



DERRY MASTER PLAN

VOLUME II: INVENTORY AND ASSESSMENT OF EXISTING CONDITIONS

October 2019



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Derry Master Plan:
Inventory and Assessment of Existing Conditions
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INTRODUCTION

The following is an inventory and assessment of the existing conditions of Derry's resources. These are presented in the chapters written for each of the Master Plan Elements listed below.

The Master Plan is presented in three (3) volumes. This document is Volume II of the Plan.

- **Volume I:** Presents the Plan, its foundations and recommendations
- **Volume II:** Represents an inventory and assessment of existing conditions
- **Volume III:** Includes a summary of public input.

This report, VOLUME II is a compilation of the **INVENTORY AND ASSESSMENT OF EXISTING CONDITIONS** of Derry's resources. It is a "snapshot" in time and represents the conditions and plans for the future that were able to be determined at the time of writing. This document is an appendix to the Master Plan and contains:

- A series of Summary Sheets: a summary of the key points of each of the Master Plan Element chapters.
- The complete Inventory of the Town's resources and an assessment of these existing conditions by master plan element

Housing and Population

Economic Development

Historic and Cultural Resources

Open Space and Natural Resources

Recreational Resources

Transportation

Community Facilities and Services

Energy Conservation and Future Resiliency Planning

Land Use and Zoning

The inventory is based on a review of existing documents, relevant plans and data, as well as on a significant number of interviews. Please see a partial list of resources in the pages that follow.

PARTIAL LIST OF INTERVIEWS CONDUCTED FOR THE INVENTORY AND ASSESSMENT OF EXISTING RESOURCES

Housing Authority, Executive Director

Derry Arts Council, Member

Greater Derry Arts Council, Trustee

Highway Safety Committee, Chairman

Economic Development, Director

Derry Public Library, Director

Taylor Public Library, Director

Code Enforcement, Director

Heritage Commission, Chairman

Police Department, Chief

Fire Department, Chief

Public Health, Health Officer

Town Administrator

Superintendent of Schools, SAU #10

Department of Public Works (DPW, Highway, Water, Wastewater, Recreation), Director

Parks and Recreation, Director

Planning Department, Town Planner

Planning Department, Assistant Planner

Economic Development Advisory Committee, Chairman

Pinkerton Academy, Headmaster

Rail Trail Alliance, Chair

Net Zero Task Force, Chair

Conservation Commission, Chair

Forest Hills Cemetery, Superintendent

Upper Village Hall, Director

Southern New England Planning Commission

SAMPLE INTERVIEW QUESTIONS

- What are your Department's priorities?
- What future opportunities or challenges do you foresee?
- What are your plans for the immediate and long-term future?
- How can we best integrate your needs and plans into the master plan?

REFERENCES

Materials, such as reports, plans and data sources referenced for this inventory are included at the end of each chapter as is relevant.

Master Plan: Derry, NH
Inventory and Assessment of Existing Conditions

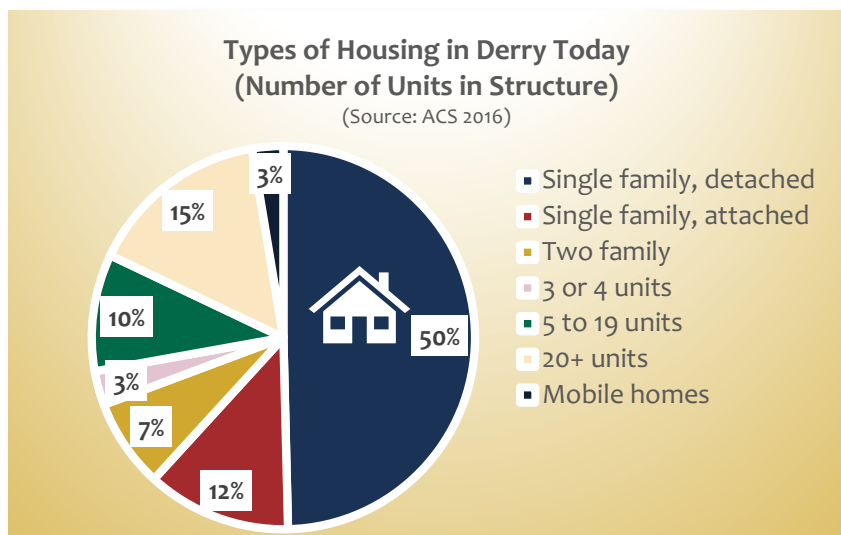
Summary of Inventory



Housing & Residential Development 1

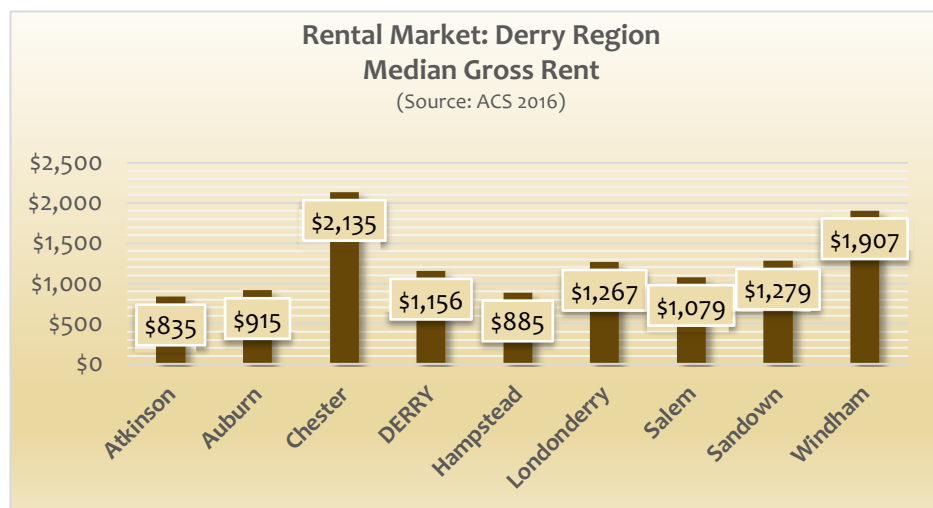
HOUSING FOR EVERYONE

- Derry offers a broader mix of housing than all of its neighbors and other New Hampshire towns of similar size.
- Today, half of all housing units in Derry are detached single-family homes. The other half includes a mix of everything from two-family residences to large multifamily apartment buildings.
- Due to the mix of housing types in Derry, people who need or choose to rent have more choices here. Renters currently comprise almost 40 percent of all households in Derry. The only community in the region that approaches Derry's range of rental housing options is Salem.
- Another important feature of Derry's housing is that many younger people, priced out of housing in the region and over the border in Massachusetts, can still find a place to live in Derry. As a result, 22 percent of the town's renter households are under 35 years and renting the unit they occupy. Southern New Hampshire generally is witnessing steady growth in younger households, and Derry's experience is consistent with that trend.
- At the same time, asking rents in Derry are about on par with the larger region, and Rockingham County rents are generally highest in the state. The median monthly rent in Derry is currently \$1,156 – much lower than Chester's \$2,135 but very similar to, and slightly higher than, several of the surrounding towns. Nevertheless, Derry is deemed to meet its "fair share" of the region's affordable housing needs.

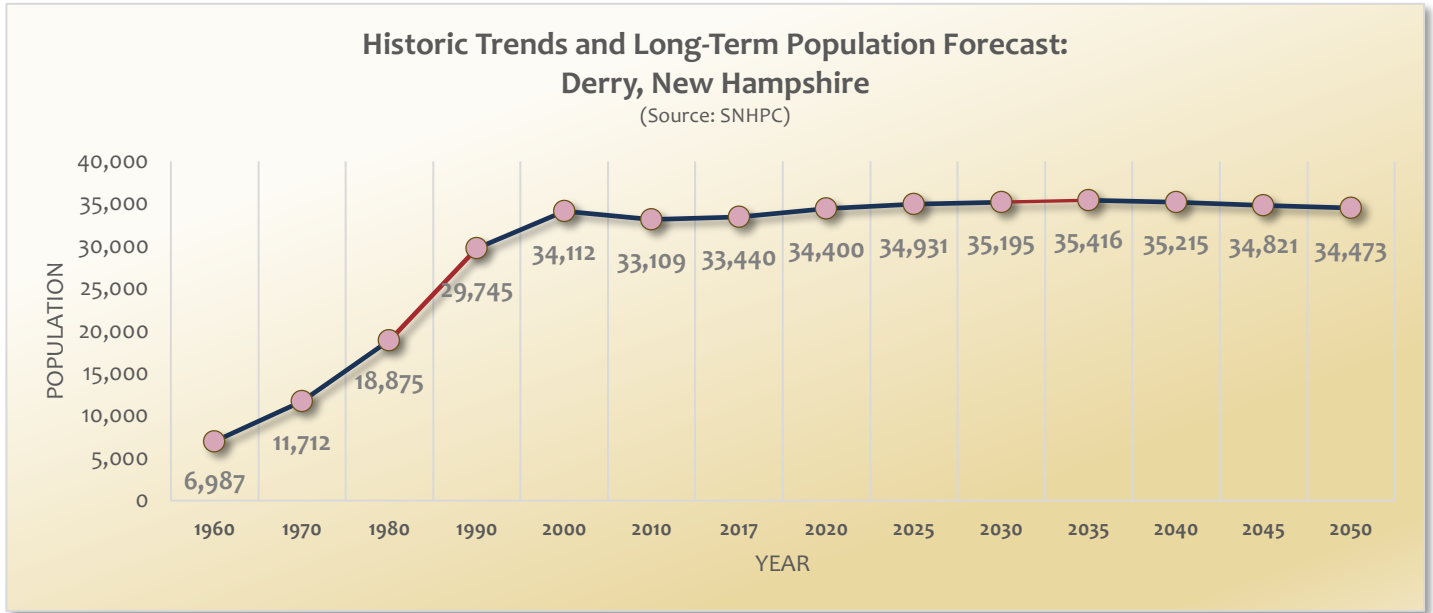


WHAT DOES IT MEAN?

- Derry is a residential town where housing is, and will continue to be, the primary land use and primary component of the tax base.
- Derry has many young householders because its housing is fairly affordable and offers many choices. The presence of many young people bodes well for the town's economic future if Derry can capitalize on the entertainment, dining, and recreation interests of millennials and young families.
- Derry satisfies its legal "fair share" of regional housing needs, but there are still lower-income people living in housing they cannot afford.



POPULATION & HOUSEHOLD CHARACTERISTICS



- Derry's recent past is a story of tremendous population growth, triggered by the combined forces of Baby Boom household formations and the exodus of Massachusetts workers to New Hampshire in the 1970s and 1980s. The town's "bedroom community" economy is a direct reflection of these forces.
- Regional planners estimate that population growth will continue at a very slow pace from this point forward. The regional forecast holds that by 1950, Derry's population will be about a thousand more than it is today.
- Population forecasts matter for long-range planning, but housing analysts pay even closer attention to household demographics: household types and sizes, householder ages, and household wealth. Communities control the make-up of their populations and households by the choices they make to control housing growth, so it is no surprise to find greater household diversity in communities with greater housing diversity. About 70 percent of Derry's 12,500 households (rounded) are **families**, which is a lower rate of family households than any of the surrounding communities. This is due, at least in part, to the range of housing types and price points available in Derry.
- Despite the somewhat lower rate of family households in Derry, the families that do live here tend to be families with children. Compared with all the surrounding towns, Derry has one of the highest rates of families with dependent children (under 18 years): 47 percent.
- Derry has many small households, too. Among non-family households, 87 percent are single people living alone.
- Approximately 44 percent of all households in Derry have low or moderate incomes. According to estimates from HUD, 72 percent are paying more for housing than they can actually afford.





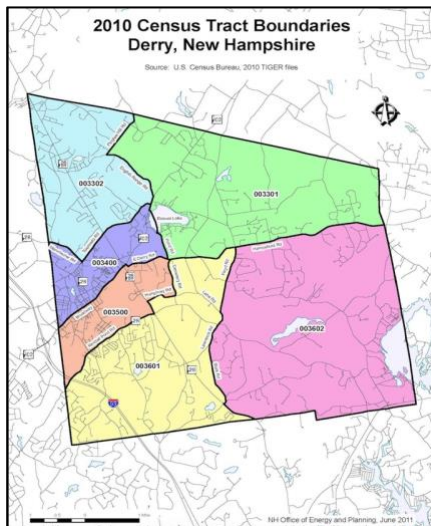
Derry's Economic Development 2

COMPREHENSIVE ECONOMIC PLANNING FOR SUSTAINABLE GROWTH

As Derry has grown, the Town has experienced positive economic growth trends that have diversified the workforce, attracted new types of businesses to the town, and decreased the unemployment rate. The town is undergoing several initiatives to continue these positive trends including periodical master plan updates, participation in SNHPC's Regional Economic Development Plan, transportation improvements and designation as an Opportunity Zone (OZ). The Town's Economic Development and Planning Departments are pursuing proactive coalitions with local/state organizations, non-profit groups, business owners, and community leaders to make Derry a destination that affirms an "open for business" attitude.

Current Assets

Opportunity Zone Designation



The orange census tract seen here is Derry's OZ.

- The OZ in Derry is enclosed by Broadway and East Derry Road to the north, Cemetery Road to the east, Humphrey and Kendall Pond Roads to the south and the Londonderry town line to the west.
- Investors can also invest in a Qualified Opportunity Fund to help support small businesses in the town – a previously unavailable funding source.
- OZ investments can range from infrastructure and preservation of cultural assets, to creation of affordable housing. This can be helpful when working to bridge the existing jobs to housing ratio in Derry.

Commercial and Industrial Properties

- Derry has a large amount of industrial, commercial, and office/research property to support new businesses and expand existing businesses in the town. Availability of these parcels nestled between Route 28 South and I-93 is ideal for business attraction and retention.
- There is currently 1.6 million square feet of commercial property available for sale or lease in Derry and 630,100 square feet of industrial property.
- Purchase of commercial and industrial property in Derry amounted to over \$5.65M in 2018, with three of those transactions being the largest in the region's submarket.
- Diversification of the town's tax revenue to support commercial/office activity will attract industries where Derry is already a leader, such as healthcare, and where the town seeks to expand, such as advanced manufacturing, information technology, and the arts.

Rezoning for Commercial Use

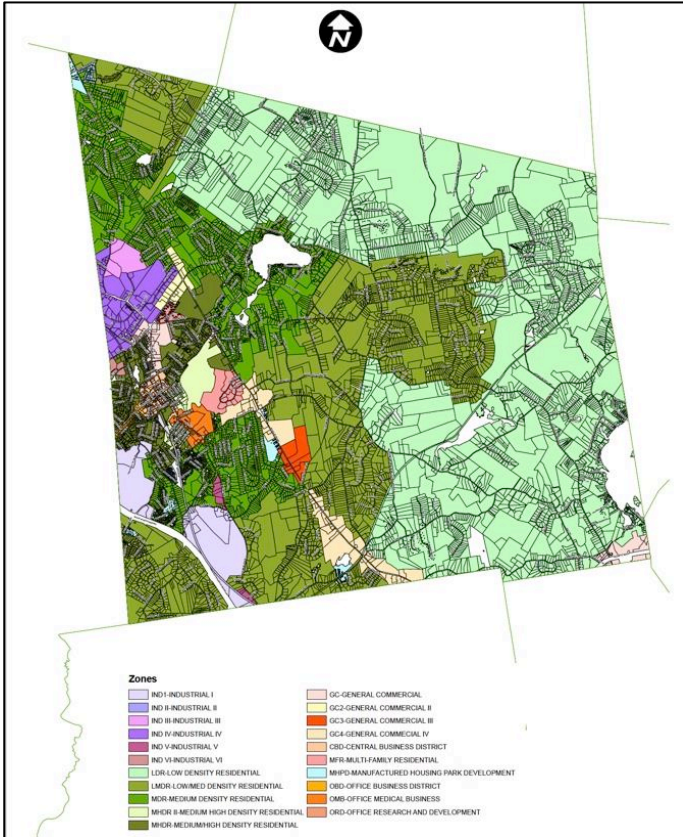
West Running Brook District (GC IV)

- Recent extension of town utilities allows for the opening of the northern part of town for the new West Running Brook district, facilitating access to the Downtown, East Derry and new commercial zones toward the Windham line. The boundaries are north of the West Running Brook Middle School in the vicinity of Humphrey Road, and will continue south just shy of the Robert Frost Farm, totaling 40 acres.

WHAT DOES IT MEAN?

- Recent Opportunity Zone designation will allow private investors to defer capital gains taxes until 2026, if they invest within 180 days. At that time, they can either sell their property or collect.
- Other options are 10% reduced capital gains taxes for a 5-year investment or 15% for a 7-year investment.
- There will be no taxes on future capital gains if they have the property for an additional 10 years or sell by 2048.
- 90% of assets must stay in the Opportunity Zone.

- Creation of a new gateway along this corridor will support development efforts, increasing vitality in an area that has long been a target for growth with untapped opportunities.



Current zoning in Derry

/Media Marketing are the top creative enterprises projected to grow over the next decade. These areas are half of all creative enterprises in Derry.

- Self-employment is growing in Derry and can be a very valuable contributor to creative industries. Marketing to seniors and younger populations in this sector has been made a goal for the town.
- Integrating arts and entertainment in the business districts are resourceful ways Derry has integrated its cultural character with economic development.
- Usage of historic landmarks such as the Adam's Memorial Building for the Arts Council's, the Old Train Station as a new restaurant, and Upper Village Hall as an events venue are examples of how Derry is bridging the Town's history with alternative creative uses.

Downtown Derry has the only downtown in the Greater Derry-Londonderry area, with capacity for business development, particularly small business. From the SNHPC's Age-Friendly Survey for Derry and previous engagement efforts, it is clear the community utilizes and enjoys the downtown, but the need for revitalization is present.

- Updated design guidelines, promotion of programs like the Façade Improvement Program, and continued collaboration with technical entities like the Small Business Administration, will allow downtown to embrace its character and central location to market to newcomers.
- Self-employment is 6% of full-time, year-round employment in Derry, and 3% of this base are self-employed with employees. Encouraging this group to do business in the Downtown would support the local economy, increase likelihood of employing locals, promote entrepreneurship, and add vitality to this central node of Derry.

- Popular locations such as Ashley Drive, currently zoned for both commercial and industrial use, will be maximized to their fullest potential.

GC III

- Zone GC III begins promptly at the Robert Frost Farm and continues south until zone GC IV, which will remain a commercial zone in the new plan.
- A major goal of the creation of this zone is to promote mixed-use interconnections extending south along Route 28 that promote connectivity over sporadic site development that has previously dominated.
- Streamlined architectural/landscape design and greening will be priorities in this zone, as the town works closely with new developers and those seeking to do business in Derry.

COLLECTIVELY FORMING A VISION FOR DERRY

Creative Economy Derry is proactively working to expand the creative economy, which is currently 2.4% of total industry employment. Creative industries and occupations have been on the rise both locally and regionally. With Derry's current upsurge in tertiary industries, increase in wages and spikes in commercial activity, the capacity for a vibrant creative realm is there.

- Arts and Electronics Retail, Visual and Performing Arts, and Media



Walkable streetscapes outside the Cask and Vine in Downtown.



Derry's Historic & Cultural Resources 3

A CENTURIES-LONG HISTORY BEGUN BY THE PENACOOKS AND CONTINUED BY THE ULSTER-SCOTS

- Humans have inhabited the Derry area for centuries, beginning with Native peoples, the Penacook band of the Abenakis, who set up villages along the Merrimack River and its tributaries, fishing for shad, salmon and alewife. Several area place names originating from the tribe, including "Merrimack" and "Massabesic" are still in use today.
- The first Europeans to settle in Derry were known as "Ulster Scots," farmers, herdsmen and weavers who had migrated from Scotland to the Ulster Plantation in Northern Ireland. From there, they came to America in 1718, settling in what they called "Nutfield," the nut tree-filled grassy, marshy area that contained today's towns of Windham, Londonderry and Derry, as well as portions of Salem, Manchester, and Hudson. Derry remained a parish of Nutfield – later Londonderry - for over 100 more years, with East Derry serving as its center.
- Farming first dominated the early local economy, but manufacturing emerged in the 1850s with the introduction of the railroad. Entrepreneurs built shoe factories in the downtown and milk from the local Hood farm was pasteurized and shipped in sterilized bottles from the railroad's Broadway depot. By the end of the 19th century, Derry had become a tourist destination, with several cabin colonies operating on local lakes and ponds. Shoe manufacturing relocated to the southern U.S. and Hood moved operations to Massachusetts. With the construction of Interstate 93 in the 1960s, Derry evolved into a bedroom community for Manchester and Metro Boston.
- Derry's extant historic resources represent this span of time. The oldest section of Forest Hill Cemetery (1722) and the Matthew Thornton House (ca. 1740) date to the first decades of settlement, while the Taylor sawmill (1799) reflects the town's early manufacturing history. While the shoe factories have nearly all been demolished, several structures from the industrial heyday remain including Upper Village Hall (1875), the Pinkerton building (1887), and the Adams Memorial Building (1904). Single-family homes, such as the Alan Shepard House (1921) reflect the town's 20th century transformation into a suburb and bedroom community.



The Matthew Thornton House, located on Thornton Street, dates to ca. 1740 and is one of Derry's oldest extant buildings.

WHAT DOES IT MEAN?

- Derry's historic and cultural resources possess local, regional and national **significance**, and therefore merit protection.
- The town's 1986 inventory of historic resources was never completed, is now out of date, and needs revising. An **updated inventory** would identify additional resources meriting recognition and protection
- Derry's status as a Certified Local Government makes it **eligible for state funding** for preservation-related activities, such as an inventory update.
- The Derry Public Library, through its New Hampshire Room, has established itself as a **central repository** for historical information about the town. The Derry Museum of History provides a space for public display and interpretation of historical artifacts.
- Derry has firmly established its **commitment to the arts** through programming at the Derry Opera House and the advocacy work of its Public Arts Committee.
- The town recently established a **Cultural District** in the downtown, drawing on its existing historic and arts-related resources. Opportunity exists to grow this district, making Derry a regional cultural hub.

A TRADITION OF RECOGNIZING AND INTERPRETING HISTORIC RESOURCES

- Derry has made several efforts, through the National Register and National Historic Landmark programs, to recognize its most important historic resources. These include the Robert Frost Farm, Matthew Thornton House, Adams Memorial Building and Opera House, as well as the East Derry National Register Historic District.
- The state has placed historic markers at the locations in Derry, honoring the significance of these sites to the state's history: General John Stark, the Scotch-Irish settlement, and Robert Frost. Derry has become an integral part of the Robert Frost/Old Stagecoach Scenic Byway, part of the state's Scenic and Cultural Byways Program.
- In the 1990s, Derry became a Certified Local Government and formed the Derry Heritage Commission, an advisory body to the town's government and to the land use boards. The commission manages the Derry Museum of History, a collection of local artifacts housed and exhibited in the Adams Memorial Building.
- The Derry Public Library maintains the New Hampshire Room, a collection of books, maps, photographs, and postcards pertaining to the town's history. The postcard collection has been uploaded to FLICKR for public view.

AN ESTABLISHED COMMITMENT TO THE ARTS

- The Greater Derry Arts Council, Derry Opera House and Derry Public Arts Committee form the bedrock of arts activity in the town. In addition to managing the Opera House's array of performing arts events, the Council and Public Arts Committee are working to address the needs of the town's working artists.
- The Derry Garden Club works to engage residents in beautifying the town's public open spaces.
- Derry Homegrown Farm and Artisan Market provides a venue for local growers and producers sell their goods, but also for artists to market and sell their work.



Members of the Derry Garden Club instruct children from the Boys and Girls Club on planting.



Derry Homegrown Farm and Artisan Market provides a seasonal venue for artists to display and sell their work.



Derry's Natural, Open Space & Recreation Resources

4

DISTINCTIVE NATURAL & OPEN SPACE RESOURCES

- Most of the town's soils consist of till-covered bedrock making them compatible with the installation of septic systems, basements, roads and streets. The gently rolling topography and limited amount of shallow bedrock further the development suitability.
- The town lies within two major watersheds, with the largest encompassing Beaver and Horne's Brooks, contributing to the Merrimack River Watershed. The Beaver Lake Watershed, a sub-watershed of the Merrimack, covers 7.72 square miles in the northern end of Derry.
- Several freshwater ponds and waterways spread across the Derry landscape, providing habitat for wildlife, as well as many recreation sites. Dams impound several of these water resources, helping to control floodwater.
- Wetlands and forests, scattered throughout Derry, provide additional habitat and recreational opportunities. The town maintains both the Town Forest and Weber Memorial Forest, together covering over 300 acres.



Apple trees growing at the Robert Frost Farm provide one reminder of Derry's history of an active farming community. The town has protected five former farms from development.

SUCCESSFUL RESOURCE PROTECTION EFFORTS

- The town has protected over 1,000 acres of former farmland through conservation easements, and two family-owned farms continue to operate in Derry. The town has also protected over 1,000 acres of open space, and much of this land is accessible to the public.
- In 2006, Derry joined Auburn and Chester in forming the Beaver Lake Watershed Partnership as a way to ensure protection of the 10.5 square mile area in response to rapid development. The group prepared a management plan, and the Town of Derry continues to implement its recommendations.
- The Net Zero Task Force has established a goal of achieving Net Zero compliance by all key stakeholders in Derry by 2025. Accomplishments to date include replacing all incandescent/fluorescent bulbs in

WHAT DOES IT MEAN?

- Derry's gentle topography, minimal shallow or exposed bedrock and soils comprised of glacial till make **much of the land compatible for development**.
- A significant portion of the town lies within one of two large watersheds, giving Derry **a key role in regional watershed protection**.
- The town and its non-profit partners have **acquired several hundred acres of conservation land** and have arranged for **agricultural easements on five former farms**.
- Derry has demonstrated its **commitment to protection of groundwater, wetlands, and floodplains** by establishing several associated zoning and overlay districts.
- The Net Zero Task Force has advanced Derry's efforts to **reduce reliance on non-renewable energy sources**.

municipal buildings with LED bulbs and developing a solar energy project at the public works facility. The task force has planned a 1-megawatt solar array for the landfill.

- The town has established several zoning districts designed to conserve groundwater and protect wetlands and flood plains

RECREATION RESOURCES IN MANY FORMS

- The Rockingham Recreation Trail (maintained by the State of New Hampshire) and Derry Rail Trail (overseen by the Derry Rail Trail Alliance) offer bicyclists, walkers, joggers and others off-road recreational opportunities. Multiple access points to both trails are spread through the town.
- Derry's conservation lands contain many miles of hiking trails through forests and former farmlands.
- Kayaking and wildlife-viewing are possible on the town's several lakes and ponds, and the state maintains a public boat launch at Beaver Lake.
- Derry is home to three publicly-accessible golf courses, Hoodcroft, Hidden Valley and Brookstone.
- The town maintains multiple fields for team sports, in locations across town.
- Alexander-Carr Park Lodge, while in need of repair/replacement, provides a place for public gatherings.

WHAT DOES IT MEAN?

- Derry's **two state parks and two multi-use trails** offer recreational opportunities and at the same time fuel the local economy.
- The **baseball, softball, and soccer fields** provide ample opportunities for team sports activities.
- The natural areas, including **lakes, ponds and conservation lands**, offer opportunities for additional recreation.
- The condition of **indoor facilities** that support these activities, including Veterans' Hall and the Lodge at Alexander Park, does not match the quality of the well-maintained fields. Both buildings are both in need of major upgrades.



Beaver Lake, located near the geographic center of Derry, is the largest freshwater body and provides both habitat for wildlife as well as opportunity for fishing and boating.



The playground at Alexander Carr Park is a popular spot for young children throughout spring, summer and fall.



The Rockingham Recreational Trail, maintained by the State of New Hampshire, runs through the southern part of Derry.



Derry's Transportation and Circulation - 5

MOVING PEOPLE OF ALL AGES AND ABILITIES

Derry manages and maintains its roadway system at a high level. In the future, traffic volumes and roadway functionality may change as a result of the planned NHDOT new Exit 4A interchange, which will change traffic patterns. As a result, there may be opportunities to redesign the Downtown area to attract residents and visitors, better accommodate pedestrians and bicyclists, and provide more and better parking.

• Travel Characteristics

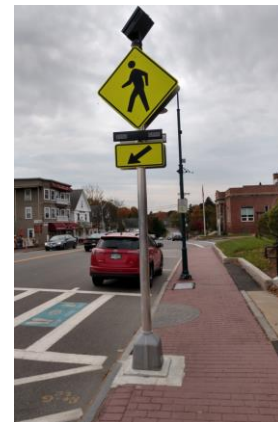
- Derry has a population of 33,246 making it the 4th largest municipality in New Hampshire
- 41% (4,000) of people working in Derry, live in Derry
- Approximately 4,000 residents work in Manchester, Salem and Londonderry
- 91% of Derry residents who commute to work drive alone
- 23% of Derry households have 3 or more vehicles
- The commute time for 85% of Derry residents was under 30 minutes

• Operating Conditions

- There are approximately 200 miles of roadway in Derry
- The Derry Highway Department has managed the Pavement Management Program since 1986. Most roadways are in Good or better condition. Over 30 roadways are scheduled to be repaired over the next few years
- The Highway Department Maintains 19.7 miles of sidewalk and 3.2 miles of bike trail
- NH 102 (West. Broadway) carries over 18,000 vehicles per day (vpd); Tsienneto Road over 14,000 vpd; NH Bypass over 12,000 vpd
- Heavy traffic congestion is experienced on West Broadway traveling westbound in the morning to the I-93 Exit 4 interchange, with the reverse pattern in the afternoon
- In 2016, a new traffic signal was installed at Rockingham Road/Windham Depot Road / Kilrea Road
- The NHDOT is planning bridge replacement or rehabilitation at Drew Road over Drew Brook; North Shore Road over tributary to Beaver Lake Outlet; Florence Street over Shields Brook; and safety improvements at the intersection of NH Route 28 Bypass/English Range Road/Scobie Pond Road
- There is a lack of uniform wayfinding signage in The Downtown

• Safety

- The number of reported vehicle crashes has increased each year between 2011 and 2015
- The following intersections experienced high numbers of crashes between 2014 and 2016:
 - Ross' Corner (20 crashes/year)



Rectangular Rapid Flashing Pedestrian Beacon in Downtown helps to improve visibility and driver awareness.

WHAT DOES IT MEAN?

- The **Highway Department** maintains local roadways through the Pavement Management Program which receives over \$1M annually in funding. As a result, most of Derry's roads are in Good or better condition.
- While most residents commute to work via single-occupant automobile, Derry has two **multi-use trails** and nearly **20 miles of sidewalk** that serve alternative transportation modes. The **Derry Rail Trail** is being extended from Hood Pond to North High Street.
- The **Streetscape and Pedestrian** improvements constructed in 2001 in the Downtown area are in need of repair. This may be an opportunity to upgrade and enhance pedestrian and bicycle facilities, and improve safety and wayfinding. A **Sidewalk Improvement Plan** would help to prioritize improvements.
- **Parking** availability and handicap accessibility are issues in the Downtown including at the **Derry Public Library**. There is the potential to use the town-owned parcel adjacent to the **Adams Memorial Building** for additional parking.

- NH Route 28 Bypass/ Pinkerton Street/Nesmith Street (11 crashes/year)
- NH Route 28/Ashleigh Drive (10 crashes/year)
- NH Route 28 Bypass/English Range Road/Scobie Pond Road (9 crashes/year)
- Tsienneto Road/Pinkerton Street (7 crashes/year)

- **Pedestrians and Bicycles**

- There are 19.7 miles of sidewalk, mostly in Downtown
- The Town has two sidewalk plows
- There is no sidewalk improvement funding mechanism
- The Derry Rail Trail is approximately 3.2 miles long and is planned to be extended northerly from Hoods Pond to North High Street (2019) with the potential of expanding beyond the I-93 Exit 4A project. At Madden Road, a new tunnel for the Derry Rail Trail will be provided as part of the I-93 Exit 4A project.
- Within the Town of Derry, the Rockingham Recreational Trail is 6 miles long. It starts at the Windham Depot, meets the Derry Rail Trail, and continues northerly to the Hampton Town Line
- Streetscape improvements made in 2001 in the Downtown are deteriorating and will need improvements, including tree planting
- Rectangular Rapid Flashing Beacons could be considered at South Avenue and Rollins Street for the Derry Rail Trail

- **Transit**

- The Greater Derry/Greater Salem Regional Transportation Council assists with the planning, pursuing funding for, and developing strategies that meet the needs of people living in the Greater Derry and Greater Salem service areas.
- The Cooperative Alliance for Regional Transportation (CART) provides three types of public transportation for residents of Derry:
 - Curb-to-curb demand for residents who are elderly or in need of transportation.
 - Route deviation shuttle service within a quarter mile radius of the route.
 - Shuttle for seniors and people with disabilities to the Londonderry Senior Center and the Marion Gerrish Community Center in Derry.

- **Parking**

- There is limited parking and handicap (accessible) parking available at the Derry Public Library. There is consideration to expand to the bandstand area at McGregor Park
- The Derry Masonic Temple has limited parking that causes patrons to park across the street on East Broadway
- Parking is limited at Adams Memorial Building (Derry Opera House) with a potential opportunity to use the abutting empty parcel owned by the Town
- Due to poor lighting and lack of nearby parking lots, patrons of the Adams Memorial Building do not feel safe walking to The Abbot Court parking lot
- Consideration could be given to maximizing the use of public space in the Downtown area by providing on-street angle parking spaces, improving lighting, and creating additional parking spaces.

WHAT DOES IT MEAN?

- A new **I-93 Exit 4A Interchange** is planned to be constructed by NHDOT in the Town of Londonderry between Exits 4 and 5. The project would include a **one-mile connector roadway to Folsom Road in Derry**. The intent of the project is to reduce congestion and improve safety along NH 102 from I-93 through the Derry Downtown and promote economic development in Derry.
- The new Exit 4A interchange may present an opportunity to change the **vision and character of Downtown Derry** if traffic volumes decrease on W. Broadway. Potential measures may include reduced travel lane widths, angle parking and improved pedestrian and bicycle facilities.
- The new connector road would be divided and would prohibit vehicles making left turns in and out of the **Police Station**, which would require U-turns. There may opportunities to relocate the Police Station in the mid- and long-term, where the current site can be sold and redeveloped.



Derry's Community Facilities & Services - 6

PROACTIVE FACILITY PLANNING

As Derry has grown, the Town has become more systematic about planning for its municipal facilities and services by periodically updating its master plan, and developing a 30-year Capital Improvement Plan among other planning efforts. Many of the Town Departments also conduct their own internal planning.

- **Schools.** Derry Cooperative School District is comprised of 5 elementary schools, 2 middle schools and 1 private, non-profit, regional high school.
 - School enrollments are expected to continue to decline with a slight increase in the elementary school population.
 - Derry's schools have additional capacity to absorb any slight increase in enrollments.
 - Pinkerton Academy expects a reduction in the number of students coming from Derry
- **Public Safety**
 - **Police Department**
 - The number of uniformed personnel (per 1,000 residents) is significantly below that of the average of municipalities in New Hampshire
 - The proposed Exit 4A road configuration will significantly negatively impact the access and reduce the ability of the Police Department at its current location to respond to an emergency
 - **Fire Department**
 - The Fire Stations are in need of significant upgrades
 - The number of calls for service have slightly increased over the last decade, (primarily due to the increase in calls for emergency medical services for elderly residents.
 - Some parts of Derry are outside of the 4-minute industry standard report time
- **Libraries**
 - The **Derry Public Library** has experienced a decrease in the number of materials circulated, but an increase in attendance at programs offered at the library, indicating it is part of a larger trend of the changing roles of libraries in a community.
 - The **Taylor Library** is not ADA compliant and must limit its popular programming due to space limitations and the fire code.
- **Veteran's Hall** is at capacity to serve the recreational and socializing needs of elderly residents. As this population is anticipated to increase, there will be a need for additional space for programming.



The Municipal Center, occupied since 2002, is well maintained and adequately accommodates many of Derry's municipal offices and the public.

WHAT DOES IT MEAN?

- The **School District** is preparing to close one of the elementary schools
- The **Police Department** may need to hire more officers in the future so that it may be more proactive in its approach to public safety. The Headquarters may need to relocate when the Exit 4A road reconfiguration is constructed.
- The **Fire Department** is planning major facility changes, including relocating stations.
- **Libraries** – Access to the Derry Public Library can be improved by providing additional parking and Sunday hours. The Taylor Library could be improved by making it handicap accessible.
- **Veteran's Hall.** More space will be needed in the future. Upper Village Hall and Alexander Carr Park Lodge may be available for additional programming for seniors and others.

- The **Adams Memorial Building** houses the Greater Derry Arts Council, Derry's Housing Authority, the Greater Derry-Londonderry Chamber of Commerce, and Derry's History Museum. While the building is in good condition, the lack of adequate parking is of significant concern.
- The **Alexander-Carr Park Lodge** will be rebuilt and available for recreation as well as for rent for meetings and events.



If the parcel adjacent to the Adams Memorial Building could be used for parking, this would go a long way in addressing the parking shortage for the building's uses.

PROVISION OF QUALITY UTILITIES AND SERVICES

• Department of Public Works

- **Solid Waste and Recycling:** Derry has a mandatory recycling program (since 1990) and trash quantities have been decreasing since then.
- Derry has a **Stormwater Management Program**.
- **Water.** Derry has an ample supply of water with capacity for additional expansion.
 - approximately 40% of the Town's residents are connected to the municipal water system, approximately 50% are on private wells and the remaining 10% are with the Pennichuck Water franchised system
- **Sewer.** Derry's wastewater is treated at the Municipal Sewage Treatment Plant.
 - Approximately 30% of the Town's population is connected to the municipal sewer system
 - There is ample capacity for expansion and some plans to extend the system within the next 5 years
 - Derry processes waste from Londonderry; it is expected that the amount will increase due to significant new development planned in that town

• Highway Department and Cemetery Division

- The Highway Department maintains:
 - 19.7 miles of sidewalk
 - 3.2 miles of bike path
 - a Pavement Management Program which prioritizes road improvements
- Due to the trend favoring cremation over full burials, there is additional capacity available at the **Cemetery**.

- **Public Health.** The Department of Public Health responds to resident reports of health issues at residential properties but also addresses public health issues at schools, daycare facilities, nursing homes, etc.
 - The number of calls for service made to the Derry Police Department that are related to health issues (e.g. substance abuse, etc.) are on the rise
 - A number of state resources exist regarding "healthy communities" initiatives (e.g. regarding safe walking, biking, local and healthy food, etc.)

WHAT DOES IT MEAN?

- Derry's **recycling rate** has increased to 36% of all waste
- The **Stormwater Management Program** protects water quality and controls the adverse affects of increased runoff due to development
- The Town is currently in discussions with the State and adjacent communities with the goal of extending and improving Derry's **water system** at no cost to the Town
- Additional **wastewater** generated by new development in Londonderry will need to be addressed (including considering expanding the treatment plant)
- New technologies may make it feasible to provide **alternative methods of sewage treatment** to more rural areas of Derry that are currently served by septic systems
- A **Sidewalk Improvement Plan** would help to prioritize improvements
- There are plans to extend the **bike path**; this would require additional maintenance
- There are opportunities for the Department of Public Health to promote initiatives that facilitate **health and wellness**



Energy Conservation & Future Resilience – 7

Planning for the future involves understanding current conditions as well as predicting future trends. Conserving energy and reducing reliance on fossil fuels reduces the negative impact on the environment and makes us less vulnerable to the volatility of fluctuations in fuel costs and international markets and relations. Additionally, as we plan for the future resilience of our communities, it is important to minimize any preventable and predictable impacts of climate change as we adapt to changing conditions. Building the capacity to be proactive and responsive is critical to the resilience of any municipality.

New Hampshire energy prices are among the highest in the nation. According to the New Hampshire Office of Strategic Initiatives¹, the State has the third highest electricity rates in the contiguous U.S. with each New Hampshire resident spending an average of \$3,934 on energy in 2015. The cost of energy is particularly burdensome to lower wage earners. Also, high energy costs may make it more difficult for commercial and industrial entities to compete with businesses located in lower-cost regions of the country.

“Energy, environment, and economic development are interrelated, just as our ecological systems consist of many interrelated and interdependent elements. Well-crafted solutions to these issues should be interrelated and will create benefits in all of these arenas, across the state and for all of our citizens.”

- The New Hampshire Climate Action Plan

STATE RESOURCES

The State of New Hampshire 10-Year State Energy Strategy sets forth a series of goals intended to “enable business and consumer cost savings, job creation, economic growth, industry competitiveness, environmental protection, and a reliable and resilient energy system.” The goals are:

- Prioritize cost-effective energy policies
- Ensure a secure, reliable, and resilient energy system
- Adopt all-resource energy strategies and minimize government barriers to innovation
- Maximize cost-effective energy savings
- Achieve environmental protection that is cost-effective and enables economic growth
- Government intervention in energy markets should be limited, justifiable, and technology-neutral
- Encourage market-selection of cost-effective energy resources
- Generate in-state economic activity without reliance on permanent subsidization of energy
- Maximize the economic lifespan of existing resources while integrating new entrants on a levelized basis
- Protect against neighboring states’ policies that socialize costs
- Ensure that appropriate energy infrastructure is sited while incorporating input and guidance from stakeholders.

WHAT DOES IT MEAN?

- The State has a number of programs available to NH municipalities including potential funding opportunities, to help towns increase energy awareness, reduce greenhouse emissions, and conserve energy

REGIONAL PLANNING: SOUTHERN NEW HAMPSHIRE PLANNING COMMISSION (SNHPC)

SNHPC has a chapter on Energy in its most recent Regional Plan. This states that while New Hampshire “has no fossil fuel reserves, it has substantial renewable energy potential.”² Potential benefits from renewable energy sources mentioned include:

- More energy dollars retained in local or regional economy
- Annual operation costs are low
- “Waste” such as manure, landfill gas, landscape trimming, etc. can be converted to energy sources
- Reduced pollution as compared with fossil fuels

¹ New Hampshire Office of Strategic Initiatives, *New Hampshire 10-Year State Energy Strategy*, April 2018.

² Southern New Hampshire Planning Commission Regional Comprehensive Plan (2010), Chapter 5 (Energy).

The Plan also identifies Land Use Planning as another way to reduce energy consumption.

MUNICIPAL EFFORTS: DERRY'S ENERGY CONSERVATION, CLIMATE CHANGE ADAPTATION & FUTURE RESILIENCY PLANNING MEASURES

Derry has been proactive in its efforts to plan for future resilience. Some of the Town's efforts include:

- In 2016 Derry created a **Net Zero Task Force** focused on conserving energy in the Town's municipal buildings and schools and replacing carbon based energy sources with renewable energy where feasible. The Task Force has a goal of becoming Net Zero in terms of carbon footprint from electricity by the year 2025.
- Derry adopted a **"Green Building and Vehicle Ordinance"** (which gives preference to the purchase or lease of alternative fuel and hybrid vehicles for Town use, requires that new construction or major renovation of Town-owned facilities incorporate environmentally friendly building methods and technology, and encourages the Town to promote and assist business owners and local Town, state and federal agencies to build in environmentally responsible ways.
- The Town has installed 4 **electrical car charging stations** accessible to the public free of charge to help promote the downtown area to residents and visitors. They are located in the Municipal Office Building parking lot.
- **Solar and Wind Exemption.** Property owners who have installed wind or solar powered energy equipment can submit the cost of their installation to receive an exemption in the amount equal to 100% of the assessed value of qualifying solar and wind-powered energy equipment.
- **Recycling.** Derry has had a mandatory recycling program since 1990. Trash quantities have decreased over time and the recycling rate has increased to 36% of all waste.
- Derry has developed a **Stormwater Management Program** that includes a Stormwater ordinance that prohibits non-stormwater discharges so as to maintain and improve the quality of water into water bodies and establishes minimum requirements and procedures to control the potential adverse effects of increased Stormwater runoff due to development.
- Derry has a **Hazard Mitigation Plan** (updated in 2015) that outlines action steps for the Town to take to reduce or eliminate long-term risks to lives and property resulting from hazards. These steps include preventive measures intended to mitigate the effects of such natural and human-caused hazards.

WHAT DOES IT MEAN?

- The Southern New Hampshire Planning Commission Regional Plan lists a number of ways in which municipalities can use Land Use planning to conserve energy; these include impact fees, smart growth development, transit-oriented development, among others. Derry can consider these as its plans for the future.
- Conserving energy by leading by example, retrofitting town facilities with energy saving technologies and by implementing energy efficient measures in town activities and ordinances are critical steps in planning for the Town's future resilience.
- Derry has been proactive in terms of setting up systems and implementing measures to move towards reducing its carbon footprint and becoming more resilient in general.
- There is more Derry can do to conserve energy, mitigate climate change impacts, and plan for future resiliency



Land Use and Zoning - 8

LAND USE PATTERNS

Derry's distinctive character is defined by the contrast between the urban, suburban, and rural-agricultural land use patterns that exist here. These patterns have been influenced by the region's growth history, by water resources, transportation features, and utilities, and zoning. Today, much of Derry is developed as low-density residential subdivisions in the west and southern ends of town – areas with relatively good highway access that connects residents to regional employment centers. Along and west of Route 28, however, Derry is a densely settled urban center with a compact downtown and a wide variety of uses. Together, Interstate Route 93 and State Route 28 have left an indelible imprint on Derry's development pattern, just as the semi-rural roads and limited utilities on the east side of town help to explain the low-density residential and agricultural character found there.

Derry has grown so much since 1970, filling in with new residential subdivisions in the west and southern parts of Town and cultivating new business activity downtown while still preserving an open, agricultural feel in East Derry. The patterns that exist in Derry today have been shaped by the combined forces of highway access, infrastructure and utilities, and land use regulations. While all of these forces play a pivotal role in a community's options for managing growth and change, **zoning** largely determines *what* and *how much* can be done with a given tract of land.

WHAT DOES IT MEAN?

- Derry has adopted a wide variety of zoning districts with flexible use regulations.
- Zoning matters! The intent of Derry's existing zoning is evident just about everywhere because Derry has grown and changed so much since the adoption of zoning.
- Derry has a broad range of housing because the town has made land use policy decisions that allow people of different incomes to choose Derry as their home.

ZONING DISTRICTS

Derry has 24 use districts, or zoning districts created for the primary purpose of regulating land use.

- 90 percent of the Town is in some type of residential use district. The largest residential districts (in area) are the Low-Density Residential (LDR) and Low-Medium Residential Density (LMDR).
- About 5 percent of the Town is zoned for commercial uses such as retail stores, office space, personal services, banks, and so on. At the heart of Derry's commercial zoning is the Central Business District, which encompasses Downtown Derry. The largest commercial zone is General Commercial 4, which provides for some light industrial uses and research/development facilities in addition to "traditional" commercial uses.
- About 5 percent of the Town is zoned for a variety of industrial and related office uses such as contractor's yards, fuel storage companies, hotels, manufacturing, or transportation facilities.

How land is **zoned** and how it is actually **used** may not always match. This is because development that existed before zoning was adopted enjoys some protection known as "grandfathering." A disconnect between what a district is called and what exists within it can also happen when a zoning ordinance allows too many types of uses in a single district.

HOW DERRY'S LAND IS USED TODAY

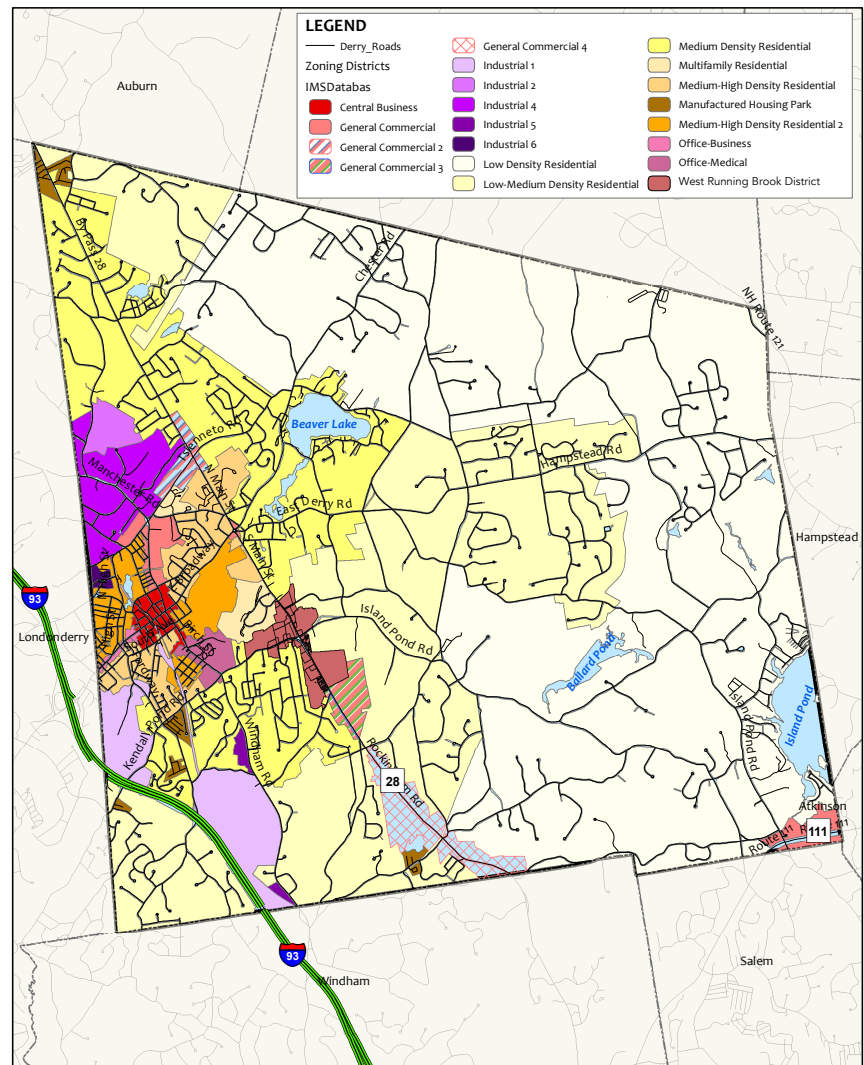
- Single-family homes: 10,700 acres
- Condo & two-family homes: 1,000 acres
- Multifamily: 400 acres
- Mobile homes: 200 acres
- Commercial: 800 acres
- Industrial: 600 acres
- Farm, forestry, recreation: 3,100 acres
- Vacant: 3,100 acres
- All Other: 2,700 acres

(Excluding roads and open water)

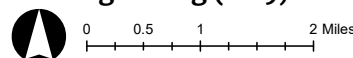


WHAT DOES IT MEAN?

- Derry still has plenty of **room to grow**.
- Derry is in a good place to capitalize on development trends in Southern NH and its relationship to I-93, especially the new Exit 4A.
- Derry will need to consider ways to streamline and simplify its zoning, shifting away from controlling **use** and more toward **form** and **urban design**.
- Derry has opportunities to update its zoning to advance the goals and policies of this Master Plan Update. Consider ways to strengthen **"age-friendly" development**, housing attractive both to seniors and millennials, and **incentives for mixed uses**.
- Derry will see more **changes within existing developed properties** as the quality of available vacant land dwindles. There may be quite a bit of vacant land in Derry today, but not a lot of good, developable vacant land.



DERRY MASTER PLAN
Existing Zoning (2019)



Chapter 1: Housing and Population

Demographic Trends & Housing

INTRODUCTION

The styles, age, quality, and location of housing units tell a story about the community's physical development and its economy. Housing also conveys important information about the people who live in a community today, including the size and wealth of their households and the expectations they have about the kind of place they want to call home. Sometimes, significant differences in housing types, density, and neighborhood design within a single town are indicative of sudden changes over which a community may have had very little control at the time. In these towns, the differences in housing patterns can signal two quite different ways of life co-existing under one civic roof: active suburban on one hand, and rural-agricultural on the other. Derry is one of these places.

Derry's rapid population growth after 1970 illustrates the impact of regional highways and migration triggered by sprawl throughout the Boston Metro area. While Derry remains a captive town for the effects of the Massachusetts population exchange, population growth is slowing in southern New Hampshire. Like all towns that are trying to plan for their future, Derry faces housing policy decisions that need to be integrated with other elements of the master plan. This section provides both a snapshot and a trend analysis to shed light on housing needs and opportunities the town may need to address as part of the master plan process.

KEY FINDINGS

With a median age of 40.2 years, Derry has a younger population overall than that of the surrounding towns and noticeably younger than the population of New Hampshire as a whole.

One out of three of older adult (65 and over) householders in Derry are single people living alone, i.e., older adults who may be widows or widowers, or those who never married.

Derry's median household income is \$67,946 (in December 2018), just below that of the state, \$68,485. According to data from the federal government, 44 percent of Derry households have low incomes.

Viewed sub-regionally – meaning Derry and the surrounding towns – Derry has the largest inventory of rental housing and 47 percent the entire rental supply.

Derry's median home value increased 33 percent between 2013 and 2017 – a faster rate of value growth than any other town in the region.

