

ESTABLISHED 2024

# TOWN OF HOWLAND

COMPREHENSIVE PLAN



A COMPREHENSIVE VISION FOR  
THE FUTURE OF HOWLAND  
INTO 2035

## ***ACKNOWLEDGMENTS***

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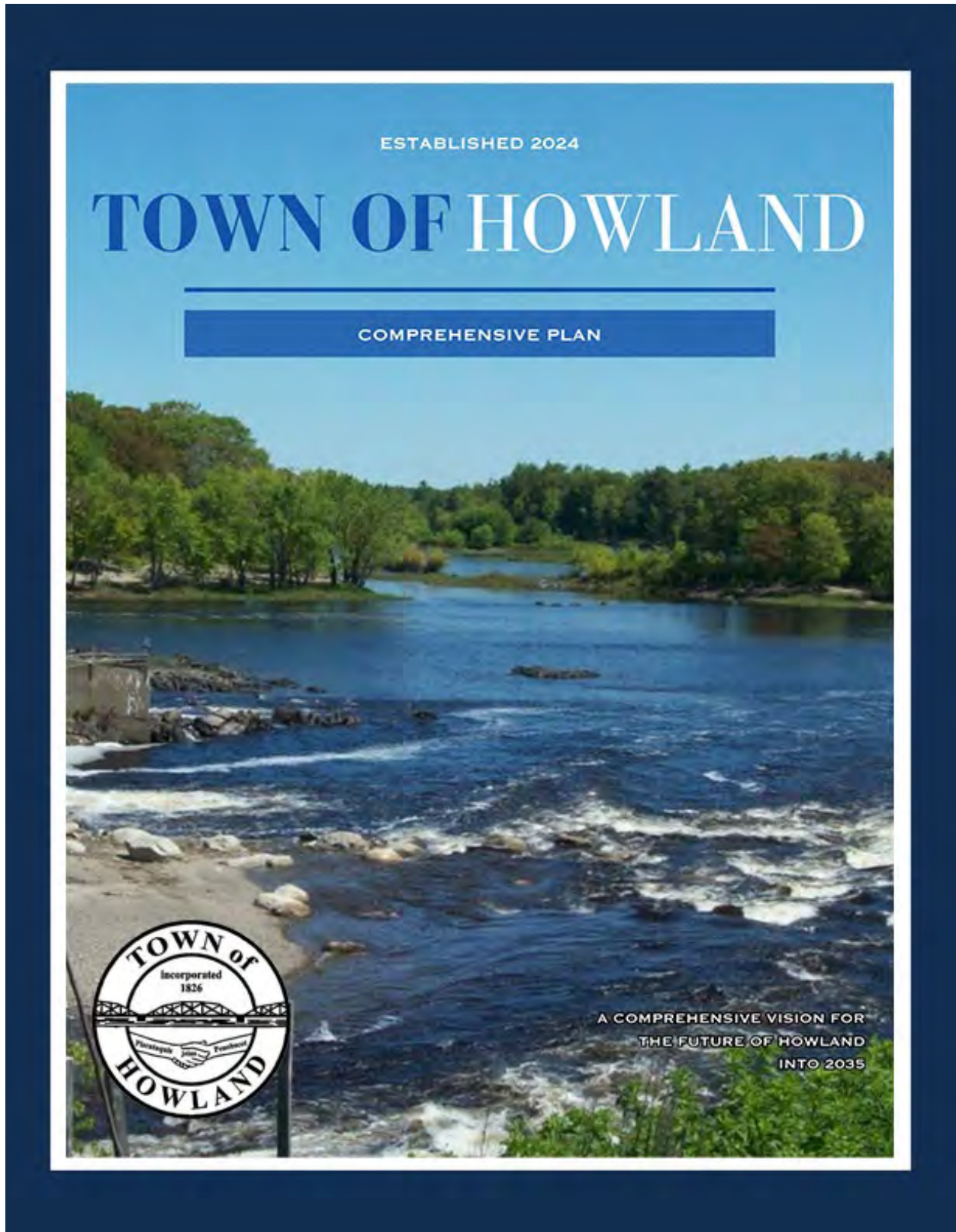
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## *Executive Summary*



In an ever-changing world, comprehensive plans can offer forward-thinking frameworks for a town's growth and development over the next decade. This plan reflects Howland's vision of fostering economic vitality, housing opportunities, environmental stewardship, and land use to help the town plan for whatever future is most advantageous for its residents.

