns, types of vessels, waste disposal.
- b. Lobby the Department of Safety, Power Squadrons, and other boating trainers to include environmental education in their boater safety programs.
- c. Provide opportunities for non-motorized boater use in the watershed.
- d. Work with marine dealers to provide incentives to convert to four-stroke engines.
- e. Work with Derry Recreation Department, Auburn Parks and Recreation Committee, Chester, Recreation Department and New Hampshire Lakes Association to design and implement education and information programs in the Beaver Lake watershed.
- f. Provide support to the Derry Recreation Department, Auburn Parks and Recreation Committee, and the Chester Recreation Department, to continue their environmental programs in the watershed.

Outcomes

- Informed and environmentally responsible recreationists.
- Recommendations for new, improved, and refined water recreation policies.

Resources

- Funding and personnel to conduct surveys and produce outreach campaigns.
- Volunteers to work with boating trainers.



Map prepared by Gomez and Sullivan Engineers, P.C. using watershed, and GIS annotation layers from NHDES and remaining GIS layers from NH GRANIT. *Digital data in NH GRANIT represent the efforts of the contributing agencies to record information from the cited source materials. Complex Systems Research Center (CSRC), under contract to the Office of Energy and Planning (OEP), and in consultation with cooperating agencies, maintains a continuing program to identify and correct errors in these data. OEP, CSRC, and the cooperating agencies make no claim as to the validity or reliability or to any implied uses of these data. *

Figure 2: Beaver Lake Watershed Topographic Map

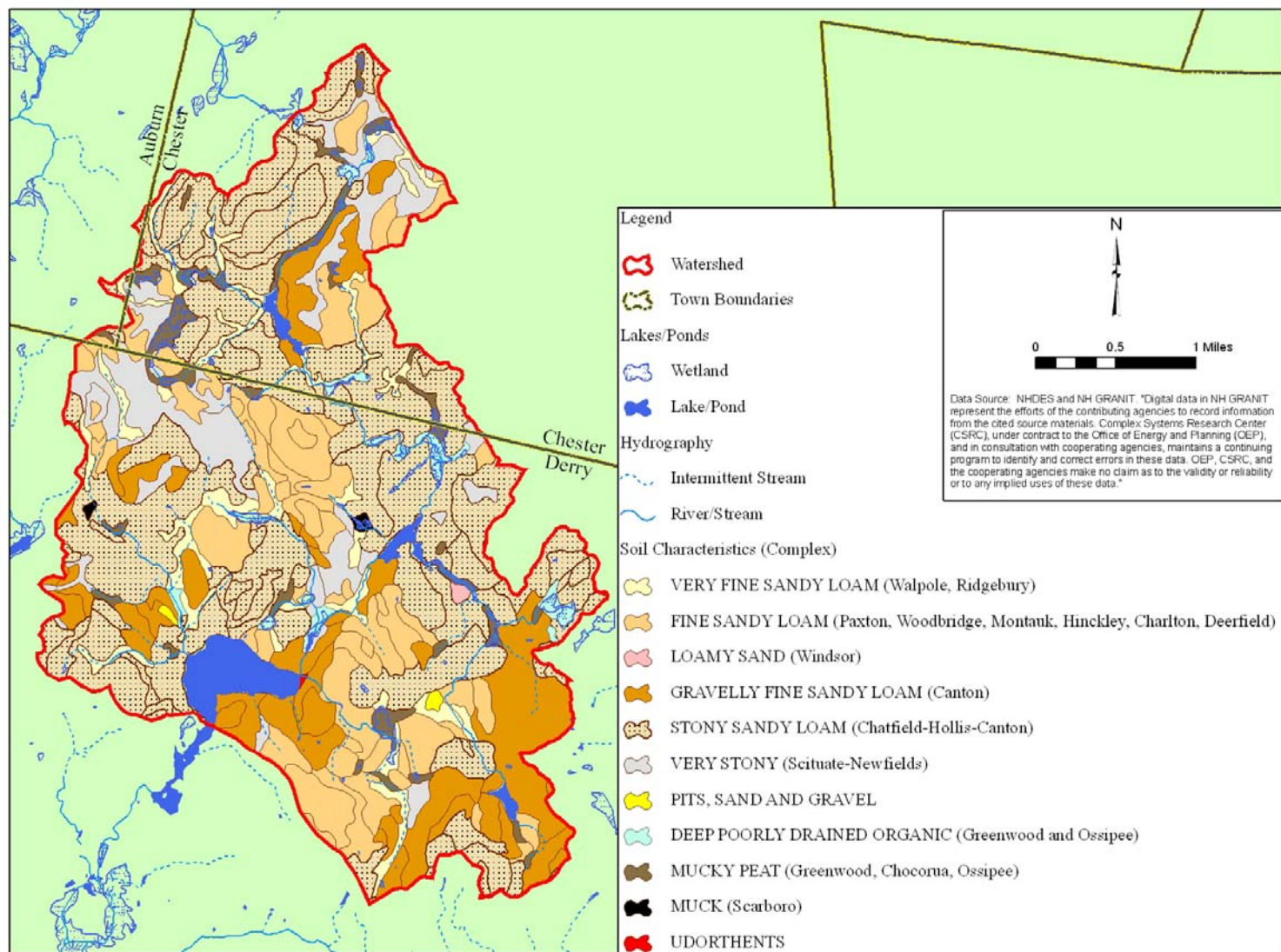


Figure 3: Beaver Lake Watershed Soils Map

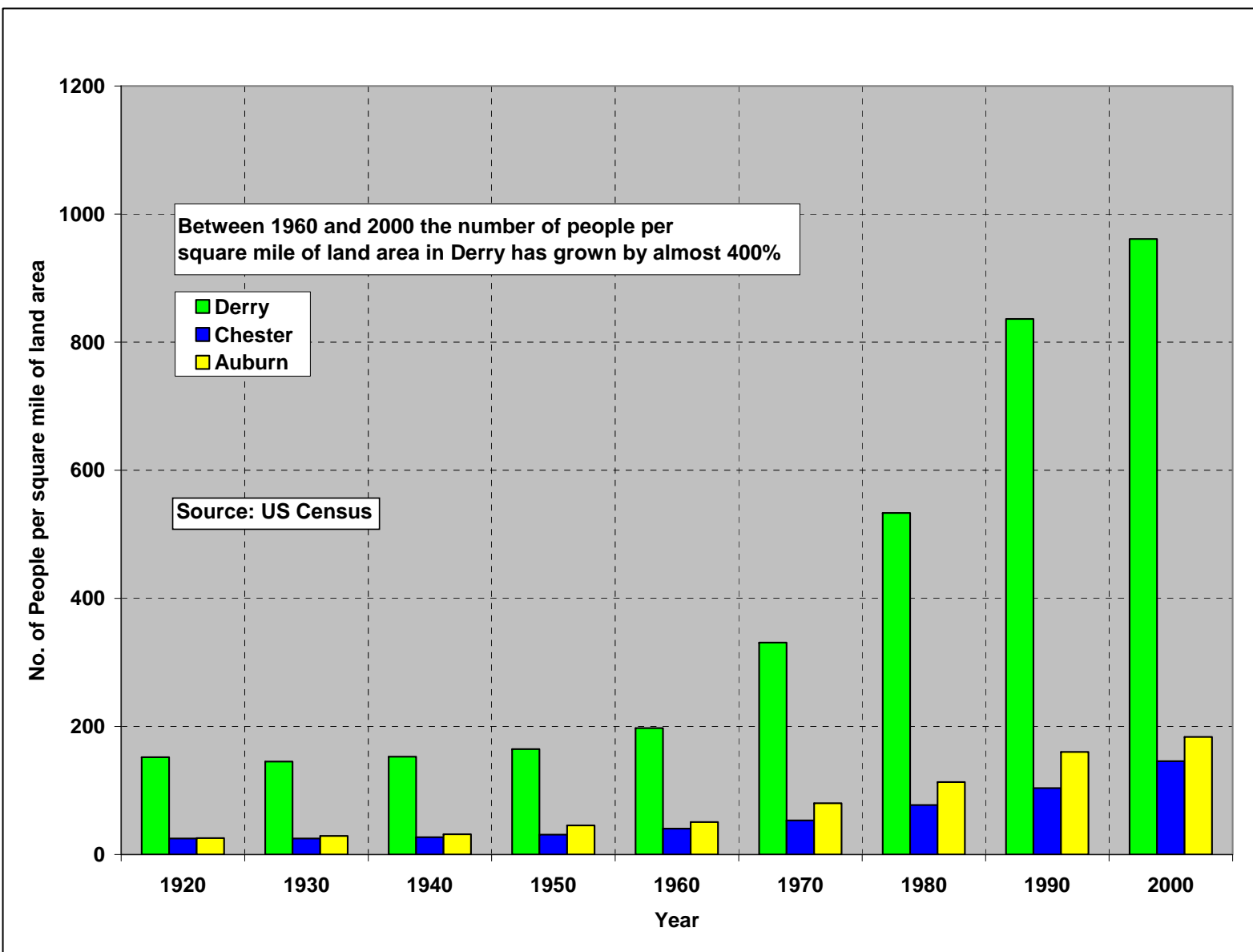
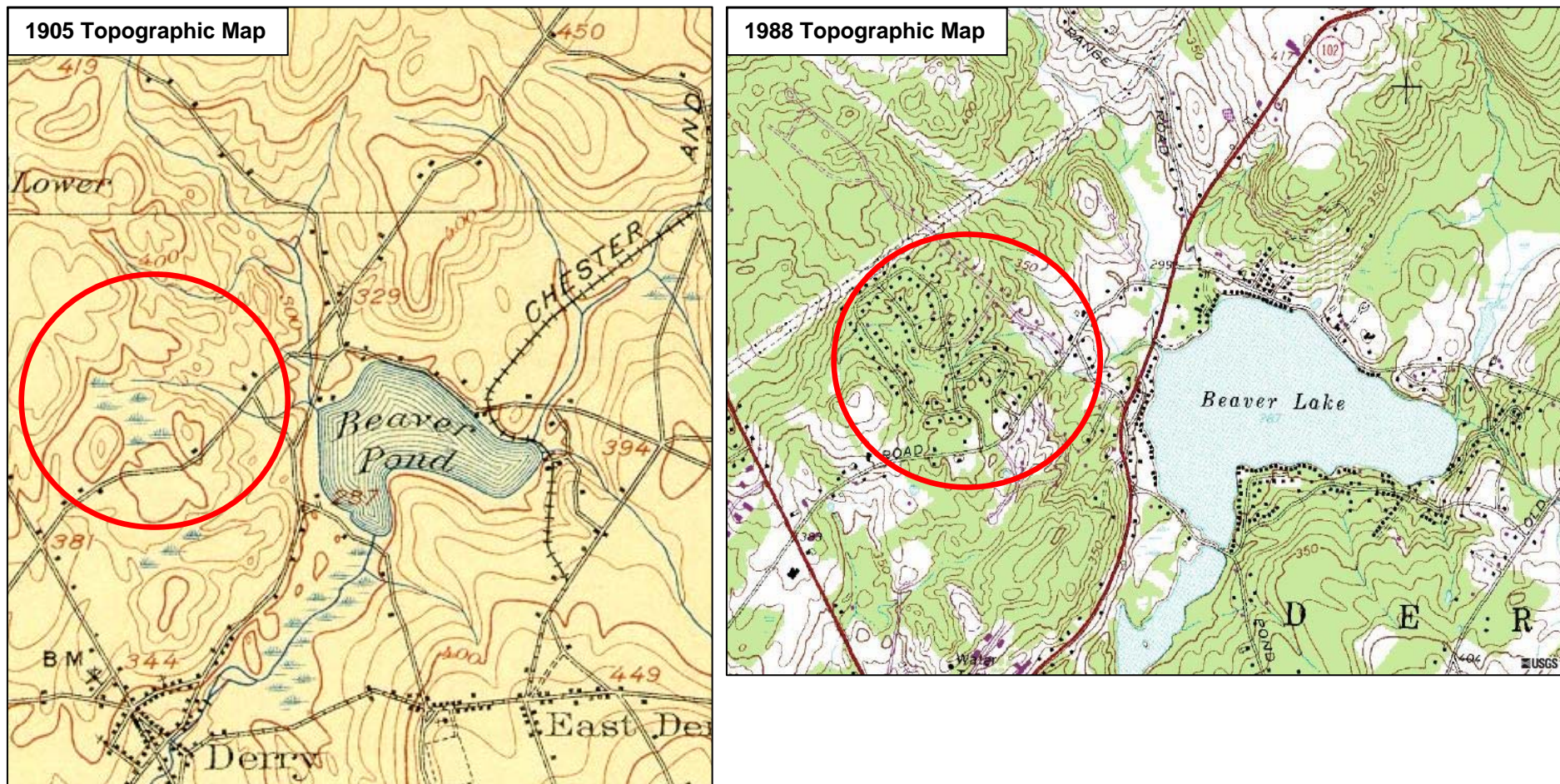


Figure 4: Population per square mile of land area within Derry, Chester, and Auburn from 1920 to 2000



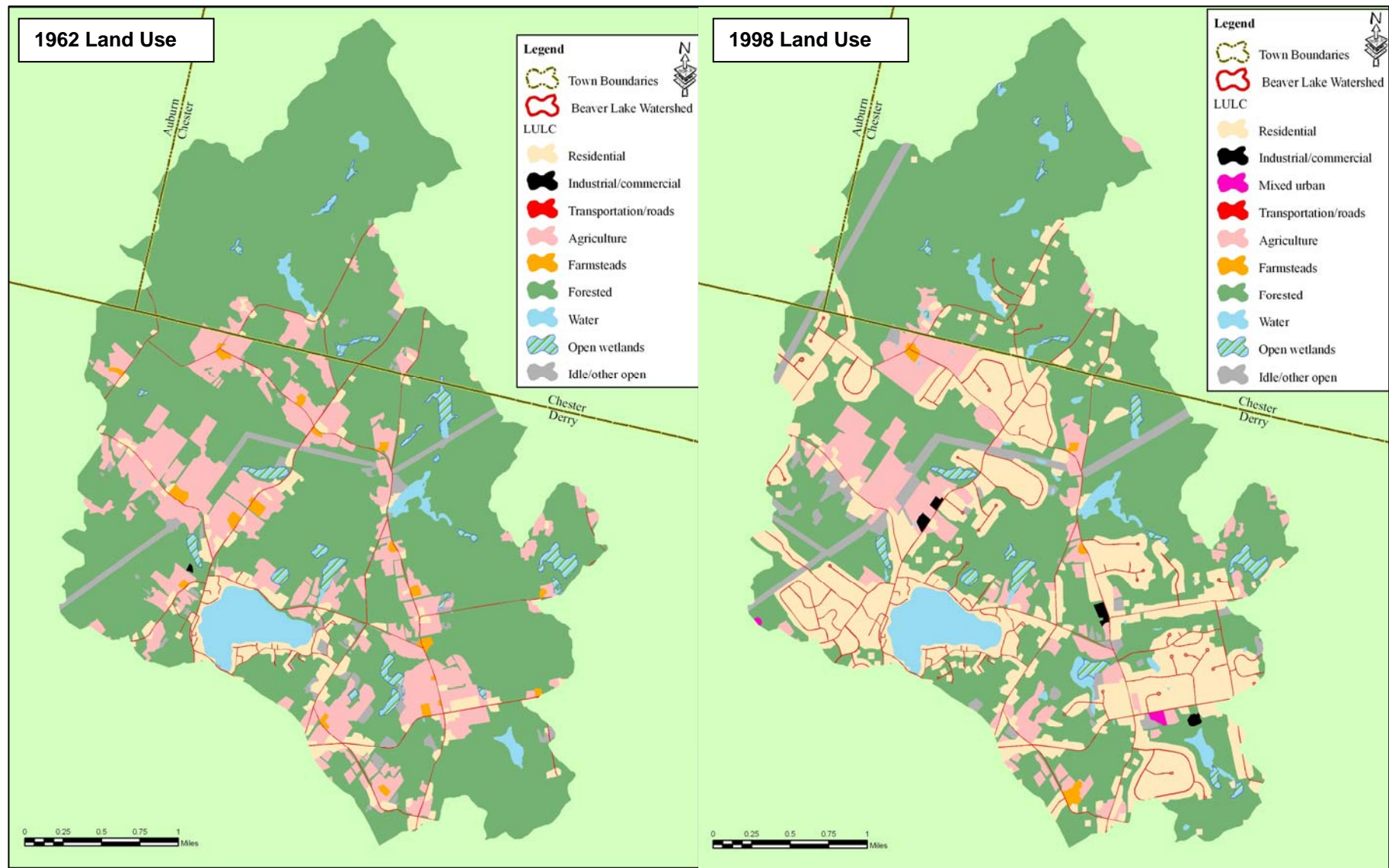


Figure 6: Land Use Maps of the Beaver Lake Watershed in 1962 versus 1998

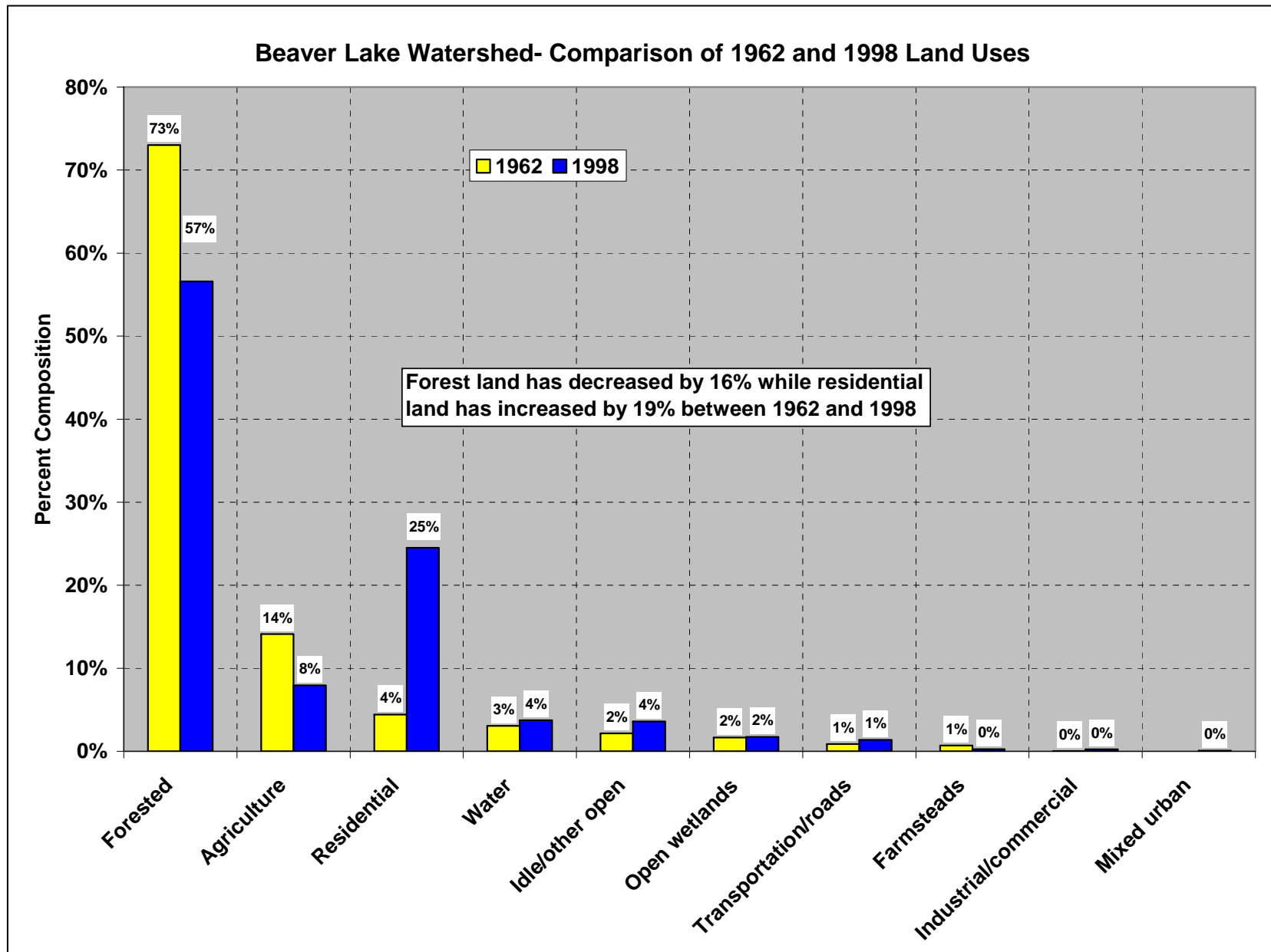


Figure 7: Land Use changes in the Beaver Lake Watershed between 1962 and 1998

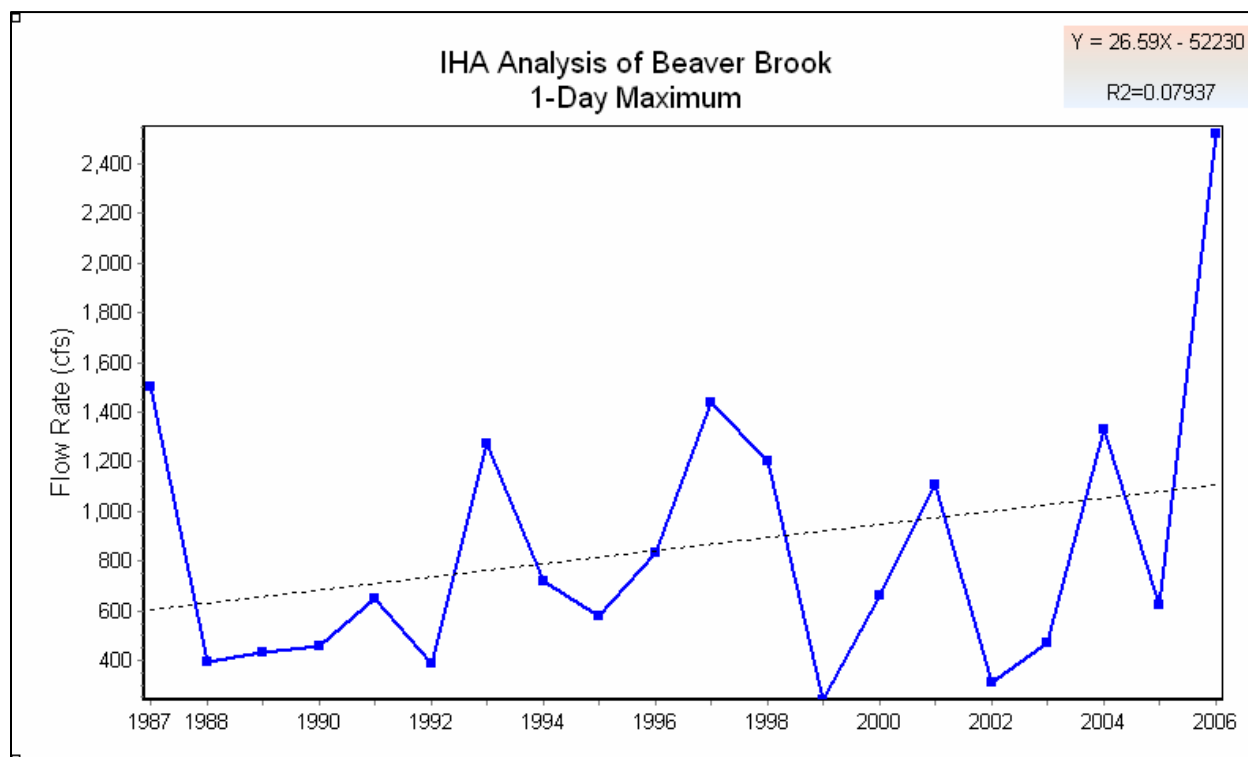


Figure 8: Annual Instantaneous Peak Flows at the Beaver Brook USGS Gauge

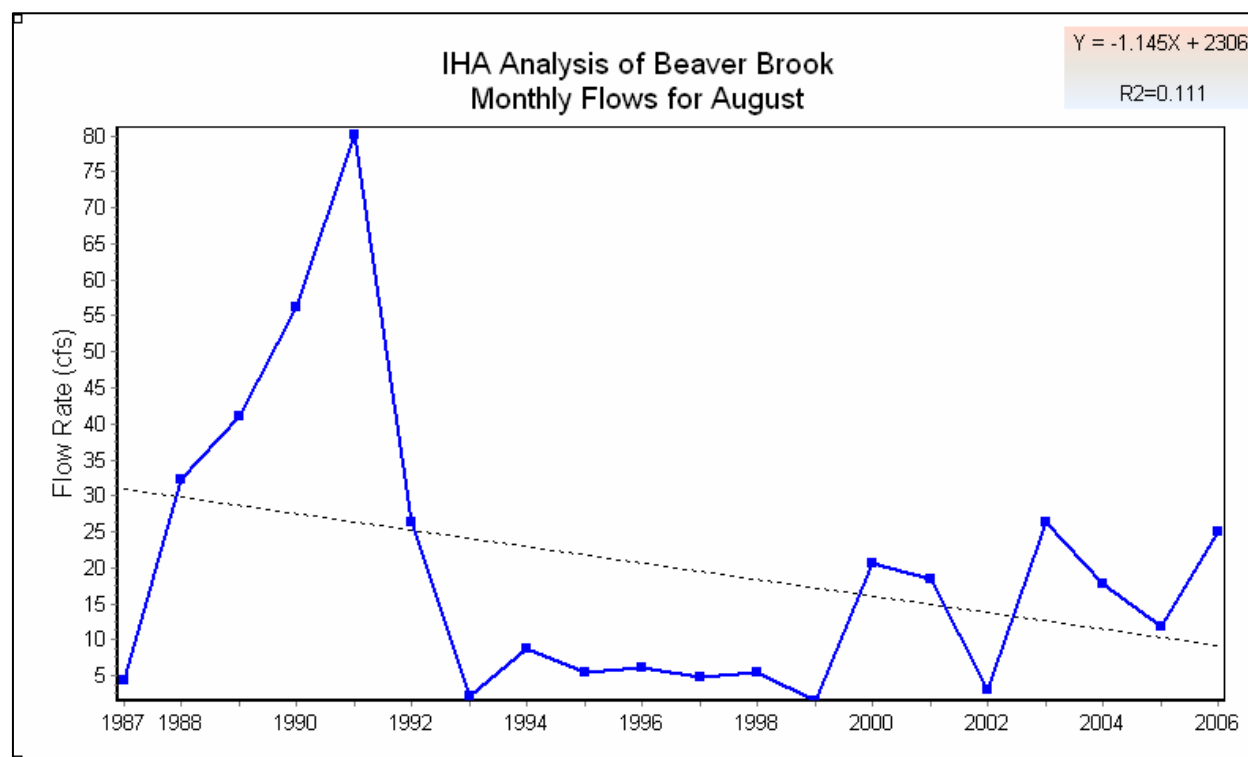


Figure 9: Mean Monthly Flows for August at the Beaver Brook USGS Gauge

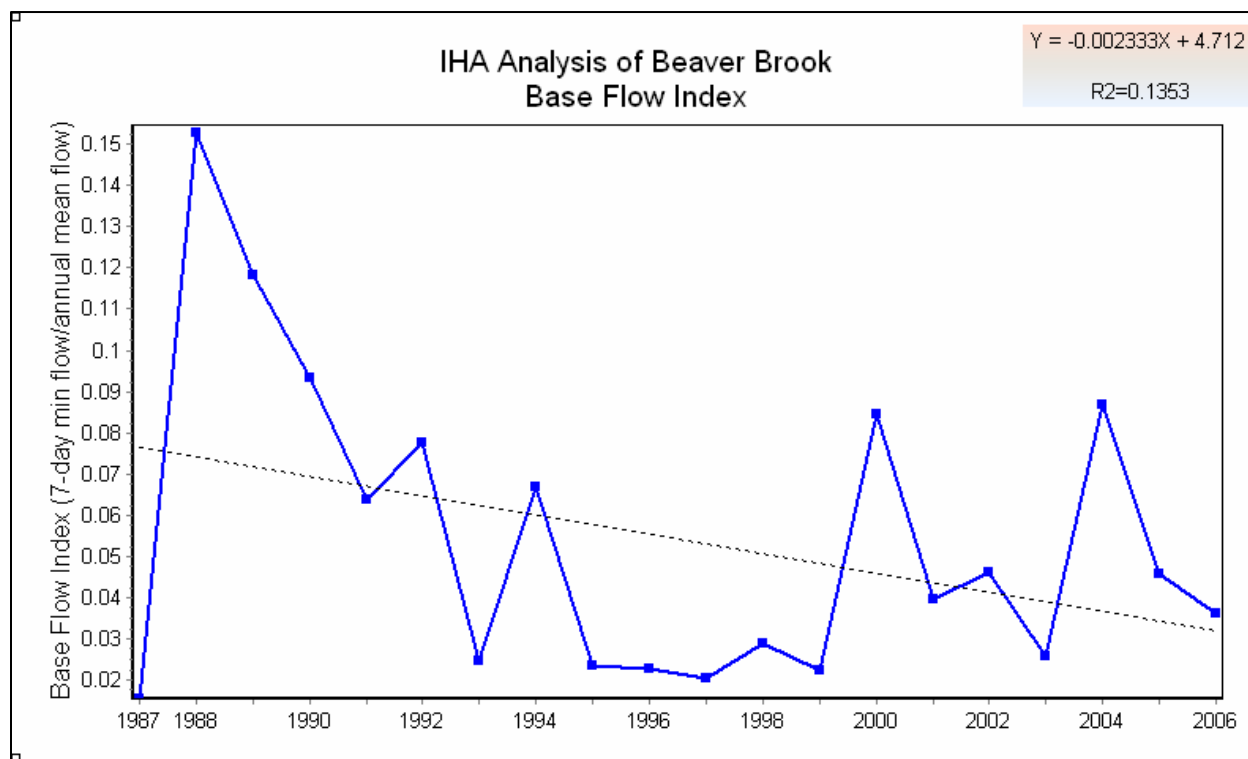


Figure 10: Base Flow Index at the Beaver Brook USGS Gauge

Section 4: Implementing the Watershed Plan

Measuring Success and Making Adjustments

The Plan is a dynamic—not a static—guidance document. The Beaver Lake Watershed Partnership will review the document annually and develop annual work plans. During the review, the Partnership will also consider emerging issues and other changes such as local ordinance revisions. Emerging issues will be determined during each year's review. For instance, ten years ago, climate change was not a well-known term and most communities were not feeling the effects of it. Now, we are seeing the effects of it on water quantity and many other watershed management issues.

