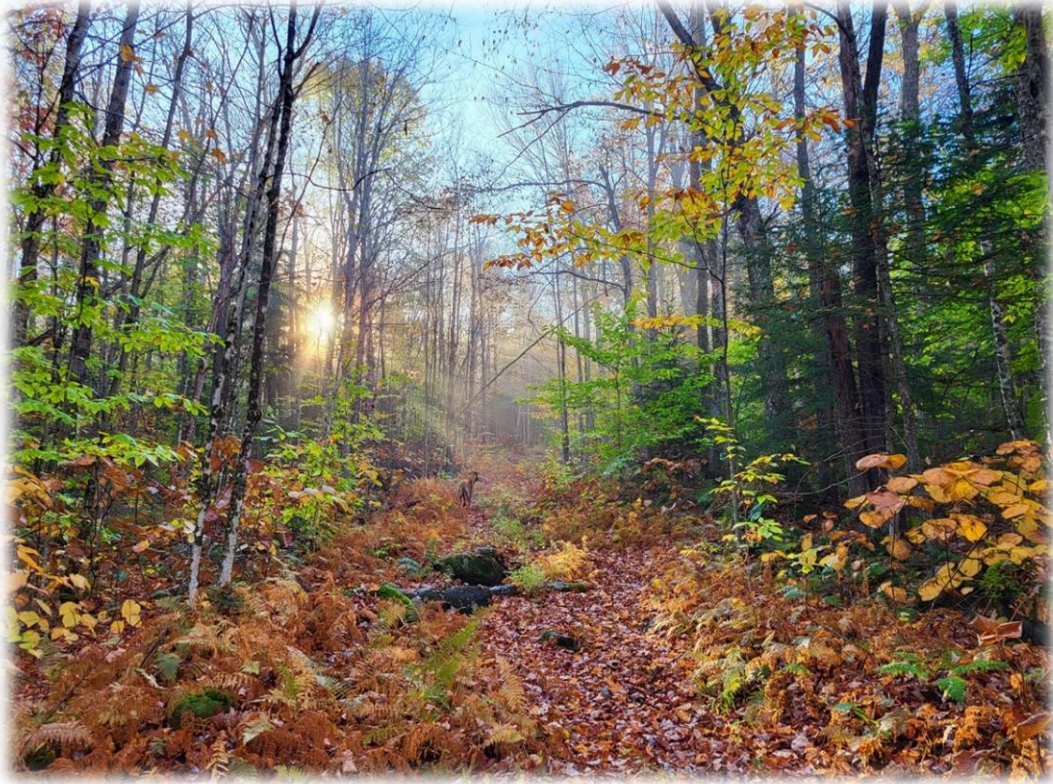


TOWN OF HOLLAND 2024 TOWN PLAN



Bill Sladyk Wildlife Management Area, Photo Credit - Stacy Boone

Current Holland Planning Commission

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This Holland Town Plan was funded in part from the American Rescue Plan Act of 2021.

Adopted January 7, 2025

~ in appreciation – Mitch Wonson ~

We wish to extend a nod of appreciation to the self-described curmudgeon, for patiently answering all our questions, never losing sight of our enthusiasm and curiosity, sharing the tools of what is necessary to make a Town Plan successful, and a document with purpose. We do not have your history of knowledge but thank you for the time you have volunteered in support of this process over many years, and multiple iterations of this document. Each version for the benefit of the Town of Holland and its residents.

Jim, Kenric, Darrell, and Stacy

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A Rural Community in Collage, Photo Credits - Stacy Boone

Introduction and Background

The purpose of this Town Plan (Plan) is threefold: to comply with the requirements of 24 VSA Chapter 117 with resultant improved opportunities for grant assistance; to assist regulatory agencies in reviewing development proposals in the Town and adjacent communities; and to provide direct guidance to the Town in implementing recommendations and resolving existing and future issues over which the Town has control.

The Town of Holland (Town) is a small rural community with a current estimated population of 632 year-round residents (US Census 2020), virtually no true commercial development, and one paved road. Containing approximately 42 square miles in an almost rectangular shape, the Town is located on the Canadian border and abuts the Towns of Derby to the west, Morgan to the south, and Norton and the Unified Towns and Gores of Essex County to the east.

The Town utilized some of its American Rescue Plan Act (ARPA) funding to contract with the Northeastern Vermont Development Association (NVDA) to assist in the updating of this Plan including a summary and including the following maps.

1. Base Map - showing such elements as roadways, farms, residences, government buildings, parcel boundaries, and fire hydrants (revised October 2024)
2. Land Cover Map - consisting of an overlay of the base map on an aerial photograph (revised October 2024)
3. Conserved Lands Map (revised December 2016)
4. Forest/Wildlife Blocks Map (revised October 2024)
5. Natural Resource Constraints Map, including topography (revised October 2024)
6. Soils Constraints Map (revised June 2016)
7. Solar Potential Map (revised October 2024)
8. Wind Potential Map (revised October 2024)
9. Woody Biomass & Hydroelectric Potential Map (revised October 2024)

These maps are included in a reduced format in the Appendix.

A town planning questionnaire was sent out in 2023 to both residents and non-resident taxpayers. The results of the questionnaire are contained in the Appendix and referenced in various sections of the Plan. It should be noted that the response rate was approximately 20%, significantly less than prior questionnaires. As such, the results of the questionnaire cannot be considered statistically significant.

The Plan format follows that required by State Statutes. While a general statement of objectives and policies follows in the Plan, the objectives related to a specific element of the Plan are contained in that section. While this Plan does address all the required elements, the Town believes that many aspects of certain elements are beyond the Town's control given its small population and financial abilities. As such, the principal focus of the Plan is on those aspects which the Town can affect and direct in a viable fashion.

Happenings Since Adoption of the 2017 Plan

There have been a few changes in Holland since the preparation of the 2017 Plan related to accomplishing the objectives set out in the Plan, community growth, and issues facing the Town. Principal trends and changes include:

1. Continued limited growth: Grand List data shows 411 single-family homes, of which 283 are year-round dwellings and 118 are seasonal. This is a small increase since 2017. Strictly commercial development consists of a self-storage facility.
2. Decrease in Current Use Program (CUP): Enrollment of acreage in the CUP has decreased from 11,199.16 in 2016 to 10,915.74 in 2024. The total acreage of land in Holland is 27,047.
3. State-owned land comprises 4,655.30 acres in Town and Holland Pond is 344 acres. In combination with land conserved by the Vermont Land Trust and land listed in the CUP, 64% of the land area has development restrictions, resulting in a significant reduction in tax base potential.
4. Road damage resulting from various storms and the July 2023 storm has generally been repaired. Road maintenance continues to be a challenging issue. The increased severity of weather events resulting from climate change will continue to present a challenge for maintenance of Town roads.
5. The Holland Elementary School was closed permanently after the 2018-2019 school year following Town vote, with children “tuitioned” to the Derby Elementary School. The Town School District has retained, by Town vote, the school building. It is used somewhat as a community center and its required maintenance is approximately \$60,000 annually. The issue of what to do with the school building and grounds should to be addressed.
6. Costs for the provision of Town and educational services has grown dramatically statewide. The taxes resulting from these increases represent a significant burden on taxpayers. Unfortunately, given the education funding methods of the State, there is little the Town can do to reduce this tax burden.
7. Outside influences such as continued mandates from State and Federal agencies, and likely reduced funding from these governments have the potential to negatively affect property values and require additional local funding.
8. The Covid-19 pandemic of 2020, disrupted many activities and created an influx of purchasers of property at prices significantly above assessed valuations.
9. The Town now allows ATVs/UTVs to utilize Town roads during specific months and times of day as noted in the adopted ordinance. This use adds an additional burden on maintenance of the roadway system.
10. In 2018 through 2020, a proposed industrial wind turbine on School Road did not materialize, due in part to significant opposition from Town residents.

Issues Currently Facing the Town

There are a variety of issues currently facing the Town. There was no real consensus of findings or direction in the 2023 questionnaire. School taxes are the biggest issue among residents. The answers of this questionnaire, divided by resident and non-resident, can be viewed in the Appendix. General issues include, but are not necessarily limited, to the following:

1. Difficulty in finding members for the Town highway crew (typically three including the foreman). When the road foreman retired in 2022, the road crew was short a person for several months, resulting in an increased burden on the two remaining and less work being accomplished. Two of the current members are on the cusp of retirement, and this increases the pressure to hire and train.
2. The Town Garage is in poor condition and of inadequate size to accommodate even one half of the equipment. The site is also constricted and may not be a location feasible for rebuilding. The need to substantially rehabilitate, replace, or relocate the garage to a new site should be studied. While the need for such a study has been part of the past three Town Plans, nothing has been done to date.
3. As noted, the Town School District currently retains ownership of the school building. A determination of the future use or sale should be made in the near future, as the current cost for maintenance and future costs for replacement of internal infrastructure may be problematic.
4. Given the frequency of damaging weather events, maintenance of Town roads in a cost-effective manner will continue to be an issue facing the Town.
5. There is a limited sense of community in Town and significant citizen apathy as exemplified by the limited participation at Town Meeting and lack of residents willing to serve on the various Town boards and commissions. Solutions to these problems will be difficult to find.
6. Affordable housing is a national and statewide problem and apparent in Holland also. Many of the solutions to this problem are beyond local control.
7. Taxes, particularly school taxes, continue to be a significant burden for some. While the Town has done a good job at limiting increases, school taxes are beyond local control.
8. There are a variety of issues presented by residents in response to the 2023 Questionnaire. There seems to be no real consensus regarding those issues.

General Statement of Objectives, Policies, and Programs

The following presents the objectives, policies, and implementation recommendations (programs) for the Town. As noted, there are numerous objectives and implementation programs discussed in each of the named sections. Only selected items are listed in this General Statement. Refer to each section for a comprehensive listing.

Objectives and Policies

1. Maintain and protect the generally rural character of the Town.
2. Address issues in a proactive fashion.
3. Retain current rights of way.
4. Improve roadway conditions.
5. Provide Town services in a cost-effective manner.
6. Minimize environmental impacts of existing and future land uses.
7. Continue to support the Holland School Board in providing an affordable high level quality education for our students.
8. Interrelate with adjacent communities in a proactive fashion.
9. Support accepted agricultural and forestry practices.
10. Support affordable housing initiatives.
11. Take advantage of outside funding opportunities for planning, maintenance, and capital improvements.

Implementation Programs

1. Explore the need for and options for land use regulations.
2. Obtain a viable long-term source of gravel and sand.
3. Evaluate road conditions and needs, possibly through retention of an outside consultant.
4. Prepare a long-range road maintenance plan that includes flood mitigation and prevention as a top priority.
5. Prepare a capital budget.
6. Encourage volunteers to prepare grant applications.
7. Encourage all construction, including agricultural buildings, to utilize and mitigate flood and erosion control and hazard risks.
8. Continue working with adjacent communities to provide cost effective services.
9. Initiate a dialogue with abutting communities in Canada.
10. Monitor and provide input to adjacent communities' planning processes.
11. Explore the feasibility of joining the National Flood Insurance Program.
12. Update in a timely manner the Town's All Hazard Mitigation Plan and Basic Emergency Operations Plan to ensure the Town would receive match funding if available from State and Federal Agencies.
13. Obtain a municipal planning grant to comprehensively revise the Town Plan by 2032.

14. Engage the community to take advantage of citizen skills and ideas in upgrading Town services and finding innovative ways to address the potential fiscal crisis.
15. Support the Planning Commission to develop a plan for renovation/replacement of the Town Garage.
16. Enlist the community to be involved and to support the social framework of our small rural community.

Land Use

Holland is a small rural community generally located away from regional activity centers and major roadways. The Town contains approximately 42 square miles (27,047 acres) consisting of a mixture of gently rolling hills, lower swamp lands, farmland, and steep ravines adjacent to numerous streams. The only significant body of water is Holland Pond in the northeast. Along the pond's west side are numerous summer camps but an increase of full-time owner use of individual properties is noticed. The pond is essentially surrounded by the Bill Sladyk Wildlife Management Area (WMA) which contains 4,655 acres or roughly 17% of the Town.

Overall development is limited and consists principally of year-round homes (283), seasonal homes (118), and several working farms. Refer to the Agricultural section. Since the 2017 Town Plan, the total number of farms has decreased with farms incorporating and merging with one another. There are also several former farms whose land continues to be open and productive through rental or lease. There is no true commercial development in Town and most businesses are home based. In what was originally the Town Center is one church, Holland Community Church. The Holland Historical Society building is located on Gore Road. The Town's three public buildings include the Town offices and school building on School Road and the Town Garage on Valley Road. Refer to the Utilities and Facilities section.

The Land Cover Map shows the existing development patterns. Over the last few decades, Holland has grown slowly to a current population of approximately 632 year-round residents with the development being residential in nature.

The 2023 Questionnaire asked a number of questions concerning growth and the overall Town Plan. Key responses included:

1. Vision of Holland in the future. Over 60% said continue as a low density, primary open space, and agricultural community.
2. Recreational opportunities and the school building. More than 50% would like the Town to encourage and provide more recreational opportunities and over 52% support having a community center to provide recreation opportunities.

Holland currently has no land use or building codes. Zoning was adapted in the early 1990s but voted out due to a significant negative reaction.

Key aspects of current land use include:

1. The WMA contains approximately 17% of the land in Town and is not taxed. It is unavailable for development. As of 2023, the Town receives \$31,480.32 from the state under the Payment in Lieu of Taxes (PILOT) project. These monies exceed the amount received in 2016.
2. In 2023, approximately 10,915 acres in Town are enrolled in the CUP. This represents almost 40% of the Town's total 27,047 acres. 3,465 acres are land trust/conservation

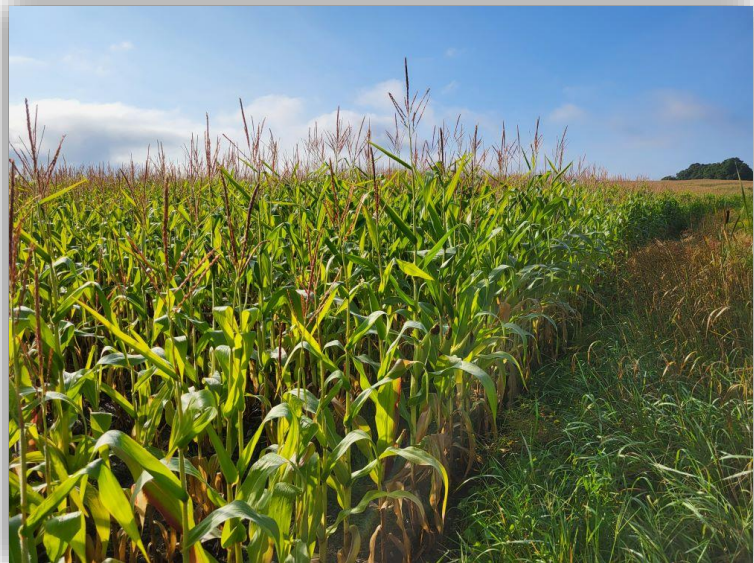
properties and therefore are unavailable for development. An additional 809 acres are not enrolled in the CUP but are listed as land trust/conservation property acres.

3. According to the 2002 state standards, most of the land parcels in Town are not suitable for on-site septic systems, due to the proximity to ledge and soil type. Based upon pre 2002 standards, outside the WMA, 8,221 acres are not suited, 2,637 are marginally suited, and only 61 acres are well suited. Other states in the Northeast and Canadian Provinces have approved in ground septic systems in soil conditions that are similar to those found here in Holland and in other parts of the state. Once the state researches and quantifies other systems, a reassessment of building sites in Town would benefit the tax base.

Agriculture

Holland has historically been devoted to agriculture and its way of life. Holland has 7,488 acres of agricultural soils, consisting of both nationally-rated “Prime Agricultural Soil” and “Statewide Important Soils.” Refer to the Soils Constraints Map.

The CUP program allows landowners with enrolled acreage to pay property taxes based on the use value rather than the fair market value. Farm buildings currently being used for agriculture at time of enrollment are completely exempt from property taxes. In exchange, the landowner must keep the property in agricultural or forest production. The municipalities receive an annual payment from the State called the “hold harmless payment” to make up the difference between the municipal taxes paid at use value



Growing Corn on Gore Road, Photo Credit - Stacy Boone

and municipal taxes that are based on the assessed fair market value. The State Current Use Advisory Board establishes “use values” every year. In 2024, the use value for agriculture land was set at \$483 an acre, and forest land was valued at \$188 per acre. Forest land that was greater than one mile from a road was valued at \$141 per acre. Enrolling land into the CUP is particularly beneficial to property owners in communities where market prices are high in relation to use value.

Dairy Farming

Government regulations, plant, and animal genetics have changed the nature of agricultural business in Vermont as well as in Holland. Management changes in breeding, earlier crop harvest which results in higher quality feed, combined with advances in feeding programs for modern milking herds has increased milk yields. The land farmed now, because of new grass and corn seed varieties, produces more milk for market. Government programs, such as those of the Natural Resources Conservation Service (formerly Soil Conservation Service), and the State of Vermont's implementation of Required Agricultural Practices (RAPs) have benefitted wetlands, water quality, and wildlife habitat—all of which affect the viability of a farm.



Dairy Farming on Gore Road, Photo Credit - Stacy Boone

Along with the mentioned changes, the types and sizes of the Holland farming business has shifted as well.

Holland farms range in size from smaller organic and conventional dairies housed and milked in the more traditional tie barn. Herds range in size from approximately 100 to 1000 milking cows. All organic herds have access to pasture, along with some conventional herds regardless of size or type of housing. Larger convention free stall herds are usually confined to indoors, with high curtain side walls and large comfortable sand bedded stalls. The curtained wall can open and close depending on inside temperature which is controlled by fans to provide air flow throughout the structure. Milking of these herds is likely done in a modern parlor, or others rely on a robotic parlor stall where the cows enter on their own schedule. These type of milking processes records essential data from the individual cows to monitor herd health and production.

Regardless of housing types, manure management, also referred to as a nutrient management plan stipulated under the RAPs, mostly consists of the storage and seasonal spread of liquid manure on hay or corn fields. The Vermont Department of Agriculture established the standard for manure management to help protect Vermont's watershed system. Other advances in machinery, crop, and farm data (which includes all the information for herd management) can be managed by computer and/or smart phone. The technology reduces labor and herd maintenance, while increasing efficiency.

Raising Beef

In addition to dairy farming, there is a sprinkling of raising beef for slaughter operations in Holland. The sale of this product is often through farm store or stand, often with other farm produced products.

Other Farming

Other farm opportunities in Holland include small flocks of egg laying hens which provide for the sale of eggs. Additionally, small flocks of meat chickens and turkeys are raised in the community. There are honeybee operations and the sale of vegetables from gardening endeavors. Rearing sheep is another developing enterprise. Growing of legal cannabis and hemp has been or is also among the farming enterprises.

Many homeowners use their land to raise gardens or a few animals which contribute to a subsistence type of agriculture or as a hobby farms.

Maple Sugaring

Sugaring is a traditional spring activity, and because of changes in weather patterns some producers have expanded their operations tapping as early as February to capture the first runs of sap. Many have installed osmosis systems. These systems extract up to 75% of the water before boiling. Many sugar makers have switched from wood to oil fire or LP gas evaporators to reduce labor demands. These types of fuel can be justified because of the much shorter boiling times. Sugar makers can now use plastic tubing, and a vacuum to acquire sap. These systems dramatically reduced labor costs and have allowed an increase in the number of trees tapped per sugar bush.