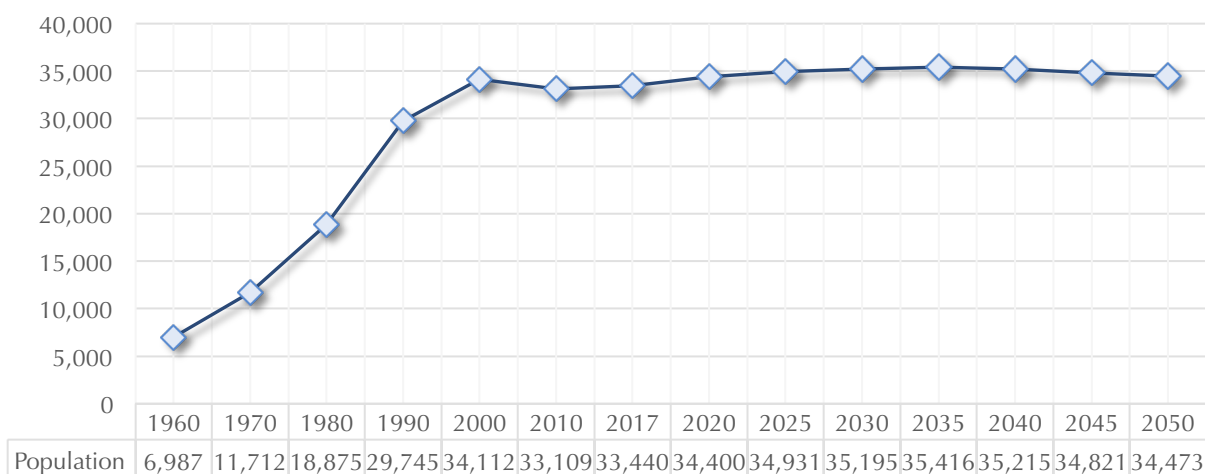
Over 70 percent of the lower-income households in Derry pay more than 30 percent of their monthly income for housing, which means they are housing cost burdened. While Derry has met its statistical "fair share" of workforce housing, it still has many households that struggle to make their monthly mortgage payment or rent.

POPULATION CHARACTERISTICS

Derry is home to approximately 33,312 people in 12,962 households.¹ Located off I-93 on the outskirts of the Boston Metro labor market area, Derry has a distinctive form with a traditional downtown flanked by compact neighborhoods on one side of town and a low-density countryside framed by curving roads, farmsteads, and open land on the other side, in East Derry. Among the Southern New Hampshire towns that have captured the bulk of Massachusetts migration, Derry grew dramatically between 1970 and 1990. Since then, Derry's population has remained fairly steady, fluctuating between 33,000 and 34,000 people. It is projected to exceed 35,000 by 2030 and decline slightly thereafter.² The available population forecasts for Derry largely mirror statewide trends. For Derry and New Hampshire's key population centers, almost all located between I-93 and the coast, the retirement of "Baby Boom" residents and predicted declines in younger, working-age people will create significant challenges for the economy, government services, and housing.³

Fig. X.1. Population History and Long-Term Forecast
Derry, New Hampshire

(Source: Southern NH Planning Commission)



¹ U.S. Census Bureau, 2013-2017 American Community Survey, B01003, B11001.

² Southern New Hampshire Planning Commission, *SNHPC Population Projections*.

³ Kenneth M. Johnson, *New Hampshire Demographic Trends in the Twenty-First Century* (Casey Institute, University of New Hampshire, 2012), 4.

POPULATION AGE

The median age of Derry's population today is 40.2 years, making Derry's population younger than that of the surrounding towns and noticeably younger than the population of New Hampshire as a whole. A significant contributor to Derry's population age profile is the presence of people between 25 and 34 years, who make up close to 14 percent of the local population. The school-age population in Derry is a factor, too, but not as much as people may think. Overall, children 5 to 17 years comprise about the same population percent in Derry as in other towns in the region. The

most conspicuous difference between Derry and statewide data lies with the population of older adults, defined here as people 65 years and over. In Derry, this group accounts for just 11.4 percent of the total population, which is noticeably below the state average of 15.8 percent.⁴ In fact, several communities in Derry's region have small percentages of older adults – likely because they attract a disproportionate share of commuters to the Boston Metro area and nearby employment centers in New Hampshire. In Derry, limited senior housing options play a role as well.⁵

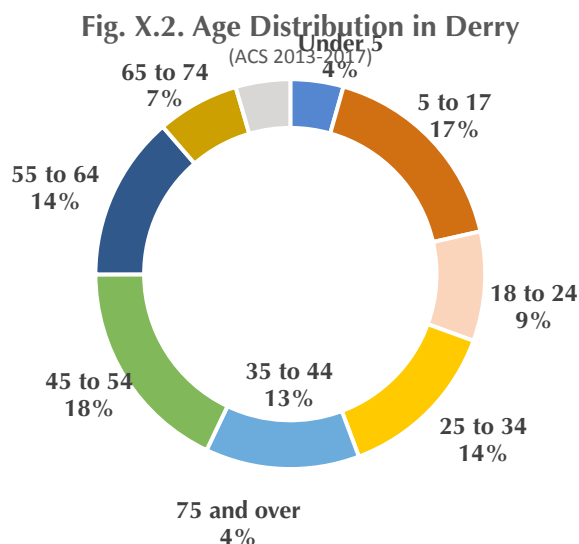


Table X.X. Comparison Snapshot: Population Age

Geography	Total Population	Dependent Children (0-17)	Working-Age People (18-64)	Older Adults (65 and over)
New Hampshire	1,327,503	20.1%	64.0%	15.8%
Atkinson	6,829	20.3%	60.8%	18.9%
Auburn	5,222	20.8%	67.6%	11.6%
Chester	4,866	22.8%	65.0%	12.2%
DERRY	33,255	21.5%	67.2%	11.4%
Hampstead	8,553	19.8%	64.6%	15.6%

⁴ ACS 2013-2018, B01001, B01002.

⁵ For purposes of this section of the Master Plan, "region" means Derry and the surrounding communities that collectively form the subregional housing market. This is not the same as the 13 communities in the Southern New Hampshire Planning Commission's (SNHPC) planning region, with Manchester as its urban center. In conformance with NH Rev Stat § 674:2, however, the discussion of Derry's relationship to regional housing needs incorporates SNHPC's most recent regional housing needs assessment.

Master Plan, Derry, NH
Inventory and Assessment of Existing Conditions: Demographic Trends & Housing

Londonderry	24,844	23.0%	64.9%	12.0%
Salem	28,860	18.5%	64.6%	16.9%
Sandown	6,231	23.5%	67.6%	8.9%
Windham	14,238	25.7%	60.9%	13.4%
Source: American Community Survey, Five-Year Estimates, 2013-2017, B0001.				

RACE, NATIONAL ORIGIN, AND CULTURE

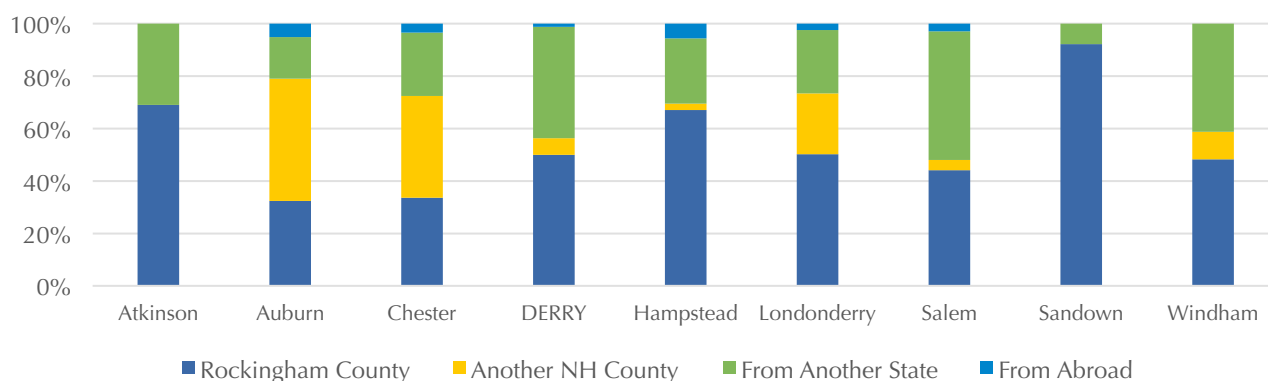
Derry's population is almost exclusively white, non-Latino (93.6 percent), much like the state (91.2 percent). The largest minority group is the white Latino population (2 percent), mainly from Puerto Rico. Derry also has Latino residents from the Dominican Republic and several countries in Central America.⁶

Although Derry has very limited racial diversity, it has been a magnet for people from all over the U.S. Only 31 percent of the population in Derry today is a New Hampshire native. Just over half of the population comes from somewhere in the Northeast (New England and the mid-Atlantic states). Approximately 1,450 Derry residents immigrated to the U.S. from another country, and roughly half are naturalized citizens.⁷

MOBILITY

Population mobility – meaning the relocation of people to and from a given city or town – is often indicative of the kind of housing that exists in the community, and this can be seen in Derry. The Census Bureau estimates that only 88 percent of Derry's current residents have lived in the town for more than a year. This may seem high, but it is actually low compared with nearby communities. In all of Derry's neighbors, the percentage of residents living there for at least a year exceeds 90 percent and runs as high as 96 percent. Derry and Salem, and to a lesser extent Windham, are also more likely to have recent move-ins from out-of-state (presumably Massachusetts).⁸

Fig. X. 4. Where Are People Coming From?
Geographic Mobility in Derry & Region
(ACS 2012-2017)

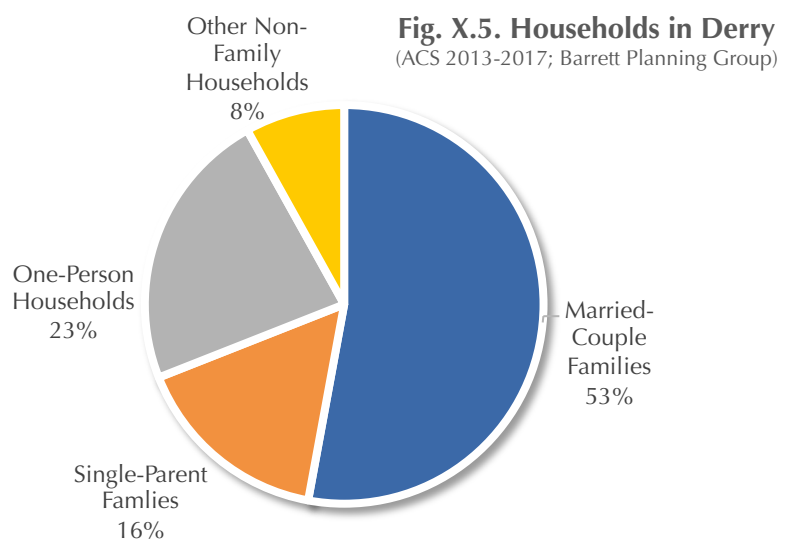


HOUSEHOLD AND FAMILY CHARACTERISTICS

Most people in Derry are members of a **household**: people who live alone or with others as a single housekeeping unit.⁹ Households can be a single person living alone or any form of shared housekeeping, including unrelated people living under the same roof. This section describes the types of households living in Derry today: size, composition, relationships, and incomes.

HOUSEHOLD TYPES AND SIZE

Derry's 12,931 households are primarily **families**: households of two or more people related in some way. Approximately 85 percent of the total population in households in Derry are in some type of family.¹⁰ The Census Bureau's definition of a family is fairly narrow: two or more people related by birth, marriage, or adoption and residing together in one housing unit.¹¹ This definition has not kept pace with judicial decisions and state laws legalizing same-sex marriage (including New Hampshire's), so the number of families reported in census tables underestimates the actual number of households living as families, married or unmarried. The proportion of married-couple families in the accompanying chart is an estimate that includes same-sex couples.



Approximately 20 percent of Derry households (2,647) are headed by someone 65 years or over. One out of three of these households are single people living alone, i.e., older adults who may be widows or widowers, or those who never married. On the other end of the age spectrum, 17 percent of Derry householders (2,366) are under 34, and over half of them are renters.¹²

⁹ The total population includes 266 people in "group quarters," or non-institutional and institutional settings. They are not part of the *household* population.

¹⁰ ACS 2013-2017, B11002.

¹¹ Population Reference Bureau, "What's a Household? What's a Family?" Note that in federal census terms, a "family household" may contain people not related to the householder, but the unrelated people are not included as part of the householder's family.

¹² ACS

Over half of all households in Derry consist of one or two people. Much like the young age of Derry's population and relatively large percentage of non-family households, the prevalence of small households stems, at least in part, from the size of Derry's multifamily housing inventory. The total number of people in larger households is high enough to elevate the average household size in Derry to 2.55 people, which is below average for the region. For people in rental housing, the households are even smaller: on average, 2.21 people.¹³

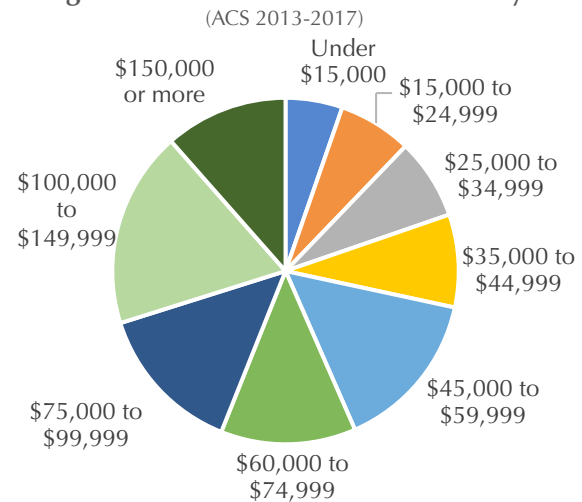
For the most part, Derry families are fairly small. The average family has 0.74 children, with married-couple families having a smaller average at 0.69 children and single-parents, 0.70 for single fathers and 0.94 for single mothers.¹⁴ Overall, the average number of very young children is larger in married-couple families while the average number of teens is larger in families headed by single women. Long-term population forecasts call for declining numbers of dependent children across the board in Derry and most of the region.

HOUSEHOLD AND FAMILY INCOMES

Derry households have slightly lower incomes than their counterparts in the surrounding towns. The most recent Census Bureau estimates place Derry's **median household income** at \$67,946, just below that of the state, \$68,485. The median can be deceptive because it does not capture the distribution of incomes. As the chart illustrates, Derry households are fairly evenly represented in four income cohorts (the groupings between \$35,000 and \$99,000).

Not surprisingly, the town's highest-income households are headed by someone between 45 and 64 years. Families of three to five people also have higher incomes, i.e., households that tend to have two employed adults.¹⁵ Nevertheless, Derry's **median family income** is also somewhat depressed compared with the region and the state as a whole. The current estimate is \$82,302. As is so often the case, married-couple families with dependent children have Derry's highest incomes overall, with a median of \$101,680. By contrast, single women with dependent children tend to have very low incomes, with a median of just \$26,071. They also make up the overwhelming majority of families with

Fig. X.6. Household Incomes in Derry



¹³ ACS 2013-2017, B11016, B25010.

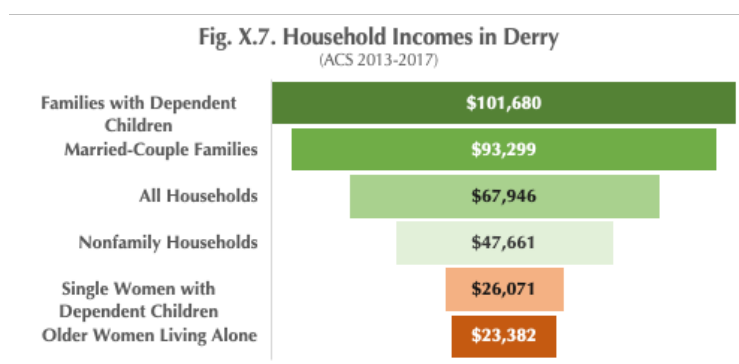
¹⁴ ACS 2013-2017, B11003, B09002.

¹⁵ ACS 2013-2017, B19019, 19049.

Master Plan, Derry, NH
Inventory and Assessment of Existing Conditions: Demographic Trends & Housing

incomes below poverty.¹⁶ The town's lowest-income households are comprised of older women living alone.

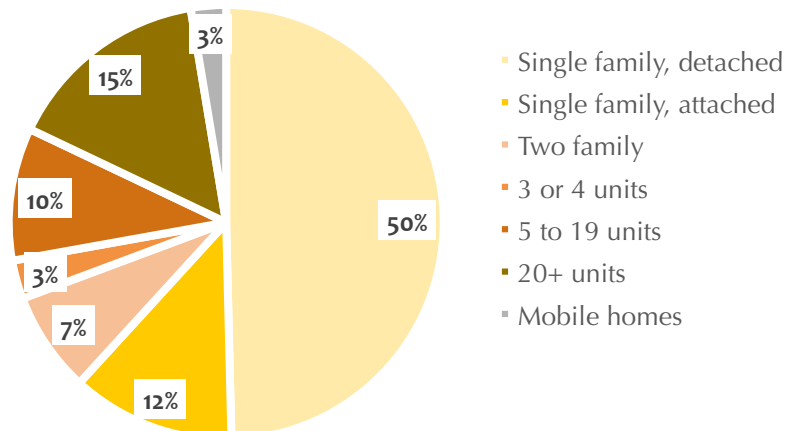
Federal statistics show that 44 percent of Derry households have low incomes as defined by the U.S. Department of Housing and Urban Development (HUD). "Low income" has a particular meaning in public policy because it determines eligibility for many types of federal and state housing assistance. As of 2015, the most recent year for which detailed estimates are available from HUD and the Census Bureau, 5,735 households have incomes at or below 80 percent of the region-wide median income for the economic statistical area that includes Derry (part of the Lawrence, MA HUD metro area). Approximately 42 percent are homeowners and 58 percent, renters.¹⁷



HOUSING CHARACTERISTICS AND TRENDS

Derry has several types of housing, including options not available in many of the surrounding towns. The housing inventory currently includes 13,577 units, half of which are traditional, detached single-family homes. Derry offers two-family homes, condominiums, and numerous multi-family dwellings, including many in small buildings tucked in and around Downtown Derry. In

Fig. X. 8. Types of Housing in Derry Today
(Source: ACS 2016)



¹⁶ ACS 2013-2017, B17023.

¹⁷ U.S. Department of Housing and Urban Development, Comprehensive Housing Affordability Strategy (CHAS) Data, and FY 2019 HUD Income Limits, Area Definitions.

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addition, Derry has one of the largest apartment complexes in New Hampshire, The Fairways. There are approximately 350 mobile homes in Derry, too.

Table X.X. Housing Inventory by Number of Units in Structures

Geography	Total Units	One-family, detached	One-family, attached	Two-family	3-4 Units	5-19 units	20+ units	Mobile homes; other
New Hampshire	620,729	63.5%	5.3%	5.6%	5.7%	7.9%	6.2%	5.8%
Atkinson	2,828	73.9%	13.1%	2.8%	3.9%	6.3%	0.0%	0.0%
Auburn	2,052	95.5%	0.5%	0.0%	1.1%	2.9%	0.0%	0.0%
Chester	1,705	92.3%	2.1%	1.1%	2.3%	0.0%	0.0%	2.1%
DERRY	13,577	49.6%	12.2%	7.5%	2.9%	9.9%	15.3%	2.6%
Hampstead	3,720	66.7%	9.5%	5.6%	2.6%	9.3%	0.3%	5.9%
Londonderry	9,244	68.8%	12.5%	2.1%	1.2%	6.7%	4.1%	4.6%
Salem	11,892	68.7%	4.0%	1.9%	2.8%	6.6%	11.7%	4.2%
Sandown	2,393	85.6%	1.8%	3.5%	3.4%	3.6%	0.4%	1.8%
Windham	5,311	84.0%	9.1%	2.5%	1.4%	1.7%	1.3%	0.0%
Source: American Community Survey, Five-Year Estimates, 2012-2016.								

TENURE AND VACANCY

Derry provides housing to 8,094 homeowners and 4,837 renters. Of the communities in its area, Derry has the largest inventory of rental housing and 47 percent the entire rental supply. Eighty percent of Derry's homeowners are families, principally married-couple families with a head of household between 35 and 64 years. The types of households in Derry's rental stock are more varied, with a mix of married-couple families, nonfamily households, and single-parent families.¹⁸ Roughly 32-34 percent of the households in Derry today have related children living with them, and Derry is the only town in the area where owner-occupied and renter-occupied units have essentially the same proportion of families with children.¹⁹ In most other towns, families with children have fewer rental options.

Housing options for older adults appear to be more limited. Of Derry's 2,242 sixty-five (65)-and-over households, the majority – 70 percent – are homeowners and just 30 percent rent the unit they occupy. These tenure-and-age statistics shift with age, however, because nearly 69 percent of the town's oldest households (75-and-over) are renters.²⁰

Recently published vacancy data indicate that under current market conditions, the homeownership inventory is not adequate to meet the demand for a place to live in Derry. Less

¹⁸ ACS 2013-2017, B25011.

¹⁹ ACS 2013-2017, B25012.

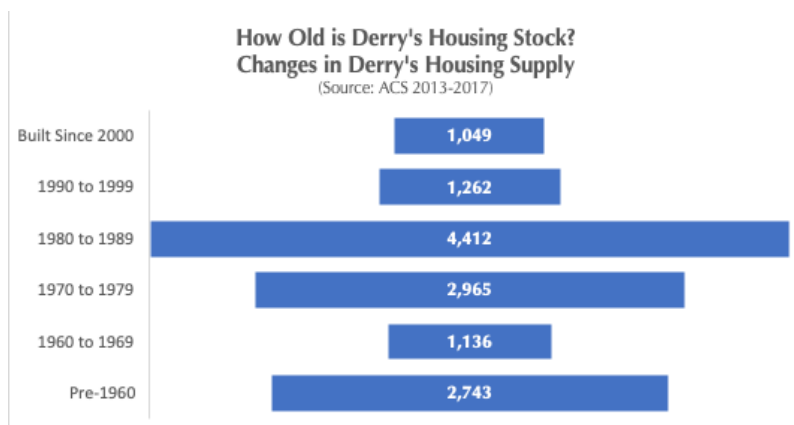
²⁰ ACS 2013-2017, B25007.

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than 1 percent of all for-sale units in Derry are on the market and available for purchase, which represents a tight market. Londonderry and Windham all have similarly low homeownership vacancy rates. A healthy vacancy rate for homeownership units is 2 percent and for rental housing, 6 to 7 percent. In Derry, the rental vacancy rate is currently 4.4 percent. This is the highest rental vacancy rate in Derry's area, but it makes sense because Derry has quite a bit of rental housing. In fact, its 4 percent vacancy rate means that Derry's rental supply falls short of demand.²¹ In Rockingham County overall, the rental vacancy rate is only 1 percent.²² Without an uptick in rental production throughout the region, the pressure on Derry's apartment stock will most likely increase – bringing with it higher rents and compromising the ability of Southern New Hampshire to house its workforce.

AGE OF HOUSING

Derry's housing stock is fairly new. Fifty-four percent of the existing housing units in Derry were constructed between 1970 and 1990 – a statistic that sheds light on the degree of physical, economic, and social change that occurred in town in a remarkably short period. New housing development accelerated in southern New Hampshire during the last half of the 1960s due to the completion of I-93 between Salem and Manchester ca. 1963. Some 4,500 two-family and multifamily units (including condominiums) were added to Derry's housing inventory between 1970 and 1990.²³ In general, the newest units in Derry are owner-occupied while the majority of units constructed in the 1970s and 1980s are renter-occupied.²⁴ Since the late 1980s, most of the new housing in Derry has catered to single-family homebuyers.



²¹ ACS 2013-2017, B25003; DP04.

²² New Hampshire Housing Finance Authority (NHHFA), *Market Update* (April 2019).

²³ *Derry Master Plan* (2000), IV-1.

²⁴ ACS 2013-2017, B25038.

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Since 2010, Derry has permitted approximately 227 new residential units. As Table X.X. shows, single-family dwellings have driven the vast majority of housing growth in recent housing growth in Derry.

Table X.X. Change in Derry's Housing Supply from Residential Building Permits, 2010-2017

Housing Type	2010 Census	2011	2012	2013	2014	2015	2016	2017	2017 Total
Single-Family	6,954	11	18	19	37	19	15	6	7,101
Multifamily	5,717	6	0	4	-3	5	4	39	5,783
Manufactured Housing	606	0	2	0	2	-4	1	5	620
Total Housing	13,277	17	20	23	36	20	20	50	13,504

Source: Office of Strategic Initiatives, *Current Estimates and Trends in New Hampshire's Housing Supply: Update 2010 – 2017*, 21.

SIZE OF HOUSING UNITS

The last master plan (2010) noted that over time, the size of housing units in Derry had gradually increased. Data from the American Community Survey indicate that trends observed almost ten years ago have continued to hold true. As new-home construction has progressed in Derry, the prevalence of large single-family residences in subdivisions on the east side of town has led to an increase in the percentage of units with 8 or more rooms. Small units are still an important part of Derry's housing stock, but the small Cape and ranch-style single-family homes built between 1960 and the late 1980s have gradually given way to the large houses that appeal to contemporary homebuyers.

Table X.X. Size of Housing Units in Derry, 1990 to 2017

Rooms	1990	Pct. Total	2000	Pct. Total	2017	Pct. Total
1 room	134	1.1%	142	1.1%	164	1.2%
2 rooms	329	2.8%	287	2.3%	437	3.2%
3 rooms	1,135	9.6%	1,098	8.6%	1,372	9.9%
4 rooms	3,131	26.4%	2,909	22.8%	3,094	22.4%
5 rooms	2,501	21.1%	2,558	20.1%	2,305	16.7%
6 rooms	1,851	15.6%	2,287	18.0%	2,377	17.2%
7 rooms	1,473	12.4%	1,722	13.5%	1,772	12.8%
8 rooms	800	6.7%	1,040	8.2%	1,175	8.5%
9 rooms or more	515	4.3%	692	5.4%	1,096	7.9%

Source: ACS 2013-2017, DP-04, Derry Master Plan (2010), and Barrett Planning Group.

HOUSING VALUES AND RENTS

Zillow classifies Derry's 2019 housing market as "very hot," yet the town is still a relatively affordable place to live for Boston-bound commuters priced out of Eastern Massachusetts. Sale prices in Rockingham County in general have increased 5 to 7 percent per year since the 2006-2007 recession and finally recovered pre-recession values in 2016.²⁵ For first-time homebuyers and home seekers with modest incomes,

Derry remains the most accessible community in this part of southern New Hampshire, but as shown below, its home prices have increased rapidly in the past 18 months.

Fig X.X. Homeowner Housing Values in Derry

(ACS 2013-2017, DP04)

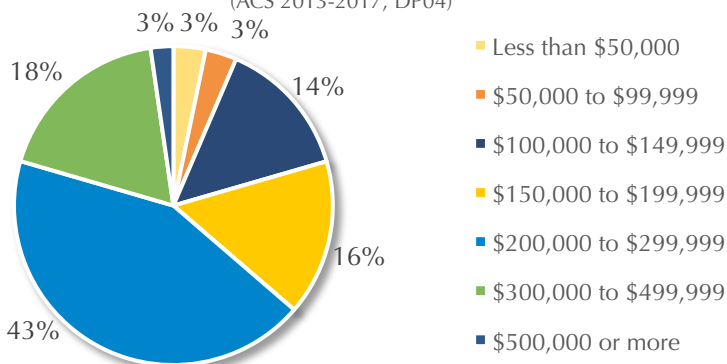


Table X.X. Change in Housing Values, Derry & Surrounding Towns

Geography	ACS Median Home Value	Estimated Current Home Value	Change Since ACS 2013-2017
New Hampshire	\$239,700	\$276,400	15.3%
Atkinson	\$318,800	\$366,300	14.9%
Auburn	\$295,400	\$376,400	27.4%
Chester	\$315,100	\$358,400	13.7%
DERRY	\$221,400	\$293,700	32.7%
Hampstead	\$292,200	\$277,600	-5.0%
Londonderry	\$285,700	\$342,400	19.8%
Salem	\$296,500	\$349,300	17.8%
Sandown	\$266,000	\$318,100	19.6%
Windham	\$368,400	\$440,400	19.5%

Sources: ACS 2013-2017, Zillow, and Barrett Planning Group. Note: ACS median home value is based on five-year housing value trends, 2013-2017, adjusted for inflation to 2017. Zillow home values are current estimates (March 2019).

²⁵ New Hampshire Realtors, *New Hampshire/Rockingham County Single-Family Residential Home Sales, 1998-2008*.

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Derry seems to fall below the area in market rents, too. However, comparing rents in Derry with rents in small towns nearby is misleading because many of the renter-occupied units in those communities are single-family homes, not apartments. In fact, Derry has a large inventory of rental housing and many types of units. According to the ACS, the median gross rent in Derry in 2017 was \$1,156, with over half of renters paying between \$1,000 and \$1,499 per month. Today, only a few years later, market rents have trended upward to over \$1,200, as indicated by the data in Table X.X.

Table X.X. Market Rent Survey, Derry, NH

LOCATION	Bedrooms	Floor Area	Low Rent	Utilities Included
The Fairways	2 BR	945 - 1,040 Sq Ft	\$1,582 - 1,691	Water, Heat, Sewer, Trash
The Fairways	1 BR	720 Sq Ft	\$1,333 - 1,570	Water, Heat, Sewer, Trash
Oak Street	3 BR	1,018 Sq Ft	\$1,395	Not Reported
Kendall Pond Rd	2 BR	1,200 Sq Ft	\$1,850	Parking
Pembroke Drive	1 BR	649 Sq Ft	\$1,300	Heat, Water
Railroad Ave	2 BR	910 Sq Ft	\$1,419	Not Reported
Pinkerton Street	3 BR	N/A	\$1,395	Not Reported
E. Broadway	1 BR	900 Sq Ft	\$1,395	Not Reported
Railroad Sq.	2 BR	700 - 910 Sq Ft	\$1,289 - 1,389	Water, Heat, Sewer, Trash
Linlew Drive	1 BR	572 Sq Ft	\$970 - 1,145	Water, Heat
Linlew Drive	2 BR	676 Sq Ft	\$1,060 - 1,235	Water, Heat
Source: Barrett Planning Group, Internet Rental Survey, Derry NH, March 2019.				

FAIR & AFFORDABLE HOUSING

By law, New Hampshire communities are required to address regional housing needs when preparing a master plan. They do so by drawing on the housing assessments prepared by the regional planning agencies. The New Hampshire statute that seeks to curb the effects of exclusionary zoning also recognizes that some towns have already met their “fair share” of the regional need for affordable housing. The most recent regional housing needs analysis – though dated now – indicates that Derry already has a disproportionate share of the region’s “workforce housing,” measured by number of units at “workforce” affordable prices.²⁶

Nevertheless, housing in Derry is actually not as affordable as it may seem. A three-bedroom home that sells for \$293,700 exceeds the maximum affordable purchase price for a household with income at 80 percent of Area Median Income (AMI) by \$70,000.²⁷ Many lenders offer special first-time homebuyer products that could help to close the affordability gap somewhat, but not

²⁶ New Hampshire law defines “workforce housing” as for-sale units affordable to households at 100 percent AMI and rental units affordable to renter households at 60 percent AMI.

²⁷ Assuming a 30-year, fixed-rate mortgage at 4.37 percent interest, 5 percent downpayment, and PMI.

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enough to close it entirely. Since about 44 percent of all households in Derry have low incomes (below 80 percent AMI), it seems clear that even though Derry provides its regional fair-share, the town has unmet housing needs, both among homeowners and renters. HUD estimates that 72 percent of Derry's low- and moderate-income households are paying more for housing than they can actually afford, which means paying more than 30 percent of their monthly gross income for housing costs. This is the condition known as **housing cost burden**, and it is more pronounced in Derry than the state as a whole.²⁸

Derry's legal obligation under N.H. RSA 674:58-61, the Workforce Housing Law is to provide "reasonable and realistic opportunities for the development of workforce housing," or "opportunities to develop economically viable workforce housing within the framework" of the town's zoning. In fact, Derry offers several options for creating mixed housing types. Much of the town is located in the Medium Density and Medium/High-Density, Multi-family, Central Business District, or Manufactured Housing districts. Multifamily dwellings, apartments, and two-family homes are permitted in the most of these districts at densities ranging from one unit per 5,000 sq. ft. to one per 10,000 sq. ft., assuming access to municipal utilities. In 2015, Derry revised the Zoning Ordinance to allow mixed-use buildings with upper-story dwelling units up to 12 units per acre. Not surprisingly, the town's zoning is much less flexible throughout East Derry due to the absence of public sewer service and, in many areas, public water as well.

Where Derry exceeds its regional fair share of affordable housing and continues to offer options for a mix of residential uses, the town has obviously taken steps to create and preserve both lower-income and workforce housing, and this contributes to Derry's relatively attainable home prices and rents today.

OPPORTUNITIES, CHALLENGES, AND OBSERVATIONS

Derry is doing what it can do – and clearly more than most of the surrounding towns are doing – to produce and maintain a range of housing options at a variety of price points. Derry's tradition of affordability has made the town accessible to homebuyers priced out of the surrounding towns and renters who could not find decent apartments elsewhere in the immediate region. This can even be seen in the results of the recent Age-Friendly Survey, for some 30 percent of the respondents cited Derry's affordability as one of the main reasons they moved to the town.²⁹ As a result, it has a greater presence of lower-income residents than other towns nearby and, despite Derry's relative affordability, they are still housing cost burdened. Even though the State of New Hampshire has recently enacted an "as-of-right" accessory apartment law, accessory dwellings can never solve all of a community's housing needs.

²⁸ *New Hampshire 2016-2020 Consolidated Plan*, 38.

²⁹ Southern New Hampshire Planning Commission, *Town of Derry Age-Friendly Survey Summary*, 2018.

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Inclusionary Zoning

Derry has at least one opportunity to work toward meeting future affordable housing needs: amending the Zoning Ordinance to require inclusion of affordable units in new residential or mixed-use developments. Communities throughout the U.S. have adopted and are successfully administering “inclusionary zoning,” a regulatory technique for leveraging affordable units in predominantly market-rate housing developments. Through this type of zoning, communities can create new, high-quality affordable housing at a very modest pace and in a manner that does not penalize or impose excessive burdens on residential developers.

Community Development Block Grant

Derry has made good use of the Community Development Block Grant (CDBG) funds it receives from the State of New Hampshire. This year, the town is investing a \$499,999 CDBG grant in a municipal sewer connection (thereby replacing existing septic systems) at the Frost Residents Cooperative, a development with 30 households, the vast majority of which have low incomes. The Town could also explore the possibility of using CDBG funds as a source of financial support for affordable units in mixed-use buildings and conversions of older single-family dwellings to two- or three-family dwellings including at least one that is affordable. This approach could add a modest inventory of safe, decent, affordable units in Derry without overburdening the town with excessive growth.

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Chapter 2: Economic Development

Economic Development

INTRODUCTION

This chapter describes current economic conditions and trends in Derry and the Town's efforts to promote economic growth. Economic development includes many aspects of the built and human environment, including local opportunities to live and work, protecting and promoting cultural resources and open space, encouraging a durable tax base to support resident and business services, and providing for a high quality of life.

This chapter includes:

- An analysis of Derry's current economic condition including the labor force, employment and wages
- An overview of economic data and future projections
- A descriptive summary of new employers in the town, and an overview of commercial and industrial activity

The chapter will conclude with an assessment of strengths and weaknesses, with recommendations for next steps.

KEY FINDINGS

- Derry has a healthy employment base that is continuing to grow
- Derry's unemployment rate has decreased significantly over a short period of time
- Efforts will continue to focus on creating business corridors along Route 28 and the Exit 4A Interchange
- Derry's workforce is skilled and educated, and has proven to be well-rounded

DERRY'S ECONOMY

Derry has historic, cultural, aesthetic, and economic features that are important for the Town's present and future prosperity. With an estimated population of 33,312¹, Derry is home to 11% of the overall Rockingham County population. It is the largest town in the Greater Derry-Londonderry region, and the fourth largest in land area in New Hampshire, totaling 21,335 acres.²

Derry is a central node in southern New Hampshire, providing amenities and resources to Rockingham County and southern New Hampshire while supplying labor to larger cities nearby. The town is ideally located for commuters, and its regional access serves them well. Situated at the

¹ U.S. Census Bureau, 2011-2016 American Community Survey 5-Year Estimates, B01001, Derry, NH

² Town of Derry Assessor's Office, 2019, Derry, NH

intersection of Route 28 and 102, and just shy of Interstate 93, Derry is 20 minutes from Manchester, 25 minutes from Nashua, 30 minutes from Concord, and 45 minutes north of Boston. The Manchester-Boston Regional Airport is close by, and bus service is available to and from Boston's South Station and Logan International Airport.³

The amenities Derry has to offer matter both to residents, the local business community, and the local government that invests business tax revenue in municipal services. Derry has many trails and conservation lands open to the public, two public libraries, three golf courses, and a range of arts and cultural programs and venues. The Robert Frost Farm attracts hundreds of tourists every year. Maintaining a "small-town" feel is important for Derry's character, yet the town also needs to convey that it is "open for business." Derry offers a good quality of life, and this will remain important not only to the people who live there but also to the town's efforts to retain and attract businesses. Advocacy for economic development in Derry comes from several sources, including the town's own Economic Development Department, the Greater Derry-Londonderry Chamber of Commerce, and the Greater Derry Arts Council. In 2018, commercial and industrial property taxpayers generated approximately 14 percent of Derry's total assessed valuation.

Derry contributed funding for and continues to participate in the Southern New Hampshire Planning Commission's Regional Economic Development Plan, which designates Derry as a target for regional economic initiatives in partnership with other Southern New Hampshire communities and state/regional agencies. The cross-collaboration and regional dialogue required by the plan could help Derry provide a strong economic future for its residents.⁴

³ *2018 Greater Derry-Londonderry Visitor's Guide*, Greater Derry-Londonderry Chamber of Commerce, 2018

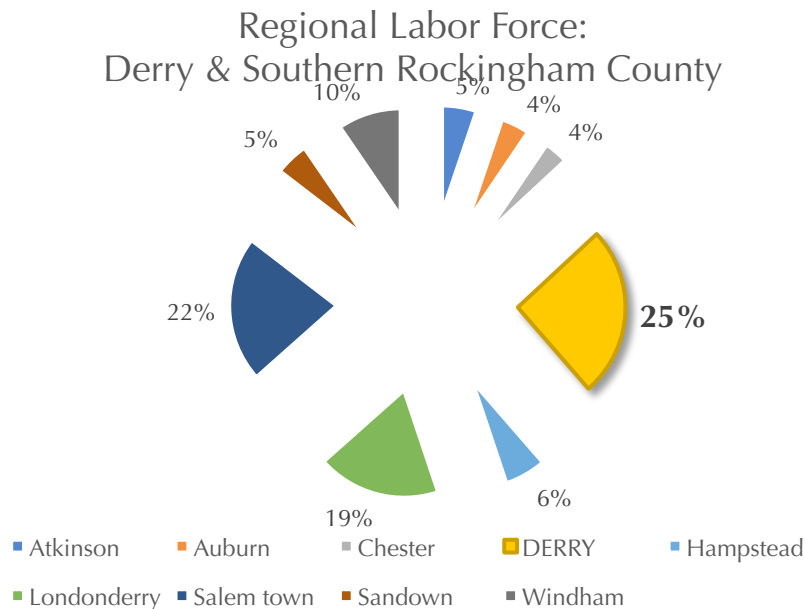
⁴ *Regional Economic Development Plan Volume I*. Southern New Hampshire Planning Commission, 2011, NH

LABOR FORCE

A community's labor force includes residents between 16 and 64 years that are employed or actively seeking employment. According to the American Community Survey (ACS), Derry's labor force consists of about 20,542 people, giving Derry a strong labor force participation rate of 75%.⁵ Derry generates the largest share (25%) of the total labor force in southern Rockingham County, as shown in Fig. X.1.

From 2006 to 2016, unemployment decreased both in Derry (to 3.4%) and Rockingham County (3.8% to 3.0%).⁶ Total employment in Rockingham County is projected to grow 8.1% between now and 2024, and New Hampshire's total employment is

expected to increase 6.1% between 2016 and 2026, gaining a total of 42,104 jobs.⁷ These figures bode well for Derry because they show positive job growth at the local, regional, and state levels over a relatively short period.



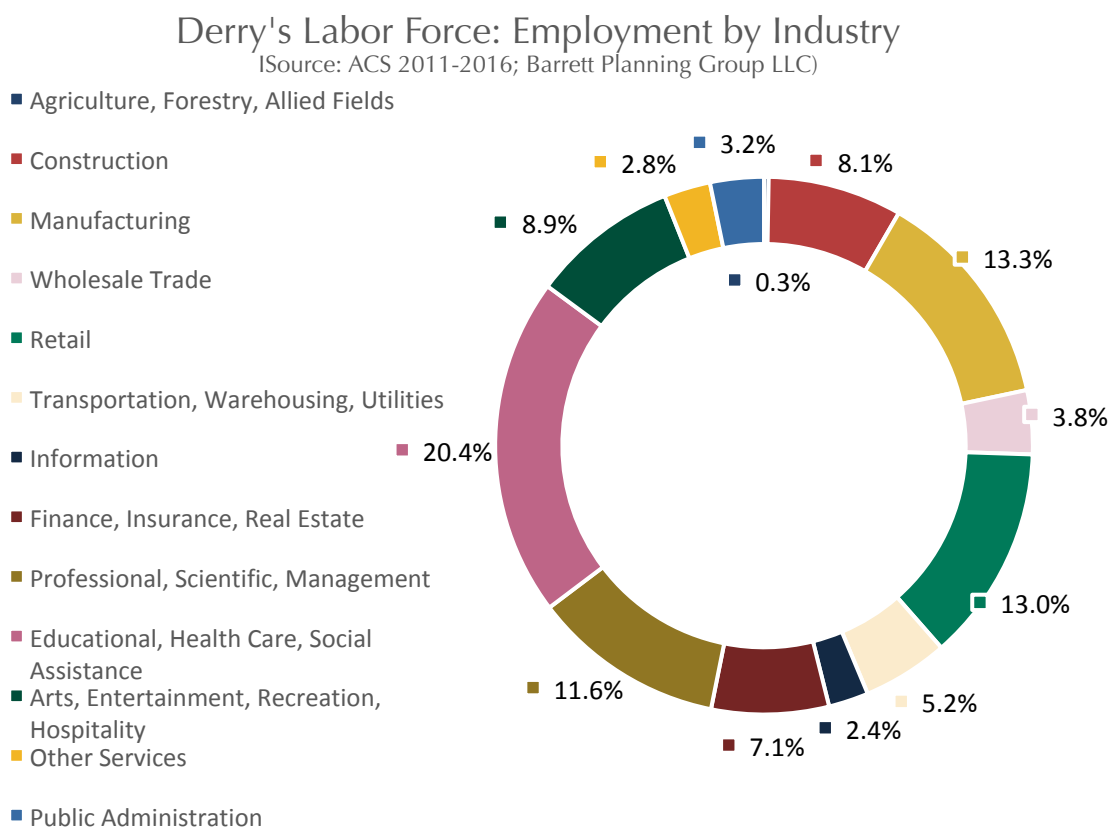
⁵ U.S Census Bureau, 2011-2016 American Community Survey 5 Year Estimates, B23025.

⁶ *Rockingham County, 2006-2016*, New Hampshire Employment Security, Economic Labor Market and Information Bureau

⁷ New Hampshire Employment Security, Economic Labor Market and Information Bureau, New Hampshire Employment Projections by County, 2016-2024 and New Hampshire Employment Projections by Industry and Occupation, 2016-2026.

WHAT DERRY RESIDENTS DO FOR WORK – AND WHERE

Derry residents work in just about all of the major industries tracked by state and federal economic agencies, but they are noticeably concentrated in health care and education, retail, manufacturing, and professional and management fields (Fig. X.2).



While some residents work locally (less than 20%), the region's access to employment centers in Boston and along Interstate Routes 93, 495 and 95 has an undeniable impact on the job choices available to Derry's population. On any given day, almost 30% of Derry's labor force commutes to work in Massachusetts. Other workplace magnets for Derry residents include Manchester, Salem, and Londonderry.⁸

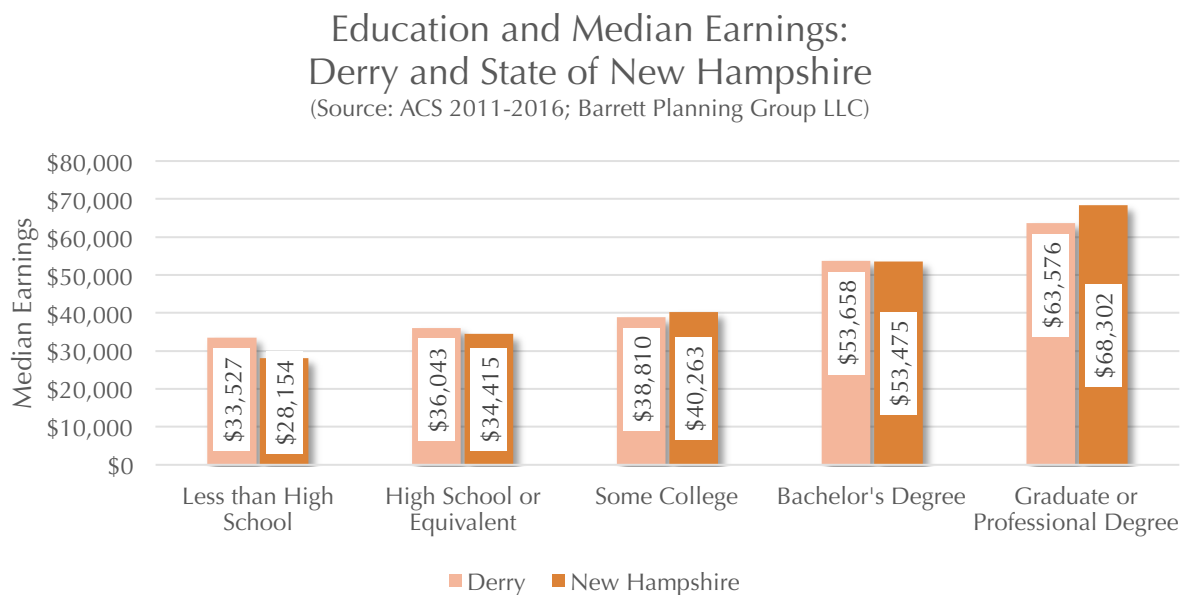
⁸ U.S. Census Bureau, 2011-2015 American Community Survey Commuting Flows (Journey to Work), Table 4, Derry, New Hampshire.

LABOR FORCE & EDUCATION

Derry is somewhat unusual because compared with nearby towns, its adult population overall tends to have lower rates of educational attainment. Achieving a high school diploma or equivalent is the highest level of education completed for about one-third of Derry residents 25 years and over. Still, for Derry and all of its neighbors, there are many adults who did not finish high school. The rates of limited formal schooling increase with population age. The presence of people with college, graduate, and professional degrees is much higher among people (especially women) between 25 and 44 years. Nevertheless, no matter how well educated they are, Derry's working-age population is predominantly employed, and there is no significant difference in the unemployment rate by educational attainment.⁹

EARNINGS

Derry residents clearly work hard, yet many have limited earnings. Data from the Census Bureau show that in general, Derry residents working year-round with full-time jobs earn quite a bit less than their counterparts in surrounding towns. As shown in Fig. X.3, the town's educational profile does have an impact on the earnings of its residents, as is the case statewide.



⁹ American Community Survey 2011-2016, B15003, B23006.

EMPLOYMENT BASE

As defined and tracked by government agencies, an employment base includes nearly all of the wage and salary jobs provided by for-profit, public, and non-profit employers in a community. While employment counts vary by source, Derry's 2018 employment base consisted of about 8,940 jobs or 1.3% of the state's entire employment base.¹⁰

Consistent with regional and national trends, Derry has witnessed employment growth in service-providing industries but a decline in goods-providing employment. Weekly wages paid by Derry employers have gradually increased. Over the past five years, average annual employment in Derry grew 5.7% percent and average weekly wages, 4.6%.¹¹ In 2017, the mean hourly wage for work in Derry was \$23.50, with a range of \$10.44 for entry-level occupations and \$30.33 per hour for experienced occupations. These figures are slightly below New Hampshire's overall wage values, for the state's mean wage was \$24.54 per hour, with an entry level wage of \$10.98 per hour and an experienced wage of \$31.32 per hour.¹² In longer-term trends, wages paid by goods-producing employers in Derry increased a modest 3.4% between 2016 and 2016 even as the total number of goods-producing jobs fell by almost a third, but in the same period, service-providing wages increased by more than 16% while jobs in these sectors rose by almost 10%.¹³

Derry's largest employer is the Derry Cooperative School District, which employs 620 people or about 5.7% of all jobs in town. The second largest employer is HCA Health Services of New Hampshire, with 532 employees. According to data from the state, Derry houses four of the top 30 employers in Rockingham County.¹⁴ There are presently over 1,000 employers operating in Derry, with over 400 employing 1 to 49 people and five with more than 250 people.¹⁵ The Town is targeting certain industries for 10-year growth, notably healthcare, financial and business services, advanced manufacturing, and information technology while continuing to nurture employers in agriculture/forestry, utilities, and education services.¹⁶

¹⁰ New Hampshire Employment Security, Economic Labor Market and Information Bureau, *Occupation and Employment Wage Numbers*, 2017, Derry NH.

¹¹, New Hampshire Employment Security, Economic Labor Market and Information Bureau, *Rockingham County, 2006-2016*.

¹² New Hampshire Employment Security, Economic Labor Market and Information Bureau, NH, *Community Profile: Derry, NH*.

¹³ *Occupation and Employment Wage Numbers*, New Hampshire Employment Security, Economic Labor Market and Information Bureau, 2006, Derry NH

¹⁴ *Community Profiles Derry, NH*, New Hampshire Employment Security, Economic Labor Market and Information Bureau, 2018, Derry NH

¹⁵ Information provided by Town of Derry Economic Development Department, 2019

¹⁶ Town of Derry Economic Development Plan Fiscal Year 2018, Town of Derry Economic Development, 2018, Derry NH

INDUSTRY STRENGTHS & WEAKNESSES

A location quotient helps to compare employment base by industry characteristics in two or more geographic areas. It represents a ratio of the percentage of an industry's employment in one geography to that of a larger reference geography. In Derry, industries such as construction, educational services, and health care and social assistance tend to have high (over 1.10) location quotients, which means these industries make up a larger share of Derry's total employment than is the case in Rockingham County as a whole. Having more than one high location quotient can indicate a diverse economy, but Derry has only a few prominent industries in its employment base and many other industries with high-wage employment are underrepresented in the town.

Table X.1. Location Quotients for Industries in Derry				
North American Industry Classification System (NAICS) Code and Industry Name	Derry Employment Count	Percent Derry Employment Base	Percent County Employment Base	Location Quotient
11: Agriculture, Forestry, Related Fields	4	0.04%	0.25%	0.151
21: Mining, Quarrying, Extraction	5	0.05%	0.06%	0.839
22: Utilities	75	0.69%	1.64%	0.422
23: Construction	734	6.79%	5.03%	1.351
31: Manufacturing	157	6.16%	8.84%	0.697
42: Wholesale Trade	324	3.00%	5.06%	0.592
44: Retail Trade	927	13.20%	18.14%	0.727
48: Transportation and Warehousing	190	2.24%	2.55%	0.877
51: Information	165	1.53%	2.75%	0.555
52: Finance and Insurance	157	1.45%	2.58%	0.563
53: Real Estate and Rental and Leasing	315	2.91%	3.10%	0.941
54: Professional, Scientific, Technical	506	4.68%	6.11%	0.766
55: Mgmt. Companies and Enterprises	5	0.05%	0.17%	0.269
56: Administrative, Support, Waste Management and Remediation Services	193	1.79%	3.64%	0.490
61: Educational Services	1,325	12.25%	6.67%	1.838
62: Health Care and Social Assistance	2,561	23.69%	13.27%	1.784
71: Arts, Entertainment, and Recreation	175	1.62%	2.38%	0.680
72: Accommodation and Food Services	812	7.51%	8.91%	0.843
81: Other Services	760	7.03%	5.25%	1.338
92: Public Administration	333	3.08%	3.31%	0.932
99: Unclassified	28	0.26%	0.29%	0.892
Sources: N.H. Employment Security, Economic Labor Market and Information Bureau, Covered Employment and Wages; and Barrett Planning Group LLC.				

TRENDS & INITIATIVES

The Derry Planning Department processed approximately 341 site change applications between December 2006 and December 2017. More recently, 26 change-of-use applications were filed between July 2018 and January 2019, with noted activity along West Broadway. And, in Fiscal Years 2017, 2018, and 2019 (part), 69 new business applications were received by the Town. As of 2018, Derry had approximately 1,300 commercial businesses.¹⁷

Derry has recently attracted some appealing new businesses, from the Kelsen Brewing Company to Nahar Yoga to the Cask and Vine restaurant. The Town is supportive of large and small businesses alike, offering programs such as the Downtown Revitalization Tax Credit Program and the Downtown Façade Improvement Program. As the only community in the Greater Derry-Londonderry region with a true central business district, Derry tries to preserve the historic and cultural character of the downtown while continuing to expand infrastructure for new businesses in previously underutilized areas there.