Public Outreach

The objectives and activities all require public outreach and educational components. The Partnership will work with its members and volunteers to form an outreach committee that will help develop these components.

The Partnership will continue to maintain BLWP.net and a variety of listserves for its members including a news listserve to which the public may subscribe through the Partnership's website.

Funding for Maintaining the BLWP and Plan Implementation

In each of the recommendations sections, the Beaver Lake Watershed Partnership has identified what resources are needed to implement the listed activities that are needed to meet the objectives and achieve the goals. Detailed budgets will be developed during the annual review and work plan drafting process.

It's well known that most plans sit on shelves and are virtually never implemented. The Beaver Lake Watershed Partnership is fully committed to developing support sources to assure that the hard work and commitment of its communities is implemented for decades to come.

The Partnership will work with its membership to develop support through its towns, businesses, and individuals. The BLWP has also identified several foundation and other grant resources for funding to support projects including the Stream Teams.

Appendix A: Local Land Use Regulations Matrix for the Towns of Auburn, Chester, and Derry

<i>Resource</i>	<i>Auburn</i>	<i>Chester</i>	<i>Derry</i>
Open space plan	March 2002	December 2005 (draft)	November 2005
Master Plan			December 2002
Strategic Land Protection or Open Space Committee		Committee meets 3 rd Thursday of the month	Open Space Committee meets monthly
Buffers from waterways and wetlands			150 foot from Prime Wetland
Open space regulations for impervious surfaces and buffers	<p>1. No more than forty percent (40%) of the lot shall be covered by impervious material, including but not limited to building, concrete, and asphalt.</p> <p>2. A minimum of forty percent (40%) of the development site shall remain as green area or undeveloped.</p> <p>3. Maximum building area coverage shall be twenty percent (20%) of the lot area.</p>		1/3 of the development site shall be reserved as open space/green space
Setbacks for septic	125' setback to wetlands (both poorly drained and very poorly drained soils)	75' from the high water mark increased to 100 feet if the soil adjacent the body of water has a "sandy skeletal" structure.	A buffer zone of at least 125 feet shall be required between a septic tank or an absorption field and the Conservation Corridor Overlay District. No waste disposal systems shall be located closer than 75 feet to any wetland.
Wetland setbacks	The Town of Auburn has a 125' wetland setback which can be reduced to 75' if a functional analysis shows that there would be no negative impact caused by reducing the setback. No septic systems, buildings, or lawns are allowed within the 125' wetland buffer.		No buildings shall be located closer than 75 feet to any wetland one acre or larger in size, and no building shall be located closer than 30 feet to any wetland less than one acre in size.

Forestry management	Foresters are required to submit a forest management plan to the Planning Board for review prior to commencing any harvest of timber.		All construction, forestry and agricultural activities within 100 feet of any wetland shall be undertaken with special care to avoid erosion and siltation into the wetlands.
Conservation zoning areas or overlays		The Chester Wetland Conservation District is defined as those areas of Town that contain marshes, ponds, bogs, lakes, as well as soils that are identified as Hydric B (poorly) or Hydric A (very poorly) drained by the National Cooperative Soil Survey conducted by the U.S.D.A. Soil Conservation Service.	Conservation Corridor Overlay District within Beaver Lake watershed

Appendix B: References

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Town of Auburn Site Plan Review Regulations, November 2000

Town of Chester Town of Chester proposed Wetland District Zoning Changes, March 2005

Town of Chester Open Space Plan, December 2005

Town of Derry Master Plan, December 2002

Town of Derry Land Development Control Regulations, March 28, 2007

Town of Derry Recreation Plan, November 2005

Town of Derry Zoning Ordinance, December 2, 2005

Other local documents

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**Beaver Lake Watershed
PARTNERSHIP**

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Appendix C

Implementation Strategies Numeric Scores

		Visioning									
Chapter	Goal Number	IMPLEMENTATION ITEM	TC	PB	CC	PR	FD	PD	HC	SB	Avg. Score
V	1.1	Create a downtown committee	X	X							2.3
V	1.1a	Acquire property surrounding the existing Veteran's Hall and Adam's Memorial Building	X	X							2.2
		Regional Concerns									
		IMPLEMENTATION ITEM	TC	PB	CC	PR	FD	PD	HC	SB	Avg. Score
RC	2.1	Mitigate traffic issues.	X	X				X			1.5
RC	2.2	Prevent watershed contamination		X	X						2.2
RC	2.3	Retain agriculture and farms.		X	X				X		1.7
RC	2.4	Determine future feasibility of Exit 4A	X	X							1.3
		Housing									
		IMPLEMENTATION ITEM	TC	PB	CC	PR	FD	PD	HC	SB	Avg. Score
H	3.1	Continue to adapt to the demand for affordable housing in Derry	X	X							1.7

		Economic Development									
		IMPLEMENTATION ITEM	TC	PB	CC	PR	FD	PD	HC	SB	Avg. Score
ED	4.1	Revitalize the downtown	X	X					X		2.0
ED	4.1a	Create an Economic Development Plan for the town	X	X							2.2
		Discuss/review the recommendations of the 2008 Downtown Market Plan									
ED	4.1b		X	X					X		1.8
ED	4.1c	Form an Economic Development Committee	X	X							1.9
ED	4.1d	Hold downtown merchant events	X	X							1.8
		Invest in downtown structure, creating attractive pedestrian paths that lead to downtown businesses									
ED	4.1e		X	X				X			2.0
		Extend water and sewer to the southwest area of Derry and to Route 28 South (Ryan’s Hill area)									
ED	4.2		X	X					X		2.0
		Widen the road in the area of Manchester Road/Route 28 in order to accommodate more traffic									
ED	4.3		X	X							2.2
		Continue to research the benefits, challenges and feasibility of Exit 4A									
ED	4.4		X	X							1.5
ED	4.5	Continue to implement the Capital Improvement Plan	X	X							1.8
ED	4.6	Participate in Regional Economic Development efforts	X	X							2.3
		Continue to seek economic development options such as the Economic Development Revitalization Zone Tax Credit (ERZ) for the areas specifically designated for economic development or expansion									
ED	4.7		X	X							2.2
ED	4.8	Adopt a blight ordinance	X	X			X				1.7
ED	4.9	Develop a “Buy Local” campaign	X	X							1.7

ED	4.10	Support the formation of an Independent Business Alliance	X	X					X		1.8
ED	4.11	Develop database of properties in Derry that are available for commercial/industrial/economic development	X	X	X				X		2.2
ED	4.11a	Prepare a commercial property inventory for determining what exists and where gaps can be filled	X	X	X				X		2.3
		Community Facilities									
		IMPLEMENTATION ITEM	TC	PB	CC	PR	FD	PD	HC	SB	Avg. Score
CF	5.1	Continue to maintain and upgrade town owned buildings as necessary	X	X							2.3
CF	5.1a	Make decisions regarding the renovation of Veteran's Hall, or construct a new recreational facility	X	X		X					2.2
CF	5.2	Develop a comprehensive Fire Code that would include residential sprinkler requirements	X	X			X				1.7
CF	5.3	Develop consolidation and regional plans with surrounding Fire Departments and emergency agencies	X	X			X				2.0
CF	5.4	Finish the Rail Trail	X	X	X	X			X		2.0
CF	5.5	Acquire parking for the Adams Memorial Building and increase parking for Library patrons	X	X							2.0
CF	5.6	Purchase property with the intent of constructing a new fire station that would include a dispatch center and administrative offices	X	X			X				1.7

		Public Utilities										
		IMPLEMENTATION ITEM	TC	PB	CC	PR	FD	PD	HA	SB	Avg. Score	
PU	6.1	Increase water and sewer on Rockingham Road from West Running Brook to vicinity of Berry Road and then to the Windham town line, including a pump station	X	X	X				X		2.0	
PU	6.2	Continue energy reducing measures including following the Green Building & Vehicle Ordinance adopted in 2008	X	X							2.2	
PU	6.3	Main upgrade and replacement program and other upgrades and repairs to booster stations	X	X							2.2	
		Transportation										
		IMPLEMENTATION ITEM	TC	PB	CC	PR	FD	PD	HC	SB	Avg. Score	
T	7.1	Address the traffic and safety concerns at Danforth Circle, Tsienneto Road at Crystal and Route 102	X	X				X			1.7	
T	7.2	Fix and improve public transportation in order to link key areas	X	X		X					1.7	
T	7.3	Continue to make streets more pedestrian-friendly	X	X	X			X			1.7	
T	7.4	Continue to research more funding sources for transportation improvements	X	X							1.5	
T	7.5	Continue to plan for short and long term improvements for the identified 8 problematic intersections	X	X				X			1.5	
T	7.6	Continue to request projects that mitigate traffic congestion to be included in the NH DOT 10 year highway plan	X	X				X			1.7	

T	7.7	Continue to work on the bike trail	X	X	X	X		X			2.2
T	7.8	Continue involvement and participation in the regional transportation funding programs for local and state transportation projects	X	X							1.8
T	7.9	Implement land use tools to manage access on a transportation corridor during the development process	X	X	X			X			1.8
		Natural Resources									
		IMPLEMENTATION ITEM	TC	PB	CC	PR	FD	PD	HC	SB	Avg. Score
NR	8.1	Implement the strategies outlined in the Beaver Lake Watershed Management Plan	X	X	X						2.3
NR	8.2	Implement recommendations in the Derry Open Space Plan	X	X	X						2.0
NR	8.2a	Consider use of conservation subdivisions to conserve open space in Derry and to work toward implementing smart growth development and planning.	X	X	X						1.8
NR	8.2b	Work with federal, county and non-profit land trust organizations, as well as private landowners to purchase, obtain through donations, easements or transfer of development rights, properties for protection from development	X	X	X				X		1.5
NR	8.2c	Continue to participate in the New Hampshire current use program to support the preservation of open space, farmland and forest land	X	X	X						2.2
NR	8.3	Adopt LEED regulations and green infrastructure	X	X							2.2
NR	8.3a	Town use of alternative energy sources	X	X							2.0
NR	8.3b	Communication of cost/benefit analysis of green/energy marketing	X	X							1.7

NR	8.4	Continue to review and update the Land Advisory Report	X	X	X						1.8
NR	8.5	Protect the drinking water supply and aquifers, lakes and surface waters, wildlife habitats and corridors and forested areas	X	X	X						2.0
NR	8.6	Preserve agricultural land, open fields and prime wetlands	X	X	X						2.0
NR	8.6a	Map preservation/conservation land so that residents are aware of the location of land available for public access	X	X	X						2.0
NR	8.7	Establish a committee to introduce science programs around natural resources/environmental conservation in the Derry schools (fall 2009 program in process at Barka School)	X	X	X					X	2.2
NR	8.7a	Reintroduce the Stream Teams Program at Pinkerton to meet the recommendations of the Beaver Lake Watershed Management Plan	X	X	X					X	2.2
NR	8.7b	Implement Project Learning Tree program (statewide program)	X	X	X					X	2.2
NR	8.7c	Obtain collaboration with the Derry School Board and get school members on Environmental Education subcommittee	X	X	X					X	2.3
NR	8.7d	Environmental education committee should be a subcommittee of the conservation commission (accomplished October, 2009)	X		X					X	2.0
NR	8.8	Continue long term protection efforts such as public education and outreach, IDDE and stormwater ordinance enforcement, and stormwater pollution prevention efforts	X	X	X					X	2.2
NR	8.9	Encourage an agricultural subcommittee on the Conservation Commission or the establishment of an agricultural commission to develop priorities and work towards agricultural preservation and sustainable agricultural practices	X	X	X						1.5

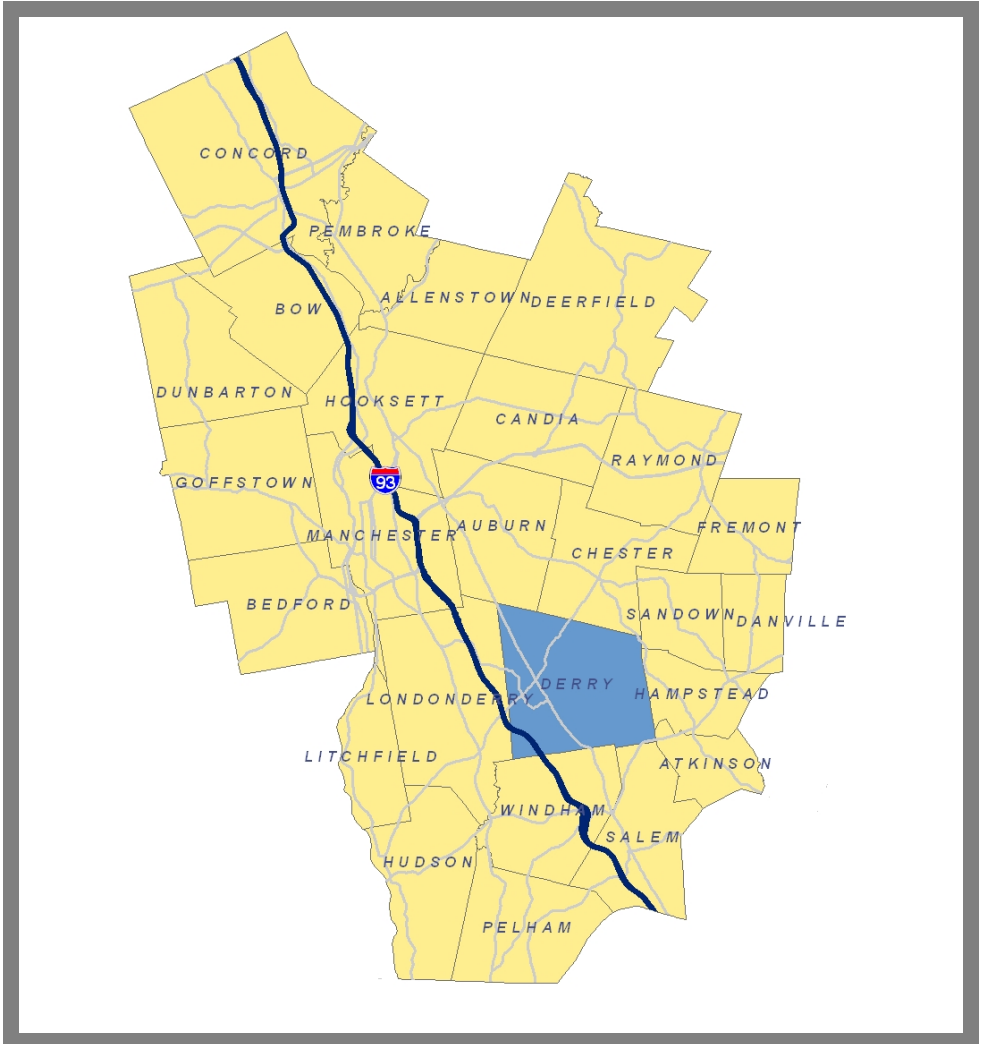
		Historical and Cultural Resources										
		IMPLEMENTATION ITEM	TC	PB	CC	PR	FD	PD	HC	SB	Avg. Score	
HC	9.1	Review and consider the recommendations contained in the 1986 Historic Preservation report prepared by Lynne Emerson Monroe	X	X					X		1.8	
HC	9.2	Review and revisit the goals for Historic Preservation as set forth in the 2002 Master Plan	X	X					X		1.8	
HC	9.3	Commit to and create a clear vision of cultural heritage and recreational resources	X	X	X	X			X	X	2.0	
HC	9.3a	Protect historic assets	X	X					X		2.0	
HC	9.4	Promote and market existing and potential recreational events and cultural resource events	X	X		X			X		2.2	
HC	9.4a	Identify or create a location for large recreational/cultural event venues	X	X		X			X		2.0	
HC	9.4b	Link historic sites so that Derry becomes a destination	X	X		X			X	X	1.8	
HC	9.5	Work with state and non-profit land trust for land preservation efforts	X	X	X				X		2.0	
		Existing and Future Land Use										
		IMPLEMENTATION ITEM	TC	PB	CC	PR	FD	PD	HC	SB	Avg. Score	
EFLU	10.1	Consider a taskforce to review planning, zoning and code enforcement regulations on a regular basis for compliance with town Goals and vision	X	X							1.8	

EFLU	10.1a	Review planning and zoning regulations	X	X							1.8
EFLU	10.1b	Determine if the 16 different zones can be combined	X	X							2.0
EFLU	10.1c	Review uses allowed in each zone, including the downtown overlay zones	X	X							1.7
EFLU	10.1d	Review Code Enforcement process	X	X					X		1.8
EFLU	10.2	Improve communication between Boards/Committees and the public	X	X	X	X	X	X	X	X	1.5
EFLU	10.3	Consider a new Commercial/Industrial zone in the area north of Tsienneto Road and along Manchester Road in the area currently zoned Industrial 3 and Industrial 4. Lot sizes in the zone are 1 acre	X	X	X				X		1.7
EFLU	10.4	Consider rezoning the area along the Route 28 corridor in the southern portion of the town to commercial	X	X	X				X		2.0
EFLU	10.5	Consider the use of a historic overlay district to protect sites and properties from abutting residential and commercial uses	X	X					X		1.7
EFLU	10.6	Consider Revising Derry's zoning and subdivision regulations to allow and encourage Open Space Subdivisions/Residential Development as a means of implementing smart growth principles and preserving open space in the future	X	X							1.8
EFLU	10.7	Continue to use the Town's Growth Management Ordinance to control and direct growth so that it is sustainable in the future	X	X							1.8
EFLU	10.8	Implement recommendations of the Downtown Market Plan (2008) for strengthening economic development and character in the downtown area and review on a regular basis	X	X	X	X					2.0
EFLU	10.9	Consider expanding the Downtown Market Plan for the development of an overall Economic Development Plan for the entire town and include a comprehensive review of current land uses to determine what strategies can be implemented to	X	X		X					2.0

		strengthen economic development in the Town of Derry									
EFLU	10.10	Implement recommendations of the Beaver Lake Watershed Management Plan in order to protect natural resources within the Beaver Lake Watershed	X	X	X	X					2.5
EFLU	10.11	Consider developing a Cost of Community Services Study to determine how land uses should be balanced in the future in the Town of Derry	X	X	X						2.3

Appendix D

Derry, NH Buildout Report



Town of Derry

CTAP Buildout Report



**CTAP
PROGRAM**



**BUILDOUT
METHODS**



**COMMUNITY
SCENARIOS**



**BUILDOUT
RESULTS**



INDICATORS



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November 2009

A project of
CTAP - Community
Technical Assistance
Program

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Introduction

This report details the Community Technical Assistance Program (CTAP) Buildout Analysis results for the Town of Derry, New Hampshire. CTAP is a five-year initiative designed to assist communities that will be affected by the rebuilding of I-93. This buildout, one of 26, is designed to allow a community to assess their future needs and help them reduce any negative consequences from the increased development pressure caused by the widening of I-93.

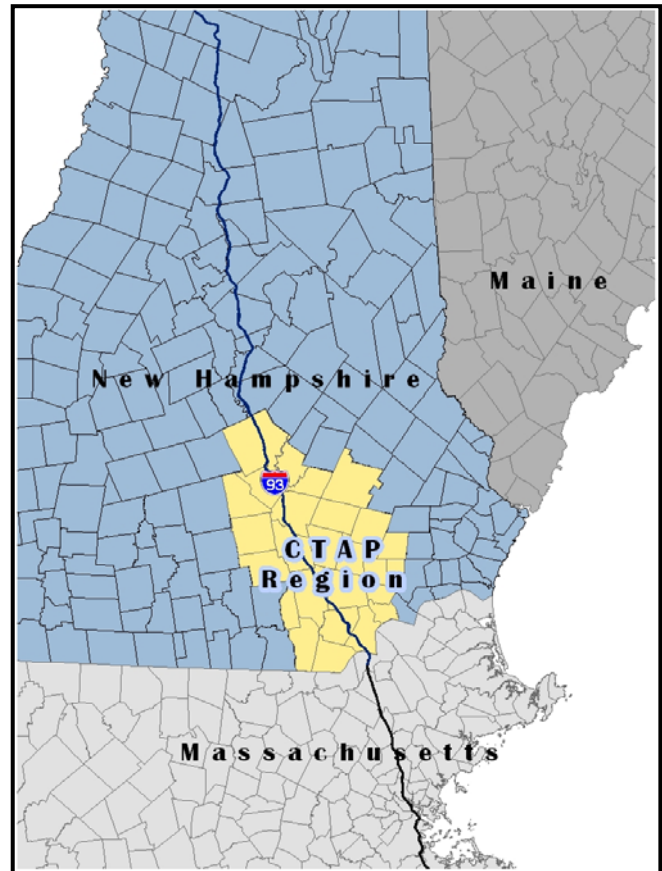
What is CTAP?

CTAP is a joint effort between the 26 communities in the corridor, state agencies, regional planning commissions, and several non-profit organizations. The purpose of CTAP is to promote beneficial growth patterns and development practices that minimize the negative effects of growth on community services, remaining open space, schools, traffic patterns, environmental quality, and existing residential and commercial development. The CTAP initiative consists of several projects, one of which is a buildout analysis. A standardized buildout analysis will be completed for each of the 26 CTAP communities.

What is a Buildout?

A buildout is a tool that allows planners to estimate future development based on different scenarios. This buildout is an analysis of existing adopted municipal policy. The buildout method allows for the potential testing of alternative land use regulation, open space planning and major development scenarios. A buildout consists of one

The Buildout analysis shows the maximum growth that is likely to occur in a community under current land use regulations (zoning).



or more scenarios. This buildout contains three scenarios: base, standard alternative, and community alternative. The process is designed with the capability for conducting future alternative scenario testing.

Comparing various scenarios allows planners to test the effects and consequences of new zoning ordinances. Changing setbacks, densities, and building restrictions can significantly alter a buildout. The analysis of results allows planners to evaluate the effectiveness and viability of changes to the zoning code. Questions that can be answered by a buildout scenario testing include: Where do I want my community to be at buildout? How much open space will there be? What will the traffic patterns look like? What will the quality of our environmental resources be like? Where will people live and what will the development patterns look like? The purpose of CTAP is to promote beneficial answers to all of these

questions. The CTAP program aims to achieve goals that cover four themes: community infrastructure, environment protection, land use, and open space, downtown/village centers and community vitality and the local economy. The CTAP Buildout project is a community empowerment tool to help people make the best long-term planning decisions.

What a Buildout is not?

A Buildout is not a prediction of what will occur. It is a planning tool to allow community decision makers to understand the impacts of growth under a set of land use rules. In addition, the Community Specified scenarios in this report do not necessarily represent official policy goals or a plan for the community, but are merely a test of one alternative growth scenario.

Scenario Planning

Scenarios are an analysis about what might be. They are not predictions about what will happen but they are possible futures based on what already exists, on current trends, and on the values and on the preferences of a community. Each community is unique and may have different goals and face

different challenges to how it will change over time. The scenarios in this report are based on both standardized methods, repeated for each CTAP Community, and a scenario where the details have been specified by community leaders and stakeholders. The scenarios are built as a way to compare outcomes and learn about the potential effects of government policies over a long span of time. Because the analysis is quantitative, scenarios can be compared directly utilizing charts and maps. The point is to help discover which long-term growth scenarios our preferable and most closely match the goals and values of the community.

Report Template

The format of this report is a template that will be used to uniformly present the buildout results for each of the 26 communities in the CTAP Region. Maps, charts and a few paragraphs of text will change for each community. This report presents only the results of the buildout scenarios. It does not attempt to be a planning analysis of those results. Each Community Report will contain the same Introduction and Overview sections on the process. Only maps, charts and the Community Scenario section will change for each different community.

Buildout questions:

- **Where do I want my community to be at buildout?**
- **How much open space will there be?**
- **What will the traffic patterns look like?**
- **What will the quality of our environmental resources be like?**
- **Where will people live and what will the development patterns look like?**



Methods

Tools and Data

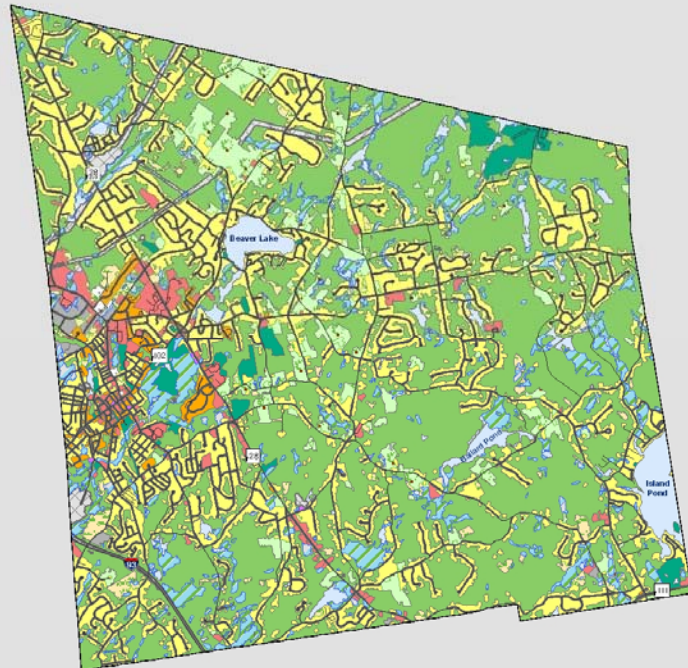
Buildouts were conducted using Geographic Information systems (GIS) software. The application used for this project is developed by the mapping software company ESRI. ArcMap and CommunityViz are the core programs used in the analysis. The CommunityViz program is an extension that works with ArcMap and is used specifically to perform buildout analyses. CommunityViz was developed by the Orton Family Foundation in order to provide communities with an affordable tool to perform buildout studies.

The GIS data used in this study originates from several sources. The base shapefiles (road centerlines, conservation lands, wetlands, etc.) were provided by GRANIT, the official New Hampshire GIS data provider. The land use polygons were created through a prior CTAP project, using 2005 aerial images provided by the NH Department of Transportation. The classification applied to the land use polygons is very detailed, using over 50 land uses. The current building points were also determined using the 2005 aerial images.



CTAP Existing Land Use

- Multi-family
- Single Family Residential
- Commercial
- Industrial
- Transportation and Utilities
- Mixed Uses
- Outdoor and Other Urban Land
- Vacant Land
- Agricultural Land
- Brush or transitional between open & forested
- Forest Land
- Water
- Wetlands
- Barren Lands

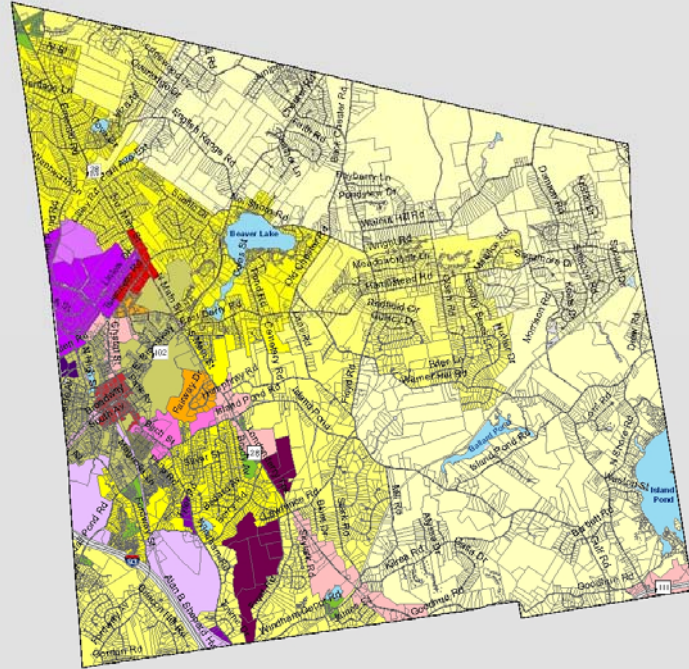




Derry Zoning

Zoning

- Central Business District
- General Commercial
- General Commercial 2
- Industrial 1
- Industrial 3
- Industrial 4
- Industrial 5
- Industrial 6
- Low Density Residential
- Low-Medium Density Residential
- Medium Density Residential
- Multi-Family Residential
- Medium-High Density Residential
- Manufactured Housing Park District
- Medium-High Density Residential
- Office/Business District
- Office/Medical/Business
- Office/Research and Development



Procedures

To complete the buildouts a CTAP Buildout Working Group was established. Members of the group consisted of the Four Regional Planning Commissions, who would be performing the analysis: Central New Hampshire Regional Planning Commission, Nashua Regional Planning Commission, Rockingham Regional Planning Commission & Southern New Hampshire Regional Planning Commission. This group was responsible for defining the tools, methods and procedures for performing the buildouts. The group is also responsible for the format of the presentation of results. Staff from each Regional Planning Commission conducted the buildout for communities in their region.