No sugaring equipment can contain lead solder, per law. Some sugar makers discontinued operations because the new laws also meant installing all stainless evaporating pans.

A Sustainable Mix

Currently there are farms in nearly every portion of Holland, except the eastern portion of Town where the WMA is located, and in areas of steep slopes. There exists a sustainable mix of farm and non-farm operations. These widespread open spaces provide scenic beauty to the Town.

The combination of working farms and productive land contributes to the impression of rural living. Holland residents value the influence of agriculture on the character of their Town and want to see it maintained in the future.

The following trends are likely to have an influence over the future of agriculture in Holland.

- Larger machinery reduces labor and increases field work efficiency. These large machines do cause road safety concerns and an increased road maintenance cost.
- Smaller pieces of open land, and some previously idle land, is being used by the organic farms to expand their land base.
- Farmers may continue to switch from manual forage handling (small hay bales) to silage or to large round hay bales

- In years past farms to be sold may not have included the woodland, just tillable and pasture acreage. Selling the development rights to an organization such as the Vermont Land Trust has allowed the purchase of whole farms. Possible because the purchase price is supplemented from the sale of these rights and reduces the buyer's purchase price. This also helps in the purchase to first time buyers and the passing of farms from the older generation to the younger. Enrolling in the CUP has helped retain farms and farmland.
- Some farmers may diversify or secure a second source of income to keep a farm operational. Diversification can allow farmers to tap into markets seeking locally grown foods and or value-added food agriculture, i.e. manufacturing processes that increase the economic value of a primary agricultural commodity. Efforts contingent on no increase in labor or equipment costs.
- As the retail value of land continues to rise, farmers will face greater pressure to sell for the financial benefit of a higher development value compared with income from agricultural production. Further, the migration of city dwellers to the country as seen during the Covid-19 pandemic, enhanced the realization that more people can work from home. A changing community of expectations might simply force farmers out of their livelihood.
- Farmers practicing agriculture in the manner traditional in Vermont for the past several decades may be able to find new opportunities as interest in supporting and expanding agriculture grows in Vermont, the Northeast Kingdom, and directly around Holland. Those planning to meet this interest recognize that additional strategies (changes in regulation, training, network development, etc.) will be required to gain existing and new farmers access to affordable production inputs and expanding markets in value added and local foods.
- Planning organizations such as the Vermont Land Trust, Farm to Plate Initiative, and Center for an Agricultural Economy recognize that more land suited for agriculture will need to be protected to make way for agricultural expansion. Conservation programs, any potential zoning implementation and improvement of the CUP have been suggested as ways to ensure protection of agricultural lands.

Overall Land Use Planning

Planning has not been a major priority in Town. Planning is becoming more a necessity in light of the issues facing the Town. The Planning Commission discusses several of these concerns throughout this Plan. The Town needs to support the planning process both through financial funding and through the retention of volunteers.

Future Development

Future development in Holland is severely constrained by natural conditions and ownership patterns. The **Natural Resources Constraints Map** shows locations unavailable or unlikely to develop significantly. Its findings illustrate this point.

As shown on this map, there is a Source Protection Area (SPA) for the public water supply to the school building. The use of land in the SPA can affect the water quality of the public water system and can impact private wells.

While growth has generally been moderate over the past few decades, the Town believes residential growth may occur in any location that can meet State requirements. According to estimates provided by the Census Bureau, the rate of growth in population and housing in Holland has exceeded that in Orleans County. Refer to the Housing section.

Strictly commercial development (unassociated with home business) should be limited to properties abutting Valley Road or along the short section of Vermont Route 111. Farming operations are a valuable resource for employment and maintaining the character of the Town as deemed important by its residents. The Town should support the agricultural character through the retention of the farming operations.

As of 2019, the Town received Village Center designation for the area around the Holland Community Church on Valley Road because this area was the original Town center. Such designation supports revitalization efforts by bringing financial incentives, training, and technical assistance needed to attract new residents and businesses (including agricultural or forestry-based) to Vermont's smaller communities. The Village Center designation can assist with the re-investment in the areas surrounding important civic buildings, such as the Holland Community Church.

Land Use Regulations

As noted, Holland does not have local land use regulations, and this Plan does not propose adoption of such. Instead, the Town relies on state regulations. It is expected that the elements of this Plan will be utilized by those regulators. The Planning Commission needs to further explore the desirability among residents of methods to maintain the current character of Holland, methods to promote growth in an appropriate fashion, and opportunities to tailor regulations to the Town's specific needs.



Hay Field Borders, Photo Credit - Stacy Boone

Gravel

Lack of gravel is a significant issue. Refer to the Transportation section.

Towers

A variety of towers are a possibility. These include residential wind generators, commercial generators, and communication towers. Refer to the Energy section for commercial wind

generators. If the need for additional communications towers is demonstrated, co-location on existing structures is a viable and desirable alternative.

Land Conservation Policy

Important agricultural soils, cultivated farmland and forested areas, including that enrolled in the CUP, are inappropriate for the siting of large scale commercial or industrial development that occupy more than 2 acres of land. This policy is to retain the Town's rural character and the value of this land for sustaining the local economy.

Objectives

1. Take appropriate steps to maintain and protect the character of the Town.
2. Continue to plan for the future of the Town in a proactive fashion.
3. Develop the necessary mechanisms to allow viable short- and long-range land use planning.

Implementation

1. Support through appropriate means local farming operations.
2. Explore options for regulatory mechanisms to address land use concerns.
3. Obtain planning grants to implement the objectives of the Town Plan.
4. Consider joining the National Flood Insurance Plan (NFIP). Refer to the Flood Resilience section.

Economic Growth

The Town's economic base is dependent on the surrounding communities and counties. Holland operates primarily as a bedroom community for the greater Newport/Derby area, which provide the majority of jobs for our residents. Since the last Town Plan, Derby has seen a marked increase in business development. Examples include the expansion of The Farmyard Store, a new facility for Poulin Grain (the former Louis Garneau facility), and a new facility for Champlain Valley Equipment along the Derby-Newport Road, a short 15-minute ride from Holland. These existing developments and any subsequent developments in the surrounding area will surely put some pressure on Holland to develop in some capacity, especially housing.

Currently there are a handful of commercial enterprises in Town, auto mechanic, trucking, and a lumber mill are among other small home-based businesses. For many existing and future home-based businesses, access to high-speed internet has become the primary infrastructure necessary to enable access to wider markets. Refer to the Utilities and Facilities/Utilities/ Telecommunications section. 14% of Americans are working from home. An Upwork study suggests "22% of the American workforce will be remote by 2025." Increasing the number of businesses in Holland has the potential to provide additional tax revenue for our fiscally strapped Town. It is our hope to support and work with any new and existing business wanting to locate in Holland whose business enterprise aligns with the Town Plan. As of 2022, it is estimated that Holland's labor force is around 380 individuals. The unemployment rate for working age adults in Holland is around 7%.

Holland is the home to numerous agricultural enterprises, primarily dairy. The dairy industry has been falling on difficult financial times over the years and continues to be a complicated business to sustain. The current dairy model is to consolidate small farms into large commercial enterprises which has pros and cons. Residents of Holland seem to express their desire to see the Town remain a primarily rural and agricultural community with stereotypically beautiful Vermont pastoral landscapes. Increasingly the Town has seen woodlots and fields plowed over for corn production to meet the conventional dairy needs.

To maintain and/or improve the Town's economic resource as a scenic pastoral agricultural community, the Town should encourage farmers to diversify and make use of the existing landscape. The use of the Town's agricultural resources to produce biofuels is one pathway to reaching residential, business, and transportation energy goals. Refer to the Energy section. The Town's economic base could also benefit from farm diversification away from dairy-based commodity markets to more specialty food markets such as Kosher or Halal meat production, specialty food production, certified meat processing facilities, solar power, or developing an agritourism program to their farm. There are many agricultural community loan programs available to communities in Vermont including NVDA, Northern Community Investment Corporation (NCIC), United States Department of Agriculture (USDA), and the Vermont Agency of Agriculture. The Town should explore the option of developing such a program to help our Town's existing or future farmers to diversify their agricultural businesses in a manner that supports our Town's character as a scenic rural agricultural community.

Reference Source

NCIC Receiving USDA Funding

[Northern Community Investment Corporation Receives USDA Funding To Create Opportunities for Small and Emerging Businesses | Rural Development](#)

Recreational opportunities in rural communities are growing. Recent road access for ATVs/UTVs on Holland's roads is increasing. This access coupled with the local VAST trails during the winter months is bringing more individuals into the community seeking motorized recreational activities. Refer to the Utilities and Facilities/Services/Recreation, Public Land-Based section.

Rural Economic Area Partnership Program (REAP Zone)

Many rural areas face economic and community development issues of a very different character than communities whose needs are mainly defined by poverty. Often, the defining features are geographic isolation of communities separated by long distances, absence of large metropolitan centers, low-density settlement patterns, historic dependence on agriculture, continued population loss, outmigration, and economic upheaval or economic distress.

To address these issues, USDA advocated a pilot concept for rural revitalization and community development called Rural Economic Area Partnership (REAP Zones). The REAP Initiative was established to address critical issues related to constraints in economic activity and growth, low density settlement patterns, stagnant or declining employment, and isolation that has led to disconnection from markets, suppliers, and centers of information and finance. The REAP Zone program gives all towns in the designated area special access to USDA Rural Development Programs for business and loan guarantees, business intermediary loan funds, rural wastewater treatment grants and loans, rural rental housing loans, and rural housing rehabilitation. REAP designation also gives preference for federal enterprise community and empowerment zones.

To further these goals and objectives for rural-based communities in northern Vermont, the Regional Planning Commissions and Economic Development Corporations of Northern Vermont created a collaborative partnership organization known as the Northern Vermont Economic Development District (NVEDD).

An Economic Development District is a federally designated organization that leads a locally-based, regionally-driven, economic development planning process. This process leverages the involvement of public, private, and non-profit sectors to establish a strategic roadmap for regional collaboration leading to successful, diversified, and sustainable economic development. NVEDD was formed to provide opportunities for region-wide development efforts that support economic prosperity, sustainability, and resilience.

NVEDD is comprised of the six counties along the northernmost border of Vermont: Grand Isle, Franklin, Lamoille, Orleans, Caledonia, and Essex. USDA Rural Development is a board member of this organization and supports its efforts.

In 2016, NVEDD developed the Comprehensive Economic Development Strategy (CEDS). This document is designed to engage individuals, organizations, local governments, and private industry to collaborate in the economic development of their region by integrating or leveraging other regional planning efforts, as well as the use of available federal funds, private sector resources, and state support to achieve development goals. The CEDS outlines five interconnected goals, strategies, and action items to achieve economic prosperity in Northern Vermont. The plan was re-approved in 2022 to continue its work toward these issues.

The CEDS plan is consistent with the USDA approved REAP program strategy and project list as well as the CEDS five interconnected goals.

- Goal 1: Build Economic Resilience in the Northern Vermont region
- Goal 2: Cultivate Business Growth
- Goal 3: Improve and Expand Infrastructure
- Goal 4: Develop the Workforce
- Goal 5: Promote Quality of Life in Communities

Reference Source

Comprehensive Economic Development Strategy
[Northern Vermont Economic Development District \(nvda.net\)](https://www.nvda.net)

Objectives

1. Develop a system of support for new and existing businesses in Town that align with this Plan.
2. Explore ways to increase recreational uses and create new economic revenues for small businesses, farms, and community residents while balancing the increase usage with the rural character of Holland.
3. Support ongoing agricultural enterprises in Town, while providing support to farmers seeking to diversify their agricultural business through researching the potential for community agricultural loan programs.
4. Promote the development of micro-agriculture businesses on small acreage to diversify Holland's agricultural base while supporting our rural scenic culture and character.
5. Re-invest in areas of Town with cultural and civic resources to better establish a sense of place that may serve to attract new residents and agricultural-based enterprises that contribute to the Town's scenic and rural character.

Implementation

1. Explore sources of funding to increase recreational uses and activities in the Town.
2. Create a Strategic Plan for business and economic development for the Town.

Transportation

Transportation is a significant issue in Holland. The only viable methods of transportation are by private or business vehicles. The area mass transit system, Rural Community Transportation (RCT), does not serve the Town on a regular basis, with service provided via an on-call system only. There are plans to upgrade RCT shuttle service in Derby and Newport in the future, but none in Holland. Those who qualify through Medicaid, Medicare, or disability can receive rides for medical, educational, or shopping purposes. Except for a small portion of Vermont Route 111 in the southwestern portion of Town (to which there are no direct Town road connections), all travel occurs on Town roads. The **Base Map** shows road locations and names. As noted from the map, the only roadway connections to adjacent communities occur to the south (Morgan) and west (Derby). Refer to the Energy section for a discussion of transportation energy goals, and the importance of agricultural lands for providing the opportunity for the cultivation of biofuels.

Overall road conditions have improved since 2017, but still present difficulties. Eighty-seven percent of questionnaire respondents felt the Town should develop long range plans for maintenance and improvement of Town roads and 70% were in favor of creating a capital budget for road improvements/equipment. This latter percentage likely reflects uncertainty regarding exact components and costs of a capital budget.

Except for Valley Road, some of its approaches, and RT 111, all roads in Town are gravel, with a posted speed limit of 35MPH. Key aspects include:

1. There are approximately 46 miles of roadways (excluding Class 4) in Town, of which Route 111 comprises only .14 miles.
2. There are 10.6 miles of Class 2 roads in Town comprised of Valley and Gore Roads.
3. Portions of some Class 3 roads are functionally Class 4.
4. There are approximately 5 miles of legal trails.

There have been limited traffic counts performed recently in Town by the NVDA. Since the culvert assessment in 2006 by NVDA, the Town has replaced and/or upgraded numerous culverts with work continuing. The Town replaced or repaired bridges on Twin Bridge and Tice Mill Roads.

Reference Sources

Rural Community Transportation

[Home — Rural Community Transportation \(riderct.org\)](http://riderct.org)

NVDA Traffic Count

[Traffic Counts - Northeastern Vermont Development Association \(nvda.net\)](http://nvda.net)

The Town's roadway burden is significant. This is demonstrated by the concept that, with approximately 512 land parcels in Town and 46 miles of roadway, each mile of road is financed by roughly eleven (mostly residential) parcels. This compares to rates of one mile to over thirty

parcels in both Derby and Morgan. The Town needs to take timely action to address the road issues, and that resolution of them will require increases in expenditures and funding sources beyond those historically used.

The following discusses the many aspects of transportation which directly affect the Town.

Functional Classification

Functional classification is a hierarchical system of classifying roadways based upon the functions they perform. These functions range from carrying traffic through a region to collecting traffic from local streets traveling to other land uses in the region or local area. Design standards, access control, and maintenance are more stringent and important the higher the function of the road. Given its size and location, Holland is not truly a part of the regional transportation system. The functional classification represents the important functions of Town roads. There are no true arterial roads in Town. Based upon the Regional Plan, the Town has one major collector: Vermont Route 111. The Town concurs with this designation, but, from a Town perspective, believes that the Valley Road also performs a major collector function considering its volumes, the overall access it provides to much of Holland, and through traffic function between Derby Line, Morgan, and Island Pond areas.

Based on a review of traffic data and local knowledge of roadway usage and travel patterns, there are minor collectors in Town which carry the principal traffic to other communities in the area. These are Gore Road, Mead Hill Road, and Bates Hill/Lackey Road. While other roads in Town may have higher volumes than these at certain times of year, they do not provide the function of carrying traffic to and from multiple areas of Holland or adjacent Towns and thus would be classified as local roads.

Road Maintenance

As noted, road maintenance is a significant issue, particularly as it relates to the gravel roads. The Town Highway budget exceeds 70% of the total Town budget. There are several reasons that maintenance of the gravel roads is problematic. These include natural wear and tear on roadways, the continued severe weather events which cause both minor and major damage to the roads with unfortunate frequency, the deterioration caused by large farm vehicles (which continue to increase in size from years past), and the addition of ATVs/UTVs to the local roadway system. The presence of ATVs/UTVs not only results in damage to the roads (particularly the proclivity of some to enjoy creating donuts in the road surface), but also by contributing to climate change which increases the severity of weather events. As such allowing ATVs/UTVs creates an additional tax burden, not to mention impacts of noise, fumes, and dust on the quality of life for those adjacent to the roads. As most ATVs/UTVs use is for pleasure, not utility, the continued viability of allowing ATVs/UTVs on the roads should be evaluated annually. Currently, Valley Road is the only paved road, which requires a large investment on a regular basis. There is no reason at this time to pave any additional roads given the cost.

The Municipal Roads General Permit (MRGP) was created as part of the Vermont Clean Water Act in 2015. This was intended for all municipalities statewide to reduce stormwater related erosion from both gravel and paved roads. Road runoff contributes to sediment and

phosphorous loads in all waterways. The Town is currently under the coverage of this permit and will need to continue to assess and remediate roads which do not meet standards.

In 2024, an assessment was prepared by the NVDA. Both the NVDA and VTrans District 9 can complete required assessments for free or at a limited cost. As part of the evaluation, an assessment of road segments that meet and do not meet the MRGP standards is forwarded to the Department of Environmental Conservation. Segments of road that do not meet the standards must develop a remediation plan, and implementation scheduled by the Town. Funding can be applied for by the Town for the inventory and remediation process through the Better Back Roads Program. The most recent assessment revealed that portions of Twin Bridge, Valley, Tree Farm, Line, Gore, Mead Hill, and Bates Hill roads are only partially in compliance.

It should be noted that check dams rather than full rip rap seem to be a better option, as they allow easier maintenance. The VTrans Maintenance District, NVDA, and Vermont Local Roads can also provide the Town with technical assistance.

Reference Sources

Compliance Tracking – Baseline Inventory

<https://anrweb.vt.gov/DEC/IWIS/MRGPREportViewer.aspx?ViewParms=False&Report=LockedInBaselineInventory&MunicipalityID=99>

Compliance Tracking – Current Inventory

<https://anrweb.vt.gov/DEC/IWIS/MRGPREportViewer.aspx?ViewParms=True&Report=CurrentInventory&MunicipalityID=99>

Compliance Tracking – Current Summary

<https://anrweb.vt.gov/DEC/IWIS/MRGPREportViewer.aspx?ViewParms=False&Report=CurrentSummary&MunicipalityID=99>

Steps the Town can take to improve the road maintenance situation.

1. Ensure sufficient personnel are employed to perform maintenance in a timely and effective manner.
2. Continue to ensure that new access meets appropriate standards and consider addressing existing access problems. Refer to the Access subsection.
3. Obtain a viable long-term source of gravel. Refer to the Gravel subsection.
4. Provide training for all road personnel to ensure they are familiar with and competent in appropriate techniques of road maintenance, e.g. grading, ditching, and drainage.
5. Prepare a five-year plan for roadway maintenance and update this plan yearly. Key elements of this plan could include: prioritization of roadways based upon function, traffic volumes, and condition; identification of the specific improvements needed on these roadways; assessment of specific cost estimates for each section; analysis of hiring outside contractors to do some of the work; identification of opportunities to stage work over time such as drainage improvements one year, followed the next by gravel; development of specific estimates of gravel amounts needed by road section;

identification of potential sources of gravel; and preparation of a specific yearly budget for the improvements.

6. Consult with other area towns that have a similar road structure as to how they maintain their gravel roads.
7. Begin the evaluation process for the MRGP permit in 2025.

