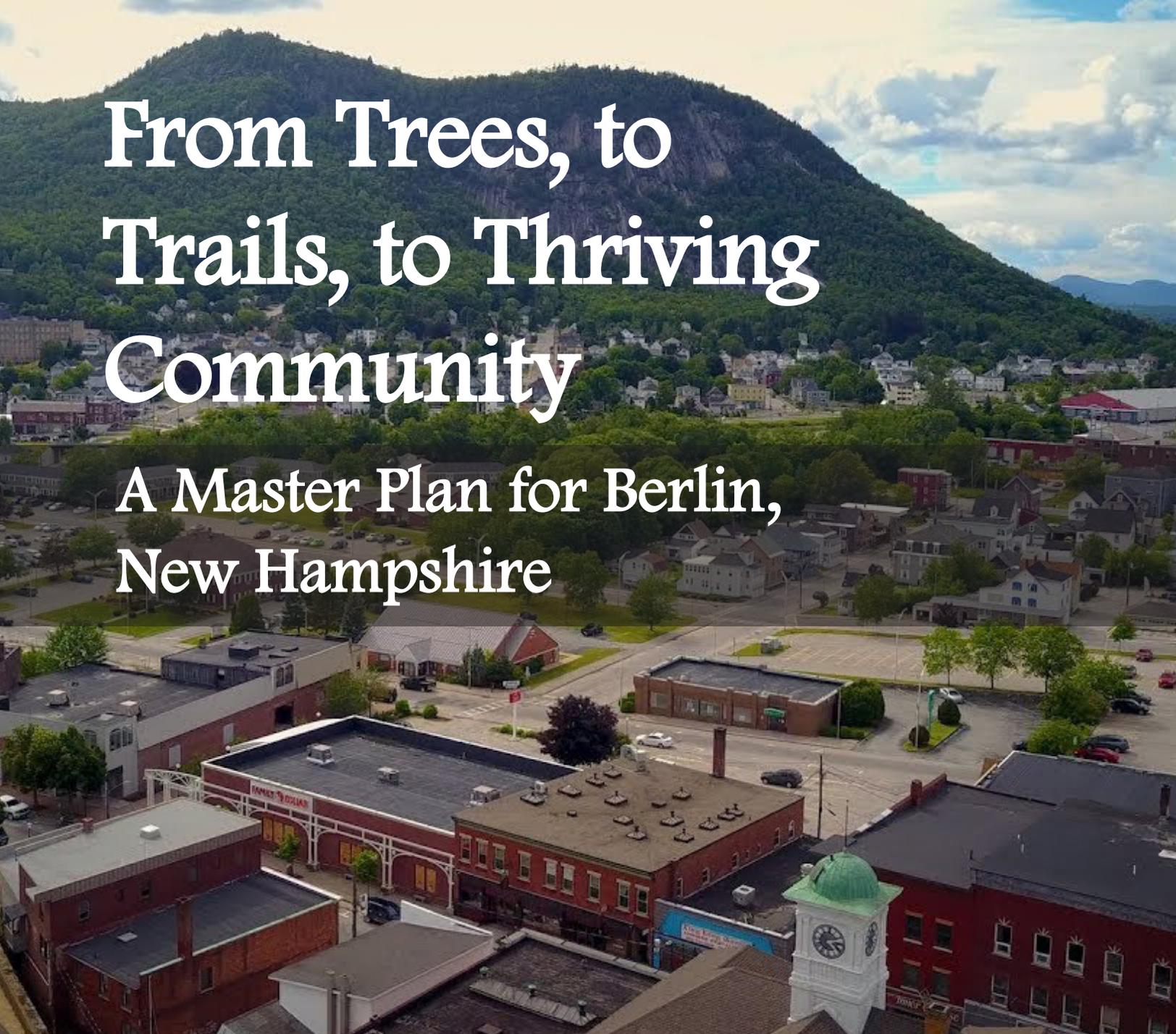


From Trees, to Trails, to Thriving Community

A Master Plan for Berlin, New Hampshire



Adopted July 6, 2022

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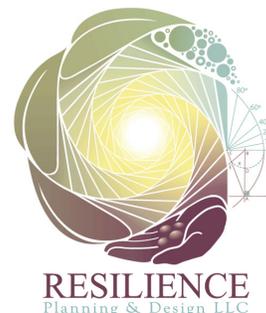
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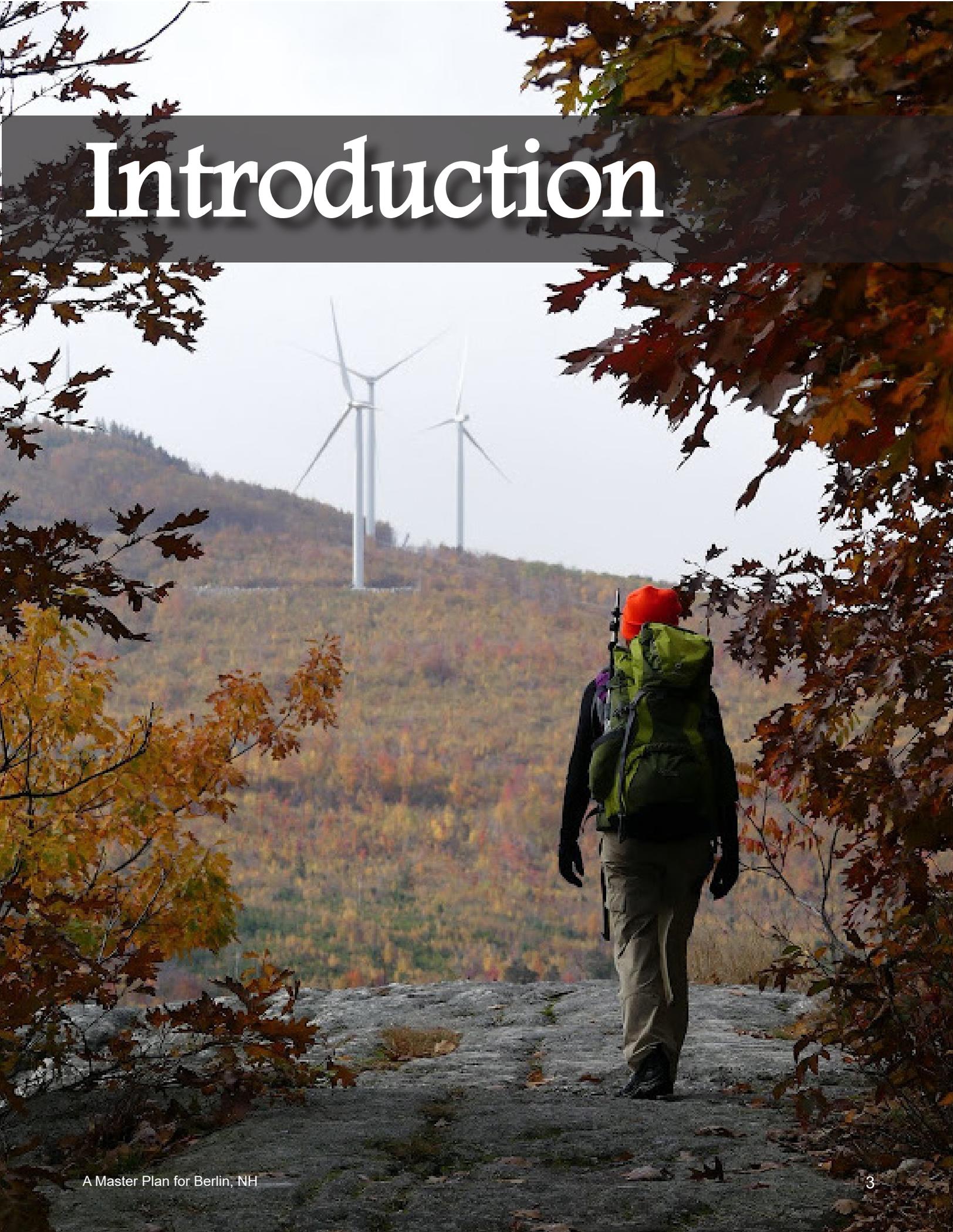
The City of Berlin would like to thank the Master Plan Steering Committee, City Staff, especially Community Development Director Pamela Laflamme, its consulting team, Resilience Planning and Design, and the public for participating in and directing the development of Berlin's 2022 Master Plan.

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Introduction



Berlin is a small City situated in New Hampshire's north country region. The City's land area is comprised mostly of protected forestland. In fact, 70% of Berlin's land area is within the White Mountain National Forest, Jericho Mountain State Park, and other smaller, protected open spaces. This means development is concentrated in the eastern portion of the municipality along the Androscoggin and Dead Rivers and the City's major transportation corridors, Route 16 and Route 110.



Berlin's year-round population as of 2020 was 9,425 residents, making it a relatively small City in New Hampshire. With a rich cultural and industrial heritage, Berlin has been an economic hub and population center in the North Country for well over 100 years. While Berlin is still a regional center today, the City has been challenged in recent years. The closing of the paper mills in 2006 dramatically impacted the City's population and economy by reducing thousands of jobs, increasing the unemployment rate, and increasing the number of vacant properties, homes, and

commercial buildings. Other challenges have included Berlin's remote location, an aging population, a lack of housing to meet demand, and under investment in public infrastructure.

However, Berlin continues to prove itself to be a resilient and resourceful community of people - a community that ranges from residents whose families have lived here for generations and those who have moved to Berlin as newcomers, attracted to the City's mountainous landscape and welcoming atmosphere.

ENVISIONING A BRIGHT FUTURE

Since the closing of the paper mills, the City of Berlin has seen significant progress - the biomass plant, which now occupies the former paper mill site, represents revitalization of vacant industrial space and stimulates the local economy; the outdoor recreation and tourism industry is continuing to gain traction; the Downtown is slowly seeing new businesses and older, deteriorating buildings are being removed or renovated; younger families are returning to the area or choosing to stay for their education, work, and quality of life; an increase in remote workers that see Berlin as a place to work from and be closer to nature; and Route 110 has undergone significant improvements while the City has put additional development and economic incentives in place.

Additionally, the City is acknowledging its unique assets and aims to build on these to

create a vibrant future for Berlin residents and community members. Some of these assets include its abundant natural and recreational resources, high quality hospital and health center, ample commercial building stock and redevelopment opportunities, the Berlin Regional Career & Technical Center, a responsive community college, airport, and local business community.

The 2022 Master Plan aims to build off the successes and progress Berlin has made in recent years and harness additional opportunities to meet the City's goals. This Plan focuses on both small interventions and long-term investments that capitalize on the City's assets and what makes Berlin unique to achieve a healthy economy, community, and environment.

THE ROLE OF THE MASTER PLAN

The State of New Hampshire authorizes municipalities to maintain a regularly updated Master Plan through RSA 674:2 to guide future growth, land use, and development. While the master plan is not a regulatory document, it does provide the legal basis for zoning and other land use regulations. It provides a big-picture view of where a community is today and where it wants to be in the future. It's a community's primary tool for directing land use policy and decision-making. It also defines policies, programs, and actions necessary to achieve a community's vision for the future and provides guidance for public and private investment, including capital improvements and budget planning.

This plan is an overarching document that includes actions specific enough to provide clear direction, while also allowing some level of flexibility in how it is implemented. In some cases, it identifies issues and projects that will require further analysis, study, and discussion. It will be up to Berlin's public, private, institutional, and community organizations to help implement this Plan by using it as a guiding framework to achieve the City's future vision. As projects, policies,

and programs are evaluated and created, Berlin should ensure that these initiatives are consistent with the vision and policies found in this planning document.

LAND USE

The use of land impacts the character and quality of life within the community. The present and future rate, location, and type of growth, and preservation of unique features, effect the evolution of a community's physical appearance and the need for public services and facilities. How a community decides to use its land area has a direct impact on natural resources, community character, transportation infrastructure; and on housing opportunities, the tax base, and the cost of providing services. There are many topics that relate to land use and quality of life that were analyzed in the development of this Plan. These include transportation, housing, energy, public facilities, natural resources, and others. Appendix A includes a summary report of the existing conditions analysis completed for Berlin by topic.



BERLIN'S EXISTING LAND USE PATTERN

Understanding the existing land use and development pattern and how it is changing over time is critical to a community's master planning process. Berlin's development pattern has largely been influenced by geography and its establishment as a regional center. The City's most densely developed area is located in close proximity to the Androscoggin and Dead Rivers, Routes 16 and 110, and the industries that emerged there. This is also due to the fact that most of the land in the western portion of the City is within the White Mountain National Forest.

With significant portions of Berlin's land area being protected from development, and with little population growth in recent years, the City retains much of its traditional centralized development pattern. This pattern is highly sought after in many northeast communities: dense development around a downtown core, surrounded by residential neighborhoods with access both to the Downtown and to the natural resources that surround it. Berlin's existing land use pattern includes a wide array of uses. These are described below.

Conservation, Recreation, and Working Natural Landscapes

70% of the City's land area is protected forestland, comprised mostly of land in the White Mountain National Forest, Jericho Mountain State Park, Mt. Forist, and Mt. Jasper. These lands are used for recreation purposes, including camping, hiking, snowmobiling, OHRV use, rock climbing, swimming, and more, and are a draw for visitors and new residents. The White Mountain National Forest is a working landscape and is also important for the forestry industry. All of these open spaces provide important ecological value as well, including clean water, air, and habitat.

Residential Development

Residential development makes up 7% of the total land area in Berlin (including the White Mountain



National Forest) and 11% of the total land area (excluding the White Mountain National Forest). Berlin's residential development includes single-family homes, multi-family housing, mobile homes, and seasonal housing units. The majority of Berlin's housing units are single-family residential units, making up 53% of Berlin's occupied housing stock. Year-round residences still dominate the housing stock, but vacation homes and short-term rentals are increasing in the City. Some of the residential land is on the rural edges of the City, but a great deal of the housing stock has been built at a higher density around the downtown due

to the availability of services and infrastructure. During the last few decades, the community has seen many housing units fall into disrepair and housing construction slow. However, the City has been undertaking an effort to reclaim a number of unsafe, vacant structures in the City to create redevelopment opportunities.

Commercial and Industrial Development

Approximately 8% of Berlin's total land area is occupied by commercial and industrial land uses. This has risen by 4% compared to the 2010 Master Plan analysis. Although the percentage is small, these properties have a dramatic effect on surrounding land uses, and contribute to the tax base. The majority of commercial land is concentrated in the downtown along Route 16 and along Route 110 and is comprised of a variety of businesses. One of Berlin's primary industrial developments has been the Maynesboro Industrial Park located on East Milan Rd. The other major tract of industrial land is occupied by Burgess Biopower, which is approximately 60 acres in size. The City is home to a number of renewable energy facilities including four hydro-electric facilities, a wind farm, and a 75 MW biomass facility.

Other Land Uses

8% of the City's land area, is comprised of institutional and governmental land uses including City-owned property, churches, federal property, the library, schools, hospitals, etc. 2,389 acres of land in Berlin, or 6% of the City's total land area, are considered to be "vacant parcels". Roadways and utilities make up 2% of Berlin's total land area.

MASTER PLANNING PROCESS

Existing Conditions Analysis

A number of topics were analyzed to inform the development of this Master Plan document. These include housing, transportation, public facilities, natural resources, demographics, transportation, economic development, and natural hazards.



Data, current conditions, observable trends, and specific issues were explored during this analysis and provide a foundation for how the vision, strategies, and actions included in this Plan were created. The Appendix includes existing conditions profiles for each of these topics, providing a deeper understanding of Berlin today.

Community Engagement

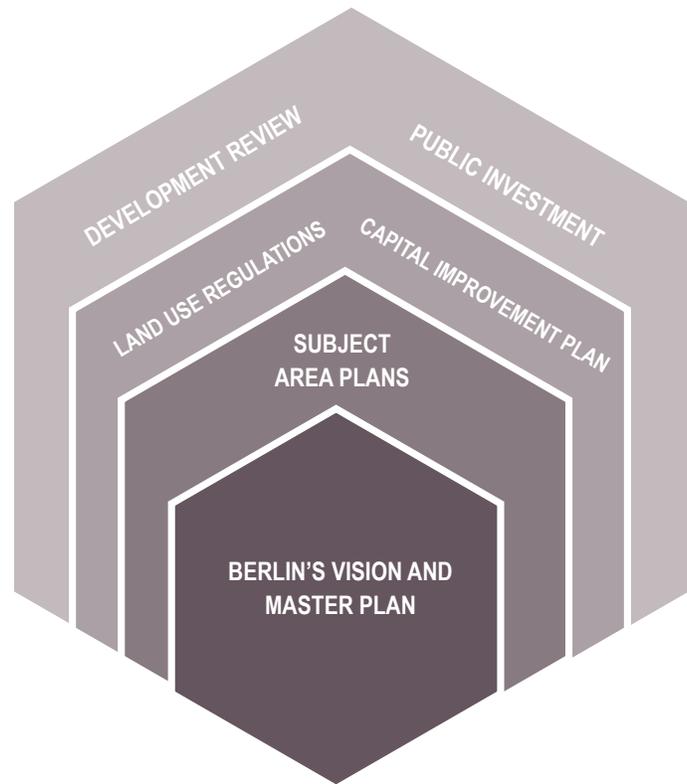
Along with the analysis of existing conditions, community desires and priorities should drive the development of a Master Plan. During this process, members of the public were engaged through the following mechanisms:

- One in-person community forum open to the public
- An online and print survey
- Focus groups
- A Plan Naming contest

The feedback from public outreach drove the development of the vision, themes, and actions in this Master Plan. Appendix B includes a summary report further detailing these outreach mechanisms and the key findings we heard through the community engagement phase of this project.

RELATED STUDIES AND PROJECTS

As the graphic on the right shows, Berlin’s Master Plan and future vision (in conjunction with subject area plans, such as its Economic Development Action Plan and the UNH Cooperative Extension Berlin Community Profile) should serve as the foundation for land use regulations, capital improvement planning, and other future initiatives. These resources should inform and drive the development review process and define public investment projects that help the City work towards its vision.



PRINCIPLES FOR IMPLEMENTATION

Additionally, Berlin embraces the following principles for implementing this Master Plan:

Multi-functional Initiatives

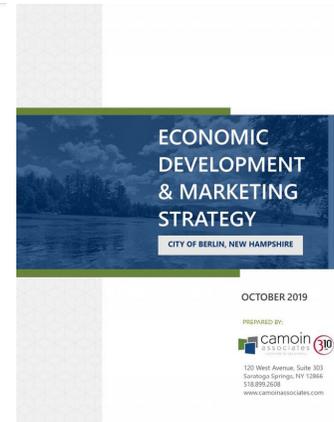
Projects that provide many benefits should be prioritized to maximize resources. For example, a redevelopment project that revitalizes the downtown, produces more housing, creates business space, and activates the pedestrian environment helps the City meet multiple goals.

Incremental Progress

Targeted interventions and incremental projects will enable the City to meet its goals in a way that is efficient, focused, and mindful.

Transparent Communication and Participatory Processes

Consistent communication and collaboration with Berlin residents and community members on big projects, proposed capital improvement expenditures, and other initiatives will build greater public support and reinforce the larger vision for the City.



Cost-Effective

Utilize multiple streams of funding where appropriate to complete projects in a way that reduces burden on taxpayers, while also educating the public when spending funds is necessary to maintain infrastructure and services.

BERLIN'S VISION FOR 2022

Berlin's 2022 Master Plan: "From Trees, to Trails, to Thriving Community" presents a vision and roadmap for land use and development over the next twelve years. It acknowledges Berlin's historical legacy as a City with a booming paper mill industry and strong relationship with the northern forest, while building a future that is still grounded in its legacy as a "City That Trees Built".

Vision Statement

Berlin is a community with immense potential. A small City comprised of close-knit neighbors, volunteers, institutions, businesses, and organizations, Berlin is dedicated to preserving and building upon its unique qualities, history, and sense of place. In 2035, Berlin is actively promoting and expanding its outdoor recreation and tourism industries, while also growing non-service related commerce. The City's Downtown is active with pedestrian activity and is seeing substantial investments, including mixed use redevelopment, business growth, and infrastructure upgrades. The City is a desirable place to live for all ages, ranging from young families, to workers, to empty nesters, and older residents. Diverse housing options for owners and renters; opportunities for jobs and job training, primary and secondary education, and business development; and accessible trails, open spaces, and recreation facilities, enable Berlin community members to thrive, while also welcoming visitors.

Building on the conversations with the Master Plan Committee, the Existing Conditions Analysis, and the public outreach findings, six core areas were identified for achieving Berlin's Master Plan Vision.



1. INVEST IN PUBLIC INFRASTRUCTURE

GOAL: Strategically plan for and invest in upgrades to Berlin's public infrastructure including roadways, sidewalks, utilities, and municipal buildings and facilities.

GOAL: Seek creative ways to fund public infrastructure and coordinate phased repairs to ensure the longevity of these facilities.

GOAL: Provide quality facilities and services that incorporate energy conservation and renewable energy production, provide long-term municipal savings, and inspire private sector investment.

2. IMPROVE COMMUNITY HEALTH AND WELL-BEING

GOAL: Increase opportunities for Berlin residents related to housing, job training, living wage employment, education, transportation, amenities, reduced physical barriers, and basic services.

GOAL: Support and partner with local organizations and social service providers working to identify and address community health issues, such as substance abuse, lack of oral health care, access to housing, homelessness, financial insecurity, lack of job skills, and others.

GOAL: Ensure Berlin is an age-friendly community that provides for its seniors, youth, veterans, and families.

3. REVITALIZE THE DOWNTOWN AND ADJACENT NEIGHBORHOODS

GOAL: Utilize both regulatory and non-regulatory approaches to promote the reuse of vacant buildings and infill development within the Downtown area.

GOAL: Continue to actively leverage public-private partnerships to revitalize the existing buildings and vacant parcels, the infrastructure, and level of activity.

GOAL: Make the Downtown more pedestrian and bicycle friendly and a destination for residents and visitors through coordinated, strategic infrastructure investments, and connection with other adjacent facilities like the parks, playgrounds, and Riverwalk.

4. SUPPORT AND EXPAND THE TOURISM AND OUTDOOR RECREATION INDUSTRIES

GOAL: Focus on supporting the outdoor recreation industry and encouraging tourism amenities.

GOAL: Continue to support the OHRV/Snowmobile user base and expand other non-motorized outdoor recreation infrastructure and uses.

GOAL: Develop new partnerships to increase the range of recreation opportunities, infrastructure, trained workforce, and related amenities.

GOAL: Balance the needs of both visitors and residents.

5. BROADEN THE TAX BASE THROUGH DEVELOPMENT AND REDEVELOPMENT

GOAL: Pursue initiatives, incentives, and policies that attract and retain skilled workforce and businesses.

GOAL: Focus economic development efforts in the heart of the Downtown and along Routes 16 and 110.

GOAL: Commit to increasing the diversity of housing options, and addressing the City's housing challenges for residents of all ages and income levels.

GOAL: Balance development and redevelopment efforts with incorporating green spaces in the built environment.

6. PRESERVE WHAT MAKES BERLIN SPECIAL

GOAL: Remember and acknowledge Berlin's sense of place, heritage, industrial history, and unique qualities. Build on these for future initiatives.

GOAL: Harness Berlin's resilience and the hardworking, can-do attitude of the community to bring this vision to reality.

GOAL: Maintain Berlin's close-knit community while also welcoming visitors.

1 Invest in Public Infrastructure

Berlin's municipal facilities and services, roadways and sidewalks, and other shared public resources are all necessary components of the City's infrastructure serving all residents and property owners.

This infrastructure also serves visitors and is a key element of future economic development initiatives in Berlin. Since both the quality and the cost of Berlin's infrastructure are greatly affected by the municipal budget, capital improvement planning, and future land use development policies, the City's infrastructure needs to be an integral part of the City's long-range planning. This includes issues related to municipal building and roadway maintenance, and the changing and expanding needs of the community over the decades ahead.

To guide future actions and address this need, three broad goals have been identified:

Strategically plan for and invest in upgrades to Berlin's public infrastructure including roadways, sidewalks, utilities, and municipal buildings and facilities.

Seek creative ways to fund public infrastructure investments and coordinate phased repairs to ensure the longevity of these facilities.

Provide quality facilities and services that incorporate energy conservation and renewable energy production, provide long-term municipal savings, and inspire private sector investment.

BACKGROUND

Over the past few decades, the City of Berlin has struggled to maintain its existing infrastructure as revenues have decreased and costs have increased. This is a reality that must be acknowledged and addressed as the community begins to focus on a bold vision for the future. While many things have contributed to this trend, the end result has been frustrating for City staff and residents alike.

There is now a shared interest in finding ways to address the overdue maintenance of roadways, sidewalks, and municipal buildings in Berlin. This is often referred to as deferred maintenance, and new systems are needed for managing this backlog of projects as Berlin prepares to invest in the revitalization of the Downtown. This is not just an issue for City departments. Moving forward, Berlin is also seeking new ways to work with and support private landowners as they address and improve their own infrastructure and buildings.

OPPORTUNITIES

In many ways, Berlin is extremely fortunate when it comes to public infrastructure. The dense, walkable downtown area is served by a well-connected transportation system and available

water and sewer infrastructure with capacity to accommodate additional development activity. This allows for a density of development activity that is unusual in northern New Hampshire. Berlin's need for updated public infrastructure is also a wonderful opportunity to set new standards that align with the City's vision for a more sustainable and resilient future. This includes creating a City-wide transportation network that provides safe roadways for all modes of travel, including vehicles, pedestrians, and bicyclists, and minimizes conflict between recreation users and other travelers. It also includes opportunities to modernize the municipal buildings, while preserving their distinct history and character, so they conserve resources, cost less to operate annually, and provide quality indoor and outdoor spaces for City staff, volunteers, and residents who frequent these facilities. These investments will build on the City's significant private sector renewable energy infrastructure, and elevate Berlin's profile as a forward thinking community.

As the City sets new standards and completes visible infrastructure upgrades in the coming years, these municipal projects will become the basis for an important outreach and education effort directed at residents, homeowners, and private land owners focused on the environmental

and economic benefits available if they too commit to pursuing similar upgrades. Looking forward, Berlin will be a City that addressed its shared public infrastructure needs using new approaches, and inspired action on private properties as well. The combined benefits will include energy savings, safe and equitable transportation options, improved air quality, a reduction of Berlin's carbon footprint, and many other enhancements to the quality of life and reputation of the City.



Guiding Principles and Practices



Public infrastructure in Berlin's Downtown and beyond could be better maintained to preserve the condition, quality, and service of its municipal assets.

ASSET MANAGEMENT

There is a need to address deferred maintenance of Berlin's public assets to protect the condition, service, and longevity of the City's roads, water and sewer infrastructure, and municipal facilities. Long-range planning and maintenance of an efficient asset management system will ensure consistent and timely investment made towards priority infrastructure projects.

The infrastructure in our communities is the legacy of a multi-generational investment, and stewarded by municipal staff and volunteers. Increasingly, we are recognizing the value of the investment that has been made in our community infrastructure, and the risks we face by not managing for the long term. To address this disconnect more municipalities are turning their attention toward asset management as a process for making informed decisions to achieve the goal of delivering sustainable services, managing risks, and getting value for money invested.

Asset management helps City departments confidently evaluate and communicate trade-offs between service, cost, and risk. This provides the community with a way of prioritizing projects and resources. In doing so it helps decide what infrastructure needs to be replaced or renewed, and how many years you can get out of the investment. It also helps the community figure out how much they should be saving for future infrastructure renewal, and can demonstrate accountability to residents and businesses in the community. Simply put, it's the right thing to do. Berlin's residents and businesses trust and expect the City to be good stewards of the services and infrastructure that they rely on every day.

HIGH-PERFORMANCE MUNICIPAL BUILDINGS

Incorporating energy conservation, energy efficiency, and renewable energy systems as part of municipal facility and public building upgrades, renovations, maintenance, design, and construction projects have the potential to result in energy savings, improved air quality, and a reduction of Berlin's carbon footprint.

Energy consumed in buildings accounts for the majority of the carbon emissions within many cities, and this includes public buildings. Berlin has a high degree of control over their municipal buildings, such as City Halls, schools, the library, and safety service structures. This authority provides City officials with a powerful opportunity to improve energy efficiency and reduce carbon emissions from these municipal buildings, and reduce annual operating costs over time.

Lower energy consumption brought about by improving energy efficiency in municipal buildings means reduced requirements for energy infrastructure and fuel purchasing, thus directly saving money for the municipality and freeing up funds for other projects. Reduced energy consumption also leads to lower vulnerability to fossil fuel price shocks or resource delivery disruptions and improved energy security of the City in general. These municipal building energy efficiency improvements can also serve as a model for private buildings, and inspire building owners to take action.

Berlin's police and fire department buildings are in need of upgrades. Bringing public buildings up to code and/or building new expanded facilities provides an opportunity to improve the energy efficiency of structures.



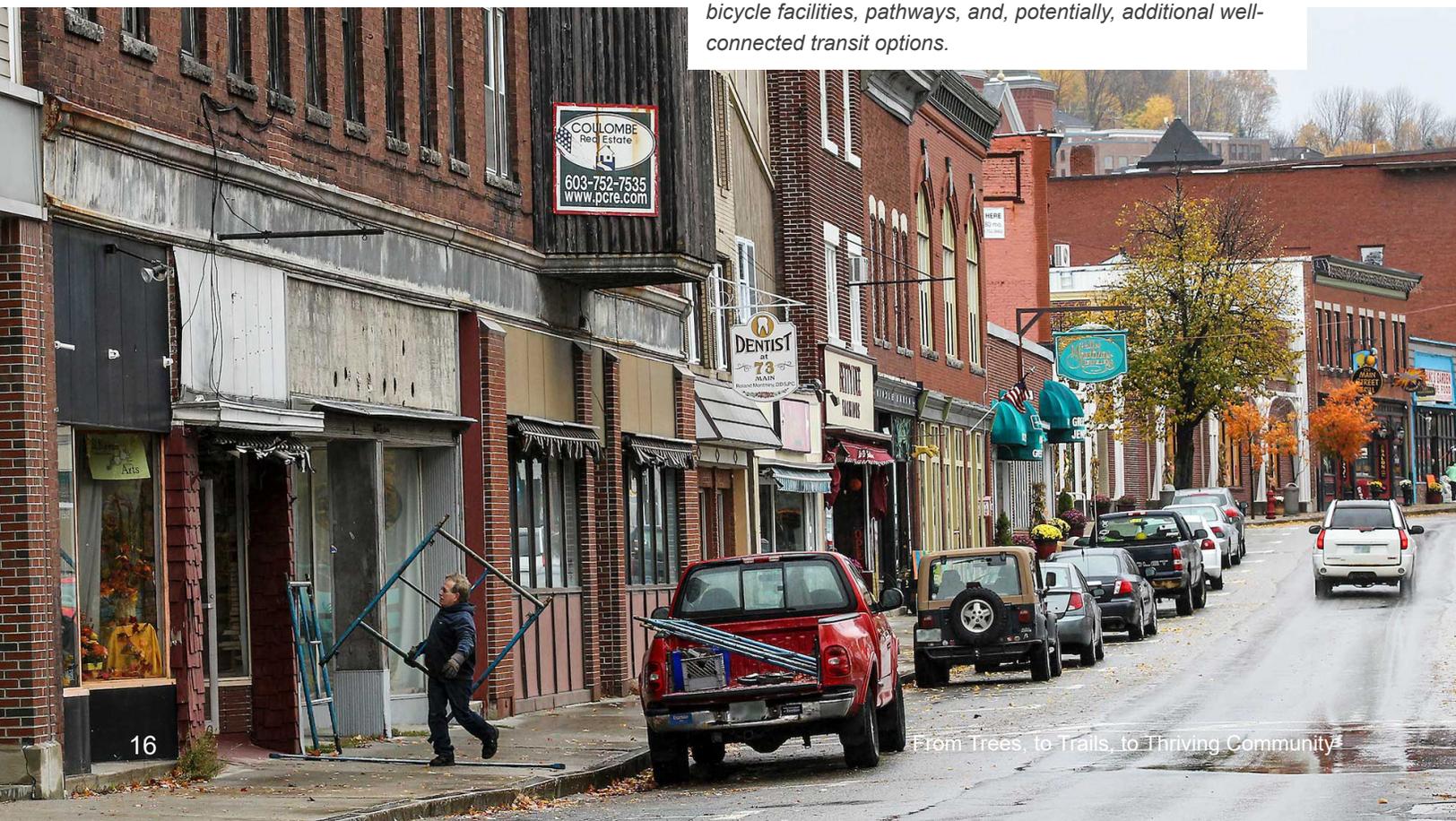
COMPLETE AND GREEN STREETS

Berlin's compact development pattern lends itself to being a walkable and bikeable community with access to a variety of transportation options, beyond the single-occupancy vehicle, including door-to-door on-demand transportation, ridesharing, and regional public transit services.

Complete Streets are streets that are designed and constructed to accommodate all modes of transportation, including automobiles, buses, bicyclists, and pedestrians to the greatest extent possible. For too long, streets have been designed primarily for automobiles and this has had detrimental impacts on the environment and our communities. The New Hampshire Department of Transportation and many other towns and cities are now shifting their transportation planning practices to embrace Complete Street designs by creating right-of-ways that are safe, convenient, and accessible for all users of the road.

The City should work towards developing a network of "Complete and Green Streets" through its Downtown, major transportation corridors, and neighborhood streets to accommodate multiple modes of travel. In planning for its Downtown, Berlin should advocate for traffic improvements that increase pedestrian safety and access, facilitate a well-connected bicycle and pedestrian network, and accommodate for public transportation. Smart Growth America and the National Association of City Transportation Officials (NACTO) have acknowledged that Complete Streets ARE Green Streets, which are streets that integrate vegetation and stormwater management systems within the right-of-way. The City should evaluate the potential for green street investments to transform the public realm and create economic, social, and environmental benefits for all street users and adjacent residents and property owners.

Opportunities exist in Berlin to create a network of sidewalks, bicycle facilities, pathways, and, potentially, additional well-connected transit options.





Above: A complete street demonstration project in Troy, NH. A roadway was transformed for a weekend showing what a bike lane could look and feel like to residents.

TACTICAL URBANISM

City staff and local leaders work to improve the public realm in cities, yet progress can seem slow, which can be frustrating for the public. The cost of making improvements can also be prohibitive, and there is often a lack of resources allocated for this task in municipal budgets. Strategic planning processes with long-term implementation horizons can also make it difficult to be responsive to local social and economic changes, and to actively engage citizens in the process of planning. Tactical urbanism projects can be used to test bigger ideas and infrastructure investments, engage the broader community in evaluating the use, and build public support.

To combat this, temporary interventions and experiments have been increasing in popularity in cities as a way to make improvements that are relatively low-risk, demonstrate action, and allow for feedback. Tactical Urbanism is a process where flexible, action-oriented, and short-term projects are initiated to advance long-term goals related to street safety, public space, and more. They typically focus on the repurposing of underutilized places using temporary materials, transforming them into more dynamic public spaces.

Also known as Do-It-Yourself Urbanism, Pop-Up Placemaking, or Urban Acupuncture, this approach refers to a City, organizational, and/or citizen-led approach to neighborhood building using short-term, low-cost, and scalable interventions to catalyze long-term change. These strategies would enable Berlin to engage the public and tweak designs while the City waits for the funding to make larger-scale infrastructure changes. This also helps to build momentum and support for change, and get some early results until projects can be completed. These projects inspire action, foster community identity, and perpetuate activities and improvements that make the City a better place to live, work, and play.

Tactical Urbanism Projects can include:

- Traffic calming projects like parklets and bump outs
- Public art that activates streetscapes
- Temporary bike lanes or shoulders
- Crosswalks and lane changes
- Flexible seating and activities in public spaces

Strategies and Actions

The following strategies below will help guide Berlin's infrastructure investments and improvements. These were informed by City staff, the Master Plan Committee, and earlier sub-area plans completed by the City, including the 2019 Economic Development Action Plan. Each strategy has a series of related and specific actions outlined below. Please note they are not listed by level of priority.