All CTAP buildouts follow the same basic procedures allowing them to be combined upon completion. The existing data used for each municipality is obtained from statewide layers, and clipped for each town. The data created for the buildout follows a strict set of guidelines in order to produce a uniform set for the CTAP region.

CommunityViz software uses the land use and zoning inputs with the constraint layers to create a buildable area GIS layer. First a numeric buildout is calculated using lot size and allowable density information. Next a spatial buildout is conducted. This process takes into account spatial restrictions (i.e. Setbacks from roads, distance between buildings). The spatial restrictions for the base buildout are determined using the current zoning ordinances. This produces a layer of new estimated buildings and places them as points

Map layers used in the Buildout Analysis.

Land use inputs:

- CTAP Land Use - based on 2005 Aerial Imagery
- Zoning
- Current Building points - based on 2005 Aerial Imagery
- Community Centers - NHDES Sprawl Indicators data, NH GRANIT
- Road Centerlines - NHDOT, NH GRANIT
- Transit Stops - Derived from local data
- Sewer Service Areas - NHDES, NH GRANIT

Constraint layers:

- Wetlands, National Wetland Inventory (NWI) - NH GRANIT
- 100-Year Floodplain - FEMA, NH GRANIT
- Conservation Lands - Local data & NH GRANIT
- Natural Services Network (NSN) - Jordan Institute, NH GRANIT

on the map. Standard Alternative and Community Alternative Buildouts using the same process with adjustments to the land use rules (Zoning changes, allowable uses & allowable densities) that are specified in those scenarios.

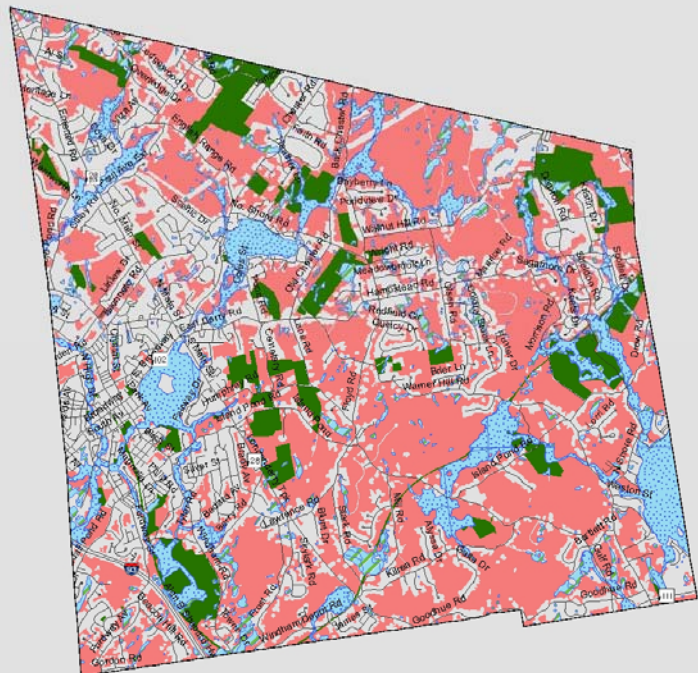
Once the buildout is complete, a template, containing all assumptions, indicators and charts is applied. All indicators are calculated from the basic buildout results. The standard template ensures that the calculations and charts are the same for all of the region's buildouts.

Detailed input and output reports, produced directly from the CommunityViz software, are available in Appendix A.



Buildable Lands & Constraints

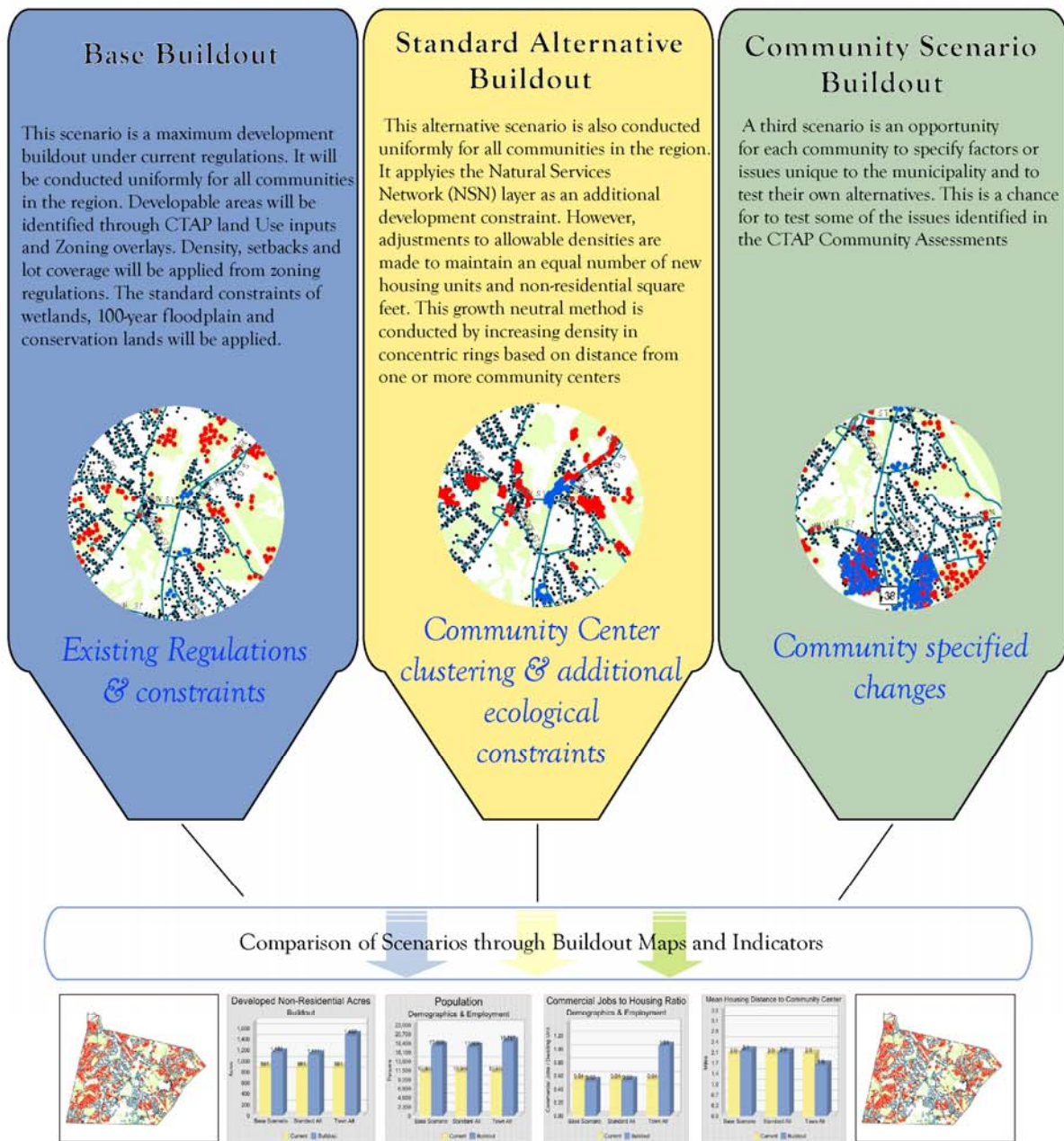
-  100 Year Floodplain
-  National Wetlands Inventory
-  Conservation Land
-  Buildable Lands





Buildout Scenarios

This report tests and compares three alternative scenarios for growth. Each scenario produces different land use patterns, different densities and different development totals. The mix of jobs and housing, available open space, traffic, schools, water and air quality and community character are all impacted in different ways. By comparing the maps and charts produced by each scenario, a community can analyze how that growth pattern will affect their city of town.



Base Scenario

The first scenario, conducted for all communities, is the Base Scenario. This scenario represents what buildout would look like following the current land use regulations. Density, setbacks and lot coverage is applied from the current zoning regulations. The standard development constraints of wetlands, 100-year floodplain and conservation lands are applied.

If current zoning is a blueprint for how the community should grow then this scenario is the culmination of the existing regulations. The indicators in this report are meant to portray a wide range of conditions at buildout. Development

growth means more than additional persons, houses or commercial buildings. It can have impacts on

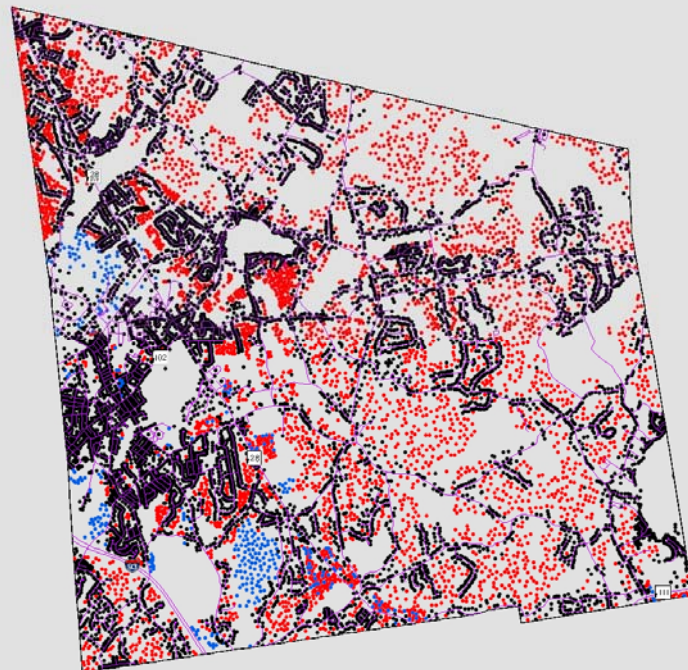
If current zoning is a blueprint for how the community should grow then the Base Buildout Scenario is the culmination of the existing regulations.

finances, traffic, municipal services, environmental quality and sense of community or place. The land use pattern for how a community grows, where development will take place and in what densities, can also have a significant impact.



Base Buildout

- Existing Buildings
- Buildout Buildings**
- Commercial/Industrial
 - Single Family Residential



Standard Alternative

The standard alternative scenario will also be conducted uniformly for all communities in the region. The scenario is different from the Base Scenario in a couple of key ways. First, it applies the Natural Services Network (NSN) layer as an additional development constraint. Second, adjustments to allowable densities will be made to maintain an equal number of new housing units and non-residential square feet. This growth neutral method will be conducted by increasing density in concentric rings based on distance from one or more community centers.

This scenario is focused on creating densely developed downtown areas, sparing important ecological areas identified in the Natural Services

network (NSN). The NSN is a co-occurrence analysis and includes four components: water supply lands, flood storage lands, productive soils, and important wildlife habitat.

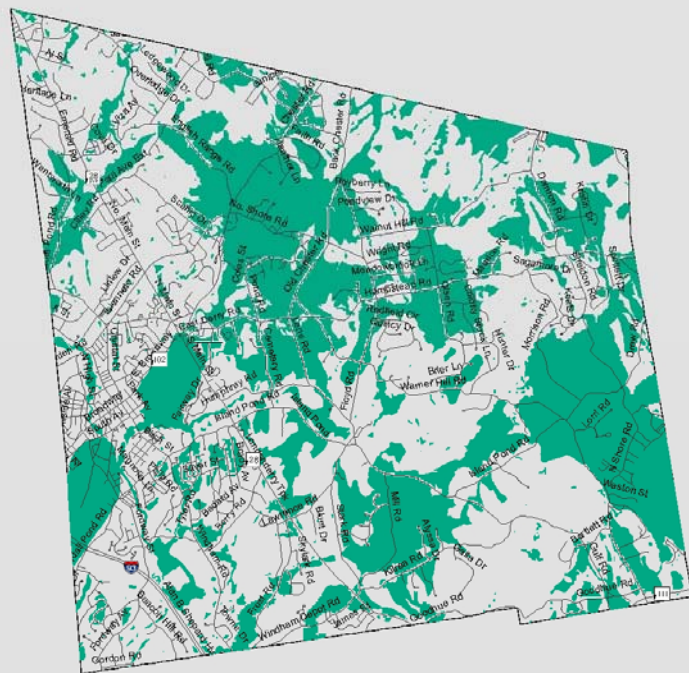
The Standard Alternative Scenario does not represent a policy proposal for the community. It is a standardized method to analyze an alternative growth scenario that can be applied uniformly to all CTAP communities.



Natural Services Network Constraint



Natural Services Network (NSN)



The key to the Standard Alternative Scenario is to adjust allowable development densities so that an approximately equal amount of growth occurs as the Base Buildout despite the fact that more land has been set aside as un-buildable. This scenario is applying a standardized, uniform growth alternative to all communities in the CTAP region. It is not

limiting the amount of commercial and residential growth that might occur in the community, but it is managing it differently.

Standard Alternative Scenario:

- NSN added as additional development constraint.
- Greater density around community centers.
- Same amount of growth as base scenario

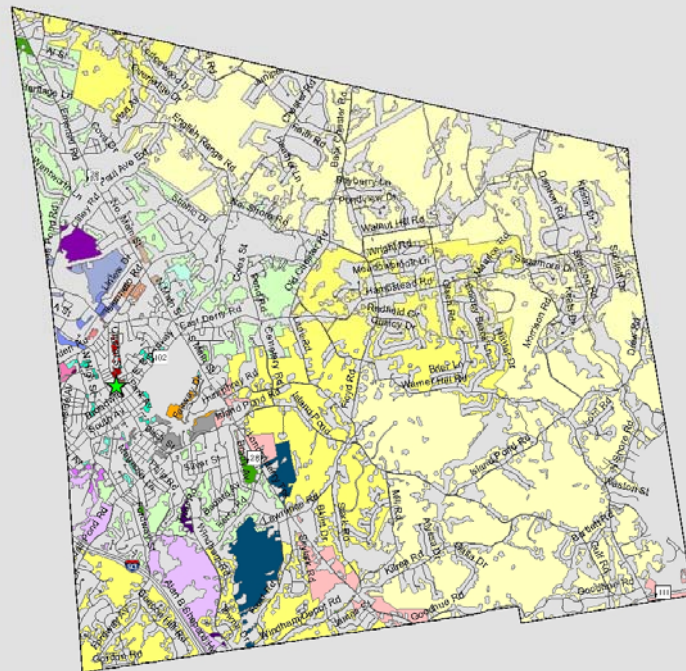


Standard Alternative Density Changes

★ Community Center

Standard Alternative Buildout Densities

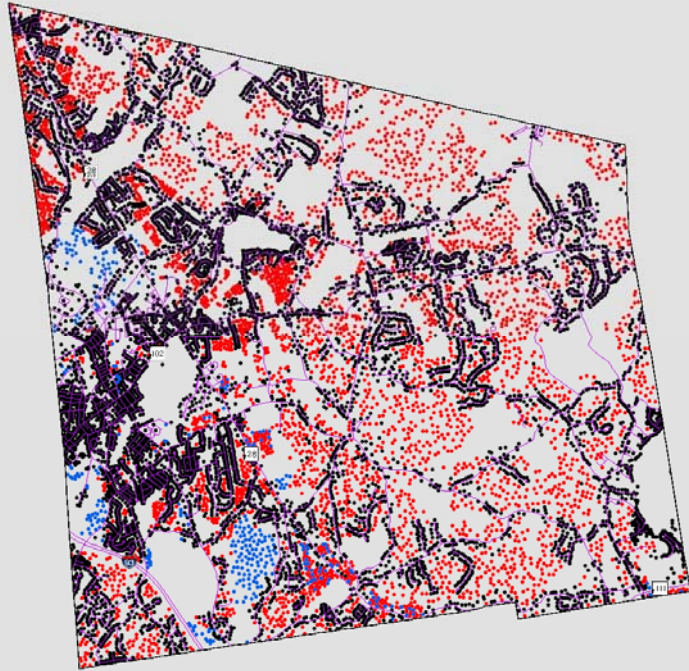
- Central Business District-Within 1 Mile
- Central Business District-Within 1/4 Mile
- General Commercial-Outside 1 Mile
- General Commercial-Within 1 Mile
- General Commercial-Within 1/2 Mile
- General Commercial-Within 1/4 Mile
- General Commercial 2-Outside 1 Mile
- General Commercial 2-Within 1 Mile
- Industrial 1-Outside 1 Mile
- Industrial 1-Within 1 Mile
- Industrial 1-Within 1/2 Mile
- Industrial 3-Outside 1 Mile
- Industrial 4-Outside 1 Mile
- Industrial 4-Within 1 Mile
- Industrial 4-Within 1/2 Mile
- Industrial 5-Outside 1 Mile
- Industrial 6-Within 1 Mile
- Industrial 6-Within 1/2 Mile
- Low Density Residential-Outside 1 Mile
- Low-Medium Density Residential-Outside 1 Mile
- Medium Density Residential-Outside 1 Mile
- Medium Density Residential-Within 1 Mile
- Multi-Family Residential-Within 1 Mile
- Multi-Family Residential-Outside 1 Mile
- Medium-High Density Residential-Outside 1 Mile
- Medium-High Density Residential-Within 1 Mile
- Medium-High Density Residential-Within 1/2 Mile
- Medium-High Density Residential-Within 1/4 Mile
- Manufactured Housing Park District-Outside 1 Mile
- Medium-High Density Residential 2-Within 1 Mile
- Office/Business District-Within 1/2 Mile
- Office/Medical/Business-Within 1 Mile
- Office/Research and Development-Outside 1 Mile





Standard Alternative Buildout

- Existing Buildings
- Buildout Buildings**
- Commercial/Industrial
 - Single Family Residential



Community Alternative

A third scenario was provided for each community to specify factors or issues unique to the municipality and to test their own alternatives. This scenario is known as the **community alternative**. This is a

The Community Alternative scenario is only a test of an alternative growth pattern. It is a planning tool conducted to see what changes might occur. It does not necessarily represent a policy plan for the community

chance for certain properties to be removed or added to the developable areas list or for particular regulation changes to be implemented. In order to

get the community's input for their scenario, meetings were conducted with local officials and volunteers. This was an opportunity for the community leaders to test what would occur if their Town or City were to grow in a different way. This is a chance to apply goals specified in Master Plan or other planning document, or to test the affects of purchasing large tracts of land for conservation.

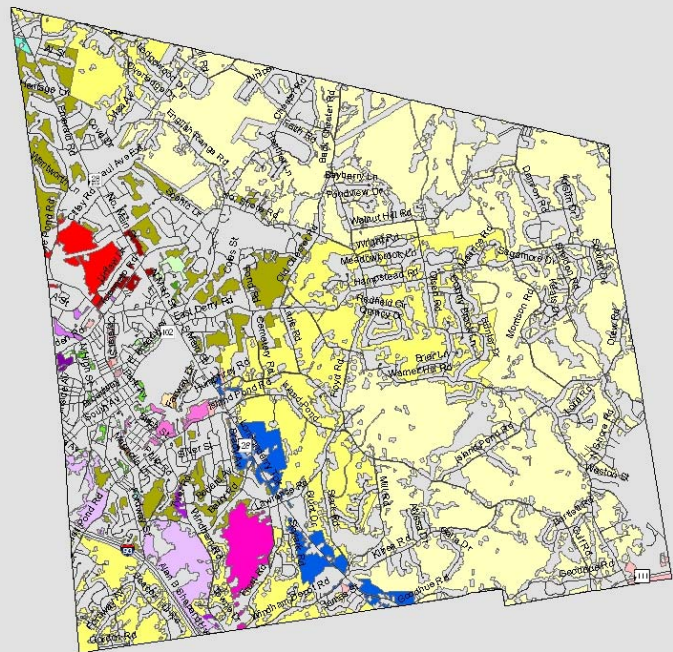
The Community Alternative scenario is only a test of an alternative growth pattern. It is a planning tool conducted to see what changes might occur. It does not necessarily represent a policy plan for the community. Unlike the Standard Alternative Scenario, the Community Scenario does not require growth to be the equal to the Base Buildout. Significantly lower or greater amounts of development are possible.



Town Alternative Scenario

Community Scenario Buildable Lands

- Central Business District- water/sewer
- Central Business District- sewer
- New Commerical/Industrial- water/sewer
- Future Commercial
- Future Commercial- water
- General Commercial
- General Commerical- water/sewer
- General Commercial 2- water/sewer
- Industrial 1
- Industrial 4
- Industrial 5
- Industrial 6
- Low Density Residential
- Low-Medium Density Residential
- Medium Density Residential
- Multi-family Residential
- Multi-family Residential- water/sewer
- Multi-family Residential- sewer
- Medium-High Density Residential
- Medium-High Density Residential- water/sewer
- Medium-High Density Residential- sewer
- Medium-High Density Residential- water
- Manufactured Housing Park District
- Manufactured Housing Park District- water
- Medium-High Residential 2
- Medium-High Residential 2
- Medium-High Residential 2- sewer
- Office Business District
- Office/Medical/Business
- Office/Research and Development



The Derry Community Scenario consists of a new Commercial/Industrial zone in the area north of Tsienneto Road and along Manchester Road in the area currently zoned Industrial 3 and Industrial 4. Lot sizes in the zone are 1 acre.

An additional zone called Future Commercial was added along the Route 28 corridor in the southern portion of the town. Densities in this zone consist of 30,000 ft² for lots with municipal sewer. Lots without municipal sewer are 1 acre.

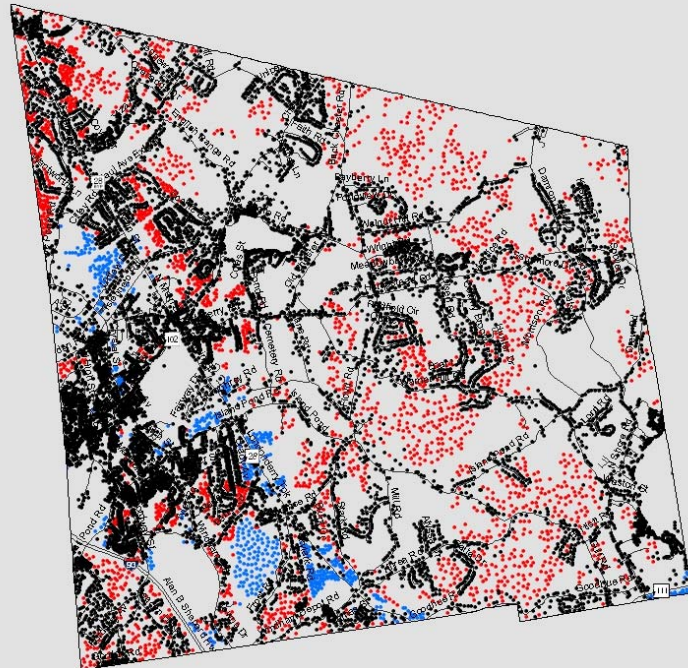
A timescope is a tool used to determine the year a town will reach its buildout capacity based on growth rates. Housing data from 1990-2008 was used to determine the rate of growth. High levels of development in Derry before 1990 caused a growth management ordinance to be put in place during the early 1990s

therefore growth rates prior to 1990 were not considered in the calculation of the growth rate. The timescope was based on a linear growth rate of 87 houses per year. At this rate of growth the projected buildout dates would be 2055, 2057 and 2043 for the base, standard alternative and community alternative buildouts respectively.



Town Alternative Buildout

- Existing Buildings
- Buildout Buildings**
 - Commercial/Industrial
 - Single Family Residential





Buildout Scenario Comparison

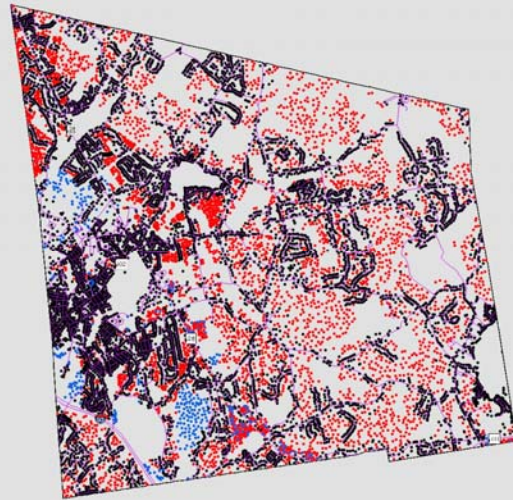
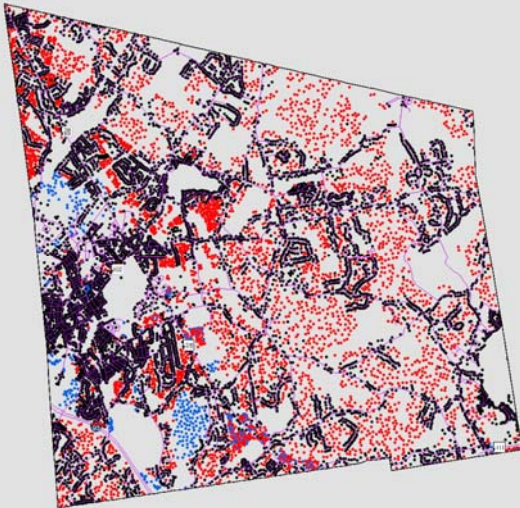
- Current Buildings

Base Buildout

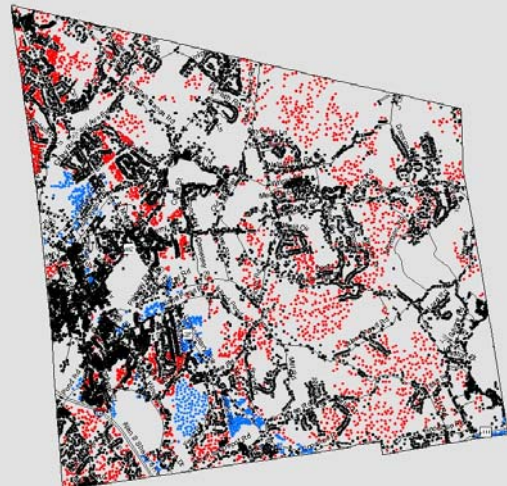
Buildout Buildings

- Residential
- Commercial

Standard Alternative



Community Alternative





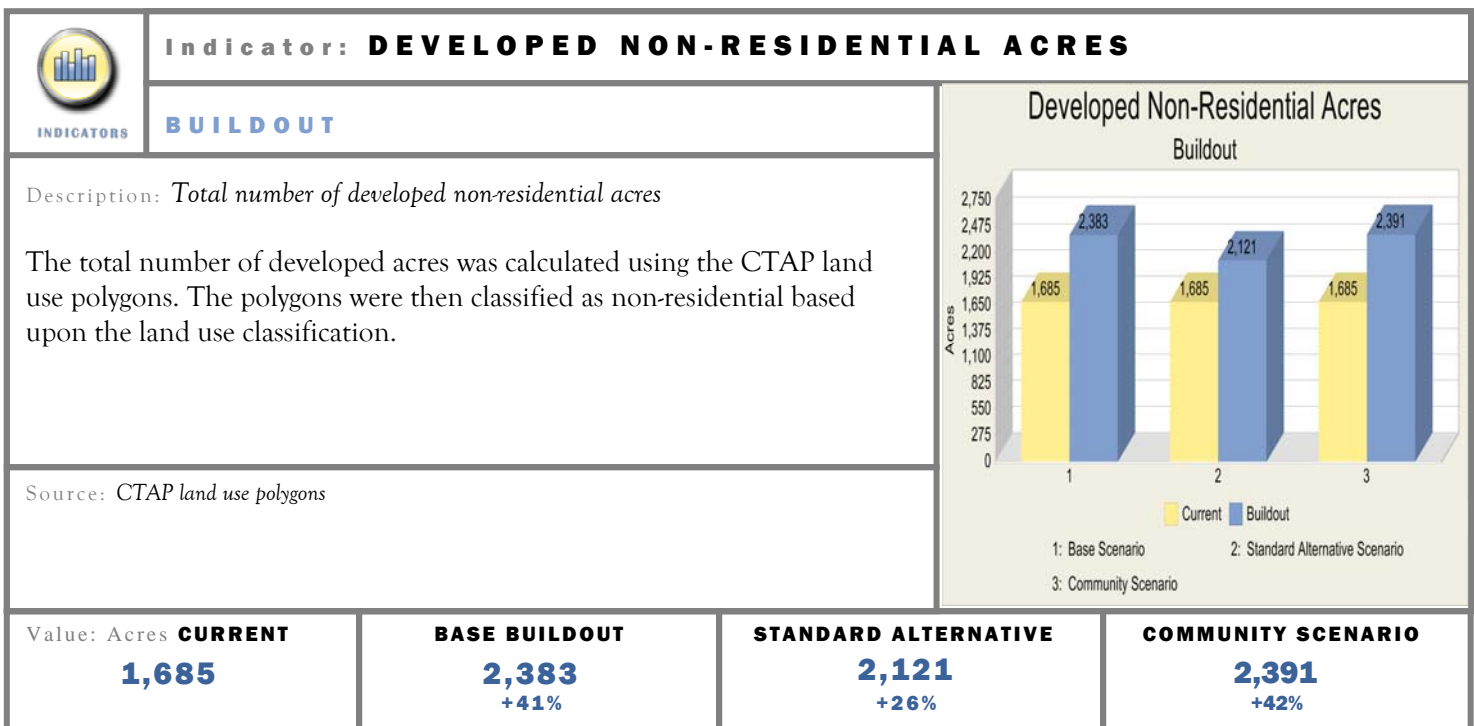
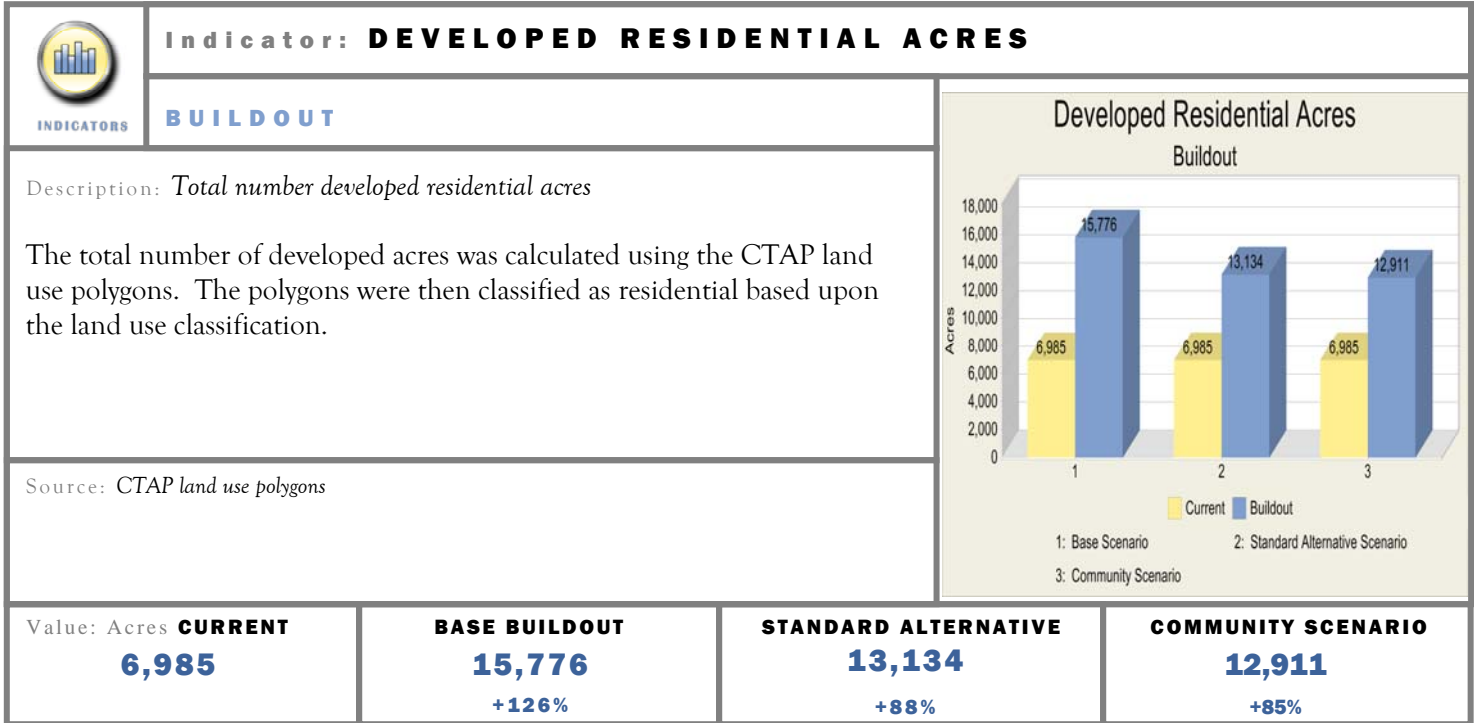
Indicators

Indicators are impact or performance measures that help people choose alternatives that best match their objectives or desired outcomes. An indicator is a calculated value that represents the impacts or outcomes of a scenario. An indicator might be used to evaluate costs, revenues, average household size, or total daily auto trips. The buildout indicators in this report are meant to provide a macro, overall picture of how a community could look at buildout.