In addition to the high volume of new business activity in Derry, current employers remain strong. HCA Health Services of New Hampshire, the second largest employer in Derry, completed a 7,000 square foot addition to the Parkland Hospital in 2015 to provide additional patient care and support.¹⁸ Another example is Pinkerton Academy, the largest independent high school in the United States and, as the employer of 530 people, the 22nd largest employer in Rockingham County as of January 2018. Pinkerton recently acquired an additional six acres for alternative student study space.¹⁹ There is also an ongoing discussion about developing a new West Running Brook Village District, which could spearhead mixed-used development in the area and provide more housing near jobs.

Derry has recently become federally designated as an “Economic Opportunity Zone” (EOZ), a program to provide investment incentives in low-income census tracts across the United States. The EOZ program benefits residents and businesses in the designated zones as well as private investors by deferring or reducing capital gains taxes. Investors can help to stimulate business growth by investing in the Economic Opportunity Fund, which in turn supports small business development in the EOZs. EOZ investments can support traditional economic development activity, including infrastructure, and stimulate the preservation and creation of affordable housing. To date, 8,700 census tracts with a combined total of more than one million parcels have been designated as EOZs. Approximately 10% of the nation’s total population lives in an EOZ, and 24

¹⁷ Information provided by Town of Derry Economic Development Department and Derry Fire Department Emergency Response Data, 2019

¹⁸ Huss, J. “Parkland Opens Behavioral Health Center.” Derry News. March 5, 2015

¹⁹ Huss, J. “Pinkerton Academy Program gets Zoning Approval.” Derry News. August 23, 2018.

million jobs are located within them.²⁰ Derry's EOZ is located by Broadway and East Derry Road to the north, Cemetery Road to the east, Humphrey and Kendall Pond Roads to the south and the Londonderry town line to the west.²¹ Initiatives like the EOZ could spur development in weak-market areas and facilitate reuse of difficult-to-develop properties. For Derry, the EOZ designation could help the Town meet or exceed its economic goals under the Southern New Hampshire Planning Commission's Regional Economic Development Plan, making the town eligible for further study, more public improvement projects, and technical support/funding opportunities including grant-writing assistance.²²

COMMERCIAL AND INDUSTRIAL DEVELOPMENT

Derry has zoned significant areas for industrial, commercial, and office uses with a combined total of 1,228 acres, mainly along the western end of the town.²³ While several properties recently changed hands, paving the way for new business growth, there is a surplus of commercial development that is presently vacant and listed for sale or lease, particularly on Rockingham Road, West Broadway and Tinkham Avenue. According to available market data sources, there is approximately 1.6 million square feet of commercial property and 630,100 square feet of industrial property available for sale or lease in Derry.²⁴

Notable commercial and industrial activity took place in Derry throughout 2018. For example, 11 A Street was purchased for \$1.35M and houses Events United, 6 A Street was purchased for \$1.075M by Bulldog Liquidators, 20 A Street was bought by Tri-K Industries, Inc. for \$2.075M, 3 Corporate Park Drive entered full occupancy after welcoming AutoStore, 56 Kendall Pond Road also entered full occupancy after welcoming Tuff Shed, and 23 Crystal Avenue was purchased for \$1.15M to ultimately become Crystal Place. Colliers International reports that 20 A Street, 56 Kendall Pond Road, and 3 Corporate Park Drive were three of the six largest transactions in the Salem, New Hampshire submarket, which includes Derry.²⁵

Derry has several key clusters with a high volume of commercial and industrial land in the town; they have the potential to stipulate extensive economic opportunity. In addition to these clusters, there are specific areas that have been identified and prioritized for economic development by community members.

²⁰ Information provided by the Urban Land Institute Responsible Property Investment Council (RPIC) Webinar Series, 2019

²¹ *Simplifying Opportunities Zones*, Town of Derry Economic Development, 2018, Derry, NH

²² *Regional Economic Development Plan Volume I*. Southern New Hampshire Planning Commission, 2011, NH

²³ Information provided by the Town of Derry Assessor's Department, 2019

²⁴ New England Commercial Property Exchange, 2019, Derry NH

²⁴ New Hampshire 2018 Market Review and 2019 Outlook. Colliers International. 2019. New Hampshire

²⁵ Ibid,

- **Route 28 South.** Discussion is underway to extend utilities to Route 28 South in support potential revenue generating opportunities there. Route 28 South extends through the heart of Derry. It is currently zoned for industrial and commercial uses with some residential as well. Numerous clusters of commercial/industrial activity exist along Route 28, but they lack continuity.

Route 28 is a major artery in the town, heading directly into Derry's downtown while intersecting with other major roadways including Route 102, Birch Street, and Tsienneto Road. Projections reported by the Southern New Hampshire Planning Council anticipate 2026 traffic volumes will increase in several places along Route 28.²⁶ The New Hampshire Department of Transportation reported an overall 2% growth in annual traffic volume on Route 28 between 2017 to 2018.²⁷ Developing and improving a commercial corridor like Route 28 could play an important role in keeping businesses in town, boost their vitality, and create opportunities to create a local signature "look" for the corridor – that is, a local vision and guided plan fashioned by those who travel along this route the most.

- **Downtown.** Derry's downtown is a high traffic area with multiple opportunities to promote connectivity, walkability, and the vibrancy conducive to a strong local economy. As the only downtown in the Greater Londonderry-Derry region, Downtown Derry has the potential for mixed-use development, with support for revitalization. The downtown is a few minutes away from I-93 via Route 10, and generally lies parallel to Route 28. The surrounding zoning has advantages for local economic development, encouraging higher-density residential, office-business, general commercial, and some industrial.

Strategic planning and implementation can improve the look and feel of the downtown to be better aligned with Derry's needs while simultaneously attracting investments in revitalization, façade improvements, streetscape enhancement, and retention of destination businesses. The Southern New Hampshire Planning Council recently conducted an Age-Friendly Survey for Derry in which 405 people said they have a favorable view of downtown and want to support its vitality. Over 70 percent of the respondents live in Derry, including 22 percent who both live and work in Derry. They indicated strong support for creating a more bike and pedestrian-friendly downtown, keeping existing businesses and incentivizing new businesses to come to downtown, having more visual and performing arts activities downtown, encouraging façade improvements on commercial buildings, and creating more public gathering spaces (including outdoor seating).²⁸

²⁶ *Existing (2007) and Projected (2026) AADT Traffic Volumes*, Southern New Hampshire Planning Council Regional Transportation Plan, SNHPC, 2007

²⁷ Transportation Data Management System, New Hampshire Department of Transportation, 2018, Derry NH

²⁸ *Town of Derry Age-Friendly Survey Summary*. Southern New Hampshire Planning Commission. 2019. Derry, NH

- **Exit 4A Interchange.** The new interchange, currently zoned as Industrial IV, general commercial, multifamily residential and medium high density residential, will provide a new entryway into Derry from I-93. It creates opportunities for high business visibility. As noted above, there is vacant land for sale or lease in this area, particularly Tinkham Avenue, B Street, North High Street and Madden Road. Businesses could profit from the exposure of the interchange and the location. This \$56.9 million project was outlined in the Regional Economic Development Plan as a development strategy for the region due to its capability of connecting the workforce with employment.

The project consists of a new diamond interchange on I-93 in Londonderry, approximately one mile north of Exit 4. The new diamond interchange will provide access to the east side of I-93. A 1-mile connector roadway would be built on new alignment from the interchange to Folsom Road, near the intersection of North High Street and Madden Road. Folsom Road, and subsequently Tsienneto Road, will be upgraded, and the intersections would be improved. This project will also reduce traffic along State Route 102, making it even more appealing to current and prospective commuters. Construction of the project is expected to be finished by 2022.²⁹

OPPORTUNITIES, CHALLENGES & OTHER OBSERVATIONS

The following are opportunities, challenges, and other observations about economic development in Derry:

- Derry has a budding creative economy with lots of assets and potential for a lasting legacy. By working closely with entities such as the Derry Opera House, the Derry Arts Council and the Public Arts Committee, the town can bridge the existing gap between economic and cultural development.
- Derry needs to explore innovative ways to compete with surrounding New Hampshire communities, including a re-examination of current land use policies to promote mixed-use development in strategic locations by the town's major arteries.
- The downtown needs revitalization. Focus should be directed toward business retention strategies and streamlined design guidelines.
- Derry needs to continue to evaluate ways to keep residents living and working in the town. Improving connectivity between districts, promoting job diversity, and particularly promoting at-home businesses and collaborative work spaces could help to boost self-employment.
- As a member of the SNHPC's Regional Economic Development Plan, Derry is able to participate in a shared economic vision for southern New Hampshire, creating opportunities through strategic planning and alternative funding sources for goals such as transportation and infrastructure improvements, unique community development initiatives, and affordable housing that will have ripple effects on the future evolution of the town and its residents.

²⁹ *I93 Exit 4A Project*, New Hampshire Department of Transportation, 2019, Derry and Londonderry, NH

- Derry has a total jobs-to-housing ratio of just 0.66 (8,940: 13,577). Because the ratio is less than 1.0, there are more resident workers employed than there are jobs in Derry. Strengthening the daytime population will help to communicate to current and prospective businesses that Derry is a place where small businesses can prosper.
- The Economic Opportunity Zone (EOZ) offers opportunities for new investment in the town. Like other communities with EOZ-designated census tracts, Derry needs to be positioned to attract that investment through strategic planning, marketing and promotions, and zoning that can catalyze economic and housing growth.

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Chapter 3: Historic and Cultural Resources

Historic & Cultural Resources

INTRODUCTION

This chapter identifies and describes Derry's historic and cultural resources and past efforts to preserve, promote and enhance them. Historic and cultural resources include both physical resources [buildings, landscape features, landscapes, and archaeological sites (both historic and pre - historic)], as well as non - physical resources (organizations, clubs, programs and events), both of which contribute to the quality of life in the town. The chapter includes:

- A brief history of Derry and an overview of the town's extant historic resources;
- A synopsis of past efforts to preserve historic and cultural resources; and
- A description of the historical and cultural organizations based in Derry.

The chapter concludes with a compilation of issues, challenges and opportunities surrounding Derry's historic and cultural resources to be considered by the town in shaping the Master Plan.

KEY FINDINGS

- Derry undertook a comprehensive inventory of its historic and cultural resources in 1986, however the document was never completed and now, after over 30 years, needs updating.
- Many historic buildings have been demolished and landscapes (including farms) have been fragmented through subdivision.
- The remaining historic resources, if preserved, can provide a base for town-wide revitalization.
- Opportunity exists for Derry to become a destination for history.

DERRY'S HISTORY AND SURVIVING HISTORIC AND CULTURAL RESOURCES¹

CONTACT AND FIRST PERIODS (BEFORE 1675)

The first known human inhabitants of the area that would become Derry arrived approximately 11,000 years ago, native peoples speaking dialects of the Abenaki language.

¹Sources for the narrative history of Derry include Lynne Emerson Monroe's "Cultural Resources in Derry," Richard Holmes's Nutfield Rambles, and William Dugan and Richard Holmes's Images of America: Derry.

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A band of the Abenakis known as the Penacooks concentrated along the Merrimack River of New Hampshire, setting up villages along waterways and fishing for shad, salmon and alewife. By the late 1600s much of the Native American population was in decline as a result of the spread of infectious diseases, such as small pox and influenza, brought by European settlers.

While evidence of Abenaki inhabitation is not known to exist in Derry, several place names originating from the tribe remain in surrounding towns. These include the Merrimack River (“deep water or river”), Auburn’s Massabesic Lake (“to the great pond”), and many others.

COLONIAL PERIOD (1675-1775)

First settlers to Derry were known as “Ulster Scots,” or Scotch Irish. Originally working as farmers, herdsman and weavers along Scotland’s west coast, they migrated to the Ulster Plantation of Northern Ireland in the 17th century during a British rebellion and purchased farmland in County Londonderry’s Town of Aghadowey. After the native Irish reclaimed the plantation land in the late 1600s, a small group of Scots chose, in 1718, to migrate further west, this time to America. On August 4th, a ship carrying sixteen families and led by Pastor Reverend James McGregor landed in Boston. Within a year, after having secured a 100 square mile tract of land, the families moved northward to their new settlement of Nutfield, an area full of marshy grasslands and nut trees, that contained today’s towns of Windham, Londonderry and Derry, as well as portions of Salem, Manchester and Hudson.

In 1722, the settlers changed the name of Nutfield to Londonderry. The local economy centered on the farming traditions brought from Ireland, including what are



Forest Hill Cemetery, established in 1722 in East Derry, is one of the town’s oldest historic resources.



The salt-box style Matthew Thornton House, located at 2 Thornton Street, dates to ca. 1740.

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believed to be the first potatoes to be grown in America, and flax.² The latter provided the raw material for cloth known as “Londonderry Linen,” the first trade-marked product in America. Settlement stood along the east/west stagecoach road to Portsmouth, capital of New Hampshire at the time, at the south end of Beaver Lake and in the vicinity of today’s East Derry.

A few resources from the Colonial Period remain in Derry. Derry’s oldest extant designed landscape, Forest Hill Cemetery in East Derry, dates to 1722 and holds the graves of the town’s early settlers. Adjacent to the cemetery is the First Parish Congregational Church, constructed in 1767. The Matthew Thornton House (ca. 1740), is a National Historic Landmark. A native of Ireland, Thornton came to America in 1718, became a doctor, and practiced from the 2 Thornton Street house from 1740 until 1780, as well as serving in the Continental Congress and signing the Declaration of Independence.

FEDERAL PERIOD (1775-1830)

The settlement remained a parish of Londonderry until 1827, when Derry³ incorporated as a separate town. The beginning of the Federal period was marked by the Revolutionary War, and many local men participated, fighting in the battles of Bunker Hill, Yorktown, and others. Two prominent military officers, General John Stark and General George Reid, were both born in Derry.

In 1806, a north/south turnpike (today’s Route 28) was built to Concord, the new state capital. This fostered the development of a second village located 1-1/2 miles to the west of East Derry, known as “Lower Village” (today’s Derry Village). Farming continued to dominate the local economy, with the center of the parish remaining in East Derry. In 1799, Robert Taylor constructed a sawmill at the eastern end of Ballard Pond near the source of Taylor Brook. Known as the “Taylor Up and Down Sawmill”



The Taylor Up and Down Sawmill was constructed at the eastern edge of Ballard Pond by Robert Taylor in 1799. Today it is a State Historic Site.

this structure contained a twelve-foot diameter/six feet wide water wheel. Taylor operated the mill into the 1800s, and today it survives as a State Historic Site. Local merchants John

² Local tradition holds that the first potato crop was planted on the town’s common field, in the vicinity of the former Murdock-White farm along today’s Route 28 bypass. In the 1980s the farm buildings were demolished to make way for an apartment complex (Holmes, Nutfield Rambles).

³ Derry was the original name of Londonderry in Northern Ireland; the name means “hill covered with oak trees.”

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and James Pinkerton established another significant property during the Federal Period, Pinkerton Academy, constructing its first school building along the turnpike (replaced in the late 1800s) in 1814-1815.

EARLY AND LATE INDUSTRIAL PERIODS (1830-1915)

A third major transportation route came to Derry in the mid-1800s that would further alter the development patterns in the downtown. Located 1-1/2 miles west of the north/south turnpike, the railroad provided an easy means of transporting goods northward, towards Concord, and southward to Boston. While agriculture and agricultural by-products, including linen and palm leaf hats, fueled Derry's economy into mid-1800s, the railroad spurred the growth of larger-scale industries, many of which were clustered around the depot at West Derry.

Beginning in the 1850s, two such operations took root in Derry. Entrepreneur Harvey Perley Hood moved to Derry in 1856 and established a milk production operation near the railroad's Broadway depot, shipping cans of milk to Boston each day. Hood was the first milk producer in New England to institute the pasteurization process and was a pioneer in the sterilization of glass bottles. In 1870, Colonel William Pillsbury established a shoe-manufacturing operation in the western section of town. The enterprise grew rapidly, adding additional shoe factories and fostering the development of the West Derry area. Broadway developed into a municipal



The HEH Shoe Factory, built in 1902, was alleged to be the largest wooden factory in the world, measuring 582 feet. Located in the Derry Depot area, it was demolished in 1939.



The 1897 Sanborn Fire Insurance Map of West Derry shows the volume of manufacturing operations clustered around the rail line.

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hub, containing stores, churches and houses, with three-quarters of the town's population living and working with walking distance of Broadway in 1900.

With the emergence of industry came the gradual decline of agriculture in Derry. Many farmers abandoned their properties to pursue work in the factories. Other farms were purchased and remodeled as summer homes. Towards the end of the 19th century, New Hampshire became a popular tourist destination, made possible by the railroad as well as electric streetcar services. In Derry, Island Pond, Chase's Grove, Germantown and Beaver Lake hosted cabin colonies.

Examples of extant resources from the Industrial Periods include the Robert Frost Farm (built in 1884 by Nathaniel Head), as well as several institutional buildings: Upper Village Hall (1875), the Pinkerton building (1887, replaced original school 1814 school building), and the Adams Memorial Building (also known as the Derry Opera House), built in 1904 (the gift of Williams Pillsbury and another Derry entrepreneur, Benjamin Adams).



Upper Village Hall, constructed in 1875 as a town house, was funded by a bequest made by Mrs. Pamela Newell.



In the late 19th and early 20th centuries, Beaver Lake became a popular vacation destination, offering cabin accommodations to summer tourists.

EARLY MODERN AND MODERN PERIODS (1915-TODAY)

In the 1930s, workers of the Federal Writers' Project described Derry as "a lively manufacturing village surrounded by hills, valley, ponds, and meadows...[with] many excellent farms spread along the outskirts of town."⁴ In reality, industry in Derry was in decline. In the early 20th century, shoe manufacturing moved to the American South, and H. P. Hood relocated to Massachusetts. In 1963 interstate 93 opened, allowing Derry

⁴Writers of the Federal Writer's Project, New Hampshire, A Guide to the Granite State..

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residents to commute, by car, to employment outside the town. Derry gradually became a bedroom community for Manchester and Metro Boston. Developers purchased abandoned tracts of farmland and forest and created residential subdivisions. All but three of the shoe factories had burned and/or closed by 1960, and the remaining three were all closed by 1989.



The birthplace of astronaut Alan Shepard was built in 1921 in the Colonial Revival style, at 64 Hampstead Road.

Several extant buildings of architectural and historical significance were constructed in Derry during the Early Modern and Modern periods, including the Alan Shepard House (1921, Hampstead Road, East Derry).

Today, many Derry residents lament the loss of the small-town character that once defined the community. Small downtown retail establishments have been replaced by shopping plazas and chain stores at the outskirts of downtown, and vehicles outnumber pedestrians. Despite these changes, Derry still retains many historic buildings and landscapes that, if preserved, can serve as a foundation for town-wide revitalization.

PAST EFFORTS TO PRESERVE HISTORIC AND CULTURAL RESOURCES

National Historic Landmarks. Derry contains two properties of national historical significance that have been designated National Historic Landmarks by the United States Secretary of the Interior, National Park Service:

- *Robert Frost Farm* (also known as the Nathaniel Head Farm), constructed in 1884 and located on Route 28 approximately two miles south of downtown. This property was owned and lived in by the poet and his family while Frost taught at Pinkerton Academy between 1900 and 1911. It earned landmark status in 1968.
- *Matthew Thornton House*, constructed ca. 1740 and located at 2 Thornton Street. A native of Ireland, Matthew Thornton practiced medicine from the property between 1740 and 1780. It became a National Historic Landmark in 1971.

Observations

- Derry has made several efforts, through the National Register and National Historic Landmark Programs, to recognize some of its most important historic resources, but most of this work was done before 1980.
- The 1986 Historic Resource Inventory and accompanying Historic Preservation Report spelled out many recommendations for preserving Derry's resources, but the town has not

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The nearly 2,600 National Historic Landmarks across the country are regarded as exceptional “because of their ability to illustrate U. S. Heritage.”⁵ New Hampshire contains 23 such properties, the bulk of which received the honor in the 1960s and 1970s. Landmark status provides some protection from federally-funded projects that may impact the landmark status and can make the landmark eligible for grants and technical assistance. Staff of the National Park Service regularly performs condition assessments of landmark properties as a condition of continued landmark status.



The Robert Frost Farm National Historic Sites consists of 30 acres of meadow and forest. Frost's poems appear on trail markers throughout the property.

National Register of Historic Places. Derry has also secured National Register of Historic Places individual property designations to the Matthew Thornton House and Robert Frost Farm, as well as the *Adams Memorial Building and Opera House* on West Broadway (listed on the register in 1982). Built in 1904, this Colonial Revival structure has served as the town offices, the police station, the first downtown library, and a courtroom, and is now home to several arts and cultural organizations (see Existing Historical and Cultural Organizations, later in this chapter). In addition, Derry secured National Register status for the *East Derry National Register Historic District* in 1984. This cluster of 22 buildings, Forest Hill Cemetery, Pearson Field, Shepard Fields, the muster parade grounds and the foundation of the Thom Tavern represent the site of first European settlement in Derry.

The National Register of Historic Places is the official list of the Nation's historic places worthy of preservation. Authorized by the National Historic Preservation Act of 1966, the National Register is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect America's historic and archaeological resources. As of July 2018, nearly 800 properties and/or districts in New Hampshire had been added to the program.⁶

State Register of Historic Places. New Hampshire's Division of Historic Resources (NHDHR) maintains a State Register of Historic Places, an honorary listing that “encourages the protection of significant buildings, districts, sites, landscapes, structures or objects that are meaningful in the history, architecture, archeology, engineering, or traditions of New Hampshire residents and communities.”⁷ Inclusion on the State Register does not provide protection to the property. Derry's properties listed on the State Register

⁵ <https://www.nps.gov/orgs/1582/index.htm>.

⁶ https://www.nh.gov/nhdhr/programs/national_register.html.

⁷ https://www.nh.gov/nhdhr/programs/state_register.html

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include *Upper Village Hall* (East Derry, listed in 2008) and the *Moore-Scott House* (Windham Depot Road, listed in 2003), and the *Taylor Library* (East Derry, listed in 2016).

State Historic Markers. This statewide program, administered by the Division of Historic Resources with support from the Department of Transportation, honors places, people and events of significance in New Hampshire's history. Cities, towns, organizations and individuals may propose placement of markers with a petition signed by at least 20 New Hampshire citizens. As of 2018, the state has placed over 200 such markers, three of which are in Derry:

- *General John Stark 1728-1822*, Route 28 2.3 miles south of the Derry rotary
- *Scotch-Irish Settlement*, East Derry Road 1 miles east of the Derry rotary
- *Robert Frost 1887-1963*, Route 28 1.7 miles south of the Derry rotary

Scenic Byways Program. The *Robert Frost/Old Stagecoach Scenic Byway*, established in 2014, follows the route of the Boston-Haverhill-Concord Stage Coach and includes the Route 28 Bypass through Derry, passing by the Robert Frost Farm and taking in the scenes and settings from some of Frost's best-known poems.⁸ It is part of the New Hampshire Scenic and Cultural Byways Program, established in 1992 "to provide the opportunity for residents and visitors to travel a system of byways which feature the scenic and cultural qualities of the state within the existing highway system, promote retention of rural and urban scenic byways, support the cultural, recreational and historic attributes along these byways, and expose the unique elements of the state's beauty, culture and history."⁹

Certified Local Government Program. Derry is one of 24 cities and towns in New Hampshire in the Certified Local Government Program (CLG), an effort that assists local governments in becoming more directly involved in identifying, evaluating, protecting, promoting and enhancing the educational economic value of local properties of historic, architectural and archeological significance. The program requires that New Hampshire's Division of Historical Resources (NHDHR) designate at least 10 percent of its annual Historic Preservation Fund allocation from the U. S. Department of the Interior to municipalities that have become Certified Local Governments. Derry became a CLG in the 1990s and formed the Derry Heritage Commission, an advisory body to the town's government and to the land use boards (see Derry Heritage Commission, later in this Chapter) on matters related to preservation of historic resources.

Historic Resource Inventory and Historic Preservation Report (1986). The survey of historic resources in Derry, completed in 1986, identified approximately 875 structures built in Derry prior to World War II. A set of recommendations for preserving Derry's historic resources accompanied the inventory:

- Create a local historic district in East Derry as a way of protecting the physical integrity of the buildings and landscapes of the district
- Consider a local historic district for Derry Village (including Pinkerton Academy)

⁸ <http://www.rpc-nh.org/transportation/highway-and-bridge/scenic-byways>

⁹ <https://www.nh.gov/dot/programs/scbp/>

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- Revisit zoning regulations in residential neighborhoods so that the historic character may be preserved
- Enact measures (design review, facade improvement, etc.) to preserve and enhance the downtown commercial center
- Create secondary historic districts around Derry's two lakes
- Protect the remaining intact agricultural areas through existing farmland protection programs
- Designate scenic roads and byways to protect visual quality of rural areas
- Reuse historic buildings, where possible, rather than tearing them down

To date, the town has implemented several of these recommendations, including developing a facade improvement program for the downtown; creating a zoning district to safeguard the landscapes surrounding important historic sites; seeking protections for historic farms; and participating in the National Scenic Byway Program.

2002 Derry Master Plan and 2010 Master Plan Update. The Derry Master Plan prepared in 2002 and its 2010 update both included chapters on historic and cultural resources. The 2002 Master Plan spelled out the following goals and actions, prepared by a group of participants focusing on the historic and cultural resources element of the overall plan:

- 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 and 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;
- Develop a trail linking historical locations;
- Provide "Certificates of Merit" for citizens who preserve and promote the town's history;
- Give descriptive names to new developments, identifying special corners, hills, clusters, cross-roads, ranges, mills, etc.

The 2010 Master Plan updated the 2002 plan. In addition to spelling out many opportunities for preserving historic and cultural resources, the new plan included the following implementation items:

- Revisit the recommendations contained in the 1986 Historic Preservation Report, prepared by Lynne Emerson Monroe.
- Revisit the goals for Historic Preservation as set forth in the 2002 Master Plan.
- Commit to and create a clear vision of cultural heritage and recreational resources.

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- Protect historic assets.
- Promote and market existing and potential recreational events and cultural resource events.
- Identify or create a location for large recreation/cultural event venues.
- Link historic sites so that Derry becomes a destination.
- Create an historic overlay district to protect historic sites and properties (such as the Robert Frost Farm) from abutting residential and commercial uses.
- Work with state and non-profit land trust for land preservation efforts.

Of this list of nine items, the town was able to accomplish the following:

- creating a new zoning district (General Commercial III) with the purpose of protecting and preserving “the character of the neighborhood in the vicinity of a historic site,” by limiting and regulating the uses, size, height and architecture of structures in the zone so as to compliment this historic site (adopted in 2011)
- Participating in the creation of the Robert Frost/Old Stagecoach Scenic Byway (2014)
- Launching an effort, through the office of the Economic Development Director and the Economic Development Advisory Committee (EDAC), to identify a location for large events.

EXISTING HISTORICAL AND ARTS ORGANIZATIONS

HISTORICAL ORGANIZATIONS

Derry Heritage Commission & Derry Museum of History. Established in the early 1990s, following the designation of Derry as a Certified Local Government, the Derry Heritage Commission is responsible for safe-guarding the historic resources of the town. The five-member appointed commission was set up to dually serve as a historic district commission, so that it may oversee a local historic district or districts in the future. The commission also manages the **Derry Museum of History**, a collection of local artifacts housed and exhibited in the Derry Opera House. Recent efforts of the commission include mounting exhibits, organizing events related to the town’s 300th anniversary celebration, and participating in a regional effort to establish a Robert Frost/Stage Coach Scenic Byway.

Derry Public Library. Established in 1905 with a \$1,000 donation to the town from R. W. Pillsbury, the Derry Public Library “promotes the free flow of information to encourage lifelong learning, promote democratic values, civic engagement, and the appreciation of the breadth and diversity of history, wisdom and culture.”¹⁰ Originally situated in Adams Memorial Hall, the institution moved to a new building in 1927, constructed on the site of the former Boyd home, with funds provided through the will of Henry MacGregor. The building underwent two renovations during the 20th century, the establishment of a children’s room in the basement in 1977, and a 15,000 square foot expansion, completed in 1990, bringing the size of today’s library to nearly 23,000 square feet. Programs and

¹⁰ <https://derrypl.org/history/mission-statement/>

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services in addition to lending include book, movie and craft clubs, meeting room rental, and computer access. The library also maintains the New Hampshire Room, a collection of New Hampshire-related books, maps, photographs and other materials, including a collection of historic Derry postcards and the 1986 historic resource survey, both available on FLICKR. Uploading of the survey photos and forms was in progress at the time this inventory report was compiled.

Taylor Library. Located in East Derry, the 140-year old Taylor Library is a local branch of the central Derry Public Library. Originally located in Upper Village Hall (across the street), the library relocated in 1920 to its current space, a gift of Frederick Shepard to the town. The facility is open six days per week and provides a full complement of library services, including lending, children's and adults' programs, preschool story hours, laptop access, and family museum passes.



The Taylor Library, located in East Derry, provides a full complement of library services from its 140-year-old building.

Friends of Forest Hill Cemetery.

This non-profit organization serves as the stewards of the town's only known place of interment, established ca. 1722 in East Derry. The group was established to preserve "the historical integrity of the cemetery and its records, to foster an appreciation of the lives interred there, and to promote and improve its general appearance as an integral part of the National Register[ed] Historic District of East Derry and the community of Derry at large."¹¹ Efforts of the Friends have included restoration of the cemetery fence and conservation treatment of gravestones, including an "Adopt a Gravestone" program, in collaboration with the cemetery superintendent. The Friends also sponsor programs, including tours and historic reenactments, and reports regularly to the Derry Heritage Commission.

East Derry Village Improvement Society (EDVIS) & Upper Village Hall. This non-profit organization was founded in 1902 by local residents concerned about preserving East Derry history and culture. Central to its mission is the preservation of Upper Village Hall, an 1875 building, purchased by the society in 2010. EDVIS leases the facility for children's theater, rehearsals, karate classes, and social events. In addition, the organization has preserved many artifacts related to Derry history.

ARTS ORGANIZATIONS

¹¹ <https://forest-hill-1721.webs.com/whoweare.htm>

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Greater Derry Arts Council, Inc., Derry Opera House & Derry Public Arts Committee.

The ***Greater Derry Arts Council*** (GDAC) non-profit organization, based in the 1904 Adams Memorial Building, is dedicated to fostering the arts and humanities in Derry and surrounding towns. It is also responsible for the operation, management and maintenance of the Derry Opera House located in the upper portion of the building. Revenue to achieve their two-fold mission is derived from facility rentals, fundraising programs, donations and grants. The GDAC organizes and raises much of its funding through the annual town fair, Derryfest, begun in 1990 and held each year on the third Saturday in September in MacGregor Park, a day long festival of food and entertainment drawing local artists, craftspeople, local businesses and non-profit organizations. They also produce a talent show each year known as Greater Derry's Got Talent as a fundraising initiative.

Volunteers with the GDAC manage the ***Derry Opera House***, hosting a wide variety of events including Broadway musicals, plays, children's theater, dance, concerts, fine art shows, business meetings, movies and weddings. A major renovation to the Opera House in 2001 upgraded the facility to include ADA-compliant access and air conditioning, allowing the GDAC to expand its audience base. In addition to the 350-seat theatre space, the facility contains a "Green Room," for smaller events (45-50 people) and two dressing rooms for performers. In contrast to the other performance spaces in Derry (Stockbridge Theatre and Tupelo), parking for Opera House events is extremely limited and it has long been the desire of the GDAC to see adjacent parking made available for theater goers. The Greater Derry Arts Council has a long-held expression which states that "Accessibility Equals Viability."

Begun as a grass-roots effort and now part of the GDAC, the ***Derry Public Arts Committee*** was established to address the fine arts needs within the community and at the same time improve economic development by attracting art lovers to town. Efforts of the committee have included pop-up art shows in vacant spaces, book signings, a piano project (placing painted pianos throughout the town), and a mural project at the Cask & Vine Building.

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Stockbridge Theatre. Located on the campus of Pinkerton Academy, the Stockbridge Theatre is an 881-seat performing arts venue serving both the school population, as well as the general public from the surrounding region. In addition to music, theater, dance performances, and an education series with performances that complement the school curriculum, the space is also rented for corporate meetings, recitals, and fundraisers.

Tupelo Music Hall (private). Established in a Londonderry farmhouse in 2004, this privately-owned multi-genre performing arts space specializing in music events, comedy, and occasional theatrical shows. In 2017, the club moved to a larger facility on A Street in Derry, one with two seating arrangements, and the ability to accommodate both mid-size and larger artists in an intimate setting. The total seating capacity is nearly 700, and the facility offers restaurant and bar service to accompany the shows.

Derry Garden Club. Founded in 1935, the Derry Garden Club is a member of the New Hampshire Federation of Garden Clubs and National Garden Clubs. The member-based non-profit organization promotes “an interest in home and garden, aid[s] in the protection of native plants, trees and wildlife and ... furthers civic beautification. Efforts within the community include collaborating with the Derry Boys and Girls Club to create a community garden; creating planted areas in not-so-attractive areas in the town (Beautify Blight); and holding an annual plant sale.

Derry Homegrown Farm and Artisan Market. A non-profit organization established in 2017, Derry Homegrown provides local farmers and growers, artisanal bakers, gourmets and craftspeople with a sustainable marketplace for Derry and surrounding communities. Operating on Wednesday afternoons from June through September at 1 West Broadway (between Martin and Manning Streets), the outdoor



Members of the Derry Garden Club assisted youth from the Derry Boys and Girls Club in creating a community



Derry Homegrown Farm and Artisan Market operates each Wednesday afternoon from June through September at 1 West Broadway.

market offers locally grown produce, locally raised meats, eggs and poultry, organic and grass-fed dairy options, prepared foods and baked goods, along with handcrafted items from local artisans.¹²

REGIONAL CONSIDERATIONS

Scenic Byways Program. As discussed earlier in this chapter, Derry's historic sites, and in particular the Robert Frost Farm, are part of the Robert Frost/Old Stagecoach Scenic Byway that follows the route of the Boston-Haverhill-Concord Stagecoach. Regional programs such as this one help bolster tourism and the economy in Derry. They also place a spotlight on the town's extant historic resources, making a strong argument for their protection.

Visit New Hampshire (Merrimack Valley Region). The state's tourism office, Visit New Hampshire, has created seven destination regions, and Derry falls within the Merrimack Valley Region.¹³ Included in the office's internet-based promotional materials are the Robert Frost Farm and Taylor Sawmill. Opportunity exists to promote more of Derry's historic sites through this office, including the buildings and landscapes of East Derry Village.

ENERGY CONSERVATION AND FUTURE RESILIENCY

Energy Conservation and Historic Buildings. The National Trust for Historic Preservation, National Park Service, and Association for Preservation Technology have all, over the past ten to fifteen years, committed to studying the relationship of historic building efficiency to the need to conserve energy. Each of these organizations has found that, on average, a greater amount of energy is conserved over the long term when a building is preserved, as opposed to being demolished. By making efficiency upgrades, including improving insulation, HVAC systems, and windows, historic buildings, which are typically better built than contemporary ones, can achieve and exceed energy conservation goals.

"Unlike their more recent counterparts that celebrate the concept of planned obsolescence, most historic and many other older buildings were built to last. Their durability gives them almost unlimited "renewability"—a fact that underscores the folly of wasting them instead of recognizing them as valuable, sustainable assets."

Richard Moe, Former President,
National Trust for Historic
Preservation

Resiliency and Historic Landscape Preservation. Inherent in efforts made by cities and towns to become more resilient to climate change is the protection of landscapes that serve as buffers to rising water table levels, increasing heat, and the threat of floods and fires. Many such landscapes, such as stream and lake edges, farmlands, and forested areas, are also important historic sites. In Derry, these landscapes might include the ancient town forest, edges of Beaver Lake, and area surrounding the Robert Frost Farm. Protection of these

¹² www.derryhomegrown.org

¹³ <https://www.visitnh.gov/things-to-do/attractions/historic-sites>

resources can help the town bolster its resiliency and, at the same time, preserve the story of Derry's past.

OPPORTUNITIES, CHALLENGES & OTHER OBSERVATIONS

The following are opportunities, challenges and other observations regarding Derry's historic and cultural resources:

- The 1986 inventory of historic resources was never completed and is now out of date. Several properties included in the inventory have been demolished. This inventory should be updated and the results added to the online database, maintained by the Derry Public Library.
- Derry's status as a Certified Local Government makes it eligible for funding from the state for preservation-related activities. Opportunity exists for the town to more aggressively pursue this funding to update the inventory of historic resources and prepare additional nominations to the State and National Registers of Historic Places.
- Many of Derry's older homes, especially in the downtown, are owned by absentee landlords who maintain the properties at best, a minimum level, resulting in a shabby or rundown appearance. In addition to affecting the value of adjacent properties, these poorly maintained buildings have an overall negative effect on the community's image and sense of self-worth. Opportunity exists for the Heritage Commission to become more involved in watching over these buildings and collaborating with other branches of town government to safeguard against and mitigate this neglect.
- Opportunity exists for Derry to establish a Cultural District in the downtown, drawing on its existing historic resources and designating Adams Memorial Building and Opera House as the district hub.¹⁴ Such district would not only stimulate the arts community, but it could also bolster efforts to develop and diversify the local economy. In conjunction with the establishment of the district, Derry could join the New Hampshire Creative

CULTURAL DISTRICTS are nationally-recognized means for fostering community revitalization, drawing on local resources (buildings, landscapes, streetscapes, arts and cultural activities) to:

- help revitalize neighborhoods and increase the quality of life for its residents.
- serve as a vehicle to assist in the support and marketing of local nonprofit cultural organizations.
- serve as a focal point to brand a city's unique cultural identity and embrace its historic significance.

- Americans for the Arts,
Cultural Districts Basics

¹⁴ <https://www.americansforthearts.org/by-program/reports-and-data/toolkits/national-cultural-districts-exchange-toolkit>

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Communities Network, a state-wide effort to simulate local economies through the arts, artists, and creative industries.¹⁵

- Derry's historic landscapes, including its lakes, ponds, streams, forests and open spaces, contribute to the character of the town and the overall quality of life for its residents. They also make up an important part of town history. Protection of these resources can help safeguard the town from the affects of climate change, while at the same time preserving Derry's heritage.
- Established in 2017, Derry Homegrown has become a destination for area residents seeking products from local farms. The weekly event also serves as a spot for social interaction in the form of a "third place." Opportunity exists to broaden Derry Homegrown's efforts by expanding the number of days and hours of operation, as well as the numbers and types of vendors, and eventually build a structure to house the market.

¹⁵ The purpose of the NH Creative Communities Network is "to strengthen and promote economic and community development across New Hampshire through the arts, artists, and creative industries." See: <https://www.nhcreativecommunities.com/>

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- "Town of Derry, New Hampshire Master Plan," March 2010

WEBSITES

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- Derry Homegrown Farm and Artisan Market: www.derryhomegrown.org
- Derry Public Library: <https://derrypl.org>

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Friends of Forest Hill Cemetery: <https://forest-hill-1721.webs.com>

National Park Service, National Historic Landmarks Program:
<https://www.nps.gov/orgs/1582/index.htm>

New Hampshire Creative Communities Network:
<https://www.nhcreativecommunities.com/>

New Hampshire Department of Transportation Scenic Byway Program:
<https://www.nh.gov/dot/programs/scbp/>

New Hampshire Division for Historic Resources: <https://www.nh.gov/nhdhr>

New Hampshire Folklife: <https://www.nh.gov/folklife/learning-center/traditions/native-american.htm>

Nutfield History: <https://www.nutfieldhistory.org>

Rockingham Planning Commission Scenic Byways: <http://www.rpc-nh.org/transportation/highway-and-bridge/scenic-byways>

Visit NH: <https://www.visitnh.gov>

INTERVIEWS

Cara Barlow, Director, Derry Public Library

Mark Beland, Trustee Greater Derry Arts Council

Karen Blandford-Anderson, Derry Heritage Commission

David Caron, Town Administrator

Michael Gendron, Trustee, Greater Derry Arts Council

Linda Merrill, Director, Taylor Library, East Derry

Elizabeth Robidoux, Assistant Planner, Planning Department

George Sioras, Director, Planning Department

Chapter 4: Open Space and Natural Resources

Natural & Open Space Resources

Stopping by Woods on a Snowy Evening¹

*Whose woods these are I think I know.
His house is in the village though;
He will not see me stopping here
To watch his woods fill up with snow.*

*My little horse must think it queer
To stop without a farmhouse near
Between the woods and frozen lake
The darkest evening of the year.*

*He gives his harness bells a shake
To ask if there is some mistake.
The only other sound's the sweep
Of easy wind and downy flake.*

*The woods are lovely, dark and deep,
But I have promises to keep,
And miles to go before I sleep,
And miles to go before I sleep.*

-Robert Frost, 1922

INTRODUCTION

The gently rolling fields, mixed hardwood forests and freshwater streams, ponds and lakes that punctuate the Derry landscape have captivated humans for over 300 years. The earliest inhabitants, the native Penacook, set up enclaves along the waterways in the Merrimack Valley where they had access to an abundant supply of fish.² Arriving in 1718, the area's first European settlers, the Ulster Scots, were drawn to the marshy grasslands and native nut trees, establishing their village near the



¹ Robert Frost, "Stopping by Woods on a Snowy Evening" from The Poetry of Robert Frost, edited by Edward Connery Lathem

² Native American presence in Derry has not been confirmed; the Penacook or Pennacook inhabited the Merrimack Valley, in the southern portion of the Western Abenaki territory.

shores of Beaver Lake and aptly naming it “Nutfield.” In searching for a new name a few years later, they chose Londonderry, meaning “hill covered with oak trees,” and the permanent name, Derry, is the anglicized version of Old Irish the “daire” (Modern Irish “doire”), which means “oak grove.”³ In the early 1900s, Robert Frost came to live at the former Nathaniel Head Farm in the southeast part of Derry, and, inspired by the natural beauty surrounding him, wrote many of his famous poems. Today, the town continues to value its natural resources, by preserving farmland, protecting its water supply, and maintaining public access to its streams, lakes and ponds.

This chapter identifies and describes Derry’s natural and open space, and summarizes past efforts to protect, promote and expand them.⁴ It also identifies issues, opportunities and challenges surrounding them to be addressed in the recommendations of the Master Plan.

EXISTING RESOURCES

GEOLOGY, TOPOGRAPHY AND SOILS

Geology. Derry’s geology includes both stratified and unstratified material, deposited by a receding glacial ice sheet, including bedrock and boulders. As discussed under “soils,” below, much of the geology supports, rather than impedes development.

Topography. Gentle slopes dominate the landform across much of Derry, with

KEY FINDINGS

- Derry once was an active farming community but today only two small farming operations exist. Neither is a CSA farm.
- The gently rolling topography and soils comprised of glacial till make much of the land compatible for development.
- A significant portion of the town lies within one of two large watersheds, giving Derry a key role in regional watershed protection.
- Over the last several decades, the town and non-profit partners have acquired several hundred acres of conservation land and have arranged for agricultural easements on five former farms.
- Derry’s commitment to protection of groundwater, wetlands, and floodplains has been proven through the establishment of several zoning and overlay districts.
- Through the work of a Net Zero task force, Derry has committed to reducing municipal reliance on non-renewable energy

³ Mills, Anthony David, A Dictionary of British Place-Names. Oxford University Press, 2003. Derry was so-named as its own municipality in 1827.

⁴ Much information for this inventory chapter was derived from the 2010 Derry Master Plan document, updated as required.

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steeper slopes scattered throughout the southern half and northwest corner of the town. Elevations within the town range from 282 feet above sea level (lowest points) to a high point of 605 feet above sea level, at the summit of Warner Hill, where views of the Boston skyline are possible on a clear day.

Soils. Derry is part of the Rockingham County Soil Conservation District of the United States Soil Conservation Service (SCS). The SCS has established the dominant soils in this district to include Canton, Hollis and Woodbridge types, characterized by well-drained to very poorly drained soils on glacial till, with gently rolling or nearly level topography.⁵ For the purposes of land use planning, the SCS categorizes soils according to their suitability for development, based on the ability to accommodate (1) septic system fields; (2) dwellings with basements; and (3) local roads and streets. The categories are as follows:

- *Very High* – soils that pose few or no limitations to development. Areas containing these soils lie at the outer edges of the town, in the east near the Hampstead line, west near the Londonderry line, and northwest near the Auburn line.
- *High* – soils that are less favorable to development than those with no limitations. Areas containing these soils lie largely in the interior of the town, where subdivisions have been established off Old Auburn Road, Hampstead Road, Old Chester Road, and Mill Road.
- *Medium* – soils that are less favorable to development than the very high and high potential soils. These soils are scattered throughout Derry, with the largest concentration in the southeast corner of the town, near Big Island Pond.
- *Low* – soils that are considered poorer than the very high, high and medium potential soils. These soils are also concentrated mostly in the southeast, south and east parts of Derry.
- *Very Low* – soils with severe limitations to development. Areas with these soils lie for the most part in the downtown.

The majority of soils in Derry fall into the “high” and “medium” categories, making much of the town suitable for installation of septic system fields, excavation of basements, and construction of local roads and streets. A smaller percentage categorized as “low,” and soils at the two extremes – “very high” and “very low” make up a small fraction of the total.

WATERSHEDS, SURFACE WATERS AND DAMS

Derry lies within two major watershed areas and contains several surface water bodies and waterways, described below.

Merrimack River Watershed. Most of Derry lies within this large watershed area that extends 117 miles from central New Hampshire southward and eastward through northeastern Massachusetts to the Atlantic Ocean at Newburyport. Sourced by

⁵ Beaver Lake Watershed Management Plan. 4,945 out of a total of 23,354 acres in Derry (or 21% of the town) lies within this watershed.

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Pemigewasett and Winnepesaukee Rivers, it collects water from several tributaries along its full course. Its 5,010 square mile basin lies mostly in New Hampshire, and several of Derry's surface waterways, including Beaver Brook and its tributary, Horne's Brook, contribute to its watershed.⁶ The **Beaver Lake Watershed** is a sub-watershed of the Merrimack River Watershed. It covers 10.5 square miles in the towns of Auburn, Chester, and Derry, with 7.72 square miles in Derry alone. Manter Brook (fueled by Adams Pond), Cat-O-Brook, Jenny Dickey Brook and several other smaller tributaries feed the 140-acre **Beaver Lake**, located at the southwestern end of the watershed. Beaver Meadow Dam impounds the lake.⁷

Piscataqua River Watershed. A small portion of Derry's northern border lies within this 1,495 square mile basin made up primarily of the Salmon Falls River, which forms the lower boundary between Maine and New Hampshire, the Piscataqua River, and the Kennebunk River.⁸

Freshwater Ponds and Waterways. As noted in the introduction to this chapter, several small freshwater ponds, brooks and streams dot the Derry landscape, providing habitat areas for wildlife as well as recreation sites for kayakers, canoeists, fishermen, and birdwatchers. Prominent among these are:

- **Adams Pond.** Located to the northeast of Beaver Lake, this is a man-made pond, controlled by a dam at the southwest end. **Manter Brook** connects Adams Pond to Beaver Lake.
- **Ballard Pond.** Part of the Ballard Mill State Historic Site and Ballard State Forest located in the southeast part of Derry, Ballard Pond is the site of the historic Taylor Mill and a popular fishing and kayaking spot. **Taylor Brook** leads from the dam southeastward, feeding into Island Pond via the Spicket River, in neighboring Hampstead.
- **Hood Pond/Horne's Pond.** Located in the heart of Derry's downtown, these small ponds are separated by a dam that impounds Hood Pond. **Beaver Brook** feeds Hood pond from the north, and also serves as the outlet, leading from the southwestern end of Horne's Pond southward towards to the Londonderry line.

Other smaller ponds include **Ezekiel Pond** (south near the Windham line); **Lower Shields Pond** and **Rainbow Lake** (northwest near the Londonderry line); **Benjamin Adams Pond** (east near the Hampstead line).

Dams. Derry contains four functioning dams, all of which serve to impound lakes and ponds, and control floodwater. The **Hood Pond Dam**, located at the southern end of the pond, is managed by the Town of Derry and is currently in a state of disrepair. In January 2019, the Derry Town Council voted to approve a bond that included \$250,000 to improve the dam structure. The **Beaver Lake (Meadow) Dam** and **Beaver Brook Dam** (downstream of the lake dam) both control water flowing from the lake southwestward

⁶ Merrimack River Watershed Council, see: <https://www.merrimack.org/>

⁷ Beaver Lake Watershed Management Plan, 2007

⁸ <https://www.mainerivers.org/piscataqua.htm>

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through the downtown of Derry, the Town of Londonderry, and eventually to the Merrimack River (at Lowell, Massachusetts). The **Ballard Pond Dam** impounds the water of Ballard Pond and controls the flow of water into the pond's outlet, Taylor Brook.

GROUNDWATER

Approximately 15% of Derry (5.1 square miles) is underlain by a stratified-drift aquifer, made up of deposits of sand and gravel, located above bedrock. This type of aquifer is effective at transmitting water, although it is susceptible to contamination. The remainder of the town is underlain by till-covered bedrock. The largest portion of the aquifer lies in the western part of town, near the Londonderry line, with smaller portions on the north side of Beaver Lake, and in the southeast corner, near Ballard Pond and the Hampstead and Salem lines. To protect these aquifers, the town has adopted a Groundwater Resources Conservation District and has established multiple wellhead protection areas to safeguard the purity of its groundwater drinking supplies. The Groundwater Resources Conservation District is discussed later in this chapter. For additional information about the wellhead protection areas, refer to the *Public Facilities and Services* chapter of the inventory.

WETLANDS

Derry contains many wetland areas scattered throughout the town, most of which are associated with its many low points, ponds, and streams in the form of swamps. The largest wetland areas are located in the southeast corner of the town around Ballard Lake and to the north of Big Island Pond, as well as east part of the town around the Hoodcroft Country Club and Lower Shields Pond. Smaller wetland areas rim the north edges of Beaver Lake. Most areas have been evaluated by the town and designated as "prime wetlands," due to the wetlands' fragility, size, uniqueness, and/or unspoiled character. To protect these areas, the town has established a Wetlands Conservation Overlay District, as well as a Conservation Corridor Overlay District (both discussed later in this chapter).

FOREST LAND

Derry maintains two forest tracts, the Town Forest and the Weber Memorial Forest. Located around a former quarry, the **Town Forest** includes 30 acres of forested uplands (mixed hardwoods) and a small wetland area, accessed from Ballard and Olsen Roads. Located off Drew Road, the 275-acre **Weber Memorial Forest** contains stands of mixed hard and softwoods, the State of New Hampshire Recreation Trail, several woods roads, and several large important wetlands and ponds which provide prime habitat for waterfowl and other wildlife. In addition, the town contains several forested "conservation areas," discussed later in this chapter.

In addition to these municipal forests is the **Ballard State Forest**, 71 acres adjacent to the southeast end of Ballard Pond, accessed via Island Pond Road. This property is owned by the State of New Hampshire and is managed by the Department of Fish and Game. As of 2008, the forest contained one of the few American Chestnut trees known to exist in New

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Hampshire. In that year, the U. S. Forest Service and The American Chestnut Foundation harvested seeds from the tree as part of a national effort to revive the species.

AGRICULTURAL LAND

Established in the 18th century as a farming community, Derry has relied on its abundance of agricultural lands to fuel its economy for centuries. The first Europeans were drawn to the area by its nut trees, but also by its marshlands, and they grew flax to make linen. In the 19th century, much farmland was used for pasturing of dairy cows. The distribution of soil types in Derry shows that a significant portion of the acreage in the central and eastern parts of town to be prime for agricultural activities. While most of the active farms no longer operate, the town has protected 1,095 acres of agricultural land through easements. This acreage includes:

- **Rowenfare Farm**, a 129-acre tract still actively farmed and partially forested, located at the northern edge of the town off Old Auburn Road. This privately-owned farm with an agricultural easement and the land cannot be developed for any other purpose. Protection was arranged through a New Hampshire Land Conservation Investment Program (LCHIP) grant and by the Town of Derry.
- **Bliss Farm**, an 80-acre privately-owned partially-farmed tract located in the center of Derry on Cross Road. The land under easement cannot be developed for residential or industrial purposes. The current owners of the property donated additional easement acreage including a trail access from Cross Road to Broadview Farm.
- **Grinnell Farm**, a 70-acre, privately-owned tract located along Island Pond, Cemetery and Humphrey Roads, consisting of open fields and forests, protected by an easement that cannot be developed for residential or industrial purposes. A portion of the land is thought to be the original location of the first Scotch-Irish settlement in Derry, originally called “Nutfield.”
- **Broadview Farm**, a 78-acre former working dairy farm, located in the center of town off Young Road, used today for Nordic skiing, hiking, fishing and camping, and also for Derry’s **community gardens**. The property contains rolling agricultural land, open fields, a small pond, a stream, a wooded area, and a thorn bush jungle. The town acquired the farm in 1998 using proceeds of a bond authorized by the Town Council for open space preservation.
- **Corneliusen Farm & Ferdinando Family Property**. Originally an apple and peach orchard, Corneliusen Farm covers 86 acres in the northern part of Derry, along English Range Road and Holiday Avenue. The property contains both farmland and forested land and offers southward views from its open high point. It was conserved in 2002 through a joint effort of the Town of Derry and the Trust for Public Land, though which 30 acres of adjacent land owned by the Ferdinando family was also conserved. and the Southeast Land Trust of New Hampshire holds a conservation easement on a portion of the Corneliusen Farm property, and the town holds an agricultural easement on the Ferdinando property.