STRATEGY 1A: MANAGE FACILITY MAINTENANCE AND REPLACEMENT

| # | ACTION |
|------|---|
| 1A.1 | Implement asset management programs across departments and facilities to manage infrastructure maintenance and plan for the replacement of public infrastructure. Adoption of an asset management system will compliment and inform the capital improvement planning process in Berlin and ensure maintenance is completed efficiently. |
| 1A.2 | Prioritize the renovation of Berlin's public works facility and incorporate it in capital improvement planning. This includes improvements to the buildings and storage facilities that are out of date and inadequate, the addition of offices and lockers, a new garage for vehicle maintenance, and some site work to remove underground tanks and rehabilitation of the site. |
| 1A.3 | Commit to continued funding of water and sewer infrastructure improvements and extensions , such as the Route 110 sewer extension. |
| 1A.4 | Fund and complete upgrades to City Hall. The 2023-2028 Capital Improvement Plan identifies upgrades to the City's HVAC system, a new elevator lift, roof replacement, energy efficient window upgrades, and other interior upgrades. |
| 1A.5 | Implement the findings of the Library's 2020 building assessment which includes addressing water drainage from the roof, the repointing of bricks on exterior walls, and replacing glass block windows on both levels of the building. |
| 1A.6 | Proceed with the identified fire station renovation projects which include installing new floors, windows, a boiler, water sealing, and brick repointing, electrical improvements, and paving of the parking lots. This also includes the construction of a new equipment building that would house vehicles and larger equipment and an addition to the existing Fire Department building to support all administration needs. |
| 1A.7 | Fund and complete necessary improvements to the Police/Recreation Department Facility. Develop a cost-analysis report to determine future options for this facility and whether a new building should be considered. This Department has outgrown the current facility and the building is not up to code. Its condition continues to rapidly deteriorate to a point where repair and renovation efforts may not be cost effective. Sewer and water lines are in need of replacement and the roof over the Recreation Department leaks and needs to be repaired. |
| 1A.8 | Partner with AVH to fund and replace the Cates Hill Radio Tower , which transmits for the entire City communications network and is vital to public safety. The existing tower continues to deteriorate and cannot keep up with Berlin's service needs. |

| | |
|--------------|---|
| 1A.9 | Complete the necessary upgrades to the existing indoor recreation center including upgraded court facilities, bathrooms and showers, offices, windows, and repair of the gym floor. These projects are required in order to repair, replace, and extend the life cycle of certain amenities within the facility. It would also aid in the lowering of energy consumption within the building and will lower operating costs. |
| 1A.10 | Begin the process of planning for the construction of a new indoor recreation center or complete significant renovations to the existing recreation facility to better accommodate the needs of community members. Analyze and compare costs of design, siting, and building options to determine a cost-effective way forward. Engage the community throughout this process. Consider the needs of the police station during the redesign and planning for the existing facility. |
| 1A.11 | Explore ways to expand capacity and funding for the City’s Recreation Department , where a lack of funds and staffing limit the ability for this Department to carry out existing programming and address new programming needs (for example, there is a need for additional activities for teens and for those with mental and physical disabilities). |
| 1A.12 | Repair the City’s tennis courts in downtown and at Horne Field to accommodate both tennis and pickleball. |
| 1A.13 | Construct an equipment garage at the Berlin Pollution Control Center to expand storage and provide covered space for equipment. |
| 1A.14 | Replace the terminal building at the Berlin Municipal Airport. The existing building is not adequate. |
| 1A.15 | Support the Solid Waste Department’s efforts to reduce household refuse tonnage to the landfill , largely through public outreach and education on the value of recycling and eventually through the creation of a municipal composting program. |
| 1A.16 | Participate in regional broadband internet initiatives to improve high speed internet service and infrastructure within the City. |

STRATEGY 1B: INVEST IN ENERGY CONSERVATION AND RENEWABLE ENERGY PRODUCTION DURING FACILITY UPGRADES, MAINTENANCE, AND CONSTRUCTION

| # | ACTION |
|-------------|--|
| 1B.1 | Adopt a Net Zero Resolution that identifies a multi-pronged strategy to guide all municipal investments in facility and infrastructure upgrades. The resolution should include energy efficiency, renewable energy, zero waste, and nature-based solutions for carbon sequestration. If well implemented, these investments will have a positive impact on the local economy and will help Berlin participate in national efforts to mitigate the negative effects of climate change. A good framework for the Resolution, in line with similar efforts throughout the country, would be to aim for a 100% renewable energy future by 2050, with an interim goal to reach 100% renewable energy for all local electricity production and consumption by 2030. |
| 1B.2 | Conduct comprehensive energy resource audits for all municipal structures and land. This data will serve as a baseline of information for asset development and the implementation of the Net Zero Resolution. |
| 1B.3 | Pursue the construction of photovoltaic systems on City buildings and land. These could be financed in a number of ways, depending on the situation, including Power Purchase Agreements (PPA) with a third party or direct purchase with City funds or debt instruments. |

| | |
|------|---|
| 1B.4 | Identify opportunities to aggregate electrical power under New Hampshire’s Community Power rules, and leverage local and regional resources to provide low-cost renewable electrical power to residents and municipal facilities. |
| 1B.5 | Pursue the conversions of any remaining public building lights to LED lighting. This will build off the success of the LED streetlight conversation program and continue to improve the energy efficiency of municipal facilities in Berlin. |
| 1B.6 | Research and determine if moving to electric vehicles for the City’s municipal fleet is the right path for the City. Utilize New Hampshire’s 2019 Electric Vehicle Toolkit for Local Governments to plan the transition if feasible. |
| 1B.7 | Implement other measures to improve energy efficiency and electrify municipal equipment on the basis of the recommendations of energy resource audits and City finances. |
| 1B.8 | Recognize and coordinate with a citizen group to discuss, research and develop local energy resources. This group can help the City understand issues around its energy resources, as well as formulate and execute efforts to better exploit or manage these resources. |
| 1B.9 | Identify ways to increase community awareness, workforce development, education, and participation in energy efficiency and conservation practices. |

STRATEGY 1C: IMPROVE BERLIN’S TRANSPORTATION SYSTEM AND UTILIZE TACTICAL URBANISM TO PILOT PROJECTS

| # | ACTION |
|------|--|
| 1C.1 | Adopt a Complete and Green Street Policy and corresponding land use regulations. This will allow the City to apply complete streets design standards on future roadway reconstruction projects to ensure roads are accommodating all modes of travel (where feasible). This will also ensure that traffic calming is incorporated and all transportation modes are accommodated. |
| 1C.2 | Fund and implement a pavement resurfacing program for Berlin’s roadways. This would include ranking streets on a priority basis determined by current conditions, pending utility projects, and traffic volumes. Resurfacing programs prolong the service life of pavement. A properly produced plan can turn failing pavement infrastructure around and aide in maintaining non-failing infrastructure. |
| 1C.3 | Creatively prioritize roadway improvement projects for the next 5-10 years. Regularly budget adequate funds to maintain municipal roads. For bigger projects, utilize the Capital Improvement Plan, TIF District, and other creative sources such as the Transportation Alternatives Program (TAP), the Surface Transportation Program (STP), Highway Block Grant, BUILD grants, and through the Community Development Finance Authority. |
| 1C.4 | Expand the sidewalk network and maintain existing sidewalks more consistently. Increase winter plowing of all sidewalks. |
| 1C.5 | Complete the Riverwalk and identify potential connections with other open spaces, the sidewalk network, roads, and the Downtown. |
| 1C.6 | Develop a multi-modal design manual to guide the buildout of this transportation infrastructure over time so that it is context sensitive. |

| | |
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| 1C.7 | Identify site-specific traffic calming and access management improvements throughout the Downtown so that they can be incorporated into the design and construction of future roadway projects. These designs should incorporate green infrastructure to improve the pedestrian experience, beautify the Downtown, manage stormwater, and provide other benefits. |
| 1C.8 | Update wayfinding signage throughout the City , including street signs, remove signs that are outdated, and repair signs in need of improvements. Improve wayfinding to Berlin's parks and recreation facilities. Create a funding mechanism for this. |
| 1C.9 | Strategically invest in vehicle charging locations within the City to ensure that travelers have the opportunity to charge their vehicles while visiting local businesses. |
| 1C.10 | Embrace tactical urbanism strategies as a way of experimenting while this change unfolds. Highlight the products of up and coming entrepreneurs, artists, and crafts people from the region. |

STRATEGY 1D: PUBLICIZE, INSPIRE, AND EDUCATE ACTION

| # | ACTION |
|-------------|---|
| 1D.1 | Over time, communicate Berlin's commitment to its many municipal assets , and the specific efforts being made at each facility to steward and invest in the municipal infrastructure. This needs to happen both internally and externally, and could be used to inspire action by private property owners and the perception of Berlin as a community. |
| 1D.2 | Complete public education for large capital improvement projects to garner public support for larger expenditures. Utilize the City's public outreach mechanisms including its website, social media, meetings, public access TV, etc. |

2 Improve Community Health and Well-Being

Future land use in Berlin should address potential public health impacts, promote positive health outcomes, and improve individual and community health and well-being.

How a community is planned and designed has a direct affect on the health of its residents. Land development patterns, zoning ordinances, and land use classifications impact walkability and access to key services like healthy food and transportation options. Additionally, local governments have the ability to partner with and support service providers to meet desired outcomes and address community issues related to homelessness, substance abuse, isolation, access to employment options, poverty, lack of healthy food options, access to transportation, and others.

To guide future actions, three broad goals have been identified:

Increase opportunities for Berlin residents related to housing, job training, living wage employment, education, transportation, amenities, reduced physical barriers, and basic services.

Support and partner with local organizations and service providers working to identify and address community health issues such as substance abuse, lack of oral health care, access to housing, homelessness, financial insecurity, lack of job skills, and others.

Ensure Berlin is an age-friendly community that provides for its seniors, youth, veterans, and families.

BACKGROUND

Healthy communities are designed, built, and programmed to support the physical, mental, and social well-being of the people who live, work, play, and visit there. Research has found that people's environments – where they live and work, how they travel, what they eat, where and when they play, socialize, and are physically active – have a major impact on their health and well-being.

When developing policies, projects, programs, and initiatives related to community health, the following areas should be considered:

- **Access to diverse, convenient, and accessible transportation options**

Access to transportation is critical to quality of life and is important for all ages. Each of us need some form of transportation to travel to work, the grocery store, pharmacies, parks, schools, and other destinations. Berlin's compact development pattern and road network present an opportunity to promote and accommodate active transportation options like walking, bicycling, and other human-powered activities. As the City continues its road improvement work, sidewalk maintenance and construction, improving unsafe pedestrian crossings, adding or widening shoulders for bicyclists, and providing supporting infrastructure like bike racks and safety signage should be a priority.

- **Location and type of housing**

Access to a diverse housing supply enables community members of varying income levels and walks of life to secure safe, quality housing for themselves. Ensuring a supply of diverse housing options should include long-term rentals, affordable housing, starter homes, middle to upper income housing, assisted living facilities, 55+ housing, and a range of unit types including single family housing units and multi-family units. Berlin's housing issues include the following listed

A HEALTHY PLACE:

- Offers healthy and affordable housing options, and a variety of safe, comfortable, and convenient transportation choices.
- Provides access to healthy foods, the natural environment, and other amenities that allow people to reach their full potential.
- Fosters community connection and social networks that offer support, enhance trust, and foster civic engagement.
- Promotes livability by providing access to parks, trails, community spaces, public safety, access to arts and culture, and social services.
- Addresses unique community issues with innovative and sustainable solutions.
- Embraces equitable policies and community design.

below. Please note that this list is not arranged in any particular order.

1. The conversion of housing units in the City to short-term rentals and the presence of second homes reduces the housing stock for long-term renters and homeowners.
2. Berlin has limited middle to higher income housing units available.
3. The demand for purchasing a home in Berlin is higher than the supply of quality units available.
4. Home prices have increased in recent years, exacerbated by the COVID pandemic, making purchasing a home not affordable to many current residents as they're out-competed by purchases from other markets.
5. Though significant work has been done in the last decade, there is still much of Berlin's building stock that is unusable or requires significant improvements to be used for commercial, residential, or mixed use spaces.
6. There is a need for housing to be tied to

jobs in the area, so more people can live and work in Berlin.

7. The COVID pandemic and other issues, like substance misuse, have resulted in increases in homelessness in Berlin and in the surrounding region.

Housing issues are complex and multi-faceted, requiring a long-term, multi-pronged approach consisting of a number of solutions. Berlin must commit to creating a comprehensive strategy to meet housing goals including expansion of the existing housing supply by supporting new housing development.

- **Quality and distribution of places to play, exercise, and gather**

Having spaces for all ages to gather, recreate, and play, and streets with active pedestrian activity create a vibrant City. Having walkable roadways that connect to activity centers enables community members to walk for both recreation and for transportation. Berlin has a number of places to recreate and gather in and near the Downtown including the Riverwalk, its local parks, athletic fields, and playgrounds,

the Recreation Center, the schools, and the Senior Center. Additionally, the Parks and Recreation Department provides diverse programming to Berlin community members including sports fitness classes, and seasonal programs. However, residents have indicated that additional gathering spaces, recreation opportunities, and places for activity would greatly improve quality of life for many in Berlin. Suggestions have included a local coffee shop/diner, more restaurants, a movie theater, more walking trails and paths, a community garden, a dog park, and a swimming pool.

- **Access to healthcare services, including physical and mental health, and social services**

Being a regional center in the North Country, Berlin has high-quality healthcare and social services not available in smaller communities. The Androscoggin Valley Hospital/North Country Healthcare is located in Berlin and provides important services and employment for the community and region. The North Country Health Consortium and Coos County Family Services provide substance misuse programs;

Berlin's Recreation Department coordinates year-round indoor and outdoor youth programming including team sports (such as soccer), a ski and snowboard program, and fitness classes.



recovery support; oral health programs; family planning; Women, Infant, Children (WIC) Nutrition Services; and response to Sexual and Domestic Violence. Tri-County CAP offers domestic violence services, food assistance, senior meals, senior center programming, homeless intervention and prevention, an aging and disability resource center, door to door transportation, and other services.

Promotion of these resources and the social and educational support resources available within the high school and community college to the greater population is needed to increase awareness of what Berlin offers to the wider community. Additionally, encouraging strong partnerships between organizations and the City will result in addressing gaps in service, better overall coordination of services, resource sharing, and capacity building.

- **Access to education and job training**

For Berlin residents to thrive, there must be high-quality early childhood education, public school education, and available pathways for diverse continuing education after high school including college education and job training. A strong social support network helps individuals as they navigate through these transitions and make decisions related to their education and career development, as they enter the workforce or transition to a new career path. This has clear economic implications. To attract business investment, Berlin needs a productive and well-trained workforce. In Berlin, NH, the community college is currently building an integrated workforce development program at White Mountains Community College

- **Access to healthy, affordable food**

Providing opportunities to access healthy food options is critical for individuals and families overall health. Berlin has a number of food

pantries operating in the City, and Tri-County CAP offers meal assistance to Berlin residents. The NH Food Bank has also been sending a mobile food pantry to Berlin for the last few years to distribute fresh, healthy food to residents that need it.

During the community engagement phase of this project (and as noted in previous plans and studies), there was a desire shared by residents to have a community garden in the City. Community gardens provide residents space to grow produce for themselves and their families. Creating gardens within or near the school property provides an opportunity to provide food services with fresh foods and education of students on the value of closing healthy foods. They're also known to be social gathering places that beautify the City, and provide additional greenery. The City could play a role in helping coordinate a project like this with other community partners.

GUIDING PRINCIPLES AND PRACTICES



Androscoggin Valley Hospital, which is part of North Country Healthcare, is an acute care and critical access hospital that provides inpatient and outpatient services to a service area of ~17,000 people.

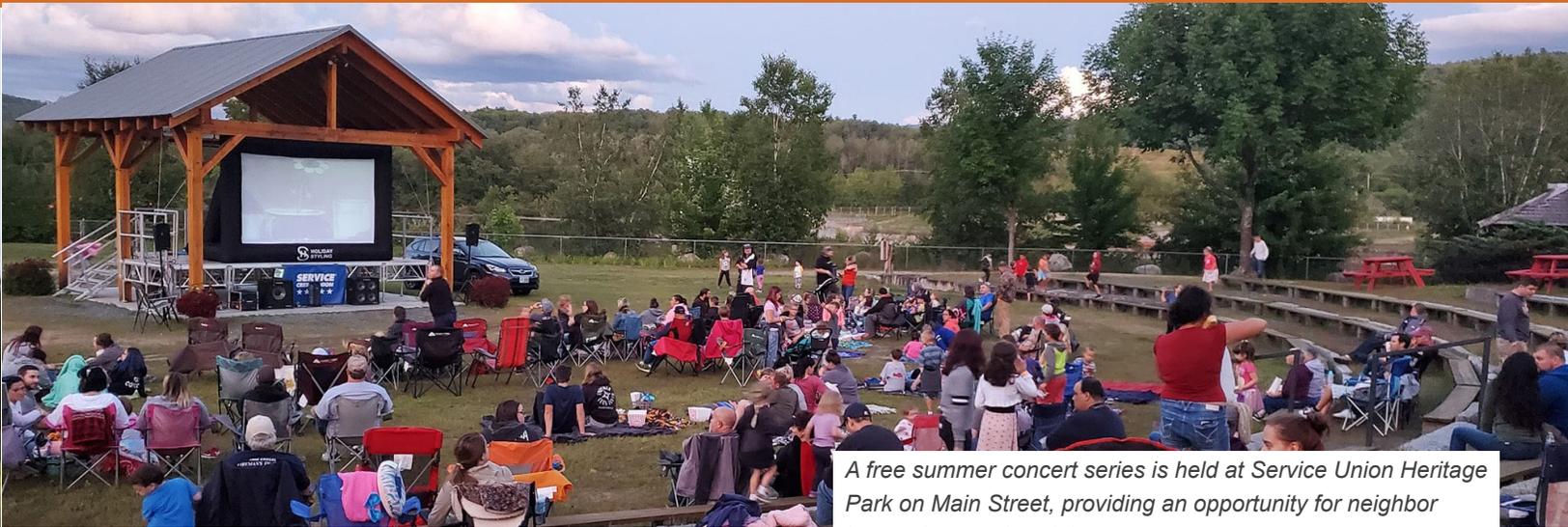
“HEALTH IN ALL POLICIES” FRAMEWORK

A “Health in All Policies” framework seeks to institutionalize considerations of health, equity, and sustainability as a standard part of decision-making processes. This collaborative approach ensures public health perspectives are integrated into decision making for project and policy work.

A “Health in All Policies” framework is based on the recognition that our greatest health challenges (health inequities, climate change, substance misuse, chronic disease, inactivity, etc.) are highly complex and often linked through the social determinants of health. The social determinants of health are the circumstances in which people are born, grow up, live, work and age, and the wider set of forces and systems affecting these circumstances. Promoting healthy communities, and in particular health equity, requires that we address the social determinants of health, such as public transportation, education access, job training, food security, economic opportunities, and more. While many public policies work to achieve this, conflicts of interest may arise where collaboration can help shape better and more positive policy outcomes. Alternatively, the unintended impacts of policies are often not measured and addressed. Building channels for dialogue and decision-making that work across traditional government policy silos is key for effective collaboration.

What this means is that there is benefit in local government, hospitals, higher education institutions, community health workers, parks and recreation providers, social service providers, and faith based organizations, working together to achieve specific goals or projects related to community health issues, policies, and future initiatives. This approach may help guide Berlin’s policy work to ensure it creates positive community health outcomes for all residents.

GUIDING PRINCIPLES AND PRACTICES



A free summer concert series is held at Service Union Heritage Park on Main Street, providing an opportunity for neighbor interactions and social engagement.

DESIGNING HEALTHY COMMUNITIES

At its heart, community planning aims to support the health, safety, and welfare of all residents in a City through sound land use policies, design, and implementation. Designing healthy communities has the potential to promote activity, foster well-being, and support community members.

Consider the following guiding concepts for designing and building model healthy communities, which were informed by multiple sources including the American Planning Association, Center for Disease Control, and Blue Zones, an educational organization named after the areas in the world where people live the longest and are the healthiest.

People First Design: People, human-scale development, and quality-of-life are more important than the speed and efficiency of automobiles. Street design, especially in Downtown areas, can accommodate cars, but give the greatest support and incentive to people on foot and bike.

Active Transportation is a Convenient Choice: Make walking and active movement the convenient alternative for residents.

Social Engagement is Easy: The layout and design of buildings and open spaces should maximize the easy and natural mixing of people of all abilities (i.e. ADA accessibility, etc.).

Green Design Enhances Everyday Life: To the maximum extent possible, trees and other natural elements are integrated into the built environment to address multiple needs related to local aesthetics, environmental health, and air quality.

Paths and Walkways: Paths (and low-volume streets) lead to activity centers and destinations, free of barriers, and are well-connected.

Strategies and Actions

The following strategies below will help guide Berlin’s community health and well-being planning efforts. These were informed by City staff, the Master Plan Committee, the public, and sub-area plans recently completed by the City, including the 2019 Economic Development Action Plan. Each strategy has a series of related and specific actions outlined below. Please note they are not listed by level of priority.

| STRATEGY 2A: IMPROVE COMMUNITY HEALTH | |
|---------------------------------------|---|
| # | ACTION |
| 2A.1 | Conduct an inventory of the critical community health issues in Berlin. Facilitate annual round table discussions with key stakeholders to identify issues and solutions. Build on the success of the Coos County Dental project. |
| 2A.2 | Fund and invest in the City departments that can promote and support healthy living such as the Health Department and Recreation Department. Market these resources to the public. |
| 2A.3 | Work with Tri-County CAP to better promote their services to the broader population. This includes their free meals program, Tri-County Transit, homelessness services, senior center, and others. |
| 2A.4 | Identify ways the City can support community organizations and social service providers, such as Tri-County CAP, Coos County Family Health, and North Country Healthcare working to address issues like substance abuse and homelessness in the community. |
| 2A.5 | Pursue development of a downtown community wellness center to provide gathering space, medical office space, counseling services, educational space, and other needed community amenities. Conduct financial feasibility analysis, identify partners, research funding sources, and inventory available spaces. |
| 2A.6 | Better understand the childcare needs of families in Berlin and identify whether childcare options in the City are sufficient. |
| 2A.7 | Encourage and facilitate the investment in resources that help the elderly to age in place, such as public transportation, energy efficiency improvement, broadband access for tele-health, real estate tax exemptions, and programs for retrofitting existing units. |
| 2A.8 | Continue to build out community and family friendly amenities like playgrounds, indoor community/play space, and community fun/educational events to encourage healthy habits and living. Consider unique recreation infrastructure to add to facilities such as a splash pad, natural playground, and outdoor exercise equipment. Utilize flexible outdoor recreation space for fitness and exercise classes. |
| STRATEGY 2B: INCREASE FOOD SECURITY | |
| # | ACTION |
| 2B.1 | Revisit hosting a farmers market in the summer. |

| | |
|------|---|
| 2B.2 | Identify potential sites for a community garden. Identify potential partners (like public schools) and a clear process for establishing a garden space and the necessary infrastructure to support it. |
| 2B.3 | Continue to promote the City's food pantries and support the ongoing visits of the NH Food Bank's Mobile Food Pantry. |
| 2B.4 | Continue to support the establishment of a co-op grocery store to serve both locals and visitors. Establish a partnership with the Androscoggin Food Coop organization. |

STRATEGY 2C: CREATE HOUSING AND TRANSPORTATION CHOICES

| # | ACTION |
|------|--|
| 2C.1 | Collaborate with surrounding communities on regional housing and public transportation solutions. Participate in the work North Country Council is engaging in on these issues. |
| 2C.2 | The current lack of public transportation options in Berlin and the surrounding region should be explored to better understand they type and regularity of transit services desired by residents. |
| 2C.3 | Launch a public awareness campaign in Berlin to educate the public about housing issues that exist in the City and create a call to action. These include the need for greater housing diversity in Berlin, the lack of housing units to meet demand, high housing costs, and the connection between housing and quality of life and economic health. |
| 2C.4 | Investigate the feasibility of establishing a housing trust in Berlin. Partner with Berlin Housing Authority and other housing organizations to further evaluate this option. |
| 2C.5 | Allow for a range of housing alternatives in City zoning, whether small units, co-housing, or others that may suit changing needs and demographics. |

STRATEGY 2D: IMPROVE ACCESSIBILITY CITY-WIDE

| # | ACTION |
|------|---|
| 2D.1 | Evaluate and improve, where needed, the ADA accessibility of Berlin's public facilities, transportation network, parks, and public spaces. |

STRATEGY 2E: PROMOTE AND EXPAND RECREATION AND CULTURE OPPORTUNITIES FOR ALL

| # | ACTION |
|------|---|
| 2E.1 | Maintain trails, sports fields, courts, playgrounds, and other amenities such as seating and landscaping, in good condition. |
| 2E.2 | Ensure all parks and recreation resources have adequate lighting to improve security and sense of safety at night. |
| 2E.3 | Add amenities to parks and recreation resources, such as cigarette receptacles, trash cans, bike racks, dog waste bags, restrooms, and water fountains, where appropriate. |
| 2E.4 | Pursue opportunities, in collaboration with partners, to create parks and walking paths. Consider community desired facilities, such as a dog park. Prioritize these in areas that are currently underserved. |
| 2E.5 | Continue to support the work of local and regional artists through public art competitions, funding for creating gallery space, support for creation and use of theater space, and encouraging the use of vacant space for displaying art. Access to public art and cultural activities can greatly improve quality of life for community members. Utilize art, crafts, and local start up products in the tactical urbanizing of vacant spaces in Downtown. |

3

Revitalize the Downtown and Adjacent Neighborhoods

At the center of Berlin's developed area is a Downtown that is the epicenter of social, civic, and economic activity in the community.

Declining population size and a shifting local economy eroded some of this activity over time, but the residents of Berlin are now advocating for investments that will enable the Downtown to once again become a thriving center for these activities and more. Following the vision and implementation actions outlined in this Master Plan, the core of the Downtown area will become the launching point for daily life and adventures in Berlin and the surrounding region. It will also become the service, hospitality, and entertainment center that residents and visitors will return to over the course of the day to connect with friends and family, and all of this will help Berlin continue to build community. The adjacent neighborhoods will also benefit from this investment and increased activity over time, and will become even more desirable places to live and work with easy access to the Downtown area.

To guide future actions and address this need three broad goals have been identified:

Utilize both regulatory and non-regulatory approaches to promote the reuse of vacant buildings and infill development within the Downtown area.

Continue to actively leverage public-private partnerships to revitalize the existing buildings and vacant parcels, the infrastructure, and the level of activity in the Downtown.

Make the Downtown more pedestrian and bicycle friendly and a destination for residents and visitors through coordinated and strategic infrastructure investments, and integration with other adjacent facilities like the parks, playground, and Riverwalk.

BACKGROUND

This revitalized urban center should be active, pedestrian friendly, and have a mix of uses, including unique stores and restaurants, and events that draw people to Downtown. In order to create this type of Downtown area, the City of Berlin will need to make investments that reinforce a unique and an inviting atmosphere that people want to spend time in and invest in over the coming decade.

This Downtown environment should also compliment and counterbalance the wealth of natural and recreation resources that surround Berlin's Downtown. Together, these resources will serve as the foundation of the City's nature-based placemaking initiatives, and will highlight and rebrand the wonderful amenities and quality of life in New Hampshire's northernmost City.

In achieving Berlin's vision for a vibrant Downtown, the following focus areas have been identified:

- **Public Infrastructure:** Assess the quality and condition of Berlin's existing public infrastructure, including water, sewer, stormwater, roadways, sidewalks and streetscapes, parking, lighting, landscaping, and other amenities in the Downtown area. As deficiencies are identified and upgrades are designed for this area they should incorporate other strategies identified in this Master Plan including complete and green street design strategies. Public infrastructure investment will spur interest in private redevelopment opportunities of the Downtown area, and provide a solid foundation for regulatory changes.
- **Streetscape Improvements:** Identify additional streetscape improvements that are needed to make this a lively and inviting Downtown, such as seating, outdoor dining and event spaces, street trees and plantings,

public art, bicycle racks, and other amenities. These additions will make Downtown Berlin a comfortable, walkable, and active pedestrian environment for residents and visitors. Engaging in creative placemaking activities (which have been explained in further detail on page 47) will help support these infrastructure and streetscape improvement projects, while reflecting the history and character of the community, and building capacity and support for the work Berlin is so heavily invested in. The City should highlight the work of local residents, community members, and organizations who are from the region in the tactical urbanism techniques to revitalize downtown vacant spaces.

- **Incentives and Regulations:** Incentivize, guide, and support development and redevelopment opportunities in the Downtown by ensuring the land use regulations are clear and offer the appropriate flexibility for developers. The creation and adoption of a form-based code for the Downtown area would be the most effective regulatory approach to accomplish this, and could be tailored to the specific context and vision for the area.

These changes should be complimented by efforts to promote existing economic development tools the City offers to property owners, and the creation of new incentives, such as a Tax Increment Financing District within the Downtown area, which is used to secure funds for public infrastructure investment during the development process. The City of Berlin should also prioritize working with property owners and businesses in the Downtown area to identify partnership opportunities. All while continuing the work of acquiring and demolishing buildings that are beyond repair, prioritizing redevelopment opportunities, and exploring ways to further incentivize building facade improvements.

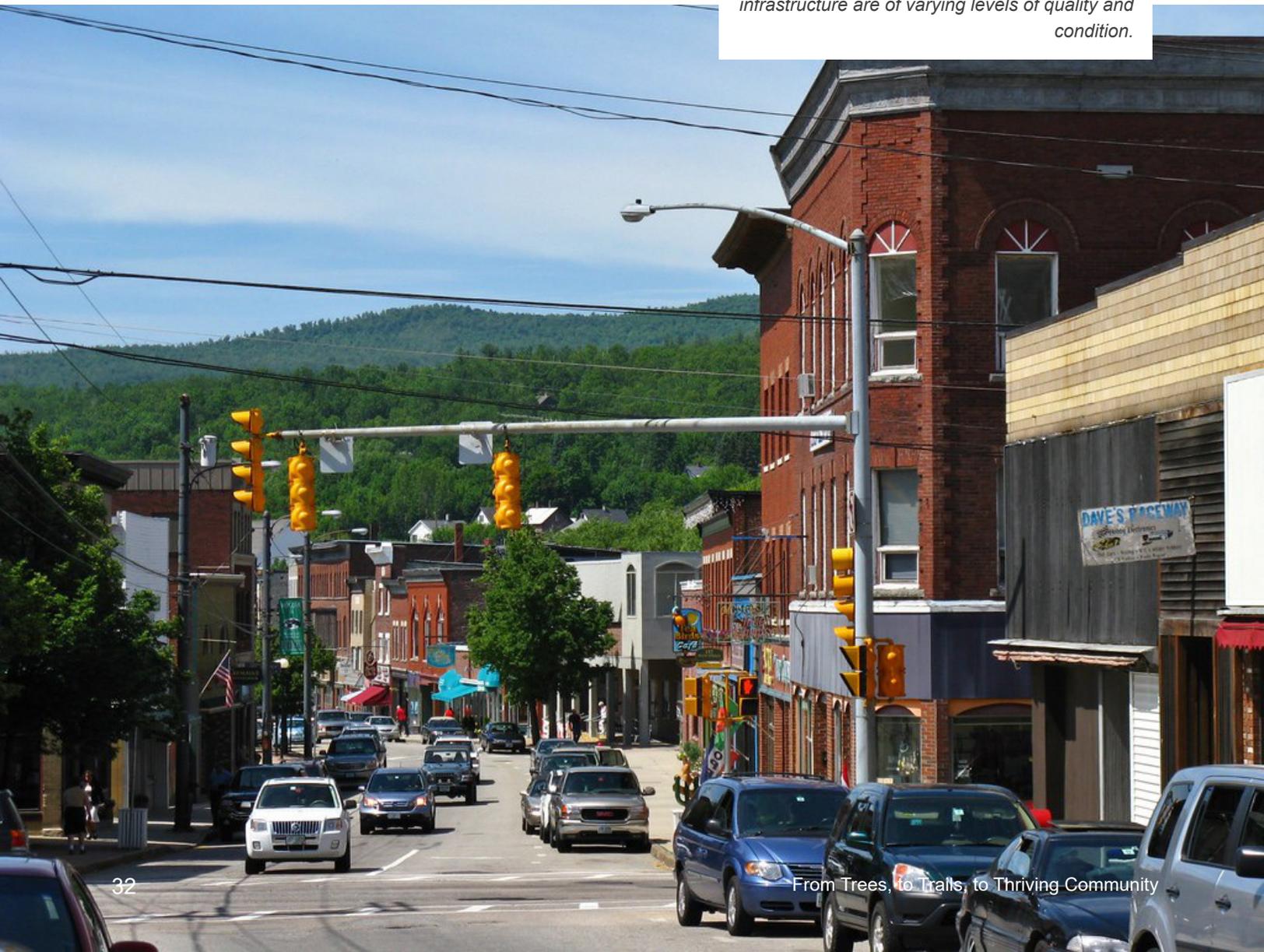
With an investment in the roadway and streetscape infrastructure along Main Street and Pleasant Streets, and through a clear and thoughtful regulatory process with incentives for higher density mixed-use development projects, the City will generate greater interest from private developers. The resulting infrastructure upgrades, street trees, and green spaces that are integrated into this dense urban environment will enhance its appearance and reinforce the connection to the surrounding natural lands.

Over time, this success will radiate out through the adjacent neighborhoods and fuel investments in existing and new structures that will broaden the housing supply, and provide new

opportunities for lower density non-residential business activities. As an original live, work, play community, new opportunities for restaurants and lodging establishments become a reality within this revamped urban landscape. These establishments and the experiences of their customers will be enhanced by the views of Mt Forist, Mt Jasper, and the surrounding landscape that helps define Berlin's identity.

Please note that this "Revitalize the Downtown and Adjacent Neighborhoods" section is directly informed by the other vision themes in this Plan.

Berlin's Downtown buildings and public infrastructure are of varying levels of quality and condition.



Guiding Principles and Practices



A Form-Based Code has the potential to spur new investment, infill development, and create a clearer regulatory process for private property owners and developers.

FORM-BASED CODE REGULATIONS

The City has the potential to be a strong public partner in Berlin's Downtown redevelopment efforts. Supportive land use regulations, a clear regulatory process, and communication of incentives and available programs will help property owners and businesses revitalize Berlin's Downtown area. A Form-Based Code for the Downtown could help achieve these conditions.

A form-based code is a land development regulation that fosters a predictable regulatory process, generates quality development results, and contributes to the public realm (sidewalks, streetscapes, etc.). This is accomplished by focusing on the physical form of the development (rather than allowable land uses) as the organizing principle. A form-based code is a regulation, not a mere guideline, adopted into City land use regulations. A form-based code offers a powerful, visual, and user friendly alternative to conventional zoning regulation. Form-based code regulations can best be applied to a Downtown environment to enhance walkability, the public realm, and the overall streetscape while creating a dense mixed use environment.

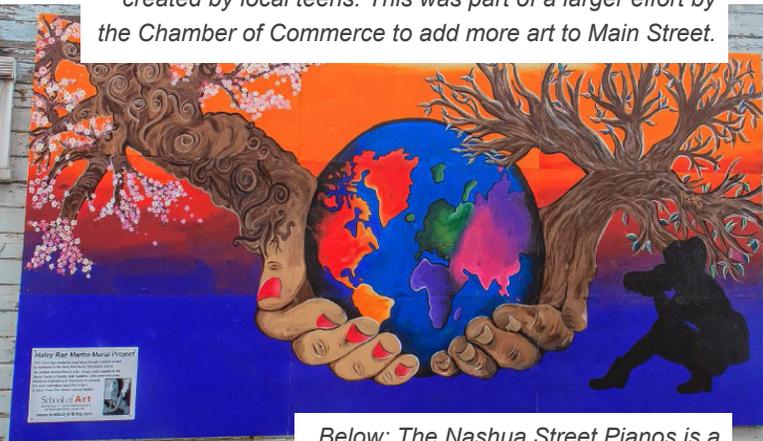
CREATIVE PLACEMAKING

Placemaking is a hands-on, people-centered approach for improving a City. Placemaking inspires community members to act collectively to reimagine and reinvent public spaces, thereby strengthening the connection between its people and places. Creative placemaking is a technique used by communities to embrace public art in the built environment, engage local residents, improve public space, and contribute to the creation of a distinct, inviting community. Creative placemaking projects can range from a sculpture in a public park to a mural on a building facade to a festival that draws new visitors to the Downtown, or a theater performing works by local and regional playwrights. Creative placemaking can also be a powerful economic development initiative which attracts visitors to the City.

Below: The City of Rochester, NH has expanded its public art throughout the Downtown as part of their economic development strategy.



Below: A public mural in Downtown Concord, NH that was created by local teens. This was part of a larger effort by the Chamber of Commerce to add more art to Main Street.



Below: Littleton, NH has used public art to define its entrance to its River District. The floating umbrellas add whimsy and character to Littleton's Main Street.



Below: The Nashua Street Pianos is a Downtown program that creates public art from pianos and are located on the streets for anyone to play or visit.



Below: In Franklin, NH a local artist creates sculptures from salvaged auto parts and displays them at Scott Marceau Park in Downtown Franklin.



Below: Bubbles and a giant Connect Four game on Elm St. during Manchester NH's "The Loop", a kickoff event for its placemaking and urban renewal program.



From Trees, to Trails, to Thriving Community

Strategies and Actions

The following strategies below will help guide Berlin’s Downtown revitalization efforts. These were informed by City staff, the Master Plan Committee, the public, and sub-area plans recently completed by the City, including the 2019 Economic Development Action Plan. Each strategy has a series of related and specific actions outlined below. Please note they are not listed by level of priority.

| STRATEGY 3A: INVEST IN THE DOWNTOWN INFRASTRUCTURE | |
|--|--|
| # | ACTION |
| 3A.1 | Complete a comprehensive assessment of all public infrastructure in the Downtown area and identify priorities for upgrades over the next 5-10 years. This includes water, sewer, roadways, and sidewalks. |
| 3A.2 | Design, fund, and implement a comprehensive roadway, sidewalk, and streetscape project along Main Street and Pleasant Street that includes the connecting roadways. This scale of investment should be coordinated with any other planned maintenance or utility work in the project area including the use of steam for the melting of snow on streets and sidewalks. |
| 3A.3 | Implement a coordinated and improved parking plan that supports Downtown shopping and living opportunities. This network of public and private parking facilities should include a wayfinding plan and improved signage, and other amenities such as public restrooms and electric charging stations. |
| 3A.4 | Continue developing an inventory of existing buildings in downtown, including documentation of any issues related to health/safety, structural concerns, and other areas to establish a base understanding of areas of concern. Identify any catalyst sites that have the potential to create momentum and work with owners to discuss opportunities. |
| 3A.5 | Establish a facade improvement program to provide funds to Downtown property owners to make upgrades to the appearance of their buildings. InTown Concord, a non-profit in Concord, NH, recently launched a facade improvement program for their Downtown. |
| 3A.6 | Continue analyzing the redevelopment opportunities for key parcels in Berlin such as the Brown School, 121 Main Street, and the vacant parcel near City Hall. Conduct a market analysis with community engagement to identify community supported and feasible redevelopment scenarios to be used in a developer RFP. Consider the impact on transportation and parking infrastructure. |
| 3A.7 | Continue to pursue and install the radiant snowmelt system on Main Street and surrounding sidewalks this would utilize excess generated hot water from Burgess Biopower to aid in snow melting and winter maintenance activities. Additionally, investigate ways to make excess heat available to the surrounding abutters to reduce their heating costs. |
| 3A.8 | Consider creative mechanisms to fund Downtown infrastructure improvements including public-private partnerships, municipal bonds, etc. |

| | |
|--------------|---|
| 3A.9 | Investment in an economic development organization and staffing will be necessary to coordinate the public/private partnerships necessary to bring these changes to the Downtown and broader community. Such an organization would assist existing property and business owners as they navigate the process and participate in this revitalization. They could also be important points of contact and recruiters for new business and development activity. |
| 3A.10 | Rehabilitate or relocate the Dead River Channel in the Downtown area. This project includes the rehabilitation or relocation of the channel carrying the Dead River through the downtown area. Coordinate the collaboration of all parties to deal with the failing infrastructure in this location. This project should include a channel relocation which would utilize the abutting properties that are currently owned by the City along Pleasant Street. The rehabilitation of the channel was listed as an action item in the 2016 Hazard Mitigation Plan. Repairs will be required as part of the Downtown Rebuild proposed along with the Snow Melt System improvements. |
| 3A.11 | Provide convenient bicycle lanes and parking in the Downtown area and link to the sidewalk network and parking facilities. |

STRATEGY 3B: POLICY AND REGULATORY CHANGES

| # | ACTION |
|-------------|--|
| 3B.1 | Complete a comprehensive regulatory audit and revision of Berlin’s existing land use regulations to determine if there are any regulatory barriers to the Master Plan vision for revitalization. This audit process should also be used to identify opportunities to increase density and incorporate other incentives that will encourage new development activity in this area of the City. |
| 3B.2 | The new RSA 79E housing related provisions should be reviewed and evaluated for the Downtown and surrounding neighborhoods. This tool incentivizes investment in the revitalization of existing residential structures. |
| 3B.3 | Develop and adopt a Form-Based Code for the Downtown. This type of zoning would provide an opportunity to streamline, help visualize, and clearly communicate the regulatory requirements and opportunities to future applicants. The design standards included should also incentivize efforts to preserve Berlin’s distinct character. Lancaster, NH has adopted a similar set of regulations for their Downtown. |
| 3B.4 | Develop a Tax Increment Financing (TIF) District for the Downtown area of Berlin to provide an incentive for developers/property owners and fund public infrastructure investment as development and redevelopment continues. |
| 3B.5 | Consider allowances for use of vacant store fronts for galleries, pop-up shops, and other temporary uses that will bring life, vibrancy, and beauty to Main Street. Consider activating vacant storefront or spaces temporarily when Downtown already has ample pedestrian traffic (such as the ATV festival or during a Holiday event). |

STRATEGY 3C: CREATIVE PLACEMAKING INITIATIVES

| # | ACTION |
|-------------|---|
| 3C.1 | As Berlin begins to make improvements to the Downtown area, it is important that the City also identify creative ways to activate the built environment, especially empty and underutilized spaces. The use of art installations, pop up events and activities, and other techniques will generate a buzz and give residents and visitors additional reasons to frequent the Downtown. |

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|------|---|
| 3C.2 | <p>Utilize tactical urbanism techniques to experiment with planned or pending infrastructure improvements. These visible experiments generate interest and activity in the Downtown and adjacent neighborhoods. They also provide opportunities to solicit feedback and adjust the designs to the longer lasting infrastructure improvements Berlin is investing in over time.</p> |
|------|---|

STRATEGY 3D: PARTNERSHIPS AND EVENTS

| # | ACTION |
|------|---|
| 3D.1 | <p>Work with partners like the Berlin Main Street Program, St. Kieran’s Community Center for the Arts, the Public Library, and Tree City Arts and identify ways to support their projects and complete creative placemaking initiatives in Berlin.</p> |
| 3D.2 | <p>Expand events in the Downtown area to draw visitors and support local businesses. It is important that the residents of Berlin build on their long tradition of signature community events, and bring regular events to the Downtown in all seasons. This should include the continuation of existing signature events that could have a Downtown component, and the creation of new events that draw residents and visitors to the Main Street and Pleasant Street area.</p> |
| 3D.3 | <p>Meet with the Northern Forest Center to explore opportunities for collaboration through their Strengthening Communities initiative. This program has four tracks: building active communities, creating community forests, increasing local capacity, and investing in place.</p> |
| 3D.4 | <p>Expand the volunteer base to make downtown improvements, including youth, for the downtown association to assist with beautification efforts, networking opportunities, and collaboration among downtown business owners.</p> |

4 Support and Expand the Tourism and Outdoor Recreation Industries

Berlin has long been a popular tourism and recreation destination, and a launching point for outdoor adventures in northern New Hampshire.