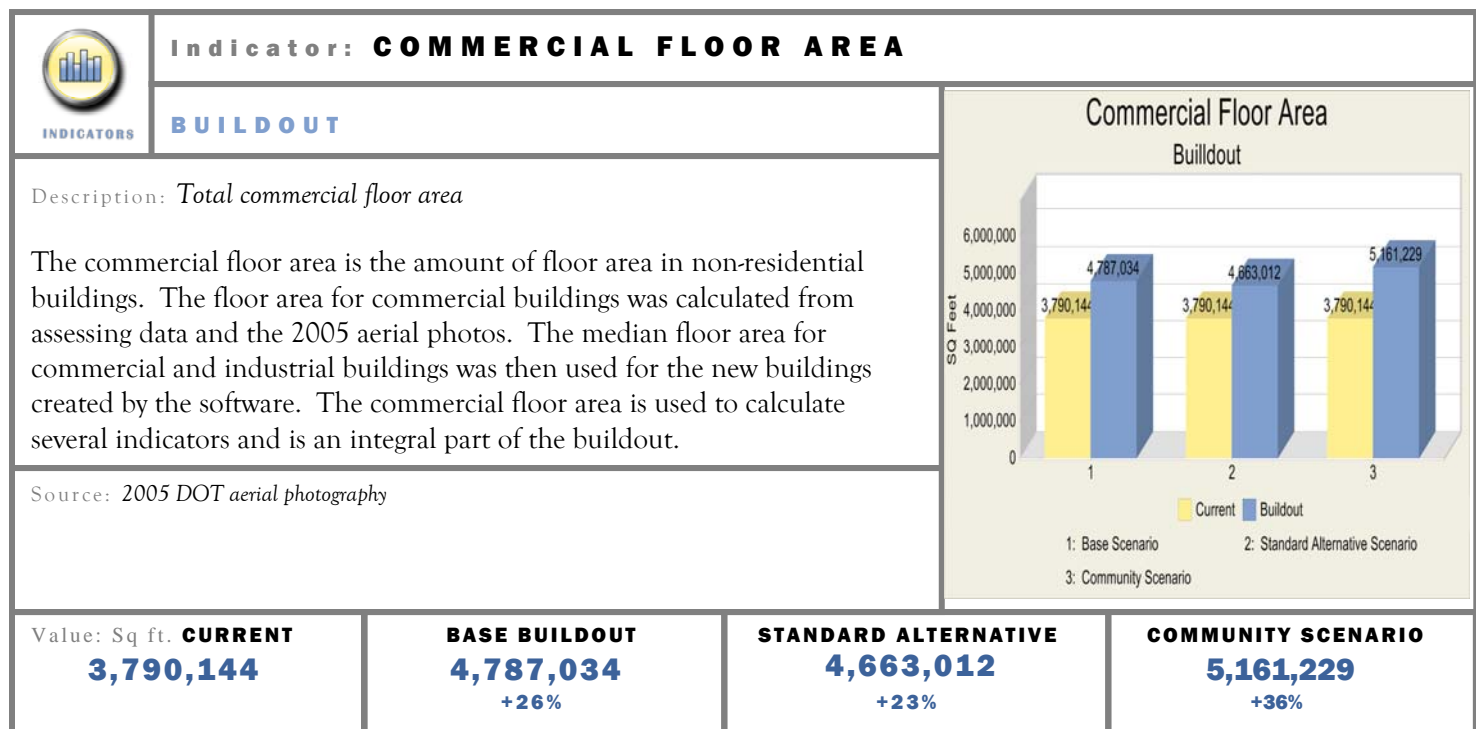
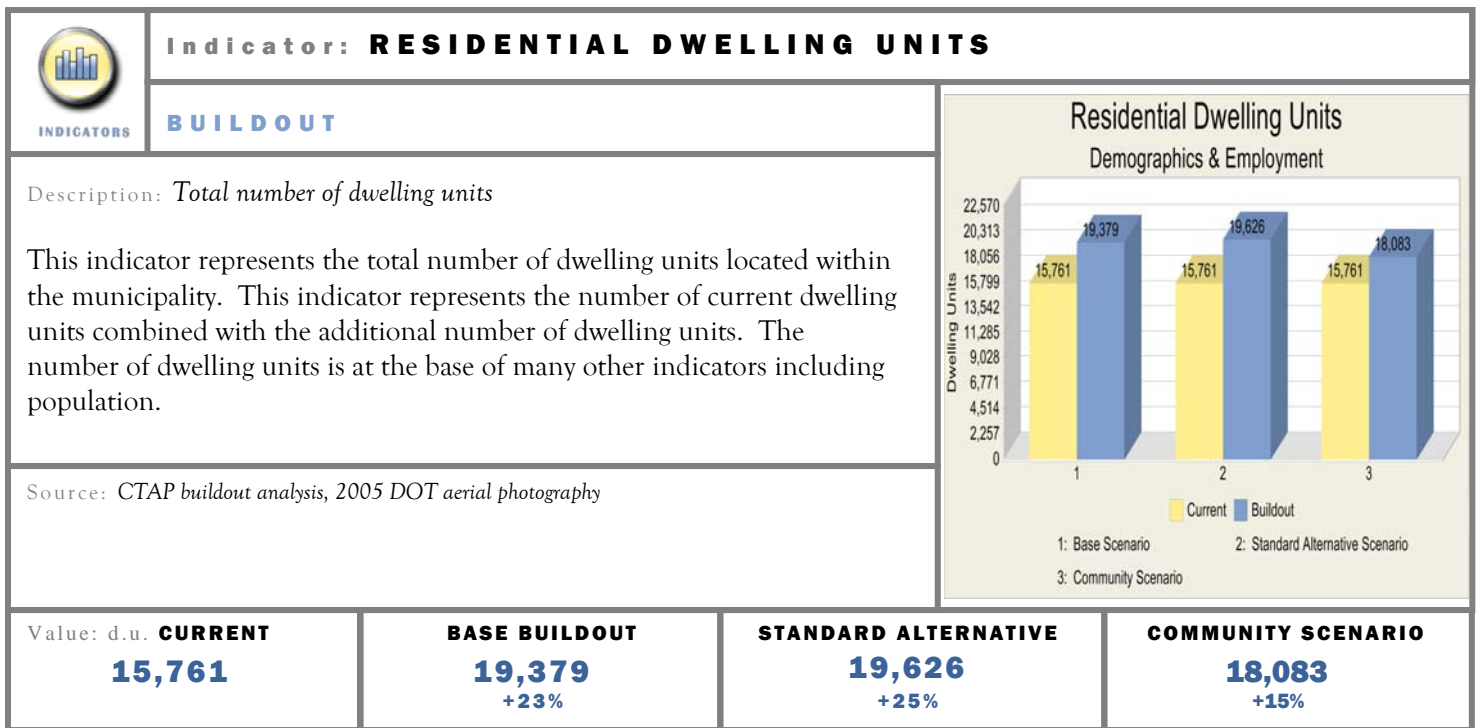
Comparing indicators by the different buildout scenarios provides an assessment of the effects different development patterns may have. There are 40 indicators arranged in seven categories: Buildout, Demographics & Employment, Environmental & Open Space, Land Use Characteristics, Municipal Demands, Water & Energy Use & Transportation. The following pages explain what each indicator means and chart the differences by scenario.

Category	Indicator	Units	Current	Base Buildout	Percent Change	Standard Alternative Scenario	Percent Change	Town Scenario	Percent Change
Buildout	Developed Residential Acres	Acres	6,985	15,776	126%	13,134	88%	12,911	85%
	Developed Non-Residential Acres	Acres	1,685	2,383	41%	2,121	26%	2,391	42%
	Residential Dwelling Units	d.u.'s	15,761	19,379	23%	19,626	25%	18,083	15%
	Commercial Floor Area	sq. ft	3,790,144	4,787,034	26%	4,663,012	23%	5,161,229	36%
Demographics & Employment	Population	Persons	40,348	49,610	23%	50,243	25%	46,292	15%
	School Kids Population	School Kids	7,626	9,376	23%	9,496	25%	8,749	15%
	Labor Force Population	Workers	16,498	20,286	23%	20,544	25%	18,929	15%
	Commercial Jobs	Jobs	4,605	5,817	26%	5,666	23%	6,271	36%
	Jobs to Housing Ratio	Jobs/d.u.	0.29	0.3	3%	0.29	0%	0.35	21%
Environmental & Open Space	Open Space Supply	Acres	20,253	10,764	-47%	13,667	-33%	13,620	-33%
	Impervious Surfaces	Percent	6.3	12.3	95%	10.4	65%	10.7	70%
Land Use Characteristics	Total Density	Persons/mi ²	840	1033	23%	1046	25%	964	15%
	Residential Housing Density	d.u./Acre	2.26	1.23	-46%	1.49	-34%	1.4	-38%
	Residential Development Footprint	Acres/d.u.	0.44	0.81	84%	0.67	52%	0.71	61%
	Recreation Density	Ft ² /person	417	339	-19%	335	-20%	363	-13%
	Housing Proximity to Recreation	Miles	0.61	0.73	20%	0.74	21%	0.72	18%
	Housing Proximity to Community Centers	Miles	3.2	3.2	0%	3.2	0%	3.2	0%
	Housing Proximity to Amenities	Miles	0.68	0.74	9%	0.77	13%	0.73	7%
	Walkability	Percent	3.12	2.65	-15%	2.72	-13%	2.8	-10%
	Housing Proximity to Transit	Miles	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Municipal Demands	Fire & Ambulance Service	Calls/Years	3,228	3,969	23%	4,019	25%	3,703	15%
	Police Service	Calls/Years	51,242	63,005	23%	63,808	25%	58,791	15%
	Solid Waste Demand	Annual Tons	21,788	26,790	23%	27,131	25%	24,998	15%
Water & Energy Use	Total Energy Use	mbtu/hh/yr	2,189,046	2,619,220	20%	2,649,498	21%	2,535,341	16%
	Residential Energy Use	mbtu/hh/yr	1,810,790	2,141,474	18%	2,184,129	21%	2,020,250	12%
	Commercial Energy Use	mbtu/hh/yr	378,256	477,746	26%	465,369	23%	515,091	36%
	Residential Water Use	mgals	1340	465	-65%	509	-62%	297	-78%
Transportation	Vehicles	Vehicles	29,000	35,657	23%	36,112	25%	33,273	15%
	Vehicle Trips per Day	Trips/Day	127,027	158,872	25%	161,700	27%	147,375	16%
	Annual CO Auto Emissions	Grams/Yr	17,522,963	22,226,395	27%	22,174,329	27%	20,518,569	17%
	Annual CO ₂ Auto Emissions	Tons/Yr	362	459	27%	469	30%	424	17%
	Annual NO _x Auto Emissions	Grams/Yr	1,098,585	1,393,462	27%	1,424,053	30%	1,286,392	17%
	Annual Hydrocarbon Auto Emissions	Grams/Yr	2,213,342	2,807,237	27%	2,869,068	30%	2,591,720	17%

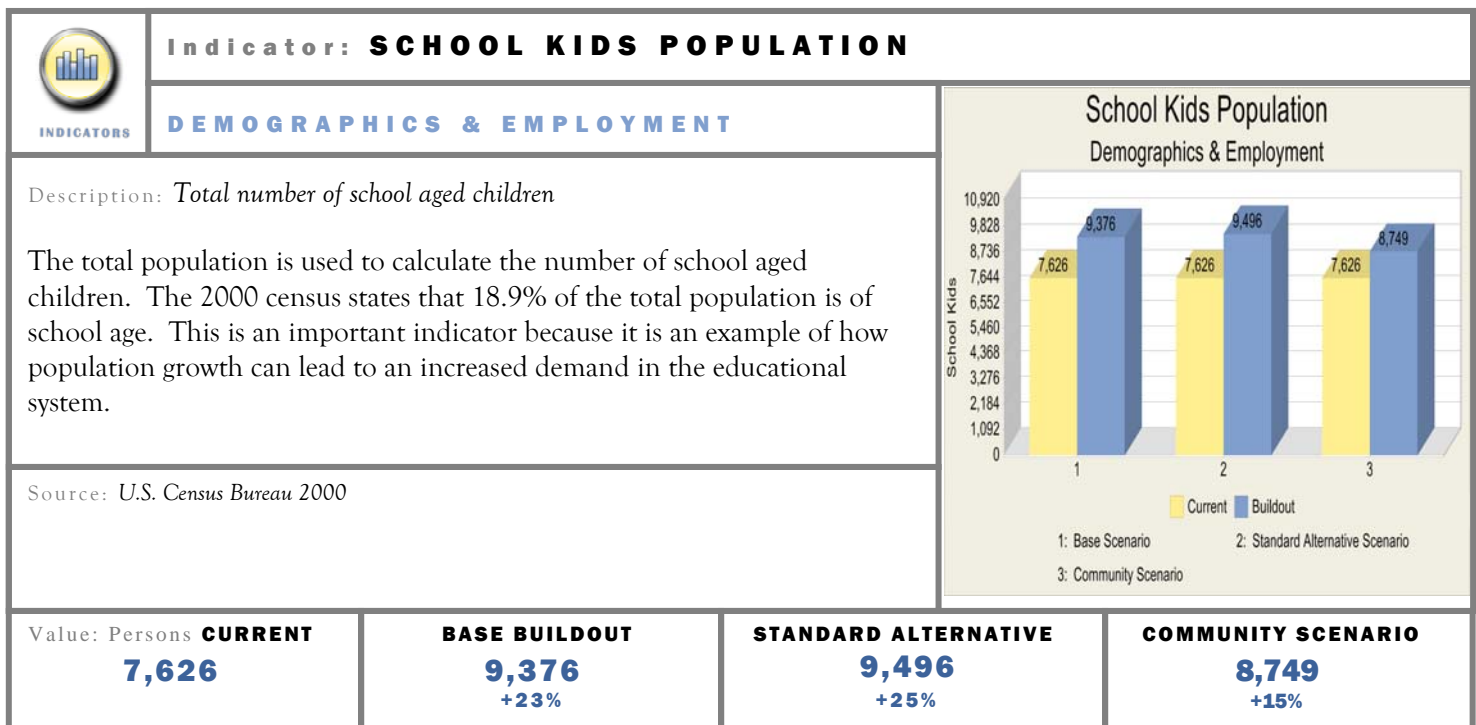
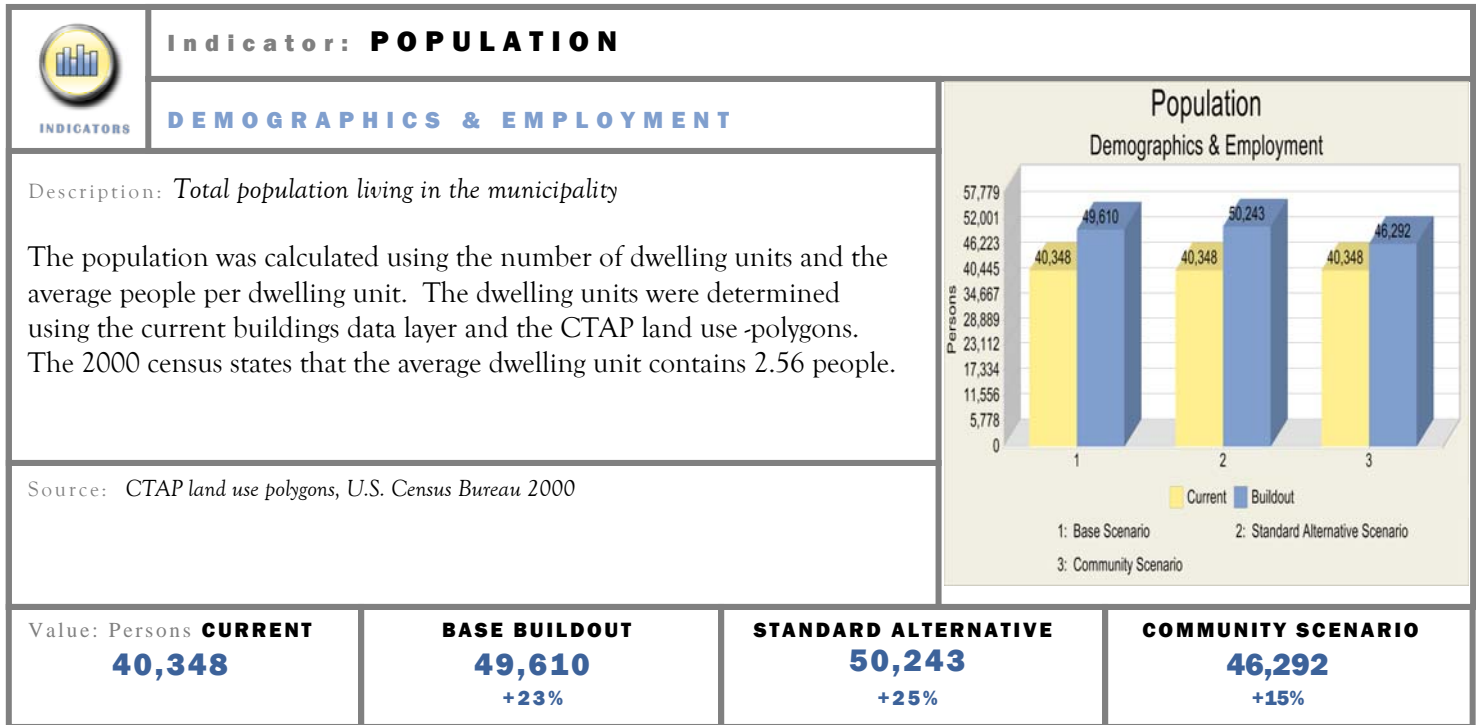
Indicators - BUILDOUT



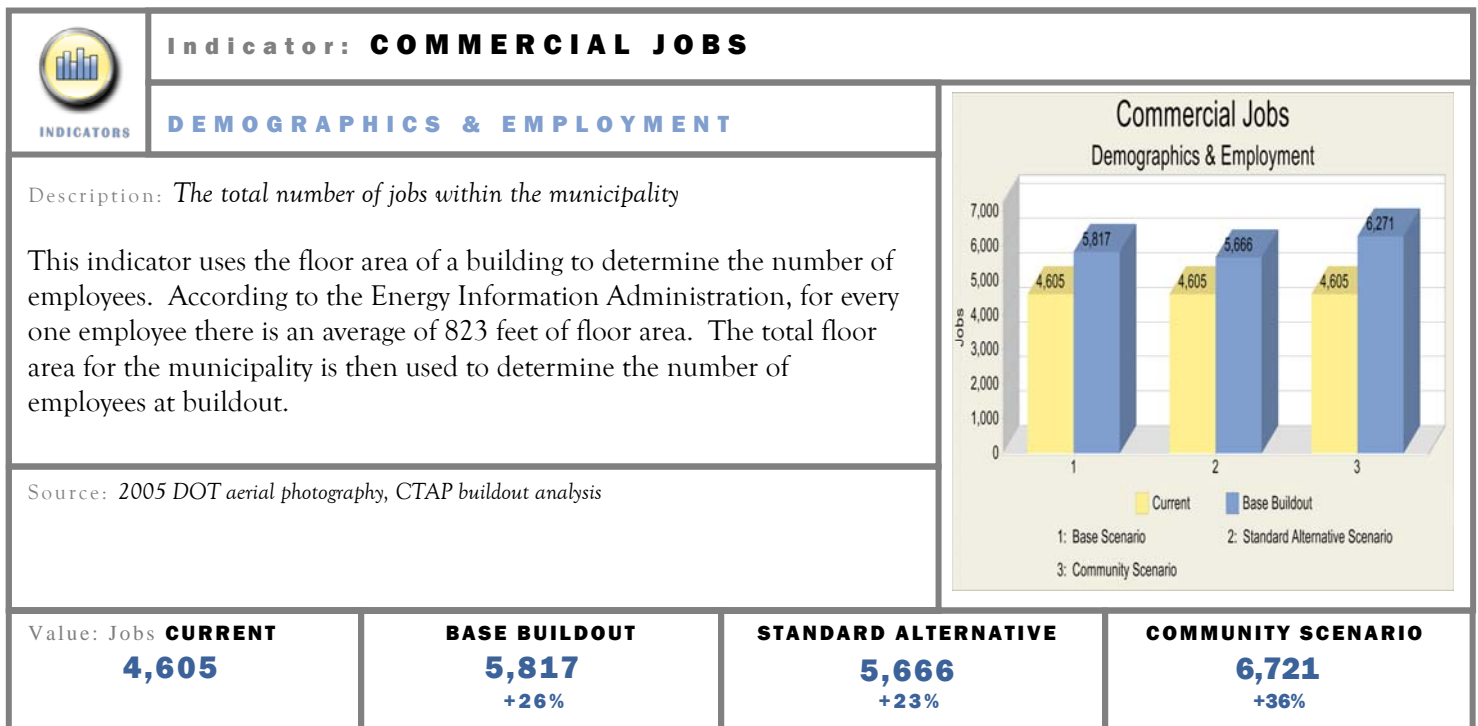
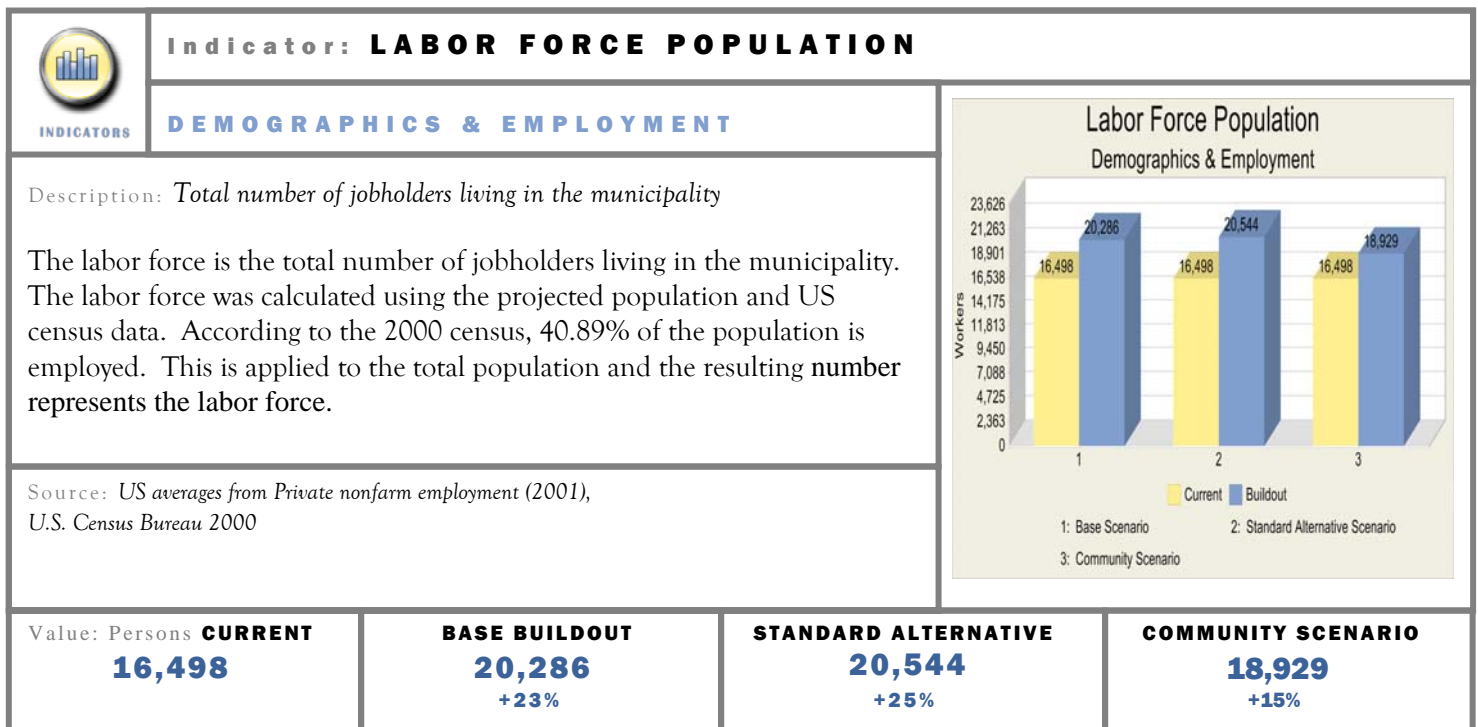
Indicators - BUILDOUT cont.