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In addition to these protected active and formerly-active farms are two family-owned farms, both in actively engaged in farming and selling products to consumers and businesses. The **J & F Farm** located on Chester Road, raises produce for sale at their farm-based stand. The **Dowie Farm**, a micro-farm located on Collette's Grove Road, grows microgreens and duck, chicken and quail eggs for direct sale to customers and delivery to restaurants. As of 2017, the town did not have a CSA farm.

Finally, the **Robert Frost Farm**, located on Route 28, consists of 64 acres of meadow and former farmland that has partially reforested. This property is owned and maintained by the State of New Hampshire as a State Historic Site.

OPEN SPACE/CONSERVATION PROPERTIES

In addition to the agricultural lands, the town has protected 1,229 acres open space, or several "conservation properties," including:

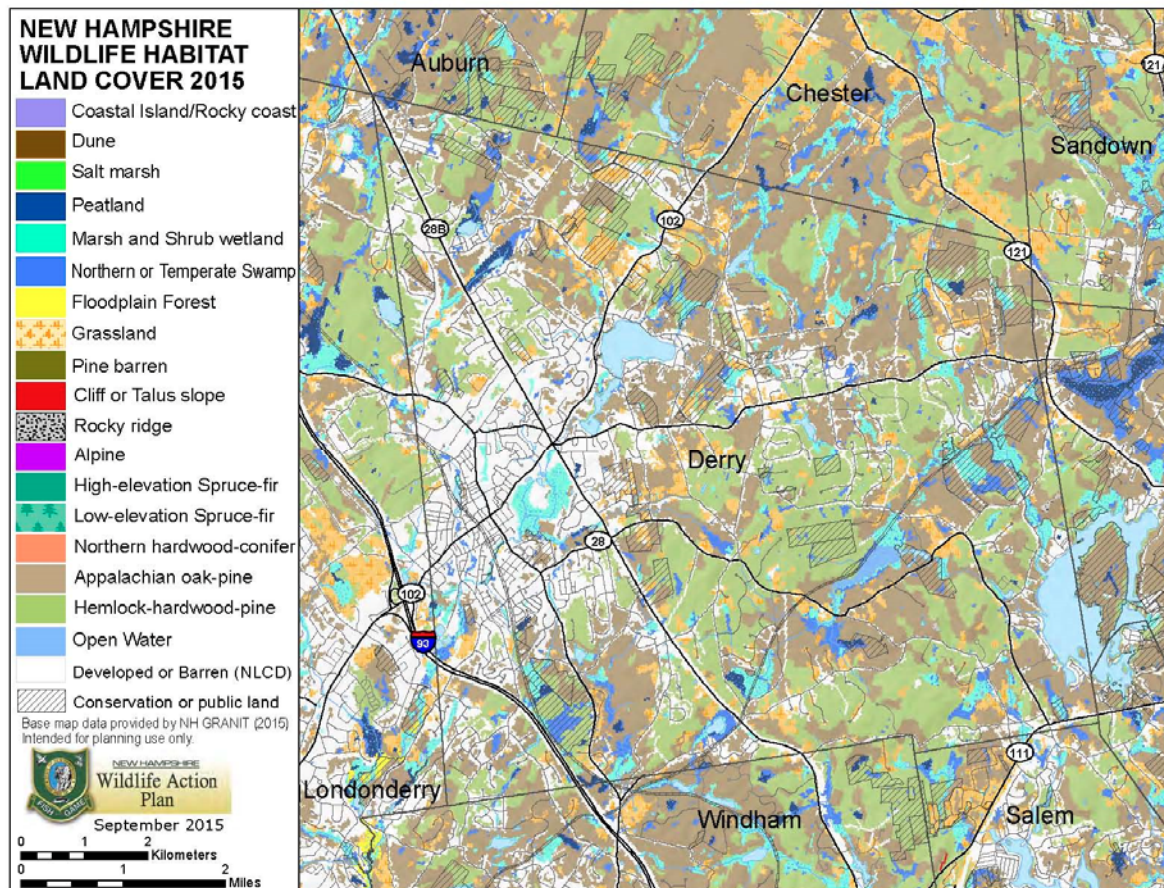
- **Cole Marsh/Joshua Marsh Property.** This three-parcel property consists of 283 acres east and west of Damren Road containing mixed hard and softwoods and wetland. The town purchased a portion of the property and acquired the remainder through non-payment of taxes.
- **Gulf Road Property.** This 33-acre wooded property is located in the southeast part of town, between Gulf Road and Kilrea Road. It was acquired by the town in 1998 using Current Use Change Tax revenues and is actively managed by the Derry Conservation Commission and a professional forester.
- **Shepard Family Conservation Area.** This 36-acre parcel of forested land and open fields located along East Derry and Pond Roads was donated to the town in 2000. To assure that the property would be protected from development, the Shepard family secured a conservation easement, held by the Southeast Land Trust of New Hampshire (formerly the Rockingham Land Trust). It is also referred to as Shepard Park.
- **Quail Hill Conservation Area.** This 17.6 acre area located in the western part of town along the Derry Recreational Trail consists of recovering forested land. A portion of the property was deeded to the town for non-payment of taxes, while the remainder was deeded to the town by developers.
- **Albert W. Doolittle Conservation Area.** This 94-acre largely forested parcel located to the east of Beaver Lake was purchased by the town in 2006. A conservation easement, held by the Southeast Land Trust of New Hampshire was placed on the property as a condition of the sale, protecting it from future development.

WILDLIFE HABITAT

In 2005 New Hampshire Fish and Game Department created a "Wildlife Action Plan" (WAP) aimed at protecting the highest quality wildlife habitats in the state. The plan, and its 2015 update, provide a blueprint for conserving Species of Greatest Conservation Need (SGCN) and their habitats in New Hampshire. WAP identifies 169 SGCN, which represent

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a broad array of wildlife, and it focuses on the 27 habitats that support these species, such as lowland spruce-fir forest, salt marsh, shrublands, warm water lakes and ponds, vernal pools, and many others. Each SGCN and habitat has an individual profile that includes information about the population, threats, and actions needed to conserve these features in New Hampshire.⁹ In Derry, hemlock-hardwood-pine, Appalachian oak-pine, northern hardwood-conifer, and march/shrub wetland habitats dominate the landscape.



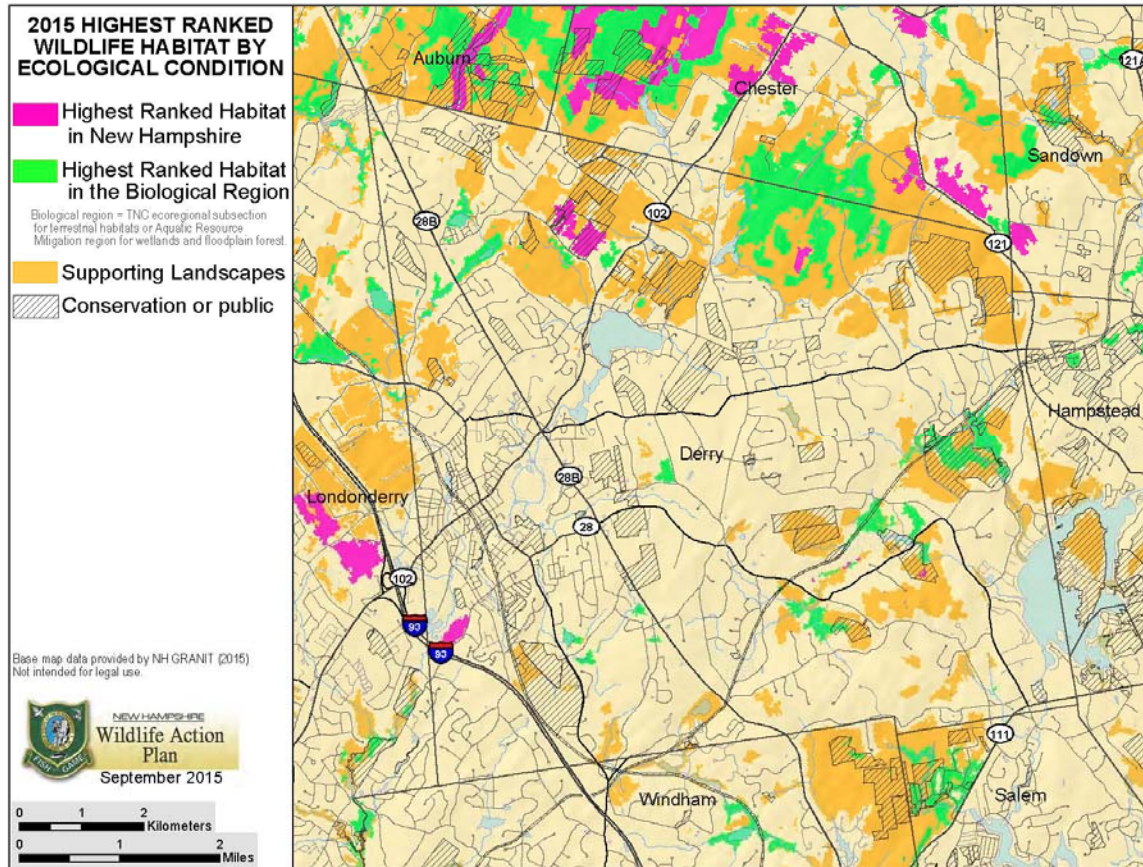
New Hampshire Wildlife Habitat Land Cover, 2015, for Derry. Source: New Hampshire Department of Fish and Wildlife, Wildlife Action Plan.

The WAP evaluated of the 27 major habitat types and ranked blocks of these habitats for quality, placing them in the following tiers:

- 1 - Highest quality in New Hampshire
- 2 - Highest quality in the biological region
- 3 - Other significant habitat on a regional scale
- 4 - Locally significant habitat (not ranked by the state)

⁹ <https://www.wildlife.state.nh.us/wildlife/wap.html>

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Highest Ranked Wildlife Habitat by Ecological Condition, 2015 for Derry. Source: New Hampshire Department of Fish and Wildlife, Wildlife Action Plan.

In Derry, the highest quality habitats in both the state and region appear in the northern end of town, along the Auburn and Chester line, with the number 1-ranked habitat located to the north of Beaver Lake, in the area of the former Corneliusen Farm and near the summit of Moore Hill. Number 2-ranked habitats are located on the northern slope of Moore Hill and around the Ballard State Forest in the southeast part of town. Supporting landscapes surround the number 1 and number 2-ranked habitat areas. A comparison between 2010 highest ranked habitat (illustrated in the 2010 Town of Derry Master Plan) and those appearing on the 2015 map indicates a decrease in the amount of both highest ranked in the state and region.

RARE, THREATENED & ENDANGERED SPECIES

In conjunction with the Wildlife Action Plan, the New Hampshire Fish and Game Department maintains a list of rare plant and animal species in the state, whose populations are highly vulnerable to loss, dividing them into three categories, as follows:¹⁰

- ***“Endangered,”*** native species whose prospects for survival in New Hampshire are in danger because of a loss or change in habitat, over-exploitation, predation,

¹⁰ <https://wildlife.state.nh.us/nongame/endangered-list.html>

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- competition, disease, disturbance or contamination; assistance is needed to ensure continued existence as a viable component of the state's wildlife community;
- ***“Threatened,”*** species which may become endangered if conditions surrounding them begin, or continue, to decline;
 - Of ***“Special Concern,”*** species of wildlife that either could become Threatened in the foreseeable future or were recently delisted from the NH Endangered and Threatened species.

In 2017, the list of endangered and threatened wildlife in New Hampshire (invertebrates, fish amphibians, reptiles, birds and mammals) included 30 endangered species and 11 threatened species. Some of these species are also considered in the Wildlife Action Plan as Species of Greatest Conservation Need (SGCN). Endangered and threatened species known to exist in Derry include New England cottontail, piping plover, loon, peregrine falcon, tern, purple martin, grasshopper sparrow, red shouldered hawk, edge wren, blanding, spotted and box turtle, black racer. The United States Fish and Wildlife Service (USFWS) also maintains a list of threatened and endangered species in New Hampshire. In 2014, this list included thirteen species in New Hampshire.¹¹

INVASIVE PLANT SPECIES

The New Hampshire Department of Agriculture maintains a list of prohibited invasive plants, non-native species that proliferate and crowd out native species. It is illegal in New Hampshire to collect, transport, sell, distribute, propagate or transplant any living or viable portion of any listed prohibited invasive plant species including all of their cultivars, varieties, and specified hybrids.¹² The list includes the following trees, shrubs, vines, and herbaceous species:

Acer Platanoides	Norway maple
Ailanthus altissima	Tree of heaven
Berberis thunbergii	Japanese barberry
Berberis vulgaris	European barberry
Elaeagnus umbellata	Autumn Olive
Euonymus alatus	Burning Bush
Ligustrum obtusifolium	Blunt-leaved privet
Lonicera spp.	Bush honeysuckles
Ramnus cathartica	Common buckthorn
Ramnus frangula/Frangula alnus	Glossy buckthorn
Rosa multiflora	Multiflora rose
Celastrus orbiculatus	Oriental bittersweet
Lonicera Japonica	Japanese honeysuckle
Polygonum perfoliatum	Mile-a-minute vine
Allaria petiolate	Garlic mustard
Centaurea biebersteinii	Spotted knapweed
Cynanchum spp.	Swallow-wort
Hercleum mantegazzianum	Giant hogweed
Hesperus matronalis	Dame’s rocket

¹¹ <https://www.fws.gov/endangered/>

¹² <https://www.agriculture.nh.gov/divisions/plant-industry/invasive-plants.htm>

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Lepidium latifolium
Microstegium vimineum
Polygnum cuspidatum
Reynoutria x bohemica

Perennial pepperweed
Japanese stilt-grass
Japanese knotweed
Bohemian knotweed

It is likely, given the proliferation of these species, that many have taken root in Derry.¹³ The Derry Conservation Commission has actively addressed the spread of these plants by requiring development plans under the commission's review to include the following note: *"no material containing any living or viable portion of plants on the New Hampshire Prohibited Invasive Species List (AGR3800 Table 3800.1) shall be transported to or from construction site without notification and approval from New Hampshire Department of Agriculture per RSA430:55" to any plan reviewed or approved by the Conservation Commission.*"¹⁴

PAST AND CURRENT NATURAL AND OPEN SPACE RESOURCE PROTECTION EFFORTS

BEAVER LAKE WATERSHED PARTNERSHIP AND BEAVER LAKE WATERSHED MANAGEMENT PLAN

In 2006, a group of representatives from the towns of Auburn, Chester and Derry, along with members of the Beaver Lake Property Owners Association and students and faculty from Pinkerton Academy formed the **Beaver Lake Watershed Partnership**. Rapid population growth and related development in the three towns from 1962 to 1998, and the impact on the health of the watershed spurred the group's formation. The group's purpose is to serve as stewards of the watershed by identifying factors that negatively affect the 10.5 square mile area and designing approaches to mitigating these effects. Of specific concern are the health of resources pertaining to water quantity, water quality, open space, land use, biology and wildlife habitat, and recreation.

In 2007, with support from the New Hampshire Department of Environmental Services and United States Environmental Protection Agency, the partnership produced the **Beaver Lake Watershed Management Plan**. The document spelled out twelve goals, 23 objectives and 78 implementation activities; the goals were as follows:

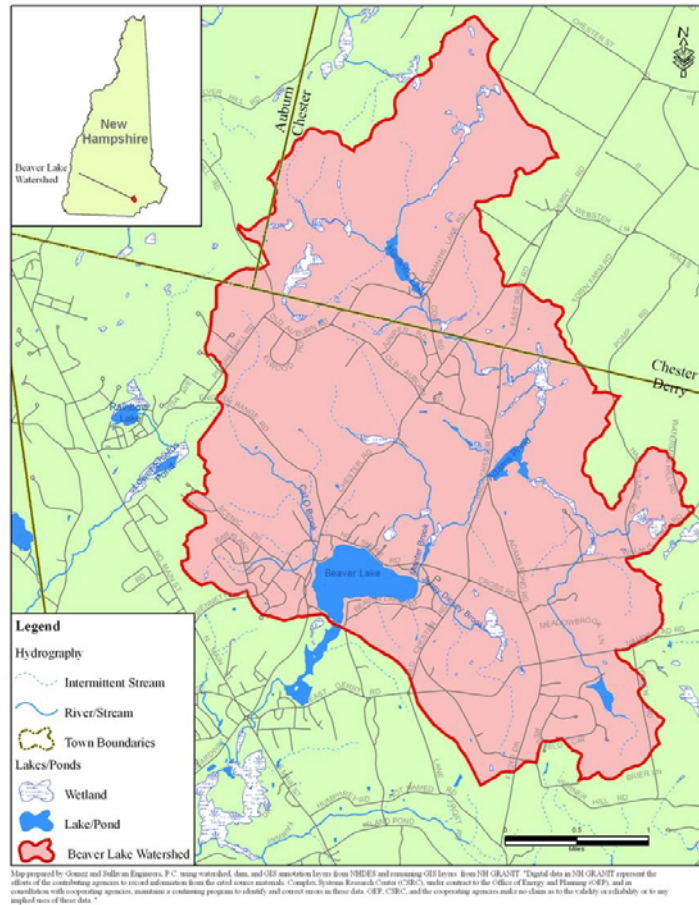
¹³ At time of the writing of this inventory chapter (winter months) shrub, vine and herbaceous species were in a dormant state and could not be identified.

¹⁴ The Derry Conservation Commission voted to require this language on all plans in September 2014.

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1. All watershed towns share the same vision for protecting the watershed and coordinate their approach to regulations and protections;
2. The watershed is protected through land use policies that minimize adverse impacts to the Beaver Lake watershed;
3. Land use in the Beaver Lake watershed is consistent with watershed protection;
4. All non-prime wetlands with the Beaver Lake watershed have greater buffer protection;
5. Auburn, Chester and Derry have Open Space Ordinances;
6. The current flow regime in the Beaver Lake watershed is maintained for the protection of aquatic, recreation, wetland, wildlife and aesthetic resources;
7. The current flow regime in the Beaver Lake watershed is maintained by managing development;
8. 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;
9. Waterbodies in the Beaver Lake watershed support their designated uses and exhibit no impairments;
10. All aquatic habitats within the Beaver Lake watershed are free from invasive species;
11. The Beaver Lake watershed benefits from a net increase in protected land that supports wildlife connectivity and continuity and fish passage;
12. The waterbodies in the Beaver Lake watershed support diverse recreation opportunities that are environmentally responsible.



The 2010 Derry Master Plan recommended that the town adopt the Beaver Lake Watershed Management Plan, as a way of protecting watershed health and local groundwater resources. As of 2019, Derry's Town Council, Planning Board and Conservation continue to implement the management strategies outlined in the plan, on an ongoing basis.

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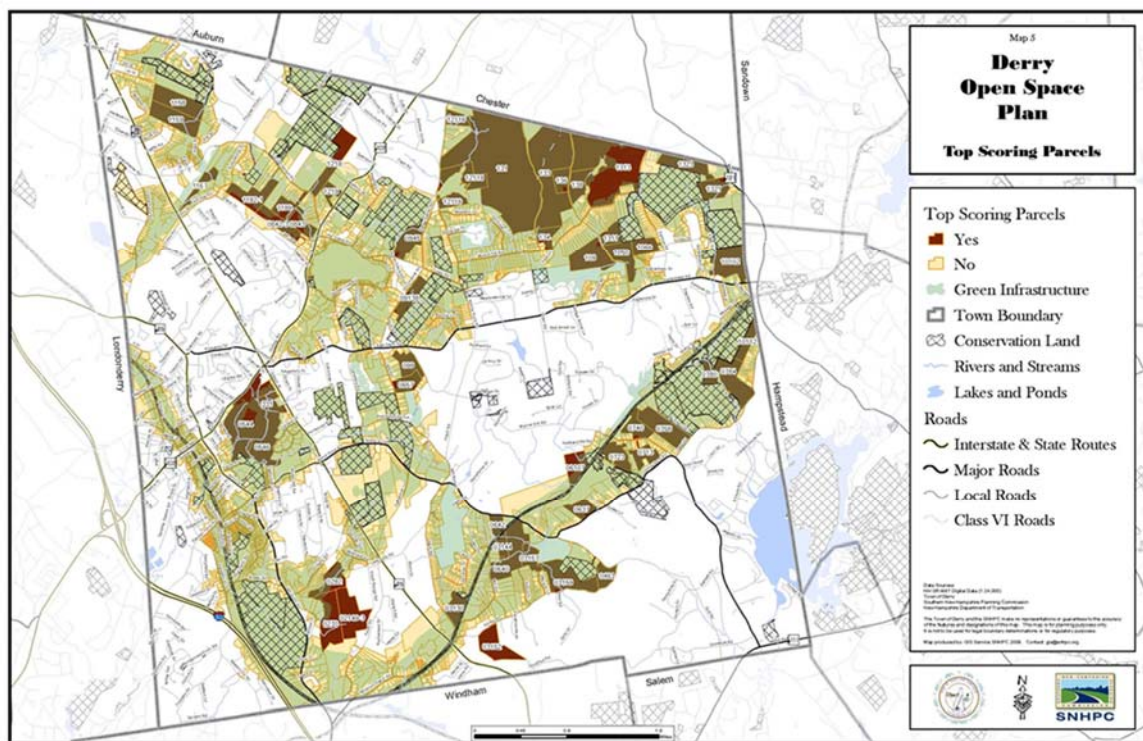
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LAND ADVISORY COMMITTEE

In 2004, residents of Derry approved, through referendum, up to \$6.0 million to be spent by the town for acquisition of open space. Following the vote, a Land Advisory Committee formed to help develop criteria for selection of property and set priorities for the acquisitions. The committee produced a written report that was then handed over to the Derry Conservation Commission for implementation. To date, over 463 acres have been secured through purchase and acquisition via non-payment of taxes.

DERRY OPEN SPACE TASK FORCE AND DERRY OPEN SPACE PLAN

Developed by the task force with assistance from the Community Technical Assistance Program and Southern New Hampshire Planning Commission, the 2009 Derry Open Space plan “identified and developed a prioritized list of agricultural, open and undeveloped land that should be protected from residential, commercial and industrial growth to preserve the town’s natural and cultural resources, agricultural character and quality of life.”¹⁵ It included the following recommendations:



Derry Open Space Plan, 2009, Top Scoring Parcels for acquisition by the town.

- The green infrastructure should be adopted as the town’s goal for open space preservation.

¹⁵ “Town of Derry Open Space Plan,” 2009.

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- A total of 51 parcels ranging from 409 to just under two acres in size and totaling over 2,600 acres, should be pursued for protection using the strategies indicated.
- The town work expeditiously and cooperatively with owners of developed parcels within the recommended green infrastructure to ensure their appropriate management.
- The Town re-examine the recommendations of this Task Force at no more than three-year intervals and review the open space financing plan annually, as part of the Capital Improvement Plan process.
- The Capital Improvement Plan includes an annual open space investment of one to two million dollars, consistent with other capital needs.

Derry uses 100% of its Land Use Change Tax (LUCT)¹⁶ for conservation of open space, and voters have authorized the expenditure matching town funds. To date, 1,229 acres of conservation land and 1,095 acres of farmland have been protected by the town.

NET ZERO TASK FORCE

With the goal of achieving Net Zero compliance by all key stakeholders in Derry by 2025, the Net Zero Task Force explores and achieves cost effective solutions for reduced energy and water use and sustainable energy development on town-controlled property, municipal buildings and vehicles, schools and the community. Members of the task force include town councilors as well as representatives from Pinkerton Academy, the Conservation Commission, the Economic Development Office, the Planning Board, the Department of Public Works, and the Derry School District. The task force began making small upgrades, such as replacing incandescent/florescent bulbs in municipal buildings with LED bulbs, and developing a small solar energy project at the public works facility. Plans are in the works for developing a 1 megawatt solar array at the landfill, which will fulfill 40% of the town's consumption requirements (not including schools). Some of the businesses in Derry are also installing solar systems. One such installation was undertaken by Tupelo, where a full solar array was placed on the building's roof and became the main source of Tupelo's power.

GO GREEN DERRY

Established in 2009 as a subcommittee of the Derry Conservation Commission (originally referred to as the Communication and Outreach Committee), Go Green has served to educate the Derry community on the beauty and value its natural resources; encourage exploration of the outdoors; and engage residents in living greener through recycling, reducing waste and using technologies that reduce reliance on finite resources. Programs included seasonal conservation land walks, recycling guidance and more. In 2019, the DCC disbanded Go Green, and voted to continue the effort through the Friends of the

¹⁶ Land Use Change Tax (RSA 79-A:10): When current use land no longer qualifies for current use assessment (usually due to development or no longer containing 10 qualifying acres), municipalities must assess a land use change tax ("LUCT") in accordance with RSA 79-A:7.

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DCC, engaging in town-wide clean-up weeks, conducting conservation walks, and performing trail maintenance.

ZONING DISTRICTS

To address concerns about groundwater, wetlands and floodplains, the town has established the following zoning districts:

- ***Groundwater Resource Conservation District.*** Adopted in 1995, this district safeguards the town's existing and potential groundwater resources from adverse development, land use practices, or depletion by regulating the land uses which may pollute or contaminate the resources.
- ***Wetlands Conservation Overlay District.*** Adopted in 2007, this district regulates the use of land in areas subject to extended periods of high water table, flooding, or standing water.
- ***Floodplain Development District.*** Adopted in 1995, this district requires a permit (from the building inspector) for all proposed development within any special flood hazard areas to ensure that the development will be reasonably safe from flooding.
- ***Conservation Corridor Overlay District.*** Adopted in 2012, this district regulates the use of lands with important wetland and watershed areas, to prevent the destruction of these areas. This district takes precedence over an existing zoning district.

STORM WATER MANAGEMENT ORDINANCE

Derry is a "Phase II Municipal Separate Storm Sewer System" (MS4) community and through this designation has developed a storm water management program and ordinance to prohibit non-storm water discharges so that quality of the receiving water bodies (lakes, rivers, streams, ponds, wetland and aquifers) is protected. A set of storm water system design regulations were developed to support the ordinance. Storm water management is discussed in further detail in the *Public Facilities and Services* chapter of this inventory.

CONSERVATION EASEMENTS¹⁷

As noted earlier in this chapter, Derry has worked with the Southeast Land Trust of New Hampshire (SELT) to secure conservation easements on several of its town-owned conservation lands. Each easement is specifically tailored to protect the important values of the land, and to the extent feasible and practicable, the individual desires and goals of the landowner.

AGRICULTURAL EASEMENTS

As noted earlier in this chapter, Derry has worked with several local farmland owners to place agricultural easements on some or all of their property (see Agricultural Land,

¹⁷ As of the writing of this inventory chapter, the town has secured 63 conservation, agricultural and discretionary easements, with the town preserving 1,229 acres of conservation land and 1,095 acres of farmland or approximately 10% of the town.

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above). These easements are deed restrictions that limit development in order to protect the natural resources. With farmland, the easement can be donated or sold to a public entity, and in so doing, the rights to develop the property are retired.

DISCRETIONARY EASEMENTS

The Derry Conservation Commission issues discretionary easements to private landowners on properties with characteristics deemed desirable for preservation by the town. The easement is a means through which property-owners may obtain a reduction in property taxes. Such parcels must be less than ten acres in size, and must remain open for public use, and provide at least one conservation and one recreational value.

2010 MASTER PLAN

Derry's 2010 Master Plan included a chapter devoted to natural and open space resources, spelling out the following recommendations:

- Implement the strategies outlined in the ***Beaver Lake Watershed Management Plan***
- Implement recommendations in the 2009 ***Derry Open Space Plan***:
 - Consider use of conservation subdivisions to conserve open space in Derry and to work toward implementing smart growth development and planning.
 - 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
 - Continue to participate in the New Hampshire current use program to support the preservation of open space, farmland and forest land
- Adopt LEED regulations and green infrastructure
 - Town use of alternative energy sources
 - Communication of cost/benefit analysis of green/energy marketing
- Continue to review and update the Land Advisory Report
- Protect the drinking water supply and aquifers, lakes and surface waters, wildlife habitats and corridors and forested areas
- Preserve agricultural land, open fields and prime wetlands
 - Map preservation/conservation land so that residents are aware of the location of land available for public access
- Establish a committee to introduce science programs around natural resources/environmental conservation in the Derry schools
 - Reintroduce the Stream Teams Program at Pinkerton to meet the recommendations of the Beaver Lake Watershed Management Plan
 - Implement Project Learning Tree program (statewide program)
 - Obtain collaboration with the Derry School Board and get school members on Environmental Education subcommittee
 - Environmental education committee should be a subcommittee of the conservation commission

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- Continue long term protection efforts such as public education and outreach, IDDE and stormwater ordinance enforcement, and stormwater pollution prevention efforts
- Encourage an agricultural subcommittee on the Derry Conservation Commission (DCC) or the establishment of an agricultural commission to develop priorities and work towards agricultural preservation and sustainable agricultural practices

To date, most of the recommendations have been partially or fully implemented, or underway on an ongoing basis. Still outstanding are (1) the adoption of LEED regulations/green infrastructure; (2) an update of the Land Advisory Committee report; (3) implementation of the Project Learning Tree program by the DCC; and (4) establishment of an agricultural advisory committee. The use of conservation subdivisions was not supported by previous Town Councils.

REGIONAL CONSIDERATIONS

Watershed and Water Quality Protection. As noted throughout this chapter, much of the land in Derry lies within one of two watersheds – the Beaver Lake Watershed and the Piscataqua River Watershed – and Derry is one of many towns comprising these areas. Similarly, the aquifers underlying Derry extend across town lines, requiring that the town share these groundwater resources. Continued efforts to protect its pieces of shared surface and ground water sources will not only safeguard Derry’s supply, but also that of adjacent towns.

Stormwater Management. Integral to water quality protection is the management of non-storm water discharges into area streams, lakes, and wetlands (swamps, marshes and bogs). These waterways connect to those in adjoining towns, providing the means for contaminants to migrate. By instituting best management practices for handling stormwater within its boundaries, Derry can help mitigate the ill effects of improperly controlled storm water throughout the region.

Habitat Protection. As with watersheds and aquifers, wildlife habitats cross municipal boundaries, and as a result, abutting towns must work together to preserve shared habitats. An example of this is the highest ranked habitat identified by the State spanning the border between Derry and Chester. By collaborating on its protection, through acquisitions, easements, and other means, the two towns will have more success in assuring that this habitat remains intact.

Invasive Species Control. As the designation suggests, “invasive” plant species migrate at will towards environmental conditions that favor their survival and proliferation. By

The worst thing that will probably happen—in fact is already well underway—is not energy depletion, economic collapse, conventional war, or the expansion of totalitarian governments. As terrible as these catastrophes would be for us, they can be repaired in a few generations. The one process now going on that will take millions of years to correct is loss of genetic and species diversity by the destruction of natural habitats. This is the folly our descendants are least likely to forgive us.”

-Edward O. Wilson

enacting control measures within its own boundaries, Derry can help reduce the spread of these pernicious plants across the region.

ENERGY CONSERVATION AND FUTURE RESILIENCY

In addition to the regional considerations discussed above, Derry's efforts to reduce energy consumption, though recycling and striving for Net Zero with municipal facilities, is bolstering the town's resiliency. Other efforts could include (1) re-evaluating the existing Groundwater, Floodplain, Wetlands, and Conservation (overlay) Districts to incorporate updated 100-year storm data; (2) continuing to invest in land conservation, particularly in areas prone to recurring high water tables and increasing amounts of flooding; and (3) promoting energy conservation among homeowners.

OPPORTUNITIES, CHALLENGES & OTHER OBSERVATIONS REGARDING NATURAL & OPEN SPACE RESOURCES IN DERRY

The following are opportunities, challenges and other observations regarding Derry's natural and open space resources:

- The gently rolling topography and soils comprised of glacial till make much of the land compatible for development. As pressure mounts on Derry to accommodate more development, this land will become more difficult to secure.
- A comparison between highest ranked habitat in 2010 (as illustrated in the Town of Derry Master Plan) and 2015 (as documented by the New Hampshire Department of Fish and Wildlife) shows an overall decrease. Opportunity exists to preserve and possibly expand these habitat areas through the use of open space acquisition and conservation/ agricultural easements. Funding is available through the State of New Hampshire's Land and Community Heritage Investment Program (LCHIP) for farmland and open space acquisition.

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- While the town has had some success since the completing the 2009 Open Space Plan in conserving open space, only a fraction of the land identified in the plan for conservation has been protected. Much of this open space is unmarked and unconnected. Opportunity exists to make the properties more visible and accessible to the public through the use of signs and maps (either printed, electronic, or electronic/downloadable).
- Derry once was an active farming community but today only two small farming operations exist. Neither is a CSA farm. Over the last several decades, the town and non-profit partners have acquired several hundred acres of conservation land and have arranged for agricultural easements on five former farms. Opportunity exists to bolster the local economy by supporting small farming efforts.

OPEN SPACE PROTECTION

Protection of open space will safeguard the health of humans and wildlife and at the same time, bolster the overall quality of life for the citizens of Derry. Benefits include:

- *Protecting groundwater and drinking water supplies;*
- *Providing habitat for rare and endangered species of wildlife*
- *Providing fertile land for farming and thereby fueling the economy and supporting the farm-to-table movement;*
- *Providing opportunities for people to explore the outdoors and better*

- A significant portion of the town lies within one of two large watersheds, giving Derry a key role in and responsibility to regional watershed protection. The town has committed to safeguarding groundwater, wetlands, and floodplains by establishing several zoning and overlay districts, and enforcement of these regulations is essential to sustaining this regional watershed protection.
- Through the work of a Net Zero task force, Derry has committed to reducing municipal reliance on non-renewable energy sources, however, the Town Council has raised opposition to the capital outlay required. Opportunity exists for these efforts to extend to local property owners by promoting energy upgrades and encouraging/providing incentives for renewable energy use.

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Mills, Anthony David, A Dictionary of British Place-Names. Oxford University Press, 2003.

DOCUMENTS

“Beaver Lake Watershed Management Plan,” 2002
“Town of Derry Open Space Plan,” 2009
“Town of Derry, New Hampshire Master Plan,” March 2010

WEBSITES

Merrimack River Watershed Council: <https://www.merrimack.org/>
New Hampshire Department of Fish and Wildlife: <https://www.wildlife.state.nh.us/>
New Hampshire Department of Agriculture: <https://www.agriculture.nh.gov/>
Town of Derry Conservation Commission: <https://www.derrynh.org/conservation-commission>
Trust for Public Land: <https://www.tpl.org/>
Southeast Land Trust of New Hampshire: <http://seltnh.org/>
United States Fish and Wildlife Service (Endangered Species):
<https://www.fws.gov/endangered/>

INTERVIEWS

David Caron, Town Administrator
James Degnan, Chair, Conservation Commission
Mike Fowler, Director, Department of Public Works
Jeff Moulton, Chair, Net Zero Task Force
Elizabeth Robidoux, Assistant Planner, Planning Department
George Sioras, Director, Planning Department

Chapter 5: Recreational Resources

Recreation Resources

INTRODUCTION

Derry's many passive and active recreation sites contribute to residents' quality of life and at the same time bolster the local economy. The town benefits from having two State Historic Sites, two multi-use trails, and several lands and ponds that offer an array of opportunities for recreation in many forms. Derry's 2010 Master Plan provided a brief entry for "parks and recreation" within its Public Facilities and Services chapter. Since then, recreation has become an increasingly important economic and health resource in the town and region. Therefore, the topic merits an inventory chapter of its own.

The foregoing identifies and describes Derry's passive and active recreation resources and summarizes past and current efforts to plan for ongoing management and future upgrades and expansions. The chapter also identifies issues, opportunities and challenges surrounding recreation resources to be addressed in the recommendations of the Master Plan.

KEY FINDINGS

- Derry benefits from having two state parks and two multi-use trails within its boundaries.
- Baseball, softball and soccer fields are available in many locations throughout the town, and are well managed by the parks and recreation department.
- Derry's natural areas, including lakes, ponds and conservation lands, offer additional recreational opportunities.
- Veterans' Hall, built in 1928, is at or beyond capacity to serve the recreation needs of seniors and the Lodge at Alexander Park has fallen into disrepair.

EXISTING RESOURCES

STATE OF NEW HAMPSHIRE-OWNED RECREATION FACILITIES

Ballard State Forest/Taylor Mill State Historic Site. Encompassing 71 acres in the southeast part of Derry, land for the Ballard State Forest was donated by Ernest Ballard in 1953. It is managed jointly by the New Hampshire Division of Parks and Recreation and Division of Forests and Lands. Recreation opportunities include kayaking, fishing,

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birdwatching, viewing of aquatic life, and picnicking, along with exploring the historic Taylor up and down sawmill.¹

Robert Frost Farm State Historic Site. This 70-acre property located along Route 28 a few miles south of downtown consists of a farmstead, meadow and forest, with a loop hiking trail around the meadow (refer to Trails, below). In addition to hiking, visitors take guided tours, view displays, and attend poetry readings. The property is managed by the New Hampshire Division of Parks and Recreation.²

Beaver Lake Public Boat Launch. Located off Route 102 and Water Street on the west side of Beaver Lake this public boat launch area provides a concrete ramp for launching small boats. Access is via a paved road. The launch is managed by the New Hampshire Division of Fish and Wildlife.³

TOWN-OWNED RECREATION FACILITIES

The Derry Parks and Recreation Department manages several active and passive recreation sites located throughout the town, totaling 132.1 acres. This acreage exceeds the average amount managed by parks and recreation agencies across North America of 10.1 acres per 1,000 residents.⁴ Many of the upgrades to these facilities have been financed through public-private partnerships, where funds of booster and civic organizations such as the Derry Soccer Club, Derry Demons and Wolverines, and Derry Rotary Club match those provided by the town. The following is a description of the facilities managed by the department:⁵

Veterans' Hall. Constructed in 1928, this two-story building located at 31 West Broadway serves as the headquarters for the Derry Park and Recreation Department, as well as providing space for recreation-related programs. The town does not operate



The playground at Alexander-Carr Park was recently upgraded and is a popular play spot for youth in Derry.

¹ <https://www.nhdf.org/Natural-Heritage/State-Owned-Reservations/Taylor-Sawmill-at-Ballard-State-Forest>

² <https://www.nhstateparks.org/visit/historic-sites/robert-frost-farm-historic-site>

³ <https://wildlife.state.nh.us/maps/boatfish/>

⁴ 2018 parks and recreation metrics are provided by the National Recreation and Park Association: <https://www.nrpa.org/publications-research/ParkMetrics/>; Derry's 2010 population was just over 33,000.

⁵ Information for this section is derived from the Town of Derry's Parks and Recreation Department website: <https://www.derrynh.org/parks-recreation/pages/parks-playgrounds-and-conservation>, and 2010 Derry Master Plan. For additional information about town-owned facilities, refer to the *Public Facilities and Services* chapter of the inventory.

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a separate senior center, and Veterans' Hall provides that function. In 2009, the building received \$250,000 in upgrades paid for, in part, by federal dollars.

Alexander-Carr Park and Lodge. Located Pierce Avenue, this park provides opportunities for many types of recreation, for persons of all ages. Included on the property are a three-season pickleball court, a winter sledding hill, a playground, hiking trails and a lodge. Adjacent to the park, in front of the Parkland Medical Center, are the Alexander-Carr Tennis Courts, where the town operates a youth tennis camp, adult tennis league, and open court use. The 5,000 square-foot, 50-year-old lodge building, is available for rent to the public for meetings, birthday parties, wedding/baby showers, and other social events, but is in a state of disrepair. In January 2019, the Derry Town Council voted to approve a bond that would include \$1.5 million to replace this structure.

Dana Ball Tennis and Pickleball Court. Located on Rollins Street across from Hood Park (see below), this area contains a single tennis and pickleball court.

Hood Park. This downtown park located on Rollins Street contains a basketball court, shuffle board court, and boat house for waterfront storage, as well as a playground and picnic area. While located alongside Hood Pond, the area is unsuitable for swimming, however fishing is allowed. Other recreation opportunities at the park include biking and hiking on park trails.

Gallien's Beach. Located at the corner of Pond Road and Route 102 on the western shore of Beaver Lake, this facility offers swimming, fishing, and rentals of boats, kayaks and paddle boards, a small tot play structure, and a concession operation.

Don Ball Park and Splashpad. Located on Humphrey Road off the Route 28 Bypass, this park includes athletic fields, a playground, picnic area and seasonal concession stand. All fields are irrigated and have electrical service, with a sports lighting system at the practice fields. A press box and grandstand with bleachers serves the "game field." In 2008 (opened in 2009) the town added a splashpad that quickly became a popular cooling off spot for young children.



The splash pad at Don Ball Park, opened in 2009, provides a cooling off spot for youth during the hottest days of summer.

MacGregor Park. MacGregor Park, named in honor of Derry's first settler, is located next to the Derry Public Library on East Broadway. This irrigated passive recreation site contains several Veterans' monuments (including an Iraq/Afghanistan War Veterans'

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memorial) and is host to summer concerts, the annual Derryfest, and other special community events.

Town Recreation Fields. In addition to the town-owned discussed above, the Derry Parks and Recreation Department maintains several playing fields, located throughout the town. All fields are irrigated with the exception of the East Derry Field, and two fields behind Derry Village:

- ***Veterans' & O'Hara Fields,*** located on Railroad Avenue and home to the Derry Little League, each ballfield has a professional lighting system. A two-story concession and announcing booth services O'Hara field.
- ***Rider Fields.*** Located on Tsienneto Road next to the Upper Room (family resource center), Rider Fields include a soccer/multi-purpose field.

School Fields. The following ballfields are associated with the Derry Public Schools:

- ***Buckley Field.*** Located behind the Hood Middle School, this facility contains both a baseball and softball field, as well as fields for soccer and field hockey.
- ***Derry Village Fields.*** Three fields are associated with the Derry Village School: Derry Village, Smith and Bastek, and each contains a baseball field.
- ***Barka Field.*** Located behind the Barka Elementary School, this soccer field has electrical service, irrigation and extended fencing.
- ***Pinkerton Academy Fields.*** The high school maintains, on its campus, several fields used by the Astros teams, including football, baseball, softball, soccer and field hockey.
- ***East Derry Field.*** Located behind the East Derry Memorial Elementary School, this area contains a multi-purpose field for lacrosse and soccer.
- ***West Running Brook Field.*** Located behind the West Running Brook Middle School, this area contains a multi-purpose field for lacrosse, field hockey and soccer.

Pocket Parks. The town has established and now maintains several small pocket park and garden areas as a means of fostering social interaction and beautifying the town. Maintained by the Derry Garden Club, the parks are located at the Grist Mill, and within the triangles/traffic islands along Folsom Road, Nesmith Street, Grandview Avenue, and Broadway and Manning Street.

Derry Dog Park. The Derry Dog Park, located on Fordway, is an off-leash area positioned next to the Animal Control Building and across from the Transfer Station. The area is completely fenced in, with a double gate to enter, allowing dogs the opportunity to run and play freely in a safe and enclosed environment. The property also contains a "Small Dog Park," a separate area available to small dogs weighing 20 pounds or less. The park is open from sunrise to sunset and includes agility obstacles and tunnels.

TRAILS AND BIKEPATHS

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Rockingham Recreational Trail. This 18-mile unpaved multi-use trail is managed by the State of New Hampshire State Parks Department, with help from the NH ATV Club and Derry Pathfinders Snowmobile Club. It runs from Depot Road in Windham, New Hampshire southwestward through Derry, passing along the north shore of Ballard Pond, crossing Route 28, and continuing past the south shore of Ezekial Pond. It terminates in Epping. Trail parking in Derry is off Warner Hill Road, and ATV are allowed seasonally on a portion of the trail that runs through Derry.⁶

Derry Rail Trail. This four-mile paved multi-use trail follows the path of the former Manchester and Lawrence branch line of the Boston and Maine railroad. Also referred to as the Derry Bike Path, it extends from Windham northward through wetlands and forests to the center of Derry and the former Derry Depot (now a restaurant). Plans are in the works to connect the trail with the nearby Londonderry Trail, which extends for twelve miles through three towns, and beyond, for a total completed length of 120 miles, all through New Hampshire. Users may access the trail at four parking areas, Hood Pond, Abbott Court, Windham Depot, and South Avenue, and may walk, run, bike snowshoe and cross-country ski on the trail. A non-for-profit entity, the **Derry Rail Trail Alliance**, established in 2007, oversees advocacy, fundraising and construction of the trail.

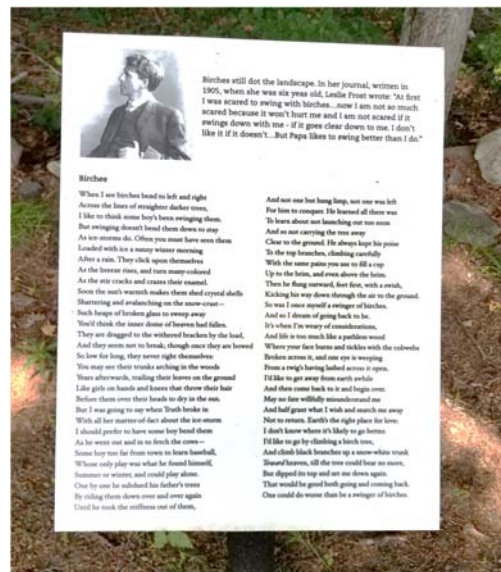
Robert Frost Farm Historic Site Loop Trail.

Located at the Robert Frost Farm, Route 28, this short hiking trail traverses meadows, woods, and former orchard, and crosses Hyla Brook, the subject of Frost's 1906 poem by that name. The state has placed interpretive markers along the trail, some of which display poems and others describing landscape features.

Derry Conservation Area Trails. The Derry Conservation Commission has arranged for the acquisition of several properties by the town, to be conserved as open space. These



The 18-mile Rockingham Recreational Trail permits ATV use on a seasonal basis on a portion of the route running through Derry.



The Robert Frost Farm contains a short loop trail, marked with signs bearing poems he penned about the property during his stay from 1900-1911.

⁶ <https://www.nhstateparks.org/visit/recreational-rail-trails/rockingham-recreational-rail-trail,-fremont-branch>

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include the Cole Marsh/Joshua Marsh property, Gulf Road property, and Shepard Family, Quail Hill, and Doolittle Conservation Areas, as well as the Broadview Farm. Some contain established hiking trails and others do not, but all are accessible as public open space lands. For more information about these properties, refer to the *Natural Resources and Open Space* chapter of the inventory.

NON-PROFIT RECREATIONAL FACILITIES

Derry Boys and Girls Club. This non-profit, member-based service organization located on East Derry Road aims to “inspire and enable all young people, especially those from disadvantaged circumstances, to realize their full potential as productive, responsible and caring citizens.” Founded in 1969, the club runs leadership, educational, health, arts and fitness programs to help fulfill this mission. Memberships are \$75 per person per year.

PRIVATELY-OWNED RECREATION FACILITIES WITH PUBLIC ACCESS

Hoodcroft Country Club. Located near the center of Derry, this private, membership-based facility was built in 1971 on the former site of the Hood farm. Designed by golf course architect Philip A. Wogan, the 9-hole course measures more than 3,200 yards. Golfers may purchase a day pass, or a membership that spans an entire season, achieved through an application process, and membership is open to the public. The club holds tournaments, and also operates a pro-shop and restaurant.

Brookstone Park Golf Complex. This 30.36-acre recreation area located along Route 111 on Big Island Pond contains a par three 9-hole golf course, driving range, practice area, and 18-hole miniature golf course. The facility may also be leased for special events.

Hidden Valley R. V. & Golf Park. Located on Damren Road, this 1300-acre recreation area includes an 18-hole championship golf course, a par three course and a 300-site campground. The park also operates a restaurant.

SportsZone. An indoor complex located on A Street, SportsZone occupies 95,000 square feet containing several floating and multi-sport courts and two turf fields for a wide range of athletic activities. Users can engage in basketball, volleyball, Futsal, dodgeball, soccer, field hockey, lacrosse, wiffleball, softball, ultimate frisbee, bocce, kickball and more. In addition to the courts and fields are a climbing wall, pitching and batting cages, concessions and a virtual sports simulator.

RECREATION-RELATED ORGANIZATIONS AND CLUBS

In addition to the many public recreation facilities, several private sports groups and organizations operate in Derry, providing additional opportunities for residents to become involved in recreational activity. These include the Derry Boys Youth Lacrosse Association, Derry Girls Youth Lacrosse Club, Derry Demons Football and Cheer Program (New Hampshire Youth Football), Derry Wolverines Football and Cheer (New Hampshire Senior Football League), Derry Diamond Athletic Association (baseball and softball), Derry

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Soccer Club, Greater Derry Track Club, Pathfinders Snowmobile Club, and Red Star Twirlers.

PAST AND CURRENT RECREATION PLANNING EFFORTS

2005 DERRY RECREATION MASTER PLAN

In 2005, Derry produced an update of the 1995 Recreation Master Plan to serve as a roadmap for “provid[ing] the citizens of Derry with high quality recreational services offering a range of accessible activities for residents of all ages.”⁷ The plan articulated six goals:

1. To assess and address the recreational needs and interests of the town through comprehensive planning;
2. To expand and develop the town’s park system in a cost-effective manner;
3. To review and adopt a revised policy for an ongoing maintenance and improvement schedule for all existing parks and facilities to ensure adequate supplies, staffing and funding are provided to accomplish ongoing maintenance for all existing and future park locations;
4. To develop partnerships with public and private organizations to offer additional services, programming and events, as well as to expand upon accessibility to overall community resources and facilities;
5. To reduce dependency on taxation by seeking alternative mechanisms for funding improvements and expansion of programs and services;
6. To encourage that 50% of the open space parcels purchased by the Town of Derry be available for active recreation uses.

As of 2010, the town had upgraded many of the facilities and some these upgrades were financed through partnerships with local sports clubs and civic organizations with matching funds from the town’s Capital Improvement Program. A turf management program had been adopted for irrigated ballfields and park areas (to improve playing conditions), and several pocket parks and garden areas had been created and incorporated into this management program.

2010 DERRY MASTER PLAN

Recreation was addressed in the 2010 Derry Master Plan through the Public Facilities and Services element. The plan enumerated efforts that had been made over the past decade to upgrade recreation amenities in the town. Much of the expansion appeared in the form of expanded programming, including aquatics, preschool programs, girls’ fast pitch softball, judo, adult and senior citizen fitness and tennis. In addition, significant investment was made to improve facilities, particularly the playing fields. One of the major recommendations of the plan was to build a new recreation complex, replacing Veterans Hall (offices of the Parks and Recreation Department on West Broadway), which was deem

⁷ Derry Recreation Master Plan Update, 2005

inadequate for providing the space and services of the over-34,000 residents of Derry. As of the compilation of this inventory, the facility was still in operation.

REGIONAL CONSIDERATIONS

Multi-Use Trails. With the construction of the Rockingham Recreational Trail and Derry Rail Trail, the town has become a key stop on a route that is used by recreation enthusiasts from throughout the Southern New Hampshire Region. These users contribute to the local economy through stops at local businesses along the way. A continued commitment, on the part of the town and its partner, the Derry Rail Trail Alliance, to developing this trail, is vital to sustaining and extending this recreation amenity as well as related economic development opportunities.

ENERGY CONSERVATION AND FUTURE RESILIENCY

Organic Turf Management. Many communities across America are investing in organic turf management programs for ball and playing fields, through which toxic persistent pesticides and harmful chemicals are banned, and organic fertilizers are applied. In 2018, Londonderry-based Stonyfield spearheaded the **#PlayFree** initiative to promote this very management approach and has established a supporting grant program.⁸ In some #PlayFree communities, ordinances have been adopted that establish organic practices as the primary means to care for and maintain property in the community, including lawns, gardens, athletic fields, parks and playgrounds.

Recreation Land as Buffer to Changes in Ground and Surface Water Levels. While the primary purpose of land set aside for recreation is play, the relatively large parcels associated with these facilities can also serve as protection areas for rising ground and surface water levels.

Renewable Energy and Athletic Facilities. Communities across the country are retrofitting athletic facilities with Net Zero energy upgrades, including installation of solar-powered sign boards, restroom facilities, and athletic buildings.

OPPORTUNITIES, CHALLENGES & OTHER OBSERVATIONS REGARDING RECREATION RESOURCES IN DERRY

- Opportunity exists to bolster the local economy through continued expansion of the multi-use trails, already under construction and partially completed.
- Veterans' Hall, constructed in 1928, is at or beyond its capacity to provide programming space for the Parks and Recreation Department, especially to serve the

⁸ <https://www.stonyfield.com/playfree>

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recreation needs of seniors. Opportunity exists to provide a space for the department separate from the hall that can better fulfill these needs.

- The Lodge at Alexander-Carr Park is 50 years old and in a state of disrepair. Opportunity exists to upgrade/replace this structure to better accommodate the recreation needs of Derry's citizens. In January 2019, the Derry Town Council approved a bond that included \$1.5 million to replace this structure.
- Opportunity exists to institute an organic turf management program for the care of the town's playing fields, parks and playgrounds, as well as other public turfed areas in town.
- Opportunity exists to further efforts to install Net Zero energy upgrades to the town's athletic facilities and require a Net Zero approach to the rebuilt Alexander-Carr Lodge.