Known for its easy access to the great outdoors, and the vast natural resources within close proximity to the Downtown area (including trails, rivers, mountains, and more), natural resources and outdoor recreation have driven increased visitation to the City and the region. Berlin is a trail town, a river town, a mountain town, and provides four seasons of recreational opportunity. Many visitors are specifically coming to recreate and enjoy OHRV riding, snowmobiling, hiking, biking, hunting, fishing, boating, birding, rock climbing, and many other activities.

However, the related recreation assets are currently being utilized to varying degrees. One of the main reasons that Berlin is such a destination is that 70% of Berlin's land area is permanently protected as national forest, state park, or conservation land. While this protected land includes important wildlife habitat, including some of the highest ranked habitat in New Hampshire, much of this land is also available for various types of recreation.

To guide future actions and address this need four broad goals have been identified:

Focus on supporting the outdoor recreation industry and encouraging tourism amenities including lodging, food, and entertainment venues.

Continue to support the OHRV/Snowmobile user base and market while expanding other non-motorized outdoor recreation infrastructure and uses.

Develop new partnerships to increase the range of recreation opportunities, infrastructure, trained workforce, and amenities including additional trails, signage, parking, and regional connections.

Balance the needs of both visitors and residents as the City focuses on strengthening the tourism economy and the infrastructure needed to support it.

Berlin is a City with a national forest, state park, 130 miles of OHRV and snowmobile trails and an annual OHRV festival, hiking opportunities close to Downtown, a neighboring ski jump, two rivers, lakes, campgrounds, and an established climbing area. While these resources have driven increased visitation of all types to the region, Berlin's biggest challenge is providing tourism amenities to capitalize on these visitors. There is also enormous potential to better connect the City's recreation resources to each other, to other trail networks beyond municipal boundaries, and to its major transportation corridors and Downtown.

The developed portion of Berlin equals 8% of the total land area and is concentrated on either side of the Androscoggin River and the terminus of the Dead River. This is where residents, businesses, and visitors mix and where future visitor amenities, including food service, lodging, retail, and others, will be located. The Downtown and adjacent neighborhoods provide access and views to the nearby rivers, mountains, and vast recreation lands, such as Mt. Jasper and

Mt. Forist. While this portion of Berlin does have some natural elements, such as street trees and vegetation, additional landscaped areas integrated in the urban environment would make the City more livable and desirable to residents and visitors alike.

There are a number of existing businesses that support the outdoor recreation economy in Berlin, and represent industries and sectors with room to grow as additional recreation facilities are built and existing recreation facilities continue to be marketed to tourists. There are also important outdoor recreation spaces and infrastructure in Berlin that currently contribute to the City's local economy, ecosystem health, and resident's quality of life including: Jericho Mountain State Park, Berlin Fish Hatchery, Mount Jasper, Mount Forist, Kilkenny Loop Road, Androscoggin River and the Dead River, Little People's Pond, the various trail networks, and extensive hunting lands.

Over the past decade Berlin has become a major destination and especially well known in the Northeast for OHRV and snowmobile enthusiasts.

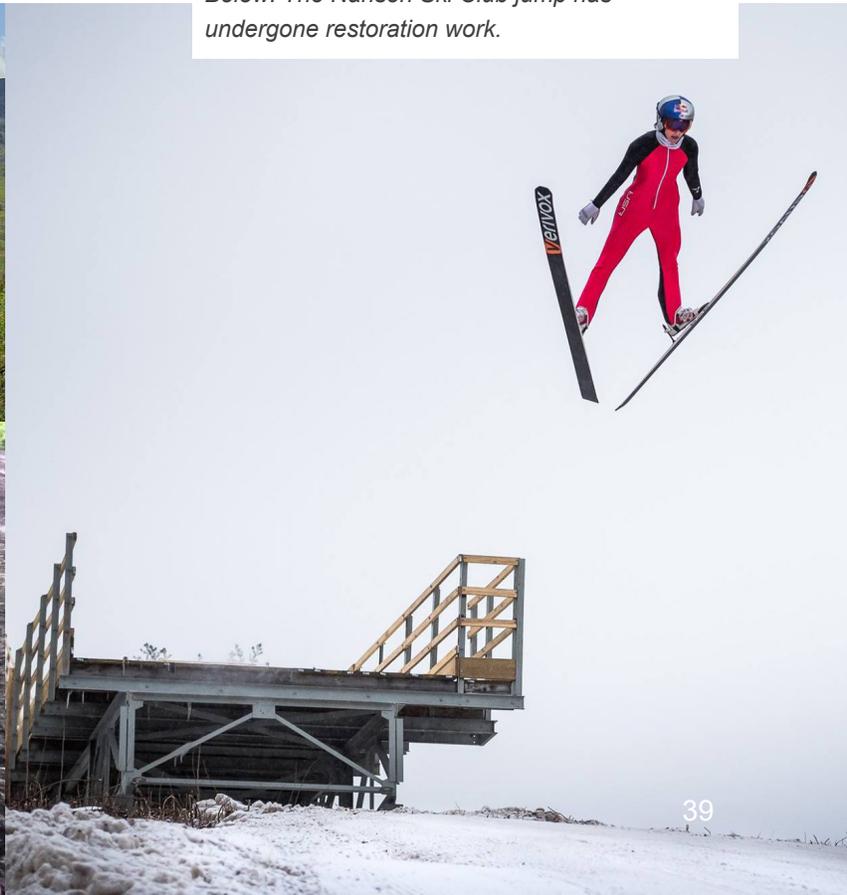
Below: With an extensive network of trails, Berlin is a major destination for OHRV riders.



Below: Mt. Forist is located near Downtown Berlin and has ~25 rock climbing routes accessed by a 4.6 mile hiking trail.



Below: The Nansen Ski Club jump has undergone restoration work.



However, the City is at risk of only being known for these activities. Despite its location, and the fact that the majority of the community falls within national forest or state parkland, Berlin lacks a more extensive and interconnected trail system for hiking, mountain biking, skiing, trail running, and the many other outdoor recreation activities that attract visitors and new residents to northern New England. Additionally, the restoration of the Nansen Ski Jump also presents an opportunity to market a unique recreation feature in the region. Berlin has the potential to further its evolution as a tourism and recreation destination by embracing a wider array of recreational activities and a nature-based placemaking initiative.

This combination of strategies will generate additional interest from those wishing to visit Berlin and recreate, but will also improve the lives of existing residents while attracting a variety of new residents and businesses. In support of this approach, Berlin's recent Economic Development Plan identified the following strategies for boosting the local economy: expand outdoor recreation, tourism, community health initiatives, and related businesses, and increase access to outdoor recreation resources. The Plan also noted that the

lack of tourist amenities in Berlin is a constraint to the City's ability to capitalize on these visitors.

Public input during this master planning process also called for capitalizing on the outdoor recreation economy and tourism; recruiting new businesses including lodging, restaurants, and shops; and working to retain existing businesses while increasing job opportunities. Berlin's success so far in becoming an outdoor recreation and tourism destination has highlighted these emerging needs and economic opportunities, but it has also identified the need to create a plan to manage the user conflict between recreation types, and between visitors and residents. With the increase in OHRVs and snowmobiles in Berlin issues have emerged with noise in neighborhoods, and with pedestrian, bicycle, and motor vehicle conflict. Berlin now has an opportunity to address and resolve these user conflicts while also embracing a more diverse range of motorized and non-motorized recreation activities. While these growing pains are clear, they all can be resolved with some planning and dialogue, and together the solutions will help the City realize its vision.

Below: Berlin's Androscoggin River offers beautiful views, a pedestrian bridge and multi-use path, and many recreation opportunities.



Guiding Principles and Practices



The close proximity of Berlin's outdoor recreation opportunities to Downtown presents unique opportunities for nature-based placemaking.

NATURE-BASED PLACEMAKING AND COMMUNITY DEVELOPMENT

The City's outdoor recreation assets, including its trails, rivers, climbing areas, parks, forests, and more, can be harnessed for community and economic development efforts, while improving the quality of life for residents.

Nature-Based Placemaking is the interaction and integration of a community's nature-based outdoor recreation assets, the economic activity associated with those assets, and the culture of the community towards both the assets and activities. The nature-based placemaking concept is not brand new, but the methodology provides an opportunity to blend a variety of approaches into one strategic, thoughtful, and practical revitalization program. It is the next generation of an outdoor-based revitalization strategy.

The first step in creating a nature-based place is to recognize and embrace the natural assets as the generators for economic activity. This includes the trails, rivers, viewsheds, and protected lands surrounding the Downtown. The nature-based placemaking approach takes into consideration the demographic, socio-economic, and behavioral characteristics of both the current visitor and current resident. It also works to bring together the local leadership of a community with the various stakeholders of the business and tourism communities. This approach can be used to develop a more robust, local tourism economy, support local business growth, and enhance the quality of life for existing and new residents.

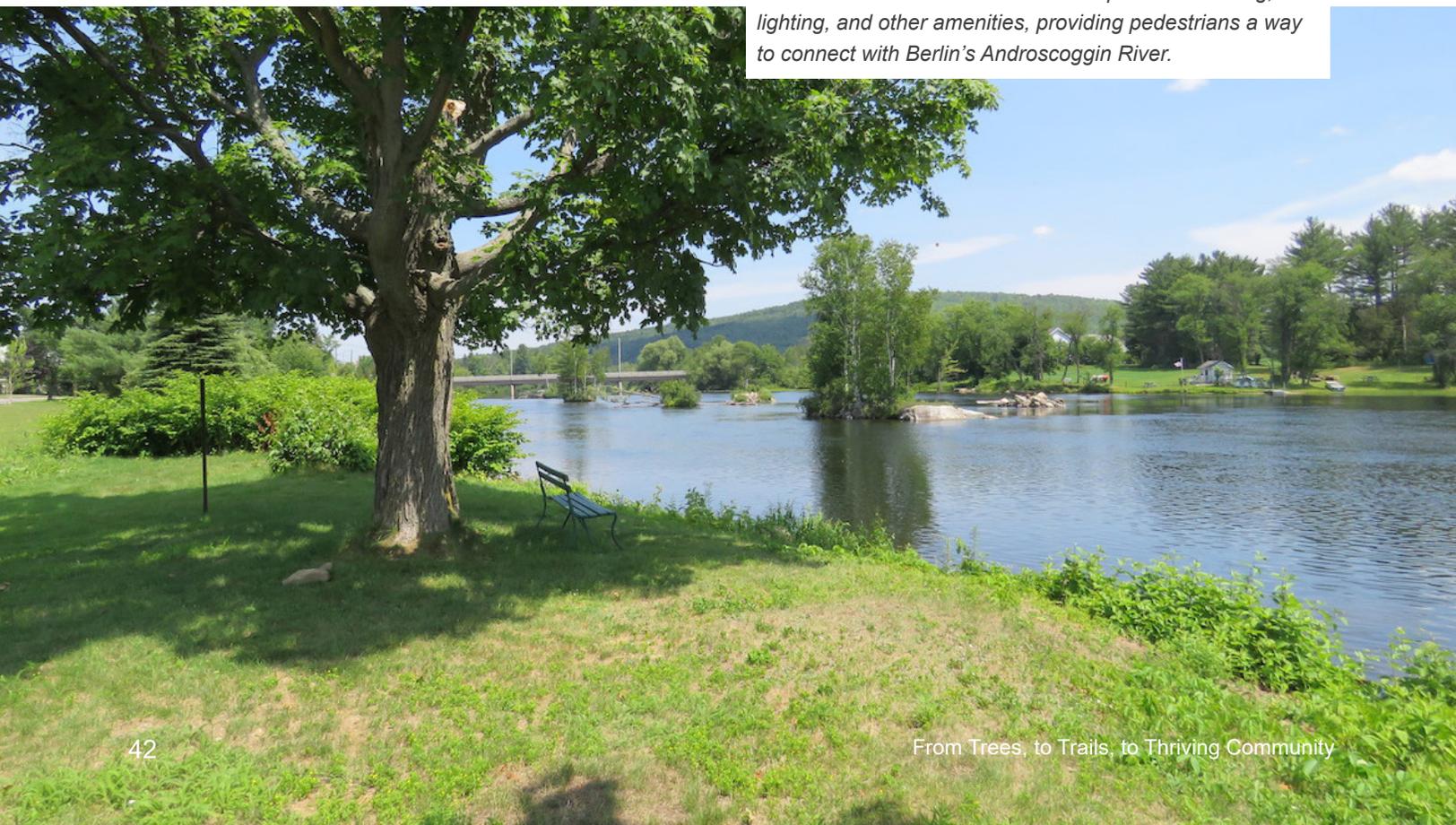
BEST PRACTICES - GRANITE OUTDOOR ALLIANCE

New Hampshire is one of the top ten states in the country when it comes to the emerging outdoor recreation economy. Surrounded by recreation lands, Berlin has the potential to expand outdoor recreation, tourism, and related businesses to boost the local economy.

To support the state's outdoor recreation economy, the Granite Outdoor Alliance was formed as a comprehensive network of stakeholders that are passionate about improving the outdoor recreation economy, infrastructure, and policy in the state of the New Hampshire. The principles they advocate for should inform the City of Berlin's efforts and include:

- Promoting economic development through coordination with outdoor recreation stakeholders, and leveraging outdoor recreational infrastructure and industry to promote tourism and recruit talent with a goal of keeping wealth local. These include recreation user groups (OHRV riders, hikers, climbers, etc.) and regional organizations (Ride the Wilds, Coos County, the Androscoggin Valley ATV Club, Coos County Cycling Club, Bike the Borderlands, the White Mountain Ridge Runners, etc.).
- Stewardship of open spaces that provide for outdoor play, namely land and water, and leveraging these natural assets in a responsible way to recreate and support a way of life. Protection of land and water is critical to form the foundation of the outdoor economy.
- Working with stakeholders and academic institutions to develop career and workforce training to recruit outdoor recreation businesses, support entrepreneurship, and provide a skilled, trained workforce.
- Active outdoor lifestyles that support healthy communities which thereby reduce health care dependencies and costs, create positive economic growth, reduce crime and other social benefits.

Berlin's Riverwalk will be a multi-use path with seating, lighting, and other amenities, providing pedestrians a way to connect with Berlin's Androscoggin River.



Strategies and Actions

The following strategies below will help guide Berlin’s outdoor recreation and tourism efforts. These were informed by extensive analysis of existing conditions, City staff, the Master Plan Committee, the public, and recent sub-area plans completed by the City, including the 2019 Economic Development Action Plan. Each strategy has a series of related and specific actions outlined below. Please note they are not listed by level of priority.

STRATEGY 4A: TOURISM AND OUTDOOR RECREATION INFRASTRUCTURE AND AMENITIES

| # | ACTION |
|------|--|
| 4A.1 | Develop a trail and outdoor recreation master plan to identify new trail connections, trail systems, and supporting infrastructure needed over time to drive tourism and economic development. This comprehensive planning process will be used to engage a range of stakeholders and partners needed to complete the buildout of this recreation network starting in the heart of the Downtown and radiating out. The finished plan will provide guidance on how the City can build a connected, accessible, diverse, and high-quality outdoor recreation system. |
| 4A.2 | Once completed, use the outdoor recreation plan to share a bold vision, maps, and promote the expansion of the trail network and recreational opportunities within the City. |
| 4A.3 | Promote and support the expansion of tourism amenities in Berlin. The lack of tourist amenities is a constraint to the City’s ability to capitalize on tourists and outdoor recreation enthusiasts. The lack of a hotel and limited restaurant options force those who are visiting Berlin to stay (and spend their money) outside of the City limits. Finding ways to build up the tourism and outdoor recreation assets in downtown and along key corridors like Route 110 Berlin will have fiscal benefits, including both increased economic activity and potentially increased residents and property tax revenue. |
| 4A.4 | Use the Capital Improvement Planning process to invest in better maintenance of its parks and recreation resources, to increase recreation facilities for a range of activities, and to expand youth programming. |
| 4A.5 | Facilitate regular community conversations around issues related to non-motorized vs. motorized conflicts. Encourage productive conversations that lead to solutions, ideas, and next steps related to improving relations and addressing challenges. |
| 4A.6 | Partner with landowners and other organizations to invest in additional maintenance and expansion Berlin’s trails and recreation resources. |
| 4A.7 | Explore opportunities to expand recreation infrastructure to better connect with the regional opportunities that exist in the area. Continue expanding the City’s motorized and non-motorized trail network, including connections into the Downtown area and Riverwalk. With its rock climbing area, hiking opportunities, and the biking trail system within the Coos County region, there is opportunity to establish additional mountain biking and hiking trails by partnering with private land owners and utilizing municipally owned land. |

| | |
|------|--|
| 4A.8 | As new recreation infrastructure is constructed or upgraded, ensure it is designed to accommodate a range of recreation options and to minimize conflict between users. This should include OHRV lanes, and shared pedestrian and bicycle facilities. |
|------|--|

STRATEGY 4B: COORDINATION AND PARTNERSHIPS

| # | ACTION |
|------|--|
| 4B.1 | Use a nature-based placemaking approach to diversify the recreation opportunities within Berlin, attract new businesses, visitors and residents. This will brand the City as a natural destination for both motorized and non-motorized recreation opportunities. |
| 4B.2 | Collaborate with outdoor recreation organizations, businesses, and user groups. Berlin has a tremendous amount of recreation assets that make it an appealing place to live or visit, but will need to coordinate with a network of other entities and individuals to expand this network over time. The City should identify and begin collaborating with groups like the Coos County Cycling Club, Trout Unlimited, Bike the Borderlands, and others to begin this process. |
| 4B.3 | Identify opportunities to expand green space in the Downtown area including street trees, planters, perennial gardens, possible through a partnership with the Coos County Botanical Garden Club. |

STRATEGY 4C: STEWARDSHIP OF NATURAL RESOURCES

| # | ACTION |
|------|---|
| 4C.1 | Explore ways to preserve the quality and size of vegetative buffers adjacent to Berlin’s rivers and streams to protect water quality. The vegetated buffers adjacent to the rivers and streams in Berlin protect water quality, prevent erosion, provide critical habitat, and contribute to the City’s image as a natural resource destination. A combination of riparian buffer regulations and strategic land conservation will best protect these resources over time and should be pursued. |
| 4C.2 | Review the stormwater management elements of the site plan review regulations and subdivision regulations to ensure they require the most current best management practices. |

5

Diversify the Tax Base Through Development and Redevelopment

Berlin is a regional center in Coos County for jobs, housing, healthcare, and other services.

The growing tourism and outdoor recreation industries in the region also continue to draw visitors to Berlin. In the Downtown area, the Burgess Biopower Plant has been completed and is now producing electricity, and some new small businesses are getting established. However, declining population numbers and an aging resident population continue to impact the City's ability to attract and retain businesses.

Over time, these trends are anticipated to continue and also put pressure on the health care system, housing supply, and community support services required. Additional population is needed to address the critical workforce shortages being faced in health-related occupations and other fields, and to generate a year-round population size that will support a greater variety of businesses and services.

To guide future actions, four broad goals have been identified:

Pursue initiatives, incentives, and policies that attract and retain a skilled workforce and businesses.

Focus economic development efforts in the heart of the Downtown and along Routes 16 and 110, which represent the primary mixed-use business areas.

Commit to increasing the diversity of housing options, and addressing the City's housing challenges for residents of all ages and income levels.

Balance development and redevelopment efforts with the need to incorporate green spaces in the built environment.

BACKGROUND

The City of Berlin is fortunate to have recently completed a study with Camoin Associates that resulted in the 2019 Economic Development Action Plan focused on building on the City's unique assets with the initial actions already taken. Berlin is already making progress toward the City-wide goals related to reversing the documented population loss and industry decline. It is also interesting to note that many of the City's Economic Development Goals identified in the 2010 Master Plan are also still needs for Berlin today. This is an indication that Berlin's efforts have been consistently moving in the same direction, but a lack of staffing and funding have made it challenging to make the desired progress.

Public input during this master planning process also called for near-term action related to expanded use of policies and incentives that stimulate redevelopment activity and new development projects. As part of this approach, participants in this planning process also suggested the City identify and remove regulatory barriers to ensure that the regulatory process is clear and predictable. These efforts must also include working to improve housing quality and increases in the diversity of housing units available. This is all linked to the broader economic development efforts in Berlin, and the identified need to build on the growing outdoor recreation and tourism industries. This new development activity will both require and help fund the needed strategic infrastructure investments identified for Berlin. For that to be successful, the City must use a combination of existing regulatory and incentive-based tools, and additional new initiatives will likely be needed to make this all possible in the years to come.

ECONOMIC INCENTIVES

Berlin currently provides a number of economic incentives to property owners in the City to make development and redevelopment projects more achievable. These include:

COMMUNITY REVITALIZATION TAX RELIEF

INCENTIVE. The City of Berlin takes advantage of two State laws that allow the City to offer a Community Revitalization Tax Relief Incentive for downtown development as well as a Partial Tax Exemption for New Industrial & Commercial Construction. The Community Revitalization Tax Relief Incentive is authorized by RSA 79-E and is a property tax relief program that seeks to encourage investment in town centers and to rehabilitate under-utilized buildings within these areas.

COOS COUNTY JOB TAX CREDIT. Because Berlin is located in Coos County, businesses in the City are allowed to apply for the Coos County Job Tax Credit. This is directly related to job creation and wages. The credit is granted to businesses for each new, full time, year-round employee hired in Coos County for which actual wages paid, including the amount paid by the employer for medical and dental benefits, equals or exceeds 150 percent of the current state minimum wage.

ECONOMIC REVITALIZATION ZONE (ERZ). This tax credit program, which is detailed in RSA 162-N, offers a short-term business tax credit for projects that improve infrastructure and create jobs in designated areas of a municipality. ERZs were established to stimulate economic redevelopment, expand the commercial and industrial base, create new jobs, reduce sprawl, and increase tax revenues within the state by encouraging economic revitalization in designated areas. Much of Berlin, including the downtown area and some of the properties along Route 110 are part of an Economic Revitalization Zone, designated by the NH Department of Business and Economic Affairs. For a business to qualify for an ERZ tax credit, it must invest in equipment and/or create a least one (1) new job in the state, and meet the following criteria:

- Be physically located in an approved ERZ.
- Invest in equipment.
- Create part or full-time jobs.

- The investment and / or the job creation must take place within one calendar year.

HUBZONE PROGRAM. Berlin is located in a Small Business Administration identified HUBZone. Coos County is a non-metropolitan county that is qualified as a HUBZone, and the HUBZone program fuels small business growth in historically underutilized business zones with a goal of awarding at least three percent of federal contract dollars to HUBZone-certified companies each year.

TAX INCREMENT FINANCING DISTRICT. Berlin is currently pursuing the creation of a Tax Increment Financing (TIF) District along Route 110 that focuses on recreation and hospitality. A TIF is a special tax district that can be used as an economic development financing tool when market conditions will not allow private investment alone to address physical impediments that limit or prevent otherwise desirable commercial or industrial development. The TIF District focuses on ways to privatize portions of capital improvements, such as broadband expansion, and incentivize public improvements such as higher density housing, recreational enhancements, water and sewer system upgrades, and road improvements. In the case of Route 110, some property owners have expressed a desire to take advantage of the interest in OHRV riding created by the park to

build and operate new commercial businesses in that area. There are also opportunities to create a TIF District in the Downtown to stimulate private and public infrastructure investment.

OPPORTUNITY ZONES. Opportunity Zones are a federal program encouraging economic development and investment in low income areas around the country. New Hampshire has 27 census tracts that are qualified opportunity zones, including Berlin. Investors can defer capital gains on earnings that have been reinvested in the zones through Opportunity Funds. Opportunity Funds are private sector investment vehicles that invest at least 90 percent of their capital in Opportunity Zones. Long-term investments maintained for over 10 years do not have to pay additional capital gains taxes on earnings from Opportunity Zone investments. Potential investment types include: construction and development of commercial real estate, development and renovation of existing property, creation of a new business, and expansion of an existing business. One such project that is underway in Berlin that utilized the opportunity zone incentive is the construction of 20-acre hydroponic commercial greenhouse facility by North Country Growers. This facility will be hiring 80 employees to complete the work and represent a unique economic development project in the City.

North Country Growers breaking ground on the construction of two commercial greenhouse structures in Berlin.



Guiding Principles and Practices



Berlin has a number of vacant parcels that represent opportunities for reuse and redevelopment.

INFILL DEVELOPMENT

Infill development refers to the development or redevelopment of scattered, underutilized, or vacant lots. Berlin's infill opportunities are high, given its compact development pattern and available underutilized or vacant properties. With some guidance, the City could steer infill development and redevelopment activity and reinforce a higher density, vibrant, walkable land use pattern.

Infill development is a tool often used in Downtowns or areas that the Master Plan designates for accommodating higher densities. It is typically employed in areas that are served by public infrastructure and have a pedestrian friendly development pattern. It is often a component of mixed-use development and is a technique that is frequently used in housing strategies to increase the diversity of housing types. Successful infill programs benefit a community by activating vacant properties, revitalizing underutilized buildings, utilizing existing infrastructure, and increasing both residential and non-residential opportunity. Typically infill development can look like developing one or more new uses on/in:

- An undeveloped site within an existing, established area.
- An underutilized site within an existing, established area.
- An underutilized building – no new external construction.
- Redeveloping a whole existing block or area.

Successful implementation of infill development requires some level of flexibility, both in zoning and in the design standards for existing and proposed infrastructure, such as buildings, roadways and parking. Zoning and other land use regulations should be evaluated to ensure they support the type of infill development a City wants to see, and so that they do not become a barrier to seeing that future realized.

Guiding Principles and Practices



The closing of the Brown Elementary School created an opportunity for a public-private partnership to reimagine a future use of the facility.

PUBLIC-PRIVATE PARTNERSHIPS

Developing strong partnerships between Berlin’s local government and property owners, developers, businesses, local organizations, and community members will increase the capacity for development and redevelopment projects in the Downtown, along Route 110, and Route 16, and open up new opportunities for investment.

According to the Urban Land Institute, public/private partnerships are considered “creative alliances” formed between a government entity and private developers, community organizations, health care providers, or educational institutions to achieve a common purpose. Public-private partnerships have increased ability to develop or redevelop an area or site, often blighted or underused, within a community. These types of partnerships may be proactively initiated by a municipality to achieve key public objectives, such as downtown revitalization, housing diversity, industrial and commercial development, transit-oriented development, or neighborhood services. In other instances, a City may have public land to include in a project or may be seeking to repurpose a now unused public facility for private use and return it to the tax rolls. Additionally, the City can be an asset in the development process by providing a clear and predictable regulatory process, and by providing assistance to the Developer as they work to meet the City’s requirements.

Guiding and supporting housing and commercial development and redevelopment in Berlin will take a long-term effort. However, there are opportunities for the City of Berlin to share its vision for the City with property owners and private developers and build excitement and incentives to reimagine new uses, activity, and types of redevelopment in Berlin.

Strategies and Actions

The following strategies below will help guide Berlin’s development and redevelopment efforts across the City. These were informed by extensive analysis of existing conditions, City staff, the Master Plan Committee, the public, and recent sub-area plans completed by the City, including the 2019 Economic Development Action Plan. Each strategy has a series of related and specific actions outlined below. Please note they are not listed by level of priority.

| STRATEGY 5A: INCENTIVES, REGULATIONS, AND POLICIES | |
|---|---|
| # | ACTION |
| 5A.1 | To bring Berlin’s development and redevelopment goals to reality, there needs to be an investment in municipal staffing. Advocate for the creation of an Economic Development Coordinator position to advance Economic Development initiatives, recruit and guide developers, and research grant opportunities. |
| 5A.3 | As Berlin works to create a more diverse housing supply for existing and future residents, it must find ways to incentivize the renovation or replacement of the existing multi-family building supply. The recent addition to RSA 79:E titled Housing Opportunity Zone should be pursued by the City as a new strategy. Create incentives for the adaptive reuse of vacant or underutilized structures into residential dwelling units. |
| 5A.4 | Conduct a public awareness campaign to promote the various financial and community development tools the City offers including TIF, PILOT, Opportunity Zone, New Market Tax Credits, Historic Preservations tax credits, and others. |
| 5A.5 | Highlight development opportunities that exist in Berlin and propose additional regulatory changes that will incentivize and stimulate the development desired in the Downtown and on Route 16 and 110. Invest in the review and modernizing of the City’s zoning ordinance to reflect the scale and pattern of development desired. |
| STRATEGY 5B: SUPPORTING BUSINESS DEVELOPMENT AND JOB TRAINING | |
| # | ACTION |
| 5B.1 | Establish an inventory of available real estate and vacant properties to be considered by expanding or relocating businesses. Track and review all work done on a regular basis and report out to City council and other constituents to demonstrate the need for continued investment in business visitation efforts. |
| 5B.2 | Create a plan for the necessary infrastructure improvements needed in the portions of these areas not already addressed, and consistent with Berlin’s economic development vision. These streetscape and utility improvements will contribute to a thriving and attractive environment for existing and new businesses, visitors, and residents. |
| 5B.3 | Establish an inventory of the types of businesses/industries that would be attracted to a location like Berlin with access to natural resources, and create targeted marketing materials/ cut sheets. Evaluate and communicate broadly the work force opportunities to support these businesses. |

| | |
|-------------|---|
| 5B.4 | Expand the tax base to ensure a diversified revenue stream over time, and promote the creation of a range of jobs in the City’s core and emerging sectors. Continue to support expansion and retention of employers in emerging 21st century industries including research and development-based employers, renewable energy, life sciences, advanced manufacturing, and other similar technology sectors. |
| 5B.5 | Identify options to establish a funding stream to support start-up efforts that are locating or expanding in Berlin. Continue to support organizations that are providing networking, space, and services to entrepreneurs, small businesses, and telecommuters. |
| 5B.6 | Facilitate discussions around opportunities for collaboration between White Mountains Community College students and existing businesses as a way to meet business needs and create opportunities for training and employment. |
| 5B.7 | Expand programs in high school that highlight available occupations, career ladders, and pathway programs. Look for ways to offer scholarships, training, incentives, mentorship or stipends for local kids looking to get trained in these critical occupations. |
| 5B.8 | Continue to support the Berlin Industrial Development and Park Authority in their work recruiting a hotel to Berlin and other relevant efforts. |

STRATEGY 5C: HOUSING AND NEIGHBORHOOD REDEVELOPMENT

| # | ACTION |
|-------------|--|
| 5C.1 | Conduct a comprehensive assessment of housing quality in Berlin and continue to pursue the removal of blighted properties. Continue the City’ efforts to invest in the demolition of blighted, tax-deeded properties for the improvement and rehabilitation of neighborhoods. |
| 5C.2 | Promote the creation of new housing on the upper floors of downtown buildings as part of its redevelopment plan, and as a way to stimulate activity and demand for retail, restaurants, and services. |
| 5C.3 | Identify residential areas which pose significant issues with regard to home maintenance and upkeep. Develop a plan to incentivize small home repairs and energy efficiency upgrades. |
| 5C.4 | Evaluate the possibility of an employer assisted housing program. The City should evaluate a program to partner with major employers, like the hospital, to gauge interest in partnering over time on an employer assisted housing program. |

STRATEGY 5D:PROTECTING NATURAL RESOURCES DURING REDEVELOPMENT

| # | ACTION |
|-------------|---|
| 5D.1 | Identify regulatory and non-regulatory actions to protect the Dead River and Androscoggin River corridors. Given the concentration of the City’s floodplains and wetlands, their significance to natural resource protection, and to flood and property protection, the corridors along the Dead River and Androscoggin River should be identified as priorities. This would allow the City to preserve the remaining resource area, reduce impacts from future development, promote restoration, and increase the City’s resilience to natural hazards. |
| 5D.2 | 6D.2 Consider ways to integrate vegetative systems into development and redevelopment projects through land use regulations. These requirements could promote native vegetation which can improve air quality, clean stormwater and provide other ecosystem services. |

6 Preserve What Makes Berlin Special

Since Berlin's paper mills closed in 2006, the City has been working to define its path forward and build upon its legacy as "the City that trees built".

Numerous planning efforts over the years have revealed that many residents want to envision bold ideas for a prosperous future, but also emphasized remembering the City's historical roots, building a future based on its strengths, and celebrating Berlin's heritage, people, and way of life. The City should make efforts to do this by:

- Celebrating Berlin's history and heritage through preserving and enhancing Berlin's cultural resources, and partnering with cultural organizations to coordinate initiatives, events, and activities that promote Berlin's rare identity and sense of place.
- Promoting a "positive" image of Berlin. Berlin's story, its strengths, and its opportunities are compelling. Developing a unique branding and marketing strategy to showcase its vibrancy and its vision to visitors and potential residents will continue to build economic benefits and both retain and attract others to live and work in the City.
- Engaging in efforts that build social capital, and strengthen and maintain Berlin's tight knit community. Foster civic engagement and promote community leadership.

To guide future actions and address this need three broad goals have been identified:

Remember and acknowledge Berlin's sense of place, heritage, industrial history, and unique qualities. Build on these for future initiatives.

Harness Berlin's resilience and the hard working, can-do attitude of the community to bring the Master Plan vision into reality.

Maintain Berlin's close-knit community of residents while also welcoming visitors.



CELEBRATING AND ENHANCING BERLIN'S HISTORY, HERITAGE, AND STRENGTHS

Berlin is a City with significant industrial history, heritage, and culture.¹ While the City was first settled by Europeans in 1821 (and incorporated in 1829), the Eastern Abenaki Native Americans traveled along the Androskoggin and Dead River corridors (using them as “highways”) in what is now known as Berlin. Mount Jasper, which is a special mountain located near the center of Berlin, was the site where the Abenaki discovered rhyolite, a fine-grained igneous rock that could be made into sharp points for arrows and spears. Rhyolite was also mined by the Abenaki peoples next to the Dead River directly below the mountain. Part of Mount Jasper is designated as a place of historical significance and has been named to the National Register of Historic Places as a Prehistoric Archaeological Site. Trails and interpretive signs provide public access and education to residents and visitors.

¹ Historical information on Berlin is sourced from the 2016 “The City That Trees Built: Turning Land and Lumber Into Neighborhoods “ Report and New Hampshire Magazines 2021 article “Berlin: The City That Trees Built”

While many of the individuals who first settled in Berlin were farmers, the City’s location alongside a river surrounded by miles of forestland made the logging and wood industries the cornerstone of Berlin’s local economy. The Androskoggin River, winds its way through Berlin, and historically provided power for the mills. The railroad arrived in 1851, connecting the City to important economic markets, and leading to the growth of the mills. By the late nineteenth century, Berlin had emerged as a major industrial center, whose reputation as an economic hub continued into the mid-twentieth century. Berlin’s largest development occurred from the 1870s to the 1920s as the wood pulp and paper mills were built and rapidly expanded. Between 1900-1930, Berlin’s population rose to over 20,000 as it became a bustling metropolis and the largest City in the northern part of New Hampshire.

The paper mills in Berlin and their logging operations contributed to the City’s unique and diverse population mix, attracting many workers from other parts of the world. While the majority came from Quebec, others came from as far as

Russia, Italy, Germany, and Scandinavia. Relics of this time are evident in Berlin's architecture, such as the churches that were built throughout the City.

St. Anne's Church was built by French-Canadians in 1901. The Holy Resurrection Orthodox Church was founded in 1915 by Berlin's Russian community. St. Kierans, which was an Irish church, was completed in 1895, and is now St. Kieran's Community Center for the Arts, representing a unique adaptive reuse of the church structure.

Although the Great Depression, among other factors, impacted the paper mill industry eventually leading to its decline, Berlin has continued to be a welcoming, resilient community with a strong work ethic, friendly neighborhoods, and strong social network. New opportunities have come the City's way and now, looking forward, Berlin is still a City known for its forests. But, instead of the paper mills, Berlin is building a local economy based on tourism, outdoor recreation, and trails. This will serve as a springboard for additional economic development, redevelopment, and infrastructure investment in the City.

A MARKETING STRATEGY BUILT ON BERLIN'S ASSETS

Berlin's 2019 Economic Development Action Plan lays out a marketing strategy for the City to pursue that focuses on communicating a unified vision for the future to residents and positive messaging and branding that attracts visitors, developers, and entrepreneurs through the promotion of the City's resources.

Improving Berlin's reputation, both internally and externally, will improve some of the negative perceptions that exist in the City. Improving communication, both internally and externally, will benefit efforts to attract investment and activity to the community. Establishing consistent channels of outreach effort and messaging will

BERLIN'S OPPORTUNITIES

(Adapted from Berlin's 2019 Economic Development Action Plan)

- Natural resources
- Affordable housing
- Committed and skilled City staff
- Growing ATV and snowmobile brand
- Committed volunteer network
- Vast outdoor recreation and arts/cultural amenities
- Community college and trades training at high school
- High quality hospital and health center
- Economic development incentives
- Parcels available for development/redevelopment
- Historical significance
- Airport
- Communications network
- Reuse of Brown School

ensure increased understanding of Berlin's resources and may attract people to the area. The marketing strategy recognizes that there is some apprehension, negative attitudes, and apathy towards both economic development and planning initiatives that must be combated in order to make the necessary changes towards a more positive future.

Strategies and Actions

The following strategies below will help guide the preservation of what makes Berlin unique. These were informed by City staff, the Master Plan Committee, and earlier sub-area plans completed by the City, including the 2019 Economic Development Action Plan. Each strategy has a series of related and specific actions outlined below. Please note they are not listed by level of priority.