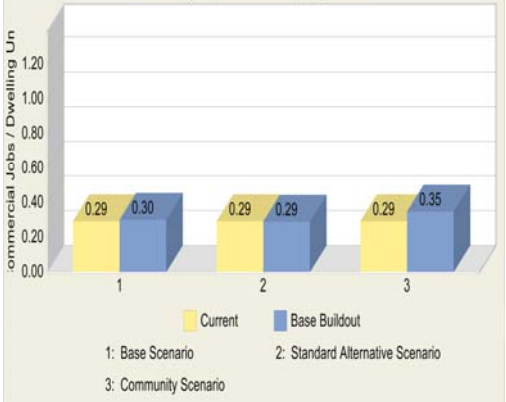
Indicators - DEMOGRAPHICS & EMPLOYMENT



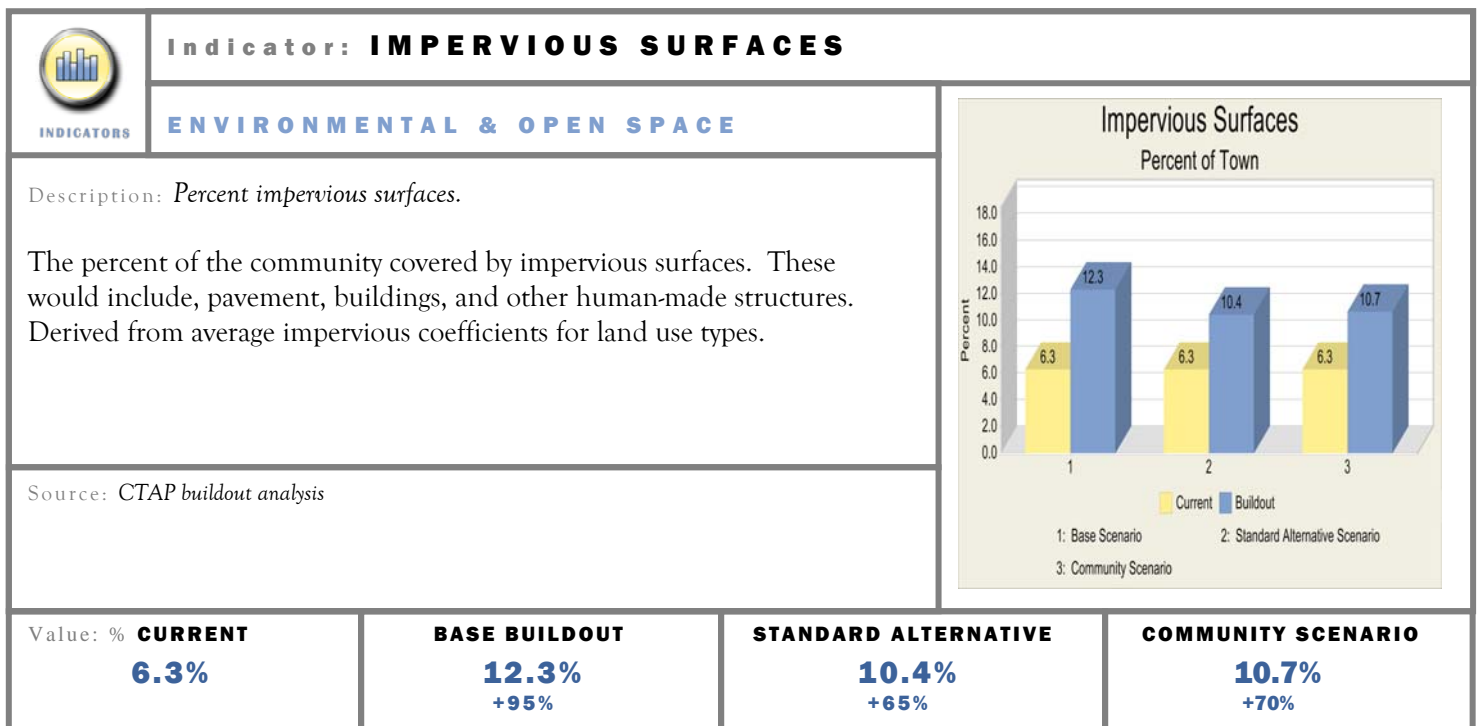
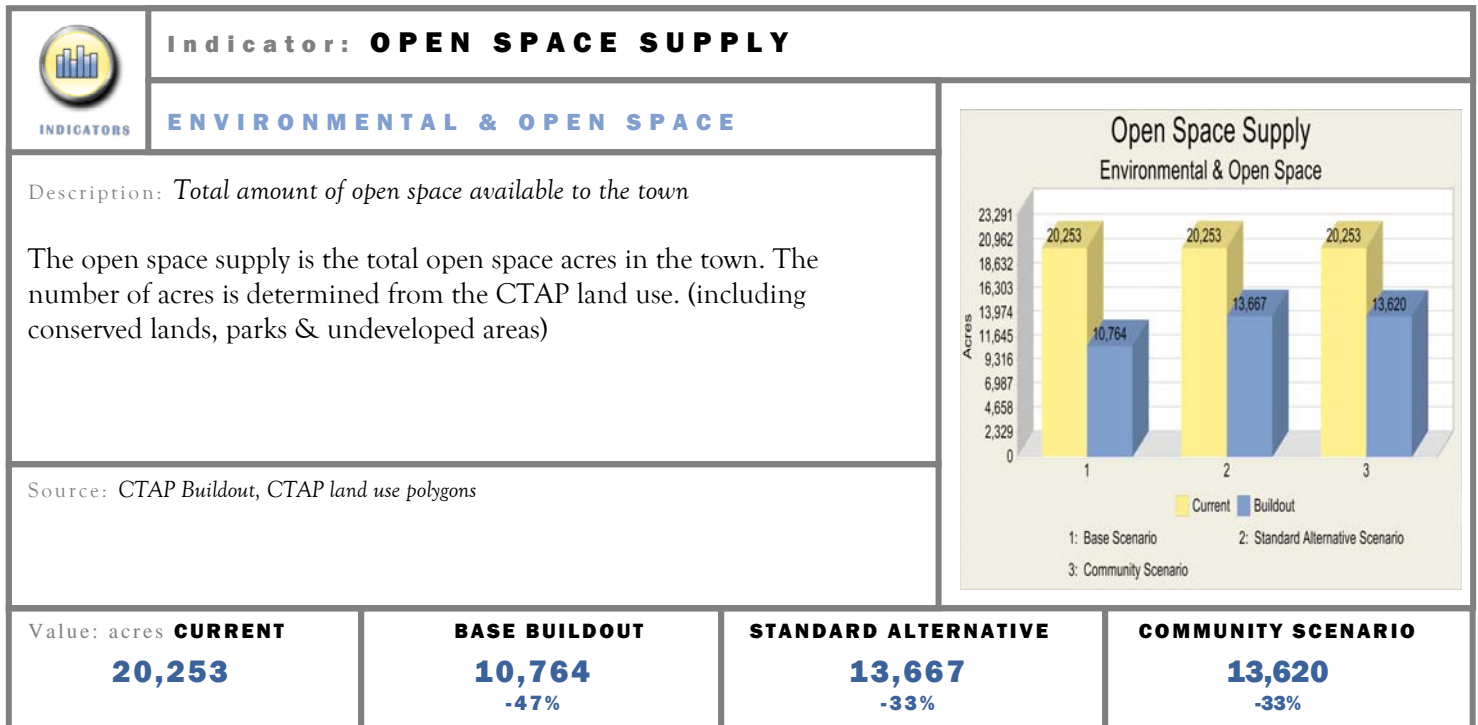
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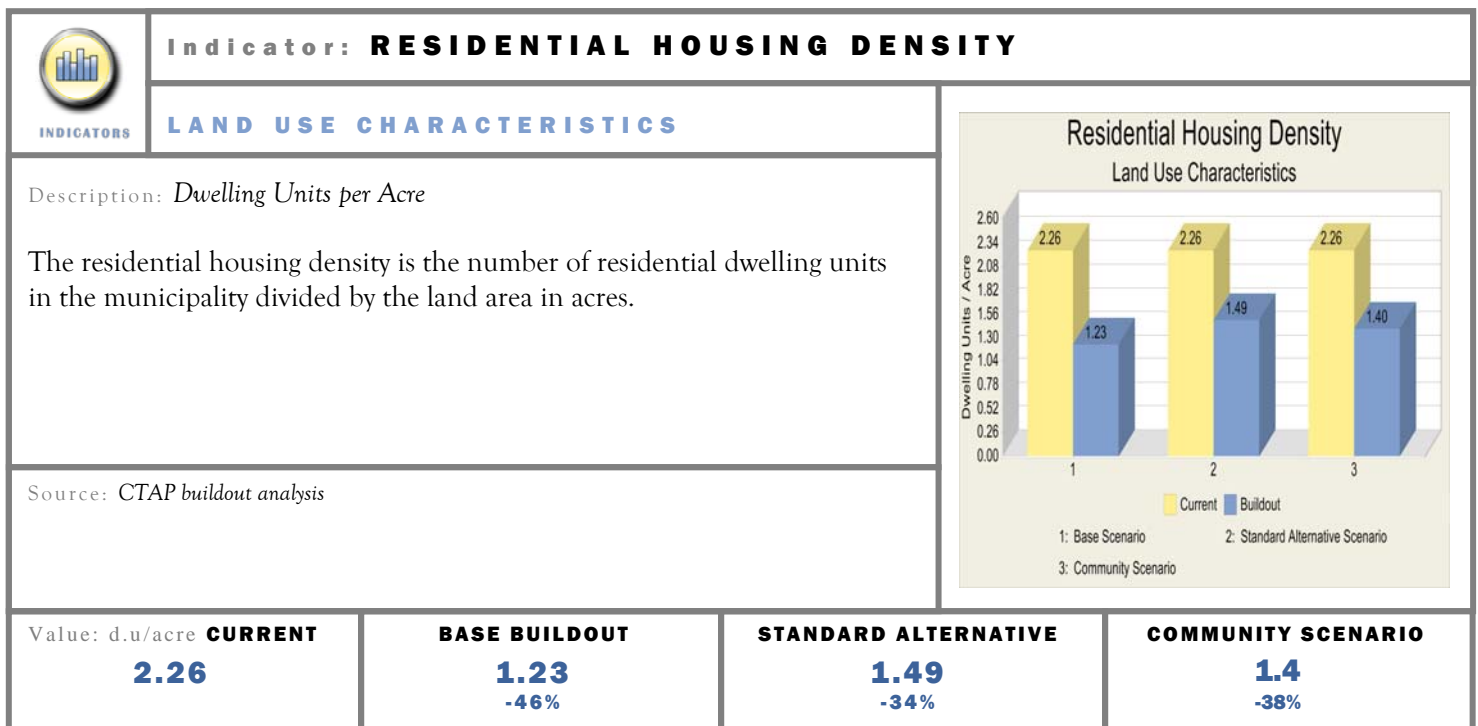
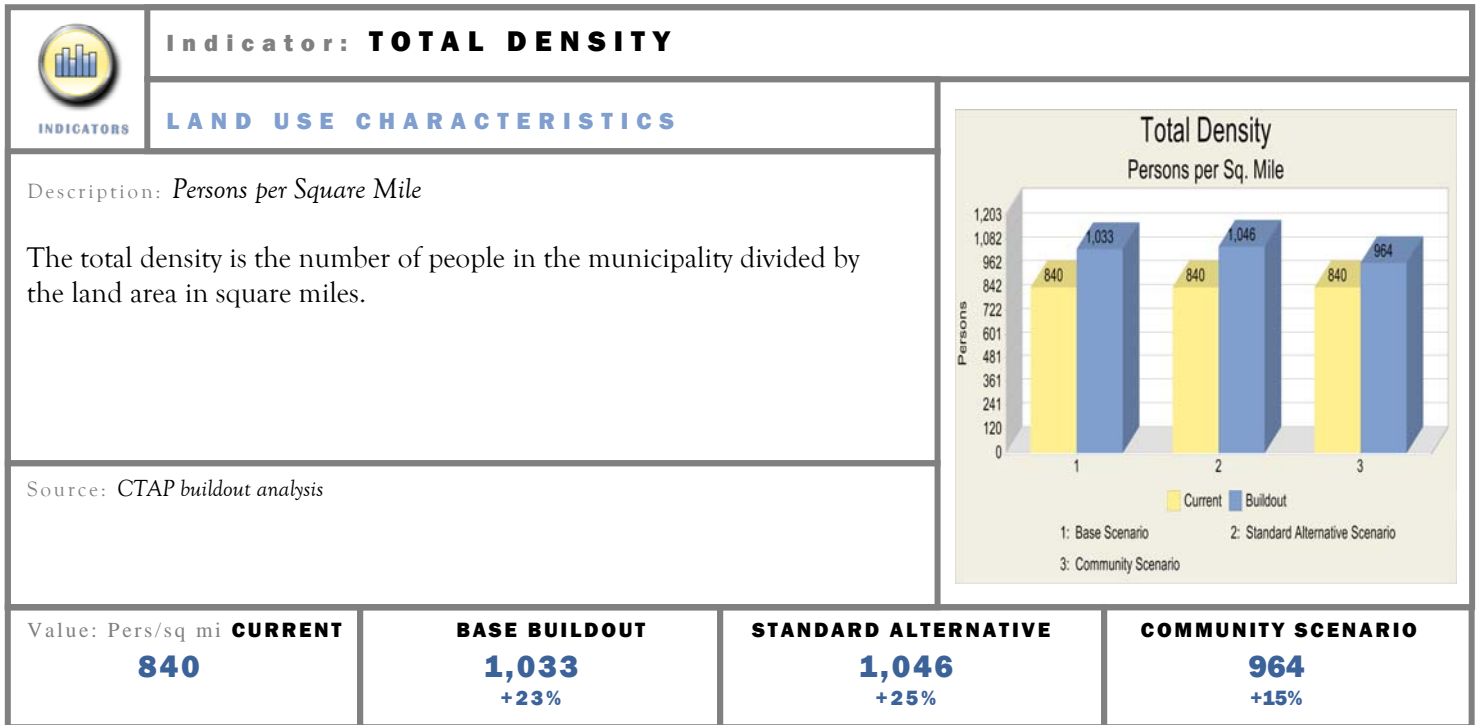
Indicators - DEMOGRAPHICS & EMPLOYMENT cont.

<div> INDICATORS</div>	<div>Indicator: JOBS TO HOUSING RATIO</div> <div>DEMOGRAPHICS & EMPLOYMENT</div>				<div><div>Commercial Jobs to Housing Ratio Demographics & Employment</div><table><caption>Commercial Jobs to Housing Ratio Data</caption><thead><tr><th>Scenario</th><th>Current</th><th>Base Buildout</th></tr></thead><tbody><tr><td>1: Base Scenario</td><td>0.29</td><td>0.30</td></tr><tr><td>2: Standard Alternative Scenario</td><td>0.29</td><td>0.29</td></tr><tr><td>3: Community Scenario</td><td>0.29</td><td>0.35</td></tr></tbody></table></div>	Scenario	Current	Base Buildout	1: Base Scenario	0.29	0.30	2: Standard Alternative Scenario	0.29	0.29	3: Community Scenario	0.29	0.35
Scenario	Current	Base Buildout															
1: Base Scenario	0.29	0.30															
2: Standard Alternative Scenario	0.29	0.29															
3: Community Scenario	0.29	0.35															
<div>Description: <i>Number of commercial jobs per dwelling unit</i></div> <div>The commercial jobs to housing ratio is the number of jobs per dwelling unit. This indicator is a representation how many jobs are located in the municipality relative to the population.</div>																	
<div>Source: <i>CTAP buildout analysis</i></div>																	
<div>Value: Pers/job CURRENT</div> <div>0.29</div>	<div>BASE BUILDOUT</div> <div>0.3</div> <div>+3%</div>	<div>STANDARD ALTERNATIVE</div> <div>0.29</div> <div>0%</div>	<div>COMMUNITY SCENARIO</div> <div>0.35</div> <div>+21%</div>														

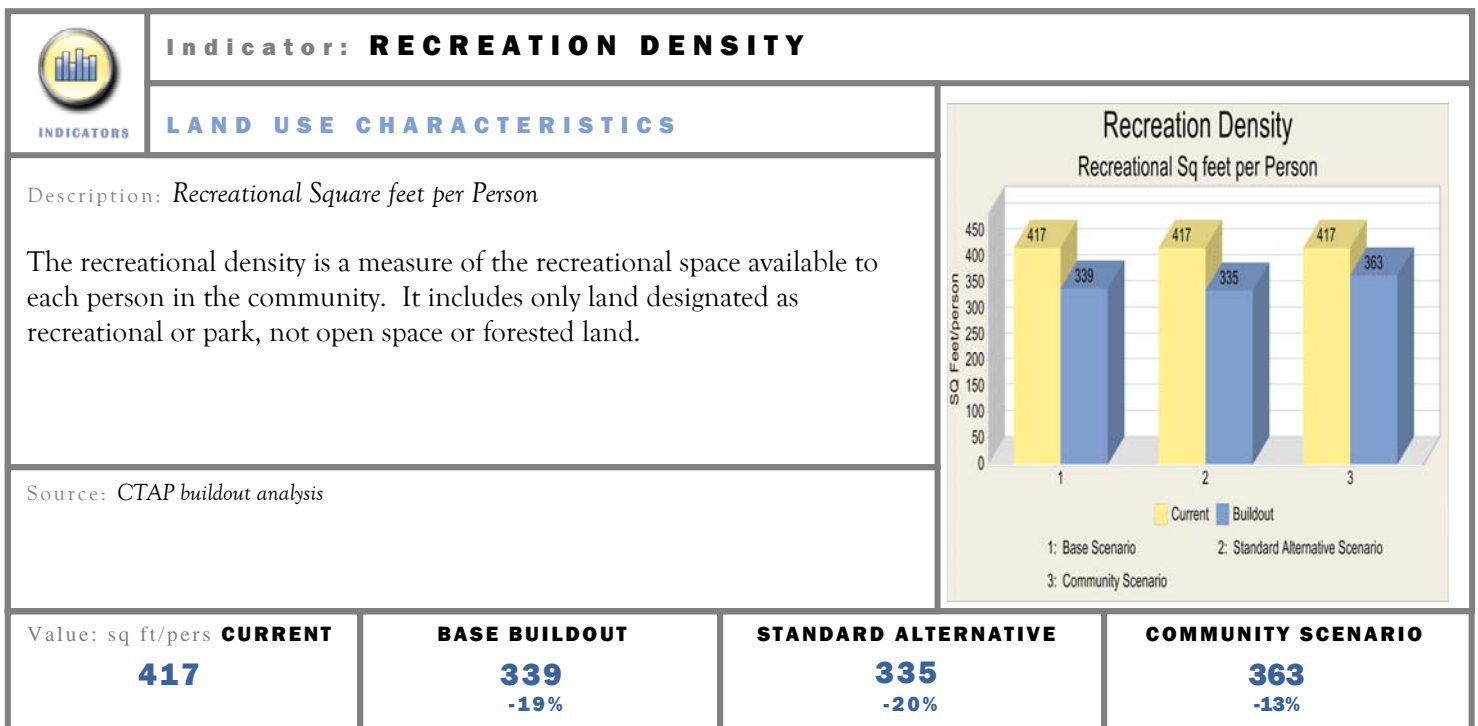
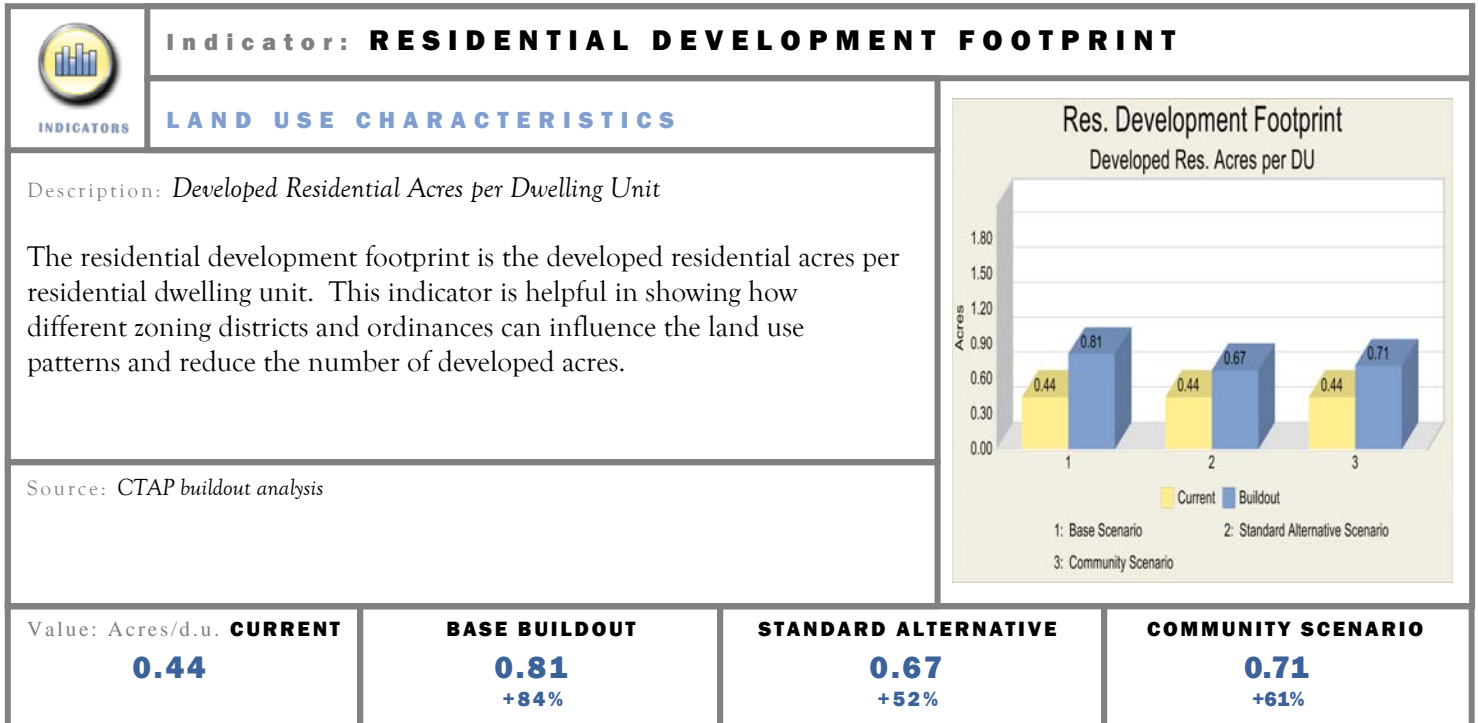
Indicators - ENVIRONMENTAL & OPEN SPACE



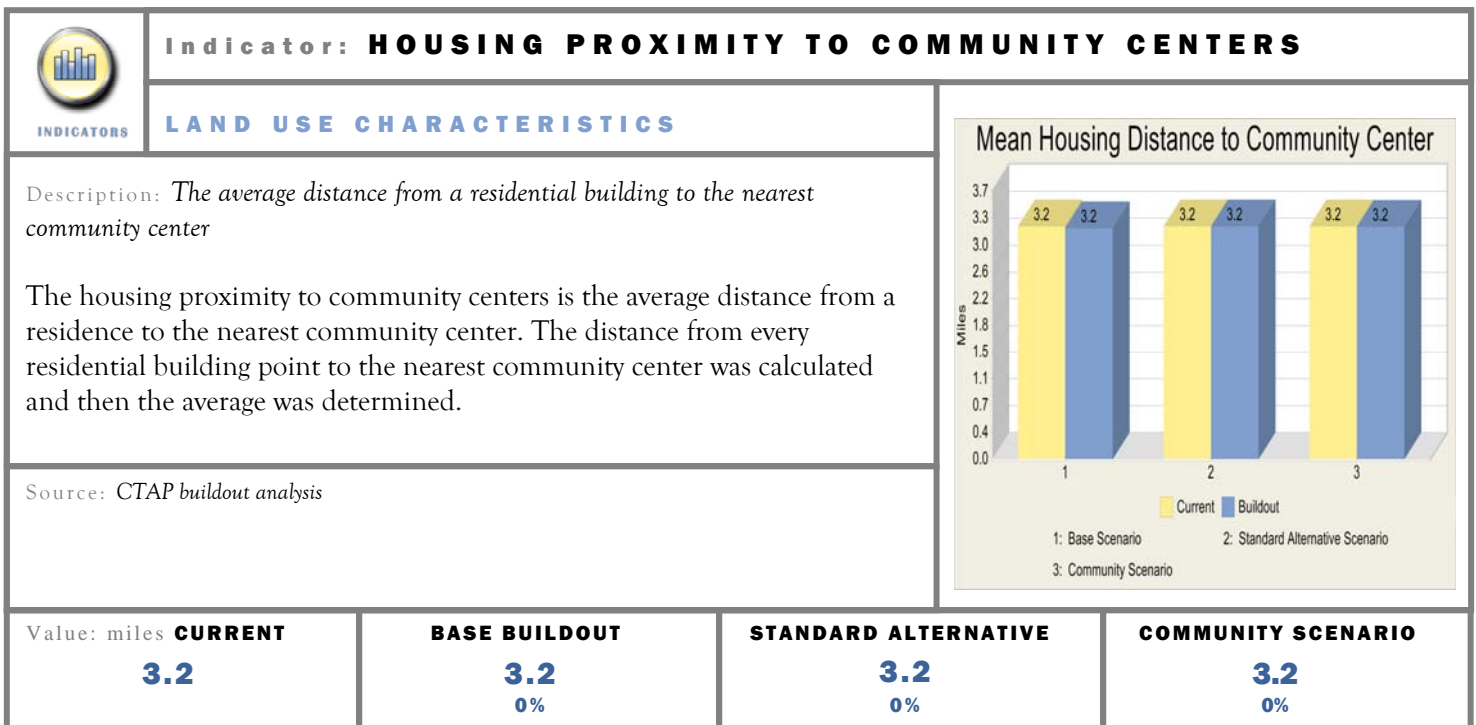
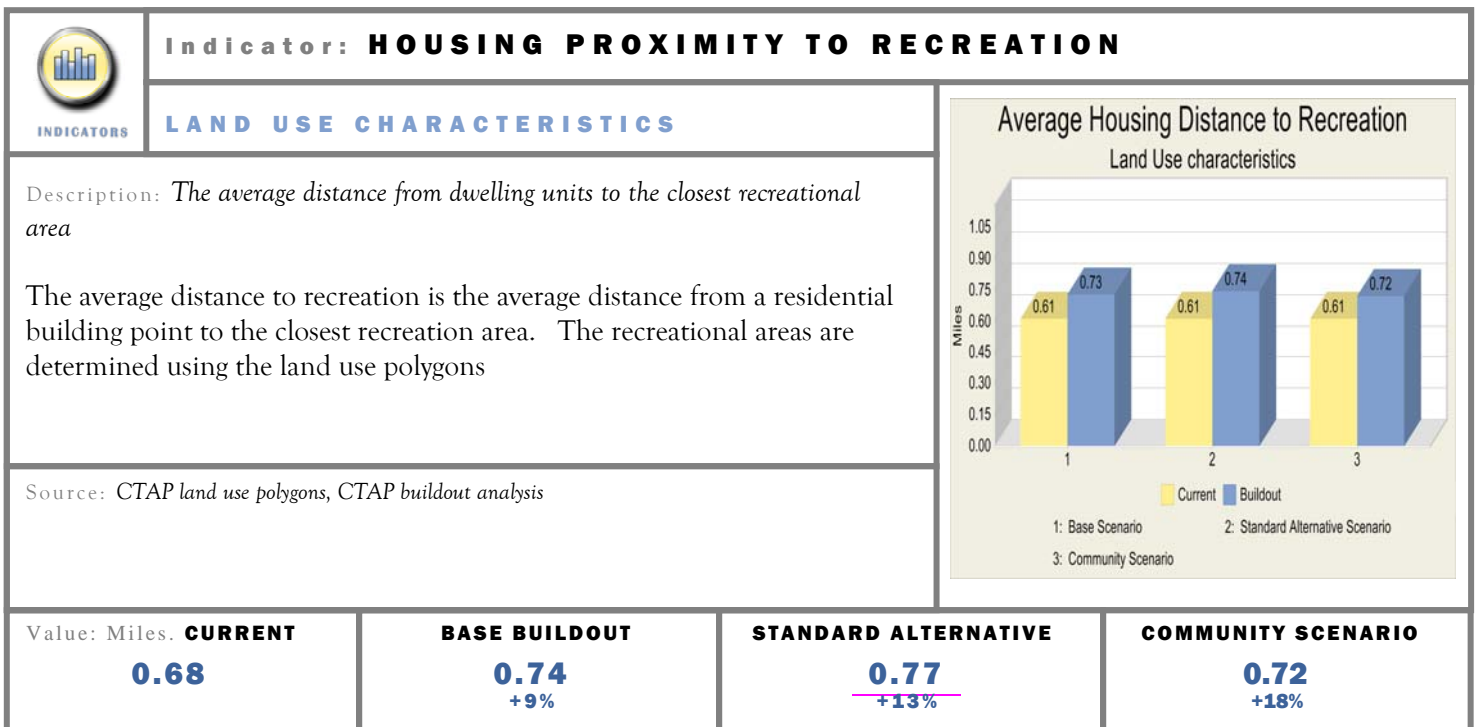
Indicators - LAND USE CHARACTERISTICS