REFERENCES

DOCUMENTS

"Derry Recreation Master Plan," September 1995

"Town of Derry, New Hampshire Recreation Master Plan Update," Draft, June 2005

"Town of Derry, New Hampshire Master Plan," March 2010

WEBSITES

Derry Conservation Commission: <https://www.derrynh.org/conservation-commission>

Derry Parks and Recreation Department: <https://www.derrynh.org/parks-recreation/pages/parks-playgrounds-and-conservation>

Derry Rail Trail: <http://derryrailtrail.org/>

National Recreation and Park Association: <https://www.nrpa.org/publications-research/ParkMetrics/>

New Hampshire Department of Fish and Wildlife: <https://www.wildlife.state.nh.us/>

New Hampshire Division of Forests and Lands: <https://www.nhdfil.org/>

New Hampshire Division of State Parks/Rockingham Recreational Trail:
<https://www.nhstateparks.org/visit/recreational-rail-trails/rockingham-recreational-rail-trail,-fremont-branch>

Stonyfield #PlayFree: <https://www.stonyfield.com/playfree>

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United States Fish and Wildlife Service (Endangered Species):

<https://www.fws.gov/endangered/>

INTERVIEWS

David Caron, Town Administrator

Mike Fowler, Director, Department of Public Works

Elizabeth Robidoux, Assistant Planner, Planning Department

George Sioras, Director, Planning Department

Chapter 6: Transportation and Circulation

Transportation

INTRODUCTION AND BACKGROUND

The Transportation Chapter identifies and describes the existing transportation system in the Town of Derry and how it connects with the regional transportation network. This Chapter also identifies transportation-related issues, opportunities, and challenges raised by Town officials and residents that will be addressed in the recommendations of the Comprehensive Plan. This Chapter begins with an introduction and background, followed by an inventory of the existing transportation conditions. The following elements are summarized in this Chapter.

- Travel Characteristics
- Roadways
- Maintaining the Transportation Infrastructure
- Transportation Funding
- Traffic Volumes
- Safety
- Public Transportation
- Rail Service
- Pedestrian and Bicycle Facilities
- Air Transportation
- Parking
- Preliminary Transportation Issues

The local transportation system should provide safe and efficient mobility for all transportation modes and connections to regional facilities. The availability and quality of the transportation system are important to residents, businesses, students, visitors, and emergency services. The maintenance and enhancement of the transportation system can be used to attract development and expand the tax base. In addition, the transportation system has impacts on resources, community character, and the quality of life.

KEY FINDINGS

- The planned Exit 4A Interchange at I-93 will improve access to Derry and reduce congestion on NH Route 102.
- CART provides shuttle bus service for seniors and those with disabilities.
- Several Downtown buildings have limited parking supply.
- The Derry Rail Trail and Rockingham Recreation Trail serves a variety of non-auto users.
- Pedestrian and streetscape improvements are needed in Downtown.

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The Town of Derry is located within Rockingham County and is the fourth most populated community in New Hampshire. The Town is geographically situated within 15 miles of Manchester, NH; 42 miles of Boston, MA; and 92 miles of Portland, ME with regional access provided via of Interstate 93 (I-93), NH Route 28, NH Route 28 Bypass, NH Route 102, NH Route 111, and NH Route 121. Public transportation is provided by way of Cooperative Alliance for Regional Transportation (CART) through the Derry/Londonderry Shuttle. The Manchester-Boston Regional Airport is an additional nearby transportation opportunity located approximately 13 miles from Derry in Manchester, NH. Boston Express provides service in the area by way of a connection between Logan Airport and the Londonderry Transportation Center located in Londonderry west of I-93 off NH Route 102. Although there is no active rail line situated in Derry, the Chester & Derry Electric Railroad ran from Chester Center, to east Derry Village, and then to the Derry Depot between 1896 and 1928. The Boston and Maine (B&M) Railroad provided rail service in Derry via the Manchester and Lawrence Branch. The Derry Rail Trail renovated a portion of the B&M Railroad to provide four miles of paved surface between Windham and Derry.

The inventory of the existing transportation system in the Town of Derry is used to identify deficiencies and needs as a basis from which to evaluate future conditions and potential improvement measures.

Key points of the existing transportation conditions in and around the Town of Derry are summarized below followed by a detailed description of each element.

TRAVEL CHARACTERISTICS

Demographics and travel characteristics such as Journey-to-Work data, vehicles available per household, commute time, and mode share trends are discussed in this section.

DEMOGRAPHICS

Based on U.S. Census Bureau data, the Town of Derry's population reached an estimated 33,246 residents in 2016, an increase of approximately +0.4% since 2010 (33,109 total population). This population estimate ranked Derry as the fourth largest incorporated municipality in New Hampshire. A slightly higher trend was seen in Rockingham County as the region's population increased from 295,223 in 2010 to 303,251 in 2016, a +2.7% increase. Unlike region-wide population trends; however, the Town of Derry experienced a decrease in population from 2000. The Derry population was 34,112 in 2000 and the population throughout the Rockingham County was 278,748 in 2000, indicating a growth rate of -2.5% locally and a growth rate of +8.8% regionally.

JOURNEY-TO-WORK DATA

Figure 7.1 shows major work destinations for Derry residents based on U.S. Census American Community Five

Observations

- 41% (4,000) of people working in Derry, live in Derry.
- 91% of Derry residents who commute to work drive alone

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Year Estimates 2009-2013.¹ As shown in the figure, 4,007 Derry residents (approximately 22% of 18,040 workers) work in Derry. Large numbers of Derry residents also work within Manchester (1,661) and Salem (1,270), New Hampshire. With the location of and convenient access to I-93, many Derry residents travel outside the community for work. Based on the U.S. Census data, approximately 48% work in other New Hampshire communities and approximately 30% of Derry residents work in communities outside of New Hampshire, with approximately 4% working in Boston, Massachusetts.

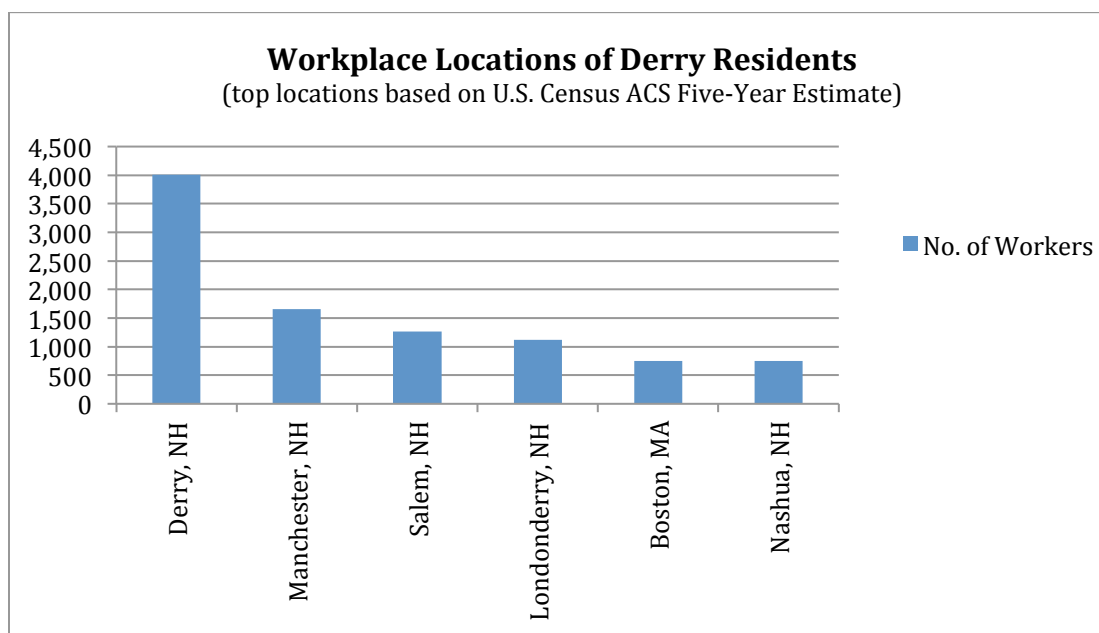


Figure 7.1: Workplace Locations of Derry Residents (2009-2013)

Figure 7.2 shows the major residence locations for people working in Derry based on U.S. Census American Community Five Year Estimates 2009-2013. As shown in the graph, approximately 4,007 of the 9,792 people working in Derry also live in Derry (41%). The other large community with a large number of residents working in Derry is Manchester, New Hampshire (1,179). Of the 9,792 people working in Derry, 9,175 people live in New Hampshire, 490 people live in Massachusetts, and 103 people live in Maine. Based on the U.S. Census data, approximately 53% of people working Derry reside in other New Hampshire communities, and approximately 6% reside in communities outside of New Hampshire.

¹ U.S. Census Bureau, American Community Survey 2009-2013 Five-Year Estimates. Special Tabulation: Census Transportation Planning.

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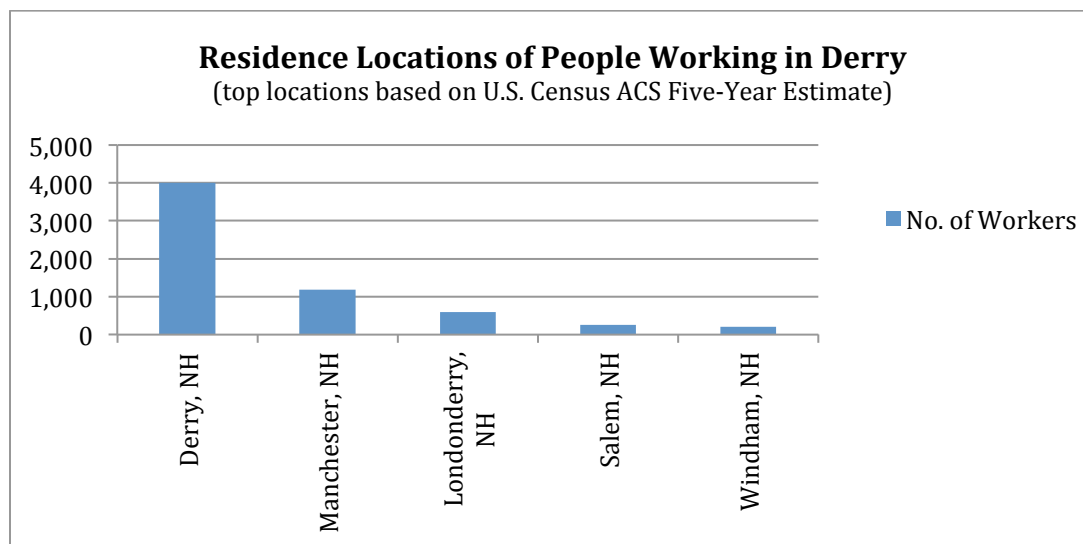


Figure 7.2: Residence Locations of People Working in Derry (2009-2013)

Based on employer information supplied by the Town of Derry, the Derry Cooperative School System employs the most people within the community (620), with the HCA Health Services of New Hampshire employing the second most (532).

VEHICLES AVAILABLE

Figure 7.3 shows vehicles available per household in the State of New Hampshire and in the Town of Derry based on American Community Survey (ACS) five-year estimates. As shown, 72% of the households in New Hampshire and 74% in Derry had one or two vehicles. The number of households with 3 or more vehicles per household was similar in the Town of Derry and in the State of New Hampshire (23%).

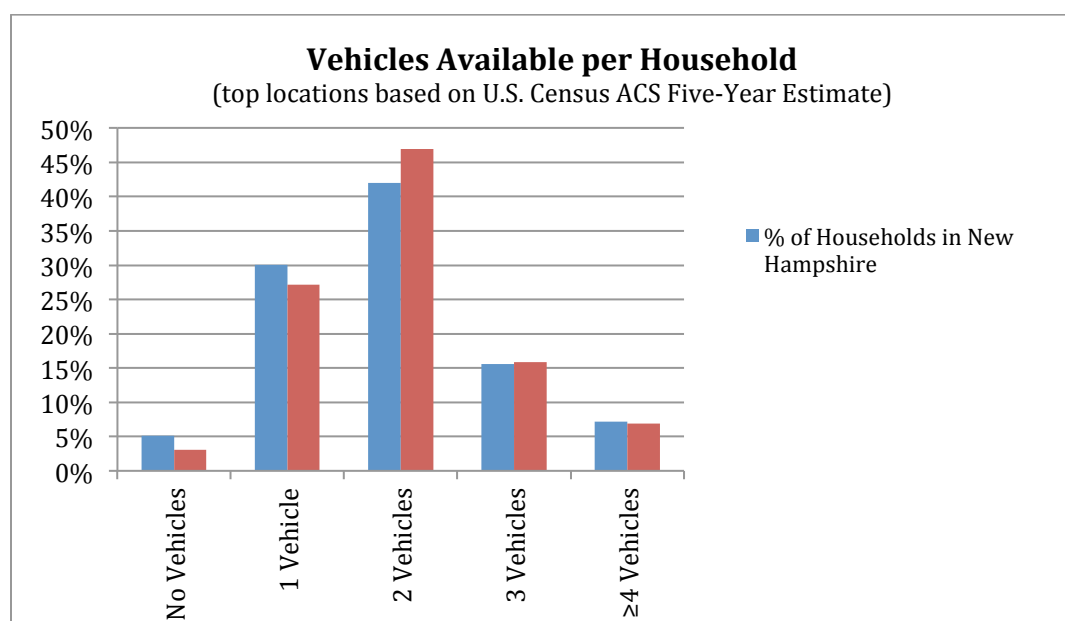


Figure 7.3: Vehicles Available per Household (2013-2017)

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MODE SHARE AND COMMUTE TIME

As shown in **Figure 7.4**, the ACS five-year estimates between 2013-2017 reveal that the great majority of Derry residents who commuted to work drove alone (91%), which coincides with other New Hampshire residents (86%). In addition, approximately 7% of Derry residents carpooled to work (2% in a 2-person carpool and 2% in a ≥ 3 -person carpool), while the remaining 2% used public transportation, walked, or used a taxicab, motorcycle bicycle, or other means.

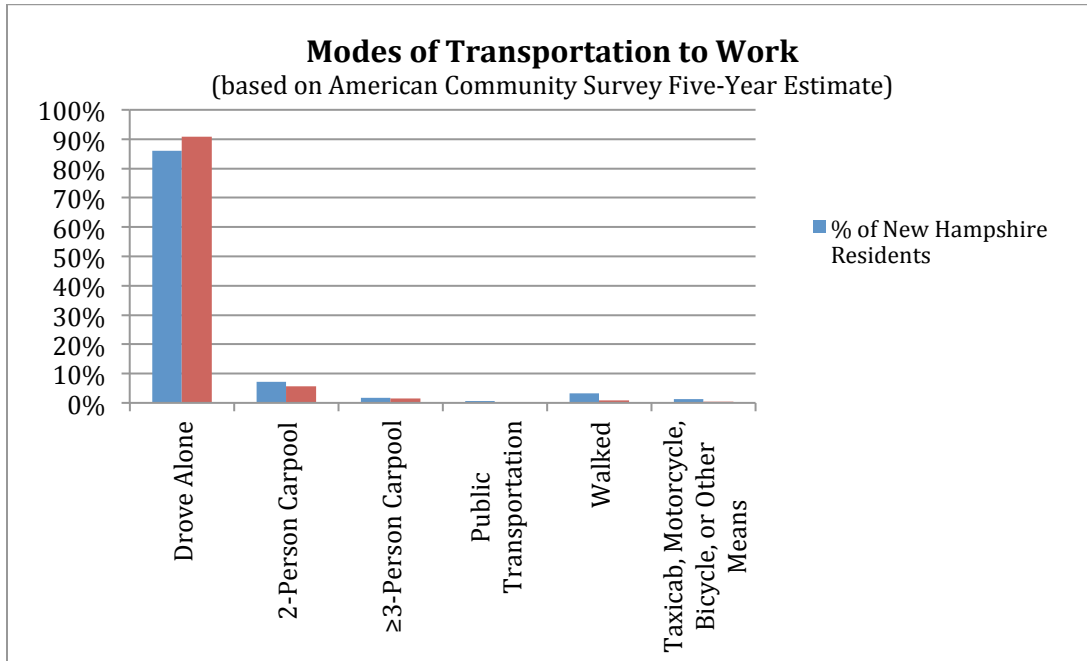


Figure 7.4: Modes of Transportation to Work (2013-2017)

As shown in **Figure 7.5**, most Derry residents travel between 25 and 29 minutes to work (18.8%), with the mean travel time to work being 19 minutes or less. Other New Hampshire residents mostly travel between 10 to 14 minutes to work (15.6%), with the mean travel time to work being similar to Derry residents (19 minutes or less).

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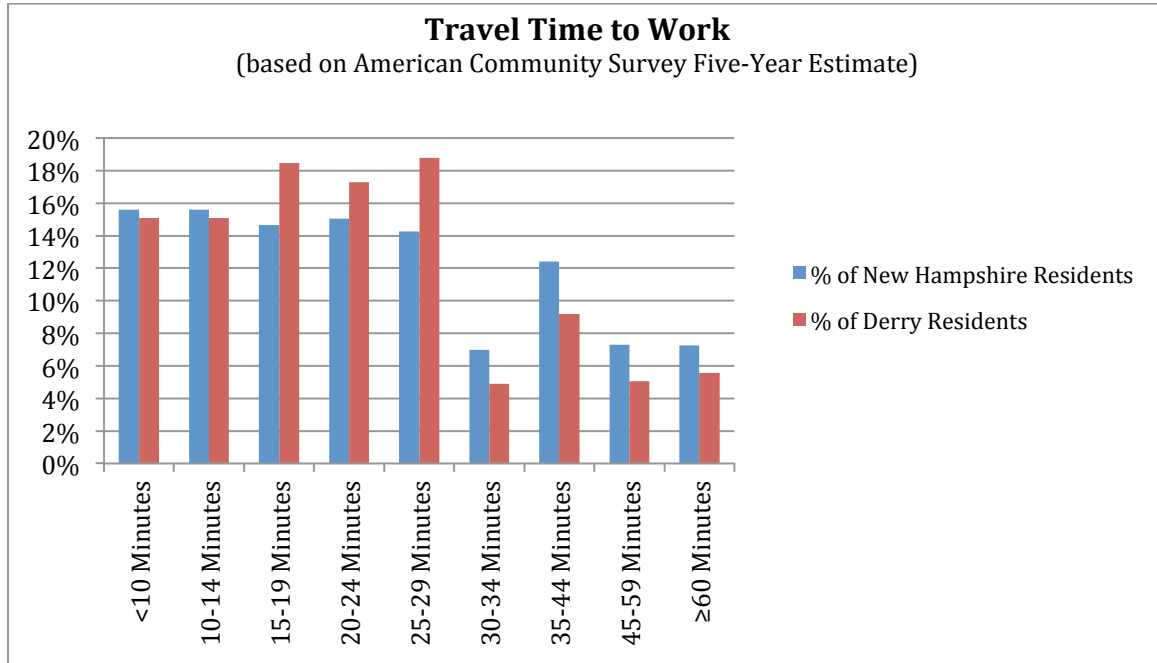


Figure 7.5: Travel Time to Work (2013-2017)

As shown in **Figure 7.6**, 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 residents are 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 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 transportation modes in Derry.

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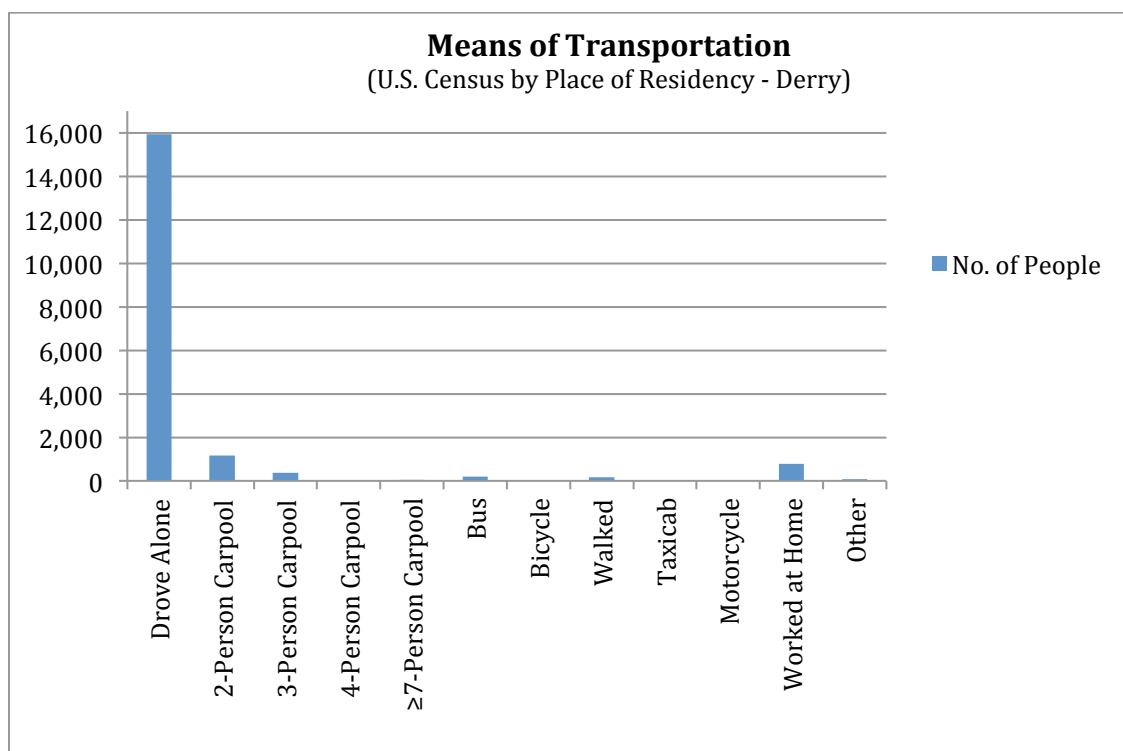


Figure 7.6: Means of Transportation (2013-2017)

ROADWAYS

Vehicular travel involves movement through a network system of roadways. Functional classification is the process of grouping streets and highways according to the character of service they are intended to provide. This classification determines how travel can be guided within a roadway network in a logical and efficient manner and is used to determine long-term management and development of the Town's roadways. The New Hampshire Department of Transportation (NHDOT) has developed a classification system of roadways for the purpose of planning, jurisdiction, and maintenance. Roadways classified as Class I, II, and III highways are under state maintenance and control, while Class IV, V, and VI highways are under municipal jurisdiction. The administrative roadway classification as defined in New Hampshire Revised Statutes Annotated (RSA) 229:5 (Highway System in the State) includes the following:

- **Class I (Trunk Line Highways):** existing or proposed highways on the primary state highway system in which the state assumes full control and payment of construction, reconstruction, and maintenance.
- **Class II (State Aid Highways):** existing or proposed highways on the secondary state highway system, in which sections improved to state standards are maintained and reconstructed by the state and other sections must be maintained by the municipality until brought up to state standards.,
- **Class III (Recreational Roads):** recreational roads leading to and within state reservations designated by the legislature, in which the state assumes full control of reconstruction and maintenance.

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- **Class IV (Town and City Streets):** highways within the compact sections of designated municipalities.
- **Class V (Rural Highways):** other traveled highways that the municipality has the duty to maintain.
- **Class VI (Unmaintained Highways):** other existing public ways (e.g., discontinued highways as open highways, highways closed subject to gate and bars, and highways not maintained by the municipality in suitable condition for travel for five consecutive years or more).
- **Scenic Roads:** are special town designations (by vote of Town Meeting) of any roadway other than a Class I or II highway to be classified as a Scenic Road. Except in emergency situations, there shall be no tree cutting or alteration of stone walls within the right-of-way without the written approval of the Planning Board.

In accordance with NHDOT's 2018 Roads & Highways – Town Center Line Miles by Legislative Class, the Town of Derry provides the following:

- | | |
|-------------------------|-------------------------|
| • Class I: 13.25 miles | • Class IV: 9.90 miles |
| • Class II: 11.97 miles | • Class V: 156.75 miles |
| • Class III: 0.00 miles | • Class VI: 7.26 miles |

Based on this information, there are 199.13 miles of classified roadways in the Town of Derry. Most roadways in town are Class V (156.75 miles). **Figure 7.7** depicts the functional classification of roadways throughout the Town of Derry.

The Robert Frost Scenic Byway is 21.4 miles long that originates at Massabesic Lake in Auburn; follows NH Route 28 Bypass through the Massabesic Lake recreation area, connects with local roadways (Auburn Road, Old Derry Road, English Range Road, and Chester Drive) through Downtown Derry, and continues southerly south of Derry Village where it meets NH Route 121 in Hampstead by way of Rockingham Road, Island Pond Road, and North Shore Road.

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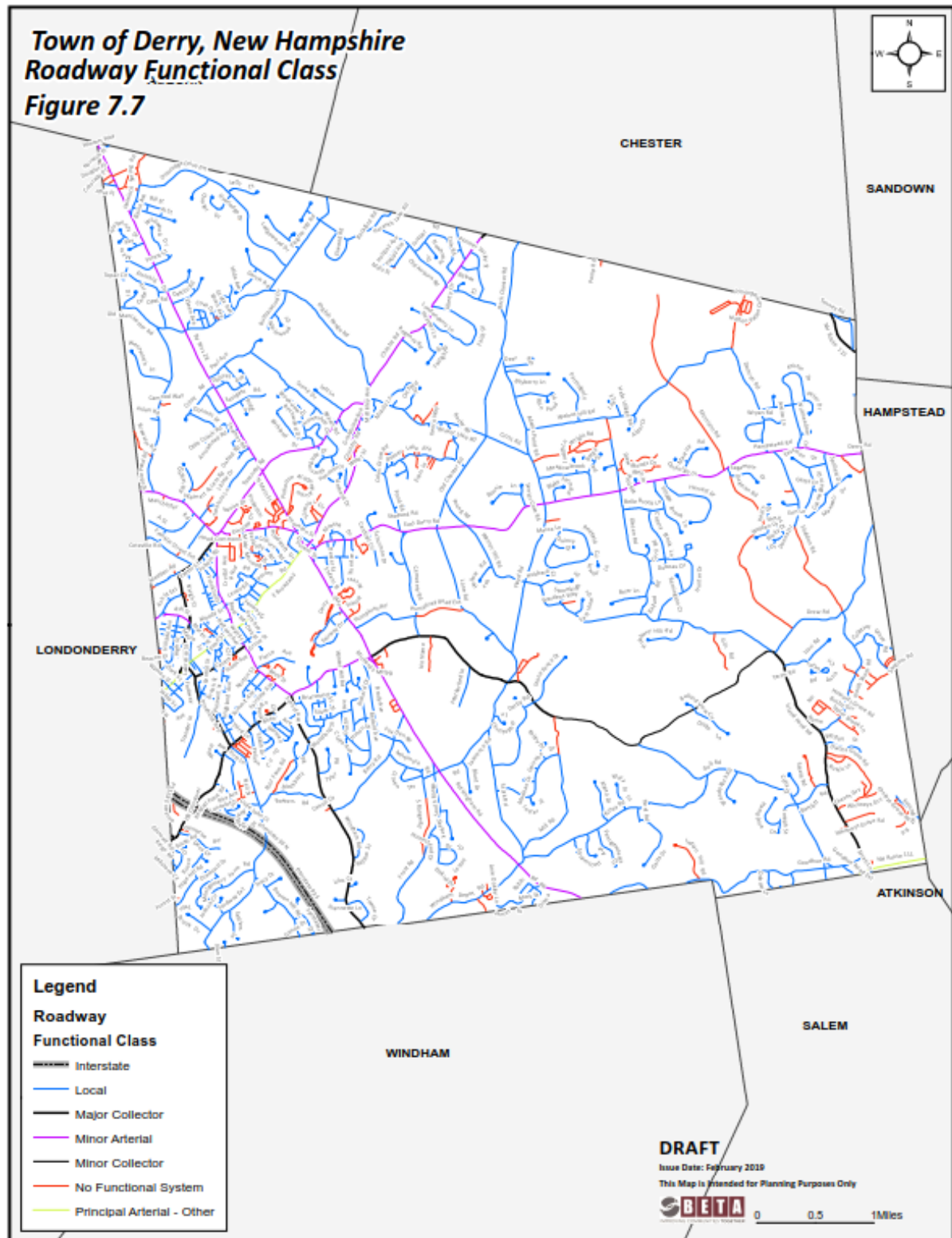


Figure 7.7: Town of Derry, Hew Hampshire, Roadway Function Class

MAINTAINING THE TRANSPORTATION INFRASTRUCTURE

PAVEMENT MANAGEMENT

NHDOT has a pavement management program focused on enabling the state's roadway system to function efficiently and effectively. As such, NHDOT bases the pavement strategy on three key concepts: (1) highway priorities, (2) making sustainable investments, and (3) funding priorities. NHDOT categorized state-managed roadways into different priorities as previously identified (RSA 229:5):

- Tier 1: interstates, turnpikes, and the divided section of NH Route 101
- Tier 2: major corridors (e.g., US Route 3, US Route 4, US Route 202, and NH Route 16)
- Tier 3: collectors (e.g., NH Route 112, NH Route 31, and NH Route 155)
- Tier 4: secondary highways and unnumbered routes

Observations

- The majority of Derry roadways are in good or better condition.

Based on data provided by NHDOT, the following three pavement management projects are programmed to be completed by Calendar Year 2020:

- NH Route 28 from NH Route 128 (Londonderry) to NH Route 128 in (Derry):
 - Municipalities: Derry and Londonderry
 - Segment Length: 4.5 miles
 - Paving ID# 20502
 - Calendar Year: 2020
 - Roadway Tier: 2 (major corridors)
 - Strategy: light capital paving
- NH Route 28 Bypass from Tsienneto Road (Derry) to Wellington Road (Hooksett):
 - Municipalities: Derry, Londonderry, Auburn, and Manchester
 - Strategy: preservation
 - Segment Length: 8.7 miles
 - Calendar Year: 2020
 - Paving ID# 20506
 - Roadway Tier: 2 (major corridors)
- NH Route 111 from Autumn Woods Road (Salem) to Derry/Atkinson Town Line:
 - Municipalities: Atkinson, Derry, and Salem
 - Strategy: preservation
 - Segment Length: 1.6 miles
 - Calendar Year: 2019
 - Paving ID# 19501
 - Roadway Tier: 2 (major corridors)

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The Town of Derry's Highway Department is responsible for maintaining and improving local roadways, sidewalks, parking lots, stormwater collection systems (over 2,000 catch basins), 11 bridges, dams, streetlights, traffic signals, and other related public infrastructure for safe public travel and use. To achieve these goals, the Highway Department has developed programs for preventative maintenance, long-term improvement planning, and emergency response during critical events.

The Town established a pavement management program in 1986 that has enabled the Highway Department to monitor, maintain, and improve the overall roadway system. The goal of the program is to provide functional, safe, and efficient travel by maximizing the lifespan of each roadway in a cost efficient manner. Periodic pavement maintenance at the proper time can increase a roadway's overall life (e.g., crack sealing, pothole patching, bituminous overlay, bituminous replacement, partial reconstruction, and complete reconstruction). A list of pavement management activity is generated to help prioritize roadways based on available funding and resources. The following roadways are listed in alphabetical order for potential work to be completed as part of the Town's pavement management program in Fiscal Years 2020-2021 and beyond:

- Alyssa Drive
- Beaver Road
- Eastman Drive
- East View Drive
- Gaita Drive
- Highland Avenue (sections of)
- Hubbard Court
- Independence Avenue
- Jewell Lane
- Kendall Pond Road (Fordway to Phillip Road)
- Mary Jo Lane
- North Main Street
- Olsen Road (Hampstead Road to Drew Woods Drive)
- Paul Avenue (#7 to Scenic Drive)
- Pemigewasset Circle
- Penny Lane
- Pondview Road
- Quincy Drive
- Railroad Avenue (East Broadway to South Avenue)
- Redfield Circle
- Rider Lane
- Silver Street (sections of)
- South Main Street
- Spollett Drive
- Squamscott Avenue
- Towne Drive
- Tracy Drive
- Trent Road
- Tyler Road
- Warner Hill Road (sections of)
- West View Drive
- Windham Depot Road (sections of)

The Town uses the Pavement Condition Index (PCI) to indicate the condition of a roadway's pavement with regard to life of the pavement. The PCI is a numerical index

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between 0 and 100 that requires manual survey of the pavement. Below is a general listing of the PCI ranges with the corresponding conditions and treatment strategies:

- 0-60: failed, reconstruction
- 60-72: poor, rehabilitation
- 72-85: fair, resurface
- 85-92: good, preventative maintenance
- 92-100: excellent, do nothing/corrective maintenance

Figure 7.8 depicts the pavement conditions of the roadways throughout the community. Due to the Town's pavement management program, the majority of the roadways are shown to be in excellent condition.

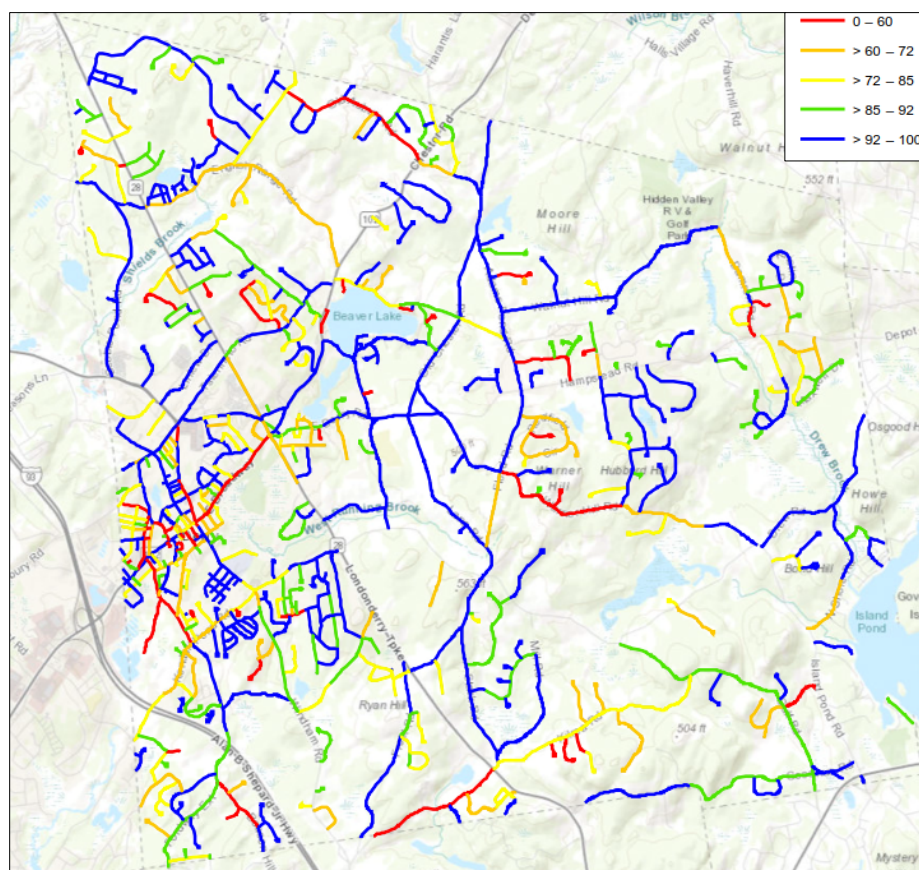


Figure 7.8: Existing Pavement Conditions (Derry DPW, February 1, 2019)

BRIDGES

In accordance with RSA 234-25-a, a Red List bridge is a bridge with the primary element in poor or worse condition (National Bridge Inventory rating of ≤ 4). Accordingly, the Commissioner of Transportation shall create and maintain a list of highway bridges that are found to be structurally deficient and are such known as Red List bridges. Based on bridge inspection data through December 31, 2017, there were 133 state-owned bridges identified as Red List bridges, but none are located within the Town of Derry. In addition,

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there were 252 municipally-owned bridges identified as Red List bridges, but none of these are located within the Town of Derry.

TRANSPORTATION FUNDING

Enhancing the integration and connectivity of the transportation system are important components in developing an efficient network that accommodates various modes of transportation. A fully cohesive multi-modal transportation system is important for maintaining the quality of life for residents, business owners, and workers, as well as contributing to a vibrant economy.

FEDERAL AND STATE PROGRAMS

New Hampshire's Ten Year Plan (TYP) is a multi-year capital improvement program that serves as a short-term programming document and lists funded transportation projects, the schedule of when those projects would occur, and the funding categories that can be used to implement the design and construction of the projects. Those projects identified in the first four years of the TYP become the foundation for the Statewide Transportation Improvement Program (STIP). Biennially, the STIP is updated in accordance with the NHDOT's Ten Year Plan based on input from Governor's Advisory Commission on Intermodal Transportation (GACIT), NHDOT, Regional Planning Commissions, municipalities, and the public. Between the two-year cycles, municipalities have the opportunity to place new projects on the Transportation Improvement Plan (TIP) through a statewide and metropolitan planning process.

The NHDOT administers all Federal and State funding allocations through several programs that include, but are not limited to, the following:

- **State Aid Funds for Class I, II, and III Highways:**
 - This program provides funds for constructing or reconstructing Class I, II, or III highways; improving sections of State secondary, Class II highways, and Class III highways; or advancing the priority of construction for special types of work (e.g., improving drainage and riding surface, eliminating sharp curves on Class I highways or improved sections of Class II highways).
 - The municipality pays 1/3 and the State pays 2/3 of the cost.
- **Bridge Aid Funds:**
 - This program provides funds for constructing or reconstructing structures in Class IV highways, Class V highways, and municipally-managed bridges on Class II highways.
 - The municipality pays 20% and the Federal government pays 80% of the cost.

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- **Highway Block Aid Funds:**
 - This program provides funds for constructing, reconstructing, or maintaining Class IV and Class V highways.
 - These funds are distributed annually to municipalities based on the following, with unused balances able to be carried over to the following municipal fiscal year:
 - Apportionment A: the distribution is based on 1/2 mileage and 1/2 population as the municipality factors bear to the State total.
 - Apportionment B: the distribution is based on a formula using equalized valuation and Class V mileage to provide the greatest benefit to communities with low, equalized valuations and high roadway mileage.
- **Congestion Mitigation Air Quality (CMAQ):**
 - This program provides assistance for projects that improve air quality and congestion mitigation in urbanized areas that have been identified as nonattainment and do not meet federally mandated air quality standards.
 - These projects require a 20% non-federal match.
- **Transportation Alternatives Program (TAP):**
 - This program provides funding for transportation alternatives projects that focus on improving the safety, convenience, and effectiveness for non-motorized users
 - These projects require a 20% non-federal match.
- **Highway Safety Improvement Program (HSIP):**
 - This program aims to achieve a significant reduction in fatalities and serious injuries on all public roadways by implementing highway safety improvement projects (both infrastructure and non-infrastructure related projects).
 - The Federal government typically pays 90% and the municipality pays a 10% match.

LOCAL PROGRAM

In addition to federal and state funding programs for transportation projects, the Town of Derry has established an impact fee structure for public capital facilities. Within the Town's 2018 Zoning Ordinance, the Planning Board has the authority to require an impact fee as a condition of approval for new developments, subdivision or site plans, and when in line with applicable Planning Board regulations. The intent of the impact fee is for an applicant to contribute a fair-share to offset the impacts with off-site improvements of capital facilities owned or operated by the Town of Derry that include, but are not limited to, the following:

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- Water treatment and distribution facilities;
- Wastewater treatment and disposal facilities;
- Sanitary sewers;
- Storm water, drainage, and flood control facilities;
- Public roadway systems and rights-of-way;
- Municipal office facilities;
- Public school facilities;
- The municipality's proportional share of capital facilities of a cooperative or regional school district of which the municipality is a member;
- Public safety facilities;
- Solid waste collection, transfer, recycling, processing, and disposal facilities;
- Public library facilities; and
- Public recreational facilities not including public open space.

In addition, the Planning Board has the authority to require an applicant to implement off-site improvements deemed necessary as a result of the proposed project and not otherwise be constructed by the Town of Derry. Some of these improvements include, but are not limited to, the following:

- Roadways;
- Auxiliary lanes;
- Curbing;
- Sidewalks;
- Street lights;
- Street signs;
- Traffic signals; and
- Other off-site improvements.

TRAFFIC VOLUMES

Traffic volume counts are one method used to evaluate vehicular operations. Traffic counts and projected traffic volumes developed as part of the Supplemental Draft Environmental Impact Statement (SDEIS) for the Exit 4A project along Interstate 93 (I-93) were utilized (NHDOT Project No.: 13065, Federal Project No.: IM 0931[201]). The I-93 Exit 4 interchange provides a full connection to NH Route 102 with access to the Town of Derry to the east and to the Town of Londonderry to the west. The I-93 Exit 5 interchange is located approximately 3.6 miles north of Exit 4 and provides a full connection to NH Route 28 with access to the Town of Derry to the east and to the Town of Londonderry to the west.

As detailed within the SDEIS prepared for the I-93 Exit 4A project, manual turning movement counts (TMCs) and automatic traffic recorder (ATR) traffic counts were collected to develop 2015 Annual Average Weekday Traffic (AAWDT) volumes. Different adjustment factors were applied to the traffic counts in order to create the baseline traffic volumes. Seasonal adjustment factors were applied to the traffic counts to account for the fluctuation of traffic throughout the year. To account for historical traffic growth, an annual average traffic-growth percentage was applied to

Observations

- Traffic volumes on some Derry roadways are expected to decrease as a result of the

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the different traffic counts in order to establish a common baseline year. Based on vehicle classification information collected by NHDOT, axle correction factors were applied to adjust for differences in vehicle classification on various types of roadways.

Figure 7.9 depicts the 2015 traffic volumes in the Town of Derry that were developed as part of the Exit 4A project along I-93. As shown, the roadways that carry the highest traffic volumes are NH Route 102 east of Griffin Street (18,002 AAWDT), Tsienneto Road east of Pinkerton Street (14,200 AAWDT), NH Route 28 south of Ross' Corner (13,406 AAWDT), and NH Route 28 south of Rollins Road (13,215 AAWDT).

The Exit 4A interchange project on I-93 involves the construction of a new diamond interchange in the Town of Londonderry between Exits 4 and 5. The new interchange would provide access to the east side of I-93 with a one-mile connector roadway to Folsom Road in the Town of Derry. The intent of the Exit 4A project is to reduce congestion and safety along NH Route 102 from I-93 through the Derry Downtown area and to promote economic vitality in the Towns of Derry and Londonderry. As part of the I-93 Exit 4A project, several Build alternatives were developed. Due to the lowest cost, least acreage for right-of-way acquisition, lowest wetland impacts, and no impact on Wildlife Action Plan highest ranked habitat, the local municipalities, NHDOT, and FHWA identified **Alternative A** as the preferred alternative for the I-93 Exit 4A project. This alternative was also found to best address traffic, economic, and safety issues.

- **Alternative A:**

- The selected alternative (Alternative A) includes a 3.2-mile corridor, including one mile of roadway construction of a new alignment and 2.2 miles of existing roadway reconstruction.
- The corridor road would begin at the I-93 Exit 4A interchange, travel southeast through a wooded area to Folsom Road, and connect with the intersection of North High Street and Madden Road.
- The project would continue along Folsom Road to Ross' Corner (NH Route 28 and Tsienneto Road), follow Tsienneto Road through the NH Route 28 Bypass (Londonderry Turnpike and North Main Street) intersection, and end at NH Route 102 (Chester Road) near Beaver Lake.

As detailed within the SDEIS prepared for the I-93 Exit 4A project, the 2015 base traffic volumes were used with the SNHPC regional traffic model to produce 2040 design-year traffic volumes.

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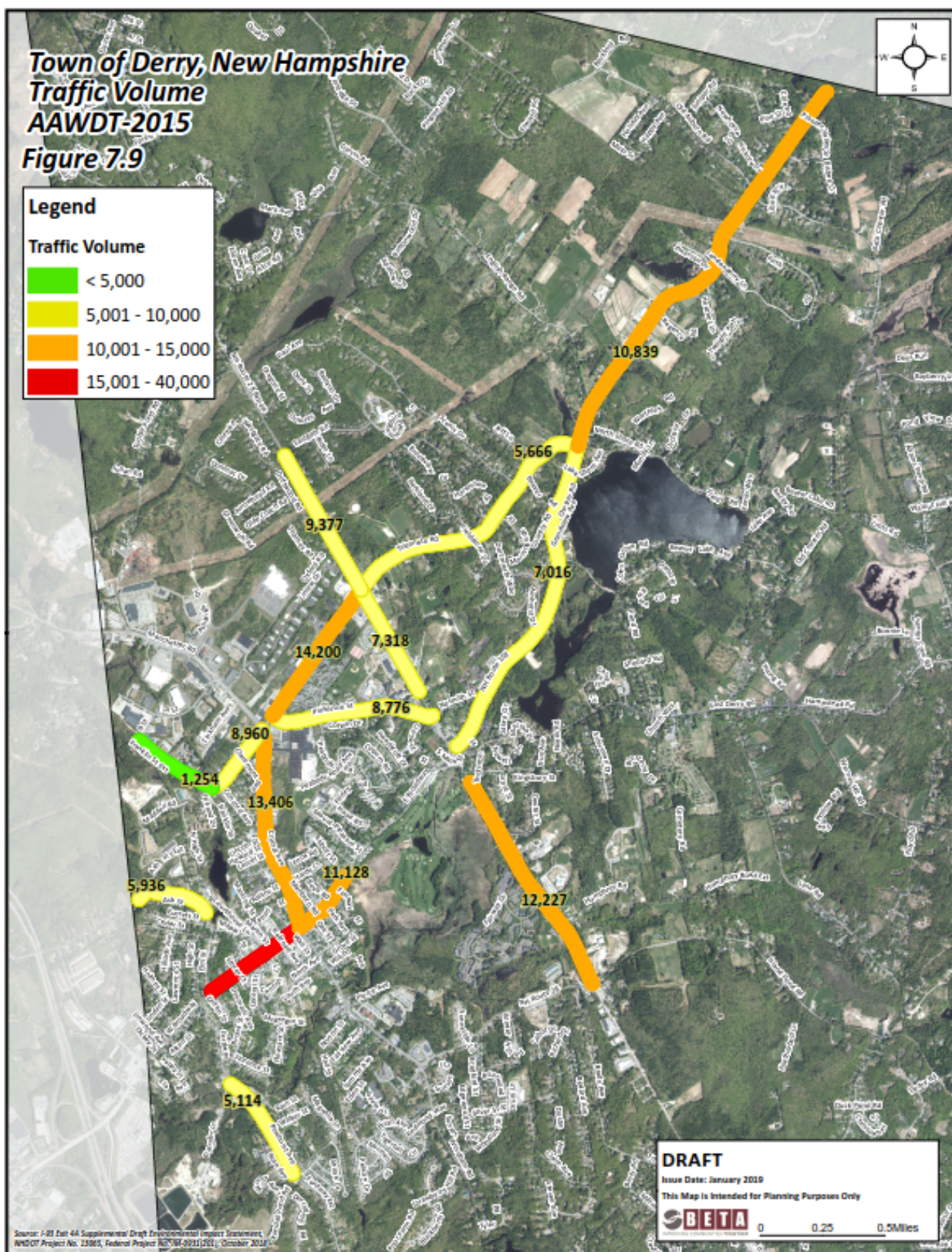


Figure 7.9: Town of Derry, New Hampshire, Traffic Volume AAWDT-2015

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The SNHPC model assignments include population and employment projections for each community within the region. **Figure 7.10** depicts the 2040 traffic volumes in the Town of Derry that were developed as part of the Exit 4A project along I-93. As shown, the roadways that are projected to carry the highest traffic volumes in the 2040 design year are Folsom Road west of Ross' Corner (38,892 AAWDT), Tsienneto Road east of Pinkerton Street (22,910 AAWDT), NH Route 102 west of Abbott Street (19,913 AAWDT), and NH Route 102 east of Griffin Street (15,776 AAWDT).

The traffic volumes presented in **Table 7.1** represent the 2015 base traffic volumes and the 2040 design traffic volumes for Alternative A of the I-93 Exit 4A project. Some roadways are anticipated to experience a decrease in traffic volumes as vehicles would be redistributed with the construction of the I-93 Exist 4A project (e.g., segments of NH Route 28, NH Route 28 Bypass, and NH Route 102).

Table 7.1: Existing and Projected Daily Traffic Volumes
(Source: Exit 4A Draft EIS: Average Annual Weekday Daily Traffic [AAWDT])

Location	2015 AAWDT	2040 AAWDT	Annual Change (%)
NH 28 (Crystal Ave) south of Ross' Corner (Manchester Rd, Tsienneto Rd, and Folsom Rd)	13,406	8,208	(1.55%)
Folsom Rd west of Ross' Corner (Crystal Ave, Manchester Rd, and Tsienneto Rd)	8,960	38,892	13.36%
Pinkerton St east of Tsienneto Rd	8,776	10,791	0.92%
Tsienneto Rd west of NH 102 (Chester Rd)	5,666	10,304	3.27%
Tsienneto Rd east of Pinkerton St	14,200	22,910	2.45%
NH 102 (Chester Rd) east of NH 28 Bypass (North Main St and South Main St)	7,016	7,175	0.09%
NH 28 Bypass (North Main St) north of Academy Dr	7,318	2,678	(2.45%)
NH Bypass (Londonderry Turnpike) north of Tsienneto Rd	9,377	5,387	(1.70%)
NH Bypass (South Main St) south of Thornton St	12,227	8,750	(1.14%)
NH 102 (West Broadway) east of Griffin St	18,002	15,776	(0.49%)
NH 102 (East Broadway) west of Abbott St	11,128	19,913	3.16%
Fordway over Beaver Brook (south of Transfer Ln)	5,114	4,949	(0.13%)
Franklin St Ext north of Folsom Rd	1,254	2,011	2.41%
Ash St at Londonderry Town Line	5,936	6,912	0.66%
NH 28 (Crystal Ave) south of Rollins St	13,215	10,907	(0.70%)
NH 102 (Chester Rd) at Chester Town Line	10,839	10,728	(0.04%)

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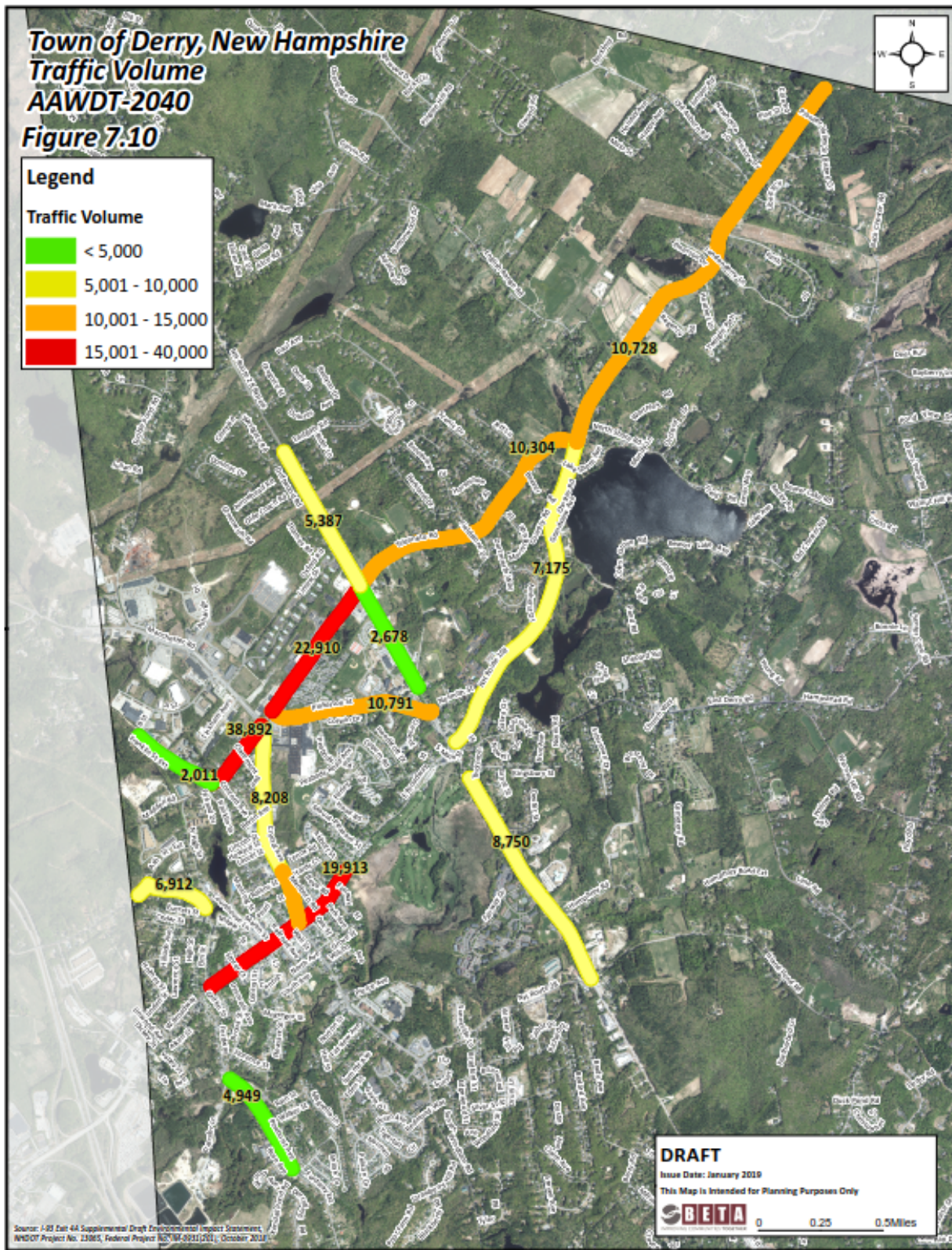


Figure 7.10: Town of Derry, New Hampshire, Traffic Volume AAWDT-2040

SAFETY

One measurement of safety is to evaluate the history of reported collisions on roadways and at intersections. Crash data were obtained from the Derry Police Department and were supplemented with data from the NHDOT. The NHDOT data include information collected through crash reports submitted by State Police and Municipal Police Departments. According to the local data, an average of 767 reported crashes occurred annually in the Town of Derry between 2005 and 2015. A summary of the collision totals is presented in **Figure 7.11**.