STRATEGY 6A: ACKNOWLEDGE BERLIN'S CULTURE AND HISTORY

| # | ACTION |
|------|--|
| 6A.1 | Seek ways to highlight Berlin's history and culture through public art and interpretive signage in Berlin's built environment and natural landscape at key locations. For example, Berlin's Downtown is walkable, which can be an invitation for visitors to spend more days in the City. Consider signage and the use of QR codes to tell the history and the geology of the City of Trees. |
| 6A.2 | Consider hosting a multi-cultural festival in the Downtown area to celebrate Berlin's heritage. |
| 6A.3 | Consider applying to become a Certified Local Government program through the NH Division of Historic Resources to access grants related to historic and cultural resources including preservation, education, and others. |
| 6A.4 | Convene representatives from Berlin's historic and cultural organizations and identify ways to collaborate that simultaneously meet other City goals related to economic development, outdoor recreation, housing and other topics. |

STRATEGY 6B: COMMUNICATIONS AND COORDINATION

| # | ACTION |
|------|---|
| 6B.1 | Create an updated "How to Start a Business in Berlin" online guidebook. |
| 6B.2 | Prepare regular communication about the work being done to get community support and build excitement. |
| 6B.3 | Establish a customer service survey to be completed following interactions with City Hall. |
| 6B.4 | Prepare specific web and social media content geared towards the needs of entrepreneurs and telecommuters. |
| 6B.5 | Highlight and celebrate the work of local entrepreneurs and showcase the potential that exists for a younger generation. |
| 6B.6 | Establish a funding source for pursuing marketing initiatives, and to avoid relying on volunteer organizations that are already at capacity. |
| 6B.7 | Work with the town newspapers to publish a "who's happening" section of the newspaper, highlighting a person/business on a regular basis to recognize the positives in the community. |
| 6B.8 | Expand use of the Building a Better Berlin Instagram page. |

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| 6B.9 | Create a future forward story for Berlin based on its vision to replace the “Discover Berlin” page on the City’s website. |
| 6B.10 | Coordinate marketing with nearby communities to bring people to Berlin and overall region. |
| 6B.11 | Many former residents, especially those within the Generation X (born between 1965 and 1980) and Generation Y (born between 1981 and 1994) populations people are considering moving back to Berlin. Consider marketing job and housing opportunities to alumnae groups or to those who have a connection to the region. |
| 6B.12 | Create specific community values and a tag-line based on a broad reaching public input campaign. |

Full Implementation Table

Berlin's Master Plan will be implemented collaboratively by City staff, local officials, board and committee members, non-profit partners, businesses, property owners, residents, and others. To coordinate the implementation of the Plan, the following recommendations were developed:

- Develop a **Master Plan Implementation Committee** that meets periodically throughout a calendar year to prioritize and coordinate the completion of implementation actions outlined in the Plan.
- Consider coordinating an **end-of-year annual joint meeting** of all boards and committees in the City that are active partners in the implementation of the Master Plan to evaluate progress and plan for the upcoming year.
- **Regularly report on the progress of the 2022 Master Plan** to local officials, boards and committees, and the public.
- Ensure the City's Planning and Community Development Department are the "keepers and maintainers" of a **trackable version** of the implementation table below that includes more detailed information including responsible party, potential partners, and level of priority. This will ensure consistency over the coming years.
- Consider the following principles for implementation that were referenced at the beginning of this plan. These include:
 - **Consider multi-functional initiatives in project development:** Projects that provide many benefits (such as a redevelopment project that revitalizes downtown, produces more housing, creates business space, and activates the pedestrian environment) should be prioritized to maximize resources.
 - **Plan for incremental progress:** Targeted interventions and incremental projects will enable the City to meet its goals in a way that is efficient, focused, and mindful.
 - **Practice transparent communication and design participatory processes:** Consistent communication and collaboration with Berlin residents and community members on big projects, proposed capital improvement expenditures, and other initiatives will build greater public support and reinforce the larger vision for the City.
 - **Develop cost-effective solutions:** Utilize multiple streams of funding where appropriate to complete projects in a way that reduces burden on taxpayers, while also educating the public when spending funds is necessary to maintain infrastructure and services.

The strategies in the implementation matrix on the following pages will help guide Berlin's infrastructure investments, capital improvement planning, land use policy, and improvement projects. These were informed by City staff, the Master Plan Committee, and earlier sub-area plans completed by the City, including the 2019 Economic Development Action Plan. Each strategy has a series of related and specific actions outlined below.

01. Invest in Public Infrastructure

STRATEGY 1A: MANAGE FACILITY MAINTENANCE AND REPLACEMENT

| # | ACTION |
|-------|---|
| 1A.1 | Implement asset management programs across departments and facilities to manage infrastructure maintenance and plan for the replacement of public infrastructure. Adoption of an asset management system will compliment and inform the capital improvement planning process in Berlin and ensure maintenance is completed efficiently. |
| 1A.2 | Prioritize the renovation of Berlin’s public works facility and incorporate it in capital improvement planning. This includes improvements to the buildings and storage facilities that are out of date and inadequate, the addition of offices and lockers, a new garage for vehicle maintenance, and some site work to remove underground tanks and rehabilitation of the site. |
| 1A.3 | Commit to continued funding of water and sewer infrastructure improvements and extensions , such as the Route 110 sewer extension. |
| 1A.4 | Fund and complete upgrades to City Hall. The 2023-2028 Capital Improvement Plan identifies upgrades to the City’s HVAC system, a new elevator lift, roof replacement, energy efficient window upgrades, and other interior upgrades. |
| 1A.5 | Implement the findings of the Library’s 2020 building assessment which includes addressing water drainage from the roof, the repointing of bricks on exterior walls, and replacing glass block windows on both levels of the building. |
| 1A.6 | Proceed with the identified fire station renovation projects which include installing new floors, windows, a boiler, water sealing, and brick repointing, electrical improvements, and paving of the parking lots. This also includes the construction of a new equipment building that would house vehicles and larger equipment and an addition to the existing Fire Department building to support all administration needs. |
| 1A.7 | Fund and complete necessary improvements to the Police/Recreation Department Facility. Develop a cost-analysis report to determine future options for this facility and whether a new building should be considered. This Department has outgrown the current facility and the building is not up to code. Its condition continues to rapidly deteriorate to a point where repair and renovation efforts may not be cost effective. Sewer and water lines are in need of replacement and the roof over the Recreation Department leaks and needs to be repaired. |
| 1A.8 | Partner with AVH to fund and replace the Cates Hill Radio Tower , which transmits for the entire City communications network and is vital to public safety. The existing tower continues to deteriorate and cannot keep up with Berlin’s service needs. |
| 1A.9 | Complete the necessary upgrades to the existing indoor recreation center including upgraded court facilities, bathrooms and showers, offices, windows, and repair of the gym floor. These projects are required in order to repair, replace, and extend the life cycle of certain amenities within the facility. It would also aide in the lowering of energy consumption within the building and will lower operating costs. |
| 1A.10 | Begin the process of planning for the construction of a new indoor recreation center or complete significant renovations to the existing recreation facility to better accommodate the needs of community members. Analyze and compare costs of design, siting, and building options to determine a cost-effective way forward. Engage the community throughout this process. Consider the needs of the police station during the redesign and planning for the existing facility. |

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| 1A.11 | Explore ways to expand capacity and funding for the City’s Recreation Department , where a lack of funds and staffing limit the ability for this Department to carry out existing programming and address new programming needs (for example, there is a need for additional activities for teens and for those with mental and physical disabilities). |
| 1A.12 | Repair the City’s tennis courts in downtown and at Horne Field to accommodate both tennis and pickleball. |
| 1A.13 | Construct an equipment garage at the Berlin Pollution Control Center to expand storage and provide covered space for equipment. |
| 1A.14 | Replace the terminal building at the Berlin Municipal Airport. The existing building is not adequate. |
| 1A.15 | Support the Solid Waste Department’s efforts to reduce household refuse tonnage to the landfill , largely through public outreach and education on the value of recycling and eventually through the creation of a municipal composting program. |
| 1A.16 | Participate in regional broadband internet initiatives to improve high speed internet service and infrastructure within the City. |

STRATEGY 1B: INVEST IN ENERGY CONSERVATION AND RENEWABLE ENERGY PRODUCTION DURING FACILITY UPGRADES, MAINTENANCE, AND CONSTRUCTION

| # | ACTION |
|------|--|
| 1B.1 | Adopt a Net Zero Resolution that identifies a multi-pronged strategy to guide all municipal investments in facility and infrastructure upgrades. The resolution should include energy efficiency, renewable energy, zero waste, and nature-based solutions for carbon sequestration. If well implemented, these investments will have a positive impact on the local economy and will help Berlin participate in national efforts to mitigate the negative effects of climate change. A good framework for the Resolution, in line with similar efforts throughout the country, would be to aim for a 100% renewable energy future by 2050, with an interim goal to reach 100% renewable energy for all local electricity production and consumption by 2030. |
| 1B.2 | Conduct comprehensive energy resource audits for all municipal structures and land. This data will serve as a baseline of information for asset development and the implementation of the Net Zero Resolution. |
| 1B.3 | Pursue the construction of photovoltaic systems on City buildings and land. These could be financed in a number of ways, depending on the situation, including Power Purchase Agreements (PPA) with a third party or direct purchase with City funds or debt instruments. |
| 1B.4 | Identify opportunities to aggregate electrical power under New Hampshire’s Community Power rules, and leverage local and regional resources to provide low-cost renewable electrical power to residents and municipal facilities. |
| 1B.5 | Pursue the conversions of any remaining public building lights to LED lighting. This will build off the success of the LED streetlight conversation program and continue to improve the energy efficiency of municipal facilities in Berlin. |
| 1B.6 | Research and determine if moving to electric vehicles for the City’s municipal fleet is the right path for the City. Utilize New Hampshire’s 2019 Electric Vehicle Toolkit for Local Governments to plan the transition if feasible. |
| 1B.7 | Implement other measures to improve energy efficiency and electrify municipal equipment on the basis of the recommendations of energy resource audits and City finances. |

1B.8 Recognize and coordinate with a citizen group to discuss, research and develop local energy resources. This group can help the City understand issues around its energy resources, as well as formulate and execute efforts to better exploit or manage these resources.

1B.9 Identify ways to increase community awareness, workforce development, education, and participation in energy efficiency and conservation practices.

STRATEGY 1C: IMPROVE BERLIN'S TRANSPORTATION SYSTEM AND UTILIZE TACTICAL URBANISM TO PILOT PROJECTS

ACTION

1C.1 Adopt a Complete and Green Street Policy and corresponding land use regulations. This will allow the City to apply complete streets design standards on future roadway reconstruction projects to ensure roads are accommodating all modes of travel (where feasible). This will also ensure that traffic calming is incorporated and all transportation modes are accommodated.

1C.2 Fund and implement a pavement resurfacing program for Berlin's roadways. This would include ranking streets on a priority basis determined by current conditions, pending utility projects, and traffic volumes. Resurfacing programs prolong the service life of pavement. A properly produced plan can turn failing pavement infrastructure around and aide in maintaining non-failing infrastructure.

1C.3 Creatively prioritize roadway improvement projects for the next 5-10 years. Regularly budget adequate funds to maintain municipal roads. For bigger projects, utilize the Capital Improvement Plan, TIF District, and other creative sources such as the Transportation Alternatives Program (TAP), the Surface Transportation Program (STP), Highway Block Grant, BUILD grants, and through the Community Development Finance Authority.

1C.4 Expand the sidewalk network and maintain existing sidewalks more consistently. Increase winter plowing of all sidewalks.

1C.5 Complete the Riverwalk and identify potential connections with other open spaces, the sidewalk network, roads, and the Downtown.

1C.6 Develop a multi-modal design manual to guide the buildout of this transportation infrastructure over time so that it is context sensitive.

1C.7 Identify site-specific traffic calming and access management improvements throughout the Downtown so that they can be incorporated into the design and construction of future roadway projects. These designs should incorporate green infrastructure to improve the pedestrian experience, beautify the Downtown, manage stormwater, and provide other benefits.

1C.8 Update wayfinding signage throughout the City, including street signs, remove signs that are outdated, and repair signs in need of improvements. Improve wayfinding to Berlin's parks and recreation facilities. Create a funding mechanism for this.

1C.9 Strategically invest in vehicle charging locations within the City to ensure that travelers have the opportunity to charge their vehicles while visiting local businesses.

1C.10 Embrace tactical urbanism strategies as a way of experimenting while this change unfolds. Highlight the products of up and coming entrepreneurs, artists, and crafts people from the region.

STRATEGY 1D: PUBLICIZE, INSPIRE, AND EDUCATE ACTION

| # | ACTION |
|------|--|
| 1D.1 | Over time, communicate Berlin's commitment to its many municipal assets, and the specific efforts being made at each facility to steward and invest in the municipal infrastructure. This needs to happen both internally and externally, and could be used to inspire action by private property owners and the perception of Berlin as a community. |
| 1D.2 | Complete public education for large capital improvement projects to garner public support for larger expenditures. Utilize the City's public outreach mechanisms including its website, social media, meetings, public access TV, etc. |

02. Improve Community Health and Well-Being

STRATEGY 2A: IMPROVE COMMUNITY HEALTH

| # | ACTION |
|------|---|
| 2A.1 | Conduct an inventory of the critical community health issues in Berlin. Facilitate annual round table discussions with key stakeholders to identify issues and solutions. Build on the success of the Coos County Dental project. |
| 2A.2 | Fund and invest in the City departments that can promote and support healthy living such as the Health Department and Recreation Department. Market these resources to the public. |
| 2A.3 | Work with Tri-County CAP to better promote their services to the broader population. This includes their free meals program, Tri-County Transit, homelessness services, senior center, and others. |
| 2A.4 | Identify ways the City can support community organizations and social service providers, such as Tri-County CAP, Coos County Family Health, and North Country Healthcare working to address issues like substance abuse and homelessness in the community. |
| 2A.5 | Pursue development of a downtown community wellness center to provide gathering space, medical office space, counseling services, educational space, and other needed community amenities. Conduct financial feasibility analysis, identify partners, research funding sources, and inventory available spaces. |
| 2A.6 | Better understand the childcare needs of families in Berlin and identify whether childcare options in the City are sufficient. |
| 2A.7 | Encourage and facilitate the investment in resources that help the elderly to age in place, such as public transportation, energy efficiency improvement, broadband access for tele-health, real estate tax exemptions, and programs for retrofitting existing units. |
| 2A.8 | Continue to build out community and family friendly amenities like playgrounds, indoor community/play space, and community fun/educational events to encourage healthy habits and living. Consider unique recreation infrastructure to add to facilities such as a splash pad, natural playground, and outdoor exercise equipment. Utilize flexible outdoor recreation space for fitness and exercise classes. |

STRATEGY 2B: INCREASE FOOD SECURITY

| # | ACTION |
|------|---|
| 2B.1 | Revisit hosting a farmers market in the summer. |
| 2B.2 | Identify potential sites for a community garden. Identify potential partners (like public schools) and a clear process for establishing a garden space and the necessary infrastructure to support it. |
| 2B.3 | Continue to promote the City's food pantries and support the ongoing visits of the NH Food Bank's Mobile Food Pantry. |
| 2B.4 | Continue to support the establishment of a co-op grocery store to serve both locals and visitors. Establish a partnership with the Androscoggin Food Coop organization. |

STRATEGY 2C: CREATE HOUSING AND TRANSPORTATION CHOICES

| # | ACTION |
|------|--|
| 2C.1 | Collaborate with surrounding communities on regional housing and public transportation solutions. Participate in the work North Country Council is engaging in on these issues. |
| 2C.2 | The current lack of public transportation options in Berlin and the surrounding region should be explored to better understand they type and regularity of transit services desired by residents. |
| 2C.3 | Launch a public awareness campaign in Berlin to educate the public about housing issues that exist in the City and create a call to action. These include the need for greater housing diversity in Berlin, the lack of housing units to meet demand, high housing costs, and the connection between housing and quality of life and economic health. |
| 2C.4 | Investigate the feasibility of establishing a housing trust in Berlin. Partner with Berlin Housing Authority and other housing organizations to further evaluate this option. |
| 2C.5 | Allow for a range of housing alternatives in City zoning, whether small units, co-housing, or others that may suit changing needs and demographics. |

STRATEGY 2D: IMPROVE ACCESSIBILITY CITY-WIDE

| # | ACTION |
|------|---|
| 2D.1 | Evaluate and improve, where needed, the ADA accessibility of Berlin's public facilities, transportation network, parks, and public spaces. |

STRATEGY 2E: PROMOTE AND EXPAND RECREATION AND CULTURE OPPORTUNITIES FOR ALL

| # | ACTION |
|------|--|
| 2E.1 | Maintain trails, sports fields, courts, playgrounds, and other amenities such as seating and landscaping, in good condition. |
| 2E.2 | Ensure all parks and recreation resources have adequate lighting to improve security and sense of safety at night. |
| 2E.3 | Add amenities to parks and recreation resources, such as cigarette receptacles, trash cans, bike racks, dog waste bags, restrooms, and water fountains, where appropriate. |
| 2E.4 | Pursue opportunities, in collaboration with partners, to create parks and walking paths. Consider community desired facilities, such as a dog park. Prioritize these in areas that are currently underserved. |

2E.5 Continue to support the work of local and regional artists through public art competitions, funding for creating gallery space, support for creation and use of theater space, and encouraging the use of vacant space for displaying art. Access to public art and cultural activities can greatly improve quality of life for community members. Utilize art, crafts, and local start up products in the tactical urbanizing of vacant spaces in Downtown.

03. Revitalize the Downtown and the Adjacent Neighborhoods

STRATEGY 3A: INVEST IN THE DOWNTOWN INFRASTRUCTURE

| # | ACTION |
|------|--|
| 3A.1 | Complete a comprehensive assessment of all public infrastructure in the Downtown area and identify priorities for upgrades over the next 5-10 years. This includes water, sewer, roadways, and sidewalks. |
| 3A.2 | Design, fund, and implement a comprehensive roadway, sidewalk, and streetscape project along Main Street and Pleasant Street that includes the connecting roadways. This scale of investment should be coordinated with any other planned maintenance or utility work in the project area including the use of steam for the melting of snow on streets and sidewalks. |
| 3A.3 | Implement a coordinated and improved parking plan that supports Downtown shopping and living opportunities. This network of public and private parking facilities should include a wayfinding plan and improved signage, and other amenities such as public restrooms and electric charging stations. |
| 3A.4 | Continue developing an inventory of existing buildings in downtown , including documentation of any issues related to health/safety, structural concerns, and other areas to establish a base understanding of areas of concern. Identify any catalyst sites that have the potential to create momentum and work with owners to discuss opportunities. |
| 3A.5 | Establish a facade improvement program to provide funds to Downtown property owners to make upgrades to the appearance of their buildings. InTown Concord, a non-profit in Concord, NH, recently launched a facade improvement program for their Downtown. |
| 3A.6 | Continue analyzing the redevelopment opportunities for key parcels in Berlin such as the Brown School, 121 Main Street, and the vacant parcel near City Hall. Conduct a market analysis with community engagement to identify community supported and feasible redevelopment scenarios to be used in a developer RFP. Consider the impact on transportation and parking infrastructure. |
| 3A.7 | Continue to pursue and install the radiant snowmelt system on Main Street and surrounding sidewalks this would utilize excess generated hot water from Burgess Biopower to aid in snow melting and winter maintenance activities. Additionally, investigate ways to make excess heat available to the surrounding abutters to reduce their heating costs. |
| 3A.8 | Consider creative mechanisms to fund Downtown infrastructure improvements including public-private partnerships, municipal bonds, etc. |
| 3A.9 | Investment in an economic development organization and staffing will be necessary to coordinate the public/private partnerships necessary to bring these changes to the Downtown and broader community. Such an organization would assist existing property and business owners as they navigate the process and participate in this revitalization. They could also be important points of contact and recruiters for new business and development activity. |

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| 3A.10 | Rehabilitate or relocate the Dead River Channel in the Downtown area. This project includes the rehabilitation or relocation of the channel carrying the Dead River through the downtown area. Coordinate the collaboration of all parties to deal with the failing infrastructure in this location. This project should include a channel relocation which would utilize the abutting properties that are currently owned by the City along Pleasant Street. The rehabilitation of the channel was listed as an action item in the 2016 Hazard Mitigation Plan. Repairs will be required as part of the Downtown Rebuild proposed along with the Snow Melt System improvements. |
| 3A.11 | Provide convenient bicycle lanes and parking in the Downtown area and link to the sidewalk network and parking facilities. |

STRATEGY 3B: POLICY AND REGULATORY CHANGES

| # | ACTION |
|------|--|
| 3B.1 | Complete a comprehensive regulatory audit and revision of Berlin’s existing land use regulations to determine if there are any regulatory barriers to the Master Plan vision for revitalization. This audit process should also be used to identify opportunities to increase density and incorporate other incentives that will encourage new development activity in this area of the City. |
| 3B.2 | The new RSA 79E housing related provisions should be reviewed and evaluated for the Downtown and surrounding neighborhoods. This tool incentivizes investment in the revitalization of existing residential structures. |
| 3B.3 | Develop and adopt a Form-Based Code for the Downtown. This type of zoning would provide an opportunity to streamline, help visualize, and clearly communicate the regulatory requirements and opportunities to future applicants. The design standards included should also incentivize efforts to preserve Berlin’s distinct character. Lancaster, NH has adopted a similar set of regulations for their Downtown. |
| 3B.4 | Develop a Tax Increment Financing (TIF) District for the Downtown area of Berlin to provide an incentive for developers/property owners and fund public infrastructure investment as development and redevelopment continues. |
| 3B.5 | Consider allowances for use of vacant store fronts for galleries, pop-up shops, and other temporary uses that will bring life, vibrancy, and beauty to Main Street. Consider activating vacant storefront or spaces temporarily when Downtown already has ample pedestrian traffic (such as the ATV festival or during a Holiday event). |

STRATEGY 3C: CREATIVE PLACEMAKING INITIATIVES

| # | ACTION |
|------|---|
| 3C.1 | As Berlin begins to make improvements to the Downtown area, it is important that the City also identify creative ways to activate the built environment, especially empty and underutilized spaces. The use of art installations, pop up events and activities, and other techniques will generate a buzz and give residents and visitors additional reasons to frequent the Downtown. |
| 3C.2 | Utilize tactical urbanism techniques to experiment with planned or pending infrastructure improvements. These visible experiments generate interest and activity in the Downtown and adjacent neighborhoods. They also provide opportunities to solicit feedback and adjust the designs to the longer lasting infrastructure improvements Berlin is investing in over time. |

STRATEGY 3D: PARTNERSHIPS AND EVENTS

| # | ACTION |
|------|--|
| 3D.1 | Work with partners like the Berlin Main Street Program, St. Kieran’s Community Center for the Arts, the Public Library, and Tree City Arts and identify ways to support their projects and complete creative placemaking initiatives in Berlin. |
| 3D.2 | Expand events in the Downtown area to draw visitors and support local businesses. It is important that the residents of Berlin build on their long tradition of signature community events, and bring regular events to the Downtown in all seasons. This should include the continuation of existing signature events that could have a Downtown component, and the creation of new events that draw residents and visitors to the Main Street and Pleasant Street area. |
| 3D.3 | Meet with the Northern Forest Center to explore opportunities for collaboration through their Strengthening Communities initiative. This program has four tracks: building active communities, creating community forests, increasing local capacity, and investing in place. |
| 3D.4 | Expand the volunteer base to make downtown improvements, including youth, for the downtown association to assist with beautification efforts, networking opportunities, and collaboration among downtown business owners. |

04. Support and Expand the Tourism and Outdoor Recreation Industries

STRATEGY 4A: TOURISM AND OUTDOOR RECREATION INFRASTRUCTURE AND AMENITIES

| # | ACTION |
|------|--|
| 4A.1 | Develop a trail and outdoor recreation master plan to identify new trail connections, trail systems, and supporting infrastructure needed over time to drive tourism and economic development. This comprehensive planning process will be used to engage a range of stakeholders and partners needed to complete the buildout of this recreation network starting in the heart of the Downtown and radiating out. The finished plan will provide guidance on how the City can build a connected, accessible, diverse, and high-quality outdoor recreation system. |
| 4A.2 | Once completed, use the outdoor recreation plan to share a bold vision, maps, and promote the expansion of the trail network and recreational opportunities within the City. |
| 4A.3 | Promote and support the expansion of tourism amenities in Berlin. The lack of tourist amenities is a constraint to the City’s ability to capitalize on tourists and outdoor recreation enthusiasts. The lack of a hotel and limited restaurant options force those who are visiting Berlin to stay (and spend their money) outside of the City limits. Finding ways to build up the tourism and outdoor recreation assets in downtown and along key corridors like Route 110 Berlin will have fiscal benefits, including both increased economic activity and potentially increased residents and property tax revenue. |
| 4A.4 | Use the Capital Improvement Planning process to invest in better maintenance of its parks and recreation resources, to increase recreation facilities for a range of activities, and to expand youth programming. |
| 4A.5 | Facilitate regular community conversations around issues related to non-motorized vs. motorized conflicts. Encourage productive conversations that lead to solutions, ideas, and next steps related to improving relations and addressing challenges. |

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| 4A.6 | Partner with landowners and other organizations to invest in additional maintenance and expansion Berlin’s trails and recreation resources. |
| 4A.7 | Explore opportunities to expand recreation infrastructure to better connect with the regional opportunities that exist in the area. Continue expanding the City’s motorized and non-motorized trail network, including connections into the Downtown area and Riverwalk. With its rock climbing area, hiking opportunities, and the biking trail system within the Coos County region, there is opportunity to establish additional mountain biking and hiking trails by partnering with private land owners and utilizing municipally owned land. |
| 4A.8 | As new recreation infrastructure is constructed or upgraded, ensure it is designed to accommodate a range of recreation options and to minimize conflict between users. This should include OHRV lanes, and shared pedestrian and bicycle facilities. |

STRATEGY 4B: COORDINATION AND PARTNERSHIPS

| # | ACTION |
|------|--|
| 4B.1 | Use a nature-based placemaking approach to diversify the recreation opportunities within Berlin, attract new businesses, visitors and residents. This will brand the City as a natural destination for both motorized and non-motorized recreation opportunities. |
| 4B.2 | Collaborate with outdoor recreation organizations, businesses, and user groups. Berlin has a tremendous amount of recreation assets that make it an appealing place to live or visit, but will need to coordinate with a network of other entities and individuals to expand this network over time. The City should identify and begin collaborating with groups like the Coos County Cycling Club, Trout Unlimited, Bike the Borderlands, and others to begin this process. |
| 4B.3 | Identify opportunities to expand green space in the Downtown area including street trees, planters, perennial gardens, possible through a partnership with the Coos County Botanical Garden Club. |

STRATEGY 4C: STEWARDSHIP OF NATURAL RESOURCES

| # | ACTION |
|------|---|
| 4C.1 | Explore ways to preserve the quality and size of vegetative buffers adjacent to Berlin’s rivers and streams to protect water quality. The vegetated buffers adjacent to the rivers and streams in Berlin protect water quality, prevent erosion, provide critical habitat, and contribute to the City’s image as a natural resource destination. A combination of riparian buffer regulations and strategic land conservation will best protect these resources over time and should be pursued. |
| 4C.2 | Review the stormwater management elements of the site plan review regulations and subdivision regulations to ensure they require the most current best management practices. |

05. Broaden the Tax Base Through Development and Redevelopment

STRATEGY 5A: INCENTIVES, REGULATIONS, AND POLICIES

| # | ACTION |
|------|---|
| 5A.1 | To bring Berlin’s development and redevelopment goals to reality, there needs to be an investment in municipal staffing. Advocate for the creation of an Economic Development Coordinator position to advance Economic Development initiatives, recruit and guide developers, and research grant opportunities. |
| 5A.2 | As Berlin works to create a more diverse housing supply for existing and future residents, it must find ways to incentivize the renovation or replacement of the existing multi-family building supply. The recent addition to RSA 79:E titled Housing Opportunity Zone should be pursued by the City as a new strategy. Create incentives for the adaptive reuse of vacant or underutilized structures into residential dwelling units. |
| 5A.3 | Conduct a public awareness campaign to promote the various financial and community development tools the City offers including TIF, PILOT, Opportunity Zone, New Market Tax Credits, Historic Preservations tax credits, and others. |
| 5A.4 | Highlight development opportunities that exist in Berlin and propose additional regulatory changes that will incentivize and stimulate the development desired in the Downtown and on Route 16 and 110. Invest in the review and modernizing of the City’s zoning ordinance to reflect the scale and pattern of development desired. |

STRATEGY 5B: SUPPORTING BUSINESS DEVELOPMENT AND JOB TRAINING

| # | ACTION |
|------|---|
| 5B.1 | Establish an inventory of available real estate and vacant properties to be considered by expanding or relocating businesses. Track and review all work done on a regular basis and report out to City council and other constituents to demonstrate the need for continued investment in business visitation efforts. |
| 5B.2 | Create a plan for the necessary infrastructure improvements needed in the portions of these areas not already addressed, and consistent with Berlin’s economic development vision. These streetscape and utility improvements will contribute to a thriving and attractive environment for existing and new businesses, visitors, and residents. |
| 5B.3 | Establish an inventory of the types of businesses/industries that would be attracted to a location like Berlin with access to natural resources, and create targeted marketing materials/cut sheets. |
| 5B.4 | Expand the tax base to ensure a diversified revenue stream over time, and promote the creation of a range of jobs in the City’s core and emerging sectors. Continue to support expansion and retention of employers in emerging 21st century industries including research and development-based employers, renewable energy, life sciences, advanced manufacturing, and other similar technology sectors. |
| 5B.5 | Identify options to establish a funding stream to support start-up efforts that are locating or expanding in Berlin. Continue to support organizations that are providing networking, space, and services to entrepreneurs, small businesses, and telecommuters. |

| | |
|------|---|
| 5B.6 | Facilitate discussions around opportunities for collaboration between White Mountains Community College students and existing businesses as a way to meet business needs and create opportunities for training and employment. |
| 5B.7 | Expand programs in high school that highlight available occupations, career ladders, and pathway programs. Look for ways to offer scholarships, training, incentives, mentorship or stipends for local kids looking to get trained in these critical occupations. |
| 5B.8 | Continue to support the Berlin Industrial Development and Park Authority in their work recruiting a hotel to Berlin and other relevant efforts. |

STRATEGY 5C: HOUSING AND NEIGHBORHOOD REDEVELOPMENT

| # | ACTION |
|------|---|
| 5C.1 | Conduct a comprehensive assessment of housing quality in Berlin and continue to pursue the removal of blighted properties. Continue the City' efforts to invest in the demolition of blighted, tax-deeded properties for the improvement and rehabilitation of neighborhoods. |
| 5C.2 | Promote the creation of new housing on the upper floors of downtown buildings as part of its redevelopment plan, and as a way to stimulate activity and demand for retail, restaurants, and services. |
| 5C.3 | Identify residential areas which pose significant issues with regard to home maintenance and upkeep. Develop a plan to incentivize small home repairs and energy efficiency upgrades. |
| 5C.4 | Evaluate the possibility of an employer assisted housing program. The City should evaluate a program to partner with major employers, like the hospital, to gauge interest in partnering over time on an employer assisted housing program. |

STRATEGY 5D: PROTECTING NATURAL RESOURCES DURING REDEVELOPMENT

| # | ACTION |
|------|--|
| 5D.1 | Identify regulatory and non-regulatory actions to protect the Dead River and Androscoggin River corridors. Given the concentration of the City's floodplains and wetlands, their significance to natural resource protection, and to flood and property protection, the corridors along the Dead River and Androscoggin River should be identified as priorities. This would allow the City to preserve the remaining resource area, reduce impacts from future development, promote restoration, and increase the City's resilience to natural hazards. |
| 5D.2 | 6D.2 Consider ways to integrate vegetative systems into development and redevelopment projects through land use regulations. These requirements could promote native vegetation which can improve air quality, clean stormwater and provide other ecosystem services. |

06. Preserve What Makes Berlin Special

STRATEGY 6A: ACKNOWLEDGE BERLIN'S CULTURE AND HISTORY

| # | ACTION |
|------|--|
| 6A.1 | Seek ways to highlight Berlin's history and culture through public art and interpretive signage in Berlin's built environment and natural landscape at key locations. For example, Berlin's Downtown is walkable, which can be an invitation for visitors to spend more days in the City. Consider signage and the use of QR codes to tell the history and the geology of the City of Trees. |
| 6A.2 | Consider hosting a multi-cultural festival in the Downtown area to celebrate Berlin's heritage. |

| | |
|-------------|---|
| 6A.3 | Consider applying to become a Certified Local Government program through the NH Division of Historic Resources to access grants related to historic and cultural resources including preservation, education, and others. |
| 6A.4 | Convene representatives from Berlin’s historic and cultural organizations and identify ways to collaborate that simultaneously meet other City goals related to economic development, outdoor recreation, housing and other topics. |

STRATEGY 6B: COMMUNICATIONS AND COORDINATION

| # | ACTION |
|--------------|--|
| 6B.1 | Create an updated “How to Start a Business in Berlin” online guidebook. |
| 6B.2 | Prepare regular communication about the work being done to get community support and build excitement. |
| 6B.3 | Establish a customer service survey to be completed following interactions with City Hall. |
| 6B.4 | Prepare specific web and social media content geared towards the needs of entrepreneurs and telecommuters. |
| 6B.5 | Highlight and celebrate the work of local entrepreneurs and showcase the potential that exists for a younger generation. |
| 6B.6 | Establish a funding source for pursuing marketing initiatives, and to avoid relying on volunteer organizations that are already at capacity. |
| 6B.7 | Work with the town newspapers to publish a “who’s happening” section of the newspaper, highlighting a person/business on a regular basis to recognize the positives in the community. |
| 6B.8 | Expand use of the Building a Better Berlin Instagram page. |
| 6B.9 | Create a future forward story for Berlin based on its vision to replace the “Discover Berlin” page on the City’s website. |
| 6B.10 | Coordinate marketing with nearby communities to bring people to Berlin and overall region. |
| 6B.11 | Many former residents, especially those within the Generation X (born between 1965 and 1980) and Generation Y (born between 1981 and 1994) populations people are considering moving back to Berlin. Consider marketing job and housing opportunities to alumnae groups or to those who have a connection to the region. |
| 6B.12 | Create specific community values and a tag-line based on a broad reaching public input campaign. |

Appendix

The Appendix for the 2022 Master Plan contains the following items:

- A. Existing Conditions Analysis Profiles
 - Population and Housing
 - Transportation
 - Economic Development
 - Recreation
 - Natural Resources
 - Community Facilities and Services
 - Natural Hazards
 - Energy
 - Existing Land Use
- B. Community Engagement Report
- C. Resource and Document Analysis
- D. GIS Maps
 - Steep Slopes
 - Highly Erodible Soils
 - Water Resources
 - Transportation
 - Existing Land Use

Appendix A:

Existing Conditions Analysis

The following pages include profiles that depict existing conditions data and information related to a variety of topics that are explored in this Master Plan. Together, these provide an idea of Berlin in 2020/21, which is when the majority of the existing conditions analysis took place.

The following sub-sections by topic include:

- Population and Housing (page 73)
- Transportation (page 77)
- Economic Development (page 85)
- Recreation (page 93)
- Natural Resources (page 102)
- Community Facilities and Services (page 106)
- Natural Hazards (page 117)
- Energy (page 121)
- Existing Land Use (page 129)

Population and Housing Trends in Berlin

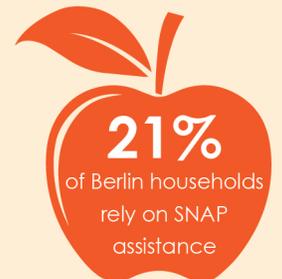
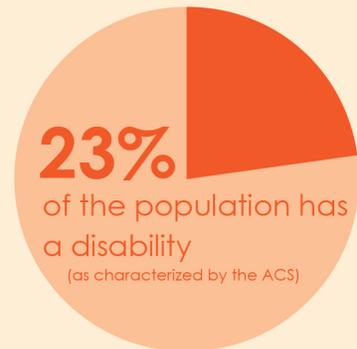
The majority of this data was sourced from the US Census Bureau's American Community Survey, which does account for the prison population in some parts of their data.



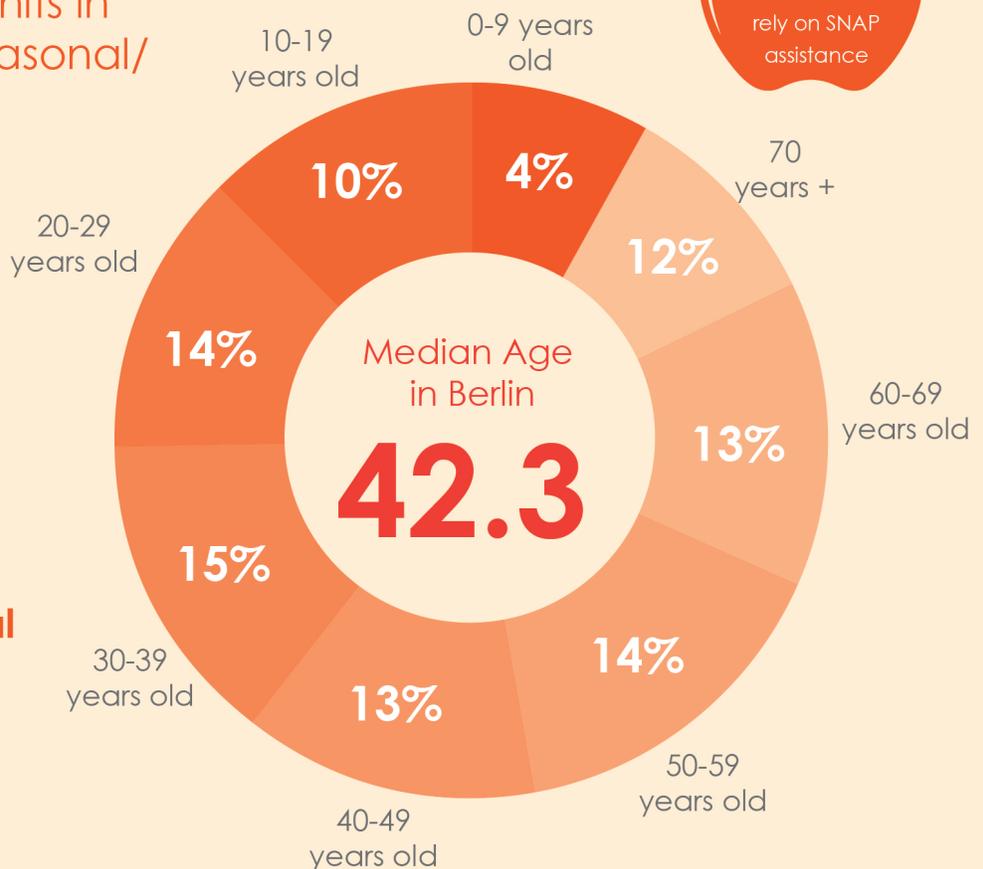
Berlin **\$39,130**
Coos County **\$47,117**
New Hampshire **\$77,933**



1.2%
Vacancy Rate of Rental Units



17% of housing units in Berlin are seasonal/vacant



Since 2000, the median rental cost in Berlin has **DOUBLED** to **\$899**

Key Findings

***Please note that we are currently investigating to what degree the prison populations are skewing this data with the City, such as language spoken at home and median age.**

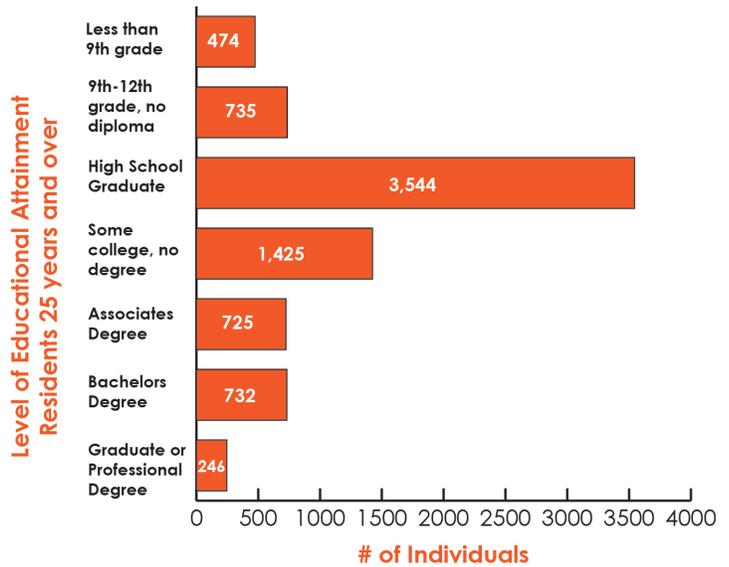
- From 1970-2000, Berlin’s population has been in a decline. Since 2000, the population has stabilized and, in 2019, was 10,221 residents. The 2019 American Community Survey (ACS) data is the most recent data produced since the release of the 2020 Census data has been delayed. The ACS indicates that the non-institutionalized population in 2019 in Berlin was 8,384 persons. The ACS classifies “non-institutionalized” people as those residing in institutions including nursing homes, prisons, jails, mental hospitals, and juvenile correctional facilities. According to the 2020 preliminary data release from the American Community Survey, 692 individuals live at the correctional facility, and 161 individuals reside at the City’s nursing home/facilities. Please note that some of the demographic data categories outlined below do not all break out non-institutionalized people from their dataset and may skew some of the findings (for example, language spoken at home and median age).

| Total Population - Berlin, NH | |
|---|----------------|
| Year | # of residents |
| 2020 | 9,425 |
| 2010 | 10,208 |
| 2000 | 10,331 |
| 1990 | 11,824 |
| 1980 | 13,084 |
| 1970 | 15,256 |
| Source: U.S. Census and American Community Survey | |

- Berlin’s median age of 42.3 is comparable to the state’s median age, making it younger than many other communities in Coos County and NH. 14% of the population is under 19 years old and 42% of the population is between 20 and 49 years old. In the 2018 Economic Development Action Plan, the large younger resident population was attributed to the correctional facilities in the City. About 25% of the population is 60 years old and older. Berlin also has a higher proportion of those ages 85 and over in comparison to the county and state.
- A large proportion of Berlin residents are living under the poverty line and are at risk for issues such as food security and access to housing. According to the Economic Development Action Plan, the 2019 median household income (\$39,130) in Berlin is lower than the county and state. However, it has risen in recent years. According to the American Community Survey, the median household income was \$38,920 in 2010 and in 2015 it was \$35,523. Coos County’s median household income is \$47,117, which is significantly higher.
- According to the Economic Development Action Plan, 18% of Berlin residents make less than \$15,000 per year and 1 in 4 households are living below the poverty level. According to the American Community Survey, 21% of Berlin households receive SNAP assistance, while 39% of these households have children under 18 years old. This highlights the importance of affordable housing options, access to social services, transportation, healthy food and wellness, and economic growth as critical factors to incorporate into the Master Plan update.