Ancient Roads and Rights of Way

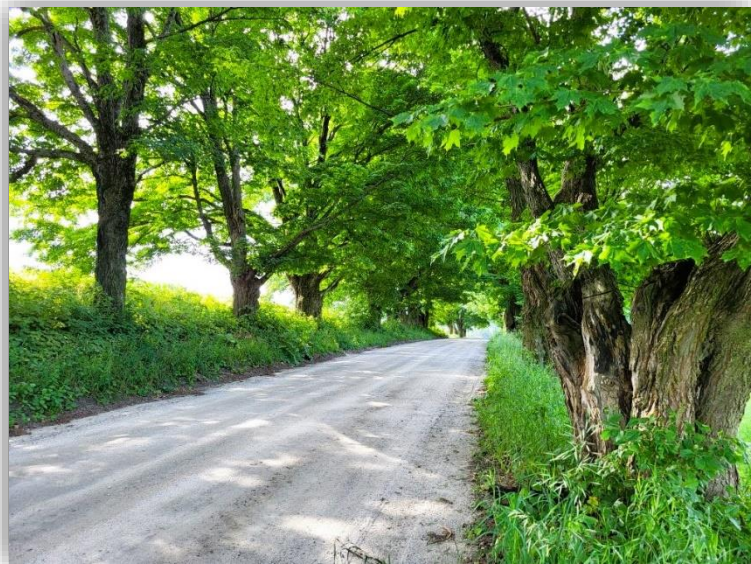
Unfortunately, the Town did not make any decisions regarding its ancient roads by the required 2009 deadline, and, as such, has lost any potential rights in such roadways.

Park and Ride

Given the small population of Holland, a Park and Ride site may not be well-utilized. However, as most residents go to other communities for employment, it is possible such a site would prove beneficial. The Town should explore the need for a Park and Ride site through discussions with VTrans, as part of another Town wide questionnaire, and through review of possible sites. While the Town Garage is a feasible site being centrally located and publicly owned, it may not be an appropriate location as travel out of Town occurs to the west and south.

Gravel

A significant problem with maintaining the Town roads is the both the lack of and cost of gravel. The Town has no sand/gravel pit and thus must purchase and haul winter sand and gravel. This is an increased cost. To adequately maintain Town roads, additional funds must be allocated for gravel. The Town needs to seriously explore the opportunity for purchase or long-term lease of a pit or other long-term source of gravel. This pit needs to be in Town (unlikely given the extreme lack of such deposits) or in a nearby community, from which hauling costs would not be excessive. Without a viable source of gravel, the roadways may not be maintained in the manner consistent with the safety needs, desires of residents, and the financial wherewithal of the Town.



Gore Road, Photo Credit - Stacy Boone

Roadway Reclassification

There are two issues concerning reclassification. Firstly, Class 2 roadways provide the greatest State transportation aid. Currently, Valley and Gore Roads are the only such roadways. State regulations allow a maximum of 25% of a Town's roads to be designated Class 2. As such, the Town cannot add Class 2 mileage as approximately 22% of the current roadway mileage is so classified. If reclassification were an option, Mead Hill Road, given its function, 4 rod width, volumes, and connection to an adjacent Town, would be a viable candidate for Class upgrading. Past discussions with our local legislator noted they don't see any movement on increasing the percentage for Class 2 roads partly due to the State's current fiscal situation. They did comment that it may be a conversation for a later date. This would be invaluable to the Town and should continue to be explored. The Town should continue to look at parts of Class 3 and 4 roads that may be able to be transitioned into legal trails to relieve the Town of added maintenance cost.

Access

The Town currently requires access permits with culverts where needed when a new driveway is proposed to a Town road. The Town should ensure that all access points are 90-degree intersections with Town roads, with particular attention paid to access to the collector roadways to ensure safe and effective operations on these more important roadways. The Town may also want to explore a program to address situations where existing access points need a culvert to reduce erosion, but do not currently have one. Elements of such a program could include identification and ranking of those driveways and cost sharing between the Town and homeowner in their installation. It is possible that such a program would prove cost effective through savings in gravel and maintenance needs caused by erosion at these locations.

Capital Budget

The Town should have a capital budget plan, particularly as it relates to roadways. Elements of this plan should include provisions for purchase/lease of a gravel pit, costs associated with ongoing gravel or pit acquisition, a financing plan for renovation/replacement of the Town Garage, and timely repair and/or replacement of Town equipment.

New Roads

The Town should not discourage new roads but should make sure they are built up to current State standards. The Town currently requires any new roads to be brought to certain standards prior to acceptance for "ownership" and maintenance. The Town should review current standards to determine if implementing improved standards would be appropriate considering the current roadway situation and expected continued severe weather events.

Pedestrian/Bicycle Facilities

Given the rural nature of Holland, there is little the Town can do to improve services for these users. Any future road construction on Valley Road may present the Town an opportunity to ask for extended shoulders as to provide a safer road width for bicycles and pedestrians.

Town Garage

The Town Garage is inadequate for the Town's needs. Refer to the Utilities and Facilities/Community Facilities/Town Garage section.

Road Safety

While there are a limited number of reported accidents each year in Holland, many residents feel the roads are generally safe for vehicles, but generally unsafe for pedestrians, bicyclists, and horse riders. While some of the safety problems stem from large farm vehicles and ATVs/UTVs, the principal reason seems to be excessive speed. As it is unlikely that a general appeal to vehicle operators would be successful, the principal solution appears to be increased coverage and ticketing by law enforcement. As such, the budget allocated for the Orleans County Sheriff's Department should be increased as it currently provides limited coverage.

Objectives

1. Ensure a viable transportation system for all residents and businesses.
2. Provide safe effective traffic flow on all roadways.
3. Address statutory responsibilities in a timely fashion.
4. Retain all current rights of way.
5. Address transportation issues in a proactive and cost-effective manner.
6. Inventory road network and identify priority segments that are impactful or have the potential to impact local waterways through storm water erosion. Also develop ways to maintain and stabilize road drainage systems.
7. Reduce or limit transportation energy usage.

Implementation

1. Obtain a viable long-term source of gravel/sand for the Town.
2. Employ sufficient personnel to effectively maintain roadways and provide them with appropriate training.
3. Prepare an evaluation of road conditions and needs, possibly through retention of an outside consultant.
4. Prepare a long-range maintenance plan, including keeping/bringing our road drainage systems up to meet standards under the MRGP, part of Act 64.
5. Retain all existing Town rights of way.
6. Explore opportunities for a Park and Ride site.
7. Continue to work with State Legislators on possible ways to allow additional road mileage to be upgraded to a Class 2 designation.
8. Continue to identify "unneeded" Class 3 or 4 roads and reclassify them to legal trails.
9. Review access standards and upgrade as necessary.
10. Explore the cost effectiveness of a cost sharing program to improve current access.
11. Look for ways to create and sustain a capital budget for roadways.
12. Work with farmers and business owners to identify road improvements to reduce travel distances.
13. Don't discourage new roads; rather, make sure any new roads are built not only up to State class standards but local standards as well.

14. Encourage local farms to investigate the cultivation and use of biofuels for on-farm agricultural vehicles.
15. Study and implement either a new Town Garage or significantly improved facility.
16. Increase the budget appropriation for Sheriff's patrols to improve road safety.
17. Continue responding to the road needs identified in the MRGP process.

Utilities and Facilities

As a rural place, Holland is a small Town with limited resources and facilities. It relies heavily on adjacent communities for the provision of numerous key services. Due to its limited tax base, it often relies on grants to provide various services, maintenance, and capital improvements. Understanding this, the Town should actively pursue hiring a part-time individual who works exclusively to write grants and file any necessary and ongoing state and federal applications for immediate/emergency Town funding.

Existing personnel is unable to carry the burden of this responsibility.

Refer to Land Cover Map to identify the location of the utilities and facilities in Town.

→Because this section of the Plan is broken into three segments, each segment has its own Objectives and Implementation numeration.

Utilities

Utilities are defined as services provided by a public utility.

Electricity

Holland is one of 75 communities served by the Vermont Electric Cooperative (VEC). VEC is a member-owned electric distribution utility which offers services that are nearly entirely renewable and non-reliant on fossil fuels.

VEC offers Energy Transformation Incentives which includes a bill credit to members who purchase qualifying devices that displace the use of fossil fuels. The incentives are designed to help members choose technologies for heating and cooling their homes, transportation, and other tasks, that are cleaner and less expensive over the long term.

Refer to the Energy section.

Solid Waste

There exists one landfill in the State of Vermont, located in Coventry, and it is managed by Castella Waste Systems (CWS) whose corporate office is based in Rutland, Vermont. The Town is a member of the Northeast Kingdom Waste Management District (NEKWMD) and works cooperatively with it to manage wastes in accordance with the district's solid waste implementation plan. NEKWMD also operates the Lyndonville Recycling Center which is the nearest facility for larger items that cannot be put in rural trash receptacles including scrap metal, freon-containing appliances, and tires.

Recycling is encouraged by both CWS and NEKWMD as a means to reduce the introduction of solid waste into the only landfill in Vermont, which in turn will increase its lifespan. As such, there is state-wide encouragement to recycle with benefits including reduced cost to homeowners for solid waste pickup, a reduction in the need for raw materials necessary for packaging of many of the products discarded in the trash, a reduction in the electric use for new packaging, and a reduction of greenhouse emissions from an overburdened landfill.

The Town Garage is the local recycling center. Open twice monthly, most recyclable materials are accepted in addition to more specialized recyclable items including oil, oil filters, automotive batteries, metal aerosol cans, scrap metal, fluorescent bulbs, and electronics (televisions, computers, radios, telephones, gaming consoles), and tires. Fees may apply. Because of collaborative agreements, residents can participate in other District programs, such as household waste events at the Derby Town garage. Reminder notices are often provided through the Town call-out email blast.

Telecommunications

Historically, one of the rural charms of the Town came from the unavailability of telecommunication service but with a more technology servicing society, telecommunications has become indispensable and the community lags in connection. Further, it has become evident that Holland has a number of homeowners who work from home and rely upon these services making them indispensable for living in our rural landscape.

Refer to the Land Use/Towers section for communication tower construction.

Choices for telecommunication services in Holland include: Consolidated Communications, Hughes Net, CCI, Viasat, and Starlink. Each has a varying degree of connectivity and cost. No consistent community-wide service is available. According to a report prepared in November 2015 by the Vermont Department of Public Service, only four locations in Holland were served by broadband internet.

The State of Vermont has acted to support small rural communities with the expansion of Broadband through fiber optic cables. Holland is a part of a Communications Union District (CUD) formed under 30 VSA Chapter 82, currently being serviced by NEK Communications. An excess of \$15,876,591 has been invested in the NEK for Broadband by its supporting communities and state funding. The USDA has issued a reconnect grant fund. The process is currently in the National Environmental Policy Act (NEPA) stage.

The Holland Selectboard appointed an individual from Holland to be our representative at these meetings and regularly reports updates. As of 2024, NEK CUD is combining with one other CUD which is not expected to directly delay the buildout of the Holland portion of the network. The number of towns included in the NEK CUD has continued to grow since inception. One of the primary benefits from combining is that grant funding might become easier to acquire when up against larger, more funded, grant applicants. One of the greater concerns for completing service is the ongoing flooding in the region.

In 2023, the Town committed \$136,363 from its ARPA funds towards this service. Funding is established for *almost* the entire Town between the committed ARPA funds and a USDA grant. Services are not expected to be community wide until 2029, but services continue to be intermittently added with an expectation that half of the community could be served by the close of 2025.

Water Lines and Hydrants

The International Water Company of Derby Line/Stanstead P.Q. has a right-of-way for a water line beginning at the Northwest corner of Holland Pond. The current water line is inoperable and has been mostly abandoned.

The Town has two fire hydrants on this line, both antiquated. The hydrant starting near Goodall Road near Tree Farm Road is in acceptable condition. The hydrant near the intersection of Lyons Road and School Road is less satisfactory.



Gore Road Dry Hydrant, Photo Credit - Stacy Boone

Additionally, there are multiple dry hydrants:

- Holland Pond Road, east of Wheeler Road on Thorne Brook
- Moulton Hill at intersection of Holland Pond Road (private pond)
- Nadeau Dairy Farm on Gore of (private pond)
- Valley Road near Hunting Camp Road (private pond)

Each hydrant is operationally spotty depending on season and water table. Silt and sediment are problematic. All hydrants require annual maintenance which requires flushing the line. This is typically a shared task between the fire department volunteers and Town personnel. A written agreement supports this collaboration. The Town should ensure that appropriate agreements are renewed as necessary to maintain these hydrants and allow additional hydrants if more become desirable.

Objectives

1. Monitor changes in demand or regulations of Town utilities and actively respond.
2. Support private or governmental initiatives in the continued provision of existing utilities.

Implementation

1. Actively pursue a part-time grant writer to prepare and file grant applications that benefit the rural character of the Town.
2. Continue membership in the Solid Waste District and support educating to the value of recycling to reduce individual and environmental costs.
3. Continue to monitor the installation of telecommunication services.
4. Continue to monitor the functionality of the hydrants serving the Town.

Services

Services are defined as an administrative division or provide as a business function.

Fire and Ambulance Services

Fire services are dispatched from Derby Line. Firefighters are volunteer community responders. Refer to the Utilities and Facilities/Utilities/Water Lines and Hydrants section to identify the location of hydrants.

Ambulance service is provided by emergency services in Newport, with a satellite ambulance station in Morgan, near the Morgan Country Store.

Both services are adequate. No changes are needed. The Town needs to continue to support both these entities through annual tax appropriations and volunteer assistance.

Law Enforcement

These services are provided by the Vermont State Police whose barracks are located on Crawford Road in Derby. Additionally, the Town is contracted with the Orleans County Sheriff's Department, headquartered on Route 5 in Derby, for annual services (renewal April 1 of each year) which includes law enforcement and policing as a contract service.

Holland borders the international border of Canada and as such the Border Patrol's regular patrol presence is evident on the community roadways. Border agents can act as first responders, when necessary, but they do not act as law enforcement officers.

Libraries

The Town has the benefit of several libraries, though none in the community proper. The two most visited libraries for the Holland community are the Haskell Free Library (Derby Line) and Dailey Memorial Library (Derby Center). Each provides a number of services and resources that support the far-ranging demographics of the community, including children's programs, tax assistance, internet service, homeschool resources, computer access, and community programs. This, in addition to the ability to borrow books and movies—nearly 20,000 from the Dailey Memorial Library in 2023.

Services are adequate. No changes are needed. The Town needs to continue to support both libraries through annual tax appropriations.

Recreation, Public Land-Based

There are two VAST trails—Route 105 and Route 105A—that connect the Holland community with the wider trail system of the state. Trails are open December 16 through April 15 each year, as snow conditions warrant.

Holland Pond is a part of the Bill Sladyk WMA and provides fishing opportunities. Ponds within the WMA are known to have white suckers, chain pickerel, brown bullheads, coregonid round whitefish, rainbow trout, and brook trout.



VAST Trail System, Photo Credit - Stock Photo, Unknown

Additional recreation activities in the WMA include hunting, bird watching, wildlife viewing, walking, hiking, and small craft boating. Cross-county skiing and snowshoeing are options in the winter season.

There exists a limitation in the parking structure of the WMA. A small cement drive dock is available at the pond, but the parking area is unmaintained in the winter season. The northern parking area is small. It would be a benefit to work with the state to develop a parking lot that is more appropriate for visitor access.

Refer to the Natural Areas and Historic Features/Natural Areas section.

Objectives

1. Monitor changes in demand or regulations of Town services and actively respond.
2. Support private or governmental initiatives in the continued provision of existing services.

Implementation

1. Continue financial support for fire and ambulance services.
2. Continue financial support for law enforcement services and monitor for a need in additional services.
3. Continue financial support for library services.
4. Continue to be an active voice in the Long-Range Management Plan of the Bill Sladyk WMA.
5. Work with the state to enhance the northern parking access of the Bill Sladyk WMA.

Community Facilities

Community Facilities are defined as a building or public space established to service a particular purpose.

The only local facilities consist of the Town offices, a small two-room structure with a vault on approximately one acre of land; the school building adjacent to the Town Offices on approximately 6 acres of land; and the Town Garage, with an associated recycling center consisting of several large shipping containers.

At this time, the Town office is adequate and the vault space sufficient.

At this time, there is no need to increase the number of local facilities.

As of 2019, the Town received Village Center designation for the area of the Holland Community Church on Valley Road because this area was the original Town Center. Such designation supports revitalization efforts by bringing financial incentives, training and technical assistance needed to attract new residents and businesses (including agricultural or forestry-based) to Vermont's smaller communities.

Holland Historical Society, housed in the historic congregational church on Gore Road is independently managed. Refer to the Natural Areas and Historic Features/ Historical section.

Cemeteries

There are two Town and six private cemeteries. The Town has the responsibility of maintaining the two Town cemeteries—Mead Hill and Marston. The Cemetery Commission has been actively restoring headstones of families that are no longer able to maintain them.

Town appropriations and monies from the Vermont Old Cemeteries Association (VOCA) have been helpful for maintenance projects.

Policies adopted in 1993 by the Holland Cemetery Commission, limit cremation plots to the front portion of the cemetery due to availability and the new rear section, purchased by the Town, be sold as burial plots. Only Town residents can be buried in the Mead Hill Cemetery.

The 2023 Questionnaire is fairly evenly split about whether the Town should invest in adding additional cemetery space, with a 2% edge to not invest.



Mead Hill Cemetery, Photo Credit - Stacy Boone

Services are adequate. No changes are needed. The Town needs to continue to support the Holland Cemetery Commission through tax appropriations.

Recreation, Community-Based

The Holland School Board is continuing community conversations regarding what to do with the school building which has not provided educational services to the community since Spring 2019. Access and/or final determination of the recreation facilities associated with that building, including the playground, fields, community garden, and walking track, are in discussion and will be contingent on the outcome of what to do with the building currently owned by the school district but under local management and control.

While no specific improvements pertaining to recreation are needed, the 2023 questionnaire results do note a 50% resident/53% non-resident interest in providing recreational opportunities. These numbers are up from the 2015 questionnaire whereby 48% of respondents felt the Town should provide recreational opportunities.

Refer to the Education section for issues concerning the school building.

Town Garage

The Town Garage is in extremely poor condition, enough so that a conversation about its replacement has been ongoing for decades. The building, constructed in early 1980s, has no bathroom and rests on a foundation that cannot accommodate a modified building or new construction. Structurally, the building is worrisome. Recently, evidence of buckling walls has been noted and the roof blew off the salt shed. The building is undersized and does not

match the Town's purchases, including trucks for road maintenance, necessitated by community expectations for services. Improper storage of Town vehicles reduces the lifespan of those vehicles and overall maintenance costs. Likewise, the inside storage of materials and machinery, and vehicle maintenance workspace, is problematic. One of the unintended consequences is an inability to complete general or immediate maintenance needs due to weather conditions because of the limited workspace.



Town Garage Back, Photo Credit - Stacy Boone

The 2023 questionnaire results note a fairly even split regarding the building of a new Town Garage—35% resident/30% non-resident respondents voting no and 32% resident/17% non-resident respondents voting yes. Nevertheless, the conversation related to the needs of this community infrastructure has been in the works for decades with no resolution and a continued increase of costs related to upkeep that has moved towards not **if** but **when**.

The Town currently pays \$100 per month for a portable toilet. It would be more economically beneficial, as well as environmentally minded, for the Town to invest in a self-contained composting toilet that can be placed on site and made available for Town Garage personnel.