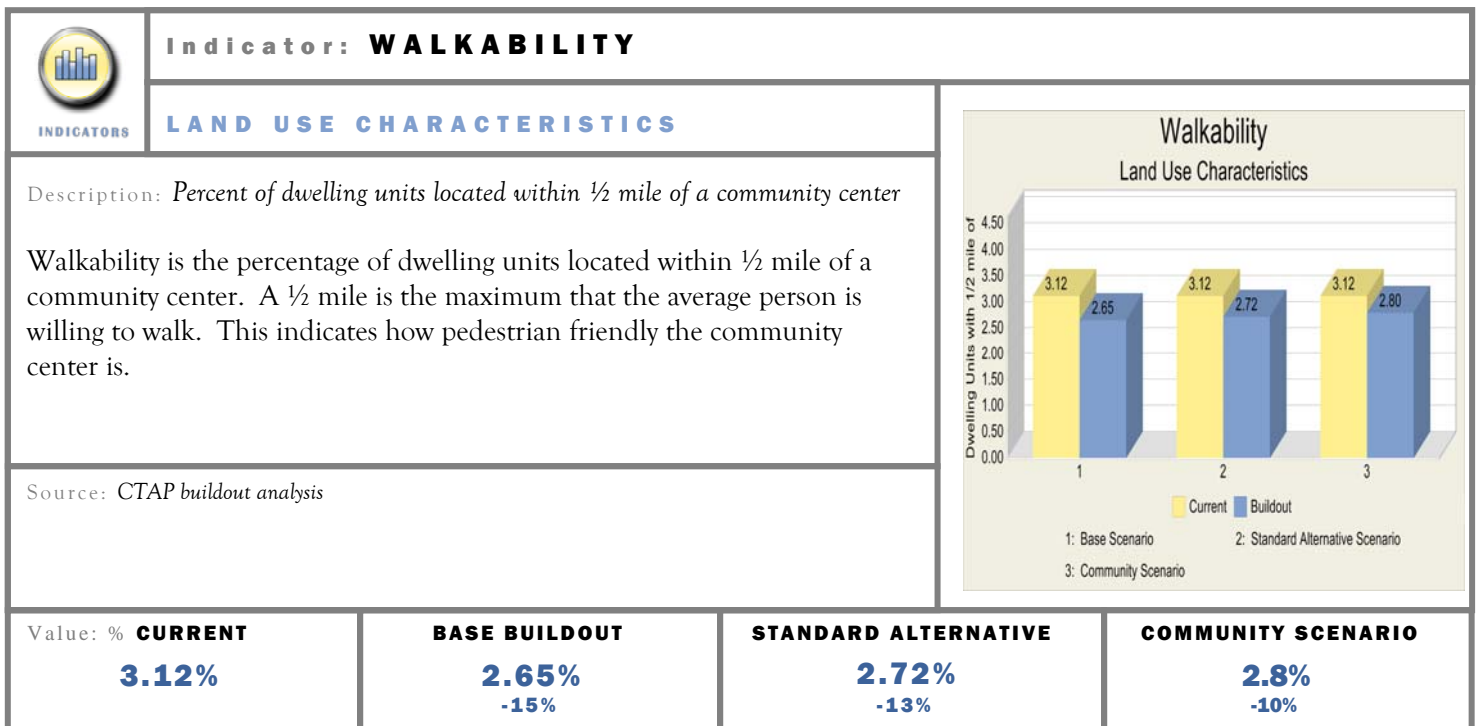
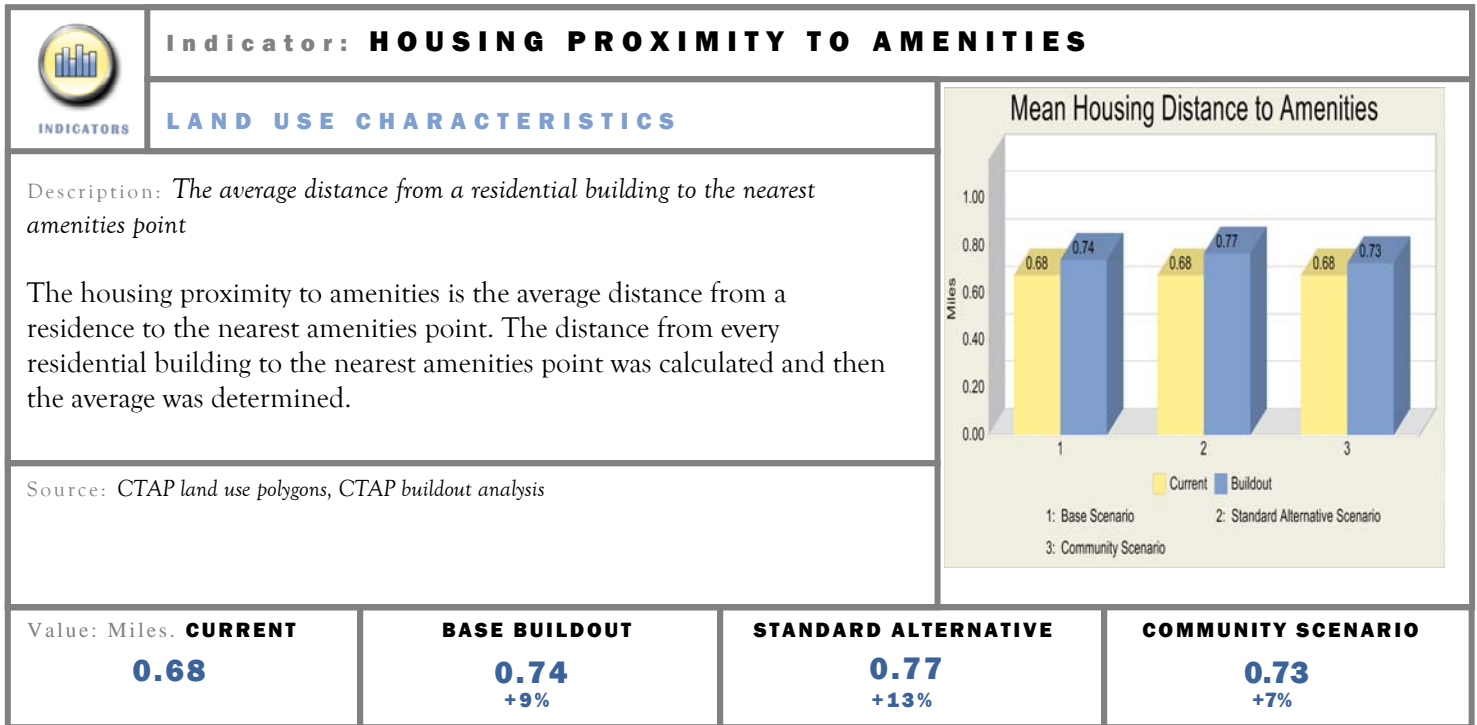
Indicators - LAND USE CHARACTERISTICS cont.




Indicators - LAND USE CHARACTERISTICS cont.



Indicators - LAND USE CHARACTERISTICS cont.

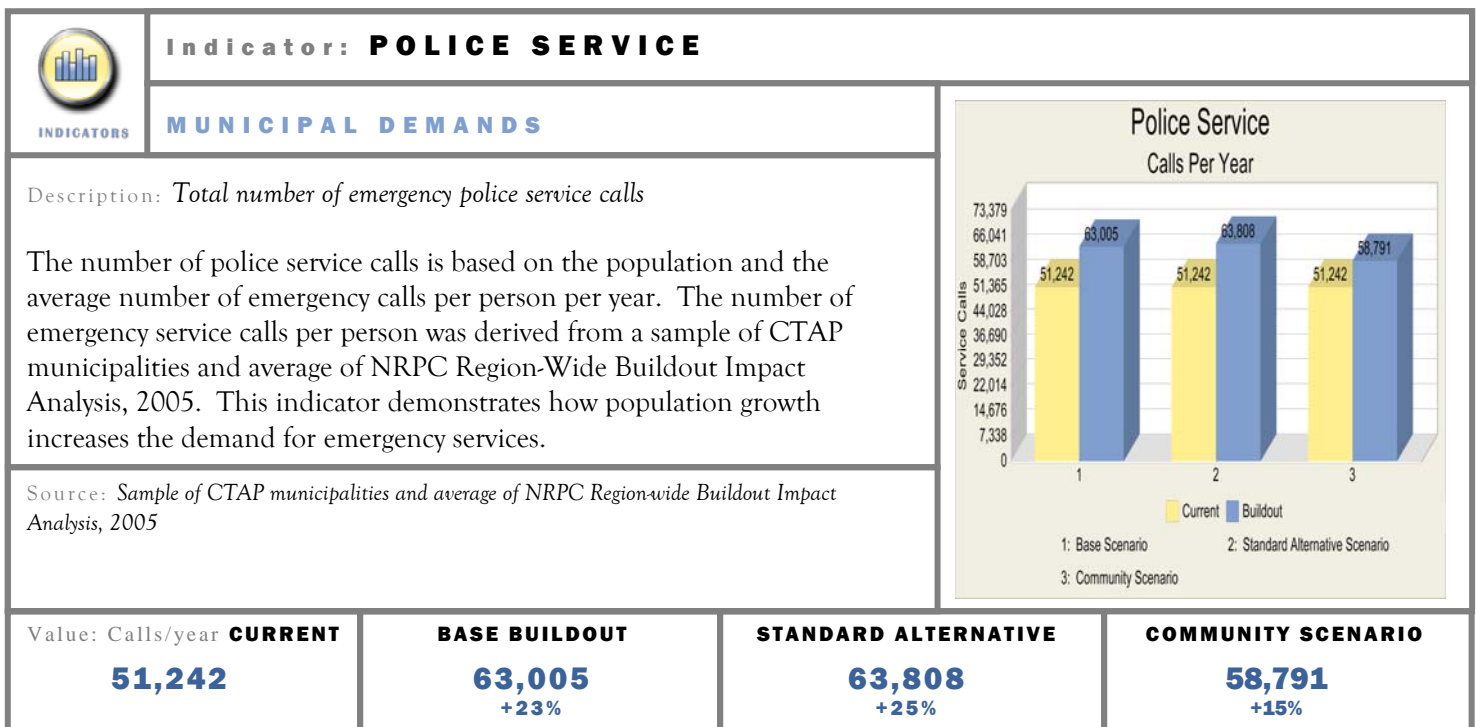
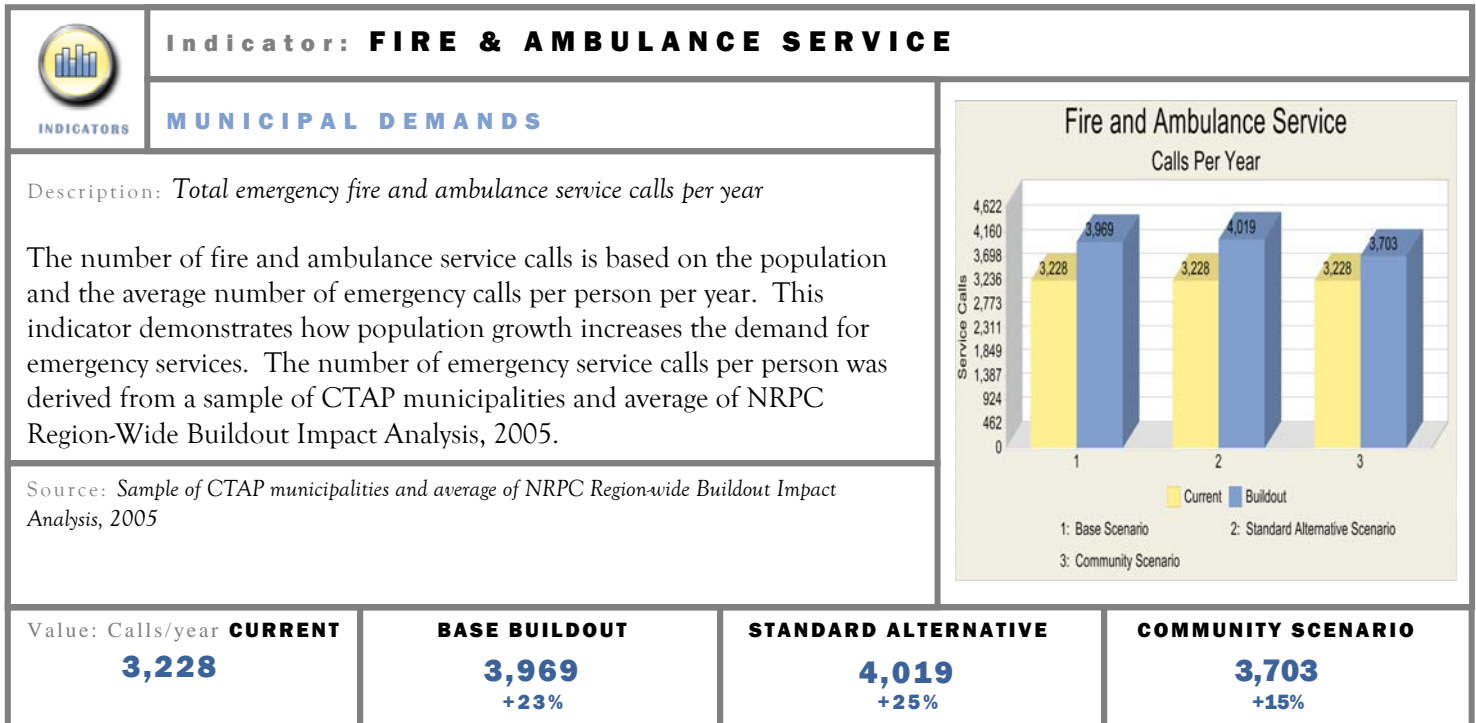


Indicators - LAND USE CHARACTERISTICS cont.

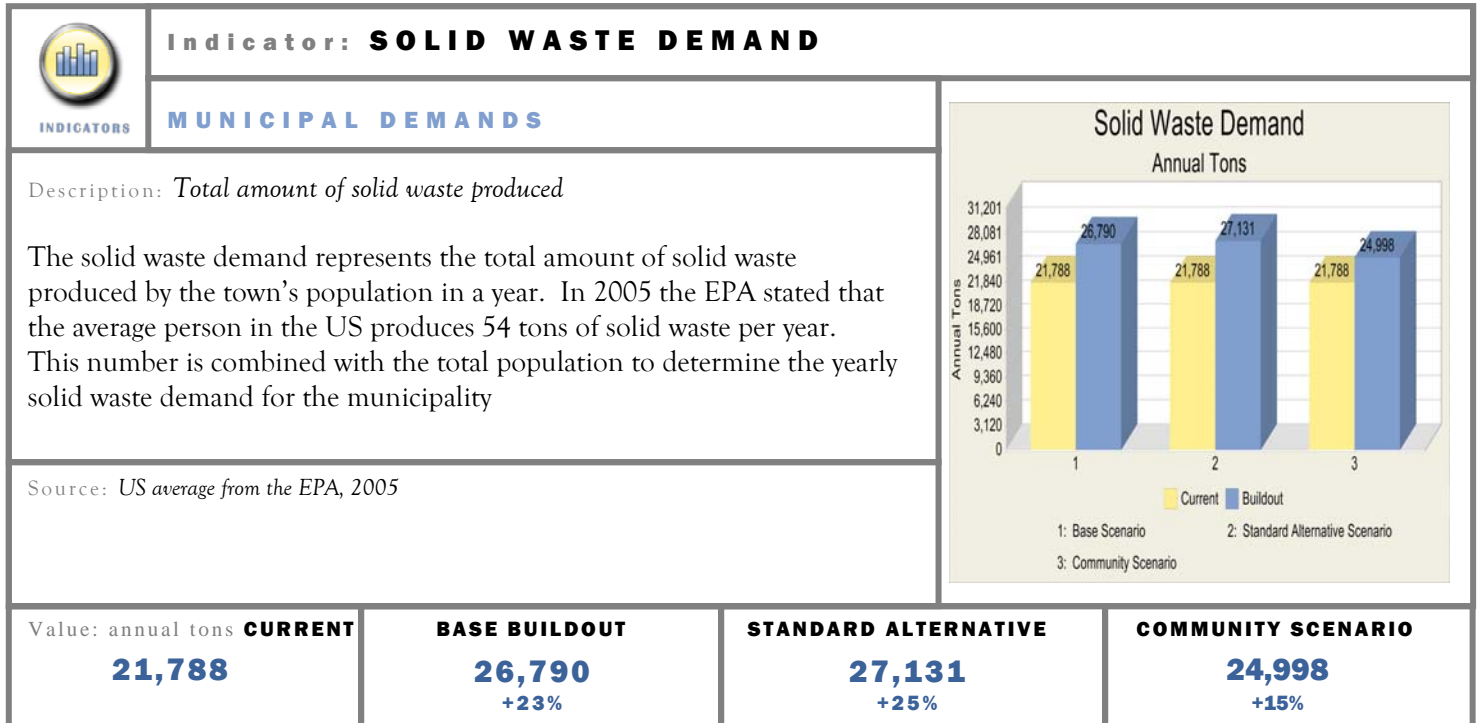
 INDICATORS	Indicator: HOUSING PROXIMITY TO TRANSIT			
LAND USE CHARACTERISTICS		Not Applicable		
Description: The average distance from a residential building to the nearest transit stop. The housing proximity to transit is the average distance from a residence to the nearest transit stop.				
Source: CTAP land use polygons, CTAP buildout analysis				
Value: Miles. CURRENT XXX	BASE BUILDOUT XXX +xx%	STANDARD ALTERNATIVE XXX +xx%	COMMUNITY SCENARIO XXX +xx%	

Indicator: EMPLOYMENT PROXIMITY TO TRANSIT				
LAND USE CHARACTERISTICS		Not Applicable		
Description: Average distance from each job to the nearest transit stop. The employment proximity to transit is the average distance from each commercial job to the nearest transit stop in miles. Because this indicator is based on jobs and not employer or building, large places of business, with more employees will have a greater effect than small businesses with fewer employees.				
Source: CTAP buildout analysis				
Value: miles CURRENT XXX	BASE BUILDOUT XXX +xx%	STANDARD ALTERNATIVE XXX +xx%	COMMUNITY SCENARIO XXX +xx%	

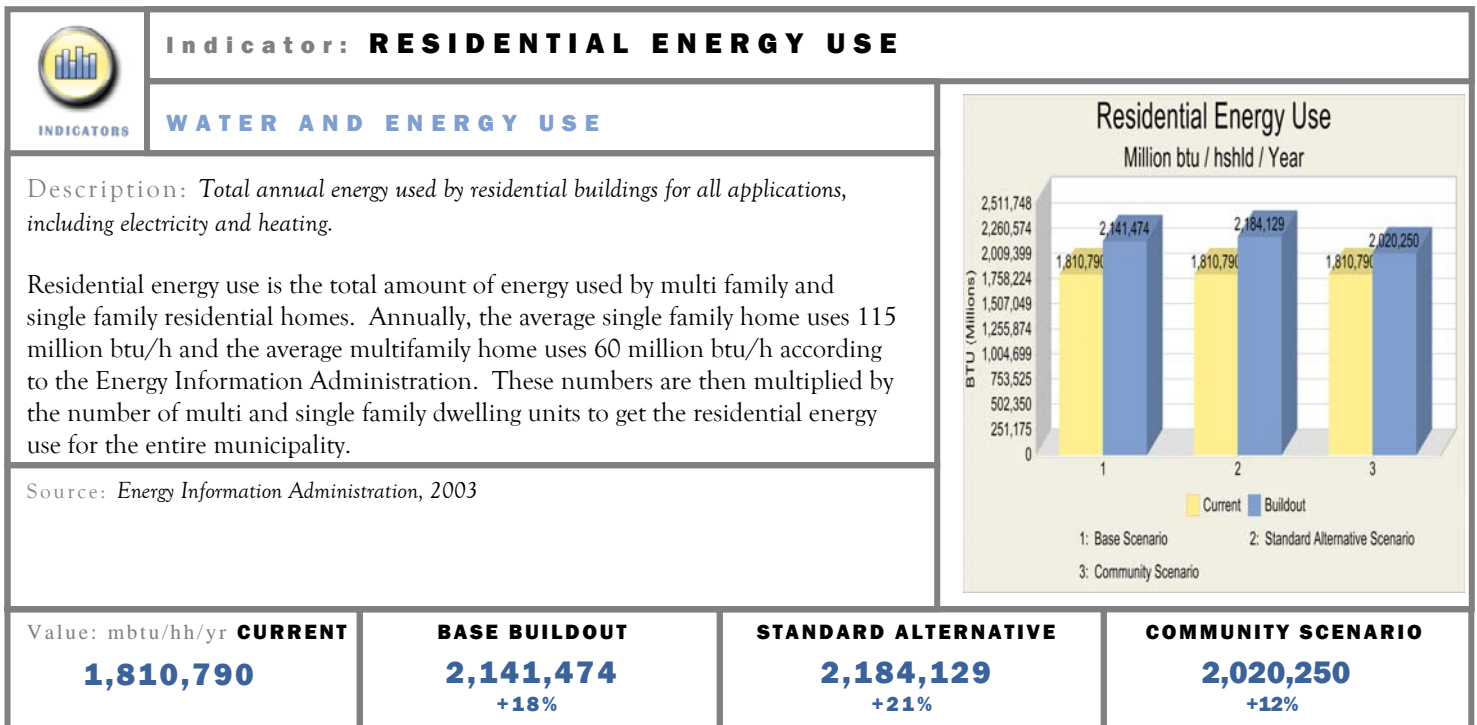
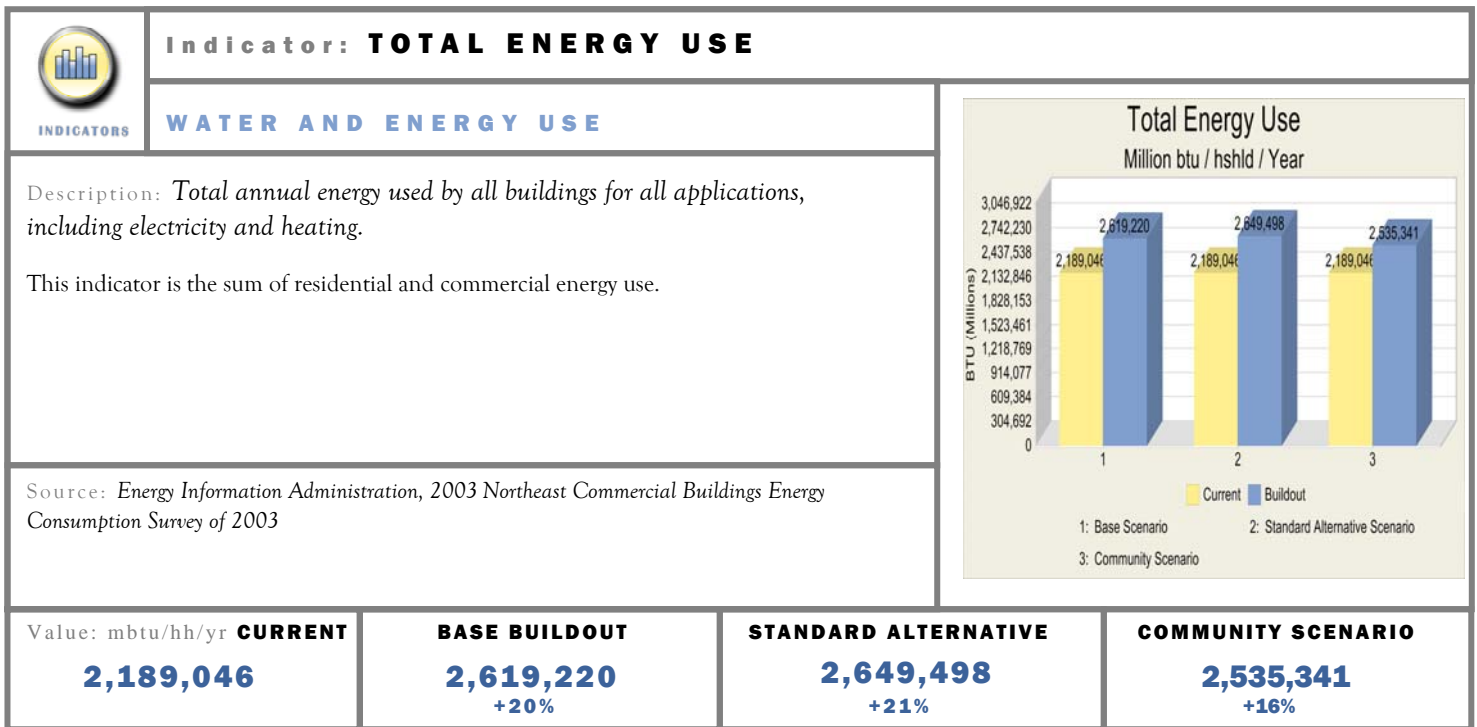
Indicators - MUNICIPAL DEMANDS