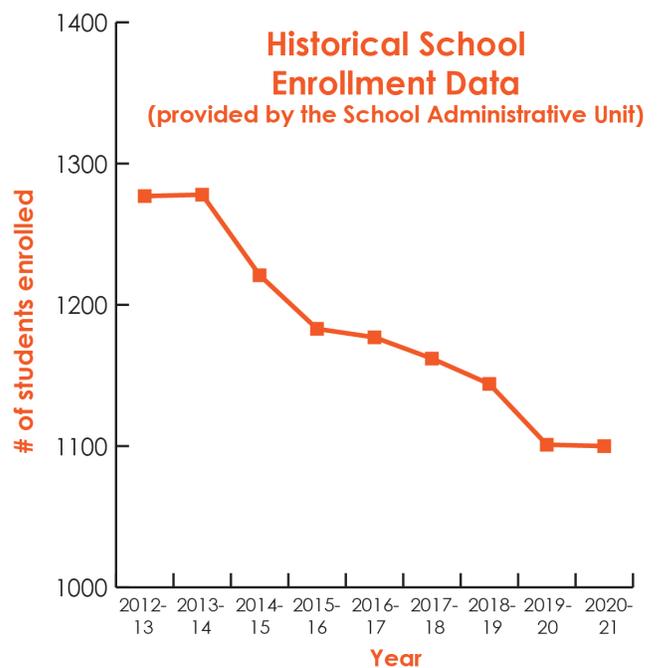
- According to the American Community Survey, 23% of Berlin residents have a disability, such as deafness, blindness, a cognitive impairment, or with an ambulatory impairment (individuals who have a serious difficulty walking or climbing stairs). 20% of Coos County residents have a disability and 13% of NH residents have a disability.
- According to the preliminary 2020 data released by the American Community Survey, Berlin is 93% White and 5% Black or African American. The remaining 3% of the population is Asian, American Indian or Alaska Native, Native Hawaiian or other Pacific Islander, or another race. According to the 2019 American Community Survey, 18% of Berlin residents speak a language other than English at home, as opposed to 11% of the County's population. The data indicates that 12.2% of Berlin residents speak a European language at home, such as French. 4% of Berlin residents speak Spanish at home. Please note this data may be skewed, as it does not break out non-institutionalized populations.

- According to the 2019 American Community Survey, high school was the highest level of education completed by 45% of Berlin residents age 25 years and over. 14% of Berlin's residents that are 25 years and older have earned higher than a bachelor's degree, compared to 19% in the county and 37% state-wide. 10% of residents in Berlin did not complete high school, compared to 9% in the county and 5% in the state. Unemployment is low in Berlin (at 3.2%) but higher than the county (2.2%) and state (2.9%). Please note this data may be skewed, as it does not break out non-institutionalized populations.



Source: 2019 American Community Survey

- According to the 2019 American Community Survey, 16.2% of households do not have access to a vehicle, compared to 2% of Coos County and 1.6% of New Hampshire. Franklin, which is also a smaller City, has 4% of its population with access to no vehicle. In Berlin, 36% of households only have access to one vehicle. Please note this data may be skewed, as it does not break out non-institutionalized populations.
- According to data provided by the Berlin Public School District, school enrollment numbers have been declining steadily over the last ten years.
- According to the American Community Survey, there were 4,784 housing units in 2019



in Berlin compared to 4,838 units in 2015 and 5,007 units in 2010. About 50% of Berlin's housing stock was built in 1939 or earlier. Construction of new housing units has slowed in the last decade.

- According to the 2019 American Community Survey, 83% of Berlin's housing units are occupied, while 17% are seasonal or vacant. There has not been a significant amount of housing construction in Berlin the last ten years.
- The median monthly homeowners expenses for Berlin is \$1,120, while Coos County is \$1,240. These expenses including mortgage, taxes, and utilities. The median monthly housing costs for all occupied housing units is \$771, which is comparable to Coos County's median number at \$792.
- Occupancy type is relatively even in Berlin - approximately 56% of housing units are owner-occupied and 44% are renter-occupied. This highlights the importance of high-quality, available, and affordable housing stock for renters specifically.
- Housing units are primarily single family housing (approximately 48%), while the remainder consists of duplex, multi-family housing, and mobile homes.
- Since 2000, the median rental cost in Berlin has doubled to \$899 per month, per NH Housing 2020 data. In 2000, the median gross rental cost was \$425 per month.
- After decades of low housing values, Berlin is now seeing values rise compared to previous years. From 2017-2020, the median home purchase price in Berlin rose 35.4% from \$63,066 to \$85,400. However, housing values are still low when compared to the county and the state. The 2020 median home purchase price in Coos County is \$1450,00 and the state of New Hampshire's is \$302,333. According to the 2019 American Community Survey, median value of occupied housing units in Berlin is

| Vacancy Rates in Rental Units - Berlin, NH | |
|--|--------------------------|
| Year | Vacancy Rate (all units) |
| 2021 | 0.6% |
| 2020 | 1.2% |
| 2019 | 1.0% |
| 2018 | 0.0% |
| 2017 | 9.5% |
| 2016 | 4.5% |
| 2015 | 7.9% |
| 2014 | 6.3% |
| 2013 | 17.4% |
| 2012 | 10.3% |
| 2011 | 26.5% |

Source: New Hampshire Housing's Annual Residential Rental Cost Survey

| Median Gross Rental Costs - Berlin, NH | | | |
|--|-------------------------------|-----------|----------------|
| Year | Median Gross Rent (all units) | Years | Percent Change |
| 2021 | \$939 | 2020-2021 | 4.4% |
| 2020 | \$899 | 2019-2020 | 7.9% |
| 2019 | \$870 | 2018-2019 | -6.6% |
| 2018 | \$931 | 2017-2018 | 6.3% |
| 2017 | \$876 | 2016-2017 | 8.3% |
| 2016 | \$809 | 2015-2016 | 2.4% |
| 2015 | \$790 | 2014-2015 | ---- |
| 2014 | --- | 2013-2014 | ---- |
| 2013 | \$638 | 2012-2013 | -3.9% |
| 2012 | \$664 | 2011-2012 | 5.7% |
| 2011 | \$628 | 2010-2011 | 0.5% |

Source: New Hampshire Housing's Annual Residential Rental Cost Survey

Building Permit History

| Year | Single Family | Multi-Family | Manufactured | Accessory |
|------|---------------|--------------|--------------|-----------|
| 2010 | 2 | 0 | 0 | 0 |
| 2011 | 1 | 0 | 0 | 0 |
| 2012 | 2 | 1 | 2 | 0 |
| 2013 | 0 | 0 | 1 | 0 |
| 2014 | 1 | 33 | 0 | 0 |
| 2015 | 1 | 13 | 0 | 0 |
| 2016 | 1 | 0 | 1 | 0 |
| 2017 | 1 | 0 | 2 | 0 |
| 2018 | 1 | 2 | 1 | 0 |
| 2019 | 1 | 0 | 0 | 0 |
| 2020 | 1 | 0 | 3 | 0 |

Source: City of Berlin

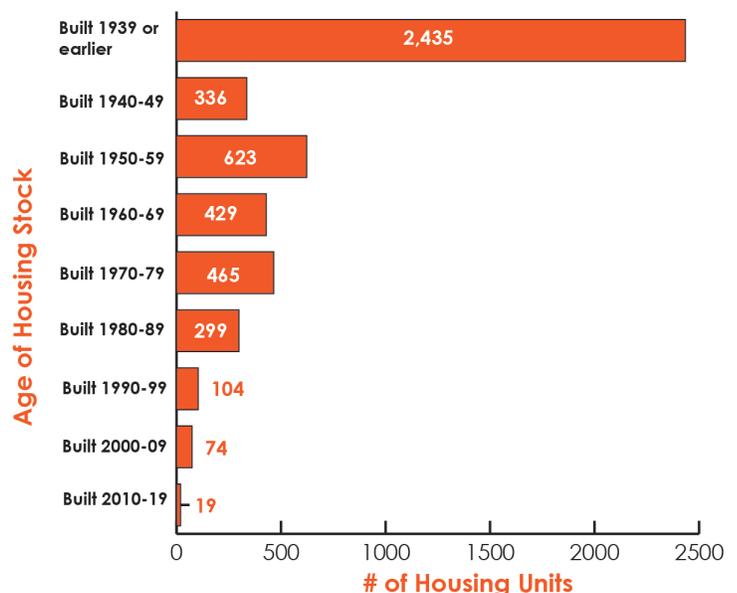
\$92,100, which is lower than the median value in Coos County (\$128,000). The median value of occupied housing units with a mortgage in Berlin is \$98,300. The median value of owner-occupied housing units without a mortgage is \$81,800.

- Berlin has a high percentage of properties without mortgages, indicating a higher amount of elderly individuals. According to the 2019 American Community Survey, there are 1,129 owner-occupied housing units without a mortgage, while there are 1,099 owner-occupied units with a mortgage.
- The presence of short term rentals, such as VRBO and Air B and B, have been increasing in Berlin over recent years. The 2021 North Country Housing Market Analysis identified that the short-term rental market is expanding throughout the whole North Country region of New Hampshire. According to AirDNA, a short-term market analyst company, advertisements for short-term rentals in the towns that make up the North Country have increased 74% since 2017. Three-quarters of these rentals are for an entire-home (as opposed to just a room). The City is currently drafting regulations to guide the establishment of short term rentals in Berlin.
- The New Hampshire Coalition to End Homelessness published a report in December 2020 on the state of homelessness in New Hampshire. The COVID-19 pandemic had a clear impact on New Hampshire homeless community. The number of people experiencing homelessness during the Point-In-Time Count in January 2020 increased by 21 percent (293 people) over the previous year. A total of 4,451 individuals and people in families experienced homelessness in the state of New Hampshire in 2020. There were 1,577 people in families, including children, who were homeless in the state of New Hampshire during 2020.

| Median Home Purchase Price - Berlin, NH | |
|---|-----------------------|
| Year | Median Purchase Price |
| 2020 | \$85,400 |
| 2019 | \$75,000 |
| 2018 | \$75,533 |
| 2017 | \$63,066 |
| 2016 | \$65,000 |
| 2015 | \$61,725 |
| 2014 | ---- |
| 2013 | \$73,000 |
| 2012 | \$88,000 |
| 2011 | ---- |
| 2010 | ---- |

Source: 2005-2014 NH Dept. of Revenue; 2015-2021 The Warren Group; filtered and analyzed by NH Housing; Note: data only includes homes for primary occupancy and does not include land, multifamily homes, seasonal, vacation homes, or manufactured homes

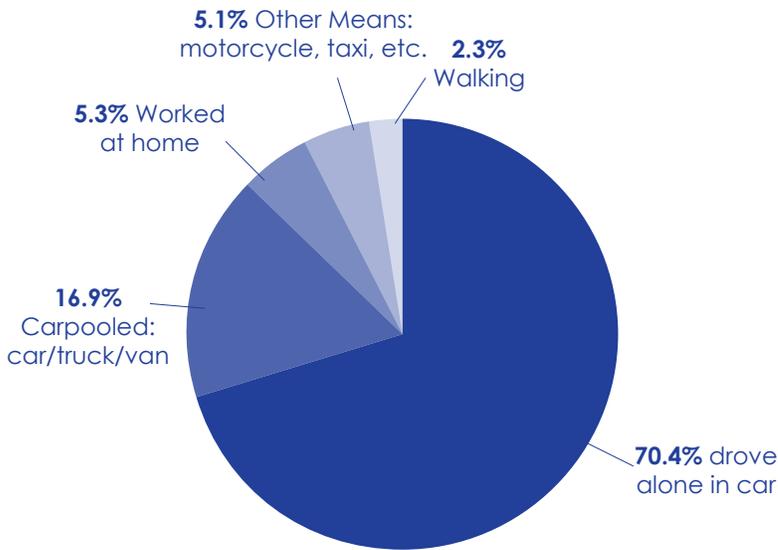
Age of Housing Stock
 Source: 2019 American Community Survey



Berlin's Transportation Network

Workforce Commuting Modes

Workers 16+ years
2019 American Community Survey



Mean Travel Time to Work

American Community Survey 2015-2019

17 mins.
City of Berlin

21 mins.
Coos County

28 mins.
New Hampshire

Berlin's Transportation Infrastructure

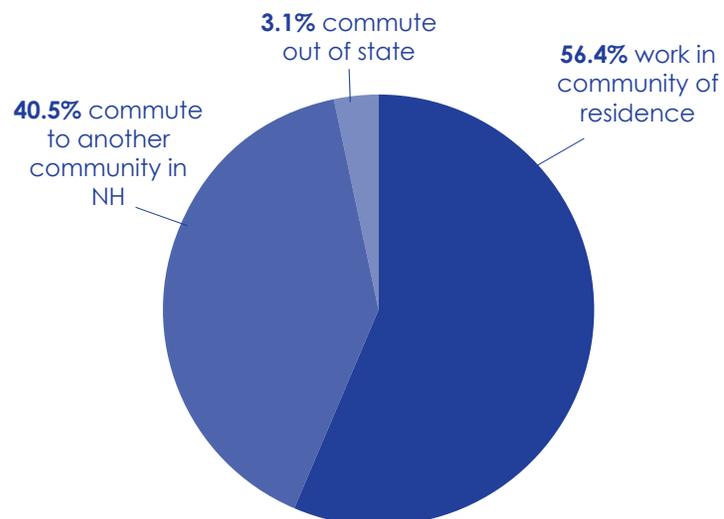
Berlin's transportation system consists of a network of infrastructure that supports movement of people and goods safely.



108 miles of roadway in Berlin

Workforce Commuting Locations

Workers 16+ years
American Community Survey 2015-2019



Transportation Improvements Since 2009



A section of Route 110 was reconstructed to remove truck traffic from residential streets.



Improvements were made to a stretch of Hutchins Street between Bridge Street and Napert Street.



The Route 16 improvement project along the Androscoggin River was completed and included road reconstruction, new sidewalks, landscaping, and other improvements.

Key Findings

ROAD NETWORK

- The City of Berlin has been designated as an urban compact community because of its population size and the density of development within the Downtown area. The City coordinates all maintenance within the compact area, and funding is provided by the State for the care of the state routes and related infrastructure.
- Berlin's road network consists of 108 miles of roadway. The major arteries of the network in Berlin are NH Route 16, the primary north south route in the region, and NH Route 110. Major City streets include north-bound Main Street and its parallel, south-bound Pleasant Street, Mason Street connecting the East Side, Jericho Road/Route 110, Green Street which links Route 16 with Route 110, Hillside Avenue, and Hutchins Street/East Milan Road on the East Side.
- According to the NH Department of Transportation (NHDOT) data, the City's urban compact zone contains 60.8 miles of City maintained roads. This include sections of Route 110 and Route 16 and a number of local roadways. While the City has been investing in road upgrade projects in recent years, many of the roads in the Urban Compact Zone are in poor condition and are due for repaving, regrading, and other maintenance activities.
- Outside the urban compact zone, there are 6.3 miles of City maintained roads. Also outside the urban compact zone, Berlin has 6.3 miles of State Class 1 roadways including 1.5 miles of Route 16 and 4.8 miles of Route 110, which are maintained by the State.
- Additionally, there are 10.2 miles of Class 0 roads in Berlin, which are private and not maintained by the City.
- There are also nearly 20 miles of private and non-classified roads (forest service and logging roads).
- The Berlin roadway system and urban compact zone can be found on the map at the end of this document.
- The City does not currently have a pavement management plan and has identified that roadway improvements could invested in more consistently to maintain a high-quality road network and infrastructure.

MAJOR TRANSPORTATION PROJECTS SINCE 2010

- Since the 2010 Master Plan, a section of Route 110 was reconstructed to remove truck traffic from residential streets.
- In 2016, improvements were made to a stretch of Hutchin's Street between Bridge Street and Napert Street. This section of road, also known as the East Side Arterial, is the major truck route through the City. The City of Berlin received a grant that was administered through the NHDOT Transportation Alternatives Program (TAP) for the proposed improvements. The project included roadway, sidewalk, and streetscape improvements.
- In 2018, Berlin's \$7 million Route 16 improvement project along the Androscoggin River was completed. The project includes road reconstruction, new sidewalk, landscaping, a new stormwater collection system and other improvements.

TRAFFIC VOLUMES AND TRENDS

- The structure of the local highway network requires local and regional travelers to share the major arterials in Berlin. Local traffic consists mainly of trips from residential areas in and around Downtown Berlin and neighboring communities to local businesses and services. The combination of local trips and through trips on the major arterials often results in slower traffic, capacity constraints, delays, and an increase in vehicle collisions.
- Overall, traffic in Berlin has remained relatively stable as the population in the region has stabilized over the past 10 years. Traffic volumes vary somewhat over the course of a year in Berlin due to seasonal fluctuations that result from the tourism industry. Although there might be spikes and anomalies at times, average annual daily traffic trends are meant to provide us with broad insight on traffic volume on roadways in the City. Berlin should collaborate with Noth Country Council to perform traffic counts at various locations at different times of year (summer, October, etc) to attempt to mitigate the seasonal fluctuations or fluctuations related to specific events that exist, such as roadwork.
- The table below shows Annual Average Daily Traffic (AADT) counts for Berlin in greater detail. There is little change in traffic volumes over the past 20 years at most traffic count locations, but some interesting downward trends. For this analysis, we utilized 2019 data since 2020 conditions were so abnormal due to the COVID-19 pandemic, which most likely resulted in less vehicles on the road.

| Location | 2000-2006 | 2016 | 2019 |
|--|------------------|-------------|-------------|
| NH 16 (Riverside Dr.) North of Pleasant St. | 9100 | 10240 | 7300 |
| 12th Street Bridge, East of NH 16 | 4500 | 3700 | 3180 |
| Hutchins St., North of Columbia Ave. | 5100 | 4400 | 3180 |
| NH 16 (Riverside Dr.), North of Maple St. | 8000 | 7000 | 5080 |
| NH 16 (Glen Ave.), South of Brown St. | 11500 | 9130 | 8950 |
| NH 110 (West Milan Rd.) at Milan Town Line | 1900 | 1800 | 1930 |
| NH 16 (Milan Rd.) at Milan Town Line | 2700 | 2200 | 2270 |
| NH 110 (Berlin-Groveton Rd.) at Northern Compact Line | 2950 | 2610 | 3020 |
| Mason St., East of NH 16 | 5500 | 4530 | 4660 |
| NH 16 (Pleasant St.) South Bound on Dead River Bridge | 6100 | 5320 | 5950 |
| NH 16 (Riverside Dr.) North Bound on Dead River Bridge | 4800 | 4420 | 3760 |
| Unity St., North of Mason St. | 7300 | 6560 | 5770 |
| Unity Street, Over Androscoggin River | 4800 | 4200 | 4420 |
| NH 16 (Pleasant St.) South Bound, South of Diana St. | 6100 | 6590 | 5480 |
| NH 16 (Glen Ave.) North Bound, South of Diana Street | 6100 | 5450 | 6660 |

CRASH DATA

- Roadway safety is determined by a number of factors, such as road condition, traffic volume and speed, the number of access points and intersections, driver behavior, and vehicle condition. All of these factors are used to evaluate potential for accidents. Referred to as “crashes” by the NH Department of Transportation, crash data is commonly used to identify hazardous situations and plan for necessary improvements. Table 2 on the following page shows the total number of crashes annually from 2011 to 2020. These numbers have increased from the 2005 total of 158 crashes even

as traffic volumes have stabilized.

- The Berlin Police Department also tracks intersections within the City that have high accident rates. Table 3 shows the intersections in Berlin that are of particular concern because of the number of accidents that occurred from 2011 to 2020. The intersections with the highest number of crashes recorded are highlighted in yellow. It is not surprising that the intersections in the heart of downtown where traffic volumes and turning movements are higher have seen higher numbers of accidents.

SCENIC BYWAYS AND ROADS

- Within Berlin there are two Scenic Byway Routes that are part of the National Scenic Byway Program. The **Woodland Heritage Trail** circumnavigates the Kilkenny District of the White Mountain National Forest, and includes Route 16 from Gorham into Berlin and Route 110 through Berlin to Milan. The route is considered unique because of its wood products heritage. The **Moose Path Trail** promotes the wilderness and wildlife of the region while highlighting Berlin Berlin as “the City that trees built.” The Trail includes Route 16 through Berlin.
- Currently, **Cates Hill Road** is the only designated Scenic Road in Berlin. Scenic Roads, are special town designations of Class IV, V and VI highways where cutting or removal of a tree, or disturbance of a stone wall, must go through the hearing process and written approval of local officials.

BRIDGES

- There are 14 major bridges within the urban compact area in Berlin, and one state maintained bridge at Horne Brook outside of the compact area. The pedestrian Bridge over the Androscoggin River is in poor condition, but is not being used to carry significant weight like the other facilities that are open to vehicles. The one red listed bridge in Berlin is the Mason Street Bridge over the canal.

| Year | Total # of Crashes |
|------|--------------------|
| 2011 | 229 |
| 2012 | 206 |
| 2013 | 234 |
| 2014 | 210 |
| 2015 | 209 |
| 2016 | 190 |
| 2017 | 214 |
| 2018 | 220 |
| 2019 | 208 |
| 2020 | 134 |

| Most Problematic Intersections | Total # of Crashes |
|--|--------------------|
| Burgess St. and East Mason St. | 7 |
| Cambridge St. and Main St. | 7 |
| Church St. and Hillside Ave. | 5 |
| Cole St. and Green St. | 5 |
| Cole St. and Mason St. | 5 |
| Cole St. and York St. | 15 |
| East Mason St. and Hutchins St. | 19 |
| Eighth St. and Finland St. | 10 |
| Glen Ave. and Hutchins St. | 22 |
| Granite St. and York St. | 8 |
| Green St. and Pleasant St. | 8 |
| High St. and Hillside Ave. | 17 |
| High St. and Pleasant St. | 5 |
| High St. and School St. | 14 |
| Hillside Ave. and Willard St. | 18 |
| Hillside Ave. and Willow St. | 17 |
| Hutchins St. and Page Hill Rd. | 20 |
| Main St. and Mason St. | 19 |
| Main St. and Twelfth | 11 |
| Main St. and Pleasant St. | 16 |
| Park St. and Willard St. | 7 |
| Pleasant St. and Mason St. | 20 |
| <i>Note: The yellow color indicates the intersections with the highest total number of crashes over the last nine years.</i> | |

**Table 4: City Maintained Bridges in the Urban Compact
2020 NH Department of Transportation Bridge Summary Data**

| Bridge Name | Year Built/Repaired | Condition |
|---|---------------------|-------------------|
| NH 110 over Jericho Brook | 1954 | Good |
| NH 110 over Small Brook | 1931, 2016 | Good |
| Cascade Street over Saint Lawrence and Atlantic Railroads | 1999 | Good |
| Saint Lawrence and Atlantic Railroad over NH 110 | 2008 | Good |
| Hillside Avenue over Dead River | 2018 | Good |
| Saint Lawrence and Atlantic Railroad over Willow Street | 1937 | Fair |
| Cole Street over Dead River | 1974 | Good |
| NH 16 TRK, Unity Street over Androscoggin River | 1982 | Satisfactory |
| NH 16 SB over Dead River | 1931, 1995 | Good |
| NH 16 NB over Dead River | 1931 | Satisfactory |
| Mason Street over Canal | 1967, 1977 | Poor |
| Mason Street over Dam | 1930 | N/A |
| Mason Street over Androscoggin River | 1967, 1977 | Satisfactory |
| Recreation Trail over Androscoggin River | 1915 | Satisfactory/Poor |
| NH 16TRK, 12th ST over Androscoggin River | 1975, 2011 | Good |
| NH 16TRK, Hutchins over Bean Brook00 | 1978 | Good |
| East Milan Road over Horne Brook | 1932, 2008 | Good/Satisfactory |

This bridge has already been redesigned and its construction is currently out for bid. Table 4 shows conditions of bridges in Berlin, as assessed by NHDOT.

BICYCLE & PEDESTRIAN FACILITIES

- Improving walking and cycling options for residents, workers, and visitors compliments local efforts to increase economic activity and the vibrancy of Downtown, improves safety for those who cannot afford a car or prefer not to use one, and benefits the natural environment by reducing vehicle emissions.
- The sidewalks and paved multi-use trail network in Berlin is primarily in the Downtown area, but extends into the adjacent neighborhoods and along the state routes. Pedestrian movement in the Downtown is a critical mode of transportation, and a form of recreation. However, the City's topography makes walking and biking challenging in some neighborhoods, especially in winter.
- State designated bicycle routes are located along portions of Route 16 from Gorham, Unity Street, Hutchins Street, East Milan Road, Mason Street, Main Street, Pleasant Street, Green Street, 3rd Avenue, Wight Street, and Route 110 to Milan.
- Not all sidewalks in Berlin are maintained in the winter.

PUBLIC TRANSPORTATION

- Public transportation reduces the number of vehicles on the road, and offers an alternative to individuals that may otherwise not have adequate transportation. Many transportation alternatives assist in reducing energy use while improving the regional air quality and reducing the contribution to climate change by reducing of the number of vehicles on the road.

- **Buses**
 - **Fixed Route and Demand Response Service:** Limited fixed route trolley (bus) service is provided within Berlin and Gorham by TriCounty Cap. TriCounty CAP also operates a limited demand response service for their clients (providing door-to-door services throughout the region Monday through Friday, and Medicaid riders can travel to medical appointments 7 days a week).
 - **Concord Coach:** Berlin is the northern terminus of one of the Concord Coach routes. There is currently one bus leaving each morning and a return trip each evening. This service provides access to southern New Hampshire, Boston, MA, Logan Airport and points beyond.
- **Taxis**
 - There is taxi service provided in Berlin and the surrounding area by several companies. Transportation is available on demand and service is provided on a 24-hour-a-day basis to any location in New England.
- **Berlin Municipal Airport**
 - The Berlin Municipal Airport has been serving the aviation community since the 1940's. The Airport is located 7 miles north of Berlin in the Town of Milan, New Hampshire, and sits at an elevation of 1,158 feet. The runway is 5,200 feet long by 100 feet wide.
- **Rail**
 - There are several rail rights-of-way in Berlin, and one of the rail lines is still active. The St. Lawrence and Atlantic line passes through Berlin from Maine and continues up to Montreal with a spur serving the mill sites in Berlin. This rail infrastructure is currently being used for some freight, but no provisions have been made for passengers. To accommodate passenger service in the future, the rail infrastructure would need to be upgraded to some extent.
- **Other**
 - The **Coos County Nursing Home** in Berlin provides rides to home residents with disabilities for medical appointments and recreational outings.
 - **Northern Human Services** provides transportation services for clients receiving behavioral health or developmental disability services and substance abuse treatment and prevention. Services include demand-response, long distance medical trips and transportation for recreational and social activities. Berlin Mental Health Center and Berlin Community Services can be contacted to learn more.
 - **Serenity Steps** provides transportation services in the Berlin area for members and participants to and from the center for mental health peer support.

MULTI-USE TRAILS

- There are also a multitude of trails and paths in Berlin serving walkers, hikers, mountain bikers, cross-country skiers, ATVs and snowmobilers. Some of this network is within the White Mountain National Forest and State-owned parcels, but much of the network is informal and privately owned, with no formal agreements for continued use or signage. The many non-motorized trails and paths in Berlin include paved paths within the Sowntown area, hiking trails at the edge of the Downtown, and wilderness trails.
- **Multi-use trails in Berlin include:**
 - A network of formal motorized use trails, including snowmobile corridors, and the ATV trails within the State owned property around Jericho Lake are well-mapped and maintained in Berlin and connect to regional trails. The White Mountain Ridge Runners Snowmobile Club manages and maintains the snowmobile trails. The existing trail network includes trails parallel to Route 16 and

110, to the east towards the Town of Success and on to Maine, across Cates Hill and north to Milan, and throughout the State and Federal lands in the western portion of Berlin.

- There are two designated parking areas in Berlin that provide access to the trail network. At Jericho Mt. State Park, there is a plowed lot with the capacity for about 50 vehicles and trailers located about 1 mile off of Route 110. The entrance road to this lot is plowed and maintained by the State and the lot itself is plowed by the White Mountain Ridge Runners snowmobile club. Jericho Motorsports located on Route 110 is a privately owned, plowed and maintained lot with capacity for about 15 vehicles and trailers.
- In addition to these parking lots, there are many private trails that intersect with the main trail system to provide direct access from private homes within the City. These trails allow hundreds of Berlin residents to ride from their homes directly onto the trail system.
- The City of Berlin has an OHRV Ordinance that allows ATVs to ride on the municipal public connector trail within the Urban Compact Zone. This trail runs from the Jericho Mountain State Park to Route 110 and follows Route 110 southeasterly as it changes from Jericho Road to Wight Street. ATV riders use this trail as a connector between ATV riding destinations and to access local businesses and services along the way.
- The riverwalk project along Route 16 and the Androscoggin River is a significant initiative underway in Berlin. The approximately \$1.1 million project will be funded by a Northern Borders Regional Commission grant, a Transportation Alternatives Program grant from the NH Department of Transportation, and funding from the City. The NH Department of Transportation has approved moving on to the final design phase for the approximately 4,000-foot trail from the river walk at the Service Credit Union Heritage Park to the Twelfth Street Bridge on City-owned land along the Androscoggin River.

SIGNAGE AND WAYFINDING

- **Signage Along Major Routes:** Signage along state routes (NH Routes 16 and 110, as well as Route 2 and Interstate 93) provide the necessary information to keep travelers on the routes and to direct travelers to many destinations.
- **Local Wayfinding:** A variety of signage is used in Berlin, including street signs; welcome/gateway signs; Downtown Berlin signs; and directional signs.
- Most of the signs are in fair to good condition, but having effective signage requires a commitment to repairing and replacing signage regularly.

WORKFORCE COMMUTING

- **Travel Time to Work:** According to the 2015-2019 American Community Survey data, the mean travel time to work in Berlin is 17 minutes, which is lower than Coos County's mean travel time (21 minutes) and New Hampshire's mean travel time (28 minutes). This may be attributed to Berlin's larger population size and its position as an urban center for the area.
- **Transportation Modes:** The majority of workers in Berlin drive single-occupancy vehicles to work (70.4% of workers over 16 years old). 16.9% of workers carpool to work in a vehicle and 5.3% work from home. 5.1% of workers transport through "other means", which includes transportation modes such as motorcycle, bicycle, etc. 2.3% of workers walk to work in Berlin.
- **Percent of Working Residents:** According to the 2015-2019 American Community Survey data, 56.4% of Berlin residents work in Berlin while 40.5% commute to another NH community and 3.1% commute out of state.

ELECTRIC VEHICLE TECHNOLOGY

- While there are currently no electric vehicle charging stations in Berlin, this infrastructure is growing in New Hampshire and throughout the region. For example, Gorham and Shelburne both have electric vehicle charging stations at campgrounds and hotels. In planning for the future, this infrastructure should be considered to support the evolving transportation needs of residents and tourists.
- Electric bicycles and scooters are also gaining popularity and may allow residents to overcome the challenging topography while reducing single-occupancy vehicle trips.
- Drive Electric NH is a coalition of public and private stakeholders whose mission is to accelerate the adoption of electric vehicles and installation of supporting charging infrastructure in NH by increasing knowledge and awareness of EVs through education and outreach. They update an evolving EV charging map and provide resources on increasing EV infrastructure in communities, types of EV vehicles, and incentive programs.

PARK AND RIDE FACILITIES

- There are currently no designated Park & Ride facilities within the North Country, although Berlin has been identified as an ideal host community for a park and ride lot within the 2020 Statewide Strategic Transit Assessment.

IMPLICATIONS FOR THE MASTER PLAN

- For those who do not own or have access to a car in Berlin, moving throughout the City can be a challenge with limited public transport options. Improving roadways and creating programs to accommodate pedestrians, ridesharing options, taxi service, and other alternative transportation should be a priority in the future.
- Long-range planning and the maintenance of an efficient road management organizational system will ensure consistent and timely investment towards priority road improvement projects and will preserve the longevity of the road network into the future.
- The majority of Berlins transportation network is confined to the Downtown area. This presents inter-connected opportunities to calm traffic, increase roadway safety and make the Downtown more desirable for pedestrians and cyclists.
- The City should apply complete streets design standards where practical on future roadway reconstruction projects to ensure roads are accommodating all modes of travel (where feasible). This will also ensure that traffic calming is incorporated and all transportation modes are accommodated.
- Site-specific traffic calming and access management improvements should be identified throughout the Downtown so that they can be incorporated into the design and construction of future roadway projects. These designs should incorporate green infrastructure to improve the pedestrian experience, beautify the Downtown, manage stormwater, and provide other benefits.
- There is a need to update wayfinding signage throughout the City, including street signs, to remove signs that are outdated, and to repair signs in need of improvements. There is also a need to create a funding mechanisms for this.
- The current lack of public transportation options in Berlin and the surrounding region should be explored to better understand they type and regularity of transit services desired by residents.
- Strategic investment should be made in vehicle charging locations within the Downtown to ensure that travelers have the opportunity to charge their vehicles while visiting local businesses.

Economic Development in Berlin

Employment

- 222** Goods-producing jobs
- 1,740** Service-providing jobs
- 1,164** Government jobs



49%

of Berlin residents are in the workforce, compared to 57% in the county and 68% in the state

\$39,130

Median Household Income

3.2%

Berlin's unemployment rate

56%

of Berlin's top industries are expected to continue to decline by 2028. (2019 Economic Development Action Plan)

9%

decrease in the number of jobs in Berlin between 2008 and 2018



3%

is the projected increase of job numbers from 2018-2028 in Berlin

7%

of Berlin residents are **self-employed**

Largest Employers in Berlin

| |
|--|
| Northern NH Correctional Facility |
| Androscoggin Valley Hospital |
| City of Berlin |
| City of Berlin School System |
| Androscoggin Valley Home Care Services |
| Northern Human Services |
| Northway Bank |
| Federal Correction Institution |

Level of Educational Attainment (Ages 25 - 64 years old)

| Education | # of residents | % of residents |
|--|----------------|----------------|
| Less than high school diploma | 806 | 13.5% |
| High school graduate (and equivalence) | 2,632 | 44% |
| Some college or associates degree | 1,737 | 29% |
| Bachelors degree or higher | 794 | 13.3% |

Key Findings

The City of Berlin is fortunate to have recently completed a study with Camoin Associates that resulted in the 2019 Economic Development Action Plan focused on building on the City's unique assets, and making progress towards City-wide goals related to reversing population loss and industry decline. Many of the City's Economic Development Goals identified in the 2010 Master Plan are still needs for Berlin today. Many of these existing conditions observations and economic characteristics were gleaned from this recent Action Plan.

ECONOMIC CHARACTERISTICS

- Berlin is a regional center for jobs, housing, healthcare, and other services.
- Since 2010 the Burgess Biopower Plant has been completed and is now producing power.
- The tourism industry continues to draw visitors to Berlin.
- The median household income in Berlin is lower than in the county, state, and nation.
- Government, (includes jobs at both the state and federal prison), is the leading industry sector in Berlin, followed by Health Care and Social Assistance, Retail Trade, and Manufacturing. By Gross Regional Product (GRP) Berlin's leading industries are Government (24% of GRP); Health Care and Social Assistance (18%); and Utilities (8%). Employment in the Goods and Service sectors in Berlin has been declining.
- Average earnings are roughly \$13,000 less in the county and City versus the state.
- From 2008-2018, Berlin saw a 9% decrease in the number of jobs. From 2018-2028, job numbers are projected to increase by 3% (about 90 jobs).
- According to the 2019 Economic Development Action Plan, about 7% of all jobs in Berlin belong to people that are self-employed. This data was generated by ESMI, which is labor market and economic data company. It was also noted that self-employed jobs are expected to increase by 4% by 2028.
- Registered nurses are the most common occupation in Berlin (130 jobs) followed by personal care aides (86 jobs) and office clerks (85 jobs). Over half of the top 10 occupations (six of 10) are expected to decline by 2028.
- According to the Retail Market Analysis in the 2019 Economic Development Action Plan, projected 2023 numbers indicate a higher percentage of households making over \$50,000, with a concentration of those households making between \$50,000 and \$149,999.