It would benefit the Town to immediately engage an investigative committee to determine the best solution to the Town Garage problem. This study needs to account for not only current requirements but potential future needs regarding equipment storage and building use. The findings must include suggestions regarding possible locations, a capital budget, and its associated process, and a financing plan to develop this improvement. The committee should impose a time-line of one year to begin moving this Town need forward.

There seem to be three general options:

1. Rebuild/rehabilitate the current building. It is expected there will be significant difficulties with this option in that the site is constrained by both size and soil conditions, which could preclude construction of septic and gray water systems.



Town Garage Road View, Photo Credit - Stacy Boone



Town Garage Front View, Photo Credit - Stacy Boone

2. Rebuild a new garage on land currently associated with the school building. This appears feasible, but soil conditions for necessary infrastructure are unknown. Further, the Town does not control the site and much depends upon ultimate resolution of what to do with the school building.
3. Find and purchase property for construction of a new facility.

It is understood that a new Town Garage will require significant funding. The Town has already taken steps by creating a Reserve Fund, with a balance more than \$93,000. It is necessary to continue these annual appropriations.

It is worth noting that the Town Garage is located in the Village Center designation. Thus, its footprint is subject to revitalization efforts through State financial incentives.

Objectives

1. Provide Town services in a cost-effective manner.
2. Support potential upgrades or newly installed private or governmental services that align with community values.

Implementation

1. Support an active resolution to the status of the school building with outcomes that support the facility intentions of the community at large.
2. Support an active resolution to replace the Town Garage.
3. Support a community minded viewpoint of recreation and gathering.

Natural Areas and Historic Features

Historical

There is one identified historical structure in Town, the Holland Historical Society (housed in the old congregational church). This building is on the National Register of Historic Places. The Society relies principally on volunteerism and has in the past published an excellent history of Holland, *Holland and Its Neighbors*, 2004 by Arcadia Publishing. Previous Town questionnaires (2005, 2012, 2016) show a continued support for preserving historic structures in Town. A value upwards of

65% of the population supports funding but the most recent 2023 survey does not ask for comment. While other areas of Town have obvious historical relevance such as the Community Church (the last remaining structure from the Village Center designation), there are no structures or areas that warrant extraordinary measures of protection.



Holland Historical Society, Photo Credit - Stacy Boone

Natural Areas

There are numerous natural areas and scenic features throughout the Town, including the Bill Sladyk WMA containing 4,655 acres along the eastern end of Town. Refer to the Utilities and Facilities/Services/Recreation, Public Land-Based section.

The WMA is a well-utilized asset for the Holland Community. Holland Pond, at 344 acres, is the Town's largest body of water. It has summer camp development on the western shore side but is seeing an increase of full-time

owner use of individual properties. There is no Town property along the pond but there are two State access points (fishing access on Holland Pond and the northern gate). The wealth of recreational opportunities available in the public WMA are only accessible through a Private Right of Way Road. [Refer to the Base Map.](#)



Holland Pond, Photo Credit - Stacy Boone

The State of Vermont, Agency of Natural Resources, Department of Forests, Parks and Recreation Department of Fish & Wildlife, Long Range Management Plan for the Border Management Unit, in which The Bill Sladyk WMA is located, was created and signed in January 2021. Its last user survey by the managing department was completed in 2008 and severely underestimates its utilization.

Reference Source

Long Range Management Plan for Border Management Unit (last updated 2021)
[Border-Management-Unit-Draft-LRMP-9-25-2019.pdf \(vermont.gov\)](#)

As a community resource, the WMA Management Plan has a considerable amount of data, though not inclusive. The details within the report inform the Town and necessitate constructing and maintaining a positive working relationship. The WMA is a natural resource which benefits the community not just as a natural area but also regarding agreements as a watershed and water resource for community partners.

- Holland and Beaver Ponds are included in the state monitored long-term research lakes to evaluate how climate change and acid rain affect Vermont's lakes.
- Beaver, Halfway, and Turtle ponds are acknowledged with the highest rating afforded by Vermont's Department of Environmental Conservation (DEC) Lake Protection Classification System for their wilderness character.
- The WMA contains rare, threatened, or endangered species and thus provides excellent protection of these locales.
- There exist 23 natural mapped community types within the WMA which continues to recover from the extensive logging completed in the 1970's. Wood resources are divided as: 20% Northern Hardwood, 33% Spruce-Fir, and 33% Red Spruce-Yellow Birch.
- One of the most important tangible values of the WMA is that the ecosystem supports and provide services including clean water and air, wildlife populations, and forest products. Each essential in the Town's inclination to maintain its rural, community driven vision.

There are numerous wetlands, streams and undeveloped areas throughout Town, with the highest point being Mount John in the eastern portion of Holland. [Refer to Natural Resource Constraints Map](#) and the Utilities and Facilities/Services/Recreation, Public Land-Based section.

Town Landscape

Much of Holland's charm comes from its rural and generally undeveloped nature. Its many scenic views are accessible by road. Notable important views can be found near and around the tops of Mead Hill, Bates Hill, Trucott, and Page Hill Roads. There are also scenic stretches of the Valley, Stearns Brook, Holland Pond, Gore, and Lyon Roads. A major feature of all these viewsheds are the rolling hills of countryside comprised of pasture, forest, and corn fields. Homes dot the landscape but do not dominate the see-scape.

Distantly, the mountains to the west are Vermont's Green Mountains. East are Gore, Middle Mountain Ridge, and Bluff mountains. South are Bald Mountain and various peaks in Westmore. North lies Mont Pinnacle, Orford, and Owl's Head in Canada.

Most areas of Town are not seriously impacted by modern occurrences such as air pollution, or significant degradation of natural resources through large development. The northeast portions of Holland do feel a light pollution impact related to the I-91 Border Crossing. With the merging of farms and the ongoing shift in agricultural management, the Town is experiencing an increase in noise pollution within the rural community soundscape. Some of this is related to the use of large farm equipment and dairy farm milking equipment which reverberates in open spaces particularly through the extension of farm operations, often pre-dawn and after sunset.

The permitting of ATVs/UTVs, as personal recreation transport, on the road system adds another non-quiet sound to the landscape. In the winter season, a combination of ATVs/UTVs and snowmobiles operating on the roadways and VAST trail system also increase the noise pollution. Further, these recreational vehicles frequently operate illegally on the roadways.

As the Town and surrounding areas grow, this rural, generally unspoiled character, will deteriorate without a concerted effort of the residents and representative governmental agencies.

Watershed

Given the agricultural use of land, if not worked in accordance with good management practices, its use can negatively impact water quality due to sediment and nutrient enrichment of waterways.

The Town is within Vermont Tactical Basin 17, and as such receives between 43-47" of precipitation annually. It is worth noting that lands in the WMA are split between the Lake Massiwappi and Coaticook River watersheds.

The southern portion of Holland is mostly within the Clyde River subwatershed which drains to Lake Memphremagog, to merge with the Coaticook River subwatershed. One of its headwater streams includes Hurricane Brook, which begins in the large wetland complex south of Holland Pond.

The northwestern portion of Holland is in the Tomifobia subwatershed that drains north to Lake Massawippi in Quebec with Holland Brook being the cache of water that moves towards the Saint Lawrence River. Holland Brook is fed from Holland Pond, which is fed from Holland, Beaver, Round, Duck, Turtle, and Line ponds. Everblue Massawippi is the non-profit arm of the Massawippi Watershed Protection Association whose mission is to preserve the health of Lake Massawippi. As such, it prioritizes the improvement of water quality throughout the watershed. Everblue has stated that the Tomifobia watershed is the primary contributor to sediment and nutrient enrichment to Lake Massawippi.

Reference Source

Everblue Massawippi, Massawippi Watershed Protection Association
[About Bleu - Bleu Massawippi](#)

Surface water in Holland includes eight ponds that are large enough to be regulated by the July 2014 State Agency of Natural Resources under the Shoreland Protection Act. The act establishes a protected area consisting of the first 250 feet from the mean water level of lakes and ponds greater than 10 acres in size. These ponds are Beaver Pond, Holland Pond, Line Pond, two Mud Ponds, Round Pond, Stearns Pond, and Turtle Pond. Holland Pond is by far the largest of these at 329 acres. The other ponds range in size from 13 acres to 39 acres. It is noted that six of these ponds are located within the WMA.

Named streams in Holland include Stearns Brook, Orcutt Brook, and Holland Brook.

Although this basin is known for its clear waters, deep lakes, and exceptional fisheries, there are some impaired waters. Portions of Stearns Brook are listed as impaired due to sediment and nutrient enrichment associated with agricultural runoff. Considering that Stearns Brook winds its way through a vast majority of Holland, its care to reduce its diminishment, as a resource, benefits the community. It is essential that the Town strengthen its resolve to adhere to the regulations of the state to reduce its impairment. This in turn will benefit the watershed that passes through our pastoral landscape.

It is expected with climate change that the watershed will experience an increase in storm intensity and total precipitation. Our community can presume an increase in flooding. Water quality and ecosystem impairments are possible, and fluvial erosion will continue and even worsen. This will be amplified with winter warming which is happening at a rate twice as fast in historical records as summer warming.

As a community resource, the *Memphremagog Watershed Basin 17 Tactical Basin Plan* has a considerable amount of data which is informative for the Town to continue a positive relationship required to maintain the rural character and watershed resource.

Reference Source

Memphremagog Watershed Basin 17 Tactical Basin Plan (last updated 2023)
[Final Basin17 TBP 2023.pdf \(vermont.gov\)](#)

- Stearns Tributary is listed as a Focus Area in addition to being listed as an impaired water source due to sediment and nutrient enrichment from agricultural runoff.
- The report makes a notation that, “climate change is causing increases in storm intensity and total precipitation.” (8)
- It is expected that flooding will be a more regular and problematic consideration. Refer to the Flood Resiliency section. Nature based solutions to minimize the costs associated

with river corridor, floodplain, and wetland impacts and improve water quality along with green infrastructure should be considered.

- Duck and Turtle Ponds are listed as an impaired water source due to atmospheric deposition: extremely sensitive to acidification; episodic acidification.
- Phosphorus levels in the Vermont portion of Lake Memphremagog average nearly 18 ug/l which is higher than the water quality criterion set for the lake of 14 ug/l.
- The report notes 46% of phosphorus loading comes from agricultural practices with hay being the highest contributor at nearly 19%. The remainder of the phosphorus loading pie is 21% from development with nearly 17% from combined development and dirt road contributions. 33% is listed as an *other* category consisting of streams, wetlands and forest/shrub contributors. 21% of that number is allocated to stream phosphorus loading.
- Best Management Practices (BMP) recommend a 32.6% decrease in phosphorus load. This is achievable through a decrease of phosphorus load from the following: 45.9% field/pastures, 64% barnyard production, 20.3% stormwater/roads.
- Tracking towards targets has increased annually for the past five years in part due to following Vermont's RAPs.
- The Orleans County NRCD has an \$850,000 Regional Conservation Partnership Program (RCPP) grant from NRCS to support the Memphremagog Long Term Water Quality Partnership. This partnership provides technical and financial assistance to farmers to implement water quality improvement practices.
- The increase in cropland and developed lands and reduction in forest lands likely contributes to increased nutrient levels.

Reference Sources

Required Practices Agricultural Rule (last updated 2018)
[RAPFINALRULE12-21-2018 WEB.pdf \(vermont.gov\)](#)

It bears repeating in this Plan, that when 10 acres or more are used for farming (as defined in Act 64) the acreage use is required to utilize RAPs. The Town will support farms in their implementation of these practices as they protect the natural heritage and biodiversity of Holland. Refer to the Agriculture section.

Septic Systems

The consideration of septic system design and use to any new development, or upgrades to existing development, is unavoidable when understanding the impact of the Town in the greater watershed.

Invasive Species

Invasive species are species that have been introduced to an area outside their native range and have no natural competitors or predators. Invasive species can be aquatic or terrestrial plants or animals and can be introduced through a variety of means.

Invasive plants can cause damage to the natural ecosystem by out-competing native plants at the determinant of different characteristics. Additional notice is provided in this Plan because of its

tangled relationship with the watershed. Invasives can lead to increased erosion, clogging of streams and waterways, as well as provide less nutritious food and habitat for wildlife. Like many places in Vermont, Holland has seen an increase in invasive plant species, some having a very noticeable impact.

Terrestrial invasive plants include:

- Common Reed (Phragmites)
- Japanese Knotweed
- Poison Hemlock
- Purple Loosestrife
- Reed Canary Grass



Common Reed (Phragmites)



Japanese Knotweed



Poison Hemlock



Purple Loosestrife



Reed Canary Grass

Invasive Species, Photos Credit – Vermont Watchlist

Invasive insects pose a serious threat to forests as well and include:

- Spruce Budworm
- Beech Bark Disease
- Paper Birch decline
- Balsam Woolly Adelgid
- Emerald Ash Borer

The Asian Longhorn Beetle is another invasive insect that attacks hardwood trees, and an infestation has been found covering over 18 square miles in Massachusetts. There are other invasive insects that could pose a threat to the current natural heritage if an outbreak were to occur.

Invasive species should be monitored, including the Phragmites (also known as common reed) which are becoming more prevalent on roadsides and on personal property wetlands. Phragmites is a tall, invasive perennial wetland grass ranging in height from 3-15 feet. The plant produces horizontal rhizomes that grow on or beneath the ground and produce roots and vertical stalks. The rhizomes allow the plant to form large colonies that quickly consume land.

Many communities throughout Vermont are wrestling with approaches for the control of invasive species. Once established, many species are difficult to control and the impacts they have on the ecosystem pose devastating consequences for the Town's natural resources.

Reference Sources

Vermont's Invasive Noxious Week Checklist (last updated 2017)
[Quarantine_WatchListUpdate-2017_November.pdf \(vermont.gov\)](#)

Agency of Natural Resources Invasive Species Photographs
[Gallery of Land Invasives | Vermont Invasives \(vtinvasives.org\)](#)

Objectives

1. Maintain Holland's pastoral landscape.
2. Support and protect Holland's history as a rural undeveloped Town with an active producing, and productive landscape.
3. Recognize and implement best agricultural practices and healthy working forests in Holland.
4. Protect Holland's rural undeveloped landscape, natural heritage, and biodiversity for the benefit of current and future generations.
5. Support and protect the Holland Historical Society and its buildings.
6. Support and protect WMA as a community resource for recreation and rural character.
7. Support and protect watershed by encouraging the utilization of best practices.

Implementation

1. Provide Town leadership in educational opportunities which might include presentations, handout materials, or simple best practices as promotional materials.
2. Encourage agricultural use of land despite land values rising. Encourage farmers to talk to Farm Bureau and explore options for keeping their land in agriculture.
3. Encourage the diversification of agriculture in the region to promote the viability of farming for the future. Look at what might replace dairy farming and encourage agritourism.
4. Promote and offer citizen scientist workshops and education to collect and utilize maps of surface waters, wetlands and key watersheds, and riparian habitats that should be protected or conserved to support habitat for fish, aquatic plants, aquatic invertebrates and other organisms important to our natural heritage.

5. Identify areas in Town where Invasive Species have altered the landscape. Create a community-wide plan to eradicate roadside invasives and educate with removal practices on private land or alternative uses.
6. Encourage conservation stewardship of natural resources through local conservation planning and land usage.
7. Collect and utilize maps and other data on land use patterns to understand current agricultural areas, contiguous forestland, and residential/commercial development.
8. Define boundaries for pastureland growth.
9. Encourage and provide education on BMPs as defined by the USDA Natural Resources Conservation Services and the Vermont Agency of Natural Resources. Apply for grants that are directly related to outcome driven goals of the agency.
10. Encourage small farms to implement RAPs to improve water quality.
11. Develop a relationship with Everblue Massawippi to improve water quality of our section of the Tomifobia watershed.
12. Promote and support private landowner's efforts to maintain and protect a natural vegetative buffer of 50 to 100 feet along all waterways.

Education

Because of a sustained decline in enrollment numbers in grades Pre-K, K, and 1 through 6, the Town voted to close at the end of 2018/2019 school year. Student enrollment had fallen to approximately 30 students attending the Elementary School. Currently, the Holland School Board is in the planning stages of what should become of the school building.

The Town is part of the North Country Supervisory Union. Educational services are provided either through this body or home schooling. All Holland students attend the following schools.



School Building, Photo Credit - Stacy Boone

- **Grades Pre-K, K, and 1 through 6**
 - are tuitioned and attend Derby Elementary School in Derby Line.
 - Projected enrollment numbers for the 2024/2025 school year is expected to be 54 students.
- **Grades 7 through 8** - attend North Country Union Junior High in Derby.
 - Projected enrollment numbers for the 2024/2025 school year are expected to be 14 students.
- **Grades 9 through 12** - attend North Country Union High School in Newport.
 - Projected enrollment numbers for the 2024/2025 school year are expected to be 16 students.

Grades 7 through 12 have seen no shift in school location, only the Elementary School aged students.

The school building, located on School Road as shown on the [Land Cover Map](#), consists of limited administrative space, classrooms, a gym/meeting hall, and is located on 6 acres of land. The school building is used for community functions, including Town Meeting and large public hearings. It is currently renting two spaces. The Nulhegan Cultural Center, which also r-uns a food shelf in the gym three or four times a month. The other rented space is occupied by a privately run preschool. The school building is also available for private usage by scheduling through the Holland Town Clerk, as too not conflict with other previously scheduled activities.

Objectives

1. Provide a high-quality education in a cost-effective manner while also minimizing increasing costs in the district.
2. Explore options concerning the future of the school building.

Implementation

1. Maintain the proactive stance of the local School Board in addressing issues prior to their becoming problems.
2. Explore opportunities to work with adjacent communities to provide cost effective educational services for all towns.
3. Urge local administrative bodies to communicate with State and Federal legislators the need to carefully review and determine the applicability of unfunded mandates to reduce unnecessary educational costs.
4. Settle on a definitive status of the school building.

Energy

An assurance of the Town should be that the residents of Holland have a dependable supply of energy.

Energy use, its availability, reliability, affordability, consistent power supply, and the functionality of an electric grid system are to be considered when making land use or development decisions in the Town. All forms of energy are available in Holland with supply and demand in balance. Energy costs, while in line with costs throughout Vermont and New England, are high and conservation practices should be encouraged by homeowners and businesses alike.

The Town of Holland supports the goals of NVDA's Regional Energy Plan, adhering to Vermont's Act 174, and aligning with Vermont's 2022 Comprehensive Energy Plan (CEP), and Vermont's 2021 Climate Action Plan (CAP). These plans stem from Vermont's Global Warming Solutions Act of September 2020.

Part of the energy drawback of living in a rural farming community is that energy usage is higher than urban practices and standards. The 2024 Energy Action Network Report, notes that Vermont ranks:

- Second highest, per capita, in greenhouse gas (GHG) emissions in New England
- Third highest average energy burden in the U.S. (8.3%)
- Among the four states with the highest reliance on fuel oil and propane for home heating
- Highest annual vehicle miles traveled (VMT) per capita in the Northeast

Even with the Vermont rankings in the bullets above, Holland has made tremendous strides in their energy decisions. Information provided by VEC in 2024 supports that Holland residents have made the following efforts to save on and/or to use alternative sources in their energy consumption.

- Solar arrays = 21.
- Wind system = 1.
- Combined, these systems have a capacity of 354 kilowatts.
- VEC has given incentives for: 12 heat pumps, 4 HP water heaters, and three pellet stoves.

The Town strongly supports all Holland residents to increase their energy efficiency. Residents are urged to connect with energy organizations in the State such as Efficiency Vermont and the Northeast Employment and Training Organization (NETO) to support Vermont's CEP goals.