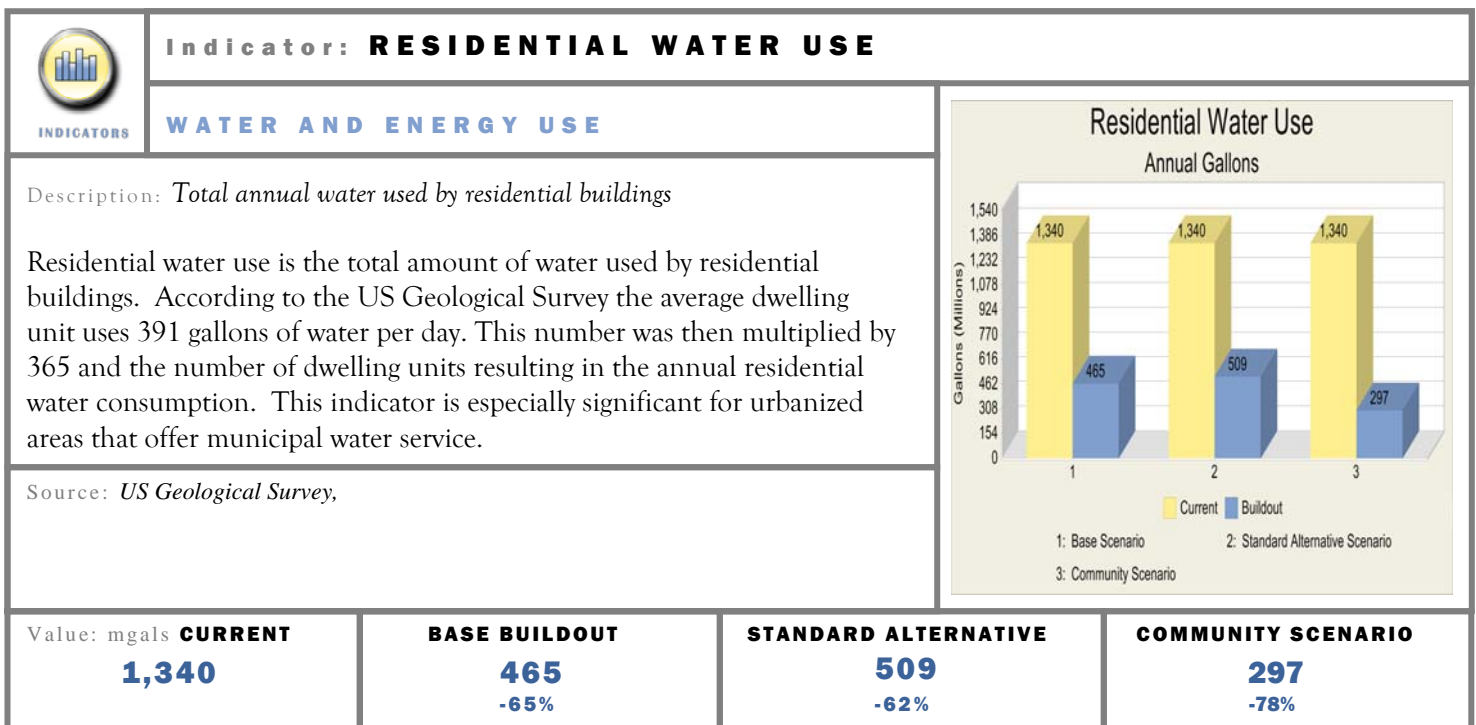
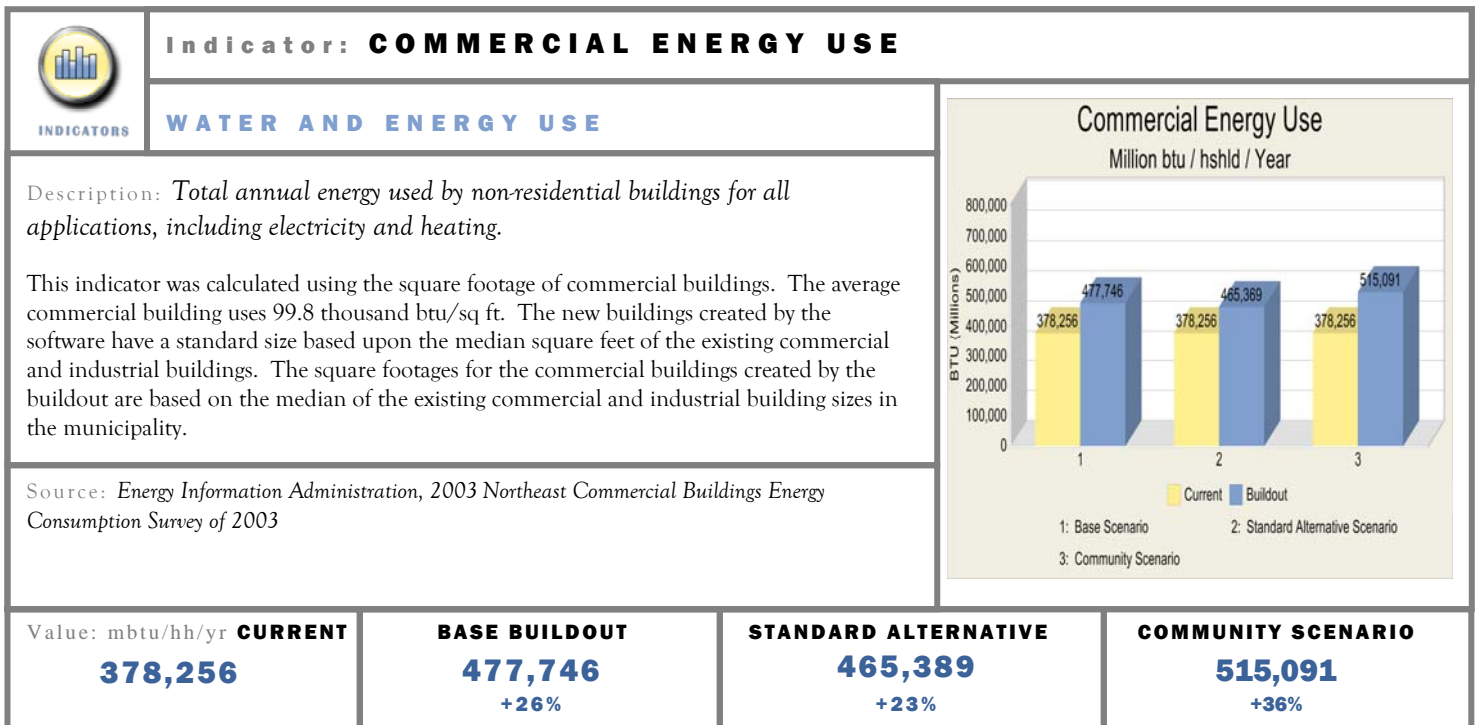
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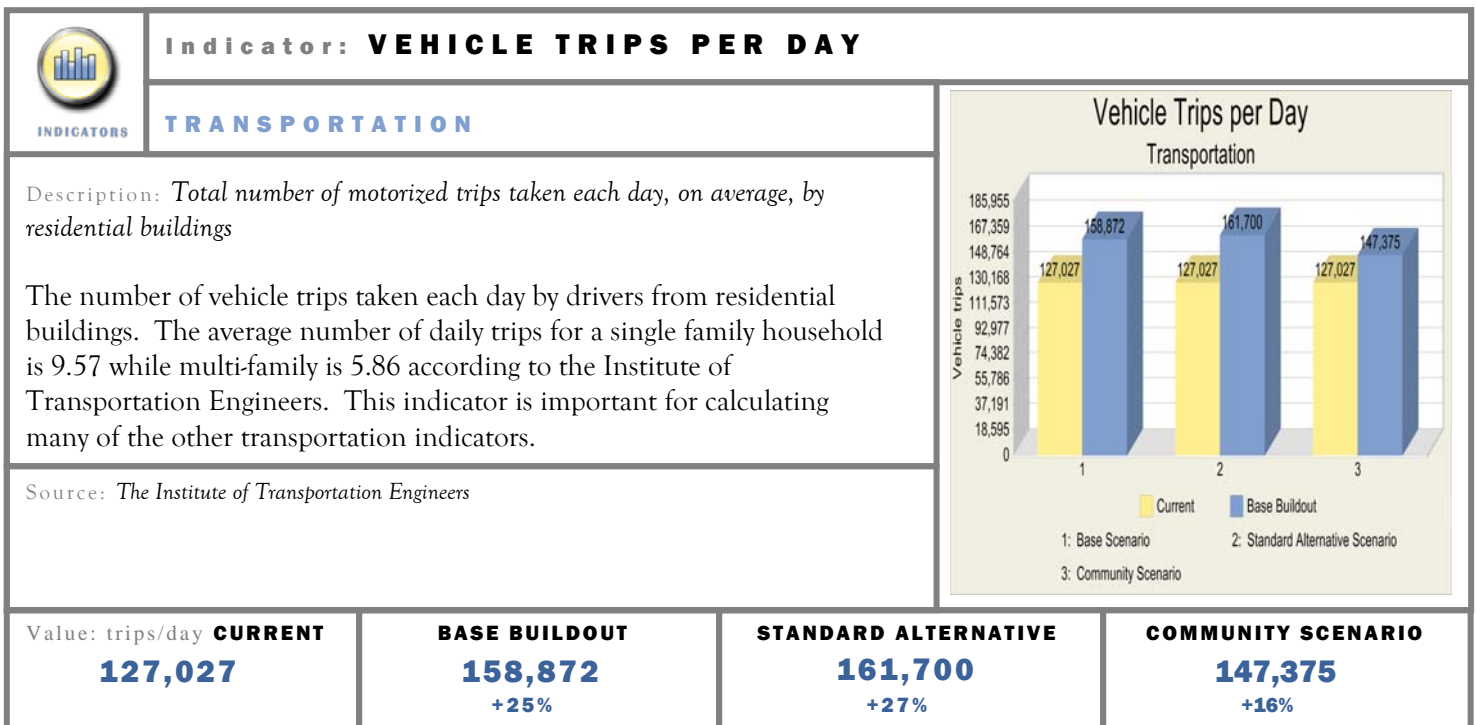
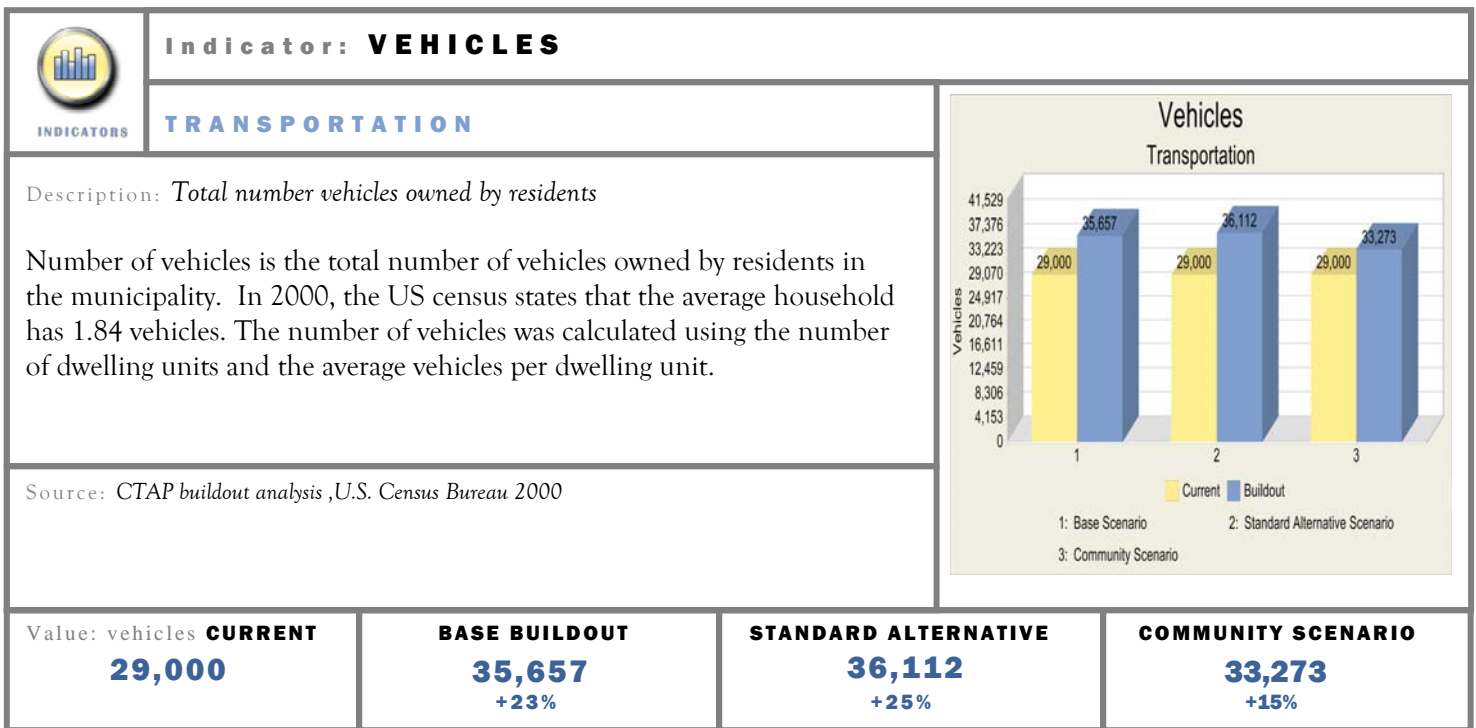
Indicators - WATER AND ENERGY USE



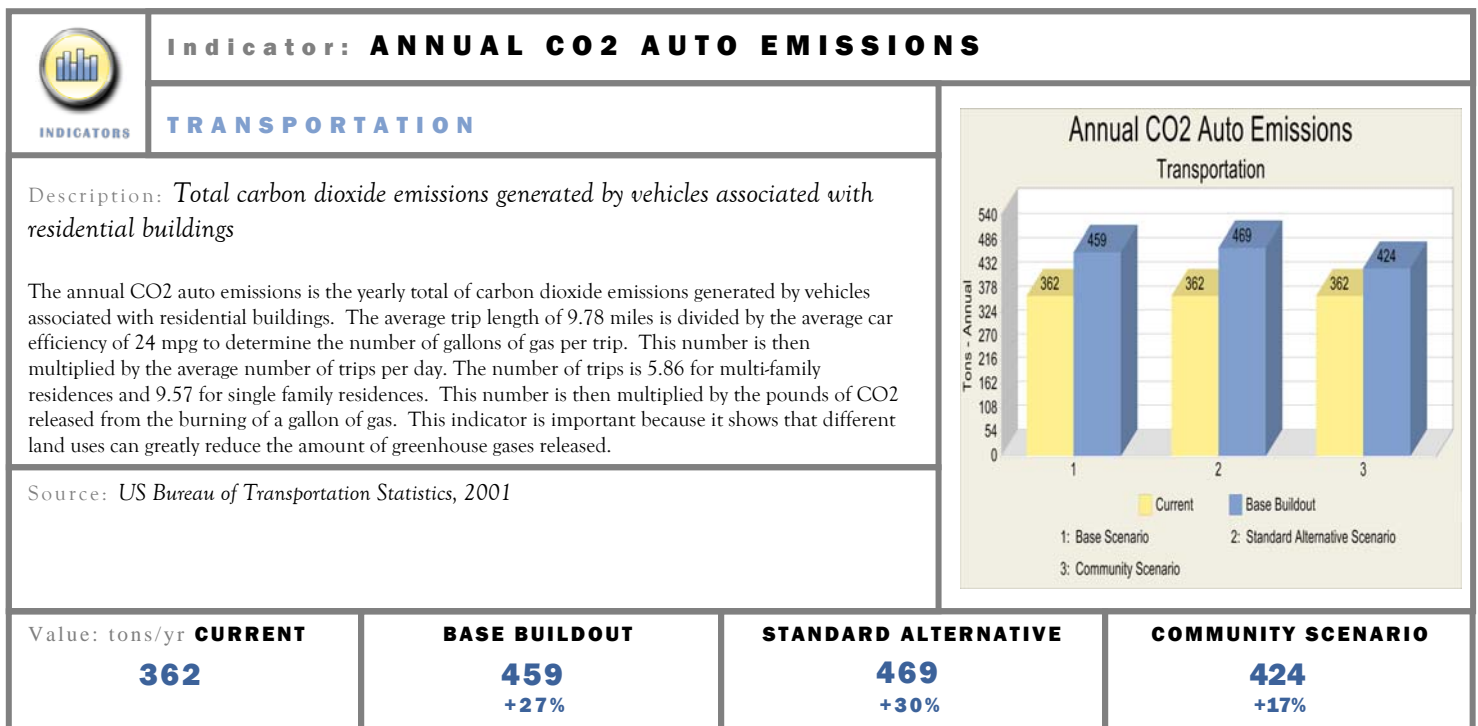
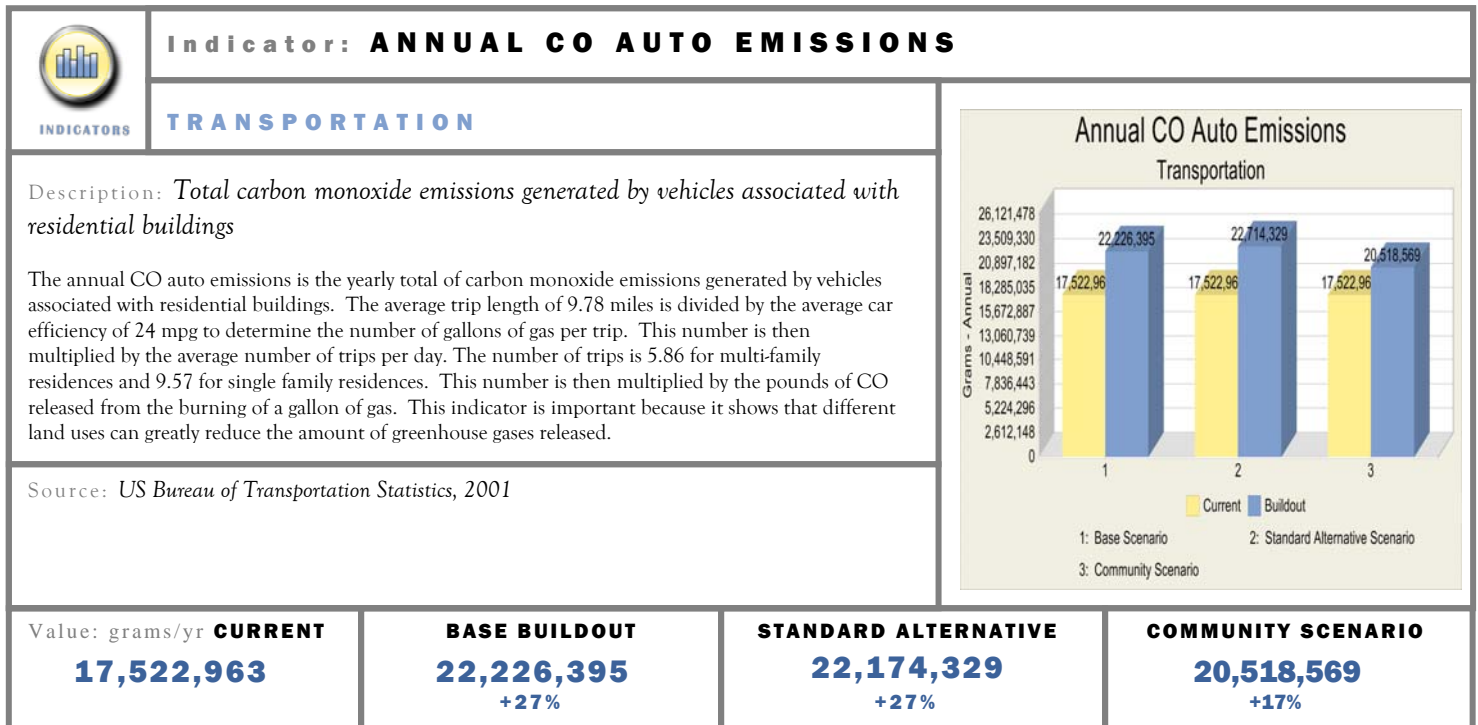
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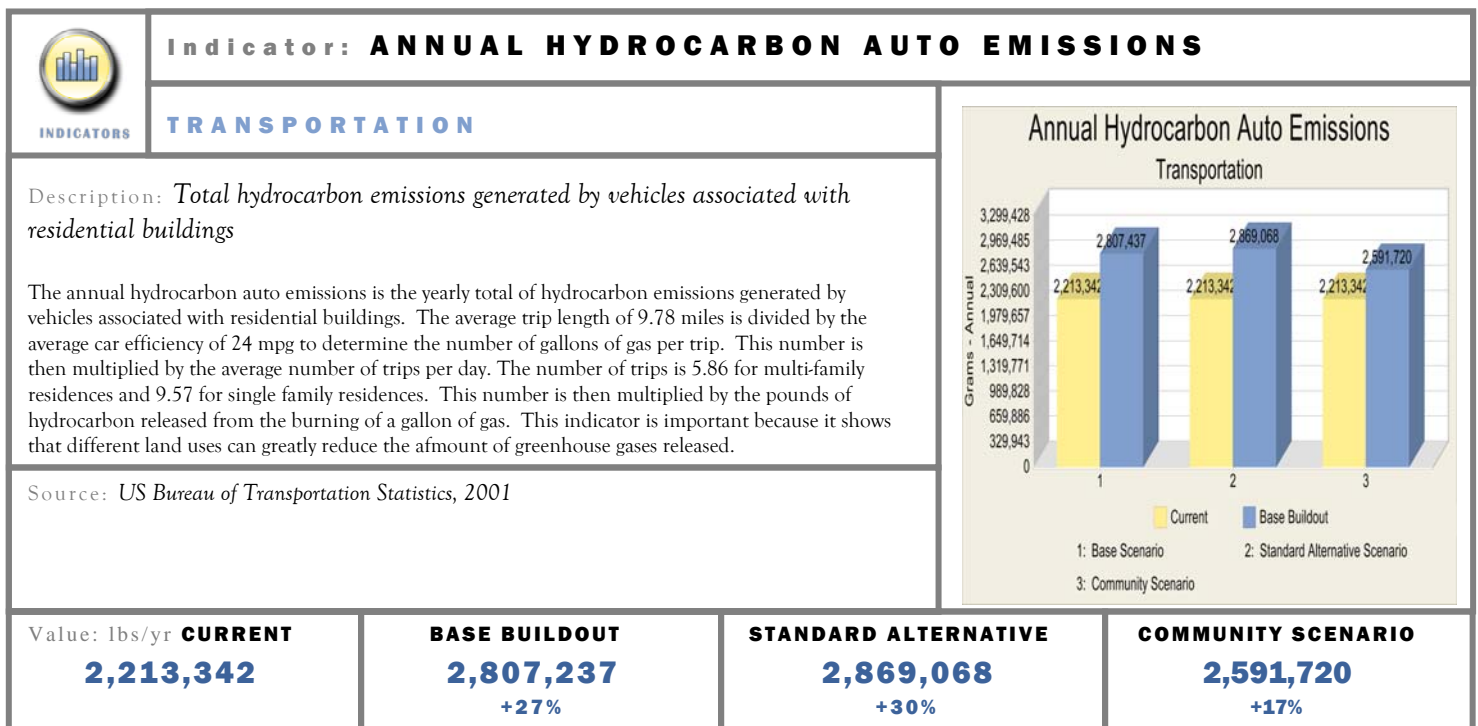
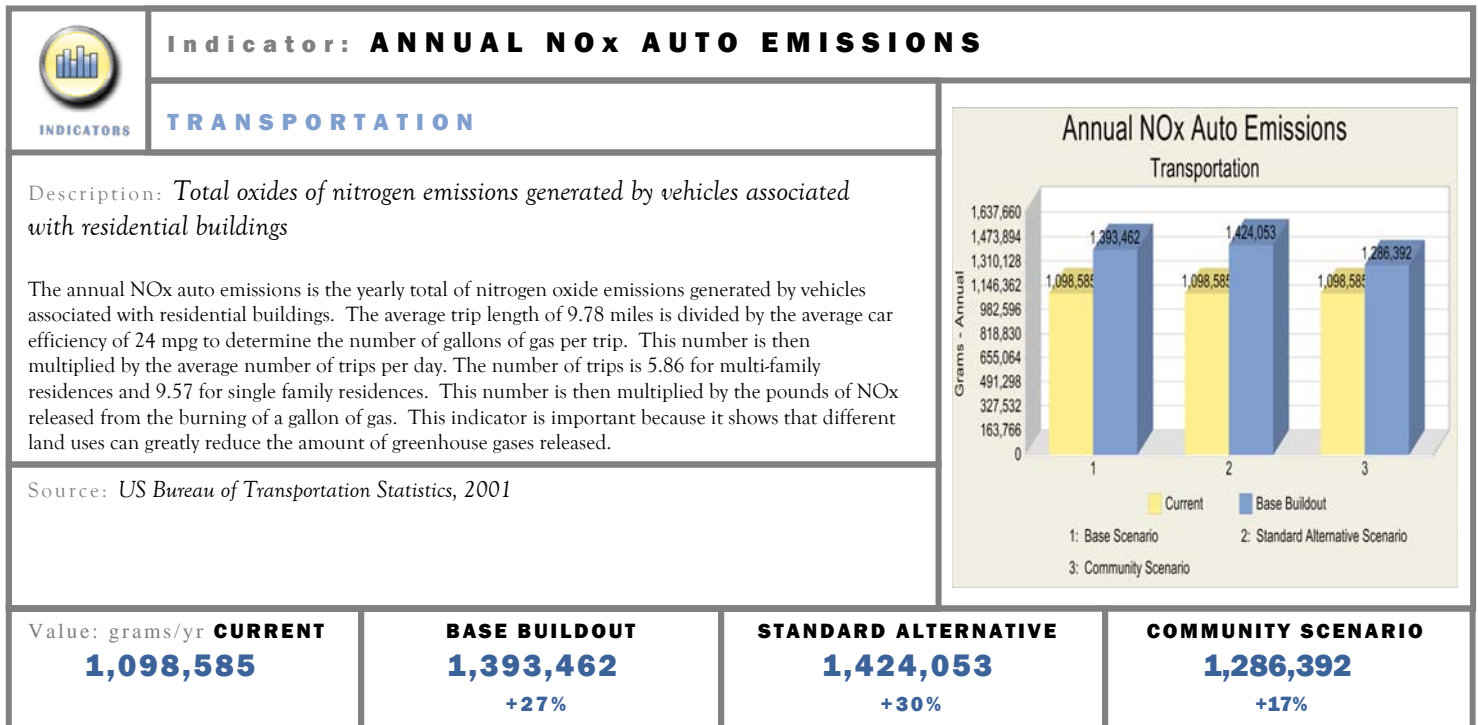
Indicators - TRANSPORTATION



Indicators - TRANSPORTATION cont.



Indicators - TRANSPORTATION cont.



A p p e n d i c e s

- A. Buildout Reports - Base & Standard Alternative & Community Scenarios
- B. Additional Maps
- C. CTAP Buildout FAQ

Appendix E

NHDES Source Water Protection Assessment for Derry, NH

Assessments of Public Water Supply Sources - DERRY

This report is a summary of NH Department of Environmental Services' assessments of the vulnerability of each source used by the public water system(s) located in this municipality. The sources listed here are grouped first by the type of public water system and then by the system itself. Each source was ranked according to a number of criteria; a vulnerability ranking is given for each criterion that applies to the source. *An explanation of each column in the report can be found on the last page.*

Source Number	Source Description	Source Type	Date Assessment Completed	Number of Vulnerability Rankings			Susceptibility Ranking Criteria																
				Highs	Mediums	Lows	Detects	Well/Intake	KCSs	PCSs	Highways/RRs	Pesticides	Septics	Urban Land Cover	Ag Land Cover	Animals	Lagoons	Dry discharges	Sanitary radius	Trophic status			
System Type <div>C</div> C=Community; P=Non-Transient, Non-Community; N=Transient																							
EPAID	0611010	System Name:		DERRY WATER DEPT																			
004	MANCHESTER WATER WORKS /LAKE MASSABES	E	12/3/2001	0	0	0																	
EPAID	0612010	System Name:		PEU /OAKWOOD TERRACE																			
502	DERRY WATER WORKS/LAKE MASSABESIC MAN	E	12/3/2001	0	0	0																	
EPAID	0612020	System Name:		PEU /MAPLE HILL ACRES																			
005	BRW	G	8/3/2001	1	2	9	L	L	M	L	L	L	H	L	M	L	L		L				
006	BRW	G	8/3/2001	1	2	9	L	L	M	L	L	L	H	L	M	L	L		L				
EPAID	0612040	System Name:		BARKLAND ACRES ASSOC																			
001	BRW	G	8/31/2000	2	1	9	L	L	L	L	L	L	H	L	M	L	L		H				
002	BRW	G	8/31/2000	2	1	9	L	L	L	L	L	L	H	L	M	L	L		H				
EPAID	0612050	System Name:		MORNINGSIDE DRIVE WATER ASSOC																			
001	BRW	G	11/5/2001	2	1	9	L	L	L	L	M	L	H	H	L	L	L		L				
002	BRW	G	11/5/2001	2	1	9	L	L	L	L	M	L	H	H	L	L	L		L				
EPAID	0612070	System Name:		GLEN RIDGE DEV																			
001	BRW	G	10/12/2000	1	3	8	L	L	L	L	M	L	H	L	M	L	L		M				
002	BRW	G	10/12/2000	1	3	8	L	L	L	L	M	L	H	L	M	L	L		M				
EPAID	0612080	System Name:		REDFIELD ESTATES																			

Source Number	Source Description	Source Type	Date Assessment Completed	Number of Vulnerability Rankings			Susceptibility Ranking Criteria														
				Highs	Mediums	Lows	Detects	Well/intake	KCSs	PCSS	Highways/RRs	Pesticides	Septics	Urban Land Cover	Ag Land Cover	Animals	Lagoons	Dry discharges	Sanitary radius	Trophic status	
	004	BRW	G	10/12/2000	1	2	9	L	L	L	M	L	L	H	L	M	L	L		L	
	007	BRW	G	10/12/2000	1	1	10	L	L	L	L	L	L	H	L	M	L	L		L	
	008	DREW WOODS INTERCONNECTION	E	12/3/2001	0	0	0														
EPAID	0612090	System Name:		HUBBARD HILL																	
	001	BRW	G	10/12/2000	1	3	8	L	L	L	L	M	L	H	L	M	L	L		M	
	002	BRW	G	9/15/2006	0	2	10	L	L	L	L	L	L	M	L	M	L	L		L	
	003	BRW	G	10/12/2000	1	3	8	L	L	L	L	M	L	H	L	M	L	L		M	
EPAID	0612110	System Name:		PEU /FARMSTEAD ACRES																	
	001	BRW	G	8/3/2001	4	0	8	L	L	L	L	L	H	H	H	H	L	L		L	
EPAID	0612120	System Name:		MEADOWBROOK																	
	001	BRW	G	8/3/2001	3	0	9	L	L	L	L	L	H	H	L	H	L	L		L	
	003	BRW	G	8/3/2001	2	0	10	L	L	L	L	L	L	H	L	H	L	L		L	
EPAID	0612130	System Name:		RICHARDSON ESTATES																	
	001	BRW	G	10/12/2000	0	2	10	L	L	L	L	M	L	L	L	M	L	L		L	
EPAID	0612140	System Name:		HI AND LO ESTATES																	
	001	BRW	G	10/12/2000	2	3	7	L	L	L	M	H	L	H	L	M	L	L		M	
	002	BRW	G	10/12/2000	2	3	7	L	L	L	M	H	L	H	L	M	L	L		M	
	003	BRW	G	10/12/2000	2	3	7	L	L	L	M	H	L	H	L	M	L	L		M	
	004	BRW	G	3/11/2005	2	3	7	L	L	L	M	H	L	H	L	M	L	L		M	
EPAID	0612150	System Name:		DREW WOODS																	
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	003	BRW	G	10/12/2000	1	5	6	L	L	L	M	M	M	H	L	M	L	L		M	
	004	BRW	G	10/12/2000	1	4	7	L	L	L	M	M	M	H	L	M	L	L		L	
	005	BRW	G	12/20/2001	1	3	8	L	L	L	L	L	L	H	L	M	M	L		M	
	006	BRW	G	12/20/2001	1	2	9	L	L	L	L	L	L	H	L	M	M	L		L	
	007	BRW	G	12/20/2001	1	3	8	L	L	L	L	L	L	H	L	M	M	L		M	

Source Number	Source Description	Source Type	Date Assessment Completed	Number of Vulnerability Rankings			Susceptibility Ranking Criteria													
				Highs	Mediums	Lows	Detects	Well/Intake	KCSs	PCSs	Highways/RRs	Pesticides	Septics	Urban Land Cover	Ag Land Cover	Animals	Lagoons	Dry discharges	Sanitary radius	Trophic status
EPAID	0612160	System Name:		WOODLAND AT DERRY																
001	BRW	G	8/13/2001	2	0	10	L	L	L	L	L	L	H	L	H	L	L		L	
002	BRW	G	8/13/2001	1	1	10	L	L	L	L	L	L	H	L	M	L	L		L	
EPAID	0612170	System Name:		MAPLE HAVEN																
002	BRW	G	10/12/2000	3	0	9	L	L	L	L	H	L	H	L	H	L	L		L	
003	BRW	G	10/12/2000	2	1	9	L	L	L	L	H	L	M	L	H	L	L		L	
004	BRW	G	10/12/2000	3	0	9	L	L	L	L	H	L	H	L	H	L	L		L	
EPAID	0612190	System Name:		BIRCHFIELDS																
001	BRW	G	10/12/2000	3	1	8	L	L	L	M	L	H	H	L	H	L	L		L	
002	BRW	G	10/12/2000	3	1	8	L	L	L	M	L	H	H	L	H	L	L		L	
EPAID	0612210	System Name:		OLD COACH VILLAGE																
001	BRW	G	2/7/2002	1	2	9	L	L	L	L	L	L	M	L	M	L	L		H	
002	BRW	G	8/3/2001	1	1	10	L	L	L	L	L	L	H	L	M	L	L		L	
EPAID	0612220	System Name:		AUTUMN WOODS																
001	BRW	G	10/10/2002	1	1	10	L	L	L	L	L	L	M	L	H	L	L		L	
002	BRW	G	10/10/2002	1	1	10	L	L	L	L	L	L	M	L	H	L	L		L	
EPAID	0612230	System Name:		RAND SHEPARD HILL																
001	BRW	G	12/20/2001	3	0	9	L	L	L	L	H	L	H	L	H	L	L		L	
002	BRW	G	12/20/2001	3	0	9	L	L	L	L	H	L	H	L	H	L	L		L	
003	BRW	G	12/20/2001	2	2	8	L	L	L	L	M	M	H	L	H	L	L		L	
EPAID	0612240	System Name:		WILLOW BEND																
001	BRW	G	3/15/2001	1	3	8	L	L	L	L	H	L	M	L	M	M	L		L	
EPAID	0613010	System Name:		ANNIE OAKLEY MOBILE HOME PARK																
001	BRW	G	7/12/2000	3	3	6	H	L	H	L	L	L	M	M	M	L	L		H	