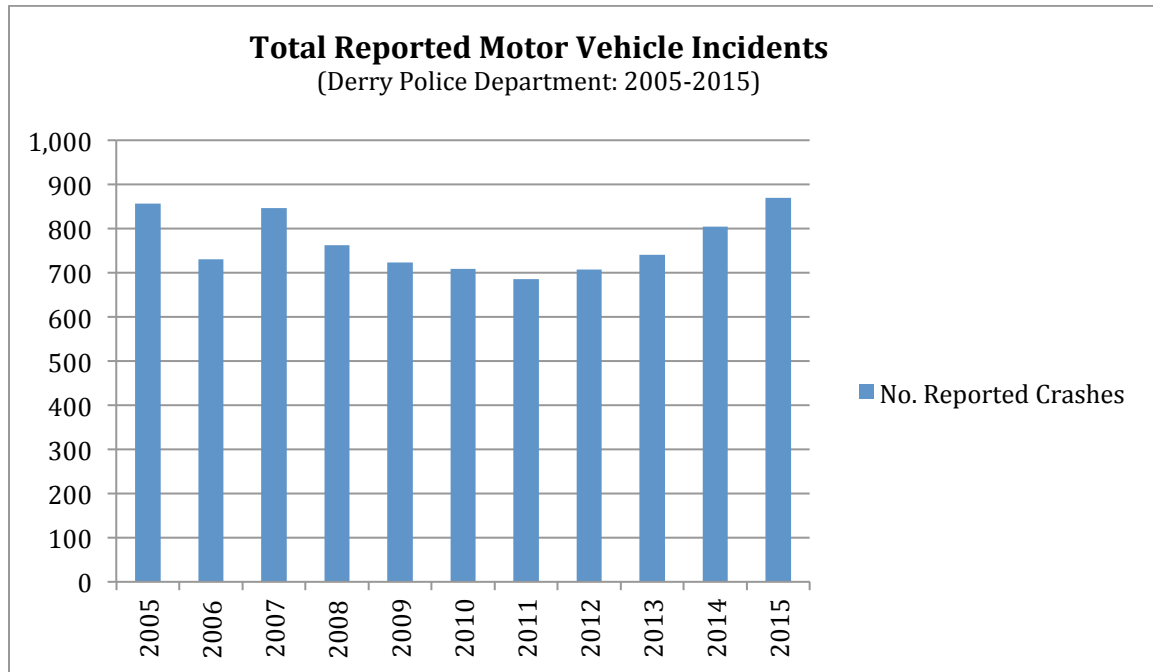


Figure 7.11: Motor Vehicle Collisions (2005-2015)

The crash data were also used to identify locations that have experienced a high number of reported collisions within the Town of Derry. **Table 7.2** summarizes a listing from the Derry Police Department and NHDOT of the 10 intersections with the most reported collisions between 2014 and 2016. During this period, Ross' Corner experienced the most reported collisions with an average of 20 incidents per year.

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**Table 7.2: High Crash Locations
(Derry Police Department and NHDOT: 2014-2016)**

Intersection	2014	2015	2016	Average
Ross' Corner: NH 28 (Manchester Rd and Crystal Ave) at Tsienneto Rd and Folsom Rd	13	18	29	20
NH 28 Bypass (North Main St) at Pinkerton St and Nesmith St	10	11	13	11
NH 28 (Manchester Rd) at Ashleigh Dr	13	13	5	10
NH 28 Bypass (Londonderry Turnpike) at English Range Rd and Scobie Pond Rd	11	7	8	9
NH 28 Bypass (Londonderry Turnpike and North Main St) at Tsienneto Rd	10	11	7	9
Tsienneto Rd at Pinkerton St	8	6	8	7
Chester Rd (NH 102) at Tsienneto Rd	5	8	7	7
NH 102 (West Broadway) at Fordway St	2	9	10	7
NH 102 (East Broadway and Chester Rd) at NH 28 Bypass (North Main St and South Main St) and East Derry Rd	9	3	6	6
NH 102 (East Broadway) at NH 28 (Crystal Ave) and Birch St	4	4	3	4

These locations are depicted on **Figure 7.12**. Upon further review of the NHDOT crash data, the following four crashes resulted in fatalities between 2014 and 2016 within the Town of Derry:

- May 11, 2014 (Sunday) at 3:41 PM: occurred on NH Route 28 when a southbound vehicle overturned during dry pavement conditions and clear weather conditions.
- May 7, 2015 (Thursday) at 6:42 PM: occurred at the intersection of Chester Road and Hickory Lane between two motor vehicles during dry pavement conditions and clear weather conditions.
- October 6, 2015 (Tuesday) at 4:06 PM: occurred on Scobie Pond Road between two motor vehicles during dry pavement conditions and clear weather conditions.
- December 2, 2015 (Wednesday) at 9:46 AM: occurred on Lane Road when a motor vehicle collided with a tree during wet pavement conditions and rainy weather conditions.

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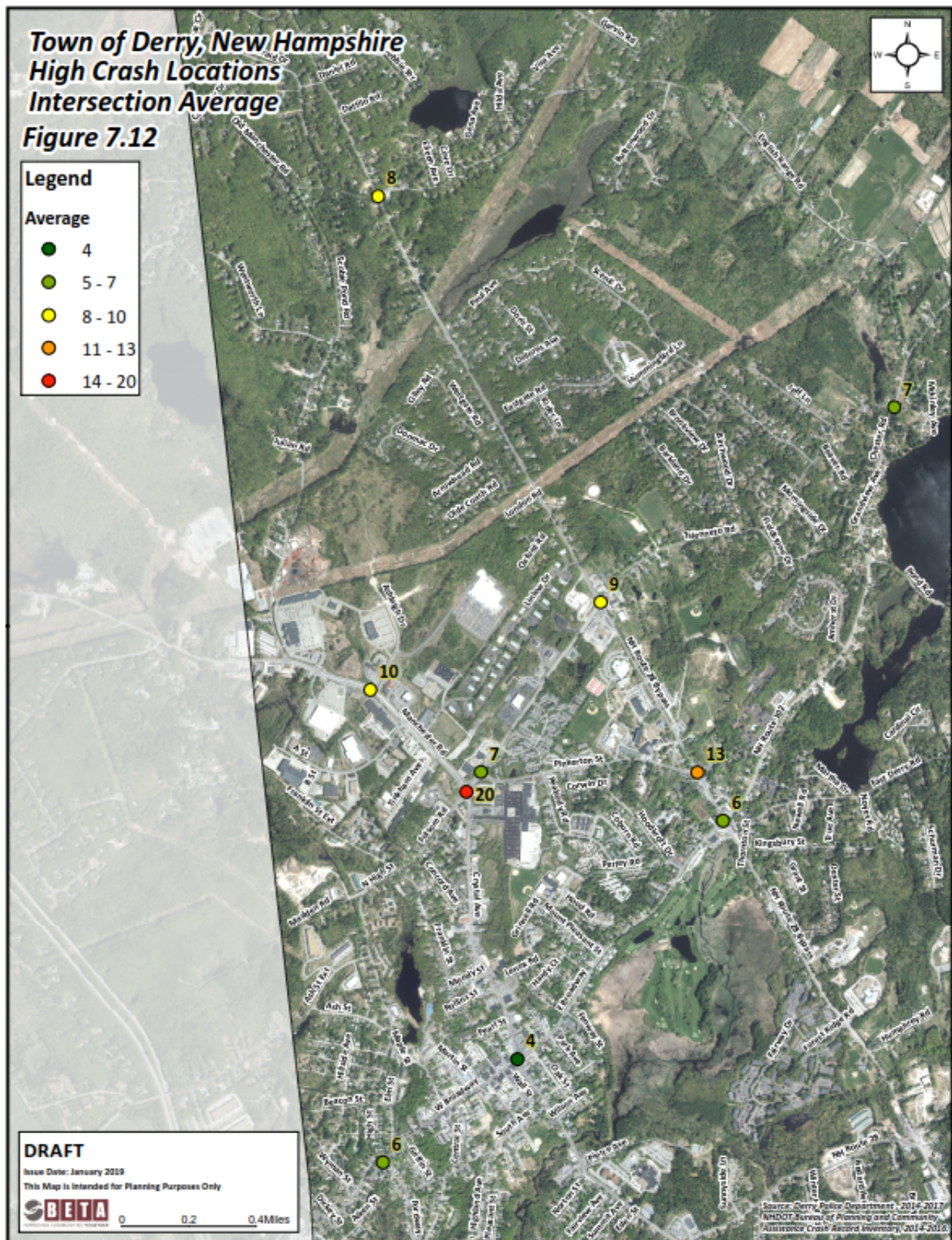


Figure 7.12: Town of Derry, New Hampshire, High Crash Locations Intersection Average

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PUBLIC TRANSPORTATION

The Cooperative Alliance for Regional Transportation (CART) provides three types of public transportation for residents of Derry. CART is fully certified by the Federal Transit Authority (FTA) and receives federal funding through FTA, as well as by member communities and charitable donations as a non-profit 501(C)3.

- CART offers curb-to-curb demand response public transportation for residents of Chester, Derry, Hampstead, Londonderry, and Salem who are elderly or in need of transportation. These vehicles are fully accessible and Americans with Disabilities Act (ADA) compliant. This service needs to be scheduled in advance and requires a minimal fare.
- CART provides route deviation shuttle service in which shuttles travel to regularly scheduled destinations and will divert within a quarter mile radius of the route to pick up and drop off riders. This service needs to be scheduled in advance, but is provided free of charge.
- CART offers the Derry/Londonderry Shuttle that is a regular fixed service for seniors and people with disabilities to the Londonderry Senior Center and the Marion Gerrish Community Center in Derry for Nutrition and Adult Day services. This service is also provided to dialysis centers in Derry and Londonderry. If space is available, this shuttle service can also be provided for non-seniors and riders without disabilities. The fixed service operates Monday through Friday between 8 AM and 5 PM free of charge.

RAIL SERVICE

Within the Town of Derry, the municipality owns the former Manchester & Lawrence Railroad (M&L) line and most of the associated right-of-way. The NHDOT has an easement that restricts development within 30 feet of the railroad right-of-way. The M&L Railroad has been discontinued and abandoned, which has provided the Town with the opportunity to transition the rail line into a recreational trail.

The Amtrak Downeaster provides regional passenger train service between the Visitor Center in Brunswick, ME and North Station in Boston, MA. Train station stops in proximity to the Town of Derry are: Haverhill, MA (23 miles), Exeter, NH (26 miles), Durham, NH (33 miles), and Dover, NH (36 miles). The Amtrak Downeaster provides five roundtrips daily Sunday through Saturday, with Wi-Fi available in a non-smoking environment.

PARKING

The availability of public parking in Downtown Derry has been an important topic that relates to mobility and access for the different businesses, recreational activities, and governmental services in the area. Currently, public parking is provided along Merchant's Row, as well as at the Abbott Court lot, the Municipal Center lot (Manning Street, Pearl



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Street, and McAllister Avenue), the Wall Street lot, the Municipal lot along East Broadway (west of Marlboro Road), and the Municipal lot along Birch Street (south of East Broadway). In addition, parallel on-street parking is provided in the Downtown area along both sides of East Broadway and West Broadway between the Crystal Avenue/Birch Street intersection to the east and the United States Marine Corps Lance Corporal Michael E. Geary Bridge to the west.

Residents identified the following issues with the available parking spaces throughout the Town:

- There is limited parking and handicap (accessible) parking available at Leach Library with consideration being given to expanding to the bandstand area at McGregor Park.
- The Derry Masonic Temple has limited parking that causes patrons to park across the street on East Broadway.
- Parking is limited at Adams Memorial Building (Derry Opera House) with a potential opportunity to use the abutting empty parcel owned by the Town.
- Due to poor lighting and lack of nearby parking lots, patrons of the Adams Memorial Building do not feel safe walking to Abbot Court parking lot.
- Consideration could be given to maximizing the use of public space in the Downtown area by providing on-street angle parking spaces, improving lighting, and creating additional parking spaces.

Observations

- There is limited parking availability for some locations in Downtown.

Based on Derry Police Department data, an average of 767 citations were issued due to parking violations throughout the Town between 2005 and 2015. A summary of the total parking tickets issued per year is presented in **Figure 7.13**.

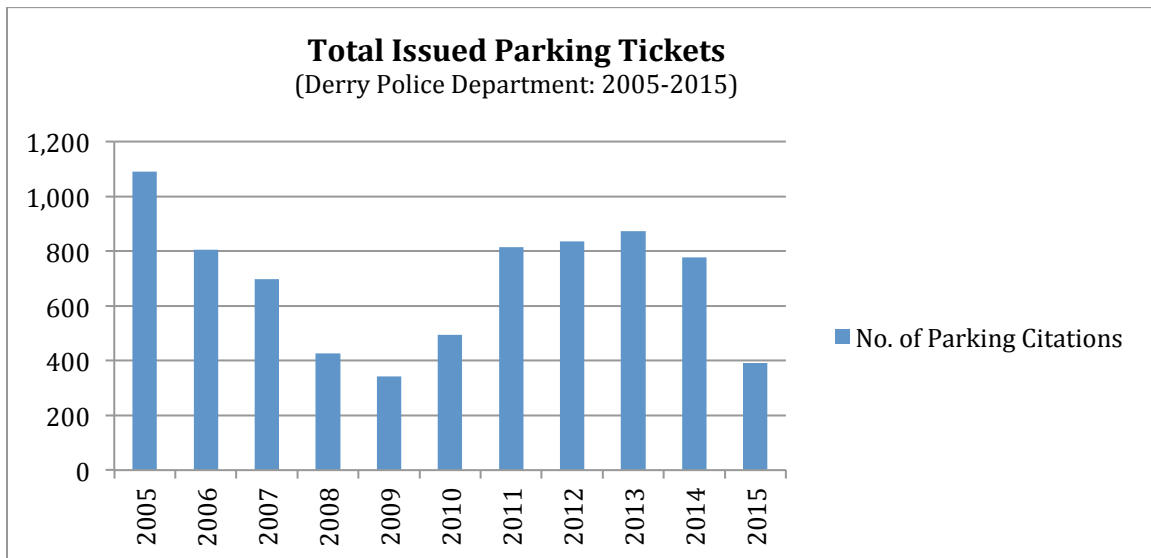


Figure 7.13: Annual Parking Citations (2005-2015)

PEDESTRIAN AND BICYCLE FACILITIES

RECREATIONAL TRAILS

The Town of Derry provides two recreational trails: Derry Rail Trail and Rockingham Recreational Trail that are depicted on **Figure 7.14**. The Derry Rail Trail is 3.7 miles long that accommodates walking, bicycling, wheelchairs, horseback riding, mountain biking, snowmobiling, and cross-country skiing along the former Manchester and Lawrence railroad corridor. The asphalt trail provides connections with the Windham Rail Trail at its southern end, runs northerly parallel with I-93, enters Downtown Derry, and ends at Hoods Pond. There is a 0.7 mile undeveloped stretch of the trail traversable for hikers and mountain bikers that leads to the Londonderry Town Line. Plans are proposed to connect the Derry Rail Trail with the Londonderry Rail Trail with a tunnel constructed at Madden Road. The first segment would connect Hood Park with North High Street and would require an upgrade to the Hood Pond Dam, while the second segment would run northerly to the Derry-Londonderry Town Line. A rectangular rapid flash beacon (RRFB) was installed at the Kendall Pond Crossing near the roadway curvature to help notify motorists. The Rail Trail Café is located in Downtown Derry (5 West Broadway) across from the Derry Rail Trail and provides bike parking.



The Rockingham Recreational Trail – Fremont Branch is an 18-mile long multi-use trail that begins at Depot Road in Windham and ends prior to NH Route 125 in Epping. Within the Town of Derry, the trail is 6 miles long that starts at the Windham Depot, meets the Derry Rail Trail, and continues northerly to the Hampton Town Line. This section of the trail has unpaved surface that is used for hikers, mountain bikers, and ATVs. Off Highway Recreational Vehicles (OHRV) include all-terrain vehicles (ATVs), utility vehicles (UTVs), and trail bikes. Due to increased use during the summer time, Off Highway Recreational Vehicles (OHRV) use is only permitted from NH Route 28 in Derry to NH Route 107 in Fremont. OHRV include ATVs, utility vehicles (UTVs), and trail bikes. The Rockingham Recreational Trail also accommodates cross-country skiing, hiking, horseback riding, mountain biking, mushing, snowmobiling, and snowshoeing.

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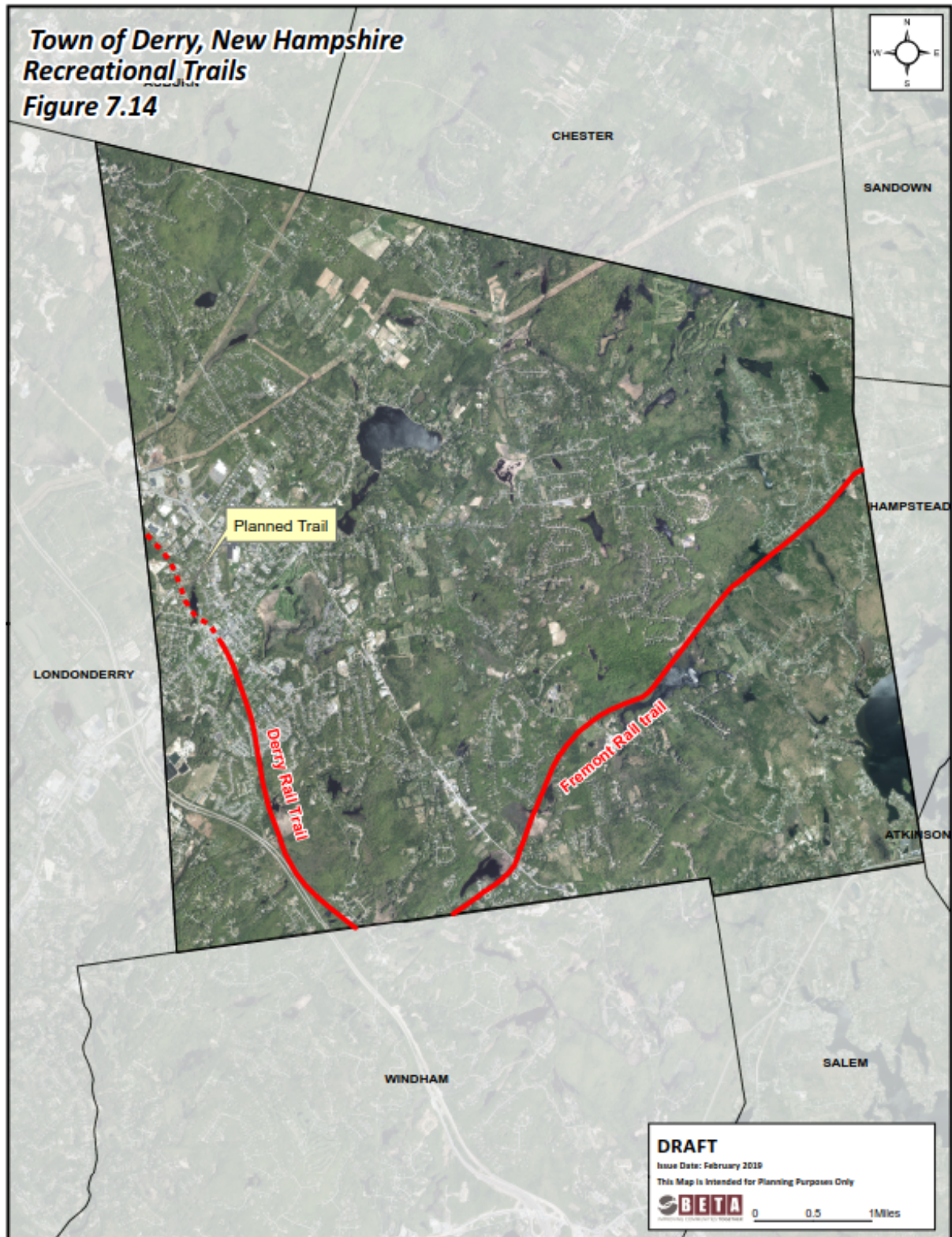


Figure 7.14 Town of Derry, New Hampshire, Recreational Trails

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SIDEWALKS AND CROSSWALKS

Accessibility for those who live and work in the Town depends on an efficient transportation system. Sidewalks improve safety by separating pedestrians and vehicles. With increased walkability and connectivity throughout the Town, those with mobility and visual impairments can be part of the community and have the opportunity to walk to many of the business in Downtown Derry.

Sidewalks provide access to neighborhoods, schools, businesses, government buildings, and parks. There are 1.9 miles of sidewalk throughout the community, mostly in the Downtown area with sidewalks provided along both sides of East Broadway and West Broadway between the Crystal Avenue/Birch Street signalized intersection to the east and the United States Marine Corps Lance Corporal Michael E. Geary Bridge to the west. While there is a roadway pavement management program, there is no sidewalk improvement program or funding mechanism dedicated to sidewalk maintenance or construction. The Town has two sidewalk plows that make the existing 1.9 miles of sidewalks more walkable during the winter months. **Figure 7.15** depicts a map of

the existing sidewalks throughout the Town.

Streetscape improvements made in 2001 in the Downtown are deteriorating and will soon need to be upgraded. A total of 11 of the 28 tree pits in the Downtown area are missing trees. The following are pedestrian mobility and connectivity issues, primarily in the Downtown:

- A lack of outdoor seating areas and amenities in Downtown;
- Pedestrian amenities not in conformance with current Americans with Disabilities Act (ADA) standards;
- Sidewalk hazards (tree roots, uneven walking surfaces, detectable warning panels, lack of ramps/transitions);
- Inaccessible entryways from sidewalk to businesses;
- Missing pedestrian connections and lack of sidewalks where desirable; and
- Limited pedestrian network to the Downtown area



Inaccessible Entryway



Non-ADA Compliant Crosswalk



Non-ADA Compliant Sidewalk

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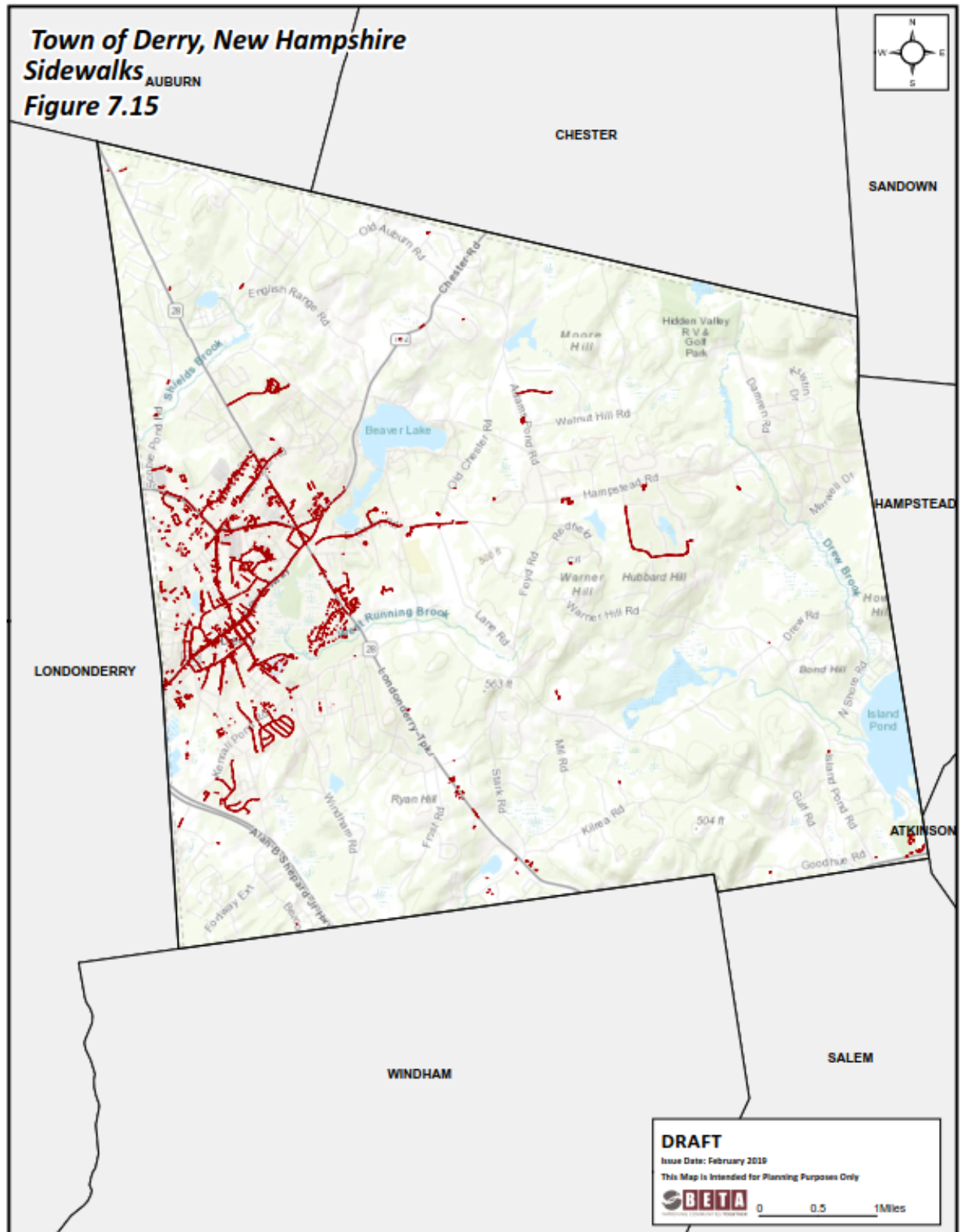


Figure 7.15: Town of Derry, New Hampshire, Sidewalks

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AIR TRANSPORTATION

The Town of Derry has access to three passenger air services outside of the community. The Manchester-Boston Regional Airport is located approximately 13 miles away (Manchester, NH), the Boston Logan International Airport (aka, General Edward Lawrence Logan International Airport) is approximately 44 miles away (East Boston, MA), and the Portland International Jetport is approximately 99 miles away (Portland, ME).

RIDESHARING

New Hampshire Park & Ride lots are located in Londonderry off I-93 at Exits 4 and 5. These lots have been positioned for north/south commuters between New Hampshire and Massachusetts. The Exit 4 lot is located off NH Route 102 on Garden Lane, provides approximately 452 parking spaces, and connects with the bus terminal for Boston Express. The Exit 5 lot is located off NH Route 28 at Symmes Drive, provides approximately 728 parking spaces, and connects with Boston Express and Concord Coach. In addition, NHDOT offers a free ride-matching service through NH Rideshare. The intent of this service is to help reduce single-occupancy vehicles on the roadway system and promote the use of alternate modes of transportation by providing information and assistance about carpools, vanpools, buses, and trains.

OPPORTUNITIES, CHALLENGES & OTHER OBSERVATIONS

The following represents a preliminary listing of opportunities, issues and challenges regarding the Town of Derry's transportation system.

- In 2016, a new traffic signal was installed and geometric/drainage improvements were constructed at the Route 28 (Rockingham Road) intersection with Windham Depot Road and Kilrea Road.
- The NHDOT has different projects within the Town of Derry that are at various stages:
 - A bridge replacement project is in the design phase for Drew Road over Drew Brook that would replace the existing culvert (NHDOT Project No. 16118).
 - A bridge replacement project is in the planning phase for North Shore Road over Tributary I to Beaver Lake Outlet (NHDOT Project No. 41400).
 - A bridge rehabilitation or replacement project on Florence Street over Shields Brook that is in the design phase (Project No. 13652).
 - Intersection safety improvements at the NH Route 28 Bypass at English Range Road and Scobie Pond Road that is in the design phase (NHDOT Project No. 24861).
 - Multi-use trail improvements for the Manchester & Lawrence Rail Corridor that is in the design phase (NHDOT Project No. 16031).

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- The I-93 Exit 4A interchange and connecting roadway project that is in the design phase (NHDOT Project No. 13065).
- The Town has programmed approximately \$1.4 million annually for pavement management. The majority of roadways in town are in good or better condition.
- Based on Derry Police Department and NHDOT crash data between 2014 and 2016, the following locations were identified as experiencing high numbers of reported collisions:
 - Ross' Corner (average 20 incidents/year)
 - NH Route 28 Bypass at Pinkerton Street and Nesmith Street (average 11 incidents/year)
 - NH Route 28 at Ashleigh Drive (average 10 incidents/year)
 - NH Route 28 at English Range Road and Scobie Pond Road (average 9 incidents/year)
 - Tsienneto Road at Pinkerton Street (average 7 incidents/year)
- Walkability and Biking:
 - The Town has approximately 1.9 miles of sidewalks, but there is neither an overall sidewalk improvement plan nor funding established.
 - The Derry Rail Trail is approximately 3.7 miles long and is planned to be extended northerly from Hoods Pond to North High Street (2019) with the potential of expanding beyond the I-93 Exit 4A project. At Madden Road, a new tunnel for the Derry Rail Trail will be provided as part of the I-93 Exit 4A project.
 - The Town owns a sidewalk plow that is used to maintain the Downtown sidewalks and the Derry Rail Trail.
 - The Town is interested in the NHDOT's Safe Routes to School (SRTS) program to improve walkability and life-style (program is part of NHDOT's TAP).
 - The Leach Library is not Americans with Disabilities Act (ADA) compliant.
 - Connections to open spaces and recreational/municipal facilities should be considered with safe and pleasant walking, biking, and parking infrastructure.
 - A new rectangular rapid flash beacon (RRFB) was installed at Kendall Pond Crossing due to a dangerous curve in the roadway.
 - RRFBs could be considered at South Avenue, Broadway, and Rollins Street for the Derry Rail Trail.
 - A potential improvement for the awkward alignment at the Bowers Road crossing of the Derry Rail Trail could be to separate the trail and roadway by constructing a tunnel for the trail users.
- Downtown Transportation:

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- Streetscape improvements were implemented in the Downtown (2001), but the stamped pavement is deteriorating. The Town is considering improvement options.
- There is a lack of pedestrian amenities in Downtown such as seating areas, street furniture and lighting.
- There are a number of missing trees in the Downtown (11 of 28 empty tree pits), in which the Derry Public Works and Engineering Department has asked for \$10,000 to replace of seven of these trees.
- The Town would like to incorporate a Complete Streets approach for the Downtown area to accommodate the needs of people of all ages and abilities. Improvements may include new sidewalks, bike lanes and crosswalks.
- Consider additional public transportation and ridesharing options.
- There is a lack of uniform wayfinding signage in the Downtown.
- Limited parking availability in Downtown, especially for events.

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INTERVIEWS

Cara Barlow, Director, Derry Public Library

Edward Garone, Chief, Police Department

Michael Gagnon, Chief, Fire Department

Courtney Provencher, Health Officer

David Caron, Town Administration

MaryAnn Connors – Krikorian, Superintendent of Schools SAU #10

Michael Fowler, Director of Public Works, (DPW/Highway/Water/Wastewater, Recreation Department)

George Sioras, Director, Planning Department

Elizabeth Robidoux, Assistant Planner, Planning Department

Dr. Timothy Powers, Interim Headmaster, Pinkerton Academy

Mark Connor – Derry Rail Trail Alliance

Chapter 7: Community Facilities and Services

Community Facilities & Services

INTRODUCTION

As Derry has grown, the Town has become more systematic about planning for its municipal facilities and services. Periodically updating the town's master plan, developing a 30-year Capital Improvement Plan, adopting a growth management ordinance and completing a FEMA-approved Hazard Mitigation Plan making the Town eligible for funding, are all examples of how the Town has become increasingly proactive in addressing the municipality's facility and service needs.

As previously mentioned, Derry prepares an annual Capital Improvement Plan (CIP) as part of its budgeting process. The purpose of the CIP is to address existing deficiencies in municipal facilities and services and to plan for future needs for expansion, renovation or other changes.

The CIP lists the Town's priorities in terms of capital needs and identifies the source of funding for these. Historically, almost all of the capital expenditures have been funded with Capital Reserve Funds, which are replenished through transfers from the Unallocated Fund Balance (UFB) in accordance with Town Council policy. Priorities are indicated as follows¹:

Priority 1: Urgent. Cannot be delayed. Needed immediately for health and safety.

Priority 2: Necessary. Needed within 3 years to maintain basic level & quality of services

Priority 3: Desirable. Needed within 4-6 years to improve quality or level of service

KEY FINDINGS

- Derry has been good about planning for and maintaining its public facilities
- There is a need to expand sewer and water systems, an expensive proposition; there are plans underway to expand the municipal water system without any cost to the Town.
- There is a significant need to address the inadequacy of Fire Department facilities.
- The proposed road configuration at the new Exit 4A will negatively impact the Police Headquarters causing them to seek an alternative site.
- There is a need for additional space for community gathering and programming especially for seniors (e.g. Community/Senior Center)
- When the elementary school enrollments drop to below 2,000 students, the School District will close one of the schools. This will result in a need to reorganize the school assignments and decide on the future use of the building.

¹ Town of Derry, *New Hampshire, Capital Improvements Plan: FY2020-FY2020*, February 20, 2019

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Priority 4: Deferrable. Can be placed on hold until after 6-year scope of current CIP

Priority 5: Premature. Needs more research, planning & coordination

Priority 6: Inconsistent. Contrary to land-use planning or community development goals

The previous master plan made a number of recommendations, some of which were successfully implemented, others still remain relevant today. In addition conditions have changed resulting in new challenges and opportunities. This chapter will focus on the most pressing of these.

MUNICIPAL CENTER

The Municipal Center has been occupied since 2002. It houses the Town Administration, Assessing, Buildings and Grounds, Economic Development, Cable 17, Code Enforcement, Finance, Fire Department Administration, Human Resources, Planning, Tax Collector, Town Clerk, Public Health, Public Works, Water and Wastewater.

Observations

- The Municipal Center building is well maintained and adequately accommodates municipal offices and the public.

The building is organized around a spacious central space and also has a large community meeting space that is state-of-the-art and includes the latest in technology.

DERRY COOPERATIVE SCHOOL DISTRICT

The Derry Cooperative School District is comprised of 5 elementary schools (grades K-5) and 2 middle schools (grades 6-8). Most high school students attend the regional high school, Pinkerton Academy, located in Derry.

In addition to serving 6-8 graders, Gilbert H. Hood Middle School also houses Derry's Early Education program (DEEP) for 3 and 4 year olds and Next Charter High School.

Elementary and middle school facilities are reportedly in good condition. However, it should be noted there are ongoing maintenance needs, including but not limited to, roof repairs and parking lot repairs.

Observations

- It is projected that student enrollments overall will continue to decline over the next few years. However, elementary school enrollments are expected to increase slightly.
- The School District is preparing to close one of the elementary schools when enrollments decline in the near future.
- Derry's schools have the necessary capacity to absorb the slight increase in student enrollments.
- Pinkerton Academy expects a reduction in the number of students coming from Derry and is looking for ways to supplement its student body.

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Many people reportedly move to Derry for the educational system. Students tend to fair quite well after attending Derry's public schools and the regional high school, Pinkerton Academy, provides a unique set of opportunities for its students.

School	Year Constructed	Year of Addition(s)	# of Classrooms ²	School Capacity 100% ³	School Capacity 90% ⁴
Derry Village Elementary School	1967	2000	25	540	486
East Derry Memorial Elementary School	1986		24	518	466
Ernest P. Barka Elementary School	2005		30	648	583
Grinnell Elementary School	1951	2008 (modular)	20	420	378
South Range Elementary School	1966	2000	20	432	389
TOTAL			119	2558	2302
Gilbert H. Hood Middle School	1951	1971, 2005	34	850	765
West Running Brook Middle School	1995		24	600	540
TOTAL			58	1450	1305
SAU (Cooperative School District)	1901	2005 (modular)			

² "Classrooms" refers to the number of grade-level classrooms available, excluding Unified Arts and categorical/specialized program classrooms

³ Based on the Derry School Board goal of an average of 21 students per classroom for Grades K-5 and an average of 25 students per classroom for Grades 6-8

⁴ The 90% capacity is calculated in order to take into account variables such as assigning fewer pupils to some classes, allowing flexibility for uneven grade distributions and scheduling, and to make allowances for assigning fewer students to undersized classrooms.

PINKERTON ACADEMY

Pinkerton Academy,⁵a private, non-profit corporation, is the largest independent high school in the United States. Approximately 3,200 students attend grades 9-12. The Academy contracts with 6 towns⁶ to provide high school education to their students. All towns and students that are tuition-based (from non-sending towns) pay \$12,066 per student.

One of Pinkerton's unique features is its campus setting. Since the Old Academy Building opened in 1815, the campus has grown to 23 buildings including the 890-seat Stockbridge Theatre. The school is very up-to-date in terms of technology and has 3 media centers on its campus.

According to the school's Headmaster the ideal enrollment is 3,200 – 3,400 so that the teacher to student ratio can remain at 1:20. The Academy defines capacity as it 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 approximately at 85% capacity which is considered by the administration to be the ideal capacity in order to have some flexibility in scheduling and to reduce the movement of teachers to and from classrooms. The Headmaster says that while space needs may change over time, they do not intend to add more students.

Over half of the students (51%) are from Derry, although enrollment is expected to decrease. As enrollment decreases the Academy will look for ways to supplement its student body. The Academy is currently working with the Town to promote Derry as a place to live presenting the benefits of Pinkerton Academy as a key reason to move to town.

In addition to the large number of students, the school's staff includes 580 employees. Forty buses (provided by the Town) bring students to and from the school everyday while others (juniors and seniors) drive to school. Sending towns use their own busses. This results in some traffic congestion during the peak times when school opens in the morning and then again when it lets out in the afternoon.

The school has security staff, but relies on the Town's Police, Fire and EMS for public safety and emergency medical services.

Next Charter High School. This educational institution rents space in the Hood Middle School and serves approximately 70 students, 60 of whom are from Derry.

⁵ <https://www.pinkertonacademy.org/index.php/about/about-pinkerton-academy>

⁶ , Pinkerton serves as the high school of record for the neighboring towns of Auburn, Candia (beginning in 2018), Chester, Derry, Hampstead and Hooksett, NH.

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ENROLLMENTS

According to the New Hampshire School Administrators Association⁷ Derry's student enrollments have experienced a steady decline over the last decade (2006-2018). In terms of projecting future enrollment numbers, Kindergarten enrollment trends are especially relevant because they are the most important predictor of future enrollments at the higher grade levels. In Derry, Kindergarten has been somewhat erratic, but it was determined that there is some indication that it will be slowly increasing over time. But when birth rates are taken into account, it would seem that Kindergarten enrollments will remain flat.

Trends in housing development were also examined in order to project future enrollments. Over the last decade or so the majority of housing development has occurred in single-family construction. Additionally, turnover in ownership of the existing housing stock will affect the future number of students. As younger families move into Derry and purchase homes from older persons, this will most likely result in some increase in the number of children-per-household.

Enrollment projections were developed using three different methodologies. The "Three Year Weighted Model" was determined to be the most accurate (this was done by using the "historical test" which uses historical data to determine which model most accurately reflects actual enrollments). This model (the results of which are depicted in Table XX) shows the overall student enrollment continuing to decline within the next five to ten years. However, elementary enrollments are projected to increase by 41 students in the next five years and 66 in the next ten years.

TABLE XX Enrollment History: October 1, 2007 – October 1, 2016

	Grade	K-5	6-8	9-12	TOTAL
Year	2007-08	2,373	1,555	2,314	6,242
	2008-09	2,343	1,498	2,317	6,158
	2009-10	2,282	1,412	2,310	6,004
	2010-11	2,224	1,373	2,205	5,802
	2011-12	2,223	1,312	2,137	5,672
	2012-13	2,252	1,273	2,089	5,614
	2013-14	2,193	1,289	1,939	5,421
	2014-15	2,148	1,237	1,905	5,290
	2015-16	2,165	1,228	1,792	5,185
	2016-17	2,131	1,188	1,843	5,162

⁷ New Hampshire School Administrators Association, ***Derry Cooperative School District: Demographic Analysis/Enrollment Projections***, December 2017.

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TABLE XX Enrollment Projections: 2018-2028⁸

	Grade	K-5	6-8	9-12	TOTAL
Year	2018-19	2,084	1,221	1,768	5,073
	2019-20	2,076	1,246	1,726	5,048
	2020-21	2,128	1,197	1,723	5,048
	2021-22	2,115	1,182	1,746	5,043
	2022-23	2,125	1,165	1,752	5,042
	2023-24	2,154	1,172	1,730	5,056
	2024-25	2,161	1,153	1,733	5,047
	2025-26	2,170	1,165	1,687	5,022
	2026-27	2,145	1,219	1,656	5,022
	2027-28	2,150	1,219	1,686	5,055

On February 13, 2019, the Derry School Board voted to begin working with the Administration to create a plan to close an elementary school and best use the space in all of the buildings when the Kindergarten through Grade 5 enrollment/population hits 1,925 students. Once it is decided which school is to close, a school district reconfiguration plan will need to be developed. Also, the School District and the Town will need to decide what to do with the building (e.g. mothball, reuse, sell, etc.)

PUBLIC SAFETY

Derry provides its residents professional police, fire and Emergency Medical services. Animal Control also provide services related to the public's safety.

POLICE DEPARTMENT

The Police Department is located at 1 Municipal Drive. In 2006, 4,000 square feet were added to the Department Headquarters building. Since then several renovation projects have helped to better accommodate the Department's needs. The space is reportedly adequate.

Derry's Police Department operates with 59 uniformed personnel. This translates to approximately 1.78 officers per 1,000 residents, a ratio that is significantly below the average of 2.2 officers per 1,000 residents found in other

Observations

- The number of uniformed personnel (per 1,000 residents) in Derry's Police Department is significantly below that of the average of municipalities in NH.
- The number of serious offenses has slightly decreased over the last decade, while the number of less serious offenses has slightly increased over the same time period.
- The opioid crisis, domestic violence and issues related to mental health have taken up more police attention than in the past.
- The proposed highway design related to the Exit 4A project will adversely impact the Police Headquarters in terms of access resulting in a need for the Department to relocate.

⁸ Three Year Weighted Model"

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municipalities in New Hampshire⁹. This is calculated by using the 2017 population estimated at 33,037¹⁰. If Derry were to increase its ratio of officers to residents to the 2.2 average, the Department would need to add 14 more officers, the cost of which would far exceed the Town's budget. The Police Chief reports that this results in curbing the Department's ability to be proactive.

Derry has Mutual Aid Agreements with the surrounding towns of Chester, Londonderry, Windham, Salem, Manchester, Rockingham County, Hampstead, Auburn, Hudson, Atkinson, Sandown and Pelham.

As is evident in Table XX, while the total number of offenses reported have increased over the last decade, the number of Group A offenses (e.g. arson, assault, theft, vandalism, etc.) has slightly decreased, while the number of less serious Group B offenses (disorderly conduct, intoxication, bad checks, etc.) has slightly increased over the same time period. The Police Chief reports that much of their work recently revolves around dealing with four major concerns, all of which overlap with public health issues; these are: substance abuse (primarily due to opioids), domestic violence (often related to alcohol abuse), errant adolescent behavior and mental illness. For more detailed information regarding calls for service trends see Appendix XXX.

The geographic areas where the largest number of calls for service originate are in the western portion of Derry in high density neighborhoods where the two largest multi-family housing complexes, Fairways (800 units) and Linlew Dr. (500 units) are located.

Table XX. Derry Police Department Calls for Service: 2009 - 2018

YEAR	#of police calls answered	Physical Arrests	Traffic violations	Parking violations	Group A offenses ¹¹	Group B offenses ¹²
2009	23,426	1,250	833	396	2,544	1,199
2010	24,690	1,363	960	482	2,691	1,107
2011	26,663	1,272	1,144	534	2,854	1,048
2012	26,939	1,412	1,052	1,182	3,033	1,071
2013	26,607	1,330	1,008	966	2,880	1,051
2014	26,034	1,433	991	866	2,520	919

⁹ From "Police to Populations ratios by state (officers per thousand):

<https://billmcgonigle.com/police-to-population-ratios-by-state-officers-per-thousand/>

¹⁰ from State Data Center: <https://www.nh.gov/osi/data-center/documents/population-estimates-2017.pdf>

¹¹ **Group A offenses** include arson, assaults, burglary, drugs, forgery, fraud, homicide, kidnapping, robbery, sexual assault, stolen property, theft, vandalism, vehicle theft, and weapons violation

¹² **Group B offenses** include bad checks, disorderly conduct, family offenses, intoxication, liquor law violations, runaways, and trespassing.

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2015	22,960	1,186	627	529	2,758	971
2016	23,785	1,231	701	382	2,396	827
2017	26,298	1,196	919	1,070	2,307	937
2018	30,126	1,164	756	652	2,157	1,182

Derry's Police Department is also active at Pinkerton Academy (a campus of approximately 3,400 people). The Academy pays for two resource officers and a security guard.

Future Plans

The Police Department has studied the proposed highway design related to the new Exit 4A project and has determined that it will “drastically alter the access and egress to our facility at 1 Municipal Drive and will drastically reduce the viability of this parcel to serve as the Police Headquarters.”¹³ For example, the new road configuration will hamper the ability of the Department to respond in an emergency as the proposed median creates the potential to block police cars from exiting in a timely manner. The Department is exploring possible mitigating alternatives for the short term and is considering relocation for the longer term.

FIRE DEPARTMENT

The Derry Fire Department currently has four stations all of which are in need of updating/rebuilding. Over the last two decades, the Fire Department upgraded equipment and made various incremental improvements to each of the four stations.

The Central Station (1) is located at 131 East Broadway. The station is a 10,000 square foot facility, of which 3,000 square feet is living area. It was built and became operational in 1973. The apparatus floor at Central Station is 5900 square feet of un-insulated space. The Station contains living quarters for up to eight crossed trained Firefighter/EMS personnel that are assigned to the station for 24-hour shifts. Daily staffing includes a three to four-member Advanced Life Support (ALS) Engine Company, who are responsible for cross staffing a Rescue Unit/Heavy Rescue Trailers and a Structural Tanker (when staffing allows), a two-member ALS Medic Unit (ambulance) and the Battalion Chief who oversees daily operations and responds in a command vehicle to provide oversight of emergency operations.

Observations

- Derry Fire Department facilities are in need of significant upgrades. The Department is considering major changes including relocating stations.
- The number of calls for service has slightly increased over the last decade primarily due to the increase in calls for emergency medical services made by the increasing elderly population.

¹³ from an email from Chief Edward Garone

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Members also ensure the operational readiness of a Tower Truck and an additional ALS Medic Unit. Central Station also houses the Emergency Communications Center which is staffed 24/7 dispatching emergency calls for the Towns of Derry, Windham, Chester, Auburn, Southeastern NH Regional Hazardous Materials Team, and coordinate emergency response of the Border Area Mutual Aid District when the Statewide Mobilization Plan is initiated for large scale emergencies.

Challenges for the future for this Station include the fact that it is not possible to insulate the ceiling because the flat roof is not engineered to hold snow loads. The equipment and apparatus must be maintained at constant temperatures to maintain readiness and meet NH Bureau of EMS regulations and State RSA. The call volume, as well as the usual operations, requires the apparatus doors to be opened and closed often. The amount of natural gas utilized continues to be greater than we would expect. Further - the Station is challenged by lack of functional storage space for equipment and apparatus.

This station receives the most calls for service and is in the worse condition. It also occasionally floods from the brook located nearby.

Island Pond Station (2) is located at 190 Warner Hill Road. The station is a 5000 square foot facility which was built in 1978. The Station contains living quarters for up to four crossed trained Firefighter/EMS personnel that are assigned to the station for 24-hour shifts. Daily staffing includes a three-person Advanced Life Support (ALS) Engine Company that cross staff an ALS Medic Unit (ambulance), Forestry Tanker, Forestry Unit and a Marine Unit. This Station also houses members and equipment who are responsible for in-house small engine repair on equipment like chainsaws and smaller forest firefighting pumps.

The Station is very small, with 2 small bays and 3 small bedrooms. It is also built adjacent to swamplands. The community that the station primarily protects is mostly residential; however there is a commercial district on Rte. 111. This station also services the year-round and seasonal residential community around Big Island Pond (a 500 acre water body located in the towns of Derry, Atkinson, and Hampstead).

English Range Road Station (3) is located at 1 English Range Road. The station is a 4401 square foot facility which was built in 2001. The Station is staffed full time by 4 shifts of 3 personnel cross-staffing Engine 3, Medic 3, and Forestry 3. All personnel are cross-trained for fire and medical response. Recent Station inspections and evaluation determined that the station was in good working order and appearance.

The Station 3 coverage area borders the towns of Londonderry, Auburn, and Chester.

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The Fire Department anticipates that when the State completes its installation of a new intersection traffic control system that this will help facilitate the Department's responses to emergency calls and create safer traffic patterns through the Bypass 28 intersection.

Hampstead Road/Station 4. The Derry Fire Department's Station 4, is located at 74 Hampstead Road on a 0.7-acre parcel. The Station 4 coverage area is in the heart of the Town of Derry. The station provides first due response to its own district as well as second due to all other town fire districts. The station was built in 1974 as a 3-bay fire station and was built to meet the needs of the citizens in East Derry. An addition to the building was added in 1994 to increase the apparatus bay area, the size of the administrative, living quarters, and a training room totaling 6800 square feet. The station is staffed full time by 4 shifts of 3 personnel cross-staffing Ladder 4, Engine 6, Medic 4, Utility 4, and Marine 4. All personnel are cross-trained for fire and medical response. This Station also houses a 150kw generator and utility trailer for emergency management.

The Hampstead Road Station hosts most of the Department training due to its central location and spacious training room. This training room is also used to host a multitude of public education classes such as First Aid, Automated Defibrillation, and CPR. The Department's self-contained breathing apparatus are also maintained at the Hampstead Road Station.

Staffing. The Department is currently comprised of 3 shifts of 16 firefighters and 1 shift of 15 firefighters, as well as Communications, Code Enforcement and Administrative Personnel for a total of 76.5 Full Time Employees. Primary responsibilities include fire suppression and EMS, inspections, mechanical repair and maintenance, communications and administration. The Department conducts its own dispatch and provides contracted regional dispatch to the towns of Chester, Auburn and Windham.

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

The following represent some of the **challenges** the Department is facing:

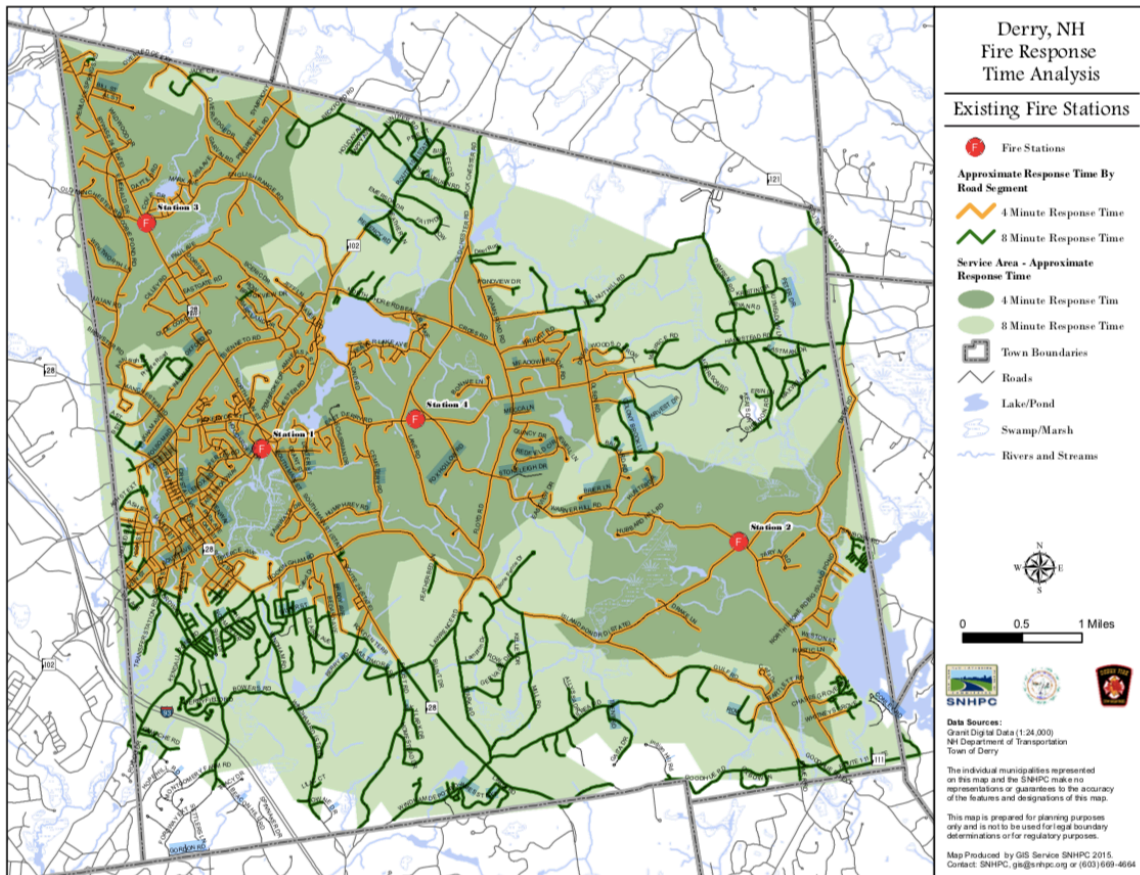
- According to the Fire Chief none of the fire stations can withstand a significant storm event; they are not constructed of masonry.
- Some areas of the Town are outside of the 4-minute industry standard response time (NFPA 1710). Approximately 270 homes (Montgomery Farm/Hope Hill area) and a campground (Hidden Valley Campground) are beyond an 8-minute response time.
- Less than half (only about 40%) of the Town is connected to the municipal water system. The Department must depend on other ways of extinguishing fires (e.g. the use of a water tanker, cisterns, and dry hydrants).