Weatherization of existing homes should be encouraged, and residents should adopt best energy practices when constructing new homes or additions to homes. These practices include designing for passive solar heating, adequate insulation, and use of Energy Star appliances.

Reference Sources

Vermont's Global Warming Solutions Act (last revised September 2020)

[https://legislature.vermont.gov/Documents/2020/Docs/ACTS/ACT153/ACT153 As Enacted.pdf](https://legislature.vermont.gov/Documents/2020/Docs/ACTS/ACT153/ACT153%20As%20Enacted.pdf)

2022 Vermont Comprehensive Energy Plan

publicservice.vermont.gov/sites/dps/files/documents/2022VermontComprehensiveEnergyPlan_0.pdf

Initial Climate Action Plan (last revised September 2021)

<https://nvda.net/nvda-regional-plan/2018FullPlan.pdf>

Transportation

Due to the rural nature of Holland, conventional fossil fuels are a critical and common fuel for transportation. With no provisional retail establishments within the community boundaries, residents are required to drive to neighboring towns to purchase goods and services. Further, a majority of the working community commutes outside Holland for employment. Although recreational biking occurs on the many scenic roads, the use of bikes as a means of commuting to work by a majority of the workforce is not realistic. Agricultural farms and businesses in Holland use many different types of equipment, all requiring various levels of fossil fuel use. Refer to the Transportation section.

The closest electric vehicle (EV) charging station is in Derby Line at the Derby Line Unitarian Universalist Church. It is expected that more sites will be developed as electric vehicles become more common.

Renewable Energy

Targets have been developed by the State for each region in Vermont towards the State goal of meeting 90% of its energy needs through renewables by the year 2050.

It is an undeveloped rural pastoral agricultural landscape that dominates Holland. Any potential commercial renewable energy facilities must not cause adverse impacts to agricultural or forestry resources, must not impact any of the important view sheds and must significantly contribute to the financial well-being of the Town. Refer to the Natural Areas and Historic Features/Natural Areas/Town Landscape section. Any potential commercial energy production facility located in Town must both fiscally benefit the Town and co-exist within the rural topography.

Statewide preferred locations include rooftops (and other structures), parking lots, previously developed sites, brownfields, gravel pits, quarries, and Superfund sites. Locally preferred locations include municipally-owned properties, including the Town Office, the Town Garage, and the school building, and on the roofs of existing and new buildings. The school building and grounds might be an appropriate location to site a small-scale solar power generation facility or micro grid. If used, the site must include space for battery back-up storage.

Based on the recommendations of the Regional Plan, there is one identified hydropower potential site. That generation site is located at the north end of Holland Pond. Refer to the Woody Biomass & Hydroelectric Potential Map.

Holland has abundant forest resources. Wood makes up a majority percentage of the fuel used to heat homes in Town. Some residential homes utilize residential-scale solar power. Refer to Solar Potential Map. And generating power through wind is also a possibility. Refer to the Wind Potential Map. With a heating season that generally lasts at least half of the year, energy consumption and costs are a significant issue for everyone. Economic savings can be realized through energy conservation, and reducing energy usage also reduces the adverse environmental impacts of energy production, transport, and use.

Patterns of Development

Patterns of development conducive to energy conservation include the clustering of homes to require shorter networks of streets and utilities that require less energy to build, maintain, and require less vehicle miles traveled. Effective land use planning can promote energy conservation. Major development proposals should fully and effectively address energy efficiency concerns.

The growing trend of working from home also helps support energy efficiency by reducing personal commutes to work. The Town should encourage the development of a co-working space to attract residents to remain in the region and conduct their work from this site. A potential site for a co-working space is the school building.

The Town has made an effort to minimize its own energy consumption by using appropriate conservation and efficiency practices. The Town Offices currently utilize a 3-day workweek, and all Town facilities have been converted or in the process of being converted to LED lighting fixtures to conserve energy.

NVDA Energy Plan Analysis and Targets Discussion

→This subsection of the Plan comes directly from NVDA with minor revisions for clarity and support of the rural nature of our community.

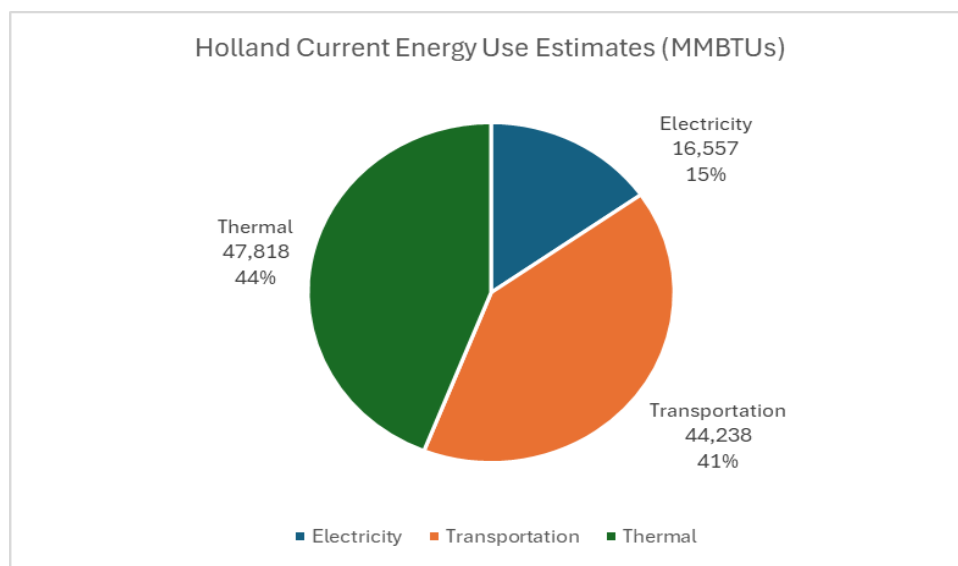
→NVDA provided an extensive Goals, Objectives, and Actions list which is included in the Appendix as a reference.

NVDA has created an Energy Equity Project (EEP) Framework with an effort to implement a regional Energy Plan. That plan focuses on four ideals:

- Everyone has continuous access to energy.
- Everyone lives in a healthy, safe, and comfortable home.
- No one spends more than 6% of their income on energy bills.
- Be attentive to more vulnerable populations which might include outdoor workers and single parent households. According to the Vermont Municipal Vulnerability Indicators (MVI) Tool, Holland is higher than the state average for these two populations and therefore special consideration and inclusion of these more vulnerable populations should be incorporated into local planning efforts.

This section is intended to provide an overview of current energy use in Holland and a sense of the trajectories and pace of change necessary to meet the State’s climate and energy goals.

NVDA estimates that the thermal sector (residential, commercial heating, and hot water) consumes the largest percentage of energy at 44%, followed by the transportation sector at 41%, and then electricity at 15%. These energy estimates are current as of August 2024 and include information from the Vermont Department of Public Service, Efficiency Vermont, U.S. Census American Community Survey, and Vermont Department of Labor.



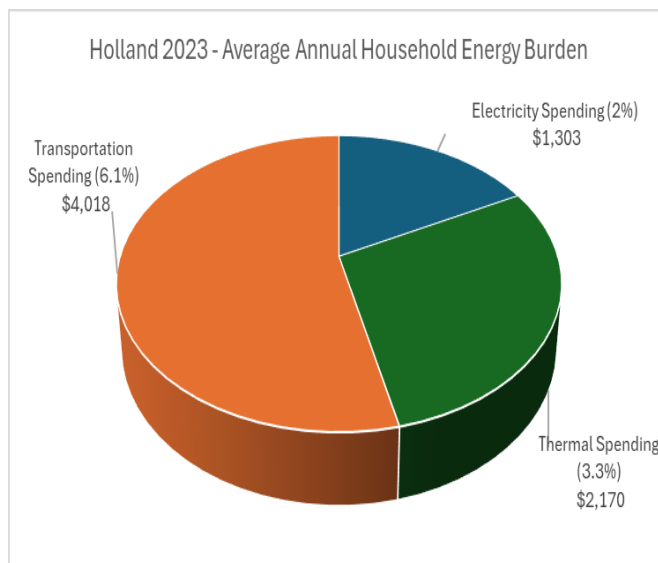
Analysis of Resources, Needs, Scarcities, Costs, and Problems

Energy burden is one way to understand the impact of energy expenses on Vermont households. An energy burden is an estimation of how much a household spends on electricity, heating, and driving, as a percentage of a household’s income. The American Council for an Energy-Efficient Economy (ACEEE) mission is to function as a catalyst to advance energy efficiency policies, programs, technologies, investments, and behaviors in order to achieve greater economic prosperity, and environmental protection. Using its resources and criteria, an energy burden *greater than* 6% (excluding transportation) is considered high and is correlated with a “greater risk for respiratory diseases, increased stress and economic hardship, and difficulty in moving out of poverty.”

According to the 2023 Efficiency Vermont Energy Burden Report:

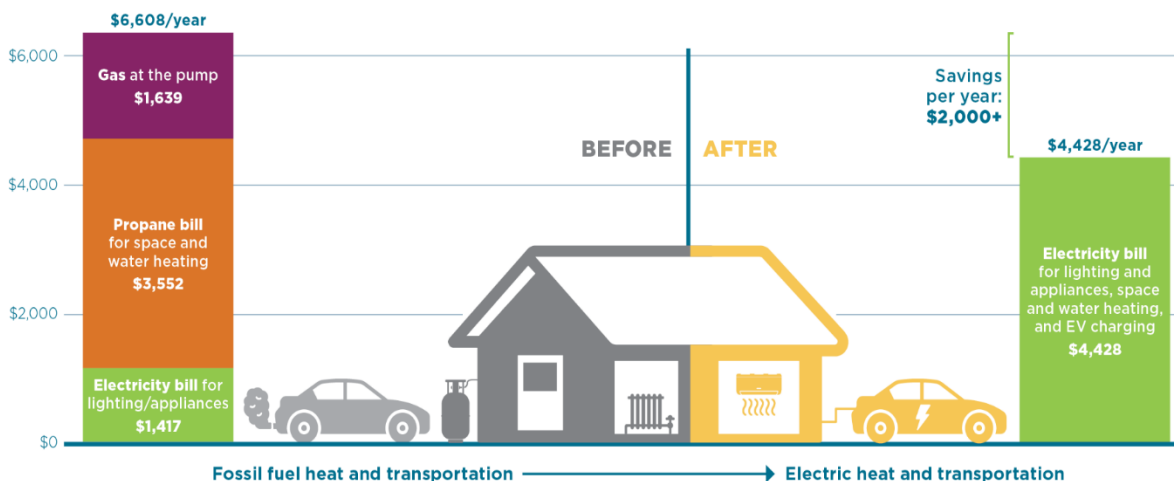
- About half of NEK communities have > 6% combined thermal + electricity energy burden
- Over one-third of NEK communities have > 6% transportation energy burden

Holland's total energy burden is over 11% (including transportation, electricity, and thermal). That equates to nearly \$7,500 in annual energy expenses across the average household.



NEK households with lower and fixed incomes typically use *less* energy than those with higher incomes, yet on average, spend *more* of their income on energy expenses—like heating, electricity, and transportation. High energy burdens can increase the risk of transitioning into poverty or of experiencing long-term poverty by 150-200%. This reference number is from the Energy Action Network (EAN).

Estimated annual energy bill costs for a sample Vermont single-family household, before and after electrification



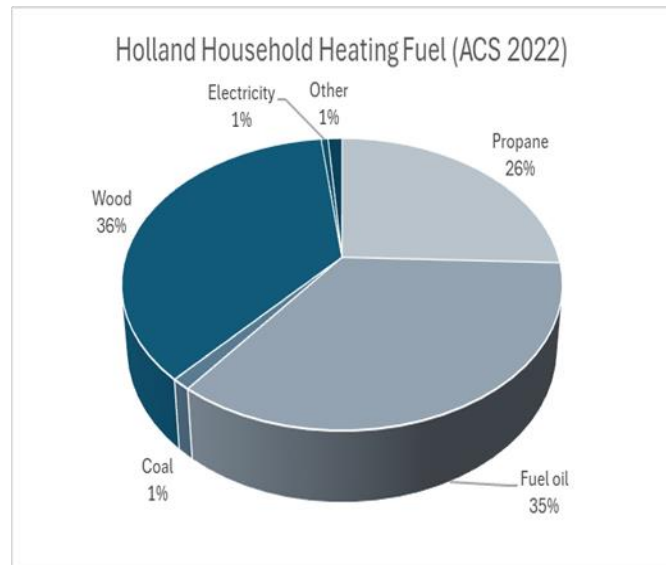
Sources: Energy bill savings calculated based on the average monthly prices for propane, gasoline, and electricity in 2023, from the Vermont Department of Public Service and EIA. Electricity bill costs for lighting and appliances reflect statewide average annual household electricity expenditures (Efficiency Vermont, "Vermont Energy Burden Report," 2023). Annual transportation fuel costs calculated using average fuel efficiency of 23.4 MPG for vehicles registered in VT from the 2021 Vermont Transportation Energy Profile and VT average annual vehicle miles traveled (VMT) of 11,084 miles/year from the Federal Highway Administration. **Note:** Actual energy bill savings will depend on a number of factors, including a household's electricity rate. Several Vermont utilities offer lower electric rates for managed EV charging, providing additional savings to households with access to those rates. Upfront equipment/vehicle costs vary based on model and incentive eligibility; because of this variance, upfront costs are not quantified here. Savings estimates are for a one car household. Savings will be higher for households replacing multiple gas vehicles with electric vehicles.



Holland - Current Energy Use Across Three Sectors (Thermal, Transportation, Electricity)

#1 - Thermal/Heating (44% of Holland's Energy)

The data describes how 411 occupied homes (NVDA numbers) are heated in Holland. According to the U.S. Census Data, over 60% use oil, propane, and/or coal to heat their homes, followed by 36% wood heating. Oil is often the back-up fuel source for homes that burn wood for heat. Propane is used by 26% of homes. Electricity is used for just 1% for household heating needs. According to the EAN Vermont Energy Dashboard, as of 2023 there are a total of 13 efficient, electric heat pumps and 10 heat pump water heaters in Holland.



Older homes are more likely to be poorly insulated, and as a result experience an increase in energy consumption, and overall heating costs. Nearly one-third of NEK housing units were built prior to 1940, and weatherization programs can assist with efficiency of these older homes.

#2 - Transportation (41% of Holland's Energy)

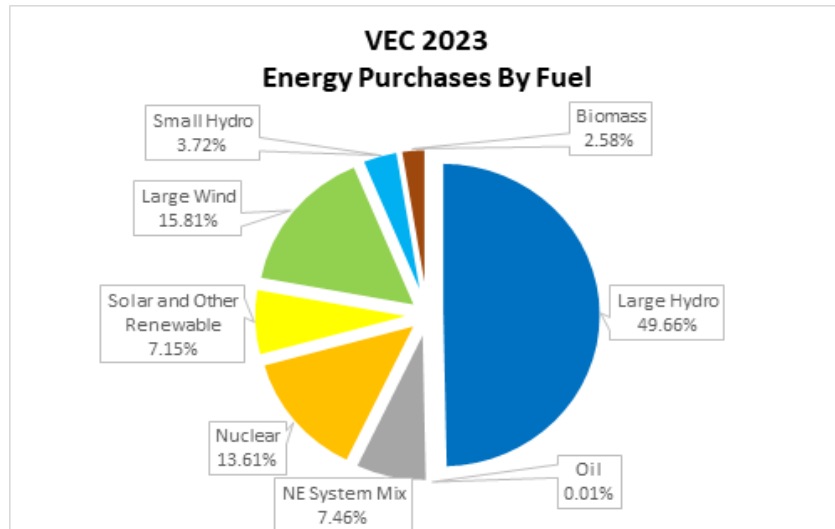
It is estimated that there are 550 fossil-fuel burning light-duty vehicles in Holland, each driving an average of 15,000 miles a year. According to Efficiency Vermont records, there are no registered electric vehicles in Holland as of 2023.

Increasing Transportation Equity - Transportation Demand Management (TDM)

A priority of the CEP is to increase the quality and types of available transportation choices—this is referred to as Transportation Demand Management (TDM). These multi-modal choices like public transit, carpooling, ridesharing, bicycling, and walking are better suited towards urban communities but difficult to attain in a rural agricultural community. While it is understood that reliance on non-motorized vehicular use is important—can reduce single-occupancy trips, lower transportation costs and fossil fuel pollution, and improve health and economic opportunities—this, too, seems more readily achievable in urban environments. NVDA's Regional Plan offers suggestions for land use and transportation strategies that encourage reduced transportation energy consumption and health equity benefits.

#3 - Electricity (15% of Holland's Energy)

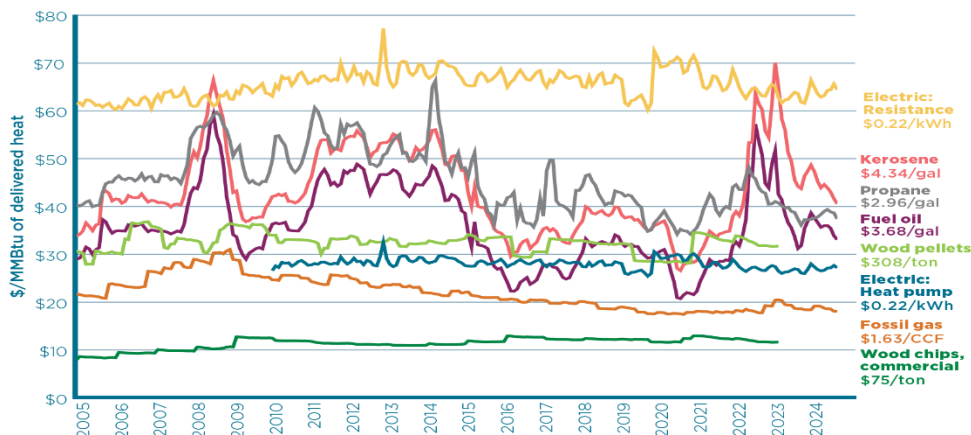
Holland receives electricity from VEC. Refer to the Utilities and Facilities/Utilities section. VEC purchases power through the ISO-New England energy market and its long-term power supply needs are projected based on forecasts conducted every three years and detailed in their Integrated Resource Plan required by the VT Public Utilities Commission (PUC).



In addition to incentives and other energy transformation programs, VEC's Community Solar program offers Co-op members the opportunity to sponsor panels on VEC solar arrays for either 10 or 20 years and receive a fixed, guaranteed monthly credit on their electric bill, which can help reduce energy burden.

According to Efficiency Vermont data provided to NVDA in 2024, Holland's average residential electric usage was 6,105 kilowatt hours (kWh) a year, slightly less than the Vermont annual average of 6,337 kWh from 2021 through 2023. For comparison, the United States' average annual residential electricity usage is 10,500 kWh, which equates to an 875 kWh per month average, according to the U.S. Energy Information Administration. It is expected that electricity consumption patterns will increase as modifications of electrification takes place.

Cost comparison of different heating fuel options over time (adjusted for inflation, June 2024 dollars)



Sources: Fuel oil, propane, kerosene prices: VT Department of Public Service, Retail Prices of Heating Fuels, 2024. Fossil gas: VGS, 2024. Electricity: EIA, 2024. Wood chips, wood pellets: Biomass Energy Research Center, 2023. **Notes:** Electricity prices presented here are a statewide average but vary by utility territory. The reason propane is usually more expensive per MMBtu than fuel oil but less expensive on a per gallon basis is because propane has a lower energy content per gallon (66% of the energy of fuel oil per gallon). Prices reflect data availability at the time of publication: through June 2024. Prices shown are in June 2024 dollars, using the U.S. Bureau of Labor Statistics Consumer Price Index.