POPULATION & AGE

- Stable/declining population numbers and an aging population will impact the City's ability to attract and retain businesses to Berlin. These trends will also continue to put pressure on the health care system, housing supply, and community support services required.
- Additional population is needed to address the critical workforce shortages being faced in health-related occupations alone.

INCOME & EDUCATION

- Lower income and education levels in Berlin is putting pressure on support services and limiting

discretionary spending potential to support local businesses. Opportunities to raise incomes and pursue education opportunities will be beneficial to residents as well as businesses looking for workers.

- Higher levels of poverty are correlated with community health challenges that should be addressed to continue to support residents in their health and wellness needs.

INDUSTRIES & EMPLOYMENT

- With the total number of jobs in Berlin declining and a heavy reliance on government employment, there is a need to diversify the economy to better prepare for the future and create new opportunities.
- Berlin’s history of heavy reliance on a primary industry has resulted in negative consequences and as a result it is critical that the City continue to pursue alternative economic options.

Informed by public input, the following charts represent a summary of Berlin’s opportunities and challenges as they relate to economic development. This was generated through the City’s 2019 Economic Development Action Planning process.

| Berlin’s Challenges |
|--|
| High tax rates and perception |
| Isolated location |
| Disinvestment in the Downtown |
| High number of vacant/underutilized parcels |
| Negative local and internal perception of the community |
| Negative external perception |
| Contradicting perception of development process |
| Volunteer burnout |
| Declining and aging population |
| Maintaining a great education with decreasing number of kids |
| Decreasing state education funding |
| Deferred infrastructure maintenance and high improvement costs |
| Low unemployment rate (lack of available workers) |
| Lack of service amenities |
| Community health challenges |
| Lack of health care professionals |
| Conflict surrounding motorized and non-motorized recreation |

| Berlin’s Opportunities |
|--|
| Natural resources |
| Affordable housing |
| Committed and skilled City staff |
| Growing ATV and snowmobile brand |
| Committed volunteer network |
| Vast outdoor recreation and arts/cultural amenities |
| Available waste heat from bioplant |
| Community college engagement and trades training at high school |
| High quality hospital and health center |
| Opportunity zone, new market tax credit |
| Increment financing options |
| Parcels available for development/redevelopment in Downtown, around periphery, along Route 110 |
| Historical significance |
| Airport |
| Regional Comprehensive Economic Development Strategy |
| Communications network (two newspapers, active online community) |
| Reuse of the Brown School |

ECONOMIC INCENTIVES

Berlin does offer a number of economic incentives to property owners in the City. These include:

- The City of Berlin takes advantage of two State laws that allow the City to offer a **Community Revitalization Tax Relief Incentive** for downtown development as well as a **Partial Tax Exemption for New Industrial & Commercial Construction**. The Community Revitalization Tax Relief Incentive is authorized by RSA 79-E and is a property tax relief program that seeks to encourage investment

in town centers and to rehabilitate underutilized buildings within these areas.

- Berlin is located in Coos County, allowing businesses to apply for the **Coos County Job Tax Credit**. This is related to job creation and wages. The credit is granted to businesses for each new, full time, year-round employee hired in Coos County for which actual wages paid, including the amount paid by the employer for medical and dental benefits, equals or exceeds 150 percent of the current state minimum wage.

- **The Economic Revitalization Zone (ERZ)** tax credit program, which is

detailed in RSA 162-N, offers a short-term business tax credit for projects that improve infrastructure and create jobs in designated areas of a municipality. ERZs were established to stimulate economic redevelopment, expand the commercial and industrial base, create new jobs, reduce sprawl, and increase tax revenues within the state by encouraging economic revitalization in designated areas. Much of Berlin, including downtown and along Route 110 is part of an Economic Revitalization Zone, designated by the NH Department of Resources & Economic Development. For a business to qualify for an ERZ tax credit it must invest in equipment and / or create a least one (1) new job in the state, and meet the following criteria:

- Be physically located in an approved ERZ.
- Invest in equipment.
- Create part or full-time jobs.
- The investment and / or the job creation must take place within one calendar year.

- Berlin is located in a **Small Business Administration HUBZone**. Coos County is a non-metropolitan county that is qualified as a HUBZone. The HUBZone program fuels small business growth in historically underutilized business zones with a goal of awarding at least three percent of federal contract dollars to HUBZone-certified companies each year.

- Berlin is currently pursuing the creation of a **Tax Increment Financing (TIF) District** along Route 110 that focuses on recreation and hospitality. A TIF is a special tax district that can be used as an economic development financing tool when market conditions will not allow private investment alone

BERLIN INDUSTRIAL DEVELOPMENT AND PARK AUTHORITY (BIDPA)

BIDPA's goal is to provide opportunities for industrial and business expansion and economic stability in and around Berlin. It seeks to expand the range of economic opportunities available and to promote the development and preservation of business and industry to serve the City of Berlin. BIDPA is also committed to assuring that a reasonable supply of adequately serviced properties and facilities are available to accommodate business and industrial growth. They accomplish this by:

- Acquiring land, buildings, structures, and facilities suitable to future business and industry.
- Developing land, buildings, structures, and facilities to make them more attractive to business and industry.
- Expanding land, buildings, structures, and facilities to suit the needs of business and industry.
- Leasing land, buildings, structures, and facilities to business and industry in need of facilities from which to conduct their trade.
- Disposing of land, buildings, structures, and facilities or when such facilities when business and industry owners wish to purchase such facilities or when such facilities are excess and no longer serve BIDPA's purposes.

to address physical impediments that limit or prevent otherwise desirable commercial or industrial development. The TIF District focuses on ways to privatize portions of capital improvements, such as broadband expansion, and incentivize public improvements such as higher density housing, recreational enhancements, water and sewer system upgrades, and road improvements. In the case of Route 110, some property owners have expressed a desire to take advantage of the interest in ATV riding created by the park to build and operate new commercial businesses in that area.

- Meanwhile, a study was recently completed on the **feasibility of attracting a small hotel** to Berlin. Pinnacle Advisory Group of Boston was hired to conduct a market demand study that looked at whether there was sufficient demand to support a 60-bed hotel in Berlin. Although Pinnacle found that leisure demand would be strong in July and August and February, they noted that demand for lodging in the shoulder seasons would be an issue. The study also found that the City lacked corporate demand, but it added that incentives and creative financing could change that assessment as could increased development in the City. Since then, BIDPA has begun working with the Melan Hotel Group to provide a secondary review of the assessment. They found there was more opportunity for a hotel in Berlin than the original study indicated and the City is now looking for creative ways forward.

EMERGING THEMES AS IDENTIFIED IN THE ECONOMIC DEVELOPMENT ACTION PLAN

Berlin's assets have enormous potential to be harnessed for economic development

AN INNOVATIVE PUBLIC-PRIVATE PARTNERSHIP

The City of Berlin has positioned itself to be a clean energy hub and has multiple energy facilities generating power through renewable resources. Berlin's biomass plant (Burgess BioPower), which became operational in 2013, converts wood chips (local renewable energy source) into electricity through the use of a steam-powered turbine. Steam at the end of the process is converted back into water via a cooling tower. It is here where "waste heat" is evaporated into the atmosphere.

The City is partnering with Burgess BioPower to utilize this "waste heat" to construct a snowmelt system for the adjacent Downtown center of Berlin as part of a planned, renewed streetscape project. This project is aiming to project is improved accessibility and safety of Downtown Berlin through the long winters in Northern New Hampshire. The average annual snowfall in Berlin is 7.25 feet per year and snow generally falls in the six-month period between the months of November and April. Under current practices, the City spends exorbitant amounts of effort to remove snow from roadways that eventually end up back on surfaces after the next storm. In the spring, streets and sidewalks are laden with the deposited winter sand until it can be manually and mechanically removed by shop owners and the Public Works Department.

With numerous government and health-related services, elderly living facilities, and the majority of the local retail sector located in Downtown Berlin, accessibility and safety are primary considerations for streetscape design and Downtown improvement. Additional improvements to accessibility and safety are proposed to be addressed through the reconstruction of the Downtown streetscape coupled with an innovative snow-melt system which will eliminate snow and ice on roads, sidewalks, and municipal parking areas.

initiatives that have a real impact on Berlin's local economy. Many of Berlin's challenges from an Economic Development perspective may prove to be some of the City's best opportunities. As the industrial face of the community changes and outdoor recreation and tourism become a larger focus, it may now be possible to see Berlin's problems as solutions.

EXPAND AND EXPLORE - OUTDOOR RECREATION AND TOURISM

- **Berlin's natural resources attract outdoor enthusiasts to the area.** The vast natural resources within close proximity of Berlin (including trails, rivers, mountains, and more) has driven increased visitation of all types to the region, including ATVs, hiking, biking, hunting, fishing, boating, birding, and others. These assets are currently being utilized to varying degrees.
- **The lack of tourist amenities is a constraint to the City's ability to capitalize on these visitors.** The lack of a hotel and limited eating options force those who are visiting Berlin to stay (and spend their money) outside of the City limits. Finding ways to build up the tourism and outdoor recreation assets in downtown and along key corridors like Route 110 Berlin will have fiscal benefits, including both increased economic activity and potentially increased residents and property tax revenue.
- **Enhancing tourism and outdoor recreation assets combined with increased internet access and the ability to work remotely will encourage more people to move to Berlin to pursue their personal hobbies.** Finding ways to increase awareness of outdoor recreation access, build up the housing stock to align with the market demand from telecommuters, and brand the community as a great place to live and work will go a long way in increasing the vibrancy of the economy.

RECONCEPTUALIZE: THE DOWNTOWN AREA

- **While Berlin has the "bones" and history of a healthy downtown, recent decades have seen**

NH HOUSING URBAN3 STATE-WIDE ANALYSIS: EVALUATING LAND PRODUCTIVITY ACROSS DEVELOPMENT PATTERNS

In New Hampshire, property taxes are the key revenue source for local governments. Tax rates, land use and land value from one end of town to the other often vary in surprising ways. To best understand the economic and policy implications of these three property tax elements, New Hampshire Housing partnered with consulting firm, Urban3, to analyze what types of development create the greatest tax return in 15 communities around the state. Berlin was one of these 15 communities.

In looking at the balance of taxable and non-taxable land in cities, Berlin is quite unique. The report indicated that 35% of the land within Berlin is taxable and 65% is nontaxable. This is largely due to so much of Berlin's land area being home to the White Mountain National Forest and other natural conservation areas. This balance gives the community a limited amount of land to work with when it comes to working on projects that intensify land use and build density.

According to this study, Downtown Berlin uses 0.6% of Berlin's land to generate 3.3% of Berlin's value. This 1:51 ratio means that, relative to its size, downtown Berlin is 51 times as productive as all of Berlin. A ratio greater than 1:6 is usually a sign of a healthy downtown. However, so much of Berlin's land is undeveloped that it distorts the intensity of Downtown's productivity. Berlin does have the grid network in place to add walkable mixed-use development and increase density, which would create more economic productivity in the City.

high levels of vacancy, disinvestment in buildings, a need for infrastructure upgrades, and a lack of significant public support to move the needle from decline to prosperity. During the outreach phase of the Action Plan, it was noted that it may be time to reconsider where and what Downtown Berlin represents.

| |
|---|
| The marketing strategy for Berlin includes three components: |
| Give more voice to Berlin’s successes. |
| Broaden the “Open for Business” initiative |
| Brand and showcase the region for recreation. |

- **Redefine or expand the location of Downtown Berlin to expand development/redevelopment opportunities.** The Downtown has a number of challenges related to revitalization - there are still a number of vacant, derelict, and underused properties, lower than desired downtown traffic, and a lack of housing options. However, the City recognizes the importance of reinvigorating Downtown Berlin and increasing opportunities for redevelopment. Redefining or expanding Downtown Berlin will require a close look at the existing building inventory, identification of types of businesses that could be a good fit, and investment in its overall infrastructure. In addition, by expanding the Downtown discussion to include a potentially larger area (such as reaching out Route 110 towards the recreation assets), it will expand the possibilities and person-power of potential redevelopment initiatives.
- **Improve customer service with the public.** An assessment was completed of the current land use regulations, review processes, and “customer service” being performed by the City of Berlin staff as it relates to economic development initiatives. The greatest needs are related to public awareness of opportunities, clarity around process/timelines, and overall perception of the City’s efforts.

SUPPORT AND DEVELOP - BUSINESS AND THE WORKFORCE

- **Focus efforts on attracting and retaining businesses and training a strong workforce.** By being a place that is attractive for businesses to locate and expand, Berlin will create new jobs, diversify the tax base, reduce the property tax burden on residential property owners, and create a more vibrant community. Training and expanding the workforce will both staff needed positions and prepare others for entrepreneurial endeavors.
- **Improve Berlin’s reputation through a multi-faceted branding campaign.** Improving Berlin’s reputation, both internally and externally, will be critical to address some of the concerns expressed by the business community including perceptions around the ability to work with the City, the desire for the City to be helpful, and the need for community support in attracting and retaining businesses. Align marketing strategy with BIDPA priorities from the 2019 Economic Development Action Plan.

RECOGNIZE AND ACKNOWLEDGE - BERLIN’S QUALITY OF LIFE

- **Publicize Berlin’s assets.** Being able to communicate the assets and benefits of visiting, living, and working in the community is critical to being able to attract investment to Berlin. This needs to happen both internally and externally, as many people living in and around the City have a negative perception of life in Berlin. The intended consequence of creating an internal marketing campaign creates a positive feedback loop which will percolate externally out of the City.
- **Improve communication with the community.** Improving communication, both internally and externally, will benefit efforts to attract investment and activity to the community. Reviewing the audience, message, and channels of outreach will ensure increased understanding of the assets of Berlin and may attract people to the area who otherwise may have chosen to go elsewhere.

IMPLICATIONS FOR THE MASTER PLAN

- Integrate key findings developed as part of the Economic Development Action Plan and Community Profile into the Master Plan document.
- Address aging infrastructure, vacant buildings, and unmaintained building facades.
- Develop a unique brand for the Berlin Master Plan so it coincides with its marketing strategy.
- Balance economic development opportunities in Downtown and along Route 110.
- Invest in downtown improvements to create a thriving and attractive environment for existing and new businesses, visitors, and residents.
- Highlight development opportunities and propose regulatory changes that will incentivize development in desired areas of the City.
- Provide guidance on how the City can build a connected, accessible, diverse, and high-quality outdoor recreation system. Explore greenway connections, open space opportunities, and community garden sites.
- Create diverse housing solutions for the City's population.
- Review (in a cursory way) the existing building inventory and infrastructure investment opportunities.
- Identify both short term and long term strategies in the Master Plan to ensure, incremental and immediate wins while making regular progress on longer-term projects.
- Embrace tactical urbanism strategies as a way of experimenting while this change unfolds.
- Support the creation of higher paying job opportunities for Berlin residents.
- Review and modernize zoning ordinance and identify improvements consistent with Berlin's economic development vision.
- Consider policies and practices to put in place to avoid deferred infrastructure maintenance in the future.

TACTICAL URBANISM STRATEGIES

Tactical urbanism is a City and community driven process where flexible, action-oriented, temporary projects are initiated to advance long-term goals related to street safety, public space activation, alternative transportation, public art, and more. Many projects that improve the public realm take years to accomplish - tactical urbanism projects focus on temporary demonstrations to show what these projects could look like. Projects often focus on re-purposing under-utilized spaces using temporary, low-cost materials to transform these spaces into a dynamic community space. Examples of tactical urbanist projects include:

- Temporary bike lanes and traffic calming infrastructure
- Public art
- Moveable planters
- Moveable seating
- Interactive play features
- Street games
- Parklets
- Pop-up events

Berlin's Recreation Assets



14 local parks, athletic fields, and playgrounds



3 established hiking areas



130 miles of ATV riding in the Berlin area

25 Established Rock Climbing Routes at Mt. Forist

Berlin's Recreation Department coordinates **sports, recreation activities, events, and other special programs** for community members.

New Hampshire's Outdoor Economy is **3.2%** of the state economy

which is the **9th highest** in the country

Key Findings

PARKS AND RECREATION DEPARTMENT

- Berlin Parks and Recreation Department is part of the Berlin Community Services Division and offers four-season programming and recreation opportunities to youth and adults in the community. This Department also maintains and manages Berlin’s recreation facilities including athletic fields, parks, playgrounds, and cemeteries. Parks and Recreation operates out of the Berlin Recreation Center, which is located Downtown.
- Berlin’s Parks and Recreation Department’s biggest asset, according to the Recreation Director, is the staff devotion and volunteer commitment to the youth of the area - they represent the backbone for Berlin’s recreation programming and offerings.
- In 2019, soccer was the Recreation Department’s most popular sport. In past years, the Learn to Ski/ Snowboard program was also very popular. The Department typically receives donations to offer scholarships to individuals, which keeps costs for equipment rental and participation low. Due to the current Recreation Department’s Assistant, baseball has also been making a comeback with many types of leagues being offered in the City. With additional funding recently being made available to the Notre Dame Arena, the Department expects to see an increase in hockey team participation as well.

BERLIN'S PARKS AND RECREATION FACILITIES

| Facility | Size | Infrastructure Description/Activities |
|--|------------|---|
| Athletic Fields and Playgrounds | | |
| Memorial Field | 5 acres | Ice rink, baseball/softball field |
| Memorial Field Annex | 2 acres | Playground |
| Berlin High School Running Track | 440 meters | Running Track (Located at High School, managed by City) |
| Berlin High School Athletic Fields | N/A | Baseball, field hockey, soccer (Located at High School, managed by City) |
| Gilbert Street Field | 0.72 acres | Field used for younger league sports – soccer, baseball, kickball, Special Olympics bocce practice, winter ice rink. |
| Horne Field and Tennis Courts | 6 acres | Boating, fishing, picnic areas, playgrounds, riverfront, tennis, ice rink for hockey and skating, baseball/ softball fields |
| Community Athletic Fields | 10 acres | 1 mile jogging area, tennis court, full fields for baseball, softball, field hockey, and soccer |
| Marston Elementary School Playground | 1 acre | Playground |
| Parks | | |
| Veterans Memorial Park | 1.5 acres | Public seating, gazebo |
| Vodukis Park | 0.77 acres | Public seating/sculpture art park |

| | | |
|---|------------|--|
| Gill Park | N/A | Small Downtown park, outdoor seating |
| Jericho Mountain State Park | 491 acres | Walking paths, beach, boating, fishing, playground, picnicking, snowmobiling |
| Highland Park at Ramsey Hill | 1 acre | Playground, ice rink for hockey and skating |
| Hutchins Street Park | 1 acre | Playground, ice rink for hockey and skating |
| Tondreau Park / Public Service Park | 26.3 acres | Walking paths, riverfront area, seating |
| Friendship Park | 0.34 acres | Playground, seating, shade structure |
| Central Park at Community Field | N/A | Walking paths, seating, playground, basketball court, 1/4 acre skate park, |
| Dead River Park / Vietnam Veterans Park | 0.43 acres | Public seating, waterfront, informal walking area, playground |
| Grand Trunk Park | 0.42 acres | Public seating |
| Unity Park at Laura Lee Viger Botanical Gardens | 6.3 acres | Owned by Central Rivers, walking paths, public seating, perennial gardens |
| Bickford Place | N/A | Located in Downtown, fountains, trees, public seating |
| Kelley Park | N/A | Located at the Public Library |

FUTURE PROJECTS TO CONSIDER FOR THE PARKS AND RECREATION DEPARTMENT

- New Indoor Recreation Facility or Significant Renovations of Existing Recreation Facility:** The existing recreation facility has a number of deficiencies including limited restroom capacity, poor ceiling and floor tile condition, water stained carpets, inefficient windows, and inadequate storage space (to name a few). In the 2021-2026 Capital Improvement Plan, a priority project listed for the City is the purchasing of the National Guard Armory site to build an indoor recreation facility for basketball, fitness classes, City elections, and events such as birthday parties, holiday celebrations, and yard sales. Although this project did not pass, an alternative solution should be considered to improve the existing facility or creatively finance a new building.
- Transportation:** A significant need of the Berlin Parks and Recreation Department is additional transportation options, including certified staffing and vehicles, to bus the public (especially the developmentally disabled, children, and seniors) to recreation programs

PARKS AND RECREATION PROGRAMS

| Program |
|--|
| Sports |
| Baseball – Ages 4 - 15 |
| Basketball – 6th Grade & younger |
| Dance – K – 6th Grade |
| Hockey – Ages 5 – 16 |
| Kickball – Grades K - 3 |
| Open Gym – All ages |
| Ski & Snowboard – 3rd – 6th Grade |
| Soccer, British – Ages 2 – 5 |
| Soccer, Summer – Grades Entering K – 8th |
| Summer Playgrounds – Ages 5 - adult |
| Tumbling – 1st – 6th Grade |
| Special Events |
| Easter “Eggstravaganza” |
| School Vacation Special Events |
| Yard Sales |
| Other |
| Raised Garden Beds at Friendship Park |
| Rental of Recreation Gym Facility |
| Rental of Veteran’s Memorial Park & Gazebo |
| USDA Meals (when school is not offering) |

(including games, plays, and concerts in the park). A bus and a certified driver could also open opportunities for special trips sponsored by this department.

PROGRAMMING NEEDS

- **A lack of funds and staffing limits the Parks and Recreation Department's programming.** The Department would like to sponsor more weekend and evening activities, however staff are already working around the clock to maintain existing programs.
- **There is a lack of activities for the older youth and young adult population that don't enjoy competitive sports.** The Department would like to offer other activities such as board games, trivia challenges, etc., however their limited budget and staffing makes it challenging to offer these. It is also challenging to stimulate general interest in recreation programming of this group.
- **There is a need for additional activities for the developmentally and physical disabled population.** The Parks and Recreation Department offered programming called "Bring on the F.U.N. (Friends Understanding Needs)" that was a big hit in the City. This population would need transportation if additional programming was made available to them.

OUTDOOR RECREATION FACILITIES, RESOURCES, AND TRAILS

The outdoor recreation spaces and infrastructure in Berlin outlined below contribute to the City's local economy, ecosystem health, and resident's quality of life.

Jericho Mountain State Park

- Jericho Mountain State Park is located a few miles northwest of downtown Berlin and is part of the New Hampshire state park system. This park provides many recreation opportunities for residents and visitors including swimming, fishing, and canoeing at Jericho Lake and an extensive trail system designed for ATV and snowmobile trail riding, biking, hiking, snowshoeing, and cross country skiing.
- The park also includes a 20 site campground, scenic overlooks, a playground, a picnic area, boat rentals, cabins, a bathhouse, and Visitors Center. The campground and visitor center connect to the 80 miles of OHRV (off-highway recreational vehicle) trails within the park, as well as connecting with the 1000 miles of trails in Coos County. The State Park also has the first 4x4 Off Road Jeep/Truck Trail on public lands in the northeast, which is maintained by the North Woods Off Road Club.
- Many of the ATV trails are also open for snowmobiling in the winter and are maintained by the White Mountain Ridge Runners, which is Central Coos County's Snowmobile Club. The Ridge Runners report trail and snow conditions for snowmobilers and groom and maintain miles of snowmobile trails in Berlin, NH, the Androscoggin Valley, and the Jericho Mt. State Park region of Northern NH. The Ridge Runners have also constructed and maintain the Jericho Warming hut at the State Park, which is an off-grid log cabin with a photovoltaic system which powers lights and a stereo.
- The park is also home to the Jericho ATV Festival, a popular event that draws thousands of visitors to the area.
- The State Parks' diverse recreation offerings and visitor amenities, as well as its trail connections with regional OHRV and snowmobile trails, make it a key tourist destination in the region.

ATV Riding in the Berlin Area

- The Berlin area has about 130 miles of riding - 80 miles in Jericho Mountain State Park, 25 miles on the Success Trail, a 20 mile loop down thru Gorham and a 3 mile City trail connecting Jericho and Success. Most of these trails are open to ATVs, side-by-sides, and trail bikes. The new 20 mile loop

from Jericho Park down to Gorham and back up to Berlin is open only to ATV's.

- The Androscoggin Valley ATV Club, Inc. is a non-profit organization created to promote OHRV recreation and safety. They also help plan, create, and maintain the OHRV trail networks of Jericho State Park, Head Pond and Success in the Berlin area. SunsetRidersATV was formed to maintain the connector trail from the Berlin ATV trails to the Millsfield ATV trails and into Maine.
- The City of Berlin has an OHRV Ordinance allows ATVs to ride on the municipal public connector trail within the Urban Compact Zone. This authorized municipal trail runs where marked from the Jericho Mountain State Park to Route 110 and follows Route 110 southeasterly as it changes from Jericho Road to Wight Street. ATV riders may use this trail as a connector between ATV riding destinations and to access local businesses and services along the way.

Berlin Fish Hatchery

- The Fish Hatchery is located off Route 110 in the White Mountain National Forest and is operated by the NH Fish and Game Department. The facility raises trout populations for stocking water bodies and provides educational opportunities to the surrounding communities.
- Aside from outdoor viewing of hatchery operations and guided tours, the Hatchery is also home to the Barry Conservation 4-H Camp (BCC), which is run by the UNH Cooperative Extension in cooperation with the NH Department of Fish and Game.

Mount Jasper

- This 203-acre property is owned by the City and contains a hiking trail (Mt. Jasper Trail), which is a 1.4-mile out and back forested trail with sweeping views of Berlin, Mt. Forist, and the Dead River valley from the summit. This trail is good for all skill levels and is primarily used for hiking, walking, and nature trips.
- Its trailhead is located near the High School Track and includes a kiosk. Interpretive signage along the trail illustrates the long history of human interaction with Mt. Jasper, beginning with Native Americans who mined rhyolite to make knives, scrapers, drills, and projectile points.
- The New Hampshire Bureau of Trails and the local snowmobile club maintain a main corridor snowmobile trail that runs along the edge of the Dead River floodplain and over Mount Jasper to Cates Hill, adjoining the larger State-wide trail system. There are several older trails and access roads up and around the property used mostly by ATVs.

Mount Forest

- Mount Forest is located near Downtown Berlin and has about 25 established rock climbing routes that are a short hike away from a small parking area, many of which are considered "moderate" or less difficult in challenge. Though this area does not receive the same level of traffic for its climbing as places in North Conway, there is significant potential to attract additional climbers to the Berlin area. There is a climbing guide book of the Mount Forist area that has been published and is available at the climbing shops in the North Conway area, at the White Mtn Cafe in Gorham.
- There is also a 4.6 mile lightly trafficked out and back trail that winds around the windmills on Mount Forest that features a great forest setting. The trail is primarily used for hiking, camping, snowshoeing, and backpacking and is accessible year-round.

Kilkenny Loop Road

- Kilkenny Loop Road is a 15-mile winding dirt road in the White Mountain National Forest that runs through Berlin. Its located at the headwaters of the Upper Ammonoosuc River and snakes by Godfrey

Dam. The loop road makes a great mountain bike ride and there are a number of primitive campsites along the way, that serve as camping and backpacking destinations. The road is also used by ATV riders. The Kilkenny Region is known for its hardwood and spruce-fir forest and hiking trails like the Kilkenny Ridge Trail and Mill Brook Trail.

Androscoggin River and the Dead River

- Many anglers go fishing along the Dead River and the larger Androscoggin River, and both rivers are destinations for paddling. They fish along its length, from Errol down through Berlin and into Gorham. Anglers will find brook, brown or rainbow trout, salmon, and small mouth bass, and may sight other wildlife that like to browse the riparian areas and rivers including moose, osprey and deer. Both rivers also provide places to swim, kayak, and canoe.

Little People's Pond

- Little People's Pond in Berlin offers a fishing area geared for children.

Hunting Destination

- Hunting is a popular outdoor activity in Berlin. There are approximately 5 or 6 guide services within 10-15 miles of the City. Androscoggin Fish and Game Club offer many programs related to fishing, hunting, and trapping and manage a shooting range.

AN OUTDOOR RECREATION ECONOMY

A Local Perspective

- Berlin's Economic Development Plan identified the following goal as parts of its strategy for boosting the local economy: Expand outdoor recreation, tourism, community health initiatives, and related business, and increase access to outdoor recreation resources. According to this Plan, the vast natural resources within close proximity of Berlin (including trails, rivers, mountains, and more) has driven increased visitation of all types to the region, including ATVs, hiking, biking, hunting, fishing, boating, birding, and others. The Plan also noted that the lack of tourist amenities in Berlin is a constraint to the City's ability to capitalize on these visitors.
- There are a number of businesses that support the outdoor recreation economy in Berlin and represent industries and sectors with room to grow as additional recreation facilities are built and existing recreation facilities continue to be marketed to tourists.
- In recent years, Berlin has become a hub for ATV and snowmobiling riding, especially with the presence of Jericho Mountain State Park. Businesses like Jericho Outdoor, which is a full service dealership for Arctic Cat ATV and Arctic Cat Snowmobile, are providing important services for this activity in Berlin and are located near Jericho Mountain State Park. Additionally, Jericho Gateway Family Campground has opened about 1.3 miles North of the Jericho State Park entrance. The campground is currently under construction, but will soon provide lodging in the form of tent sites, RV sites and Cabins, including many remote sites situated throughout the 300 acre property. Additionally, a State OHRV and snowmobile trail (the Yamaha Connector Trail) runs right through the center of the property and connects to the local trail network and the more than 80 miles of trails within the park.
- There are a number of lodging opportunities in Berlin, mostly in the form of campgrounds, smaller inns, and Air B and B rentals, such as Berlin Trails Inn and Farm and KF Development's Cabins. Jericho Lake Campground and Jericho Gateway Family Campground both provide a variety of

camping options. Other accommodations in Berlin include On the Trail Lodging, Northwoods Getaway, and a variety of vacation home rentals. According to the City, Air B and B destinations in Berlin have increased in the last eighteen months.

- Events like the River Fire, held at the Service Credit Union Park, and the Jericho ATV Festival attract families, recreation enthusiasts, and other visitors to the area, which supports the local economy. Service Credit Union Heritage Park has also become a place for events such as Paddlemania and the Luau ATV Poker Run.

A State Perspective

- According to the newly formed Granite Outdoor Alliance, New Hampshire's outdoor economy is 3.2% of the State economy, 9th highest in the Country. Further, consumer spending is \$2.8 billion providing 37,000 jobs, \$1.3 billion in wages, and \$528 million in state/local taxes. In 2019, New Hampshire became the 16th state in the US to approve an Office of Outdoor Recreation Industry Development (ORID) to be housed within the New Hampshire Department of Business and Economic Affairs (BEA). ORID was established in 2021 to support New Hampshire's diverse outdoor economy and connect the state's world class outdoor assets to broad economic development strategies such as workforce and business recruitment. In a post-COVID world and the new remote work environment, these connections will take on even more importance.
- The Granite Outdoor Alliance is a comprehensive network of stakeholders that are passionate about improving the outdoor recreation economy, infrastructure, and police in the state of the New Hampshire. They advocate for:
 - Promoting economic development through coordination with outdoor recreation stakeholders, and leveraging outdoor recreational infrastructure and industry to promote tourism and recruit talent with a goal of keeping wealth local.
 - Open spaces that provide for outdoor play, namely land and water, and leveraging these natural assets in a responsible way to recreate and support a way of life. Protection of land & water is critical to form the foundation of the outdoor economy.
 - Working with stakeholders and academic institutions to develop career and workforce training to recruit outdoor recreation businesses and provide a skilled, trained workforce.
 - Active outdoor lifestyles that support healthy communities which thereby reduce health care dependencies and costs, create positive economic growth, reduce crime and other social benefits.

REGIONAL TRAILS AND RECREATION RESOURCES

Ride the Wilds, Coos County!

- Ride the Wilds is the Northeast's largest interconnected ATV trail system with 1,000+ miles of trails across Coos County. This trail system was constructed and is maintained by the 11 not-for-profit clubs that make up the system. These clubs perform volunteer work to construct, maintain, and patrol the trails. The Androscoggin Valley is the Southeast Portal of the trail system, offering access to riding areas in Berlin, Gorham, Milan, and Success. Jericho Mountain State Park connects to the Ride the Wilds trail network. The Ride the Wilds corridor trail runs through the park and then heads north through Success. Along this section of trail, there are sweeping views to the south looking at the Presidential Range of the White Mountains.

White Mountain National Forest and Nearby State Parks

- Surrounding Berlin, there are a number of popular hiking areas in the White Mountain National Forest and State Parks including Mt. Waumbek, Mt. Cabot, Carter Mountain, Milan Hill State Park, and Moose Brook State Park. Over 100 miles of the Appalachian Trail runs through the White Mountains and the Mahoosucs.

The Coos Trails and the Coos Loop

- The mission of the Coos County Cycling Club is to build a vibrant cycling community for riders of all ability levels in the greater Gorham, New Hampshire area. The Coos County Cycling Club builds and maintains the “Coos Trails” which serve mountain bikers, trails runners, and walkers. In collaboration with Moose Brook State Park and others, Coos Trails is 22 miles of trail in Moose Brook State Park and through the woods around the town of Gorham. Berlin would position itself well within the mountain biking and gravel biking community if the City continued to build upon these biking trails and connected with the regional trail network.
- New Hampshire Grassroots Racing also hosts an annual cycling competition called the Coos Loop, which is a 240-mile bike-packing challenge that starts in Gorham and goes through Berlin and other Coos County communities. Sections in Berlin that are ridden include the old rail line from Gorham and Success Pond Road.

Bike the Borderlands

- Organizations in Maine, Vermont, New Hampshire, and Canada have launched an effort called “Bike the Borderlands” to promote the region as a mountain biking destination, attract more tourists, encourage locals to take up the sport, nurture surrounding local businesses, and boost the North Country’s economy. The Borderlands refers to eight destinations of mountain biking throughout the region and its strategy is to make these areas more prominent by promoting them under a Borderlands marketing umbrella. As for the positive economic impacts mountain biking destinations have on the region’s economy, a 2016 study on the economic impacts of Kingdom Trails (one of the older mountain bike areas in the region) estimated out-of-state visitors spent almost \$8 million a year at Kingdom Trails.
- Partners include the Coos Cycling Club in Gorham, NH, Kingdom Trails in East Burke, VT, the Franconia Area Chapter of the New England Mountain Bike Association in Franconia, NH, Parker Mountain Trails in Littleton, NH, and others. This effort has caught the attention of other nearby communities who see the potential for economic activity through the mountain biking trail development. For example, the newly formed Bethlehem Trails Association is building a network of trails and has recently joined the initiative.
- Alongside promotion, the Borderlands initiative also requires each area to standardize trail markings and maps as well as design trails built with erosion control and sustainability in mind.

Downhill and Cross Country Ski Destinations

- Two ski resorts (Wildcat Ski Resort in Gorham, NH and Bretton Woods Ski Area in Carroll, NH) and the ever-popular Tuckerman’s Ravine in Gorham are located relatively close to Berlin and offer downhill and backcountry skiing opportunities.
- First used as a means of travel in the Androscoggin Valley area, cross-country skiing became a popular recreational activity in northern New Hampshire. The country’s oldest continuously organized ski club, the Nansen Ski Club, is based in Berlin and was formed in 1872. The Nansen Ski Club offers more than 9 miles of groomed trails at Milan Hill State Park, and easy access to 186 miles of nearby groomed ski trails. Other cross-country ski trails can be found at nearby Great Glen Trails,

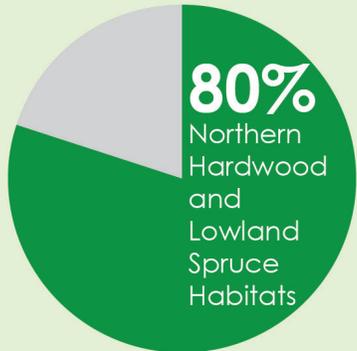
Nansen Wayside Park, Bretton Woods Nordic Ski Center, Bear Notch, and more. The Ski Club is currently in the midst of restoring the Ski Jump, which should create a unique destination for jumping competitions.

FUTURE CONSIDERATIONS

- Transportation and a new indoor recreation facility have emerged as needs for the Parks and Recreation Department. Finding creative sources of funding to allow for expanded recreation programming to populations that are underserved is also a high priority. These funds could also be used for hiring additional staff (which could include seasonal and temporary positions, etc.).
- Berlin's outdoor recreation spaces and infrastructure make the City well-suited for being branded as a multi-sport destination for those who love to play outdoors. The City should explore opportunities to expand recreation infrastructure to better connect with the regional opportunities that exist in the area. The ATV trails reflect this concept and represent an excellent case study - Berlin is now known as an ATV/OHRV destination. With its rock climbing area, hiking spots, and the biking trail system within the Coos County region, there is opportunity to better market these resources to visitors and to establish additional mountain biking and hiking trails by partnering with private land owners and utilizing municipally owned land.
- As Berlin continues to promote itself as an outdoor recreation destination and maintains/expands recreation opportunities in the City, it will need to consider the role of supporting infrastructure in managing capacity and providing a positive user experience. This includes parking, signage, and wayfinding and other visitor amenities, like hotels and restaurants.
- The City should continue its efforts in establishing a cohesive branding strategy to attract tourists who are looking to getaway and spend time in nature, whether that be for ATV riding, cross country skiing, hiking, or any of the other activities Berlin offers. Berlin has a tremendous amount of recreation assets that make it an appealing place to vacation.
- With the State of New Hampshire investing heavily in growing the outdoor recreation economy, there may be opportunities to access funding for infrastructure improvements or other related projects.
- The coronavirus pandemic that started in 2020 has had multiple impacts on communities. This includes the increase of an in-migration of workers who are able to conduct business remotely and are choosing to live in a place with access to nature and outdoor recreation opportunities. This also includes an increase in traffic to popular outdoor recreation destinations, which could increase parking and amenity needs if this trend continues.