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- There is a lack of training facilities that results in firefighters not having an opportunity to sufficiently practice and or obtain new skills. There is a Training Room at the Hampstead Station, but no outdoor training facility other than a small area at the Transfer Station.

Calls for Service

Since 2015 there has been a 10% in the overall call volume. Many of these are attributed to the increase in emergency medical calls from the nursing homes and independent living units.



Some parts of Derry are outside of the 4-minute industry standard response time.

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TABLE XX. Fire and Rescue Responses by Type: 2013-2018

Type of Fire and Rescue Response	Number of Responses to Calls for Service					
	2013	2014	2015	2016	2017	2018
Building Fire	30	30	21	16	16	19
Vehicle/Heavy Equipment Fire	14	16	11	6	17	14
Brush	43	21	55	54	25	12
Fires – Other	29	25	36	33	29	34
Alarm Activation – No Fire	393	472	396	382	465	404
Hazardous Condition	130	154	124	124	181	167
Good Intent	333	359	341	370	436	421
Service Call	465	403	645	768	690	666
Emergency Medical Services	2732	2896	2997	3117	3212	3237
TOTAL RESPONSES	4169	4376	4626	4870	5071	4,974

As seen in Table XX, the total number of fire and emergency medical service provided by Derry Fire Department has increased. Planned development in Londonderry may result in additional mutual aid responses.

Future Plans:

The Fire Department has developed a plan to address a large number of these issues, especially with regard to the need to upgrade the fire stations. The Plan is as follows:

- Relocate Central Station and turn it into a sub-station.
- Relocate English Range Station south on Rt. 28 By-Pass and turn this station into the new Central Station. This would also tie in with the new Exit 4A which is expected to spur additional development in the adjacent areas.
- Some land has been identified for this purpose. Once the land is secured the Department will need architectural drawings, construction drawings, and cost estimates before attempting to secure a bond.

EMERGENCY MEDICAL SERVICE

The Fire Department has provided Emergency Medical Services to Derry since 1972, and has provided Advanced Life Support Paramedic service since 1985. Derry's EMS has been accredited by the Commission of Accreditation of Ambulances (CAAS) since 2001. Derry is one of 14 municipal fire-based EMS systems in the Country, and the only one in New Hampshire to hold the CAAS accreditation. EMS offices are located at 14 Manning Street in the Fire Administration Office in the Derry Municipal Center.

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The number of calls for Emergency Medical Service has reportedly increased over the last decade. This is most likely the result of an increase in the elderly population in Derry.

Although emergency services are performed by the Derry Fire Department, billing operations and the collection of fees are performed by a private vendors. The Derry Fire Department also provides contracted EMS services to the Towns of Chester and Auburn.

ANIMAL CONTROL BUILDING

The Animal Control Building is located at 45 Fordway Street. The facility, built in the mid-1980s is approximately 750 square feet and houses the Animal Control office, the kennel for dogs and storage of food and equipment for the animals. It is reportedly adequately sized and in good condition.

Derry's Dog Park is located adjacent to Animal Control and across from the Transfer Station. The Derry Dog Park is an off leash dog area and is fenced in allowing dogs the opportunity to run in an enclosed environment. There are also agility obstacles available to help dogs to exercise.

There is also a separate Small Dog Park, which is an off-leash area open to dogs 20 pounds and under.

LIBRARY

Derry has two libraries, the Derry Public Library and the Taylor Library.

DERRY PUBLIC LIBRARY

The Derry Public Library building is located at 64 East Broadway, abutting MacGregor Park. The original building, built in 1924 was 5,000 sq. ft.; a 1989 addition resulted in the current two-story building of approximately 23,000 sq. ft. Repairs and improvements to the building have been made each year with library and municipal funds. The library has some remaining ADA compliance issues, a need to replace the front steps and sidewalk, and also needs improvements to the HVAC system.

Observations

- The Library is responsive to the changing role in it plays in the community
- The library is not open on Sundays.
- Parking continues to be a problem.
- The Derry Public Library Board of Trustees is in the process of developing a strategic plan.

The Library is governed by a Board of Trustees and the Town Council approves the budget. The library enjoys a close working relationship with the Municipal Center and benefits

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from the Town expertise. There are approximately 30 staff members, nine of which are full-time. Additionally there are a number of volunteers, the majority of whom are teens.

The library is a member of a regional non-profit consortium of twelve public and academic libraries (GMILCS) through an integrated library system that facilitates the sharing of resources and group purchasing.

The library makes a concerted effort to be responsive to residents' evolving expectations and Derry's changing community needs. There are 15,931 active Derry Public Library card holders out of a town population of 33,440. The library's location and role in the community have meant that it has long served as a community anchor for the downtown area. It continues to play an active role as a downtown anchor by establishing library programs that align with the new and emerging "creative economy" of Derry. Such programs include:

- The Derry Poet Laureate program, promoting poetry in the Derry community.
- The annual MacGregor Poetry Contest in partnership with the Robert Frost Farm.
- Derry Author Fest, which is an annual spring event featuring New Hampshire authors, publishers and agents.
- Offering free or discounted museum passes to area museums.
- Displaying local artists' work in the library.
- Offering art, music and movement programs for children.

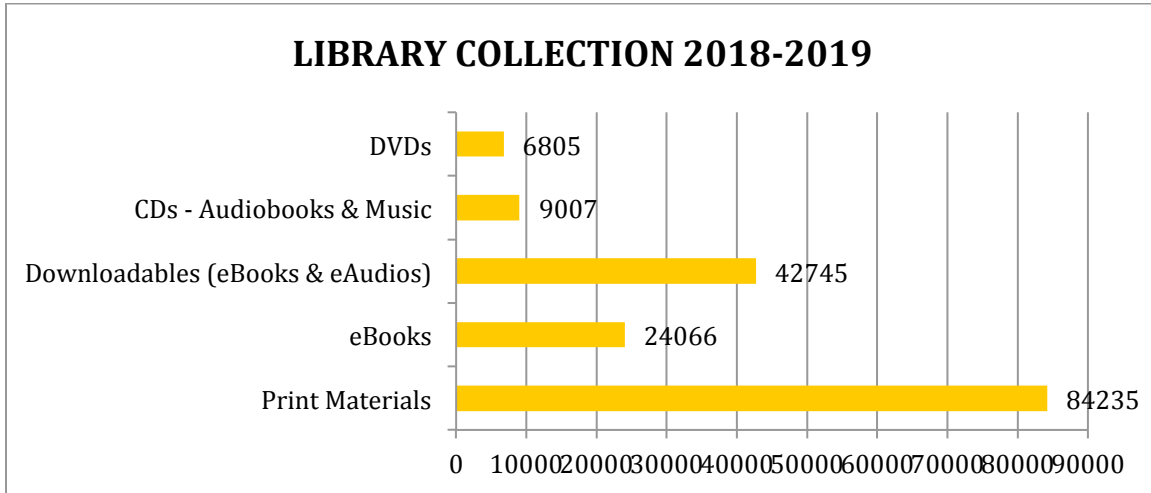
Ways the library connects to the community and serves its needs include:

- Partnering with community organizations such as The Upper Room, the Derry Parks & Recreation Department, Derry History Museum, Derry Cable TV, the Robert Frost Farm, public and private schools and local home schooling groups.
- Offering quiet rooms for tutoring, small meetings or work.
- Creating a café area where library users can enjoy their own snacks and beverages.
- Offering Wifi throughout the building and free access to public computers in the reference area.
- Tailoring its library collection, both hard copy and digital, to the interests of library users and the Derry community. Following national trends, Derry's use of audiobooks, both CD format and downloadable, is trending upwards, while the use of books, both hard copy and downloadable, remains steady or is declining in some portions of the collection.
- Digitizing back issues of the Derry News and Nutfield News as well as local historical newspapers and other materials to make them accessible through the library website and actively assisting genealogists and local historians.

A "snapshot" of the library's current collection is in Table XX below. The library has made a commitment to staying within its current footprint; the collection is curated closely and the library makes use of its membership in GMILCS to access materials it doesn't own.

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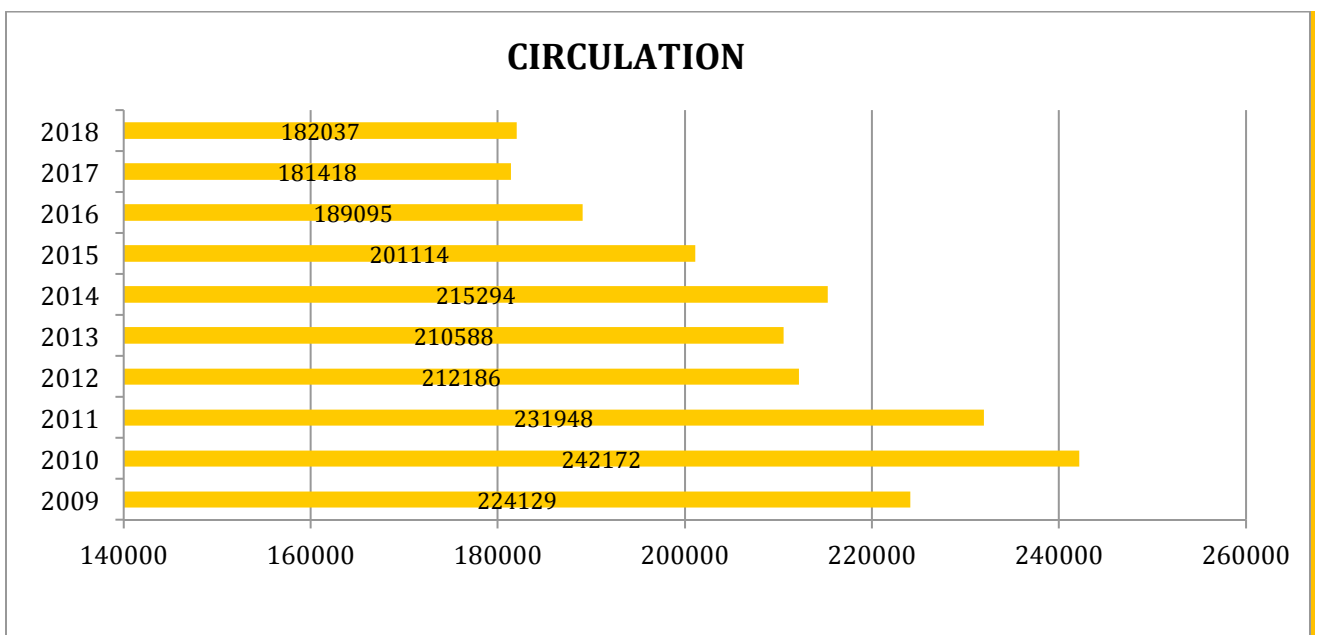
TABLE XX: Derry Library Collection: 2018-2019



Total circulation of library materials has been decreasing. According to the Library Director this is consistent with a historical trend: “when the economy is good, library book borrowing trends downward.”

Derry Public Library – Total Circulation: 2009- 2018

The total circulation of library materials has decreased over the last ten years.



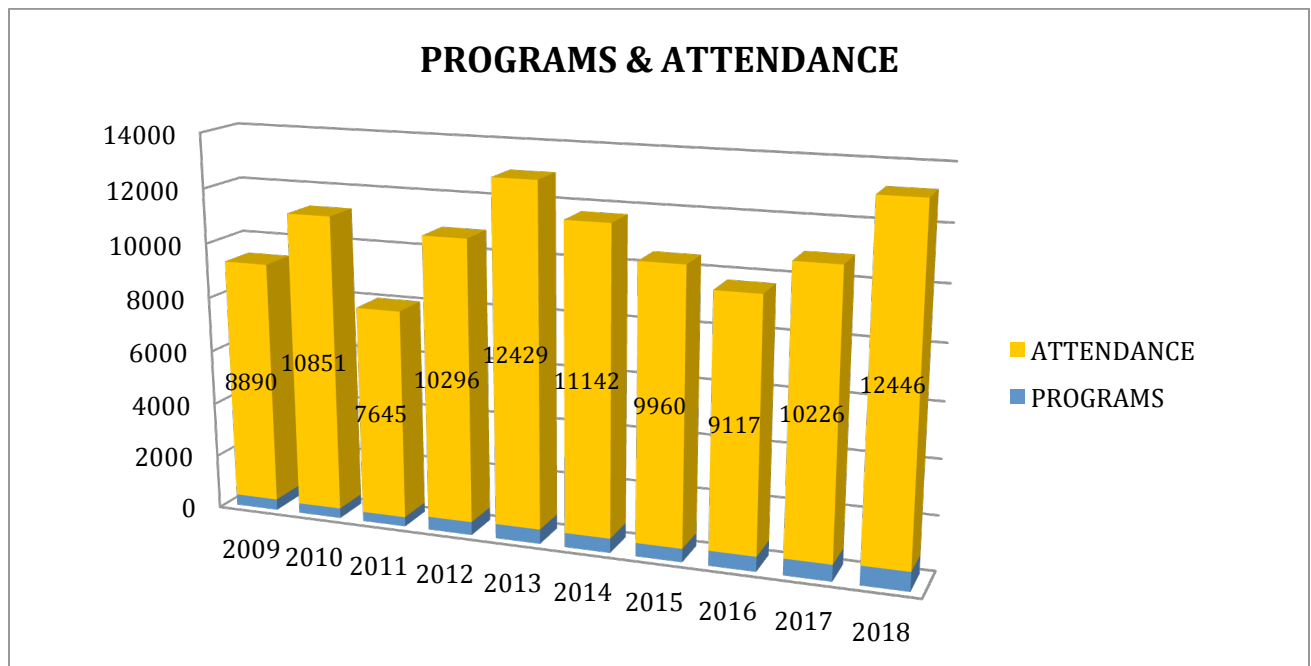
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Despite this decrease in the circulation of library materials, the library remains very busy, with approximately 400 people visiting daily, indicating the library is being used in new ways.

The Library Director reports an increase in the use of the quiet spaces, the café and program attendance, as well as reference services. This is consistent with the national trend of libraries increasingly being viewed as community centers for all ages, where meeting space and programming are highly valued. As our lives become increasingly virtual (lived on a screen), “third places,” – not home, not work, but as Ray Oldenberg wrote “places where you relax in public, where you encounter familiar faces, and where you make new acquaintances,¹⁴” are increasingly desired. The library is a key such third place in the community.

As noted above, as a response to the level of demand the Library has increased the number of programs it offers for every age group and program attendance has risen (see Table below).

Derry Public Library Programs & Attendance - Adult, Teen and Child: 2009-2018



Access to the Derry Public Library poses some issues:

¹⁴ Oldenburg, Ray (1991). *The Great Good Place*. New York: Marlowe & Company. ISBN 978-1-56924-681-8. (Paperback)

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- The Library is open Monday through Saturday and is closed on Sundays when many people could go to the library as they are not in school or at work. In the 2010 Master Plan adding Sunday hours is mentioned; it is a goal that has not yet been attained.
- Parking continues to be an issue for library users. There are currently 13 parking spaces (2 of these are designated as handicap spaces) in front of the library. The Library has an agreement with the Masons to use their parking during the day, and there is a large municipal parking lot on the other side of the Mason's building, but the demand is still not met. This is especially an issue when the library offers programs.
- The Derry Public Library has a strategic plan and the Board of Trustees is in the beginning stages of updating it.

TAYLOR LIBRARY

The Taylor Library is located in the East Derry Upper Village Historic District at 49 East Derry Road. The historic building, registered in the National Register of Historic Places (2016), was established as a library in 1878.

The library has one full-time Director, 4 part-time staffers and a number of teen volunteers.

The library, though very limited in space (1,300 sq.ft.), provides a wide range of services including:

- Print materials for borrowing
- Children and family programming (4 children's programs per week)
- Monthly programs for adults
- Summer reading programs
- Deliveries to shut-in residents
- Family museum passes
- Displays of historic artifacts
- Map and information to individuals searching family in the old part of the Town-owned cemetery located behind the library building
- 3 public laptops
- Summer programs are held outside in the "picnic grove"



Storytime space for younger library patrons at the Taylor Library

In an effort to increase access to the library, the Taylor Library instituted Sunday hours in 2014 and continues to see large numbers of patrons enjoying the library's Sunday hours.

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The library is not ADA compliant and has to limit the number of children attending programs due to space limitations and the fire code. Additionally, the library is at capacity programming-wise due to space limitations. A proposed expansion was turned down at Town Meeting.

PARKS AND RECREATION

Also see Chapter XX: Recreation Resources for more detailed information regarding Derry's Parks and other recreational facilities.

VETERANS HALL

Veteran's Hall, built in 1928 and located at 31 West Broadway Street is where the Department of Parks and Recreation is headquartered. It is also where the Department provides recreational programming and programming specifically oriented to Derry's senior citizens (Derry does not have a Senior Center per se).

The building was renovated in 2009 but is in need of additional upgrades. In the 2010 Master Plan Veteran's Hall was identified as being outdated and inadequate for the level of use (especially with regard to the gymnasium and parking). Since then usage of the facility has increased resulting in a more pressing need to address these issues.

As previously mentioned, the Town does not have a Senior Center and will need additional space and programming for the growing senior population. Additionally, the next generation of seniors is generally more interested in programming that is fitness-oriented, provides opportunities for socializing as well as for multi-generational activities.

Observations

- Veteran's Hall is at capacity to serve the recreational needs of seniors and as this segment of the population grows there will be a need for additional space and programming.
- There seems to be a need for something akin to a Community Center, but in addition to the renovation/construction costs this would entail, it would require annual money for staffing.
- The Town will have additional gathering/meeting space as well as recreational facilities once the Alexander-Carr Park Lodge is rebuilt.
- Upper Village Hall is available for use by the Town for additional programming

UPPER VILLAGE HALL

Upper Village Hall, located in East Derry was purchased from the Town in 2009 by a group of citizens for \$1.00. Since then the East Derry Village Improvement Society, a non-profit organization, has restored the historic building and rents it for meetings, social events, etc. The facility includes 3,000 square feet of hall space including a kitchen. The Hall is available much of the time during the day, especially on weekdays and the Director has

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expressed an interest in making it available to the Town for additional programming. Additionally, plans are underway to add more meeting and office space.

ALEXANDER-CARR PARK LODGE

The Alexander-Carr Park Lodge, located off Pierce Avenue is a 5,000 square foot structure that is approximately 50 years old. It is available for rent and used for meetings, banquets, events and parties, but is in need of repair. The lodge is located on a park where residents of all ages participate in a variety of recreational activities including sledding, pickleball, playground and tennis. According to the DPW Director, there is a need for additional programs and facilities for seniors. In January of 2019 Town Council approved a \$1.5million bond to rebuild the Lodge.

PARKS

The Department of Parks and Recreation manages a number of Town-owned parks, baseball, softball and soccer fields. Additional facilities are located at the Town's public schools, a Dog Park, as well as at swimming areas at area lakes and ponds.

Many of the areas mentioned are available for rental when they are not being used by Department programs or Derry Sports Organizations.

A number of trails provide opportunities for walking, biking, cross-country skiing, and snow-shoeing. These include the Rockingham Recreational Trail (managed by the State of New Hampshire Parks Department), the Derry Trail Trail (managed by the nonprofit Derry Rail Trail Alliance), the Robert Frost Farm Historic Site Loop Trail (managed by the State), and the Derry Conservation Area Trails (managed by the Town's Conservation Commission).

In early 2019 Town Council voted to approve a \$4 million bond¹⁵ that includes \$250,000 to improve the Hood Pond dam (part of a park that could be connected to the downtown¹⁶), and \$1.5 million to replace the Alexander-Carr Park Lodge. An additional \$200,000 will be spent on installing LED lights at the baseball diamond at Don Ball Park and \$100,000

¹⁵ ***"Derry Town Council approves \$4.02 million bond,"*** Ryan Lessard, New Hampshire Union Leader, Jan. 9, 2019.

¹⁶ Some of those interviewed recalled with nostalgia that Hood Pond used to be a popular place for families to gather. The last few years it became the site of drug-related activity. Surveillance cameras were put in and reportedly this has had the desired effect of reducing criminal activity in the area. Food trucks are brought in twice a year and this has drawn a crowd. A desire was expressed by some that the Pond be better connected to the downtown, with more programming, and that it be "cleaned up."

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will go towards park structure upgrades including the rebuilding of the playground at Alexander-Carr and installing outdoor fitness stations at three town parks.

MARION GERRISH COMMUNITY CENTER

The Town owns the building and leases it to a non-profit organization that runs the Marion Gerrish Community Center. The Center generates revenues from donations as well as the sales generated by its Thrift Shop. The Center is located at 39 West Broadway Street and provides meeting space to nonprofits, clubs, community groups and other organizations. Over 150 different groups use the building for meetings, parties and baby showers, memorial services and other private functions.

Additionally, some senior programming including Meals-on-Wheels and Drop-in bingo are run out of the Center.

The Center has 8 rooms available for groups to reserve. All rooms have at least one whiteboard, television and DVD player and a projector is available for use. Rooms are offered to non-profit groups to use on a donation basis.

The Center's Thrift Shop is located in the basement of the building and is open Monday through Saturday. The Shop sells clothing, household items and other items.

DPW is responsible for the maintenance of the building grounds.

PUBLIC HEALTH

The Derry Department of Public Health's mission is "to support, cultivate and protect the health, well-being and safety of the Citizens of Derry." The Health Officer whose office is located in the Municipal Center at 14 Manning Street is primarily responsible for licensing and performing inspections of food service establishments including but not limited to restaurants, supermarkets, schools, bakeries and specialty food processors. Enforcement of the He-P 2300 State of NH Food Protection Rules and FDA 2009 Food Code requires on-going training so proper food safety education can be relayed to and guide operators.

Observations

- The number of calls for service made to the Derry Police Department that are related to unhealthy life choices (substance abuse) are on the rise. Providing information and support for healthier lifestyle choices could be beneficial at least to some residents.
- A number of State resources exist regarding "healthy community" initiatives (including Safe Routes to School, local food, safe walking/biking, etc.)

Additionally, foster family homes, schools, daycare facilities, nursing homes, and other locations where public health may be an issue, fall under the division's purview. The department responds to resident reports of health issues at residential properties, including

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conditions of squalor, insect and vermin infestations, inadequate heat or hot water in rental units and nuisance complaints such as trash or junk accumulation on private property. The Health Officer conducts inspections along with Town Code Enforcement employing the International Property Maintenance Code when properties are found to be neglected and posing public health hazards such as when found to have mold, lead, etc.

The NH Division of Public Health Services has completed a State Health Improvement Plan: *“Charting a Course to Improve the Health of New Hampshire.”*¹⁷ The Plan outlines the Health Improvement Priority Areas; these are listed below. While some of these require direct preventive measures or intervention by health providers, others can be at least partially addressed through best practice planning (e.g. reduce the incidence of obesity and heart disease by encouraging walking on safe and pleasant sidewalks and crosswalks; reduce the potential for injury by making road intersections safer; introduce a dog park for alternative outdoor activity option for families, singles, etc.; promote healthy lifestyle choices by providing attractive recreation facilities, opportunities for community gathering, and access to healthy food, etc.).

- Tobacco
- Obesity/Diabetes
- Heart Disease and Stroke
- Healthy Mothers and Babies
- Cancer Prevention
- Asthma
- Injury Prevention
- Infectious Disease
- Emergency Preparedness
- Misuse of Alcohol and Drugs

“Health begins with healthy communities, with safe streets, freedom from violence, and parks where kids can play. Health begins with a good education... No institution alone can restore a healthy America that nurtures families and communities. That will require leadership, and a partnership of business, government and civic and religious institutions.”

-from a New Way to Talk about the Social Determinants of Health, Vulnerable Populations Portfolio, 2010, Robert Wood Johnson Foundation

The Health Officer has expressed an interest in broadening the scope of the Department to include other issues of Public Health such as increasing awareness regarding the relationship between fitness, diet and health (e.g. walking, biking, recreation and active lifestyles have been demonstrated to be good for both physical and mental health in a variety of ways). Connectivity through actions of engaging community sectors such as the elderly, youth, and families with promotion of good health is key.

¹⁷ NH Division of Public Health Services, Department of Health and Human Services, ***New Hampshire State Health Improvement Plan: 2013-2020.***

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OTHER MUNICIPAL BUILDINGS

ADAMS MEMORIAL BUILDING

The Adams Memorial Building, also known as the Derry Opera House, is located at 29 West Broadway Street, near Derry's downtown. Originally built in 1904 the building has served as a Library, Town Hall, Police Station and District Court. In addition to the theater on the second floor, the building also houses Derry's Housing Authority, the Chamber of Commerce, the Greater Derry Arts Council and Derry's History Museum. The Greater Derry Arts Council rents the building to theater, dance, schools and other organizations to use the theater (which has a capacity of 325 people) as a venue for performing arts performances; it is rented out for a fee and attracts regional audiences. The theater is in use 240 days a year.

Observations

- While the Adams Memorial Building is in good condition and provides space for a wide range of cultural and community events, the parking is woefully inadequate.

In 2014, the Opera House received a new roof, and the plaster work was repaired, the balcony seating was reconstructed and the space was repainted.

In addition to the revenue generated through rentals, Derryfest, a community-wide event, is the main fundraiser for the Greater Derry Arts Council. The Council charges local sponsors for booths, banners, and infomercials on Cable TV, and plans to begin asking for donations on social media.

Parking is a major concern for the Greater Derry Arts Council, the organization that runs the Opera House performing arts venue. Municipal parking located across the street and "in the bowl" is reportedly perceived as being unsafe as well as being difficult for some to walk "up the hill." Additionally, when there is a show on at the Opera House, this can create a parking problem for the area restaurants as the number of spaces is limited. The Greater Derry Arts Council estimates that if the adjacent lot (or other equivalent nearby parking) were to be converted to parking, they could increase usage of the theater by 50%.

The parcel adjacent to the building is privately-owned but would be ideal as a site for parking for the Opera House. An additional issue is that of handicap accessibility. There are currently only 3 handicap parking spaces and they are located at some distance from the handicap entrance which is around the other side of the building and not at all obvious to the first time visitor.

HIGHWAY DEPARTMENT AND CEMETERY DIVISION

The Highway Department and Cemetery Division is responsible for maintaining and improving the Town's roads, sidewalks, bike paths, streetlights and signalized intersections, parking lots, storm drains, bridges, dams, and the Town Cemetery.

The Division has one crew chief, ten full time Machine Equipment Operators, and one part-time laborer. During the summer months the crew is supplemented with temporary employees.

The Department maintains 19.7 miles of **sidewalk**, but has no overall Sidewalk Improvement Plan. There is a reported lack of funding for maintenance.

The 3.2 miles of **bike path** are ploughed in the winter and there are plans to extend the path north from Hood Pond and to connect to Londonderry.

A **Pavement Management Program** has been in place since 1986 and has been used to prioritize improvements to the roadway network. The Department receives an annual appropriation for this purpose. See Chapter XXX: Transportation and Circulation for more detailed information.

The Highway Department has a garage and salt shed, both in good condition.

The **Vehicle Maintenance Facility**, located on the DPW "campus" on Transfer Lane, is used for repairs and maintenance of the town's vehicle fleet and storage of the Wastewater Department's truck.

The **Highway Garage Building** (constructed in 2008) is the base of operations for road repair and maintenance and winter snow removal operations. The building houses offices for staff and has a large bay area for the storing of vehicles, trailers, and heavy equipment.

The **Salt Storage Facility** (constructed in 2008), has a capacity of up to 3600 cubic yards of sand and salt for winter deicing. The facility is able to accommodate loading and unloading inside so as to avoid spillage of materials and therefore reduce the potential for polluting the groundwater.

Observations

- The Department is responsible for maintenance of much of the Town's infrastructure and will need continued if not increased funding in order to accomplish deferred and routine maintenance as well as the planned expansion of some facilities

CEMETERY

The Town-owned cemetery, located on Cemetery Road (off East Derry Road) is 23 acres and is available to current Derry residents only. There are 1500 plots (both cremation and full burials). A Cemetery expansion project was completed in 2007. In the 2010 Master Plan it was anticipated that the acquisition of the additional section would provide

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additional capacity for 20 – 25 years. Due to the trend favoring cremation over full burial, the cemetery continues to have additional capacity. In 2007 approximately 70% preferred a full burial, currently 55% preferred cremation compared to 45% who opted for a full burial (2017).

If a need for additional capacity does arise in the future there is a Town-owned parcel adjacent to the cemetery that could be used for expansion.

The Town Council functions as the Trustees for the Cemetery.

DEPARTMENT OF PUBLIC WORKS

The Public Works Department provides a number of services to Derry's residents including maintaining the roads during winter months, processing solid waste, delivering safe drinking water, treating wastewater, parks and recreation management and code enforcement.

DPW has 40 teamster members, 15 clerical staff, and equipment that is shared across the various divisions which result in cost and other efficiencies.

Observations

- The Town has increased its recycling rate over the last few years.
- The Department shares staff and equipment across other town divisions resulting in cost efficiencies

BUILDINGS AND GROUNDS DIVISION

The Buildings and Grounds Division oversees the maintenance of municipal facilities including the Municipal Center, the Police Station, Adam's Memorial Building, Veteran's Hall and the Animal Control Building. Building and Grounds also supports repairs to other facilities throughout Town.

SOLID WASTE DISPOSAL

The Town's Transfer Station is located on the DPW "campus," which also includes the Wastewater Treatment Plan.

The Transfer Station/Recycling Station is a drop off center for residential household refuse, construction and demolition debris, scrap metal, various recyclable materials, used oil and universal waste. The Town provides its own transportation of recycled plastic/glass, construction and demolition debris, and household waste. The remaining materials are transported offsite for proper disposal.

A new Transfer Station was built in 2016 to include a large warehouse and 33 parking spaces. The new facility has facilitated sorting and recycling capabilities by moving many

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activities and materials storage indoors, eliminating direct Stormwater exposure. Stormwater control and treatment were installed in the new facility.

Derry has had a mandatory recycling program since 1990. Trash quantities have decreased over time and the recycling rate has increased to 36% of all waste. See APPENDIX XX for a detailed breakdown of tons of solid waste and recycling trends over the last decade.

WASTEWATER/SEWER

Derry has its own Wastewater Treatment Plant; it is located at 50 Transfer Lane on the DPW “campus”. The facility includes several support and storage buildings, 4 waste water treatment lagoons and pump station. The municipal system does not extend throughout the Town, but is in good condition and has ample capacity for expansion.

Approximately 30% of the Town’s population is connected to the municipal sewer system. The public system was extended between 2014 and 2016 along Rt. 28 to the Robert Frost Farm.

When the industrial uses left Derry, this resulted in increasing the capacity of the Wastewater Treatment Plant as there was a significant decrease in inflow. Derry currently receives and processes 329,000 gallons per day of waste from Londonderry. The planned development at Woodmont is estimated to add 1,000 residents and 750,000 sq. ft. of commercial development. The build out has not been finalized so at this time it is not possible to know how much of an increase in waste this will generate.

With this significant additional development and the related increase in inflow expected, there may be a need to adjust to accommodate to this increase. One option would be to change the contractual agreement with Londonderry. The other is to expand the wastewater treatment plant (the Town has the ability to do so if needed).

There are plans to extend the system to the Flea Market site in the southern portion of Derry. Additionally the Department expects it will need to extend the system to the Sunset Acres area, a 1970s subdivision near the South Range School where the septic systems have been deteriorating and the area’s residents have petitioned the Town. This is expected to occur within the next 5 years.

Observations

- Derry has its own Wastewater Treatment Plant. The municipal system does not extend throughout the Town, but is in good condition and has ample capacity for expansion.
- Planned development in Londonderry may have significant impact on inflow to the Treatment Plant. Build out has not been finalized so amount is as of yet undetermined. The contract with Londonderry may need to be amended and/or the Treatment Plant expanded.

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Derry Sewer Usage and Capacity: 2013-2018

Year	Inflow (MGD) ¹⁸	Capacity (MGD) ¹⁹
2009	1.85	3.00
2010	1.80	3.00
2011	1.59	3.00
2012	1.72	3.00
2013	1.54	3.00
2014	1.54	3.00
2015	1.58	3.00
2016	1.47	3.00
2017	1.54	3.00
2018	1.60	3.00

WATER

The Water Department is located at 50 Transfer Lane on the DPW “campus,” and houses staff, support services, and storage of spare parts and supplies used for water lines. Derry’s water supply is ample to serve the Town and there is plenty of capacity for additional expansion (See TABLE XX). Plans to extend the system are currently underway.

Derry has a water supply purchase agreement with Manchester Water Works that provides water to 7 towns (including Derry) with water from Lake Massabesic that is located in Manchester and Auburn. Water is stored in a 4 million gallon atmospheric storage tank. The majority of Derry’s residents are serviced by private, individually-owned wells. Currently the town’s residents are divided in terms of their water supply in the following way:

- Approximately 50% are on private wells
- approximately 40% are on the municipal system
- the remaining 10% are with the Pennichuck Water franchised (satellite) system

The public water system was extended approximately half-way to the Windham Town line. The water system will need to be extended to sub-divisions in East Derry. Currently if they

Observations

- Derry’s water supply is ample to serve the Town and there is plenty of capacity for additional expansion. Plans to extend the system are currently underway.
- Currently the Town has entered into a preliminary inter-municipal agreement that will result in extending and improving Derry’s municipal water system at no cost to the Town.

¹⁸ Daily Average Treatment in gallons

¹⁹ Maximum daily capacity in gallons

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are not on the municipal system, these sub-divisions are utilizing wells maintained by the Pennichuck system.

Private wells are the most vulnerable to depletion and contamination. Derry has adopted a Groundwater Resource Conservation District as a way of preserving and maintaining existing and potential groundwater resources and aquifers by regulating land uses that would deplete and/or pollute the private or public water supply.

Derry is currently in negotiations with the State for a regional water delivery system. The project would result in an extension and upgrade to existing pipes at no cost to Derry. Additionally there will be a “toll” for transferring water from Manchester to Windham with a potential revenue to Derry of up to \$0.5 million. This money can in turn be used to further extend both the water and wastewater systems.

TABLE XX. Derry Water Usage and Capacity: 2013-2017

Year	Usage (MGD) ²⁰	Capacity (MGD) ²¹
2009	1.18	3.32
2010	1.24	3.32
2011	1.34	3.32
2012	1.41	3.32
2013	1.42	3.32
2014	1.47	3.32
2015	1.45	3.32
2016	1.56	3.32
2017	1.60	3.32
2018	1.48	3.32

ENERGY CONSERVATION AND FUTURE RESILIENCY PLANNING

Conserving energy by leading by example, retrofitting town facilities with energy saving technologies and by implementing energy efficient measures in town activities and ordinances are critical steps in planning for the Town’s future resilience. Derry has been very proactive in its efforts to be sustainable.

Observations

- Derry has been very proactive in terms of setting up systems and implementing measures to move towards reducing its carbon footprint and becoming more resilient in general.

Some of the Town’s efforts include (for more detailed information on these please see Chapter XXXX Energy Conservation and Future Resiliency Planning):

²⁰ Daily average water consumption

²¹ Maximum daily capacity in gallons

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- In 2016 Derry created a **Net Zero Task Force** (which includes representatives from the public, Planning Board, Economic Development, Code Enforcement, DPW, Town Council, School Board and the Chamber of Commerce) focused on conserving energy in the Town's municipal buildings and schools and replacing carbon based energy sources with renewable energy where feasible. The Task Force has a goal of becoming Net Zero in terms of carbon footprint from electricity by the year 2025. Other sources of renewable energy will be introduced as technologies and the economic payback for the town become more favorable.
- Derry adopted a **"Green Building and Vehicle Ordinance"** (in 2008) which gives preference to the purchase or lease of alternative fuel and hybrid vehicles for Town use, requires that new construction or major renovation of Town-owned facilities incorporate environmentally friendly building methods and technology, and encourages the Town to promote and assist business owners and local Town, state and federal agencies to build in environmentally responsible ways.
- The Town has installed 4 **electrical car charging stations** accessible to the public free of charge to help promote the downtown area to residents and visitors. They are located in the Municipal Office Building parking lot.
- **Solar and Wind Exemption.** Property owners who have installed wind or solar powered energy equipment can submit the cost of their installation to receive an exemption in the amount equal to 100% of the assessed value of qualifying solar and wind-powered energy equipment.
- **Recycling.** Derry has had a mandatory recycling program since 1990. Trash quantities have decreased over time and the recycling rate has increased to 36% of all waste.
- Derry has developed a **Stormwater Management Program** that includes a Stormwater ordinance that prohibits non-stormwater discharges so as to maintain and improve the quality of water into water bodies and establishes minimum requirements and procedures to control the potential adverse effects of increased Stormwater runoff due to development.
- Derry completed a **Stormwater Pollution Prevention Plan** in 2015 and is in the process of implementing it. Measures include structural controls and best management practices to minimize the exposure of industrial activities to rain, snow, snowmelt and runoff.

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- Derry has a **Hazard Mitigation Plan** (updated in 2015) that outlines action steps for the Town to take to reduce or eliminate long-term risks to lives and property resulting from hazards. These steps include preventive measures intended to mitigate the effects of such natural and human-caused hazards.

REGIONAL CONSIDERATIONS AND EFFORTS

Derry is involved in a number of regional cooperative efforts to make more efficient use of municipal resources, including staff time and expertise, equipment, as well as taxpayer dollars. Some of these are discussed below.

WATER

Derry is in discussions with the State for its participation in an inter-municipal regional water delivery system. The State would extend and upgrade Derry's water system at no cost to Derry and would connect pipes from Manchester, through Derry to the Town of Windham.

FIRE DEPARTMENT

The Derry Fire Department conducts its own dispatch and provides contracted regional dispatch to the towns of Chester, Auburn and Windham. The Department also provides contracted EMS services to the Towns of Chester and Auburn.

WASTEWATER TREATMENT

Derry currently receives and processes 329,000 gallons per day of waste from Londonderry. The planned development at Woodmont is estimated to add 1,000 residents and 750,000 sq. ft. of commercial development. The build out has not been finalized so at this time it is not possible to know how much of an increase in waste this will generate.

With this significant additional development and the related increase in inflow expected, there may be a need to adjust to accommodate to this increase. One option would be to change the contractual agreement with Londonderry. The other is to expand the wastewater treatment plant (the Town has the ability to do so if needed).

OPPORTUNITIES, CHALLENGES & OTHER OBSERVATIONS

The following are opportunities, challenges and other observations regarding Derry's community facilities and services:

- Derry public **schools** are in good condition and are able to accommodate the slight increase in student enrollments projected for the elementary school grades. The Cooperative School District is preparing to close one of the elementary schools. This will result in the need to reorganize enrollment and decide on the reuse of the building.
- **Pinkerton Academy** will have to find a way to make up for the decline in the number of students coming from Derry. It is also working with the Town to promote Derry as a place to live advertising the benefits of the school as a key reason to move to Town.
- Derry has fewer **police** officers per thousand residents than the State average. This reportedly hinders the Department from being as proactive as it would like to be. Additionally, in the near future the proposed highway design related to the Exit 4A project will adversely impact the Police Headquarters and its ability to respond in an emergency resulting in a need for the Department to relocate. Alternative sites will need to be explored.
- The **Fire Department** will need to undergo a significant facilities improvement project that will include renovations, new construction and potential relocation of fire stations.
- **Derry Public Library** will need to continue to evolve to meet the changing needs of patrons. It may need to expand its hours so that it is open on Sundays, a day many people are available to visit the library. This will require additional money for staffing. The parking issues will also need to be addressed.
- The **Taylor Library** will need to become ADA compliant at some point and eventually may need to be expanded to support the area's demand for programming.
- **Veteran's Hall** is at capacity and is in need of upgrades.
- **Upper Village Hall** may be a good option for the Town to use it to provide additional programming, especially to seniors. It is reportedly available most days.
- The **Alexander-Carr Park Lodge**, when renovated will provide additional space for programming.

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- The money recently appropriated by Town Council (January 2019) for **park improvements** will need to be followed by additional funds for maintenance of these facilities.
- The **Health Department** may need additional staff and/or funding to expand its role in promoting health and wellness for Derry's residents.
- The **Adams Memorial Building** is in serious need of additional parking to support its mission to increase cultural offerings and to promote the creative economy in Derry.
- The **Highway Department** will need additional funding to expand and maintain sidewalks and bike paths, an expansion of which is supported by many residents.
- The **Cemetery** has additional capacity, especially given the trend towards cremation as opposed to full burials (which take up more space).
- The **Wastewater Treatment Plant** has plenty of additional capacity that may be needed once the planned development at Woodmont in Londonderry is completed as currently Derry processes Londonderry's waste. System expansions may be necessary over time as septic systems fail.
- Derry is currently negotiating an inter-municipal agreement that will result in extending and improving the **municipal water system** at no cost to the Town. Additional system expansions may be needed in the future as private wells are vulnerable to depletion and contamination. Also municipal water is needed for the Fire Department to most effectively provide fire extinguishing services.
- Derry has done much to be proactive in terms of shifting to **renewable energy sources** and increasing awareness, providing education and undertaking measures that result in resilience and sustainability. The Town should continue to do so.
- There may be opportunities for regional collaboration in the areas of Hazard Mitigation, Surface and Groundwater Protection and other issues that do not follow municipal boundaries.

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INTERVIEWS

Cara Barlow, Director, Derry Public Library

Arthur Caras, Director, Upper Village Hall

David Caron, Town Administrator

MaryAnn Connors – Krikorian, Superintendent, Derry Cooperative School District SAU #10

Michael Fowler, Director of Public Works,
(DPW/Highway/Water/Wastewater, Recreation Department)

Edward Garone, Chief, Police Department
Captain George Feole, Police Department
Captain Vern Thomas, Police Department

Michael Gagnon, Chief, Fire Department

Michael Gendron, Trustee, Greater Derry Arts Council

Linda Merrill, Director, Taylor Library

Jeff Moulton, Chair, Net Zero Task Force

Dr. Timothy Powers, Headmaster, Pinkerton Academy

Courtney Provencher, Health Officer, Health Department

Elizabeth Robidoux, Assistant Planner, Planning Department

George Sioras, Director, Planning Department

Captain Thomas, Director, Animal Control, Derry Police Department

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APPENDIX XX

DERRY POLICE DEPARTMENT Calls for Service/Offense Reported: 2007-2017

GROUP A OFFENSES	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Arson	17	26	21	24	27	19	14	15	8	5	7
Assaults	771	761	823	889	1012	936	825	885	777	718	704
Burglary	164	143	154	209	218	190	139	109	109	60	45
Drugs	154	128	142	133	137	180	183	302	334	335	346
Forgery	26	21	42	45	56	63	55	56	30	19	28
Fraud	173	160	155	156	183	191	186	264	179	236	225
Homicide	1	0	1	0	1	0	0	0	0	1	0
Kidnapping	5	9	12	3	13	5	12	6	6	4	2
Robbery	22	10	11	19	12	5	5	8	10	8	6
Sex Assaults	55	49	43	47	60	57	55	57	51	44	38
Stolen Property	26	51	44	94	69	103	60	70	60	63	46
Theft	541	620	635	676	725	714	616	630	556	522	380
Vandalism	519	496	537	497	470	365	326	331	230	247	297
Vehicle Theft	60	63	61	51	41	40	34	21	39	37	25
Weapons Violations	12	7	10	11	9	12	10	4	7	8	8
Sub Total	2546	2544	2691	2854	3033	2880	2520	2758	2396	2307	2157
GROUP B OFFENSES	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
All Other Offenses	630	657	660	621	603	642	536	583	512	576	794
Bad Checks	17	13	13	8	8	12	21	23	22	10	7
Disorderly Conduct	26	26	26	20	20	29	43	33	33	22	52
DWI	117	100	93	66	91	108	114	120	96	97	80
Family Offenses	27	27	30	32	15	29	30	36	32	32	38
Intoxication	80	89	86	113	112	69	52	60	57	72	79
Liquor Law Violations	128	125	108	55	80	59	44	48	33	37	46
Runaways	69	102	63	72	80	55	34	12	10	50	56
Trespassing	58	60	28	61	62	48	45	56	32	41	30
Sub Total	1152	1199	1107	1048	1071	1051	919	971	827	937	1182
TOTAL Group A+B	3698	3743	3798	3902	4104	3931	3439	3729	3223	3244	3339

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APPENDIX XX. Total Tons of Solid Waste and Recycling (rounded up): 2009-2018

	2009	2010	2011	2012	2013	2014	2015	2018
Trash	8766	8671	8582	8418	9107	8969	8743	9147
Commingles	1167	1153	1241	1014	985	920	1518	1325
Newspaper	811	822	763	641	504	604	629	329
Lite Iron	700	583	542	462	476	451	567	765
C/D	1178	1252	1429	1644	1364	1358	1845	2042
Cardboard	1015	550	538	454	514	546	436	343
Air Conditioners	498	463	397	359	279	327	593	553
Refrigerators	384	288	272	300	147	289	420	339
Propane Tanks	176	172	164	83	44	175	18	270
Mix Metals	20	31	44	18	20	28	13	0
Batteries	-	0	0	0	0	0	0	5
Tires	43	45	23	27	16	41	48	48
Aluminum	23	21	22	18	24	36	24	46
Compost	993	2072	607	720	620	600	n/a	0
Hard White	0	0	0	0	0	0	0	0
Chips	1802	558	0	0	0	0	0	0
Cast Iron	33	37	29	53	20	49	27	22
Ash	0	0	0	0	0	0	0	n/a
Ash Tailings	0	0	0	0	0	0	0	n/a
TV/Monitors	65	45	43	41	30	49	33	131
Brush	0	0	1181	488	1105	0	n/a	0
Rigid Plastic	n/a	n/a	39	83	13	0	0	0
Cooking Oil	n/a	n/a	268	0	950	850	n/a	n/a
#2 Steel	n/a	n/a	8	14	6	0	0	0
Glass Bottles	0	0	0	0	0	0	0	0

Chapter 8: Energy Conservation and Future Resiliency Planning

Energy Conservation and Future Resiliency Planning

Planning for the future involves understanding current conditions as well as predictable future trends. Conserving energy and reducing our reliance on fossil fuels both reduces the negative impact on the environment, as well as making us less vulnerable to the volatility of the cost of fuel and fluctuations in international markets and relations. Additionally, as we plan for the future resilience of our communities, it is important to minimize any preventable impacts of climate change and adapt to changing conditions.

The purpose of Resiliency Planning is to be proactive in terms of anticipating the potential impacts of climate change and taking steps to minimize the risks and damages by increasing a Town's ability to prevent, withstand and quickly recover from such eventualities such as severe storms, sea level rise, and extreme heat. Risks and damages can include loss of human life, loss or damage of property and negative impacts to the local economy. Building the capacity to be proactive and responsive has become critical to the resilience of any municipality.

Conserving energy by leading by example, retrofitting town facilities with energy saving technologies and by implementing energy efficient measures in town activities and ordinances is a critical first step towards the Town's future resilience. Derry has been proactive in its efforts to be sustainable.

Derry's energy system does not exist in a vacuum; it is embedded in a regional system that in turn is part of a State Energy Strategy. There are three key documents that provide background and context for Derry's energy policies and climate change adaptation. They are summarized below.

KEY FINDINGS

- There are a wide variety of programs available to New Hampshire municipalities from the State, including potential funding opportunities, to help towns increase energy awareness, reduce greenhouse gas emissions, and conserve energy.
- Derry has been proactive in terms of setting up systems and implementing measures to move towards reducing its carbon footprint and becoming more resilient in general.

STATE

Two documents outline the state approach to Energy Conservation and Climate Change Adaptation, both directly relevant to the future resilience of the state, the region and more specifically, to Derry. As C.P. Wake at the University of New Hampshire's Climate Change Research Center states, "the weather has become hotter, wetter, and more extreme."¹

NEW HAMPSHIRE 10-YEAR STATE ENERGY STRATEGY

New Hampshire energy prices are among the highest in the nation. According to the New Hampshire Office of Strategic Initiatives² the State has the third highest electricity rates in the contiguous U.S. with each New Hampshire resident on average, spent \$3,934 on energy in 2015. The cost of energy is particularly burdensome to lower wage earners who many spend more than a third of their income on purchasing energy. Additionally, high energy costs may make it more difficult for commercial and industrial entities to compete with businesses located in lower-cost regions of the country.

The State of New Hampshire's Energy Strategy identifies addressing energy costs as being a critical goal and it organizes energy goals around cost-effective energy policies. The outcomes of this strategy are intended to "enable business and consumer cost savings, job creation, economic growth, industry competitiveness, environmental protection, and a reliable and resilient energy system." The goals are:

- Prioritize cost-effective energy policies
- Ensure a secure, reliable, and resilient energy system
- Adopt all-resource energy strategies and minimize government barriers to innovation
- Maximize cost-effective energy savings
- Achieve environmental protection that is cost-effective and enables economic growth
- Government intervention in energy markets should be limited, justifiable, and technology-neutral
- Encourage market-selection of cost-effective energy resources
- Generate in-state economic activity without reliance on permanent subsidization of energy

¹ Wake, Cameron, The Climate Change Research Center, University of New Hampshire, *"Indicators of Climate Change in the Northeast: 2005."*

² New Hampshire Office of Strategic Initiatives, ***New Hampshire 10-Year State Energy Strategy***, April 2018.

- Maximize the economic lifespan of existing resources while integrating new entrants on a levelized basis
- Protect against neighboring states' policies that socialize costs
- Ensure that appropriate energy infrastructure is able to be sited while incorporating input and guidance from stakeholders.

The State Strategy calls for **Fuel diversity**, that is, having a diverse mix of energy sources, can help ensure a "secure, reliable and resilient energy system." Renewable energy sources, based on environmental assets such as wind, water and sun, have the potential to play an important role in providing cost-efficient energy and a system that is efficient, effective and independent of volatile world fuel markets.

Another objective of the State Strategy calls for a **reduction in the energy intensity of transportation activities**. As the Strategy points out, energy use largely reflects infrastructure availability, and investments shape energy use patterns... An additional point is that "commuter travel is significantly impacted by **land use policies** and the availability of housing to workplaces.

THE NEW HAMPSHIRE CLIMATE ACTION PLAN

The New Hampshire Climate Action Plan describes the relationships between energy emissions, climate change and future economic growth in the state. It advocates for increased energy efficiency in all sectors of the economy by continuing efforts to increase sources of renewable energy and implementing land use policies and transportation infrastructure that reduce dependency on the automobile.

The Climate Action Plan describes the impact of greenhouse gas emissions on New England's changing climate. The changes include: "warmer

New Hampshire Climate Action Plan

In 2009, the Governor's Climate Change Policy Task Force released the N.H. Climate Action Plan, containing 67 overarching strategies necessary to meet the states greenhouse gas reduction, economic, environmental, and climate change related goals. The Plan's Task Force recommended that New Hampshire strive to achieve a long-term reduction in greenhouse gas emissions of 80 percent below 1990 levels by 2050. The recommended strategies are organized into the following 10 overarching plan goals:

1. Maximize energy efficiency in buildings.
2. Increase renewable and low CO₂-emitting sources of energy in a long-term sustainable manner.
3. Support regional and national actions to reduce greenhouse gas emissions.
4. Reduce vehicle emissions through state actions.
5. Encourage appropriate land use patterns that reduce vehicle-miles traveled.
6. Reduce vehicle-miles traveled through an integrated multi-modal transportation system.
7. Protect natural resources (land, water and wildlife) to maintain the amount of carbon fixed or sequestered.
8. Lead by example in government operations.
9. Plan for how to address existing and potential climate change impacts.
10. Develop an integrated education, outreach and workforce training program.

The Plan aims to achieve the greatest feasible reductions in greenhouse gas emissions while also providing the greatest possible long-term economic benefits to the citizens of New Hampshire. The most significant reductions in both emissions and costs will come from substantially increasing energy efficiency in all sectors of our economy, continuing to increase sources of renewable energy, and designing our communities to reduce our reliance on automobiles for transportation.

winters, reduced snow fall and snow-on-ground days, earlier spring runoff, sea-level rise, increased total rainfall, and more severe weather events that result in increased risk of flooding.” As the report states, “if left unchecked, these changes have the potential to significantly change our economy and way of life by the end of this century.”