LEAP - Low Emissions Analysis Platform - Hypothetical Targets for 2025, 2035, and 2050

The following LEAP projections estimate the rate of technological adoption across the thermal, transportation, and electricity sectors needed to meet CAP goals. These are hypothetical targets to help Holland imagine the pace at which the Town might consider weatherizing its building stock, switching to efficient, electric heating (heat pumps and heat pump water heaters), and transitioning to electric vehicles.

Regional Residential Housing Weatherization/Retrofits						
	2020	2025	2030	2035	2040	2050
Baseline Scenario	1,105	2,283	3,372	4,408	5,480	7,745
CAP Mitigation	1,766	6,221	10,677	13,446	16,215	21,752
Holland Targets	1.20%	75	128	161	195	261

Regional Residential New Heat Pump Water Heaters						
	2020	2025	2030	2035	2040	2050
Baseline Scenario	388	457	460	463	466	476
CAP Mitigation	388	5,650	12,200	18,817	25,509	25,819
Holland Targets	1.20%	68	146	226	306	310

CAP Mitigation Regional Residential New Cold Climate Heat Pumps (CCHP)						
	2020	2025	2030	2035	2040	2050
VT LEAP Total	1,427	8,597	15,822	23,112	30,468	34,060
Holland Targets	1.20%	103	190	277	366	409

CAP Mitigation Regional Commercial New Cold Climate Heat Pumps (CCHP)						
	2020	2025	2030	2035	2040	2050
VT LEAP Total	178	3,201	6,365	9,680	11,898	12,380
Holland Targets	0.7%	22	45	68	83	87

CAP Mitigation Regional Passenger Car EV and PHEV Stock						
Vehicle Type	2015	2025	2030	2035	2040	2050
Battery Electric	20	985	4,253	10,159	16,127	23,926
Plug In Hybrid	50	187	175	144	91	33
VT LEAP Total	70	1,172	4,428	10,303	16,218	23,959
Holland Targets	1.15%	13	51	118	187	276

CAP Mitigation Regional Light Duty Truck EV and PHEV Stock						
Vehicle Type	2015	2025	2030	2035	2040	2050
Battery Electric	3	1,158	6,896	16,217	24,560	33,073
Plug In Hybrid	33	122	168	161	107	40
VT LEAP Total	36	1,280	7,064	16,378	24,667	33,113
Holland Targets	1.15%	15	81	188	284	381

Renewable Energy, Storage, Transmission & Distribution Resources

In support of the 90x2050 goals, each region in Vermont has a set of renewable energy generation targets. Generation targets can be met through a variety of renewable technologies,

including solar, wind, hydro, and biomass. The Northeast Kingdom generates a disproportionate share of renewables relative given its low population and is on track to reach its 2050 targets for renewable energy generation.

Refer to the Solar, Wind, and Woody Biomass & Hydroelectric Potential Maps.

Holland's Potential Renewable Energy Generation with No State Constraints:

- Solar - 505 acres
- Wind - 1,593 acres
- Woody Biomass - 15,301 acres
- Hydroelectric - ~1,000 kW

NEK Siting Guidelines for Renewable Energy Generation

NVDA Regional Energy Maps have been updated to be consistent with the CAP and 2022 Act 174 standards, with an emphasis on the value of forest lands for sequestering and storing carbon. These maps can identify areas unsuitable for development, while also guiding identified potential/preferred areas for renewable energy development to meet regional energy demand, reduce energy burden, and contribute to the state energy and climate goals.

Reference Sources

2023 Vermont Energy Burden Report

[2023 Vermont Energy Burden Report | Efficiency Vermont](#)

Energy Action Network, Annual Progress Report

[EAN-APR-2024 web.pdf](#)

American Council for an Energy-Efficient Economy Website

<https://www.aceee.org/energy-equity-initiative>

Vermont Electric Coop, Integrated Resource Plan

<https://vermontelectric.coop/electric-system/integrated-resource-plan>

*U.S. Energy Information Administration, Energy Use in Home
Electricity use in homes - U.S. Energy Information Administration (EIA)*

2024 Annual EAN Progress Report for Vermont on Emissions, Energy, Equity, and the Economy

[EAN-APR-2024 web.pdf](#)

Energy Action Network (EAN) Tool

<https://eanvt.org/vermon-t-energy-dashboard/>

NVDA Regional Plan

<https://nvda.net/nvda-regional-plan/2018FullPlan.pdf>

NVDA Energy Specific Plan

<https://nvda.net/nvda-regional-plan/2018Chapter2Energy.Final.pdf>

Objectives

1. Continue to monitor any State or Federal changes in Energy regulations.
2. Support State renewable energy goals that align with Act 174 targets.
3. Maintain the rural character of the Town by assuring any renewable energy facilities do not adversely impact the nature of the community, its agricultural or forestry resources, scenic views, or the Bill Sladyk WMA.
4. Any commercial energy production facility must have a direct fiscal benefit for the Town.

Implementation

1. Provide Town leadership in educational opportunities which might include presentations, handout materials, or simple best practices as promotional materials related to energy consumption and conservation practices of the thermal energy, electrical, transportation, or renewable energy goals.
2. Support the reduction of heat energy demand through weatherization.
3. Promote the production of biofuels as an agricultural business.
4. Encourage local farms to address their energy needs through alternatives available to the agricultural community.

Housing

A majority of housing stock in Holland consists of single-family homes. Seven structures are listed as containing two units, which are considered single family residences for purposes of this review. Roughly 38% of the houses in Holland have 3 bedrooms, and over 53% have 3 bedrooms or more. The average number of bedrooms per home in Holland is 2.7, which is slightly larger than the Town's average household size of 2.3.

Holland is home to 281 households. Approximately 85% of the residents own their homes and 15% are renters. Holland has seen an increase in the number of households (95) over the last 10 years. Orleans County as a whole has seen a 3% increase in the number of households over that same period. Holland reports 121 housing units used as seasonal or vacation homes, meaning a large percentage of homes are vacant a majority of the year.

The population of Holland has been generally stable over the past 10 years at about 630 residents. During that time the median age has remained constant at around 40-45. The most common household size is two people, with 38% of households falling into this category. The average household size has decreased considerably over the past 10 years from 3.2 in 2012 to 2.3 in 2022. This decrease has had an impact on Holland's youth population. Holland's K-12 school enrollment has decreased slightly over the past 10 years from 120 students in 2012 to 100 students in 2022 to 86 students in 2024. Consequently, Holland residents voted to close the Elementary School in 2018.

Holland's housing stock is relatively new according to housingdata.org. Twenty percent of Holland's housing stock was built after 2000, which is more than both the rest of the county (19%) and the state (16%). Just 16% of Holland's housing units were constructed before 1950. 41% of the homes in Holland are owned by individuals who are 60 or older. Housing units in Holland breakdown the following:

- 409 single units
- 13 multi-units
- 55 mobile homes

Population and housing unit growth in Holland outpaced the rest of Orleans County by several percentage points. As of 2022, seasonal housing units accounted for 30% of all housing units in Holland, a decrease of about 6% since 2010. Seasonal homes, as a percentage of all homes in Orleans County, is 27%.

In reviewing housing data, it is apparent that both income and housing costs in Holland are reasonably consistent with Orleans County averages (although somewhat below) and below that of the State as a whole. One notable exception is the Median Household Income of renter households at \$101,000. This number can only be attributed to the lack of residential rental units and the availability of vacation rental units on Holland Pond. Vermont Housing Data statistics indicate the primary home sale price in Holland as of 2022 is \$202,000. This is slightly lower than the county median sale price of \$215,000. Median gross rent in Holland has increased significantly since 2010. As of 2022, average rent is over \$1,281/month for Holland residents.

This rental average outpaces Orleans County average rent of \$895/month. Holland is about on par with the County and State in terms of housing affordability. There are, however, many concerns regarding affordable housing in Holland. They are:

1. The lack of multi-family dwellings in Town which typically provide younger families and single persons reasonably affordable housing.
2. The lack of any housing facility available for older residents of the Town who may not be able to continue to maintain a single-family home.
3. While the Town feels that much of the erosion in affordability of housing is beyond the scope of the Town, there are proactive actions the community can take to assist in retaining and increasing affordable housing stock.
4. It is important to note that 10,915 acres, 40% of the land in the community, is farmland under Vermont's CUP. This program restricts property development which can hinder housing development, especially affordable and workforce housing.

Objectives

1. Provide assistance to maintain and increase affordable housing.
2. Increase housing diversification through the development of rental units, duplexes, and cluster homes while maintaining an open rural character.

Implementation

1. Encourage cluster type housing on smaller lots with joint infrastructure which utilize existing Town roads for access.
2. Explore mechanisms to provide maintenance and rehabilitation funding for existing residences to help maintain affordability.
3. Encourage residents and homeowners to explore loan and grant programs for housing renovation and energy efficiency available for low- and moderate-income households through USDA, Rural Edge, NCIC, Vermont Housing Authority, Efficiency Vermont, Northeast Employment and Training Organization (NETO), and Vermont's Department of Housing and Community Development (DHCD).
4. Encourage Accessory Dwelling Units (ADUs) development and other housing initiatives (tiny home cluster housing) to increase housing stock within the community while increasing Holland's Grand List.

Reference Source

State of Vermont, Agency of Commerce and Community Development
[Housing | Agency of Commerce and Community Development \(vermont.gov\)](https://www.vermont.gov)

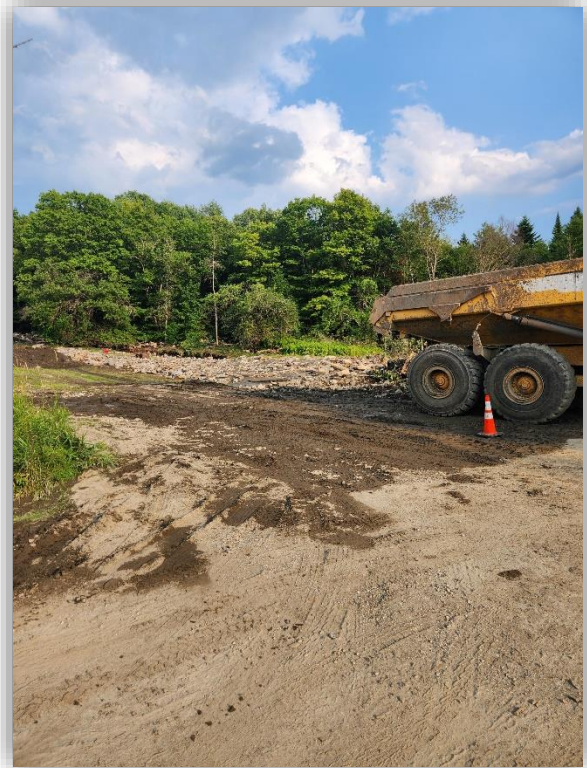
Flood Resilience

Introduction

State statute directs that a municipal plan shall include a flood resilience plan that:

- Identifies flood hazard and fluvial erosion hazard areas based on State river corridor maps, and designates those areas to be protected, including floodplains, river corridors, land adjacent to streams, wetlands, and upland forests, to reduce the risk of flood damage to infrastructure and improved property.
- Recommends policies and strategies to protect the areas in flood and fluvial erosion hazard areas and to mitigate risks to public safety, critical infrastructure, historic structures, and municipal investments.

Refer to the Natural Areas and Historic Features/Watershed section.



2024 Flood Damage, Photo Credit - Diane Judd

Mapped Hazard Areas

FEMA has not mapped Holland for flood prone areas, and consequently there is no Flood Insurance Rate Map for the Town. However, Holland is eligible for FEMA funds even though it is not in the National Flood Insurance Program (NFIP).

The State of Vermont Agency of Natural Resources (ANR) has mapped “River Corridors” throughout the State. The River Corridors, as defined by ANR, “encompass the area of land surrounding a river that provides for the meandering, floodplain, and the riparian functions necessary to restore and maintain the naturally stable or least erosive form of a river thereby minimizing erosion hazards over time.” Since lands within and immediately abutting a river corridor are at higher risk to fluvial erosion, the State recommends that development within mapped River Corridors be avoided, and that a minimum 50-foot setback be maintained from smaller streams.

As an incentive to encourage towns to restrict new development within River Corridors, the State provides an increased State match under Emergency Relief Assistance Fund (ERAF) for communities that adopt local flood regulations incorporating regulation of State River Corridors.

River Corridors have been mapped by the State for portions of Stearns Brook, Orcutt Brook, and Holland Brook in Holland.

Reference Sources

Reference Guides for River Corridors

[River Corridor and Floodplain Maps | Department of Environmental Conservation \(vermont.gov\)](#)

Natural Resource Atlas

[Vermont ANR - Natural Resources Atlas HTML5 Viewer](#)

Infrastructure and Buildings at Risk

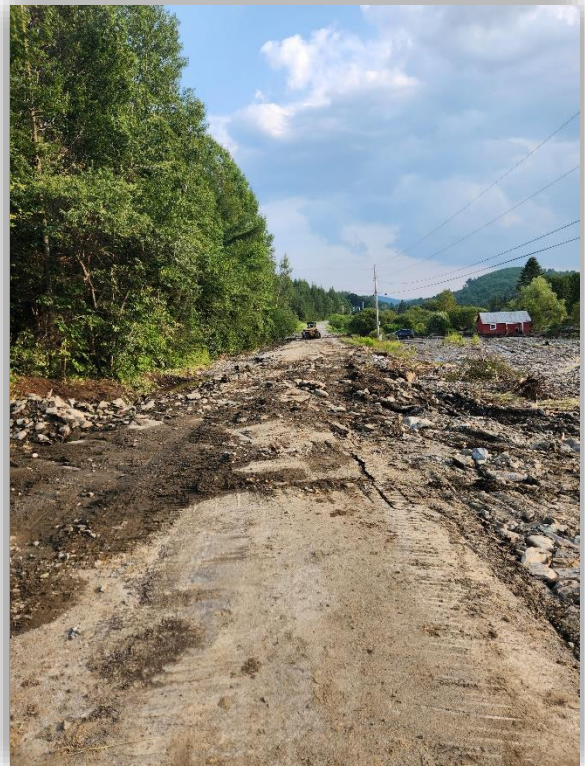
The Town has a grant for the development of Local Hazard Mitigation Plan (LHMP). Once approved by FEMA, the Town Selectboard should adopt. The LHMP identifies the road infrastructure that has experienced damage in the past due to flooding, erosion, and stormwater runoff, and identifies proposed mitigation measures.

Emergency Relief Assistance Fund (ERAF)

ERAF helps Vermont municipalities repair damaged infrastructure after a presidentially-declared disaster. The Town currently receives 7.5% from the State in ERAF funds. These funds match Federal Public Assistance after federally-declared disasters. Eligible public costs are reimbursed by federal taxpayers at 75%. The State contributes an additional 7.5% towards costs. For communities that take specific steps to reduce flood damage, the state will contribute 12.5% or 17.5% of the total cost.

As of October 23, 2014, towns were required, at a minimum, to have four flood hazard mitigation measures in place to maintain level state funding in the event of such a disaster.

1. Adopt Flood Hazard Regulations that meet minimum standards for enrollment in the National Flood Insurance Program.
2. Adopt the most recent Agency of Transportation Road and Bridge Standards.
3. Adopt a Local Emergency Management Plan (LEMP).
4. Update and adopt a Local Hazard Mitigation Plan and submit to FEMA for approval.



2024 Flood Damage, Photo Credit - Diane Judd

Reference Sources

Overview, How the Emergency Relief Fund Works
[Emergency Relief and Assistance Fund | Flood Ready \(vermont.gov\)](#)

Access to Expanded Community Reports
[Community Reports | Flood Ready \(vermont.gov\)](#)

The Town adopted a LEMP on 4/22/24 with an annual review required. The State Road and Bridge Standards adopted on 6/25/19. The Town has a grant to update the LHMP and as such, should ensure its development in 2025. Because the Town does not have any FEMA-mapped flood hazard areas, a different basis for establishing hazard areas would need to be established for the Town to adopt flood hazard regulations and join the NFIP. If the State River Corridors were used in conjunction with other information, this would further increase the amount of funding provided by the State under ERAF.

Planning Considerations

Local Hazard Mitigation Plan (LHMP)

Once the LHMP has received approval by FEMA and has been adopted by the Town Selectboard, the proposed mitigation measures related to flood hazards contained in that plan should be incorporated in this Town Plan by reference.

Vegetated Buffer Areas and Coverage Limitations

Maintaining natural vegetation and limiting impervious surfaces in areas close to streams helps prevent potential sedimentation of streams and water bodies and reduces stormwater runoff that could contribute to downstream flooding. In addition to the recommended avoidance of areas within the statewide river corridors, the Planning Commission recommends the Town implement a 100-foot setback (even in places where a 50-foot setback is acceptable) be maintained as a natural vegetation buffer from streams around ponds.

Upland forests and wetland areas

The State of Vermont regulates activities in and adjacent to wetlands in accordance with the Vermont Wetland Rules. State permits are necessary for activities in or within 100 feet of Class I wetlands, and within 50 feet of Class II wetlands. A permit can only be issued if it is determined that the use will have no undue adverse impact on protected functions, unless such impacts are mitigated. The State also regulates stormwater runoff for development projects involving over one acre of earth disturbance and creating one acre of impervious surface. However, the stormwater from developments of less than one acre can also cumulatively cause flooding and pollution if not managed properly. Since Holland does not have local land use regulations, non-regulatory means can be pursued. Areas adjacent to streams subject to fluvial erosion, steep slopes, upland forests and wetland areas can be protected through securing conservation easements in critical locations and educating property owners of best practices. It is noted that the Bill Sladyk WMA affords protection to Holland Pond and its tributaries, as well as several smaller ponds in the WMA.

The management of upland forested areas plays an important role in flood hazard management. As these areas are cleared and become developed, storm water, instead of infiltrating naturally into the soil, quickly runs off hard surfaces picking up pollution and carrying it to waterways. Increased flows during storms can destabilize stream channels and adversely affect water quality.

Limiting the extent of disturbance and development of impervious surfaces on upland slopes helps to reduce the amount of storm water runoff and helps to avoid overwhelming existing stormwater infrastructure. This includes roadside ditches and culverts. Avoiding steep slopes greater than 20% when clearing and developing land and managing stormwater runoff from new development on-site will also help mitigate future flood hazards.

Wetlands provide an important floodwater storage function by storing stormwater runoff and allowing unencumbered space for flood water to overflow riverbanks. By holding some of the flood waters, wetlands slow the rate that water reenters the stream channel and can reduce the severity of downstream flooding and erosion.

Tactical Basin Plan

The Basin 17 *Water Quality Management Plan* is a plan prepared by the Watershed Management Division of the Agency of Natural Resources.

Reference Source

Water Quality Management Plan (last updated 2023)
[Final_Basin17_TBP_2023.pdf \(vermont.gov\)](#)

The Basin Plan contains the following proposed objectives that are relevant to flood resiliency and water quality planning within the Holland community.