Berlin's Natural Resources

62%
of the City's land area is conserved/protected



69%
of Berlin's steep slopes are conserved



66%
of the City's protected land is the **White Mountain National Forest**



74% of the Town is land that is ranked as important wildlife habitat by NH



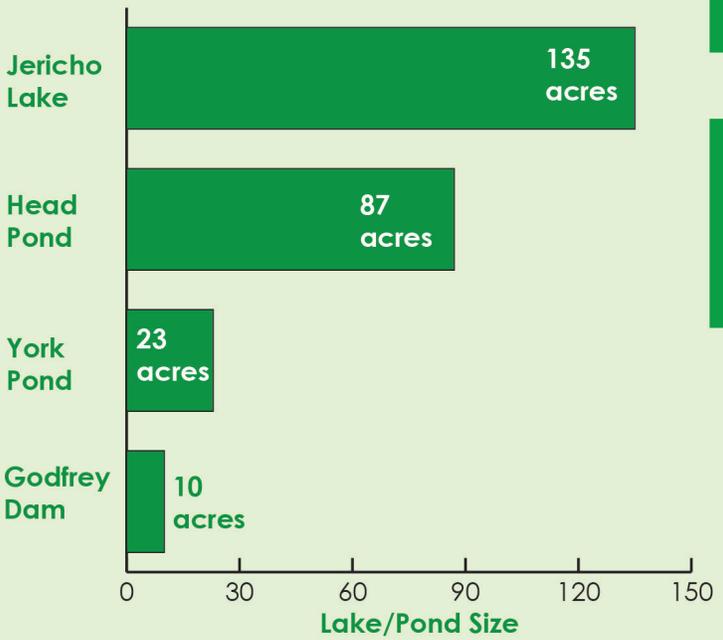
75%
of the highest ranked habitat by the state of NH in Berlin is conserved



>20%
of Berlin is considered to be the highest priority habitat in the state

6 miles
of the Androscoggin River flows through Berlin

56%
of Berlin's wetlands are conserved



3 miles
of the Dead River flows through Berlin

43%
of all riparian buffers are conserved

10%
of Berlin's floodplains are conserved



Key Findings

GENERAL

- The majority of Berlin's land area is conserved land and not available for development (see text box to the right for more information about land protection designation types). Including the White Mountain National Forest, these lands account for 70% of the City. Excluding the White Mountain National Forest, these lands account for 50% of Berlin's total land area. Within these conserved areas and the other undeveloped portions of the City that are nearby, there are significant natural systems, including forest, wetlands, floodplains, rivers, lakes, and others, that provide critical ecosystem services. Ecosystem services are benefits that nature provides to human communities such as capturing and cleaning water, purifying air, providing shade and habitat, and cooling buildings.
- Of the conserved land, 66% consists of the White Mountain National Forest and 34% includes other conserved parcels, such as Jericho Mountain State Park and part of Mt. Jasper.
- The developed portion of the City equals 8% of the total land area and is concentrated on either side of the Androscoggin River and the terminus of the Dead River. However, this developed area of Berlin has less natural elements, including street trees, planted medians, and perennial

UNDERSTANDING LAND PROTECTION DESIGNATIONS

Conserved land refers to property that is protected in perpetuity through deed restriction, conservation easement, or other legal restriction. These restrictions are tied to the title of the land, regardless of its subsequent ownership. Such land may be given to a public body dedicated to the conservation of forests, parkland, and natural resources or to a private land trust, with the intent of restricting it from being developed.

According to the NH Division of Forests and Lands, state lands under the jurisdiction of the Department of Natural and Cultural Resources (DNCR) are referred to as "reservations" by state law. RSA 227-G:2 defines "reservation" as public land under DNCR including, but not limited to: state forest, state park, natural area, historic site, geologic site, recreation trail, memorial area, fire tower, wayside area, heritage park, resource center, agricultural area, state forest nursery, fish pier, administrative facility, information center, demonstration forest, certain islands, and lands under lease to the department. State Parks are properties with developed or otherwise specific recreation uses available for visitors. Most offer many activities such as swimming, hiking, camping, picnicking, and hunting but not necessarily to the exclusion of other uses such as timber management, water resource protection and wildlife habitat management. Jericho State Park was first acquired by the NH Division of Forests and Lands to add to its state park system.

National forests are largely forest and woodland areas owned collectively by the American people through the federal government, and managed by the United States Forest Service, a division of the United States Department of Agriculture. Land management of these areas focuses on conservation, timber harvesting, livestock grazing, watershed protection, wildlife, and recreation.

gardens, integrated in the urban environment. These natural features soften the impact of the urban development pattern and make the City more livable and desirable to existing and future residents.

- The U.S. Environmental Protection Agency classifies any sub-watershed with 10%+ impervious cover as an “impaired system”, meaning the high percentage of impervious cover starts to impact water quality. As Berlin nears 10% development, it is important for the City to encourage stormwater best management practices to filter polluted stormwater flowing over impervious surfaces, such as roadways, driveways, and rooftops.

STEEP SLOPES AND HIGHLY ERODIBLE SOILS

- Steep slopes are lands that have slopes greater than 15% in grade. These areas pose risks if developed, including soil erosion and water contamination. 69% of Berlin’s steep slopes (>15%) are conserved, leaving a portion available for development.
- There are also steep slopes that exist within the developed portions of the City and the unprotected areas near development. For example, portions of Hillside Avenue are at 17%. Development on steep slopes has implications for water quality, erosion, and important loss of habitat areas.
- Additionally, highly erodible soils are also present in some of the developed portions of Berlin. Highly erodible soils are soil types that are especially prone to erosion. Best management practices when developing steep slopes should be identified and promoted through regulatory and non-regulatory measures.

WILDLIFE HABITAT

- The State’s Wildlife Action Plan is a blueprint for conserving the species of greatest conservation need and their habitats in New Hampshire. NH Fish and Game, the lead agency in developing this tool, ranked all habitat in the state by level of importance for protection to guide local officials to make informed land use decisions.
- 74% of Berlin is considered important enough to be designated in the Wildlife Action Plan. This means that the vast majority of the City has been considered important habitat by the State of New Hampshire.
- More than 20% of the entire town is considered the highest ranked habitat in the State.
- 75% of the Wildlife Action Plan identified lands in Berlin are already conserved. This is a significant finding.
- Dominant habitat types in Berlin include Northern Hardwood-Conifer forests and Lowland Spruce-Fir forests. These ecosystems make up nearly 80% of the City. Nearly all of the high-elevation Spruce-Fir forests in Berlin have been conserved.

SIGNIFICANT AGRICULTURAL SOILS

- Only 1% of the City is considered “prime agricultural soils” by the State of NH.
- More than 80% of this important farmland in the City is ranked as having ‘local’ significance.
- Some of these farmland soils have already been developed. It is important to the community’s future to identify areas where the remaining agricultural soils could be protected and used to support a local food economy and provide food security for residents.

WATERSHEDS

- **City-wide:** the Androscoggin River drains the eastern half of Berlin and land areas north of the City out to the coast of Maine and the Atlantic ocean. The Upper Ammonoosuc River drains the western

half of Berlin to the Connecticut River which leads to Long Island Sound.

- **Sub-Watersheds:** Three sub-watersheds divide up the eastern half of the community, but only two flow to the Androscoggin River. The third sub-watershed drains west to the Ammonoosuc River.

SURFACE WATERS, WETLANDS, AND RIPARIAN BUFFERS

- The Androscoggin River flows for approximately six miles through the eastern side of the City along Route 16.
- The Dead River flows for approximately three miles through Berlin in a diagonal from northwest to southeast direction along Route 110. Though a much smaller flowage in volume, steepness, and energy than the Androscoggin River, the Dead River has a wide floodplain which provides riparian habitat and adjacent large wetland complexes.
- Jericho Lake (135 acres), Head Pond (87 acres), York Pond (23 acres), and Godfrey Dam (10 acres) are the most prominent water bodies in Berlin. Numerous small, unnamed ponds are found in the City as well.
- According to GIS analysis, 5% of Berlin is comprised of wetlands. More than half (56%) of these identified wetlands have been conserved. The location of the remaining wetlands is important as they are dispersed along the two major rivers in the community and provide a variety of important ecosystem services including flood water storage during peak events. This is especially true along the Dead River, and loss of wetlands along the Route 110 corridor could increase the threat of flooding and private property damage in downtown. These remaining wetlands should be protected by regulatory means (buffer requirement or overlay) and through land protection efforts where possible.
- Riparian buffers, or vegetated buffers adjacent to rivers and streams, compliment the work of Berlin's wetlands and protect water quality, prevent erosion, and provide critical habitat. 12% of the entire town falls within these riparian buffers and 43% of all riparian buffers are conserved. When looking at the first 50 feet of riparian buffers along each waterbody, 64% has already been conserved. A combination of riparian buffer regulations and strategic land conservation could increase this number over time.

FLOODPLAINS AND FLOOD STORAGE

- Only 2% of Berlin's land area is within designated floodplains. However, these areas overlap with most of Berlin's remaining unprotected wetland resources.
- Only 10% of Berlin's floodplains are conserved.
- Given the concentration and overlap of the City's floodplains and wetlands, their significance to natural resource protection, and to flood and property protection, the corridors along the Dead River and Androscoggin River should be identified as priorities for regulatory and non-regulatory actions. This would allow the City to preserve the remaining resource area, reduce impacts from future development activity, and promote restoration and increase the City's resilience to natural hazards.

Community Facilities and Services



20,757

Police Department calls for service from 2018-2019

50

acres of cemeteries in Berlin

From 2018-2019

795

million gallons of sewage were processed at Berlin's Pollution Control Facility



19,088

patrons visited the Berlin Public Library in 2019-2020



28,000

square feet of Public Works Facility space



29,330

linear feet of new water main lines were installed between 2013-2018

880

calls for service to the Fire Department in 2018-2019



3,667

tons of household waste was generated from 2018-2019 in Berlin

2,282

participants in the Public Library's programs between 2018-2019

Key Findings

Community facilities and services are necessary components of a municipality's infrastructure. Since both the quality and the cost of a community's facilities and services are greatly affected by the town's future development policies, they need to be an integral part of the City's long range planning.

FIRE DEPARTMENT

- The Berlin Fire Department prepares for and responds to a wide variety of emergencies and calls for service. Professional services provided to the City include fire suppression, fire and emergency rescue, hazardous materials, emergency medical services, life safety, code enforcement, preparation and response related to weather related incidents, and public education.
- The Fire Department is housed in the City's Central Fire Station on Main Street, which is now the City's only fire station. Historically, there were three stations in Berlin, with satellite stations on the East Side and Upper Main Street.
- The current fire station houses a number of vehicles. These include two fire engines, one ladder truck, one tanker truck, one special operations vehicle (owned jointly with the NH Forest Fire Service), one rescue boat, one four wheeler, and one rescue ATV. The Fire Station also houses the administrative offices. The building adjacent to the Fire Station is where Berlin's hazardous materials decontamination equipment is stored. The department vehicle inventory also includes a pick-up truck, the Chief's vehicle, and the Assistant Chief's vehicle.
- Fire Department staff are divided into four shifts of four (4) persons each. The administration for the department is comprised of the Fire Chief, Assistant Fire Chief who also serves as the department Training Officer, the Fire Prevention Officer, and a part-time Administrative Secretary. In 2010, recent trends showed a decline in volunteerism in emergency services nationwide due to the amount of discretionary time that must be committed. In 2020, this trend still exists. The Berlin Fire Department finds it must compete with many other volunteer organizations for membership.
- The Fire Department responded to 880 calls for service during Fiscal Year 2019. The breakdown for these is shown in Table 1 below.
- As of April 2020, all 911 calls go directly to the Dispatch Center located at the Police Department. With that said, the Fire Department still receives emergency calls due to a lack of public awareness of this change.
- Since the 2010 Master Plan, the kitchen and bathroom/shower room in the Central Fire Station were renovated.
- According to the Berlin Fire Chief, many fire station renovation projects are slated to start in the coming years. These include installing new floors, windows, boiler, water sealing, and brick repointing. Electrical improvements, paving the parking lots, updating the rescue tools, and updating the apparatus should also be future priority investments.

| Type | 2019 |
|------------------------|------|
| Fires (all categories) | 38 |
| Rescue/EMS | 174 |
| Hazardous Condition | 151 |
| Service Call | 233 |
| Good Intent | 34 |
| False Alarm | 145 |
| Special Incident | 5 |

POLICE DEPARTMENT

- The Police Department is located at 135 Green Street. The Department has 21 sworn full-time officers, 17 part-time auxiliary/special enforcement officers, and ten civilian personnel. Sworn full-time officers consist of the chief, deputy chief, lieutenants, prosecutor, lead investigator, detectives, corporals, and patrol officers. Civilian personnel consist of the communications supervisor and full- and part-time communications specialists, the administrative assistant, detectives'/prosecutor's secretary, and maintenance coordinator.
- The Police Department operates out of a three-floor building. The basement (level 1) contains a booking area; three lock-up cells designated for males; one lock-up cell designated for females/ juveniles; an evidence area; a "records room"; a men's and a women's locker room; a break room, and a small work out area. This floor was recently renovated and additional office space and storage rooms have been added and the evidence processing area has been expanded.
- A communications center is located on the street level (level 2), along with offices accommodating three detectives, the prosecutor, and the detectives' secretary. One other small office contains two desks and is reserved for patrol officer use when dealing with citizens and to complete paperwork.
- The third floor (level 3) houses offices for the chief, deputy chief, administrative assistant, and communications manager. There is also a small conference room on the third floor which serves as a training room and also doubles as an office, on occasion.
- The 2010 Master Plan indicated that the facility was deficient in meeting the combined spatial needs for staff, equipment, and records storage. After many years of trying to expand the Department's facility, it was decided that a new garage would be built for the Recreation Department, and the Police Department would extend into the existing Recreation Department garage instead. The Police Department partnered with the Berlin High School's Building Trades Program to make the necessary building renovations. Lockers were replaced in the locker room, and the basement was completely renovated.
- The Police Department is equipped with thirteen police vehicles, including those in service for patrol, a 4x4 truck, a van, and unmarked vehicles. They also have access to four donated off-road recreational vehicles.
- Illegal drugs and drug activity continue to be a problem in Berlin. Operation Granite Shield is continuing to provide grant funding to Berlin for research and information gathering. Berlin is also continuing its collaboration with the NH Drug Task Force as well. Recently, the drug prevention and education program "DARE" has been replaced with "LEAD: Law Enforcement Against Drugs". The LEAD program reaches a broader range of students with age-appropriate content.

PUBLIC WORKS DEPARTMENT

- In the City of Berlin, public works services include: sewage collection and disposal, maintenance of stormwater system, solid waste disposal, recycling, maintenance of Berlin's 60 miles of roadways and sidewalks (including winter plowing, treating, patching, sweeping, and paving), maintenance of City structures and cemeteries, and maintenance of the City's fleet of vehicles.
- Equipment maintenance is provided for all of Public Works, Fire Department, Recreation Department, Pollution Control, Code Enforcement, Police Department, and the Berlin Municipal Airport.
- Public Works also provides and maintains 159 sand/salt barrels for winter use at multiple locations throughout the City.
- The Department operates out of facilities at 10 Jericho Road in approximately 28,000 square feet of space. Constructed in the 1930's, many of the buildings and storage facilities are out of date and

inadequate. As noted in the 2010 Master Plan, the salt storage unit is inadequate and has not been replaced yet. Additionally, the 2010 Master Plan indicated that there was a need to renovate the existing public works building, including the addition of offices, lockers, a new garage for vehicle maintenance, and some site work to remove underground tanks and rehabilitation of the site. These facility improvements are still needed and should be prioritized in capital improvement planning. Over the next 5-10 years, window replacements are planned.

- The Department has 28 permanent employees (2 of which are supervisors) with additional personnel brought in during the summer months. The staff breakdown includes:
 - Solid Waste/Recycling: 8 personnel
 - Garage: 5 personnel
 - Sewer Repair Crew: 5 personnel
 - Cemetery Maintenance: 1 person
 - Street Sweeping: 1 person
 - Supervisors: 3 personnel
 - Labor/Drivers: 5 personnel

| Table 2: Police Department Calls for Service | |
|---|-------------|
| Type | 2019 |
| Total Calls for Service | 20,757 |
| Accidents | 223 |
| Accidents within an intersection | 86 |
| Assaults | 94 |
| Assists to Berlin Ambulance | 867 |
| Assists to Other Berlin Depts. | 289 |
| Bulgaries | 26 |
| Domestic Violence Incidents | 237 |
| Drug Complaints | 184 |
| Felonies | 236 |
| Juvenile Arrests | 27 |
| Juvenile Incidents | 149 |
| Misdemeanors | 938 |
| OHRV Accidents | 25 |
| Parking Tickets | 352 |
| Sexual Assaults | 36 |
| Thefts | 198 |
| Total Arrests | 817 |

WASTEWATER TREATMENT AND COLLECTION SYSTEM

- The Berlin Pollution Control Facility started operating in 1979 and is managed by the Public Works Department. The facility was designed to treat an average flow of 2.64 million gallons per day of wastewater. The facility is a Grade III secondary treatment, conventional activated sludge treatment facility. Located on the east side of the City on Shelby Street, the facility presently treats the domestic sewage and some industrial wastes from the City of Berlin. It also receives septage from motor homes and from the surrounding communities.
- The Wastewater Division of Public Works complies with NPDES (National Pollution Discharge Elimination System) permit requirements, and works to improve treatment efficiencies to enhance final effluent discharged to the Androscoggin River. The NPDES permit program is authorized by state governments and the Environmental Protection Agency (EPA) under the Clean Water Act. Municipalities that discharge pollutants into navigable waters must hold a permit from the EPA or authorized state agencies before they can discharge these pollutants. The permit specifies the process in which water pollutants may be discharged into navigable waters such as lakes, rivers, or streams as well as the technological features required to limit water pollution.
- Berlin’s wastewater collection system includes six pumping stations which feed the primary pump station at Watson Street where large solids, are removed by an automated bar screen. Three large Centrifugal pumps deliver the collected sewage across the River to the Headworks structure from

where it flows by gravity through the Treatment Process before discharging clean water into the Androscoggin River. Sludge is delivered to the Mt. Carberry Landfill for disposal.

- In Fiscal Year 2019, Berlin’s Pollution Control Facility processed 794.88 million gallons of sewage from the City. The Facility also processed 24.59 million gallons of leachate from the Mt Carberry Landfill. The Facility also accepted and treated approximately 861,315 gallons of septage waste from outlying communities not on their own sewer systems (i.e., septic tanks).
- The Phase 2 Inflow and Infiltration (I/I) Reduction project is currently underway. During wet weather events, significant volumes of inflow and infiltration (storm water, groundwater, etc.) enter the City’s sewer collection system, which results in combined sewer overflows (CSOs) at the Watson Street Pump Station. This excess flow discharges into the Androscoggin River untreated. To reduce inflow and infiltration, the project includes replacing sewer mains, re-routing illicit connections to the sewer system (sump pumps, perimeter and roof drains), and relining sewer mains.

SOLID WASTE AND RECYCLING

- The solid waste operations are managed by the Public Works Department. The Public Works Department is a member of the Androscoggin Valley Regional Refuse Disposal District (AVRRDD). The City performs weekly curbside pick-up of household refuse and bi-weekly recycling pick-up. Household refuse is brought to the AVRRDD Mt. Carberry Landfill for disposal. Currently, Berlin provides over half of the waste to the District and half of the revenue to the District (compared to the other member communities).
- The Department is continuing its efforts to reduce household refuse tonnage to the landfill, largely through public outreach and education on the value of recycling. The Department has also worked to reduce/eliminate large curbside and yard waste pickup’s by asking residents to use the AVRRDD Transfer Station for these items. Recycling within the City has been mandatory since 2012.
- In 2019, the Public Works Department collected 3,667 tons of household refuse this fiscal year, which is up 1.40% from 2018. Currently, Berlin delivers all the solid waste to Mt. Carberry.
- Recycling consists of 8 districts which collect paper, cardboard, glass, plastics (HDPE and PETE), tin, and aluminum from residents.
- The eight-acre East Milan Landfill site was capped and closed in October of 1996. The Cates Hill site was capped and closed in August of 2006. Groundwater quality and methane gas production are being monitored at both sites.

CEMETERIES

- Berlin has nine cemeteries occupying approximately 50 acres of land. Table 3 lists the cemeteries, their locations, and ownership. Five of the cemeteries are owned or managed by the City, and four are owned by the Catholic Parish.
- The City’s older cemeteries (Calvary and St. Anne’s) are at capacity. St. Kierans and Mt. Calvary cemeteries have

| Table 3: Cemeteries in Berlin | | | |
|-------------------------------|----------------|----------------------|---------------------|
| Name | Location | Ownership Management | Additional Capacity |
| Old City | E Milan Rd. | City | No |
| New City | E Milan Rd. | City | Limited |
| Russian | E Milan Rd. | City | Limited |
| St. Anne’s | E Milan Rd. | Parish | No |
| Mt. Calvary | Cates Hill Rd. | City/Parish | Yes |
| St. Kieran’s | Hutchins St. | Parish | Yes |
| Calvary | Hutchins St. | Parish | No |
| Beth Israel | Hutchins St. | City | Yes |
| Benev Israel | Hutchins St. | City | Yes |

expanded recently and have substantial areas available. The New City cemetery is 90% full and the Russian cemetery is 95% full.

- The City cemeteries are managed by two cemetery trustees.

BERLIN WATER WORKS

- In 1925, the New Hampshire Legislature established the Berlin Water Works (BWW) as a public municipal organization. At that time, a Board of four Commissioners was established to direct the organization by determining its budget, staffing, water rates, revenue collection, and system management.
- The purpose of the BWW is to provide safe and reliable drinking water and fire protection for the community. BWW is responsible for managing Berlin's water supply sources (Godfrey Dam and Brown Farm Wells), treatment facilities, the distribution system with over 50 miles of water mains, over 400 hydrants, seven water storage tanks, seven pump stations, and 3,500 service connections. The BWW has not increased water rates in twenty-two years.
- The primary water source for BWW is the Ammonoosuc River, which is withdrawn at the Godfrey Dam and treated at the Ammonoosuc Water Treatment Plant (WTP). The WTP has a capacity of 4 millions gallons per day.
- The BWW also utilizes Brown Farm Well #1, which has a capacity of 1,000 gallons per minute and has been used while the Ammonoosuc WTP is not in service. BWW has also developed Brown Farm Well #2 so that it will have a fully redundant water supply in the event that the Godfrey Dam, the Raw Water Transmission Main, or the Ammonoosuc WTP is suddenly taken out of service.
- Aging infrastructure presents challenges to drinking water safety, and continuous improvement is needed to maintain Berlin's quality of life. In 2018, BWW reported that they had installed 29,330 feet of new water mains over the last five years. These investments, along with improved operation and maintenance processes, and reduced maintenance costs, have helped BWW achieve its goals.
- Through Capital Improvement Projects, Berlin Water Works has eliminated the high flows of processed water sent to the City's distribution system. These improvements have also eliminated a large number of customers that had to run their water in the winter to prevent the main lines and service lines from freezing.
- BWW has started mapping and managing all of its assets through People GIS. The program uses GPS to locate all valves, shut offs, hydrant valves and meters tied to each individual property. Additionally, BWW uses this program to track all work orders, unplanned work, and water main replacements and prioritizations.
- Because of BWW's planning, the Board of Water Commissioners expects to continue reducing unplanned maintenance work such as water main breaks, service line breaks, and frozen water lines that require thawing. While water rates have supported much of the infrastructure upgrades and maintenance, BWW also utilizes State Revolving Loans or Rural Development Loan and Grants as well.
- Energy improvements include the solar system installation at the BWW office and the Hydropower System installation at the Ammonoosuc WTP. These systems have helped keep energy costs manageable.
- BWW continues to offer online bill paying for customers located on the City's website. Invoice Cloud and Northern Data Systems are providing electronic bill presentment and online payment service. Approximately 940 or 27.02% of BWW's customers are registered to use the online billing service and a total of 425 or 12.21% are paperless.

AIRPORT

- The airport, located in Milan, is operated under the direction of the Berlin Airport Authority, which consists of representatives from Berlin, Milan and the Coos County Commission. The airport consists of a 4,900 foot paved runway heading in a north/south direction.
- Landing lights and radio landing instructions are available. The airport offers hanger space and refueling facilities. No scheduled service is available at this time, however. The airport is staffed by a full-time airport manager, who is located in the terminal building which also serves as the administration building. The Airport's work is guided by a ten-year Master Plan document.
- In 2019, the Berlin Regional Airport took on a capital improvement project of runway rehabilitation and airfield signage improvements. The rehabilitation consisted of large crack removal and reconstruction of the asphalt and the smaller cracks were sealant filled. The entire width and length of the runway was seal coated to extend asphalt life.
- In 2022, the Airport is scheduled to complete a fencing and gate improvement project.

ADMINISTRATIVE AND HUMAN SERVICES

- **City Hall:** City Hall is the administrative headquarters for the City, as well as the legislative headquarters for the City Council and Mayor's Office. Over the years, the structure has experienced many renovations and organizational changes which better utilize the available space for public-oriented functions and administrative offices.
- **City Clerk:** The City clerk, with offices in the collection department, maintains vital records, publishes notices, issues licenses, files reports with the State, attends and records minutes of City council meetings, registers voters and sells cemetery lots. The office consists of the clerk and a part-time assistant.
- **Planning and Community Development:** Located in City Hall, this Department is responsible for serving the Planning Board, ensuring compliance with local and state regulations, providing education and guidance to the public throughout the development review and application processes, and administering federal grants. This Department also oversees the administration and management of the Economic Development program. The Department provides staff support for the Planning Board, Berlin Industrial Development and Park Authority, and the Berlin Economic Development Corporation. The staff consists of a full-time Community Development Director.
- **Assessor's Office:** The Assessor's Office is located on the second level of City Hall. Its function is to assess all property, provide the collection department with a grand list, handle exemptions and abatements and keep the City tax maps up-to-date. The department consists of one Assessing Coordinator.
- **Finance and Collections Department:** The Finance Department maintains the integrity of the City's financial records and transactions, and ensures the proper and efficient expenditure of City funds. The Department manages the centralized payroll, employee benefits, and accounts payable functions for the City. It also manages the City's revenue collections and bills and collects the semiannual property tax and sewer bills. The Department also issues motor vehicle registrations, dog licenses, and landfill and tire permits. The Department staff includes the comptroller, assistant comptroller and four clerks.

- **Welfare Department:** The Welfare Department is located in City Hall and provides general assistance to persons or families in the City who do not have sufficient resources for their basic needs, as required by State law RSA 165:1-b. The amount of assistance offered is determined by basic needs such as shelter, electric, food and prescription costs, etc. minus income and assets. According to the 2019 Town Report, there were 112 welfare recipients. 33 were single females, 26 were single males, and 53 were families.
- **Berlin Health Department and Home Health Nursing Program:** Located in the lower level of City Hall, the Health Department provides public health services to the community. Public health functions include disease control, immunization, medication assistance, cholesterol screening and other community public health nursing services at the Main Street location and at various businesses and community locations. The Department has a staff of a full time director, secretary, bill clerk, nursing supervisor, and nurses.
- **The Home Health Nursing services** provide skilled nursing, occupational, physical and speech therapy, and home health aides to those in a homebound setting. The Home Health Nursing program provides 24 hour on-call care. The Public Health Officer provides health code enforcement, inspection and licensing of ambulances, restaurants, child care facilities and foster homes. Additionally, the Health Officer is responsible for community emergency management coordination.
- **Berlin Housing Authority:** The Berlin Housing Authority is a separate entity within the City of Berlin. It is responsible for providing affordable housing for income qualified residents. The Housing Authority currently has 285 Housing Choice vouchers and 55 public housing units serving elderly and disabled residents. They also manage the St. Regis House, which is a 42 unit multifamily complex.

| Table 4: 2019 Library Statistics | |
|----------------------------------|--------|
| Type | 2019 |
| Items Circulated | 21,016 |
| Patron Visits to Library | 19,088 |
| Phone Inquiries | 1,676 |
| Service Requests | 3,483 |
| Computer Users | 3,128 |
| Interlibrary - Loaned | 922 |
| Interlibrary - Borrowed | 311 |
| NHDB downloadable books | 1,973 |

BERLIN LIBRARY

- Berlin has one central Library building located at 270 Main Street, which is directed by a 3-member Board of Trustees. The Library was built in 1903 by the Carnegie Foundation on land donated by W. W. Brown. The Library building is 2,288 square feet with 1,988 sq. ft. finished and 300 sq. ft. unfinished.
- The library offers not only materials in print but also provides microfilm, audio books, a movie collection, and interlibrary access to materials from the NHAIS network through the New Hampshire State Library. Fax, copier and scan to email services are also available. The library catalog can be accessed through the City of Berlin website as well as in the library. Library patrons also have access to downloadable books through the New Hampshire State Library and Overdrive.
- In addition, the library now offers Heritage Quest, a genealogy resource, accessible on site or remotely and Ancestry, which can be accessed at the library.
- There are also 5 computers with internet access in the building's upper level (Adult Dept.) and 11 Chromebooks available for public use. The Chromebooks are setup with WiFi connectivity for portable internet access within the building.
- The library also provides diverse programming to the community. They offer an annual lecture series

in conjunction with the White Mountains Community College and summer reading programs in the Children's Department. In 2019, The Children's Librarian ran a total of 23 weekly Story Hours for young children from September to June, serving 128 children and 80 adults. In addition, there was a Halloween program with 251 children and three Afterschool Programs for 95 children. The total attendance of all the library's programs was 1,344 children and 938 adults for a grand total of 2,282 patrons.

- Library personnel currently consist of a head librarian, one children's librarian, one full time desk clerk, and two part time desk clerks. The library is still currently using all available space to capacity, including storage areas.
- The lot and building to the south of the Library was acquired by the City and turned into Kelley Park, which includes a fenced in, outdoor patio space approximately 720 sq. ft. The library will be using this space as an outdoor program venue in the warmer seasons. This newly furnished space is made available for public use during normal business hours when not occupied during programmed events.
- In 2020, the Library underwent a building assessment that helped prioritize the upgrades and maintenance needed on the library building as observed by the consultant. A few concerns expressed within this assessment include water drainage from the roof, the repointing of bricks on exterior walls (especially on the back (river side) wall), and replacing glass block windows on both levels of the building. Prioritizing upgrades and maintenance needs in the next five to ten years will ensure the library building stays in good shape.

PARKS AND RECREATION DEPARTMENT

- Berlin's Parks and Recreation Department is located on First Avenue and provides recreation opportunities to youth and adults in the community. Full time staff consists of a Recreation Director and Assistant Recreation Director. Seasonal staff are utilized to execute seasonal programs throughout the year. Numerous volunteers are also utilized all year long. More about the Parks and Recreation Department programs and needs can be found in the Recreation Existing Conditions Profile.
- Aside from administering and managing recreation programs, this Department also oversees management of the raised garden beds at Friendship Park, oversees rental of the Recreation Gym Facility, oversees rental of the Veteran's Memorial Park & Gazebo, and administers USDA Meals (when school is not in operation). Parks and recreation facility maintenance is performed by the Public Works Department.

BERLIN PUBLIC SCHOOLS

- The Berlin Public Schools provide Kindergarten through Grade 12 education for Berlin's youth, and educate some children from surrounding communities on a contract basis with their community. This includes an area agreement with the Town of Milan, and a tuition agreement with the Town of Dummer.
- Berlin's public schools have undergone significant changes since 2010. The Brown Elementary School closed in 2019 due to state budget cuts, and the School Board has created a Building Committee to start looking at future space and facility needs. The Berlin Elementary School is now located in the former Middle School housing grades K-5. Since 2010, Berlin High School has become Berlin Middle-High School and houses grades 6-12.
- According to data provided by the Berlin Public School District, school enrollment numbers have been declining steadily over the last ten years. More about school enrollment numbers can be found in the Housing and Population Existing Conditions Profile.

WHITE MOUNTAINS COMMUNITY COLLEGE

- Since 1966, Berlin has had a college located in the City. In 2007, it became part of the state's Community College System of New Hampshire, an independent state agency, allowing for a new name for the Berlin campus. As of 2008, this college is now known as the White Mountains Community College (WMCC).
- WMCC is a strong community partner with the City and has worked to support economic diversification and community improvement throughout its existence. Initially functioning as a vocational college, the now comprehensive community college includes Associate Degree programs and transfer pathways to four year Bachelor Degree programs. WMCC's programs like WorkReadyNH and their business industry and training program are helping to address workforce shortage needs in the region. They also offer a number of programs to high school and middle school students.
- Currently, WMCC is selling 300 acres across the street from the campus and are making some changes related to programming to best meet the needs of the greater area and to secure economic sustainability. In recent years, they have completed major campus renovations including upgrading the student life area, bistro/cafeteria space, entrances, and the offices in the main lobby.

ANDROSCOGGIN HOSPITAL

- Located off the East Milan Road on Page Hill, the Androscoggin Valley Hospital is a not for profit New Hampshire corporation. The Hospital is exempt from Federal income taxation under Section 501(c)(3) of the Internal Revenue Service Code of 1976 as amended. The Hospital is one of 26 acute care hospitals in the State and is also one of the 13 Critical Access Hospitals in the State of New Hampshire.
- The Hospital has 25 acute care beds and offers a wide range of inpatient and outpatient services to a service area of approximately 17,000 people. The Hospital currently employs approximately 384 individuals. The current Medical Staff consists of 29 active staff members, which includes family practice, internal medicine, orthopedics, ob/gyn, general surgery, ENT, Urology, and emergency medicine.
- According to Berlin's 2019 Economic Development Plan, jobs in the hospital and healthcare industry are expected to decline by 2028 in both Berlin and Coos County.

AMBULANCE SERVICE

- The City of Berlin contracts for ambulance service with the Berlin Emergency Medical Service, Inc. They are a professional service with paid emergency staff and 3 ambulances. They are dispatched by police requests and for structural fires. They also transport non-emergency patients to and from the hospital. The service is subsidized by the City.

NURSING HOMES

- Two nursing home facilities are located in Berlin. The Coos County home has 100 beds and is usually fully occupied with a waiting list. St. Vincent's Nursing home has 80 beds and is also fully occupied. The demand for nursing home space in Berlin far out ways the supply and Berlin residents must search for beds outside of the City.

CHURCHES

- Berlin with its rich cultural heritage, has a large number of churches and faiths. Over the years there

has been a reduction in the number of churches in Berlin - three have closed since 2010. A full list of churches within Berlin is located in Table 5.

LOOKING AHEAD

The following directives were identified by analyzing the existing conditions of Berlin’s community facilities and services.

- Overall, Berlin has aging infrastructure in need of upgrades. Improved asset management and planning across departments should be flagged as a priority.
- For example, Berlin’s public works facilities are in need of renovations and should be prioritized in capital improvement planning. Additionally, this Department could use a comprehensive asset management system to better monitor maintenance of facilities and equipment. Long-term maintenance plans should be established and put in place for other community facilities as well, including City Hall, the Library, etc.
- Aging water and sewer infrastructure presents challenges related to drinking water safety and sanitation, and continuous improvement is needed to maintain the quality of life of Berlin residents.
- Reuse of the Brown Elementary School represents an exciting opportunity for the City of Berlin.

| Table 5: Berlin’s Churches |
|--|
| First Baptist Church |
| Community Bible Church |
| Heritage Baptist Church |
| Good Shepard Parish at St. Anne Church |
| Saint Barnabas |
| Saint Paul Church |
| Holy Resurrection Orthodox Church |
| Seventh Day Adventist Church |
| Havest Christian Fellowship |
| Lamb’s Chapel |
| Salvation Army |

Berlin's Natural Hazards

WHAT ARE NATURAL HAZARDS?

"A natural hazard refers to the harm and disruption cause by a meteorological, environmental, or geological event."



"**Hazard mitigation** refers to actions that reduce or eliminate the long-term risk to human life and property from hazards (both nature and human). It's been demonstrated that hazard mitigation is most effective when based on an **inclusive, comprehensive plan** developed before a disaster occurs." -Federal Emergency Management Administration (FEMA)

"The challenges posed by **climate change**, such as intense storms, frequent heavy precipitation, heat waves, drought, and extreme flooding could significantly alter the types and magnitudes of hazards impacting states in the future." -FEMA



HAZARD MITIGATION METHODS

- Public Education
- Emergency Operation Center
- Medical Facilities
- Emergency Shelter(s)
- Mutual Aid Agreements
- Infrastructure Investment

Natural hazards which are MOST LIKELY to affect Berlin include:

- Severe Winter Weather (including ice storms)
- Extreme Temperatures
- Flooding (local roads)
- Severe Thunder & Lightning Storms



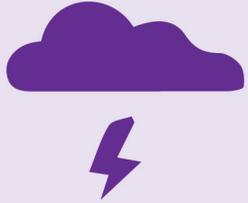
If **5%** of Berlin's structures are impacted by a hazard event the losses could total up

\$41,800,000



Natural hazards which are LEAST LIKELY to affect Berlin include:

- Hurricanes & Tropical Storms
- Wildfires
- Riverine Flooding (including ice jams)
- Tornados & Downbursts

10% 

of Floodplain in Berlin is conserved

Historically only one tornado has been recorded in Berlin, and that occurrence was in 1929.

Key Findings

DEFINITIONS FROM THE FEDERAL EMERGENCY MANAGEMENT ADMINISTRATION (FEMA)

- "A natural hazard is a source of harm or difficulty created by a meteorological, environmental, or geological event."
- "Hazard mitigation is any sustained action taken to reduce or eliminate the long-term risk to human life and property from hazards. Hazard mitigation activities may be implemented prior to, during, or after an event. However, it has been demonstrated that hazard mitigation is most effective when based on an inclusive, comprehensive, long-term plan that is developed before a disaster occurs."
- "Human-caused hazards are the result of human intent, error, or as a result of failed systems."

GENERAL

- New Hampshire is subject to many types of natural hazards: floods, hurricanes, nor'easters, winter storms, earthquakes, tornadoes and wildfires, all of which can have significant economic and social impacts.
- The City of Berlin is susceptible to a variety of natural hazards including flooding, severe winter storms, extreme temperatures, severe thunder/lightning storms, hurricanes/tropical storms, tornadoes/downbursts, wildfires, and other hazards.
- As of 2020 we are all even more aware of the impact of human-caused hazards as well which include: Epidemic/Pandemic/Influenza, etc; Hazardous Materials via Transport; Hazardous Materials via Fixed Locations; Terrorism; and Extended Power Failure. The Hazard mitigation plan even called out that "Berlin could be susceptible to a epidemic and subsequent quarantine."

HAZARD MITIGATION MISSION AND VISION

- **All Hazards Mission Statement:**
 - To make Berlin less vulnerable to the effects of all hazards through the effective administration of hazard mitigation planning, wildfire hazard assessments, and a coordinated approach to mitigation policy and planning activities.
- **All Hazards Vision Statement:**
 - The community of Berlin will reduce the impacts of all natural hazards and other potential disasters through implementing mitigation measures, public education and deliberate capital expenditures within the community. (As a result, residents,) homes, and businesses will be safer and the community's ISO rating may be improved.

EMERGENCY FACILITIES

- **Emergency Operation Center:** In Berlin the designated EOC is the Police Station.
- **Medical Facilities:** Androscoggin Valley Hospital in Berlin (25 beds) is the closest large healthcare facility.
- **Emergency Shelter(s):** In Berlin, the designated primary shelter is the Berlin High School. If the need arises and the Berlin High School is not available, the Recreation Department could be used as a secondary shelter.

- **Mutual Aid Agreements:** Are in place with the Gorham Police Department, and the Milan, Gorham, Shelburne & Stark Fire Departments; the NH State Fire Marshal is also available to assist as needed.

CLIMATE CHANGE

- “The challenges posed by climate change, such as more intense storms, frequent heavy precipitation, heat waves, drought, and extreme flooding could significantly alter the types and magnitudes of hazards impacting states in the future.” -FEMA
- Communities in New Hampshire, such as Berlin, should become increasingly aware of the effects of climate change on the natural hazards that are already being experienced.

NATURAL HAZARDS WHICH ARE MOST LIKELY TO AFFECT BERLIN INCLUDE:

- Severe Winter Weather (including ice storms)
- Extreme Temperatures
- Flooding (local roads)
- Severe Thunder & Lightning Storms

THE NATURAL HAZARDS WHICH MAY AFFECT BERLIN INCLUDE:

- Hurricanes & Tropical Storms
- Wildfires
- Riverine Flooding (including ice jams)
- Tornados & Downbursts

SEVERE WINTER WEATHER

- The probability of future ice storms and heavy snow storms occurring in Berlin is high. The topography of Berlin, with steep slopes, mountains and deep river valleys makes winter weather conditions that much more threatening. A significant ice storm can inflict several million dollars worth of damage to forests and structures.