As a partial response to the potential impacts of climate change, New Hampshire enacted a renewable portfolio standard (RPS) in 2006 that requires a substantial portion of electricity to come from renewable sources such as hydro, wind, solar, or biomass. It calls for efforts to be focused:

- Planning for how to address existing and potential climate change impacts
- Developing an integrated education, outreach and work-force training program

The Task Force outlines the importance of preserving working forests and avoiding the conversion of forest lands to other purposes because they play an important role in: “Mitigating climate change, providing a renewable supply of wood for heating, lumber and a variety of forest products, water cycle regulation, groundwater recharge and water quality protection, and wildlife habitat, and recreational opportunities.”

The Task Force emphasizes the **importance of early action**: “Delays in achieving reductions would result in increased implementation costs, thus reducing the economic benefits and making it more difficult to reach the long-term goal. The Task Force goes further to say that “an extensive analysis of the review of peer-reviewed scientific literature by the intergovernmental Panel on Climate Change (IPCC) has clearly shown that if global greenhouse emissions continue to grow at current rates, there will be significant and far reaching changes in our future climate that will profoundly affect our health, economy, security and quality of life.”

“Energy, environment, and economic development are interrelated, just as our ecological systems consist of many interrelated and interdependent elements. Well-crafted solutions to these issues should be interrelated and will create benefits in all of these arenas, across the state and for all of our citizens.” - The New Hampshire Climate Action Plan

The Task Force outlines the purpose of adapting to climate change as being multi-factorial and includes impacts on the state’s economy, human health, natural systems, and infrastructure.

STATE GUIDANCE AND SUPPORT FOR ENERGY CONSERVATION AND RESILIENCY PLANNING

At the state level, New Hampshire law provides general guidance for energy policies. The New Hampshire Office of Strategic Initiatives (formerly known as the Office of Energy and Planning) is charged with helping policymakers to ensure that decisions are consistent with the state's energy policy goals.

In 2010, the state established the New Hampshire State Energy Program, Energy Technical Assistance and Planning for New Hampshire Communities (ETAP) to support municipalities in their efforts to reduce energy use, reduce fossil fuel emissions and improve energy efficiency in general.

RSA 378:37 requires that energy policy ensures the “lowest reasonable cost while providing for the reliability and diversity of energy sources.”

The New Hampshire Office of Strategic Initiatives (NHOSI) manages several programs in partnership with both private and public entities to promote a sustainable future. Some of these are listed and briefly described below. For a more complete list and description of the programs, please see Chapter 5 of the Southern New Hampshire Planning Commission Regional Plan³.

New Hampshire Greenhouse Gas Emissions Reduction Fund (GHGERF). These funds support energy efficiency, conservation and demand response programs in order to reduce greenhouse gas emissions.

Municipal Energy Reduction Fund (MERF). This fund is available to help municipalities improve the energy efficiency of their municipal buildings, street lighting, water and sewer treatment facilities, and where appropriate, electrical distribution systems.

25 x 25. This is part of a national effort that sets a goal for New Hampshire to obtain 25% of its energy from clean, renewable sources by the year 2025.

Energy Technical Assistance and Planning For New Hampshire Communities (ETAP). Through this program New Hampshire municipalities are offered energy efficiency technical assistance to reduce energy use, reduce fossil fuel emissions and improve energy efficiency in transportation, building and other areas.

Granite State Clean Cities Coalition (GSCCC). The GSCCC offers training, equipment and vehicle demonstrations and strategic planning services with the purpose of expanding the

³ Southern New Hampshire Planning Commission, Regional Comprehensive Plan: 2010, Energy, Chapter 5.

use of alternative, cleaner burning fuels by private and public fleets as well as by individuals.

The Alternative Vehicles Fuel Project. The project provides funding to help state and municipal fleets purchase alternative fuel vehicles and infrastructure.

New Hampshire Industries of the Future. This program is designed to help energy- and waste-intensive industries use technology and process advancements to improve profitability and competitiveness by cutting energy costs.

Renewable Energy Property Tax Exemption. This incentive (RSA 72: 61-72)grants municipalities the option to exempt certain renewable energy installations from property taxation

New Hampshire Energy Smart Schools Program. The program available to all public and private schools in the state is designed to help schools to understand their energy consumption and related costs, compare these to other schools and identify opportunities for improvement and cost reduction related to energy consumption.

Bio Oil Project. Bio-oil is a renewable, liquid resources that can be obtained from low-grade wood waste. The project provides information to those wanting to explore bio-oil production in New Hampshire.

Weatherization Program. This program is designed to reduce household energy use and costs in low-income households by installing energy efficient improvements.

Industrial Assessment Centers (IAC). The IAC enables eligible small and medium-sized manufacturers to have comprehensive industrial assessments conducted free of charge. These assessments are intended to help manufacturers to become more competitive by reducing energy use, minimize waste, and increase productivity.

A number of programs specifically oriented to businesses as well as others to residents also provide support to those wanting to reduce energy consumption, shift to renewable energy sources, and/or understand what sustainability options are possible. These are also listed in the SNHPC's Regional Plan.

SOUTHERN NEW HAMPSHIRE PLANNING (SNHPC) REGION

The Southern New Hampshire Planning Commission's Regional Plan's (2010) Chapter Five is dedicated to a discussion on Energy Conservation. The Plan identifies a need, at the regional level, for increased awareness regarding "adapting energy policy into the fabric of everyday life. The Regional Planning Commission, like the State approach, links the various components for more effective policy formation. As the Plan states "by considering energy, environmental and economic policies and programs together, we can protect the

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air, water, and open space in the region... that will provide a cleaner and healthier environment for all citizens while continuing to have a strong and diverse economy.”

SNHPC administered an Energy Survey to the public and determined that “greater educational and training programs as well as increased collaboration between the public and private sectors regarding energy issues may be necessary.”

Table XX indicates that fuel oil, kerosene, and other types of fossil fuels are the primary source of household heating in the Southern New Hampshire Region. Also note that a slightly higher percentage of Derry’s households use oil-based heat than in the state overall. The dependence on oil-based heating creates a vulnerability to international markets and conditions. Renewable energy sources are the most sustainable, cost-effective, efficient and least polluting means of reducing energy demand.

The Regional Plan quotes the U.S. Energy Information Administration (EIA) as stating that “New Hampshire has no fossil fuel reserves but has substantial renewable energy potential.” The sources of such energy include wind power, hydroelectric power, fuel wood from the dense forests and solar from the sun.

TABLE XX. SNHPC Household Heating Type by Percentage: 2000 Census

Locale	Utility Gas	Bottled Tank or Liquid Propane	Electricity	Fuel Oil, Kerosene, Etc.	Coal or Coke	Wood	Solar Energy	Other Fuel	No Fuel
Derry	6.5	14.1	14.8	59.8	0.6	2.5	0.1	1.2	0.2
State of NH	18.4	10.7	7.6	58.1	0.2	4.3	0.0	0.5	0.2

The potential benefits from renewable energy sources are listed in the Regional Plan as follows:

- More security because it can be produced close to the point of use and it has multiple sources such as hydro, wind, solar, biomass and geothermal
- Efficiency gains due to less energy consumed in transmission or transport
- More energy dollars are retained in local or regional economy, not exported
- Renewable energy installations can create additional local jobs
- Reduced pollution compared with fossil fuels
- Can be greenhouse gas neutral
- Lifetime cost can be lower than for non-renewable energy sources
- “Wastes” such as manure, sewer gas, landfill gas, landscape trimmings, can become energy sources
- Annual operation costs are low

The Southern New Hampshire Planning Commission also identified **Land Use Planning** as another way to reduce energy consumption, particularly when it comes to dependency on

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automobile travel. It lists the following examples of land use tools that can help reduce vehicle miles traveled:

- Initiating impact fees that require developers to pay for the increased demands on infrastructure they generate
- Adopting smart growth development principles such as mixed-use zoning to allow greater accessibility to desired services without requiring greater mobility (e.g. by promoting Traditional Neighborhood Developments, Village Plan Alternatives, etc.)
- Promoting Transit-Oriented Development (development around transportation facilities thus reducing people's dependence on the automobile)
- Techniques such as density transfer credits, lot size averaging and infill development so as to preserve open space in areas that are more sparsely developed and to increase density where development already occurs.
- Supporting employers to encourage tele-conferencing, working from home and carpooling.
- Upgrading municipal fleets so they are more energy efficient, instituting non-idling policies, incorporating the use of alternative fuels, etc.

"The way communities are designed, planned, and built has significant influence over the amount of energy used, how energy is distributed, and the types of energy sources that will be needed in the future. As communities grow and physically spread out, vehicle miles traveled per household and the associated energy demand have increased to support a more auto-dependent lifestyle." (from the Southern New Hampshire Planning Commission Regional Comprehensive Plan (2010), Chapter 5 (Energy).

Other energy efficient measures are mentioned:

- Incorporating site-design techniques that take advantage of sun exposure, microclimate, landscaping, etc.
- Energy Planning including adopting an Energy Efficiency Ordinances for municipal energy use
- Educating citizens about best practice homebuilding
- Adopting building codes which exceed the state energy codes and promote sustainable, energy-efficient construction in the built environment (e.g. U.S. Department of Energy's Building Energy Codes Program (BECP) and certifications such as Leadership in Energy and Environmental Design (LEED)
- Adopting a zoning ordinance that encourages the voluntary implementation of energy efficient practices for new construction in exchange for incentives or bonuses

The Regional Plan also describes trends in the use of renewable energy sources including small wind electric systems, biomass⁴, solar electric (photovoltaic) systems⁵,

⁴ Biomass material consists of "whole-tree wood chips, stumps, brush and smaller low-lying vegetation, low-grade woods and other plant material unusable in timber or paper production" (SNHC Regional Plan) used for the generation of fuel.

solar heating⁶, self-contained solar units, hydro electric, light emitting diodes (LED lighting)⁷, alternative automobile fuels (electrical vehicles or cleaner combustible fuels and hybrids that run on a combination of fuel and electric battery power).

Additional Land Use Planning measures that promote sustainable development and future resilience are discussed in a document entitled: ***New Hampshire Innovative Land Use Planning Techniques: A Handbook for Sustainable Development***. These include: density transfer tax, lot size averaging, feature-based density, conservation subdivisions, Transit-Oriented Development, Village Plan Alternative, infill development, agricultural incentive zoning, urban growth boundary and urban service district, inclusionary housing, as well as some environmental zoning (Stormwater management, steep slope and ridgeline protection, habitat protection, wetlands protection, protection of groundwater, surface water and shorelines, etc.).

The SNHPC Regional Plan concludes that *“Implementation of energy measures can only work when integrated with programs dealing with other region-wide issues such as land use, air quality, transportation, housing and economic development and other issues that are at the forefront of the Southern New Hampshire Planning Commission’s efforts to make our region a healthier and more functional place to live.”*

“Poorly managed growth leads to the following types of consequences:

- ***Economic:*** increased costs for road maintenance, infrastructure expansion, public services (such as plowing), and schools, higher public and private automobile maintenance and fuel costs, higher housing costs, and reduced ability to attract new businesses.
- ***Environment:*** degradation of air and water quality, deforestation and forest fragmentation, increased impervious cover and greater polluted runoff, loss of wildlife habitat, loss of agricultural land, loss of open space, and loss of scenic vistas.
- ***Social:*** loss of sense of community, increased traffic congestion, disrupted social networks with fewer opportunities to connect with neighbors, loss of intergenerational contact, lack of housing options, lack of transportation options, reduced walkability, lower levels of exercise, loss of time spent on community activities and with families, lower levels of participation in civic life, loss of rural character, and loss of rural culture. “

- From ***New Hampshire Innovative Land Use Planning Techniques: A Handbook for Sustainable Development***

⁵ Hybrid solar lighting collects sunshine and routes it through optical fibers into buildings where it is combined with electric light in “hybrid” light fixtures.” (SNHC Regional Plan)

⁶ Solar heating can be passive (e.g. using large windows) or active

⁷ LED lighting can last up to 20 years and can be used for a wide range of applications including commercial and industrial lighting, traffic and street lighting, and light bulbs in homes and offices.

DERRY: ENERGY CONSERVATION, CLIMATE CHANGE ADAPTATION, AND FUTURE RESILIENCY PLANNING

The 2010 Master Plan listed the following “Energy Efficiency Action Goals”:

- 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.
- Take advantage of the PSNH Energy Rebate Program and invest in energy efficient electric technologies in order to reduce energy consumption
- 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)
- Increase and promote the use of alternative energy sources such as wind, solar and geothermal
- Continue to implement and enforce the Town’s Green Building and Vehicles Ordinance, seeking opportunities for energy efficiency in all town facilities and operations.
- Encourage and promote “buying locally” in order to reduce the town’s carbon footprint and consider the creation of a town farmer’s market.
- Implement a public education campaign to promote energy conservation.
- Collaborate with local groups and other communities on innovative ways to be more energy efficient.
- Encourage energy efficient design and development within town ordinances and subdivision regulations.
- Develop and implement a plan to further reduce solid waste and increase recycling.

The Town has made progress on each of these initiatives. Some of the Town’s efforts are discussed below.

NET ZERO TASK FORCE

In 2016 Derry created a **Net Zero Task Force** (which includes representatives from the public, Planning Board, Economic Development, Code Enforcement, DPW, Town Council, School Board and the Chamber of Commerce) focused on conserving energy in the Town’s municipal buildings and schools and replacing carbon based energy sources with renewable energy where feasible. The Task Force has a goal of becoming Net Zero in terms of carbon footprint from electricity by the year 2025. Other sources of renewable energy will be introduced as technologies and the economic payback for the town become more favorable.

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- Reduce energy consumption in Town-owned buildings by introducing management policies and technologies that result in energy and cost savings
- Introduce renewable energy sources; some solar systems have been installed (e.g. at the DPW campus) and others are planned (e.g. one installation on the landfill would result in generating 40% of the Town's energy (excluding the schools) at a cost of \$3million)
- Work with local businesses to raise awareness and provide information ("solar up campaign," green loan from banks, etc.); The Economic Development Director sends businesses to the Net Zero Task Force for technical and economic assistance.
- Support Derry to adopt the 2015 state building code which has more stringent energy requirements than the current local code
- Consider Solar Up campaigns for residents (to increase awareness and provide information regarding the benefits of using solar energy)
- Explore ways of encouraging and/or requiring new construction to use solar energy

GREEN BUILDING AND VEHICLE ORDINANCE

Derry adopted a "**Green Building and Vehicle Ordinance**" (in 2008) which:

- gives preference to the purchase or lease of alternative fuel and hybrid vehicles for Town use
- requires that any new construction or major renovation of Town-owned facilities meet LEED certification standards (U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Green Building Rating System) and incorporate environmentally friendly technology
- encourages the Town to promote and assist business owners and local, Town, state and federal agencies to build in environmentally responsible ways in order to provide a healthy environment for employees and the public

ELECTRICAL CAR CHARGING STATIONS

The Town has installed 4 **electric car charging stations** accessible to the public free of charge to help promote the downtown area to residents and visitors. They are located in the Municipal Office Building parking lot.

SOLAR AND WIND EXEMPTION

Property owners who have installed wind or solar powered energy equipment can submit the cost of their installation to receive an exemption in the amount equal to 100% of the assessed value of qualifying solar and wind-powered energy equipment.

RECYCLING

Recycling. Derry has had a mandatory recycling program since 1990. Trash quantities have decreased over time and the recycling rate has increased to 36% of all waste. See Chapter XX Community Facilities and Services for a more detailed information regarding trash and recycling trends.



STORMWATER MANAGEMENT

Derry has developed a **Stormwater Management Program** that includes a Stormwater ordinance that prohibits non-stormwater discharges so as to maintain and improve the quality of water into water bodies including lakes, rivers, streams, ponds, wetlands and groundwater. The ordinance also establishes minimum requirements and procedures to control the potential adverse effects of increased Stormwater runoff due to development.

Derry completed a **Stormwater Pollution Prevention Plan** in 2015 and is in the process of implementing it. Measures include structural controls and best management practices to minimize the exposure of industrial activities to rain, snow, snowmelt and runoff. The Plan outlines ways that these can be carried out on the DPW “campus” where such facilities as the Transfer Station, Wastewater Treatment Plant, and Salt Storage Facility which have the potential to pollute, are located.

HAZARD MITIGATION

Derry has a **Hazard Mitigation Plan** (updated in 2015) that outlines action steps for the Town to take to reduce or eliminate long-term risks to lives and property resulting from hazards. These steps include preventive measures intended to mitigate the effects of such natural and human-caused hazards. As the number and intensity of natural disasters is projected to increase, hazard mitigation is of utmost importance to the resilience of a community. The Plan addresses a number of potential hazards including flooding, wind, wildfire, ice and snow events, earthquakes and other hazards. It identifies Critical Facilities and Areas at Risk (equipment or areas that could be threatened if a natural disaster were to occur).

- Critical Facilities include the Police Department, Fire Service Facilities, Bridges, Municipal Office Building, Telephone and Wireless Communication Facilities, and the Wastewater Treatment Plan among others.

Master Plan, Derry, NH
Inventory and Assessment of Existing Conditions

- Areas at Risk include Water and Wastewater systems, dams, major highways, schools, day care centers, recreation areas, historic/unique resources, solid waste facilities, and commercial/economic impact areas, among others.
- A Vulnerability Assessment estimates the potential for monetary losses due to natural hazards in Derry. Estimates are provided for flooding, hurricanes, debris impacted infrastructure and river ice jams, erosion and mudslides, rapid snow pack melt, dam breach or failure, tornadoes, nor'easters, ice storms, heavy storms, wildfires earthquakes, extreme heat, lighting, etc. Of these the most potential damage monetarily speaking is predicted to be from flooding and rapid snow pack melt (\$21 million - \$24 million in both cases since the loss is estimated to be similar).
- The plan identifies one hazard with potential to increase due to development trends, that of vulnerability to wildfires due to less open space and the possibility of drought/extreme heat due to warmer weather patterns.

BUYING LOCALLY

Buying Locally. As identified in the 2010 Master Plan, “supporting local businesses not only strengthens the local economy and increases local jobs, but also decreases the community’s carbon footprint by reducing the distance products need to travel to get to the local community and in turn decreasing greenhouse gas emissions.”

- Derry’s Farmer’s Market is one important step in this direction.
- The idea of a culinary incubator where farmers would showcase their products and also eventually connect to local restaurants is another important step in the effort to reduce the carbon footprint, while simultaneously meeting healthy eating goals.

REDUCE ENERGY INTENSITY OF TRANSPORTATION ACTIVITIES

Derry has plans to extend the **bike path** and improve **sidewalk connections**. Providing more and better alternatives to automobile travel can help reduce energy consumption.

OPPORTUNITIES, CHALLENGES & OTHER OBSERVATIONS

- Derry's Net Zero Task Force has been very proactive especially in terms of the reduction of energy consumption and shifting to renewable energy sources.
- Derry has not adopted the New Hampshire Climate Change Resolution.
- Smart growth practices including concentrating growth in areas where development and services already exist is one way for Derry to be energy efficient. Encourage infill development in the Downtown, in the Exit 4A area and along the 28South corridor would help to achieve this objective.
- Derry has been working on improving walking and biking infrastructure (sidewalks, crosswalks, bike paths, etc.) so as to encourage alternative ways of getting around town (other than the automobile). The Town also offers electric car charging stations to its residents. More can be done to improve and promote these options as a way of reducing the energy intensity in the transportation system.

New Hampshire Climate Change Resolution

"Whereas, The protection of our forests, air and water quality, fisheries and other natural resources are important to the health and quality of life of our citizens; and

"Whereas, There is evidence that climate change is already impacting New Hampshire's environment and natural resources, from increased intensity of storms, higher sea level, less snow cover, and more winter rain; and

"Whereas, New Hampshire state government has taken steps to lead by example by reducing energy use of state operations and committing to an overall state goal of using 25 percent renewable energy by 2025; and

"Whereas, The residents of many New Hampshire towns passed the New Hampshire Climate Change Resolution, calling for a national program to reduce U.S. greenhouse gas emissions while protecting the U.S. economy, to create a major national research initiative to foster rapid development of sustainable energy technologies, and encouraging towns to start local energy committees to seek ways to save energy, reduce emissions and save taxpayer dollars;

"Now, therefore, I John Lynch, Governor and the Executive Council of the State of New Hampshire, do hereby commend the New Hampshire Climate Change Resolution and local volunteers for bringing this issue to New Hampshire's town meetings and community leaders."

- Many state resources are available to support Derry in its Energy Conservation and Resiliency Planning.
- A slightly higher percentage of Derry's households use oil-based heat than in the state overall. The dependence on oil-based heating creates a vulnerability to international markets and conditions. Renewable energy sources are the most sustainable, cost-effective, efficient and least polluting means of reducing energy demand.
- The Southern New Hampshire region is rich in renewable energy sources. Derry possesses these resources and therefore has the potential to shift even more of its fuel needs to renewable sources (solar, biomass, hydro, etc.).
- Derry has an updated Hazard Mitigation Plan, an important step that puts the Town in a proactive position with regard to climate adaptation in that the plan outlines mitigation measures to take in order for Derry to remain resilient in the face of an increase in the number and intensity of extreme natural weather conditions.
- Derry has both a Stormwater Management Program and a Stormwater Pollution Prevention Plan. These help to control and address the adverse affects of increased Stormwater runoff due to development and more extreme weather events.
- Derry has been increasing its recycling rate. Improvements to the Transfer Station should act to support a continuation of this trend.

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INTERVIEWS

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(DPW/Highway/Water/Wastewater, Recreation Department)

Jeff Moulton, Chair, Net Zero Task Force

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Chapter 9: Land Use and Zoning

Land Use and Zoning

INTRODUCTION

In suburban communities like Derry, **land use** focuses primarily on balancing residential, commercial, industrial, institutional, and recreational uses and open space. It is often concerned with differentiating various types, functions, and scale of uses, all of which help to define and nurture unique neighborhoods, main streets, and districts in a built-up environment. The way land is used, divided up, or developed upon is one of the few topics that directly affects (and is affected by) all the other elements of the Master Plan. **Land use policies** – codified in the zoning ordinance – determine the type of transportation systems needed to serve development, the natural environment that is affected by development decisions, the efficiency and delivery of public services, the mix of housing available to residents, and the protection or destruction of historic resources. Accordingly, land use is at the heart of any city or town master plan.

EXISTING LAND USE PATTERNS

Derry's distinctive character is defined by the contrast between the urban, suburban, and rural-agricultural land use patterns that exist here. These patterns have been influenced by the region's growth history, by water resources, transportation features, and utilities, and zoning. Today, much of Derry is developed as low-density residential subdivisions in the west and southern ends of town – areas with relatively good highway access that connects residents to regional employment centers. Along and west of Route 28, however, Derry is a densely settled urban center with a compact downtown and a wide variety of uses. Together, Interstate Route 93 and State Route 28 have left an indelible imprint on Derry's development pattern, just as the semi-rural roads and limited utilities on the east side of town help to explain the low-density residential and agricultural character found there.

While Derry has significant remnants of its agricultural roots, the town overall consists of fairly new development. Well over half of all buildings in Derry today were constructed between 1970 and 1999, and another 18 percent have been built since 2000. This means that overall, Derry's present land use patterns have evolved since the adoption of zoning. It is important for planning to understand how the Town has approached zoning to date and how the existing zoning may create opportunities and constraints in the future.

EXISTING ZONING

USE DISTRICTS

Derry has a large number of zoning districts for regulating land use today. When the new West Running Brook District was adopted in 2019, it brought the total number of use districts to 24. A **use district** is a zone that controls land uses, and typically – as in Derry – use districts fall into three broad classes: residential, commercial, and industrial. This section presents an overview of Derry’s zoning today.

Low Density Residential District (LDR)

Approximately 9,948 Acres

46 Percent of the Town

Like LDR permits single-family detached dwellings in conventional subdivisions, manufactured housing, accessory apartments, campgrounds, production or sale of farm products by district residents, community-oriented recreational facilities, and home-based businesses. Golf courses and country clubs are permitted, too. The minimum lot area is three acres (or larger if determined by Chapter 170, Land Development Control Regulations), minimum frontage required is 200 feet, minimum lot width is 200 feet at the thirty-five foot front setback line, and the minimum yard depth is 35 feet to the front and 15 feet to the back.

Minimum Lot Area	Minimum Lot Frontage	Minimum Lot Width	Front Setback	Side/Rear Setbacks
3 acres	200'	200'	35'	15'

Low-Medium Density Residential District (LMDR)

5,217 Acres

24% of the Town

The LMDR is almost identical to the LDR district in terms of use regulations, but this district provides for somewhat smaller lots. Additionally, home businesses are permitted in the LMDR.

Minimum Lot Area	Minimum Lot Frontage	Minimum Lot Width	Front Setback	Side/Rear Setbacks
2 acres	150'	150'	35'	15'

Medium Density Residential District (MDR)

2,987 Acres

14% of the Town

The MDR provides for single family detached dwellings in conventional subdivisions, manufactured housing subdivisions, accessory apartments, campgrounds, production or sale of farm produce by district residents, and community-oriented recreational facilities. By special exception, an owner-resident may conduct a home business, provided it relates to select professions or businesses (e.g., lawyer, doctor, clergyman, real estate agent, insurance agent, or in a similarly recognized profession; artist or craftsman; tradesman), and if certain conditions are met, e.g., that the dwelling is owner-occupied and the business cannot exceed 25 percent of the finished living area of the home.

Minimum Lot Area	Minimum Lot Frontage	Minimum Lot Width	Front Setback	Side/Rear Setbacks
1 acre	125'	150'	35'	15'

All campgrounds have to conform to the regulations of the State of New Hampshire and are permitted to operate from May 1 through October 31. Campgrounds must be accessible via a state highway, and entrance and exit roadways must be at least 25 feet wide and no closer than 250 feet from any existing residence or center line of any existing residential curb cut. Campsites and facilities cannot be closer than 1,000 feet from an existing residence, and a buffer zone of 500 feet from the lot lines shall be maintained around the perimeter of the parcel. Plan review and approval by the Planning Board is required prior to construction. Other requirements apply as well.

Medium-High Density Residential District (MHDR)

482 Acres

2% of the Town

The Medium-High Density Residential Districts (MHDR) are located on either side of the CBD, to complement those uses and generate connectivity for those in the area. This district provides for mixed residential uses including single-family detached dwellings, two-family and multi-family dwellings, and accessory apartments. The area and dimensional requirements for single-family detached and two-family dwellings are consistent with those for the MFR District. Minimum lot frontage, lot width, and yard depth are also consistent with those of the MFR District. Multi-family dwellings have consistent dimensional requirements with the MFR District. Private schools also have their own requirements within the MHDR districts. The minimum lot area is one acre, the minimum frontage is 125 feet, and the minimum lot width is 125 feet. Yard depths are 30 feet for the front yard and 20 feet for the rear and side yards. Building height must be reviewed and approved by the Planning Board and buffer zones must be at least 50 feet wide.

Minimum Lot Area	Minimum Lot Frontage	Minimum Lot Width	Front Setback	Side/Rear Setbacks
10,000 sq. ft.* 15,000 sq. ft. ** 1 acre***	100'	100' (or 125' if community water system)	35'	15'
*with water and sewer *with water or sewer (not both) *community water system				

Other Provisions

Buffer zones have requirements in the MHDR district that pertain to any building, parking lot or driveway that is non-residential and abuts a residence. These requirements include separate minimum dimensions, landscaping regulations, minimum plantings, and other guidelines for vegetation. Site plan review is required for all development, changes or expansions of land and buildings for non-residential use. Off-street parking follows the general overarching provisional regulations. Additional multi-family requirements include length not exceeding 200 feet, a minimum distance of 35 feet between dwellings, connection to municipal service systems, and 15 percent of buildable lot area dedicated to recreation space.

Special exception uses are granted within the MHDR to allow owner-residents to conduct home business.

Medium-High Density Residential District II (MHDR-II)

355 Acres

<2 Percent of the Town

The MHDR-II District, also located on either side of the Central Business District, is more limiting in terms of allowed uses. In this zone, only single-family detached dwellings and accessory apartments are permitted uses. The dimensional requirements for single family dwellings in MHDR-II are the same as those of the MHDR District.

Minimum Lot Area	Minimum Lot Frontage	Minimum Lot Width	Front Setback	Side/Rear Setbacks
10,000 sq. ft.* 15,000 sq. ft. ** 1 acre***	100'	100' (or 125' if community water system)	35'	15'
*with water and sewer *with water or sewer (not both) *community water system				

Multi-Family Residential District (MFR)

146 Acres

<1 Percent of the Town

Multi-family Residential has two clusters west of Route 28 in Derry. The zones are nestled amongst commercial districts. The permitted uses include single family detached dwellings, two-family dwellings, multi-family dwellings, and accessory apartments. Area and dimensional requirements vary between each permitted use within the MFR District.

Use	Minimum Lot Area	Minimum Lot Frontage	Minimum Lot Width	Front Setback	Side/Rear Setbacks
Single-family & two-family	10,000 sq. ft.* 15,000 sq. ft. ** 1 acre***	100'	100' (or 125' if community water system)	35'	15'
Multifamily	5,000 sq.ft./unit	150	35'	35'	30'
	*with water and sewer *with water or sewer (not both) *community water system				

Central Business District (CBD)

83 Acres

<1 Percent of the Town

The Central Business District (CBD) is Derry's primary commercial district and cultural and civic hub. The CBD provides for several land use types that are designed to have a minimal impact on the traditional variety of uses that are currently in place and/or are being maintained. The CBD's stated purpose is to encourage uses that support the town's character from cultural, historic, residential, and commercial standpoints. Thus, permitted uses in the district are subject to specific architectural design regulations.

Minimum Lot Area	Minimum Lot Frontage	Minimum Lot Width	Front Setback	Side/Rear Setbacks
30,000 with sewer, or 1 acre	50'	50'	8'	5' 10'

Permitted commercial uses within the CBD include hotels/bed and breakfasts/inns, retail sales, office, restaurant, educational facilities, light manufacturing, parking facilities, and indoor recreational facilities, however there are more. The CBD provides more leniency around residential uses compared to other commercial districts in Derry. New single-family homes are not permitted,

but those existing before July of 2015 are legal. Mixed-use residential is permitted via special exception if the project does not exceed 12 dwelling units and other requirements are met.

Other Provisions

The Zoning Board of Appeals (ZBA) grants special exceptions for the following uses in the CBD: product assembly, equipment fit-up and repair, research and development facilities, automobile repair, and wood and metal craft work. Certain conditions must be met when granting a special exception including but not limited to: the creation of employment opportunities, establishment of a positive contribution to the area, improvement of the streetscape/overall visual appearance, and confirmation that project is not out-of-character with the remainder of the district. These special exceptions are transferable between owners of a property if the property is active and used as originally proposed. Lastly, site plan review is required for approved special exceptions.

General Commercial District

185 Acres

1 Percent of the Town

The General Commercial District (GC) is located in two places in Derry. The first (and primary) location lies at the intersection of Folsom and Tsienneto Roads, bordering the Industrial IV District, the Medium High-Density Residential districts, and the Central Business District. The other location encompasses Route 11, near the border with Salem. This district allows for a variety of permitted uses, such as hotels/inns, manufacturing, office, banks, clinics, and automobile sales and services.¹ Examples of current businesses in the area include larger retailers and restaurant chains such as Big Lots and Subway. Two large shopping centers are located at the main intersection: Hood Commons and Citizen Plaza.

Minimum Lot Area	Minimum Lot Frontage	Minimum Lot Width	Front Setback	Side/Rear Setbacks
30,000 with sewer, or 1 acre	125'	50'	8'	20'

The GC District contains some of the most heavily travelled routes in the town, as it is at the junction of Routes 28B and 102.

Other Provisions

Conditional use permits can be issued in the GC District for self-storage and accessory self-storage uses that do not pertain to vehicles. Conditional use permits are granted if the proposed use contains reasonable architectural and landscape features, does not adversely affect pedestrian or vehicular

¹ Town of Derry, "Town of Derry Zoning Ordinance." October 18, 2018.

traffic and infrastructure, complies with site plan requirements, and is generally compatible /complimentary with other uses within the district.

General Commercial II District (GC-II)

76 Acres

<1 Percent of the Town

The General Commercial II District is a fairly new zone, created in 2004 to supplement commercial revenue in Derry and grow employment opportunities in the area. Permitted uses are more specific in this district compared to the GC District and have varying requirements depending on the type of use. Permitted uses include hotels, conference centers, full-service restaurants, retail sales, pharmacies, banks, and health service facilities. Professional office uses, retail sales, automobile retail sales, and wholesale sales must be 2,500 gross square feet (GSF) to be located in the GC-II District. Banks must be at least 1,500 GSF. Other uses do not have specified gross square footage requirements.

Area and dimensional requirements for the GC-II District are consistent with those of the GC District (30,000 square feet with public sewer and 1 acre without). However, the minimum frontage requirement and lot width is 200 feet. Front, side and rear yard minimum requirements are also identical to those for the GC District. GC-II abuts the Industrial IV District and several residential districts including the Multi-Family Residential District (MFR). The boundary continues northeast along Tsienneto Road toward the intersection with North Main Street, serving as a continuation of the GC District. Some businesses within the district include the Post Office, several auto dealers, daycares, and the Derry Medical Center. Prohibited uses in GC-II are sexually-oriented businesses, wireless communication facilities and manufactured housing.

Minimum Lot Area	Minimum Lot Frontage	Minimum Lot Width	Front Setback	Side/Rear Setbacks
30,000 with sewer, or 1 acre	299'	200'	8'	20'

Other Provisions

Additional requirements of the GC-II District include adherence to Derry's architectural design regulations. Drive-thrus are not allowed for any use other than pharmacies. Gasoline filling stations are not allowed within 1,000 feet of an existing station.

General Commercial III District (GC-III)

101 Acres

<1 Percent of the Town

The General Commercial III District (GC-III) came into effect in 2011 with the purpose of preserving the neighborhood surrounding an old historic site. The district extends from Berry Road in the north, to Clark Circle to the south. GC-III is bordered almost entirely by residential uses, and a large portion of the General Commercial IV District and the Manufactured Housing Park Development to the north.

Minimum Lot Area	Minimum Lot Frontage	Minimum Lot Width	Front Setback	Side/Rear Setbacks
30,000 with sewer, or 1 acre	125'	50'	8'	20'

Due to the location of the historic site within the district, multiple dimensional regulations have been established by the town. These regulations include size, height and specific architectural elements. Professional office, full-service restaurant, and bank gross square footage regulations are consistent with those of the GC-II District. Minor differences include retail uses not exceeding 5,000 total GSF and pharmacies being limited to one drive thru window. Minimum lot area and dimensions mirror those for the GC-II zone. Manufacturing housing is permitted in the district, however sexually-oriented business and wireless communication facilities remain prohibited.

Other Provisions

As in GC-II, architectural design must compliment the surroundings of the district. Structures cannot exceed the height of the tallest building on the historic site.

General Commercial IV District (GC-IV)

417 Acres

< 2 Percent of the Town

The General Commercial IV District (GC-IV) allows for numerous uses and discourages or prohibits others, such as agriculture, assisted living, conference centers, movie/recording studios, nursing homes, publishing, research and development facilities/labs, drive-in restaurants, television broadcasting, and transportation centers. GC-IV is situated along Route 28 and separated into two clusters. A portion of the GC-IV was recently rezoned to a new district, the West Winding Brook Village District.

Minimum Lot Area	Minimum Lot Frontage	Minimum Lot Width	Front Setback	Side/Rear Setbacks
30,000 with sewer, or 1 acre	125'	50'	8'	20'

In general, GC-IV is dominated chiefly by automobile-oriented businesses, but also hosts businesses such as Clam Haven and Seacoast Sport Cycle. The second cluster begins at the intersection of South Range and Lawrence Roads, and continues south along Route 28 to the border Windham. This portion of the district also overlaps with a Manufactured Housing Park Development District; however the majority of the zone is surrounded by varying residential districts. Sexually-oriented uses businesses are permitted in the GC-IV, unlike other similar zones. From this, it is evident GC-IV was granted a higher level of flexibility concerning allowed uses, where other commercial districts are more stringent.

West Running Brook District (WRB)

199 Acres

<1 Percent of the Town

The West Running Brook District (WRB) is a new mixed-use district as of 2019. It covers approximately 199 acres in the vicinity of South Main and Rockingham Road. This district was established to provide for a different type of small business district than the other zones in Derry and to respect the historic character of West Running Brook area. As a result, development in this district is subject to architectural design guidelines. Desired types of businesses in the WRB include banks, day care, cultural facilities, conference center, and a hotel or an inn, along with offices, retail, limited manufacturing, and multifamily housing.

Minimum Lot Area	Minimum Lot Frontage	Minimum Lot Width	Front, Side, Rear Setback	Setback to Buildings on Adjacent Lots
N/A	50'	50'	10' or as determined by Planning Board	30'

Office Business District (OBD)

15 Acres

<1 Percent of the Town

The Office Business District (OBD) was created to control uses that may have a stronger impact on traffic. The use regulations for this district were recently amended and updated. The Town encourages bank, cultural facilities, child care centers, brew pubs, laboratory and testing uses, and housing, as well as research laboratories and limited retail.

The OBD is subject to specific regulations to regulate changes that current and potential uses will have on the town. Permitted retail uses must have a floor area no larger than 5,000 square feet, and comply with parking regulations. A change of use in any capacity from residential to non-residential is subject to review by the Planning Board, who will enforce the necessary architectural design and setback regulations. Limitations apply for new construction, conversion of existing structures, and

new structures in the OBD. The maximum lot coverage, including parking areas, cannot exceed 70 percent of the total lot area in the district, and one curb cut is permitted on West Broadway.

Minimum Lot Area	Minimum Lot Frontage	Minimum Lot Width	Front Setback	Side/Rear Setbacks
10,000 sq. ft.	100'	100'	35'	150'

Other Provisions

Parking needs to be located at the rear of a building, but off-street parking can be provided for residential uses contingent upon if one space per bedroom is provided. Off-street parking Conditional Use Permits can be granted by the Planning Board for access to parking behind structures within the District. These permits come with their own terms and requirements.

Buffer zones are instated where a non-residential use abuts a residential use in the district, and must have a minimum width of 10 feet. Existing lots within the OBD are considered conforming lots unless removed or destroyed. Non-conforming structures can be used for permitting until the same circumstances apply. All non-conforming uses that existed in 1991 are allowed until such uses are discontinued. At that time, they may be replaced by a permitted use.

Office/Medical/Business District (OMB)

92 Acres

<1 Percent of the Town

The Office, Medical, and Business district (OMB) was created by the town of Derry to encourage uses that align with the Parkland Medical Center and other healthcare uses. The OMB zoning regulations are designed to support this type of growth without negatively impacting existing residential uses. As in the OBD and other commercial districts, zones with specified purposes have certain requirements and restrictions established to achieve said purposes. The OMB is another such zone.

The permitted uses in the OMB are professional businesses and offices pertaining to healthcare professionals, and single-family dwellings with and without an attached business. Unlike many of the other discussed districts, the OMB allows wireless communication facilities within its boundaries. It also allows congregate care facilities and assisted-living facilities as of 2007 through a Growth Management Ordinance. Those prohibited uses include any use that is deemed offensive, injurious or noxious or that poses a community hazard (as outlined in the CBD as well). Sexually-oriented businesses are also prohibited.

Minimum Lot Area	Minimum Lot Frontage	Minimum Lot Width	Front Setback	Side/Rear Setbacks
30,000 with sewer, or 1 acre	125'	50'	8'	20'

Office/Research and Development District (ORD)

The Office, Research and Development District (ORD) was established to execute the organized growth of nonresidential uses on the built-out western side of town. The district's purpose is to expressly avoid severe impacts on residential uses existing within its boundaries. As with district growth management in Derry, the ORD is subject to explicit regulations and restrictions deemed necessary to achieve its stated purpose. All proposals are to be reviewed and approved by the Planning Board in the ORD. Permitted uses include business, professional, administration, or headquarter offices. Permitted uses also include research or testing laboratories, medical/dental laboratories, animal hospitals/clinics, existing residential uses, and wireless communication facilities. As in the OMB and CBD Districts, prohibited uses are those that are deemed offensive, injurious or noxious, or that could pose a hazards to the community at-large. Specifically prohibited uses include grocery stores, gasoline stations, sales/most retail businesses, fast-food, and sexually-oriented businesses.

Minimum Lot Area	Minimum Lot Frontage	Minimum Lot Width	Front Setback	Side/Rear Setbacks
3 acres	200'	200'	30'	20'

Neighborhood Commercial District (NC)

The Neighborhood Commercial District (NC) was created to allow limited retail sales and service facilities within close proximity to residential areas. This in turn allows for traffic mitigation by commercial areas and a more harmonious blend of uses. The district is also designed to be more convenient for those nearby neighborhoods, avoiding commercial sprawl. NC districts are "floating" districts; they can be within any residential districts. However, they cannot be within 1.5 miles of another one another, of a business or industrial district, or of a parcel with an existing convenience store. The Planning Board must approve and file a plat for any NC District in Derry. The floating districts are to be the same size as a single lot conforming with the minimum residential lot size requirements for the underlying district. NC Districts can exist as long as they are in compliance, and are not affected by the subsequent expansion of an industrial or business zones nearby if they have been established first.

Minimum Lot Area	Minimum Lot Frontage	Minimum Lot Width	Front Setback	Side/Rear Setbacks	Lot Coverage
Flexible	200'	200'	50'	50'	25%

Due to the flexible nature of these districts, permitted uses are limited. Allowed uses include only the retail sale of grocery or sundry items and/or retail rental of audio or video tapes. Prohibited uses are those activities outside of what is explicitly outlined above, as well as the outside storage and display of goods, portable/temporary signs, sexually-oriented businesses, wireless communication facilities, on-premises video-games, and the sale of motor fuels. Hours of operation are regulated, with a limitation of 80 hours per week. There can only be one building for permitted use in a NC district.

Other Provisions

Specific floor area requirements have been established for NC Districts, unlike other districts covered thus far. The maximum area covered (including porches) must be 2,000 square feet (SF), the minimum area of the building must be 1,200 SF, the maximum building perimeter must be 180 SF, and the sales floor area cannot exceed 2,000 SF of the first floor only. Building design should conform with existing residential improvements and facilitate future use as a single family residence. Specific landscaping, including a buffer zone, must be provided within the lot boundary and a single driveway that does not exceed 24 feet is permitted.

Manufactured Housing Park District (MHPD)

136 Acres

<1 Percent of the Town

The Manufactured Housing Park District (MHPD) serves the purpose of permitting manufactured housing units in Derry to create and advance affordable housing opportunities. They are presently scattered along multiple portions Route 28. A MHPD must be accessible from a town or state-maintained road, and cannot be on land exposed to flooding, erosion, or chronic nuisances such as odor or dust. A license is required for any manufactured housing park in Derry, and an application for a license must be made annually stating the number of units, the names and addresses of unit owners, and the number of vacant spaces. Inspections are also required, and can affect licensing if not completed. Licensing and renewals are subject to fees under the zoning ordinance. Unoccupied units cannot be used for storage or commercial purposes. New housing parks must follow design standards that cover the following: private road and interior access dimensions, open space and recreation coverage, buffer zone requirements, underground utilities, municipal water system connections, and minimum right-of-way access. Existing parks cannot be expanded or altered in any way

Minimum Park Size	Minimum Area Per Unit	Minimum Width	Minimum Depth	Separation between MHs	Setback from Street ROW
15 acres	7,200 sq. ft.	60'	120'	20'	50'

Other Provisions

Additional provisions of MHPD Districts include construction and placement standards, and open space and improvements maintenance assurance. Open space and improvements maintenance provisions include penalties for lack of upkeep as well as associated costs. Unoccupied manufactured homes in the possession of dealers (stock-in-trade or resale) are exempt from the provisions outlined in the zoning ordinance contingent upon if they are not stored in an existing MHPD district.

Industrial District I (IND-I)***555 Acres******<3 Percent of the Town***

Derry's Industrial District I permits a variety of uses that pertain to manufacturing products involving building materials, chemicals, furniture, and transportation equipment. The district is located in the southwest corner of town, adjacent to Route 93. Large-scale operations are encouraged in this district, as well as agriculture/forestry uses, wireless communication facilities, and their accessory uses. Prohibited uses include any industry that produces smoke (other than normal heating and power production), and several other specific products. These products are: acetylene gas, ammonia/beachline powder/chlorine, asphalt, blast furnace, boilers, brick/terra cotta/tile, coke creosote, dye stuff manufacturing, emery cloth or sandpaper, foundries of gunpowder and other explosives, tar roofing or waterproofing, animal/foul slaughtering, ore smelting, tanning/curing of raw hides/skins, or japanning of leather, tar, and any business use including sexually oriented business.

Minimum Lot Area	Minimum Lot Frontage	Minimum Lot Width	Front Setback	Side/Rear Setbacks
1 acre	125'	125'	30'	20'

Building heights must be reviewed and approved by the Planning Board.

Other Provisions

The IND-I District contains special water and sewer service requirements. Town water must be used if possible, and town sewer service must be within 100 feet of a property line. If town water and sewer services are not available, state services must be used.

Industrial District III (IND-III)

97 Acres

<1 Percent of the Town

Industrial District III is nestled between another industrial district (IND-IV) and medium density residential uses on the western side of Derry. Permitted uses range from large to small-scale manufacturing, to accommodation, to transportation-based services, to public utilities. Examples of other uses permitted in IND-III are hotel/motel, parking garages, warehouse and wholesale, and breweries/bottling facilities. Prohibited uses are defined in the zoning ordinance as any land, building or structure that is considered offensive, injurious or noxious by amplifying traffic impacts or negative environmental conditions. There are no other prohibited uses stated in the zoning ordinance.

Minimum Lot Area	Minimum Lot Frontage	Minimum Lot Width	Front Setback	Side/Rear Setbacks
1 acre with sewer 1 acre plus*	125'	125'	30'	20'
*Subject to Table A, Minimum Lot Size by Soil Type, Chapter 170, Land Development Control Regulations.				

Building height is permissible up to 60 feet.

Industrial District IV (IND-IV)

385 Acres

< 2 Percent of the Town

The Industrial IV District is one of the largest industrial districts in Derry and is located just off of Route 93, by the border of Londonderry. The district follows Manchester Road to the intersection of Folsom and Tsienneto Roads, abutting the General Commercial District (GCD). Currently, the district is zoned to permit manufacturing - generally of larger scale - agriculture/forestry, retail sales, wireless communication facilities, restaurants (with and without drive-ins), office, hotel, light industrial and various automobile uses. Those uses that are prohibited in the IND-IV district are identical to those that are prohibited in IND-I, with the addition of churches. Sexually oriented businesses are also prohibited. Minimum lot, frontage, and yard requirements are consistent with IND-I and IND-III requirements, as are water and sewer service requirements. As in IND-I, building height is subject to approval by the Planning Board.

Minimum Lot Area	Minimum Lot Frontage	Minimum Lot Width	Front Setback	Side/Rear Setbacks
1 acre	125'	125'	30'	20'

Industrial District V (IND-V)

31 Acres

<1 Percent of the Town

The Industrial V District has two small locations along Windham Road. One location overlaps with the medium-density residential zone roughly from the intersection of Strawberry Hill and Windham Roads, to the intersection of Bowers and Windham Roads. The second location is wedged between Route 93 and Windham Road by the border of Derry and the town of Windham. IND-V is unique compared to the other established industrial districts as it was created to support less-intense industrial uses. Due to its unique nature, IND-V is subject to particular regulations and requirements, much like the NC and OMB Districts. Permitted uses in IND-V are the manufacturing of the following products: appliances, office supplies, building material, photographic and optical products, clothing textiles, furniture, wood and metal products, instruments, and electronic assembly and software development. Storage, wholesale, warehouse, agriculture/forestry, and their accessory uses are also permitted within the districts. Uses considered offensive or hazardous, wireless communication facilities, and sexually-oriented businesses are prohibited. Area and dimensional requirements water/sewer connections, building height, off-street parking, and buffer zones are consistent with regulations in place for the other industrial districts.

Minimum Lot Area	Minimum Lot Frontage	Minimum Lot Width	Front Setback	Side/Rear Setbacks
1 acre	125'	125'	30'	20'

Industrial District VI (IND-VI)

17 Acres

<1 Percent of the Town

The Industrial District VI is a small district established to encompass Corporate Park Drive and Ash Street, by Londonderry. This district permits office and light manufacturing uses to produce employment opportunities in an area equipped with vehicular access and municipal water and sewer access. Permitted uses include: manufacturing industries warehouse and wholesale uses, professional office and appurtenant uses in buildings of greater than 10,000 square feet, public utilities, parking garages, animal hospital, veterinary clinics, printing establishments, industrial supply establishments, hotel/motel, breweries and bottling facilities, and enclosed recycling of non-hazardous materials. Prohibited uses are any of which are deemed offensive by generating added traffic impacts, that are potentially hazardous, and that are sexually-oriented. Minimum lot area is one acre with town sewer, and larger if not serviced by town sewer.

Minimum Lot Area	Minimum Lot Frontage	Minimum Lot Width	Front Setback	Side/Rear Setbacks
1 acre	125'	125'	30'	20'

Building height is allowed up to 60 feet in the IND-VI.

OVERLAY DISTRICTS

Traditional Business Overlay District (TBOD)

The TBOD provides for uses that enhance existing historical, residential, commercial, and cultural uses and protect the traditional character of the CBD. This district permits mixed-use multi-unit residential dwelling units, provided that residential units are a minimum of 800 square feet per unit, limited to one or two bedroom units, and not located below the third floor. Existing structures may be converted for multi-unit residential uses as long as the lot and the structure meet the minimum standards for this district (dimensional requirements, buffer zones, off-street parking, and height limitation). Conversions are subject to review and approval by the Planning Board.

Other permitted uses include retail establishments, pharmacies, banks, transportation centers, travel agents, commercial service establishments, contractors, indoor recreational facilities, commercial performing and fine arts school and studios, professional and other offices, restaurants, libraries, public/private educational facilities, radio and television broadcasting studios exclusive of transmitter facilities (upper levels only), parking facilities, light manufacturing, electric vehicle supply equipment, and any public use by a semipublic agency whose activities are primarily non-profit in nature.

Minimum Lot Area	Minimum Lot Frontage	Minimum Lot Width	Front Setback	Side/Rear Setbacks
7,500 sq. ft. or 1 acre +	50'	50'	5'	20'

Mixed use multi-unit residential dwelling units must have one parking space per bedroom, with a minimum of three spaces being required per dwelling unit. Chapter 170, Land Development Control Regulations provides further parking regulations for multi-unit residential dwelling units and non-residential use

Any change from a residential to a non-residential use of a lot or structure, or any change in use from one permitted use to another more intense permitted use, is subject to review and approval by the Planning Board. The Planning Board has authority to adopt architectural design regulations for this district.

Floodplain Development District

The Floodplain Development District are regulations that are designated as special floor hazard areas and include numerous parcels across Rockingham County. This district is not defined on the most current version of the zoning map. This district has separate definitions, permitting, and certification when compared to previously discussed zoning districts specific to Derry, NH.

Groundwater Resource Conservation District (GRCD)

The Groundwater Resource Conservation District establishes regulations to protect, preserve and maintain existing and potential groundwater resources and primary groundwater recharge areas within this district. This district is not defined on the most current version of the zoning map. This district has separate definitions, permitting, and general provisions compared to previously discussed zoning districts specific to Derry, NH.

Conservation Corridor Overlay District

The Conservation Corridor Overlay District are regulations formed to protect the “Conservation Corridor” in the 100-year flood plain determined by the Federal Insurance Administration's Flood Insurance Rate Maps (FIRM) of Rockingham County, NH. This district is not defined on the most current version of the zoning map. This district has separate definitions, permitting, and general provisions compared to previously discussed zoning districts specific to Derry, NH.

Wetlands Conservation Overlay District

The Wetlands Conservation Overlay District was established to regulate the use of land areas subject to extended periods of high water table, flooding, or standing water. This district is not defined on the most current version of the zoning map. This district has separate definitions, permitting, and general provisions compared to previously discussed zoning districts specific to Derry, NH.

Independent Adult Community Overlay District

The Independent Adult Community Overlay District was created to meet the growing need of those persons aged 55 and older, and encourage innovations in various field to support them, particularly in the field of housing. This district is not defined on the most current version of the zoning map. This district has separate definitions, permitting, and general provisions compared to previously discussed zoning districts specific to Derry, NH. An amendment was made to the zoning ordinance regarding this district in 2005.

OPPORTUNITIES, CHALLENGES, AND OBSERVATIONS

Number of Districts

Derry has taken a fairly sophisticated approach to customizing districts to fit the character of various parts of town. Still, the number of zoning districts is quite large for a town Derry's size, and some of

the districts are so small in area that perhaps some of them should be reviewed for consolidation opportunities.

Zoning Organization: Structure, Format

Derry would be well advised to recodify the existing Zoning Ordinance. In its present form, it borrows from an older and largely obsolete structure that is entirely “text heavy,” i.e., without tables and visual aids to help readers navigate the document and interpret its provisions. If the Town worked toward replacing text with a Table of Uses and Table of Dimensional Requirements, it is quite possible that a number of inconsistencies would be identified – and unless they are found through a systematic review process, they may not be discovered until the middle of a permitting process.

List of Sources

Town of Derry, "Town of Derry Zoning Ordinance." October 18, 2018.

Town of Derry, GIS Parcel Map and GIS Zoning Map