- Increase awareness of stormwater runoff issues and available solutions through newspaper articles and outreach materials.
- Complete demonstration projects addressing stormwater issues in the basin, such as rain barrels or rain gardens, to show how these practices can be used and increase awareness of these methods.
- Increase educational opportunities and outreach to the public, landowners, agricultural farmers, dairy farmers, and loggers on good forestry practices and the mechanics of logging.
- Increase awareness of landscaping techniques to minimize nutrient, herbicide, and other pollutant runoff from lawns and pastures/fields. Techniques include aerating, increasing organic content, maximizing natural vegetative cover, and using less and only phosphorus free fertilizers except where soil testing show low soil phosphorus levels.
- Conduct extensive outreach of existing programs that provide financial incentives for cover crop, conservation cropping, no-till etc. to all farms.
- Increase awareness of sediment runoff from driveways and roads.

Objectives

1. Mitigate flood hazards and maintain good water quality in Town.

Implementation

1. Undertake restoration projects in river corridors.
2. Encourage best practices to handle stormwater runoff from existing and new development.
3. Discourage development on steep slopes and within river corridors.
4. Create a capital improvement plan to address the mitigation projects identified in the LHMP, beginning with the highest priority projects.
5. Consider adopting Flood Hazard regulations to regulate development within the River Corridor Areas mapped by DEC to mitigate flood and fluvial erosion hazard risks, protect investments in streambank restoration projects, and receive a higher amount of funding under ERAF.
6. Hold periodic education events to inform residents how to mitigate flood and fluvial erosion hazards.

Relationship to Adjacent Communities

Members of the Planning Commission read the currently adopted or recently proposed plans for each adjacent Vermont Town as well as the Northeast Kingdom Regional Plan. Concerning adjacent communities:

Norton and the Unified Towns and Cores (UTG)

Holland has no direct roadway connections with these communities and, apart from a small parcel adjacent to Canada, the entire portion of the Town abutting these communities consists of the State-owned Bill Sladyk WMA. Given these situations and the fact that both towns are similarly rural to Holland, the Town sees no conflicts between our plans.

Morgan

Holland shares a lengthy border with Morgan to the south with its three roadway connections all consisting of collector roads. In addition, for much of the Town, the closest retail (albeit limited) businesses, as well as a post office, are in Morgan. The Town shares a principal concern with Morgan regarding roadway maintenance, given the continued increases in costs and severe weather events. The current and proposed land uses and general elements of the Morgan plan are consistent with those provided in this document; no significant conflicts are apparent. Holland should take certain actions concerning its relationship with Morgan as noted in the objectives and implementation recommendations below.

Derby

The Town of Derby has the greatest existing and potential impact on Holland given its population, provision of numerous commercial and employment opportunities, and roadway connections. Holland acts as a bedroom community to Derby and it is expected that this function will continue to grow. The Derby land use plan provides for essentially rural residential development, which is consistent with that proposed in this Plan, no direct conflicts are apparent between the two plans. The Town does need to take certain actions to ensure compatibility and limit potential negative impacts from Derby's expected growth as an adjacent community.

Regional Plan

Given Holland's remote location and anticipated limited growth role in the region, the provisions of this plan are consistent with the regional plan. Holland's goals for growth in agricultural businesses as a means of economic development is consistent with State and regional goals.

Canada

There is virtually no direct interaction between the Town and communities to the north given the lack of any roadway connections. As a result, the Town knows virtually nothing about proposed plans and potential impacts from Canada and historically has taken no action to do so. While current land uses are generally compatible (and proposed to stay so in Holland), a dialogue with these communities is appropriate to ensure continued compatibility.

Objectives

1. Interact with adjacent communities in a proactive fashion to understand changes and issues in those communities. Provide them with timely notice and opportunity for discussion of significant changes in Holland and provide input if significant changes or development are proposed in those communities which affect the Town.

Implementation

1. Continue to financially support, provide input to, and monitor actions of the NVDA.
2. Initiate a dialogue with abutting communities in Canada to understand their planning processes and potential future impacts on Holland and to provide input as appropriate.
3. Develop a relationship with Everblue Massawippi to improve water quality of our section of the Tomifobia watershed.
4. Work with adjacent communities to ensure coordinated roadway maintenance, provide input to their planning processes, and address educational issues of mutual concern to assess possible cost savings.
5. Monitor and provide input to the Town of Derby as it continues to address growth in that community. Of particular concern are viable and coordinated maintenance of the two collector roadway connections, and major growth proposals in Derby. A key step is to inform Derby officials of Holland's interest and request timely notification of major development or other changes proposed close to Holland.

Appendix

The Appendix contains the following reference resources for the Holland Town Plan.

Maps

1. Base Map - showing such elements as roadways, farms, residences, government buildings, parcel boundaries, and fire hydrants (revised October 2024)
2. Land Cover Map - consisting of an overlay of the base map on an aerial photograph (revised October 2024)
3. Conserved Lands Map (revised December 2016)
4. Forest/Wildlife Blocks Map (revised October 2024)
5. Natural Resource Constraints Map, including topography (revised October 2024)
6. Soils Constraints Map (revised June 2016)
7. Solar Potential Map (revised October 2024)
8. Wind Potential Map (revised October 2024)
9. Woody Biomass & Hydroelectric Potential Map (revised October 2024)

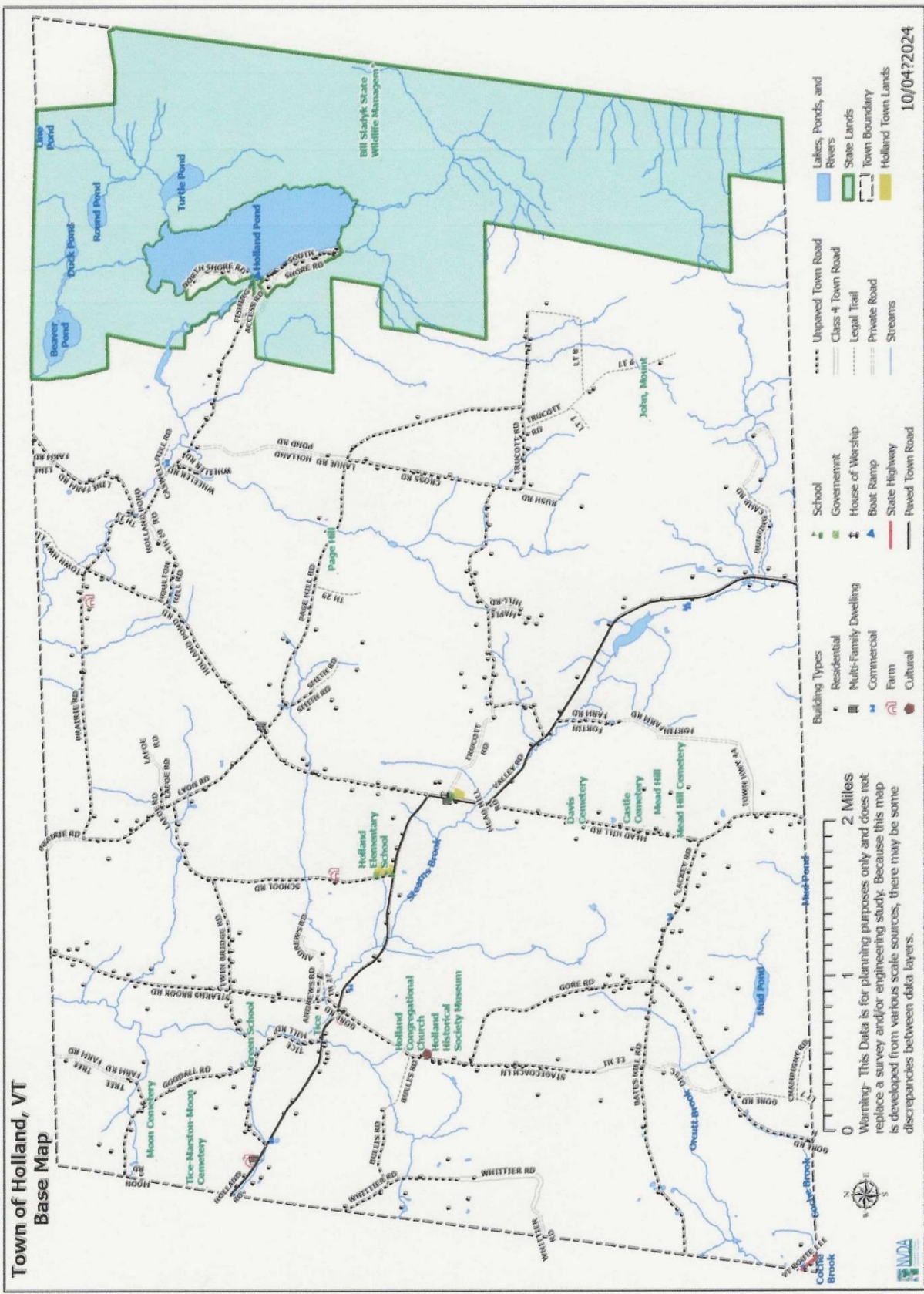
* maps not to scale; they are modified to fit the margins of this document

Holland Energy Implementation Pathways: Goals, Objectives, and Actions

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Holland Town Planning Questionnaire 2023 Results

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Town of Holland, VT
Base Map

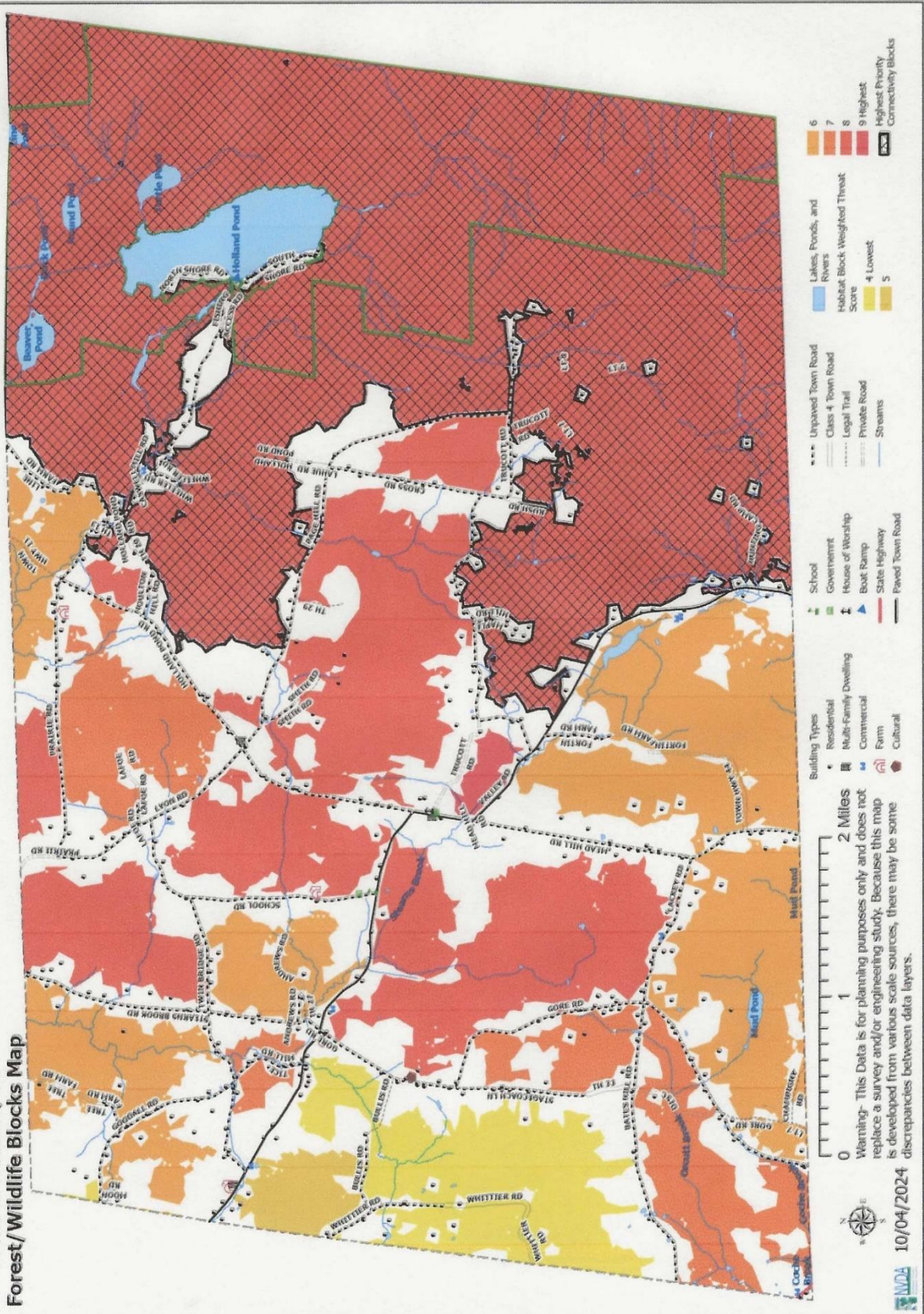
0 1 2 Miles
Warning: This data is for planning purposes only and does not replace a survey and/or engineering study. Because this map is developed from various scale sources, there may be some discrepancies between data layers.

10/04/2024

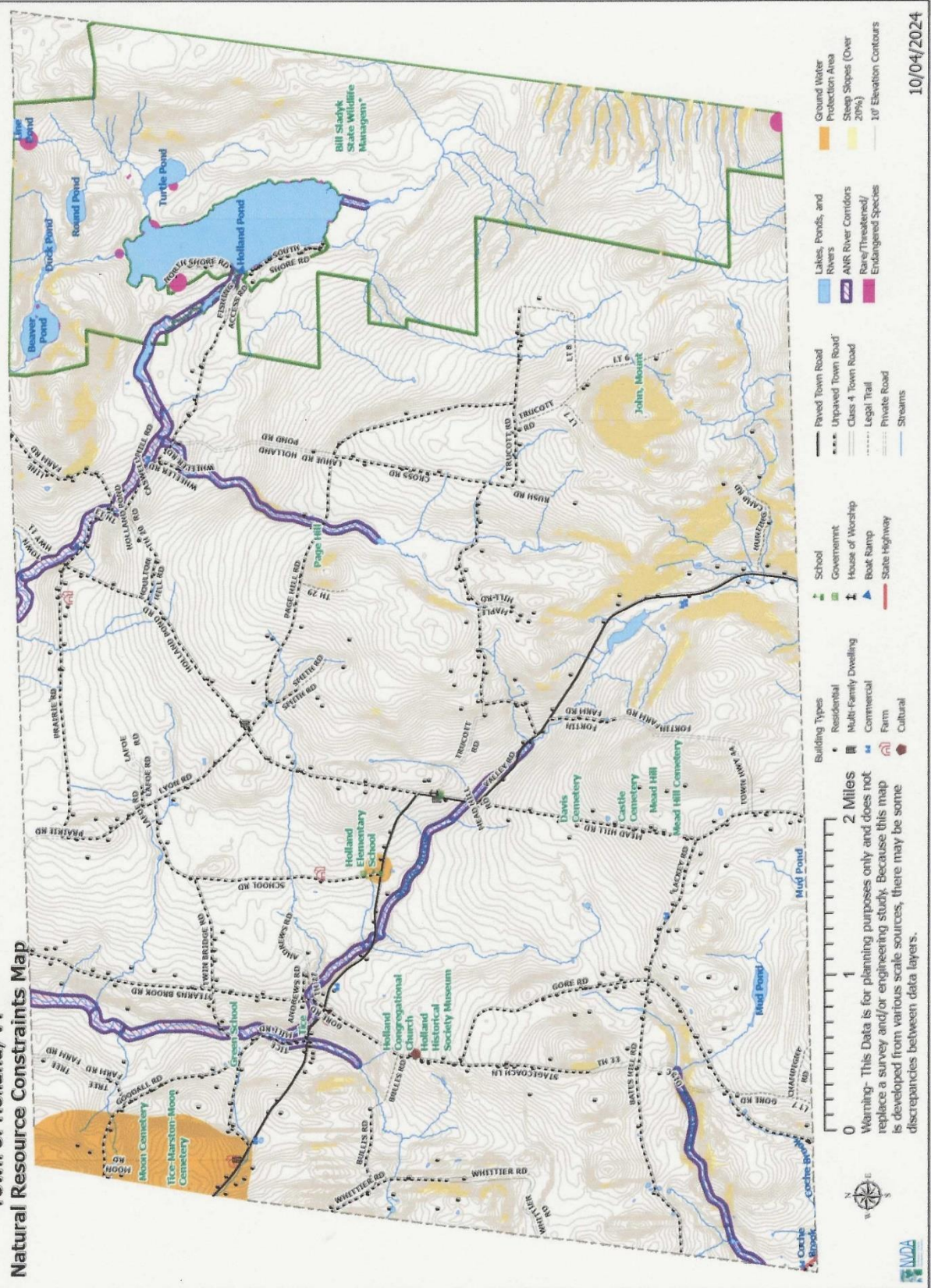
Town of Holland, VT Land Cover Map



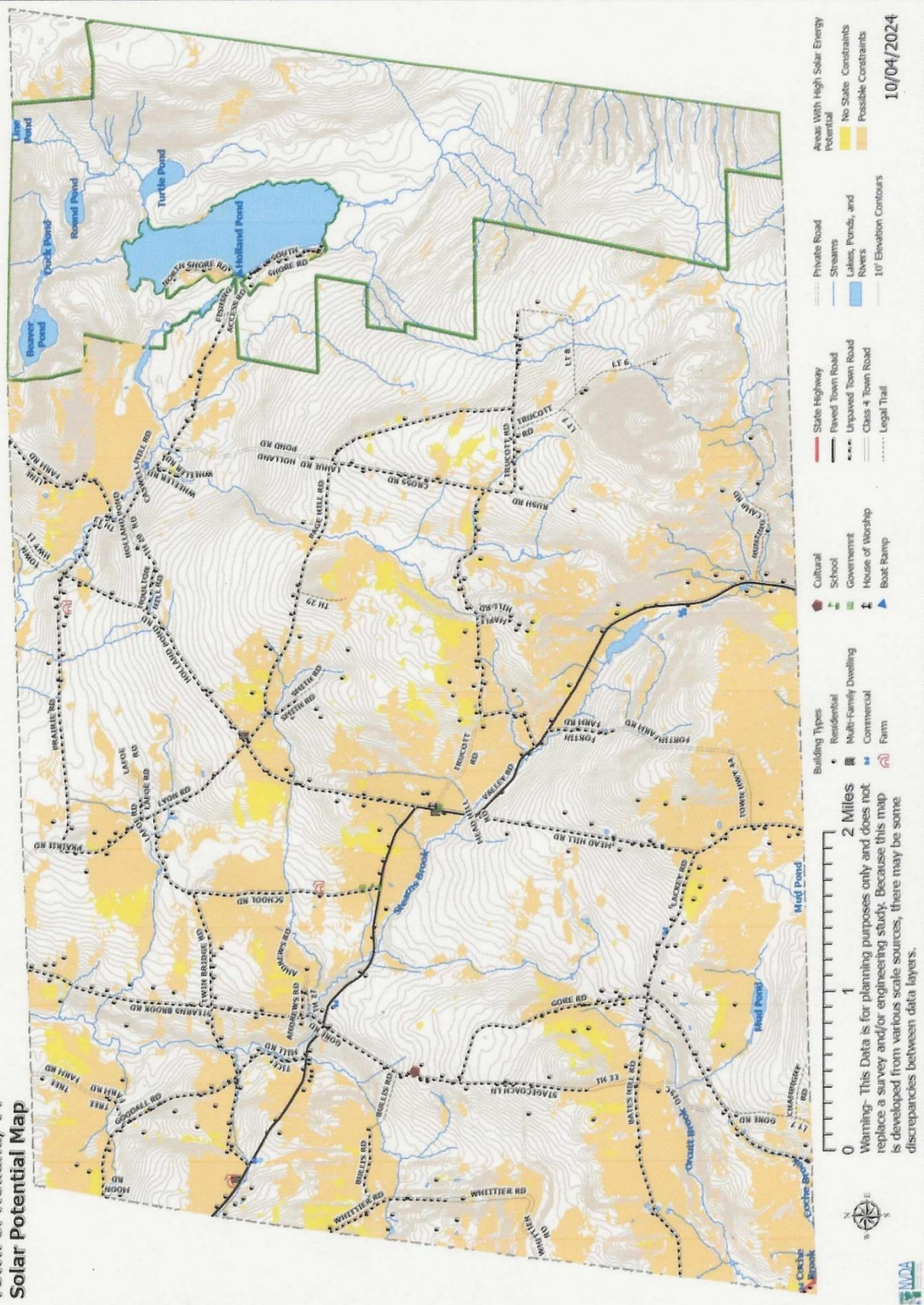
Town of Holland, VT Forest/Wildlife Blocks Map