EXTREME TEMPERATURES

- The probability of extreme temperatures, particularly extreme cold, is very high in Berlin and northern New Hampshire in general. Increasingly, extreme heat events are also on the rise.

FLOODING

- Only 2% of the entire town is in the designated floodplain
- 10% of the floodplain area is conserved.
- The community does have a history of isolated flooding events.
- According to Berlin’s Hazard Mitigation Plan, it is likely that the future will bring more flooding in Berlin, along Watson Street and Glen Avenue in the southern part of the City, and on the Class V road network. Under performing culverts have been identified as contributing to this situation throughout the City. Road flooding is also a common occurrence on Industrial Park Road and at the confluence of the Dead River and the Androscoggin River.
- **Dams:** the dam of most concern is the Aziscohos Dam in northern Maine. Failure of the Aziscohos Dam combined with an overburden on dams downstream, could cause a “domino” effect and could put large parts of Berlin underwater.
- **NFIP:** The City of Berlin has been participating in the National Flood Insurance Program since 1982.

SEVERE THUNDER & LIGHTNING STORMS

- Severe thunder and lightning storms are happening more often than in the past; several lightning strikes are now documented each year. Lightning is a potential problem that can have cascading impacts including forest fires.

WILDFIRES

- Due to the abundance of slash on the forest floor left by logging operations, blow downs and storms, there is potential for fast burning fuels.
- While very few significant wildfires have occurred in Berlin in the recent past, it is important to note that many of the community's residences are located in the Wildland Urban Interface. It is also important to recognize the increased risk of forest fires as the climate in northern New Hampshire changes. Large wildfires in northern New Hampshire are uncommon; however, given the right set of conditions (drought, lightning, human interface), the potential for large wildfires is good. During dry periods in the summer an increased risk of fire should be considered.
- **Wildfire Mitigation**
 - The City of Berlin has a Wildfire Mitigation Plan that is currently out of date. The Plan calls for the City of Berlin's Capital Improvement Plan to include Wildfire Mitigation strategies, such as water storage facilities in identified locations.
 - The Plan also recommends an ordinance that would require sprinklers in homes within subdivisions and multi-family homes, or to have sufficient water sources available prior to construction.
 - The Plan recommends working on awareness issues within the community, reducing slash left along the natural gas pipeline. Best management practices in the forests were also recommended.
 - Additional research should be completed to determine the status of these actions.

HURRICANES & TROPICAL STORMS

- Wind and water damage due to a hurricane is a consideration because of the significant forests throughout the community, and the configuration and location of structures on the hillsides and valley floors in Berlin.

TORNADOS & DOWNBURSTS

- Historically only one tornado has been recorded in Berlin, and that occurrence was in 1929. More recent "unofficial" downburst activity occurred in July of 2002.

EARTHQUAKES

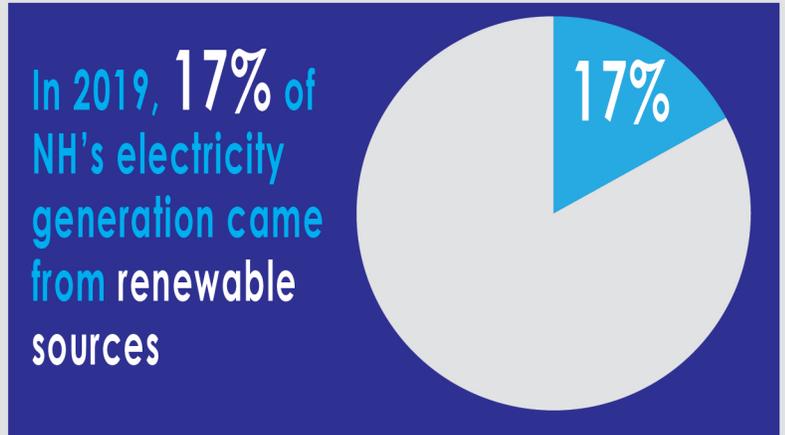
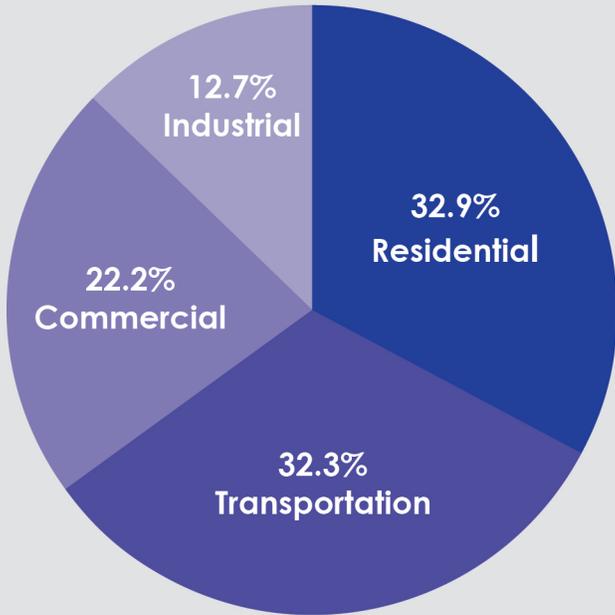
- Historically there have been two events in the Berlin area, and one in Hollis, ME. The first event was a 4.0 magnitude earthquake in 1988 that had an epicenter five kilometers northeast of Berlin. The second event was a 4.1 magnitude earthquake that took place in 1989. Although historically earthquakes have been rare in New Hampshire, the potential does exist and depending on the location, the impact could be significant.

POTENTIAL FINANCIAL IMPACTS:

- If 5% of Berlin's structures are impacted by a hazard event the losses could total up to \$41,800,000 or more according to the 2016 Hazard Mitigation Plan.

Energy

New Hampshire Energy Consumption by End-Use Sector, 2019 American Community Survey



New Hampshire has the **3rd highest** electricity rates in the U.S.



> 60%

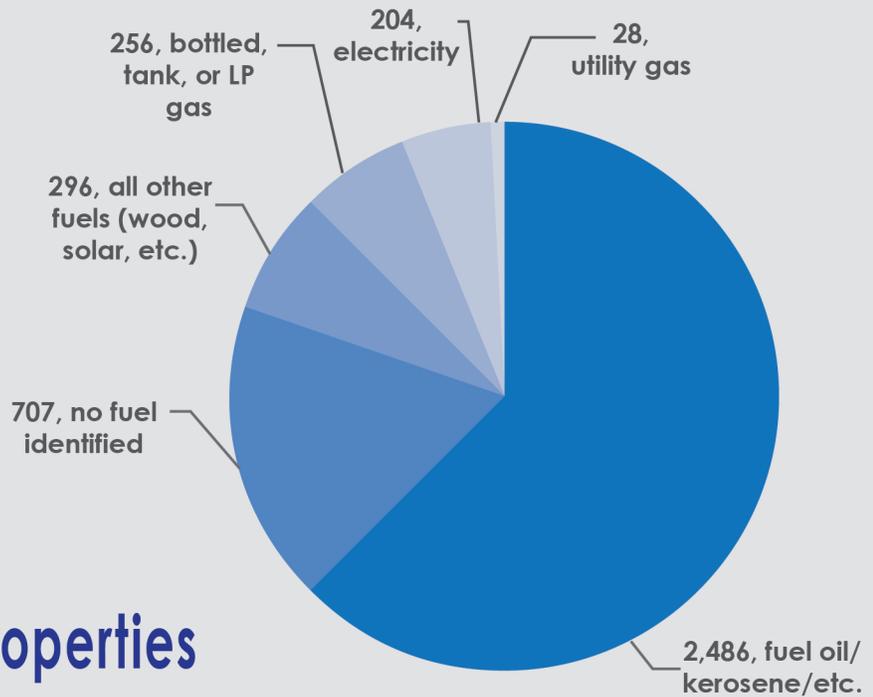
of Berlin residents rely on fuel oil as their primary heating source.



15

properties

in Berlin have solar electric installations



Primary Heating Source in Berlin Occupied Housing Units, 2019 American Community Survey

Key Findings

Promoting energy conservation, energy efficiency, and renewable energy systems to homeowners, private land owners, and on public facilities and properties has environmental and economic benefits for Berlin. These benefits include energy savings, improved air quality, and a reduction of Berlin's carbon footprint. The City already has significant renewable energy infrastructure including four hydroelectric dams, a wind power farm on the top of Jericho Mountain, and a biomass-fueled power plant, creating opportunities for the City to build upon and expand its renewable energy sector.

ENERGY EFFICIENCY AND CONSERVATION

Energy efficiency and conservation focuses on reducing overall energy consumption across all sectors, thus reducing energy costs and carbon emissions. Communities can achieve reductions in energy consumption through:

- Improving energy efficiency in both existing and new buildings (such as improving insulation, investing in renewable energy systems, and using energy efficient appliances and fixtures).
- Increasing community awareness, education, and participation in energy efficiency and conservation practices.
- Investing in alternative transportation systems and offering a spectrum of safe and affordable transportation choices.
- Improving access to clean fuel choices.
- Improving the energy efficiency of street and outdoor lighting.

ENERGY RELATED DATA & FINDINGS

The following section is an overview of the energy related characteristics of New England, New Hampshire, and the City of Berlin, and the many related issues and opportunities confronting the community.

BENEFITS OF ENERGY PLANNING

MUNICIPAL COST SAVINGS

Increasing energy efficiency and energy conservation in municipal facilities, buildings, and operations (as well as supplementing with renewable sources) can reduce fuel and utility bills over the long term.

GREATER INDEPENDENCE AND SECURITY

Ensuring a diversity of energy sources safeguards residents and businesses from worldwide energy price shocks and supply shortages.

LOCAL INFLUENCE OVER ENERGY SITING

Developing land use regulations for energy systems provides more control to local authorities for siting new energy systems.

MORE EFFICIENT COMMUNITIES

Energy planning enables communities to integrate goals with transportation and land use planning strategies, resulting in a more compact and efficient use of land.

HEALTHIER COMMUNITIES

Reducing energy use improves local air quality and associated health benefits. Efficient land use and transportation planning can promote walking and cycling opportunities which promotes healthier behaviors.

A CLEAN ENVIRONMENT

Investing in energy efficiency and renewable energy can result in reduced greenhouse gas emissions, improved air quality, and healthier ecosystems.

- 61% of New Hampshire's net electricity generation in 2019 was produced by Seabrook's nuclear power reactor (the largest in New England).

- New Hampshire has the third highest electricity rates in the contiguous United States, impacting all NH residents, but especially low-income earners.

- More than 40% of all New Hampshire households rely on fuel oil as their primary heating fuel, the second-largest share, after Maine, among the states. In Berlin, its more than 60% of households.

- In 2016, New Hampshire generated more of the state's electricity from wind than from coal for the first time, and, with the exception of 2018, annual generation from wind has continued to exceed that from coal.

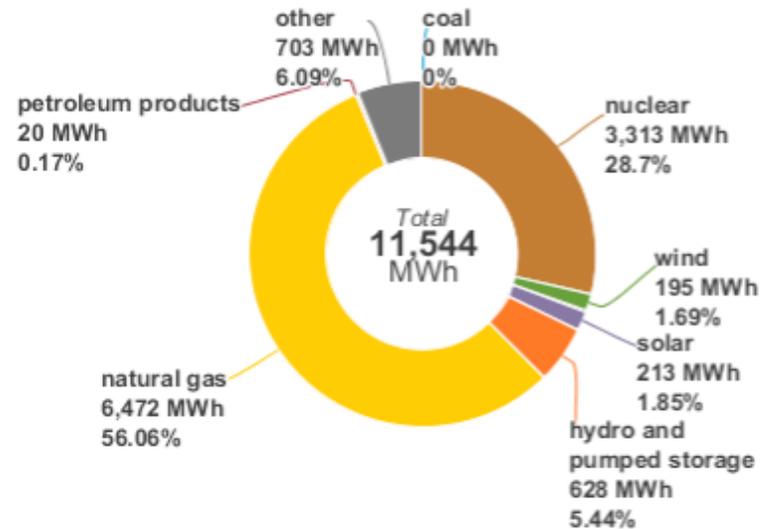
- New Hampshire's renewable portfolio standard only requires 25% of electricity sold in the state come from renewable energy resources by 2025.

- In 2019, 17% of New Hampshire's electricity generation came from renewable resources, including small-scale solar installations. Most of the state's renewable generation comes from biomass and hydroelectric facilities, including those located in Berlin.

- New Hampshire has two of the three coal-fired power plants still operating in New England—Schiller in Portsmouth and Merrimack in Bow.

- According to the Berlin Assessor, there are 15 properties with solar electric installations.

Real-time net generation by energy source in New England, as of 8/3/21, 10:02 a.m.



eia Source: ISO New England

CLIMATE CHANGE IN NH

Energy use – specifically the burning of fossil fuels for electricity, transportation, and heating and cooling – accounts for the vast majority of air pollution and greenhouse gas (GHG) emissions. Research has shown that this concentration of greenhouse gas emissions in our atmosphere, particularly carbon dioxide, is linked to climate change. According to the NH Department of Environmental Services, energy consumption for power generation, direct use, and transportation remain the largest sources of air pollution emissions in the state.

As discussed in the natural hazards profile, climate change poses risks to New Hampshire communities related to temperature increases, a higher frequency of severe weather events, and an increase in flooding and droughts. Increasing energy efficiency of City buildings, employing energy conservation measures, investing in renewable energy infrastructure, and promoting mixed use development and energy efficient land use patterns are among the strategies municipalities are using to combat climate change.

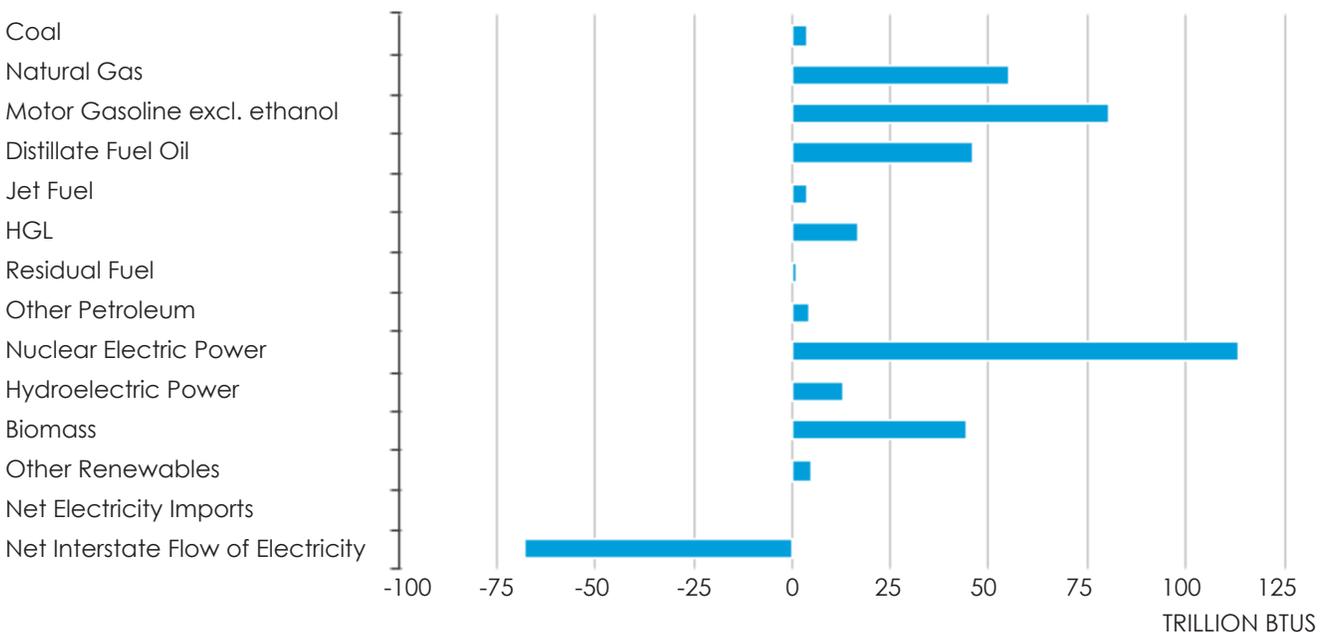
- The most effective actions to focus on at the municipal level are energy conservation, which reduces the amount of energy consumed annually, and energy production from renewable energy sources which reduces emissions and contributes to energy security.
- Identifying opportunities for greater building and vehicle efficiency, and efficient land use patterns supported by lower energy transportation alternatives should continue to be part of the conversation in Berlin.
- There is also a need to think about Berlin’s resilience and the ability of municipal departments to respond during emergencies when the grid may be down. Some redundancies of energy systems can address this need.

HOME HEATING FUELS IN BERLIN

According to the 2019 American Community Survey, approximately 62.5% of occupied housing units are heated by fuel oil/kerosene in Berlin. 17.7% of housing units did not have a heating source identified. 7% of units are heated by “all other fuels”, which consists of wood, solar, and other renewable sources.

The pie graphs to the right depict primary house heating fuel type for owner-occupied housing units and renter-occupied housing units. 82.6% of owner-occupied housing units are heated primarily by fuel oil/ kerosene, while 36.9% of renter-occupied housing units are heated by fuel oil/kerosene. It’s important to note that approximately 40% of renter-occupied housing units did not have a fuel source identified in the survey. This could be due to renters not knowing what the fuel source is or choosing not to respond.

NEW HAMPSHIRE ENERGY CONSUMPTION ESTIMATES, 2019



Source: Energy Information Administration, State Energy Data System

RENEWABLE ENERGY INFRASTRUCTURE

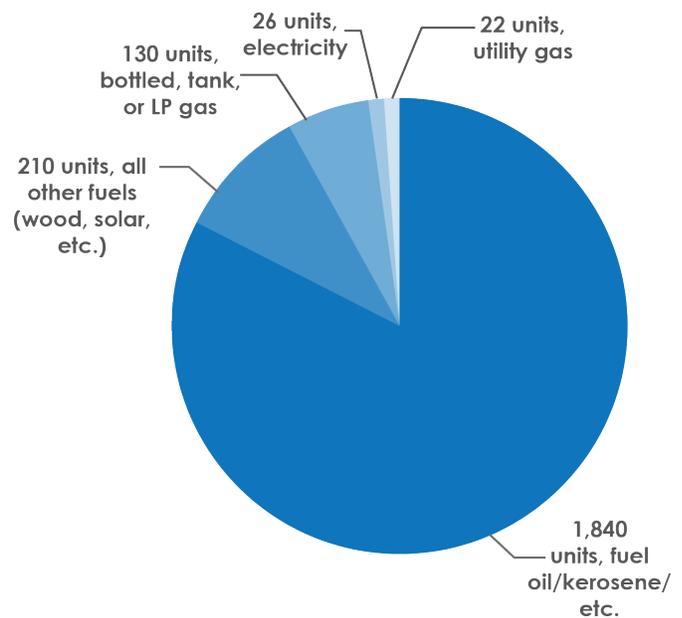
Renewable energy is an important step toward addressing climate change and securing financial and environmentally sustainable energy systems into the future. The five most commonly used renewables are:

- **Biomass:** Renewable organic materials, such as wood, agricultural crops or wastes, used as a source of fuel or energy. Biomass can be burned directly to heat water and produce steam which is then used to turn a turbine to produce electricity, or processed into biofuels such as ethanol and methane.
- **Water (hydropower):** The force or energy of moving water used to turn a turbine to produce electricity
- **Geothermal:** Energy generated by heat stored beneath the Earth’s surface. This heat is used to heat a liquid (typically water) to produce steam which is then used to turn a turbine to produce electricity.
- **Wind:** As wind blows through turbine blades affixed to a tower, the blades turn a central shaft which is attached to a generator to produce electricity.
- **Solar:** Direct solar systems can collect heat to supplement building systems or can generate electricity.

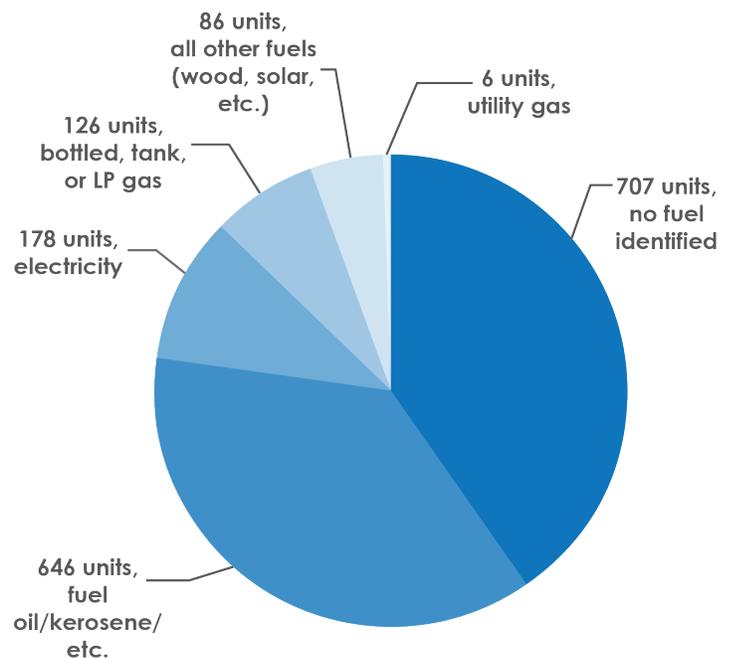
Renewable energy production contributes to Berlin’s local economy and represents a sector with significant opportunity for growth, expansion, and economic benefit. The City could already be considered a “clean energy hub”, as it is home to four hydroelectric dams that provide a total of 30 megawatts (MW) of renewable energy, a wind power farm on the top of Jericho Mountain that provide 14.25 MW of renewable energy, and a biomass-fueled power plant (Burgess BioPower) that generates 75 MW of renewable energy. More information about Berlin’s renewable energy systems can be found below:

- **Jericho Mountain Wind Farm:** Palmer Capital developed Jericho Power, which is a wind project on Jericho Mountain. The facility and the five turbines are now owned and operated by an affiliate of LS Power Development. The project’s renewable energy is sold to the New Hampshire Electric Cooperative and the Reading Municipal Light Department.

PRIMARY HOUSE HEATING FUEL IN HAMPTON'S OWNER-OCCUPIED HOUSING UNITS



PRIMARY HOUSE HEATING FUEL IN HAMPTON'S RENTER-OCCUPIED HOUSING UNITS



- **Burgess Power Biomass Plant:** In 2013, Burgess Biopower converted a former pulp mill chemical recovery boiler located in Downtown Berlin into a state-of-the-art, biomass-fueled power plant (which converts wood into power). This redevelopment project benefits the community and the region by providing clean energy. Burgess purchases approximately 800,000 tons of low-grade wood per year, with about 60% coming from NH. The facility also created approximately 40 jobs, and generates 75 megawatts of green power for Eversource, the state’s largest utility provider. The biomass plant (Burgess BioPower) converts wood chips (which is a local renewable energy source) into electricity through the use of a steam-powered turbine. At the end of the process, steam is converted back into water via a cooling tower where “waste heat” is evaporated into the atmosphere.
- **Solar Installations:** The City of Berlin tracks solar electric installations and has identified 15 private solar photovoltaic systems in their database system. These are largely rooftop mounted solar arrays.
- **Hydro-Power Facilities:** Berlin’s hydro-power facilities include Riverside Hydro, Sawmill Hydro, Cross-Power Hydro, and Smith Hydro.

CURRENT ENERGY PROJECTS

- **Waste Heat Recovery System:** Currently, the City is looking to leverage the positive partnership developed with Burgess BioPower

LAND USE PLANNING AND ENERGY

Land use significantly drives a community’s energy consumption, which not only impacts the environment, but also has a range of effects on household and municipal budgets. How we manage and use land impacts how much energy is consumed by local governments, businesses, institutions, and residents. Berlin’s development is concentrated in the eastern portion of the City, creating opportunity to expand its mixed use development and walkability. In New Hampshire, transportation is a leading cause of carbon emissions and overall energy use.

Mixed-use development combines two or more different types of compatible land uses, such as apartments and small-scale retail either in the same building or in close proximity to each other. In mixed-use areas, transportation modes are commonly intertwined, such as streets with bike lanes, sidewalks, and bus stops making transportation alternatives more accessible. Land use planning practices that promote mixed use development include:

- **Enhance Building Design and Siting:** Communities may also incorporate energy efficiency standards and renewable energy generation requirements in their zoning ordinances.
- **Incorporate Energy Efficiency Strategies into Municipal Policies:** Energy efficiency can save communities significant costs. Policies may include a no-idling policy for municipal vehicles, energy efficiency standards for the construction or operation of municipal buildings, and the regular consideration of retrofitting existing facilities to be more energy efficient.
- **Create an energy commission:** In 2009, the NH Legislature enacted RSA 38-D, authorizing municipalities to establish local energy commissions. They can be created for the purpose of study, planning, and utilization of energy resources for municipal buildings and built resources, and for making recommendations to local boards and committees pertaining to municipal energy plans and sustainable practices, such as energy conservation, energy efficiency, energy generation, and zoning practices.

and utilize the “waste heat” generated when the plant burns woodchips to make steam, which turns turbines and generates electricity. The waste heat would be utilized in the construction of a snowmelt system for the adjacent Downtown center of Berlin as part of a planned, renewed streetscape project. A recent economic impact study showed the facility results in 323 jobs statewide and over \$65MM in overall economic activity in addition to 27 direct jobs. Taxes and other fees paid directly to the City help reduce local property taxes on residents and provide funds for City maintenance. Of particular importance is Burgess’s significant impact on the low-grade wood harvesting industry in New Hampshire which is a key element of sustainable forestry practices. Burgess makes about 500 million BTUs an hour of excess “waste heat”.

- **Battery Storage Facility:** Brookfield Energy is in the planning and permitting phase of a project for constructing a battery storage facility for their Sawmill Hydro Facility. Brookfield has the option of erecting this facility on 3.8 acres of City land behind the District Courthouse on Main Street, where it’s planning to install a 14-megawatt battery storage project.

ENERGY RESOURCES

- **Granite State Clean Cities:** Supported by the U.S. Department of Energy Clean Cities Program, the Granite State Clean Cities Coalition seeks to reduce petroleum use in transportation through the use of domestically produced, cleaner burning alternative fuels and other fuel reduction strategies.
- **Drive Electric New Hampshire:** A coalition of public and private stakeholders whose mission is to accelerate the adoption of electric vehicles (EVs) and installation of supporting charging infrastructure in NH by increasing knowledge and awareness of EVs through education and outreach.
- **NH Energy Efficiency Plan:** New Hampshire’s electric and gas utilities submitted a three-year energy efficiency plan to the Public Utilities Commission in early September, 2021. The plan sets new energy savings goals for 2021 through 2023 and is the culmination of 10 months of stakeholder discussions.
- **NH Department of Energy (NHDEP):** The NHDEP operates several Energy Programs in partnership with both private and public entities to promote a sustainable, environmentally sound and least-cost energy future for New Hampshire. NHDEP is tasked with promoting energy efficiency and reducing energy costs by supporting programs for low-income households, state government buildings, businesses and industry, and schools and towns; exploring opportunities to expand the use of renewable, domestic energy resources such as biomass, wind and solar energy; and administering state and federal programs related to energy.
- **NH Saves:** New Hampshire’s electric utilities, as directed by the legislature, established the NHSaves Program, a statewide energy efficiency program to provide New Hampshire customers with information, incentives and support designed to save energy, reduce costs, and protect our environment statewide.
- **Local Energy Solutions Working Group:** Formed in 2008 in response to municipalities across the state forming the first local energy committees and commissions (LECs), the Local Energy Working Group is an ad-hoc group drawn from local, state, and federal government, and nonprofit partners

collaborating to providing collaborative guidance and technical support to LECs, municipalities, schools, and other political subdivisions seeking to reduce energy use, minimize energy costs and/or reduce fossil-fuel consumption.

- **Database of State Incentives for Renewables & Efficiency (DSIRE):** DSIRE is the most comprehensive source of information on incentives and policies that support renewables and energy efficiency in the United States.
- **New England Grassroots Environment Fund (NEGEF):** Small grants for education, outreach, and community energy projects are available through revolving grants offered by NEGEF.

LOOKING AHEAD

- While there is a large amount of renewable energy is generated in Berlin, much of it is not used by Berlin residents and is imported elsewhere.
- While some of Berlin's municipal facilities track energy use data and have had energy audits completed on their systems (Fire Department, Pollution Control Facility, Schools), some are due for new energy audits, such as City Hall.
- The City of Berlin should continue participating in the Community Power Coalition of NH, which gathers member municipalities by jointly contracting for services, developing projects and programs together, educating and engaging the public, and advocating for communities and customers at the Legislature and Public Utilities Commission.

EXISTING LAND USE

Key Findings

- The purpose of this section is to assess Berlin's **existing pattern, mix, and types of land uses**. Understanding the existing land use pattern and development activity and how it is changing over time is critical to a community's master planning effort. Berlin's development pattern was largely influenced by geography - the City's most concentrated developed area is located in the eastern portion of the City, in close proximity to the Ammonoosuc River and the industries that emerged there. This is also due to the fact that most of the land in the western portion of the City is in the White Mountain National Forest.
- Understanding the context of Berlin's development history and the resulting land use pattern will help the community plan a path toward their chosen vision of the future. How a community decides to use its land base has a direct impact on natural resources, community character, transportation infrastructure; and on housing opportunities, the tax base, and the cost of providing services.

BERLIN'S EXISTING LAND USES

- With significant portions of Berlin protected as conservation land in the White Mountain National Forest, and with little population growth in recent years, the City retains much of its traditional centralized development pattern. This pattern is highly sought after in many northeast communities: dense development around a downtown core, surrounded by residential development with easy access both to the core and to the natural resources that surround it.
- As mentioned above, Berlin is a product of its location and environment. The City's natural features, such as topography and geology, as well as its politics, transportation system, and economics have greatly influenced its development. Berlin's establishment as a regional center is a result of its geographic location, and early commercial and manufacturing growth in the area. The Androscoggin River provided the early power for manufacturing, and the City's location provided easy access for neighboring communities.
- Berlin contains rivers, streams, wetlands, lakes, ponds, as well as a combination of dense forests, large areas of exposed



Above: Berlin's industrial and manufacturing development began along the Androscoggin River



Above: Hiker on top of Mt. Jasper, one of Berlin's many natural areas

and shallow ledge, and wide floodplains. The City also includes the Upper Ammonoosuc River headwaters, the Dead River, and the drainage of the Middle Androscoggin River. Approximately 45% of Berlin is located in the White Mountain National Forest (WMNF). Another 20% is owned by the State of New Hampshire and others for recreation and conservation purposes. The WMNF land and state owned lands are contiguous throughout the western portion of Berlin, providing protection from development for over half of the City.

- Berlin’s existing land use pattern consists of a wide array of uses. For the purpose of this existing conditions analysis, Berlin’s existing land uses have been grouped into generalized categories in order to facilitate a better understanding of Berlin’s existing pattern of development. These can be found in the tables below.

| Table 1: Existing Land Use | Acres | Percent of City |
|---|---------------|------------------------|
| Commercial | 818 | 2% |
| Government | 2,414 | 6% |
| Industrial | 240 | 1% |
| Institutional | 208 | 1% |
| Other/Unknown | 2,356 | 6% |
| Conservation/Recreation/Working Landscape | 27,940 | 70% |
| Residential - multi family | 495 | 1% |
| Residential - single family | 2,192 | 6% |
| Trans/Comm | 718 | 2% |
| Vacant | 2,389 | 6% |
| Total | 39,770 | 100% |

| Table 2: Existing Land Use excluding the WMNF | Acres | Percent of City |
|--|---------------|------------------------|
| Commercial | 818 | 3% |
| Government | 2,414 | 10% |
| Industrial | 240 | 1% |
| Institutional | 208 | 1% |
| Other/Unknown | 2,356 | 10% |
| Conservation/Recreation | 11,630 | 50% |
| Residential - multi family | 495 | 2% |
| Residential - single family | 2,192 | 9% |
| Trans/Comm | 718 | 3% |
| Vacant | 2,389 | 10% |
| Total | 23,460 | 100% |

CONSERVATION, RECREATION, AND WORKING LANDSCAPES

- This land use category encompasses the White Mountain National Forest (note that Table 2 excludes the White Mountain National Forest), Jericho Mountain State Park, Mt. Forist, and other large open space tracts that are conserved, serve as working landscapes, or provide recreation opportunities. As seen in Table 1, a remarkable 70% of the City’s land area falls under this category (with the White Mountain National Forest is included). Even excluding the White Mountain National Forest, this land use type makes up 50% of the City. While this could be perceived as limiting in some ways (i.e.

less land in the City available for development), this presents immense possibility for the City to direct a portion of its economic development efforts towards tourism and outdoor recreation. OHRV (off-road recreational vehicle) tourism alone has boomed in the last decade in Berlin with the establishment of the Jericho Mountain State Park's OHRV trail network and campground facilities. Because of the limited land available for development, Berlin has to be creative in thinking about land use - this could include exploring opportunities for increasing density, as well as identifying redevelopment opportunities.

- Forestlands are, by far, the most dominant land cover in Berlin. Approximately 84% of Berlin is covered by forestlands. Most of the forested land in Berlin falls within the White Mountain National Forest. Other areas are steeply sloped and generally unsuited for other uses. The timber from Berlin's forestlands were once a resource for the paper industry and is now a resource for the renewable energy biomass industry. There are also lands throughout the community that were once pasture land, but are now abandoned and have returned to forest. Generally, land that is presently unsuitable for development due to steepness or inaccessibility remains in woodlands until the pressure to develop, or the demand for the wood, exceeds the natural barriers of the land. A small amount of agricultural land remains in Berlin, and very little agricultural activity takes place within the community currently. Berlin is fortunate to have such a high percentage of its working landscape intact.

WHAT ARE WORKING LANDSCAPES?

“Working landscapes” are open space lands that consist of natural resources utilized by forest or farm based businesses to generate income.



Above: Lookout at Jericho Mountain State Park

RESIDENTIAL LANDS

- Residential lands make up 7% of the total land area in Berlin (including the White Mountain National Forest) and 11% of the total land area (excluding the White Mountain National Forest). Residential land in Berlin includes multiple types of housing development: single-family homes, multi-family dwellings, mobile homes, and seasonal homes. The majority of Berlin's housing units are single-family residential units. According to the 2019 American Community Survey, single family units make up 53% of Berlin's occupied housing unit. Year-round residential units still dominate the residential usage, but second-home development and short-term rentals are increasing in the City.
- Some of the residential land is on the rural edges, but a great deal of the residential development has been built at a higher density around the downtown due to the availability of services. The majority of residential units are single-family and multi-family dwellings concentrated around the downtown area. During the past few decades, the community has seen many multi-family structures fall into disrepair. The City has made significant strides towards removing unsafe buildings from the downtown, and in identifying new housing types that will appeal to the changing demographics of Berlin residents. While the number of total housing units has decreased since 2010, this is most likely due to the demolition of unsafe, vacant structures.

COMMERCIAL AND INDUSTRIAL LANDS

- Approximately 8% of Berlin’s total land area is identified as commercial and industrial land uses. When excluding the White Mountain National Forest, commercial/industrial land makes up 13% of Berlin’s land area. This has risen compared to the 2010 Master Plan analysis, which indicated commercial/industrial lands made up 4% of Berlin’s land area. Although the percentage is small, these properties have a dramatic effect on surrounding land use, and contribute to the tax base. The majority of commercial land use is concentrated in the downtown and along Route 16. The commercial uses in Berlin support the needs of local residents as well as other communities in the region.

Downtown

- Future development opportunities exist within the downtown core as infill development and redevelopment. Some key parcels for redevelopment include the former Brown Elementary School, the vacant parcel near City Hall, and 112 Main Street. The commercial core of the downtown extends for approximately three-quarters of a mile along Main Street and Pleasant Street, parallel roadways that form a one-way traffic loop. The eastern boundary is formed by the Androscoggin River and to the west the area is loosely edged by the railroad right-of-way and Hillside Avenue. The western quadrant is comprised primarily of multi-family residential properties.
- The prosperity of Downtown property owners and business owners has fluctuated considerably over the last few decades and efforts to support and stabilize the City’s economic core have been numerous throughout this period. Some concerns heard through the public engagement phase of the Master Plan Update included the costs associated with upgrading blighted buildings, including the expenses required to bring the structures up to code. Berlin is seeing a small influx of new businesses pop up in Downtown. Building off this new energy, while also supporting existing businesses who have had a long-term presence in the community, to expand Berlin’s tax base is a high priority for the City.

Route 16

- Route 16, on either side of Main Street, is a major transportation route through the City. It has a number of commercial businesses such as gas stations and auto repair shops located at the southern end, as well as larger businesses and institutions located at the northern end, including the White Mountains Community College, White Mountain Lumber, and the Correctional Facility. Medium to high density residential and commercial uses are situated in the central portion of this roadway.
- The City has recently completed a multi-year rehabilitation project of a significant portion of Route 16 along the

WHAT IS INFILL DEVELOPMENT?

Infill development is the development or redevelopment of land that has remained vacant, and or is underutilized. This development technique is often used to promote growth and development in the heart of a City, specifically in areas that are currently served by public infrastructure and transit, but underserved by residential and commercial real estate markets. Successful infill programs offer multiple benefits to a City including:

- Activate vacant properties
- Prevent sprawl
- Use existing infrastructure.
- Reinvigorate underutilized buildings
- Increasing residential/non residential opportunity
- Increased residential development leads to increased vibrancy

Androscoggin River. The project includes road reconstruction, new sidewalks, landscaping, street trees, a new stormwater collection system, and other improvements.

- There is some undeveloped land along Route 16 that has potential for additional commercial uses that the City has highlighted a great need for, including a hotel.

Industrial Development

- One of Berlin's primary industrial developments has been the Maynesboro Industrial Park located on East Milan Rd. The other major tract of industrial land is occupied by Burgess Power, which is approximately 120 acres in size.
- The City also has a number of renewable energy facilities including four hydro-electric facilities, a wind farm, and a 75 MW biomass facility.
- Berlin's Industrial Development and Park Authority is currently working on a number of projects to increase industrial development and productivity in Berlin, including a Hotel Feasibility Study, establishing a Tax Increment Financing District, and implementing the Economic Development Action Plan developed by Camoin Associates.

OTHER LAND USES

- **Institutional/Government Land Uses:** 8% of the City's land area, is comprised of institutional and governmental land uses including City-owned property, churches, federal property, libraries, hospitals, etc.
- **Vacant Land:** 2,389 acres of land in Berlin, or 6% of the City's total land area, are considered to be "vacant parcels".
- **Transportation/Communication:** Roadways and utilities make up 2% of Berlin's total land area.

LOOKING FORWARD

- There are distinct areas within Berlin that have a unique combination of land use types and development/redevelopment opportunities.
- The presence of natural resources, working landscapes, and recreation lands in Berlin represent a key opportunity for these areas to be capitalized on for tourism and economic development.
- Route 16 and the Downtown pose opportunities for redevelopment and infill development, as well as improved connectivity between these areas. The Route 16 reconstruction project, the steady demolition of old buildings, the reinvestment in commercial buildings, parcels, and new housing units, the Riverwalk, the recreation trail, and the increase in tourism amenities in Berlin all represent an integrated effort to stimulate the economy in Berlin and increase the tax base in City's key commercial corridors and areas.