Source Number	Source Description	Source Type	Date Assessment Completed	Number of Vulnerability Rankings			Susceptibility Ranking Criteria												
				Highs	Mediums	Lows	Detects	Well/Intake	KCSs	PCSs	Highways/RRs	Pesticides	Septics	Urban Land Cover	Ag Land Cover	Animals	Lagoons	Dry discharges	Sanitary radius
EPAID 0613030	System Name: PEACEFUL ACRES																		
001	BRW	G	8/3/2001	5	3	4	H	L	H	M	H	L	H	H	M	L	L		M
EPAID 0613050	System Name: FROST RESIDENTS COOPERATIVE																		
003	BRW	G	10/28/2002	2	3	7	L	L	M	M	H	L	H	L	M	L	L		L
EPAID 0613060	System Name: THE BIG W																		
003	BRW	G	4/4/2001	5	2	5	H	L	L	M	H	L	H	H	M	L	L		H
System Type <input type="text" value="N"/> C=Community; P=Non-Transient, Non-Community; N=Transient																			
EPAID 0617030	System Name: HIDDEN VALLEY CAMPGROUND																		
002	BRW	G	1/14/2000	1	0	8	L	L	L	H	L	L	L			L	L		
EPAID 0617040	System Name: BOYS CLUB OF GREATER DERRY																		
001	BRW	G	7/11/2001	1	0	8	L	L	L	H	L	L	L			L	L		
EPAID 0617060	System Name: ROBERT FROST FARM																		
001	BRW	G	6/16/2000	3	0	6	L	H	L	H	H	L	L			L	L		
EPAID 0618050	System Name: NEW LEIS GARDEN																		
001	BRW	G	9/19/2000	2	0	7	L	L	L	H	H	L	L			L	L		
EPAID 0618060	System Name: ROBERT FROST MOTOR INN																		
001	BRW	G	6/16/2000	3	0	6	L	L	H	H	H	L	L			L	L		
EPAID 0618080	System Name: BEAVER LAKE MHP AND COTTAGES																		
001	BRW	G	7/26/2001	1	0	8	L	L	L	H	L	L	L			L	L		
EPAID 0618090	System Name: PROMISES TO KEEP																		
001	BRW	G	1/14/2000	0	0	9	L	L	L	L	L	L	L			L	L		
002	BRW	G	6/16/2000	0	0	9	L	L	L	L	L	L	L			L	L		
EPAID 0618100	System Name: KERSHAW'S QUICK STOP																		

Source Number	Source Description	Source Type	Date Assessment Completed	Number of Vulnerability Rankings			Susceptibility Ranking Criteria													
				Highs	Mediums	Lows	Detects	Well/Intake	KCSs	PCSs	Highways/RRs	Pesticides	Septics	Urban Land Cover	Ag Land Cover	Animals	Lagoons	Dry discharges	Sanitary radius	Trophic status
001	BRW	G	7/23/2001	3	0	6	L	L	H	H	H	L	L			L	L			
System Type <input type="text" value="P"/> C=Community; P=Non-Transient, Non-Community; N=Transient																				
EPAID	<input type="text" value="0615020"/>	System Name: <input type="text" value="CALVARY CHURCH AND SCHOOL"/>																		
001	BRW	G	8/3/2001	2	2	8	L	L	L	L	L	L	H	M	M	L	L		H	
EPAID	<input type="text" value="0615040"/>	System Name: <input type="text" value="CIRCLE OF FRIENDS SCHOOL"/>																		
001	BRW	G	8/3/2001	3	2	7	L	L	L	M	H	L	H	L	H	L	L		M	
EPAID	<input type="text" value="0615060"/>	System Name: <input type="text" value="E DERRY MEMORIAL ELEM SCHOOL"/>																		
001	BRW	G	8/3/2001	1	4	7	L	L	L	M	L	M	H	L	M	L	L		M	
EPAID	<input type="text" value="0615070"/>	System Name: <input type="text" value="OVER THE RAINBOW PRESCHOOL"/>																		
001	BRW	G	11/5/2001	2	4	6	L	L	H	M	H	L	M	L	M	L	L		M	
EPAID	<input type="text" value="0616020"/>	System Name: <input type="text" value="HILLSIDE PLAZA"/>																		
001	BRW	G	3/13/2001	3	3	6	H	L	H	M	H	L	L	L	M	L	L		M	

Explanatory Notes

Abbreviations used in the following notes:

HAC = hydrologic area of concern for a surface water source. *For small or undeveloped watersheds, the HAC includes the entire watershed. For all other surface sources, the HAC includes only a portion of the watershed close to the water system intake.*

WHPA = wellhead protection area for a groundwater source. *For community and non-transient systems, the WHPA is the area from which water is expected to flow to the well under extremely dry conditions. For transient systems, the WHPA is the area within 500 ft of the well.*

EPAID: Each public water system is identified by a 7-digit federal ID number.

Source number: Each source is further identified by a 3-digit number.

Source description: An abbreviated description of the source from NHDES's database. (Some common abbreviations: BRW=bedrock well; GPW=gravel-pack well; GRW=gravel well; DUG=dug well; PTW=point well; SPR=spring; ART=artesian well; INF=infiltration well.)

Source type: G=groundwater (well or spring); S=surface water (lakes, reservoirs, ponds, rivers); E = water purchased from another system (*Purchased sources are not assessed per se, but the original sources used by the seller are assessed*).

Date Assessment Completed: The date NHDES completed the process of reviewing available data, collecting new data, and entered the assessment information into its database.

Number of Vulnerability Rankings: The number of High, Medium, and Low rankings for that source listed in the columns to the right. Each criterion is explained below. Some criteria do not apply to all types of sources or systems.

Detects: Confirmed detections of certain contaminants (after treatment) of suspected human origin, not including disinfection byproducts. L = none detected at or above trigger levels in the most recent round of sampling. There is no M ranking for this criterion. H = contaminants were detected at or above trigger levels.

Well/Intake: The integrity of the well (if a groundwater source) or the intake (if a surface water source). L = no unresolved deficiencies with the well or intake identified in the most recent sanitary survey. There is no M ranking for this criterion. H = there are unresolved deficiencies.

KCSs: Known contamination sources in the vicinity of the source. This includes any site known to DES where contaminants are known or very likely to have been released to the ground, and where remediation is not complete. L = none present in the WHPA (for groundwater sources) or in the HAC (for surface water sources). M (for community and non-transient systems) = one or more KCSs in the WHPA or HAC but not within 1,000 ft of the well or intake. *There is no M ranking for transient systems.* H = one or more KCSs within the WHPA or HAC within 1,000 ft of the well or intake.

PCSs: Potential contamination sources in the vicinity of the source. This includes any site known to DES where contaminants are known or very likely to be used in significant quantities, but where there are no known releases to the ground. L (for community and non-transient systems) = no PCSs within 1,000 ft of the well in the WHPA (for groundwater sources) or none present in the HAC (for surface water sources). L (for transient systems) = none present in the WHPA. M (for groundwater sources serving community and non-transient systems) = 10 or fewer PCSs within 1,000 ft of the well in the WHPA. M (for surface water sources) = one or more PCSs in the HAC but not within

1,000 ft of the intake. *There is no M ranking for transient systems.* H (for groundwater sources serving community and non-transient systems) = more than 10 PCSs within 1,000 ft of the well in the WHPA. H (for transient sources) = one or more PCSs in the WHPA. H (for surface water sources) = one or more within 1,000 ft of the intake in the HAC.

Highways/RRs: The presence of numbered state highways or active railroads in the vicinity of the source. L = none present in the WHPA or HAC. M (for community and non-transient groundwater sources) = one or more in the WHPA but not within 1,000 ft of the well. M (for surface sources) = one or more in the HAC but not within 300 ft of the source water. *There is no M ranking for transient systems.* H (for transient sources) = one or more in the WHPA. H (for community and non-transient groundwater sources) = one or more in the WHPA within 1,000 ft of the well. H (for surface sources) = one or more in the HAC within 300 ft of the source water.

Pesticides: Whether or not pesticides have been routinely applied in the vicinity of the source. This is based on the presence of land parcels owned by registered pesticide applicators. L = no application areas in WHPA or HAC. M (for community and non-transient sources) = application site(s) in WHPA or HAC but not within 500 ft of the well or within 300 ft of the intake. *There is no M ranking for transient systems.* H = application site(s) within 500 ft of the well or within 300 ft of the intake.

Septics: The presence or density of septic systems and sewer lines in the vicinity of the source. L (for community and non-transient groundwater sources) = no septic systems or sewer lines located within 500 ft of the well, and fewer than 30 septic systems in the remainder of the WHPA. L (for surface sources) = no septic systems within 500 ft of surface water. L (for transient sources) = no septic systems or sewer lines within 75 ft of the well. M (for community and non-transient groundwater sources) = fewer than 10 septic systems and no sewer line located within 500 ft of well, and fewer than 30 septic systems in remainder of the WHPA. M (for surface sources) = low density of septic systems (lots averaging 2 acres or more) within 500 ft of surface water in the HAC. *There is no M ranking for transient systems.* H (for community and non-transient groundwater sources) = 10 or more septic systems or any sewer line within 500 ft of the well and/or high density of septic systems (more than 30) in the WHPA. H (for surface sources) = densely developed shoreline (lots averaging less than 2 acres) within 500 ft of surface water in the HAC. H (for transient sources) = one or more septic systems or sewer lines within 75 ft of the well.

Urban Land Cover: The percentage of urban land cover in the vicinity of the source, based primarily on satellite images. *This criterion does not apply to sources serving transient systems.* L = less than 10% of the WHPA or HAC is urban, and less than 10% of the WHPA within 1,000 ft of the well is urban. M (for community and non-transient groundwater sources) = less than 10% of WHPA is urban but 10% or more of the WHPA within 1,000 ft of the well is urban. M (for surface sources) = between 10% and 20% of HAC is urban. H (for community and non-transient groundwater sources) = 10% or more of WHPA is urban. H (for surface sources) = 20% or more of HAC is urban.

Ag Land Cover: The percentage of agricultural land cover in the vicinity of the source (in the WHPA or within 300 ft of surface water in the HAC), based primarily on satellite images. *This criterion does not apply to sources serving transient systems.* L = no ag land. M = less than 10% ag land. H = 10% or more ag land.

Animals: The presence of concentrations of 10 or more animal units in the vicinity of the source. L = none in the WHPA or (for a surface source) within 300 ft of surface water in the watershed. M (for community and non-transient groundwater sources) = one or more such farms in the WHPA but not within 1,000 ft of the well. M (for a surface source) = none within 300 ft of surface water in the HAC, but one or more within 300 ft of surface water in the watershed. *There is no M ranking for transient systems.* H = one or more in the WHPA within 1,000 ft of the well or (for a surface source) within 300 ft of surface water in the HAC.

Lagoons: The presence of wastewater treatment lagoons or spray irrigation sites in the vicinity of the source. L = none in the WHPA or (for a surface source) in the entire watershed. M (for community and non-transient groundwater sources) = one or more in the WHPA but not within 1,000 ft of the well. M (for a surface source) = none within 300 ft of surface water in the HAC, but one or more in the watershed. *There is no M ranking for transient systems.* H = one or more in the WHPA within 1,000 ft of the well or (for a surface source) within 300 ft of surface water in the HAC.

Dry Discharge: The presence of dry-weather stormwater discharge sites in the vicinity of the source. *Only a handful of surface sources were evaluated for such discharges; no discharges were found.*

Sanitary Radius: The presence of development not associated with the well within the sanitary radius (within 75 to 400 ft of the well). *Applies only to groundwater sources serving community and non-transient systems.* Of particular concern are sewer lines, septic systems, or storage of regulated substances in this area. L = no inappropriate land uses or practices. No medium ranking. H = inappropriate land uses or practices were discovered during the most recent sanitary survey, and have not been corrected.

Trophic status: The projected trophic (nutrient) status of the source as predicted by a computer model using a future land development scenario for the watershed. *This criterion applies only to 24 lakes, ponds, and reservoirs included in the phosphorus loading study.* L = oligotrophic (relatively good clarity and water quality with low algae population). M = mesotrophic (intermediate clarity, quality, and algae population). H = eutrophic

Appendix F

**Soils-based Lot Sizing,
Derry, NH**

LAND DEVELOPMENT CODE REGULATIONS

TABLE A - MINIMUM LOT AREA BY SOIL TYPE

SOIL TYPE	LOT SIZE	SOIL TYPE	LOT SIZE	SOIL TYPE	LOT SIZE
111CH	45000	212CH	80000	23XDH	140000
111DH	60000	212DH	95000	23XEH	NA
111EH	NA	212EH	NA	241BH	50000
112BH	75000	213BH	50000	141CH	75000
112CH	80000	213CH	75000	241DH	100000
112DH	95000	213DH	100000	241EH	NA
112EH	NA	213EH	NA	243BH	50000
114*H	NA	214*H	NA	243CH	75000
11XBH	80000	21XBH	80000	243DH	100000
11XCH	100000	21XCH	100000	243EH	NA
11XCH	100000	21XDH	140000	244*H	NA
11XEH	NA	21XEH	NA	24XBH	90000
121BH	40000	221BH	40000	24XCH	130000
121CH	45000	221CH	45000	24XDH	180000
121DH	60000	221DH	60000	24XEH	NA
121EH	NA	221EH	NA	251BH	90000
122BH	75000	222BH	75000	251CH	135000
122CH	80000	222CH	80000	251DH	150000
122DH	95000	222DH	95000	251EH	NA
122EH	NA	222EH	NA	253BH	90000
124*H	NA	223BH	50000	253CH	135000
12XBH	80000	223CH	75000	253DH	160000
12XCH	100000	223DH	100000	253EH	NA
12XDH	140000	223EH	NA	254*H	NA
12XEH	NA	224*H	NA	25XBH	130000
161BH	50000	22XBH	80000	25XCH	190000
161CH	55000	22XCH	100000	25XDH	240000
161DH	70000	22XDH	140000	25XEH	NA
161EH	NA	22XEH	NA	261BH	50000
164*H	40000	231BH	40000	261CH	55000
166*H	NA	231CH	45000	261DH	70000
16XBH	90000	231DH	60000	261EH	NA
16XCH	110000	231EH	NA	263BH	60000
16XDH	150000	233BH	50000	263CH	85000
16XEH	NA	233CH	75000	263DH	110000
211BH	40000	233DH	100000	263EH	NA
211CH	45000	233EH	NA	264*H	NA
211DH	60000	243*H	NA	266BH	NA
211EH	NA	23XBH	80000	26XBH	90000
26XCH	110000	33XBH	115000	412BH	145000
26XDH	150000	33XCH	155000	412CH	190000
26XEH	NA	33XDH	205000	413BH	90000
275*H	NA	33XEH	NA	413CH	135000

DERRY CODE

SOIL TYPE	LOT SIZE	SOIL TYPE	LOT SIZE	SOIL TYPE	LOT SIZE
311BH	60000	341BH	75000	414*H	NA
311CH	90000	341CH	100000	41XBH	150000
311DH	120000	341DH	125000	41XCH	180000
311EH	NA	341EH	NA	421BH	75000
312BH	95000	343BH	75000	421CH	115000
312CH	125000	343CH	100000	422BH	130000
312DH	155000	343DH	125000	422CH	165000
312EH	NA	343EH	NA	423BH	90000
313BH	60000	344*H	NA	423CH	135000
313CH	90000	34XBH	115000	424*H	NA
313DH	120000	34XCH	155000	42XBH	150000
313EH	NA	34XDH	205000	42XCH	180000
314*H	NA	34XEH	NA	431BH	150000
31XBH	100000	351BH	90000	431CH	150000
31XCH	120000	351CH	135000	433BH	115000
31XDH	160000	351DH	160000	433CH	50000
31WEH	NA	351EH	NA	434*H	NA
321BH	50000	353BH	90000	43XBH	175000
321CH	75000	353CH	135000	43XCH	235000
321DH	100000	353DH	160000	441BH	115000
321EH	NA	353EH	NA	441CH	150000
322BH	85000	354*H	NA	443BH	115000
322CH	100000	35XBH	130000	443CH	150000
322DH	135000	35XCH	190000	444*H	NA
322EH	NA	35XDH	240000	44XBH	175000
323BH	60000	35XEH	NA	44XCH	235000
323CH	90000	361BH	70000	451BH	135000
323DH	120000	361CH	100000	451CH	205000
323EH	NA	361DH	130000	453BH	135000
324*H	NA	361EH	NA	453CH	205000
32XBH	100000	363BH	70000	454*H	NA
32XCH	120000	363CH	100000	45XBH	195000
32XDH	160000	363DH	130000	45XCH	285000
32XEH	NA	363EH	NA	461BH	105000
331BH	75000	364*H	NA	461CH	150000
331CH	100000	366*H	NA	462BH	105000
331DH	125000	36XBH	110000	463CH	150000
331EH	NA	36XCH	130000	464*H	NA
333BH	75000	36XDH	170000	466*H	NA
333CH	100000	36XEH	NA	46XBH	165000
333DH	125000	375*H	NA	46XCH	195000
333EH	NA	411BH	90000		
334*H	NA	411CH	135000		

Appendix G

1986 Historic Preservation Report

Lynne Emerson Monroe

Historic Preservation
Cultural Resources in Derry (1986)

Report by Lynne Emerson Monroe, Historic Preservation Consultant

Cultural Resources in Derry

The Cultural Resources Survey identified approximately 875 structures built in Derry prior to World War II. These individual structures combine with the landscape elements to make up the historic man made and natural environment of Derry.

Derry's development has historically been linked to regional transportation patterns. The first area of settlement was in the village center today, known as EAST DERRY, which was located on the east/west stagecoach road to Portsmouth, which was then the capital of New Hampshire. In 1806 a north/south turnpike was built to the new capital in Concord (Route 28) and a second village center grew up 1 ½ miles west at the intersection of these two routes. Originally distinguished as "Lower Village", this center is now known as DERRY VILLAGE. Forty years later, a new mode of transportation, the railroad came to town. The tracks ran parallel to the turnpike, about 1 ½ miles west and a new village center grew up around the railroad depot, i.e., Derry Depot. This village is today known as WEST DERRY.

These three village centers have distinctly individual characters as defined by the styles of the building popular at their period of development. Each center has survived in a remarkably intact condition.

The Scotch-Irish people who came to settle Derry in the eighteenth century were mostly farmers. Therefore, major industry of the town was agriculture. Throughout the town, large tracts of land were cleared for these farms. During the nineteenth century subsistence farming gave way to specialty farming, primarily dairy and orchards, and in the twentieth century the poultry industry enjoyed a brief popularity. Both the buildings and the landscapes associated with these farms still survive to maintain the character of this segment of Derry's development.

In the last quarter of the nineteenth century, many of Derry's farms were abandoned so that people might go to work in the factories. Some of these farms were bought as summer houses and some remodeling took place during that time as an indication of this.

This was also the era of the streetcar, and the electric railroad brought summer tourists to Derry's lakes and ponds. Cabin colonies grew up on Island Pond, Chases' Grove, Germantown and Beaver Lake. Beaver Lake Lodge survived as

an architectural resource from this time period, as did many of the cabin colonies. Other resources, such as the pavilion, have been lost.

Like many towns in the state, Derry developed an industrial base during the nineteenth century; in this case, the shoe industry, which grew in West Derry. Only two factories survive, as testament of this important industry.

Framework for Maintaining Derry's 'Small-Town Character'

The first important step for maintaining the character of Derry has been taken by identifying it in the Cultural Resources Survey. The next step will be to publicize the results of the survey and create an enthusiastic public. Generally, the results of a survey are enthusiastically received by the community. Most people love history and old houses. Once this appetite has been created, encouraging this public to take steps to protect these resources is much simpler. The Historic District Commission will be seen in a leadership role in this program as a newly created Board in the Certified Local Government program for the state. The Commission will be seen as the resource for historic preservation issues, both by town boards and private property owners.

Resource Protection Measures

East Derry: This center has already been listed on the National Register of Historic Places. National register listings give recognition and promote pride, but provide no specific protection for identified properties. The Historic District Commission should define boundaries as identified in the Cultural Resources Survey, and recommend to Town Council that East Derry be considered as a local historic district. The boundaries of this district should be larger than the boundaries of the National Registered District already identified. Besides being governed by the ordinance that the Historic District will create, a public education program for property owners should be undertaken. Good maintenance is a building's best protection. East Derry has an outstanding collection of Federal period buildings. It is architecturally significant and its best protection will be through good continued maintenance.

Derry Village: Derry Village is also predominantly Federal in style, and additionally it has late nineteenth century, early twentieth century residential neighborhoods. Derry Village also boasts an intact brick factory and Pinkerton Academy among its architectural resources. This area is somewhat less intact, due to the rotary which bisected the area in the 1940's. Derry Village should be considered as a local historic district. Its boundaries have been identified on the historic architectural areas map of the Cultural Resources Survey. In addition, property owners should be encouraged to undertake good rehabilitation programs.

West Derry: This area contains the largest concentration of older buildings in town. It grew up around the railroad and the shoe factories, and the growth and expansion of these industries can be read in the distinctive, intact neighborhoods, civic and industrial structures, and a fine commercial district on Broadway, i.e., downtown. Preserving the character of this large area will involve multiple techniques. The first idea would be to create another historic district, but with fewer controls than those suggested for East Derry and Derry Village. The review of the Historic District Commission would be given only on demolition or new construction.

Residential Neighborhoods: New zoning should reflect the historic character of these neighborhoods. When discussing neighborhoods, it is important to work first with a public education program for residents and property owners. Neighborhood organizations can then be created for the understanding, enjoyment and promotion of these fine neighborhoods.

The National Trust for Historic Preservation publishes an excellent newsletter called "Conserve Neighborhoods". In addition to the newsletter, they run conferences and programs for neighborhood leaders. Derry should consider participation in this program. Leadership for this effort might come from the Historic District Commission or from the Derry Planning Office. Various avenues might be explored for identifying neighborhood leadership. If this becomes a priority, the possibilities are limitless. These special areas are one of Derry's primary resources for maintaining a sense of community alive.

Downtown Commercial Center: A variety of late nineteenth, early twentieth century commercial buildings have survived. These are in various states of preservation, having had unfortunate rehabilitation efforts during the last decade. In many cases, the buildings survive in an intact condition on the second stories, while on the first story, storefronts have been replaced with newer, unsympathetic designs. Regional shopping centers and patterns have changed, as commercial strip development has developed on the borders of town and outlying areas. Downtown has some vacancies now.

Downtown has a diversity of uses, as well as visual diversity. Unfortunately, many open spaces have been created, where buildings have been lost to fire and demolition. The filling-in of these spaces should be carefully supervised by the Historic District Commission so that the scale and texture of the streetscape can be reaffirmed.

West Derry is most often defined by its commercial area on Broadway, i.e., its downtown. The downtown area is an important element in identifying the character of Derry – where people shop, go to the post office, go to the Town Hall, and go to the library has a lot to do with their sense of community. If streetscape improvements, such as light fixtures, paving or pedestrian amenities are being considered, the Historic District Commission should be consulted as to

their design. A fatal mistake of many downtowns is including Colonial or fake elements from other periods. Derry's downtown is emphatically turn-of-the-century and this unique character has been defined in the Cultural Resources Survey and must be respected when improvements are considered. From time to time, the state makes available money to fund a storefront program. Derry should participate if this possibility arises; or the town might undertake its own program by hiring a qualified architect familiar with this type of work, to make suggestions to various merchants on how to improve their storefronts.

Many techniques exist for helping to revitalize a downtown. Regionally, many communities have conducted successful revitalization programs of their downtowns. Advice is available from the New Hampshire State Historic Preservation Office, Office of State Planning, and Regional Planning Commissions. The National Trust for Historic Preservation has a Mainstreet Program, which offers matching funds for hiring Downtown Managers. Derry might look into this significant program. A downtown Merchant's Association might be formed to promote downtown shopping. A boost in the downtown economy would clearly boost the architectural resources as well.

Two studies were produced in 1984. They were compiled by a team of professionals from Applied Economic Research and Rist-Frost Associates. These studies are titled "Derry Railroad Corridor Feasibility Study, Part One: Economic Analysis" and "Part Two: Feasibility Study". These studies were undertaken as preliminary steps toward revitalizing the downtown. These studies should be utilized and implemented by a Downtown Revitalization Committee. This Committee should be formed of representatives of both the public and private sectors, i.e., a member of the Town Council, the Historic District Commission, the Planning Board, the Chamber of Commerce, the Merchant's Association, a local merchant, a real estate owner, and possibly a developer to name some possibilities. This group could form a steering committee to implement the studies and begin work on the process of revitalization.

Summer Resort Areas: The areas identified on Derry's two lakes might be considered as secondary historic districts. In these areas, the Historic District Commission would have jurisdiction only over demolition and new construction. The guidelines of the commission could address the specific architecture of the cabins at the turn-of-the-century. Property owners could be encouraged, therefore, to maintain their properties in a characteristic and sympathetic manner. These areas are part of the unique character of Derry.

Historic Agricultural Areas: During the eighteenth and nineteenth centuries, much of the arable land in Derry was cleared for farming. This process has reversed in the twentieth century, however, and today many of the farms have been abandoned and much of the land is returning to forest cover. To accommodate Derry's considerable housing boom, many of these historic farms have already been bought and subdivided.

The Cultural Resources Survey identified nearly a dozen areas where the historic agricultural character of Derry was still remarkably intact. In these areas, the landscape combines with the historic farms to present a wonderful picture of the agricultural heritage of the town. Driving or walking through these areas, it is possible to recall the days before the housing boom.

A current survey of the open land in Derry shows 50 parcels in the ownership of 30 to 35 people. Some of this land is used by two dairy farms, which still operate; half a dozen market garden farms, some orchards, and several horse farms (a recent trend). The balance of open land which is not owned by the farmers, is rented by them and used for crops, such as hay, alfalfa and corn. The availability of this land is especially important for dairy farmers who are unable to afford to own the amount of acreage they need. Indeed, the important dairy industry may be on the verge of extinction in Derry.

Open agricultural land is the single resource which contributes to the character of Derry that is in the greatest present danger. Therefore, the Historic Preservation Committee spent a great deal of time exploring the individual techniques available for protecting land. These techniques include municipal land use controls such as historic districting; agricultural zoning; land evaluation and its site assessment (LESA); the right-to-farm law; site plan review combined with cluster development and planned unit development; performance standards; and transferable development rights. It was the consensus of the committee that a combination of these techniques would be helpful in achieving their goal. However, the disadvantages of most of these techniques was that they would require considerable professional expertise. This would mean additional volunteer efforts and/or staff in the town Planning Department to initiate and manage these programs. Nevertheless, the Committee felt that an investment in a part-time or full-time staff person to handle these programs, would be well worthwhile in the benefit gained by undertaking these protection measures.

The Committee also investigated private incentives and programs that could augment the community's efforts. A private/public partnership could be formed, which could increase the potential for protecting open land. These techniques included the formation of local development corporations, and revolving funds to be managed by a local development corporation. The local development corporation can include land trusts; the problem again was the need for staff time. Other private possibilities included estate planning; easements; covenants and deed restrictions; and outright acquisition by both public and private sectors.

The overall concept of partial development was looked on favorably as the strongest possibility. The advantage of this concept is that it involves the establishment of an informal partnership among the landowner, local conservation groups, the developer and the bank responsible for financing the package. This approach is beneficial because it allows fair compensation to the

large property owner and provided for new housing, while protecting land resources critical to the community.

The recommendation of the Historic Preservation Committee, therefore, is that an ongoing group, a Landscape Preservation Committee be formed to begin the actual implementation of land protection. This group should have representatives from both public and private sectors.

Other Possibilities

With the development of these implementation techniques, the remaining sections of Community Goal #2 and #10 have been met. Other elements of the Master Plan should be reviewed for compatibility with historic preservation goals. These include:

Transportation Many of the roads and highways in Derry represent historic routes of travel. These roads should be given special consideration. Some areas have been identified on the map as scenic agricultural and historic areas. Every effort should be made to divert traffic away from these historic routes, rather than widening them to accommodate increased traffic through the area. Highway and road improvement can potentially have serious impact on the integrity of Cultural Resources. Forethought and flexibility should be the watch words when dealing with such improvements. The Department of Public Works and Highways should be informed that Derry now has a complete Cultural Resources Inventory. This will help them in the pre-designed stage so that Derry can be assured that these resources will be given full consideration during corridor and design hearings.

Derry has serious traffic problems that must be addressed. One possibility that does not seem to have been explored is the possibility of mass transit. Regional studies have been and are being done, and Derry might consider stronger participation, even leadership, in these efforts. A mass transit system could be beneficial to all parts of town.

Recreation Derry's ponds and parks have been a source of recreation throughout its history. These historic uses should be maintained and encouraged. Town facilities in West Derry include tennis courts and a lake front recreational center. The development of more such resources is encouraged. The historic railroad corridor has been abandoned and should be maintained in an open condition. This corridor provides a scenic/historic recreation possibility.

The area known as English Range, progressing down through Chester Road, Beaver Lake to East Derry and south of East Derry center is amazingly intact. This scenic section could be enhanced by a series of bicycle paths and/or trails. A brochure highlighting the historic and scenic uses could be prepared to highlight the community's most outstanding assets.

Community Facilities The town should conduct a space-needs inventory and compare it with the space existing in some of its historic structure. For instance, the town owns the significant Adams Memorial Building, which has a particularly high uses as a theatre or arts center. A study report of the feasibility of reusing this building, produced in 1982, will be very helpful with this project. The Capital Improvements Program should reflect the needs of these buildings, for maintenance and rehabilitation.

It is important that the implementation efforts of other phases of the Master Plan, such as transportation, economic development, and downtown revitalization, be coordinated with the cultural preservation efforts outlined in this segment of Derry's Master Plan.