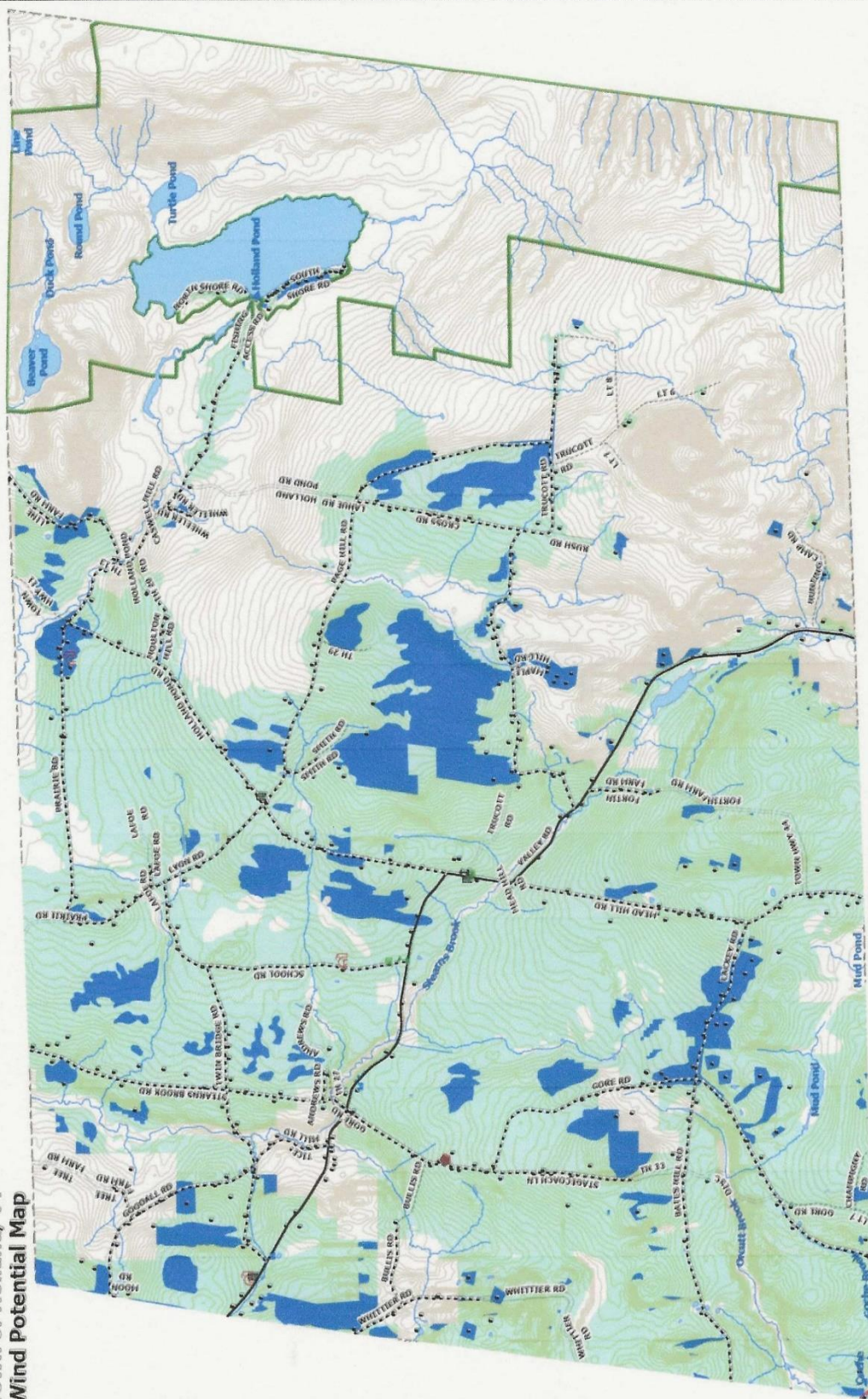
Town of Holland, VT Natural Resource Constraints Map



Town of Holland, VT Solar Potential Map



Town of Holland, VT Wind Potential Map



Building Types

- Residential
- Multi-Family Dwelling
- Commercial
- Farm

Cultural

- School
- Government
- House of Worship
- Boat Ramp

Roads

- State Highway
- Faded Town Road
- Unpaved Town Road
- Class 4 Town Road
- Legal Trail

Water Features

- Streams
- Lakes, Ponds, and Rivers
- 10' Elevation Contours

Areas With Wind Generation Potential

- No State Constraints
- Possible Constraints

Scale

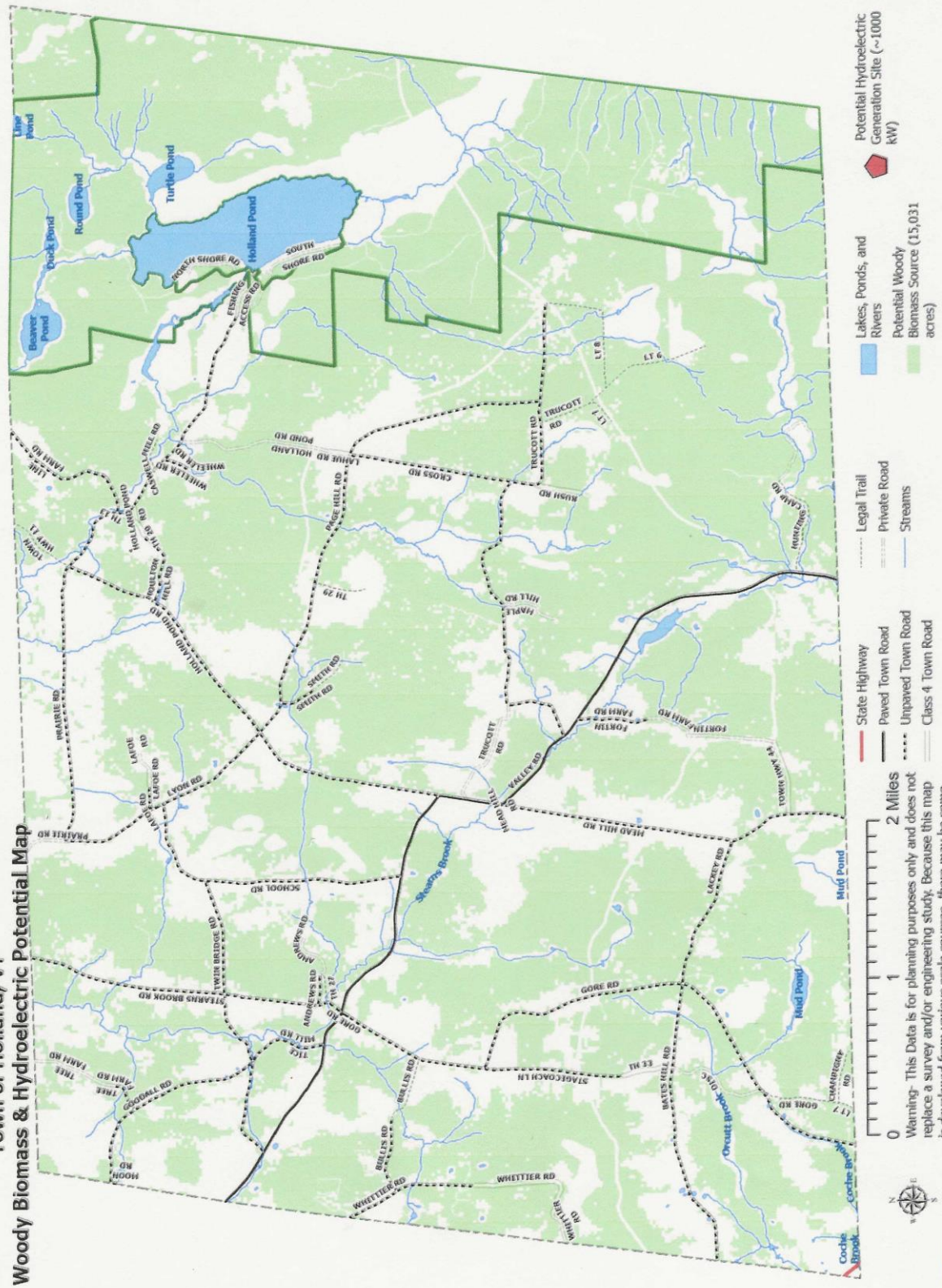
0 1 2 Miles

Warning: This Data is for planning purposes only and does not replace a survey and/or engineering study. Because this map is developed from various scale sources, there may be some discrepancies between data layers.

North Arrow

10/04/2024

Town of Holland, VT Woody Biomass & Hydroelectric Potential Map



Holland Energy Implementation Pathways: Goals, Objectives, and Actions

In addition to Holland's energy goals and pathways outlined below, the Town is supportive of the NVDA Regional Energy Plan Pathways that outline the recommended goals, objectives, and actions that are aligned with the goals of Vermont Climate Action Plan and Comprehensive Energy Plan and will help achieve the targets identified earlier in Holland's Energy Plan.

Holland Energy Goals

1. **Support State Renewable Energy Goals:** Align with Vermont's Act 174 targets for thermal and electric efficiency improvements and increased use of renewable energy for transportation, heating, and electricity.
2. **Maintain Rural Character:** Ensure that any commercial renewable energy facilities do not adversely impact agricultural or forestry resources, scenic views, or the Bill Sladyk Wildlife Management Area.
3. **Financial Benefit:** Ensure that any commercial energy production facility fiscally benefits the Town.

Holland Energy Pathways

The following goals and pathways aim to balance the Town's energy needs with its rural character and environmental conservation goals.

- **Thermal Energy Goals**
 - **Educational Events:** Conduct events to promote cold-climate heat pumps and other renewable heating technologies.
 - **Weatherization Workshops:** Coordinate with NETO and Efficiency Vermont for workshops and encourage energy efficiency and weatherization.
 - **Forestry Practices:** Hold information sessions on forest management plans.
 - **Building Standards:** Provide information on State energy standards for buildings.
 - **Municipal Building Upgrades:** Investigate weatherization for municipal buildings and replacing fossil fuel systems with renewable energy systems.
- **Electricity Goals**
 - **Energy Awareness:** Support building energy audits and raise awareness about utility incentives and other programs/funding to switch to beneficial electrification.
 - **Community Methane Digester:** Investigate creating a community-owned methane digester.
 - **Alternative Energy for Residences:** Support residential-scale wind and solar energy systems.
 - **Firefighter Training:** Support training for handling fires involving solar panels.
 - **Municipal Properties:** Consider renewable energy facilities on municipally-owned properties.

- **Siting Standards:** Ensure renewable energy projects do not negatively impact agricultural lands, scenic views, or require extensive new infrastructure.
- **Transportation Energy Goals**
 - **Local Economic Development:** Promote agricultural and forestry-based businesses and small retail to reduce commute distances.
 - **Biofuel Production:** Encourage the production of biofuels as an agricultural business.
 - **Farm Energy Needs:** Encourage farms to use alternative energy, such as agrivoltaics.
 - **Ride-Sharing:** Promote ride-sharing services and identify carpooling parking lots.
 - **Vehicle Maintenance:** Maintain municipal vehicles and analyze routing for efficiency.
 - **Alternative-Fuel School Buses:** Investigate funding for an alternative-fuel school bus fleet.
 - **Bicycle and Pedestrian Safety:** Extend road shoulders for safer bicycle and pedestrian use.
- **Renewable Energy Generation Potential:**
 - **Diverse Technologies:** Utilize a variety of renewable technologies to meet the Town's energy generation target.
 - **Preferred Locations:** Focus on municipally-owned properties and rooftops for renewable energy installations.
 - **Avoid Unsuitable Areas:** Refer to NVDA's "NEK Siting Guidelines for Renewable Energy Generation" found above and in the NVDA Regional Energy Plan.

Holland Town Planning Questionnaire 2023 Results

RESULTS:

109 questionnaires were returned out of 512 taxable parcels. 60 residents (of 226 homesteads), 47 non-residents (of 286 non-homesteads). Two did not answer the resident question and were not included in these totals.

1. What is your vision for Holland in the future?

	Resident	Non-Resident
Continue as a low density, primarily open space and agricultural community. A community driven place that gathers regularly and supports each other when in need.	1.67%	6.38%
A community driven place that gathers regularly and supports each other when in need.	16.67%	23.40%
Become more self-sufficient community with services and more housing opportunities.	11.67%	0.00%
Continue as a low density, primarily open space and agricultural community.	58.33%	63.83%
Other	8.33%	2.13%
NA	3.33%	4.26%

Comments

Open the border over the mountain to build a community with our northern neighbors.
Create environment that will attract young families.
Agricultural community that supports each other when needed.
Become a more self-sufficient community with services and more housing opportunities. A community driven place that gathers regularly and supports each other when in need.
No opinion. I'm too old. Younger people should be making this decision.
Continue community services like the food shelf. big benefit.
Continue as a low density, primarily open space and agricultural community. A community driven place that gathers regularly and supports each other when in need. Mostly low density.

2. What is the biggest issue facing the town?

	Resident	Non-Resident
Town taxes too high and school taxes too high	6.67%	4.26%
Quality of roads	11.67%	12.77%
Town taxes too high	10.00%	12.77%
School taxes too high	28.33%	12.77%
Lack of fire hydrants	5.00%	2.13%
Other	23.33%	27.66%
NA	15.00%	27.66%

Comments

Apathy of the town's people!
Community involvement.
A community rec-center and fields would be great for community events, recreation etc.
Cost of living.
Destroying all the fields access because of ditching.
Finding a road commissioner.
Internet (x2).
lack of community (x3).
Recreation for children and families.
Maintaining open space and forested land.
Maintaining the school building
Mentality of families to self-care and over reliance on tech.
Promote small businesses, open a store, invite other community members to spend money in town. Example Brownington.
Need number to get in touch with someone in emergency flooding.
Trespassing/ Disrespect of property owners (x2).
Not sure.
Public works/ highway dept. does a good job with roads, based on many challenges.
Roadside garbage.
Too much sub division.

3. Should the town have a capital plan/budget for road improvements/equipment and other capital costs?

	Resident	Non-Resident
No	8.33%	2.13%
Yes	70.00%	72.34%
Undecided	16.67%	17.02%
Other	0.00%	0.00%
NA	5.00%	8.51%

4. Should the town develop long range plans for maintenance and improvement of town roads?

	Resident	Non-Resident
No	3.33%	2.13%
Yes	86.67%	85.11%
Undecided	6.67%	8.51%
Other	0.00%	0.00%
NA	3.33%	4.26%

Comments

Start the conversation.
Especially the gravel roads. Good job so far!

5. Should the town continue to allow recreational vehicles on town roads as per the ordinance?

	Resident	Non-Resident
No	18.33%	14.89%
Yes	68.33%	63.83%
Undecided	11.67%	17.02%
Other	0.00%	0.00%
NA	1.67%	4.26%

Comments

What walk??? :)
The midnight runs of 8-10 in a row multiple nights this summer really annoy a person.
RV use on roads has been reasonable. My concern is town liability for possible incidents between RV's & agricultural vehicles during harvest periods.

6. Should the town buy the school at a minimal price for town use?

	Resident	Non-Resident
Sell	11.67%	6.38%
Buy just land	5.00%	2.13%
Buy land and building	36.67%	57.45%
Buy just building	0.00%	2.13%
Undecided	36.67%	27.66%
Other	8.33%	4.26%
NA	1.67%	0.00%

Comments

Only if they can guarantee revenue with it.
Seems ridiculous a town would have to buy a municipal building on town land!
Events & gatherings are great there - could rent out too!
More info. What is the minimum price? Need meeting.
Continue/grow as a community center.
Only if there is a plan for the building.
Who currently owns it?
Depends on how beneficial it would be for the town.
What would be its best use if purchased.
Town taxpayers cannot afford to buy and maintain.
The school is costing taxpayer money!

7. Should the school building and land be sold?

	Resident	Non-Resident
No	43.33%	48.94%
Yes	21.67%	27.66%
Undecided	28.33%	17.02%
Other	1.67%	0.00%
NA	5.00%	6.38%

Comments

Need the appraisal, updated for the current market.
Town use it.
Need meeting.

8. Should the town have a community center?

	Resident	Non-Resident
No	23.33%	14.89%
Yes	51.67%	57.45%
Undecided	20.00%	25.53%
Other	0.00%	0.00%
NA	5.00%	2.13%

Comments

School (x3).
A few activities a year are difficult.
Great idea, but probably not doable.

9. Should the town provide recreational opportunities for residents?

	Resident	Non-Resident
No	23.33%	25.53%
Yes	50.00%	53.19%
Undecided	23.33%	14.89%
Other	0.00%	0.00%
NA	3.33%	6.38%

Comments

Cost?

10. Should the school grounds be upgraded for recreational use? (softball, hockey, playground, etc.)

	Resident	Non-Resident
No	25.00%	17.02%
Yes	38.33%	55.32%
Undecided	28.33%	21.28%
Other	0.00%	0.00%
NA	8.33%	6.38%

Comments

Again cost?

Depends who owns it.

11. Should the town invest in renewable technology (solar/methane digester/etc.) to reduce costs and taxes?

	Resident	Non-Resident
No	26.67%	27.66%
Yes	53.33%	57.45%
Undecided	16.67%	14.89%
Other	0.00%	0.00%
NA	3.33%	0.00%

Comments

Whatever they can afford.

No wind (x2).

Cost?

12. Should the town build a new town garage?

	Resident	Non-Resident
No	35.00%	29.79%
Yes	31.67%	17.02%
Undecided	30.00%	51.06%
Other	0.00%	0.00%
NA	3.33%	2.13%

Comments

If needed (x4).
Hire someone to clean, organize and repair. A fraction of cost, compared to a new garage!

13. Should the town invest in fire hydrants?

	Resident	Non-Resident
No	33.33%	36.17%
Yes	36.67%	25.53%
Undecided	25.00%	36.17%
Other	0.00%	0.00%
NA	5.00%	2.13%

Comments

No fire hydrants or station.
Cost (x2).
I don't know what that means.
If needed.

14. Should the town restore old gravestones?

	Resident	Non-Resident
No	30.00%	17.02%
Yes	45.00%	57.45%
Undecided	16.67%	25.53%
Other	1.67%	0.00%
NA	6.67%	0.00%

Comments

Cost?
For historical purposes yes.

15. Should the town invest in making more cemetery space?

	Resident	Non-Resident
No	33.33%	23.40%
Yes	31.67%	21.28%
Undecided	31.67%	51.06%
Other	0.00%	2.13%
NA	3.33%	2.13%

Comments

If needed (x4).
Cost?