### **Future Land Use Plan: Key Goals and Policies**

The Future Land Use Plan is a central component of the Comprehensive Plan, designed to guide development while addressing Howland's unique opportunities and constraints. The plan aligns with the state's goal to encourage orderly growth, protect rural character, and prevent sprawl.

### **Guiding Development Patterns**

The plan identifies growth areas that leverage existing infrastructure, such as water and sewer systems, and proximity to transportation networks, including Routes 2, 155, and Interstate 95. These areas will accommodate future residential, commercial, and light industrial development while minimizing environmental impacts. Special districts, such as the Mixed-Use and Critical Waterfront areas, are designed to foster economic diversity and ensure sustainable land use practices.

### **Responding to Housing Needs**

Howland's Future Land Use Plan addresses Maine's ongoing housing crisis, emphasizing the creation of affordable, accessible, and diverse housing options. By promoting residential development in designated growth areas and leveraging state legislation like LD 2003, the plan seeks to increase housing availability for low- and moderate-income households. Strategies include:

- Encouraging infill development and the rehabilitation of underutilized properties.
- Supporting mixed-use districts for higher-density, walkable communities.
- Allowing accessory dwelling units (ADUs) and density bonuses for affordable housing.

### **Conservation and Environmental Stewardship**

Protecting Howland's natural resources is a cornerstone of the plan. Critical Rural, Open Space, and Aquifer Protection districts safeguard wetlands, wildlife habitats, and water resources. Collaborative efforts with regional and state partners enhance these conservation initiatives, ensuring sustainable development practices that preserve the town's ecological integrity.

### **Economic and Infrastructure Development**

The plan supports strategic economic growth through:

## Introduction

- Maintaining the Industrial District near major transportation routes to attract light and heavy industries.
- Promoting small-scale commercial development in the town center and along key corridors.
- Enhancing public infrastructure, such as roads, water, and sewer systems, to support growth areas.

## Looking Ahead

Over the next decade, Howland anticipates modest growth, with projections of 20–40 new residential units and small-scale commercial and industrial development. By concentrating development in well-suited areas, the town aims to enhance its quality of life while maintaining fiscal and environmental responsibility.

The Comprehensive Plan positions Howland as a resilient and vibrant community, prepared to adapt to emerging challenges and opportunities. By aligning growth with community values and fostering collaboration at all levels, the plan ensures a prosperous and sustainable future for all residents.



## *Introduction*

A comprehensive plan guides the future growth of a municipality and creates a collective vision for local community and economic development. As a long-range plan, the document serves as



an inventory of current community conditions and trends and identifies characteristics important for local growth. Adopting a comprehensive plan consistent with the State of Maine’s Growth Management Act has numerous advantages including preferential consideration when applying for state grants, promoting local resource protection, and providing a foundation for land use related decision-making. Following a framework established by the State of Maine, the Enfield Comprehensive Plan contains chapters in which related goals, analyses, policies, and strategies direct future growth and emphasize community values.

- Population and Demographics
- Housing
- Transportation
- Economy
- Water Resources
- Natural Resource
- Agricultural and Forest Resources
- Historic and Archaeological Resources
- Recreation
- Public Facilities and Services
- Fiscal Capacity and Capital Investment Plan
- Existing Land Use • Future Land Use

### ***Howland Is on The Move***

Howland’s 2024 Comprehensive Plan builds upon the town’s rich history and evolving needs, ensuring a sustainable and resilient future. With new challenges such as the affordable housing crisis and climate resilience, this plan reflects the town’s commitment to growth while maintaining its character. Initiated in 2023, the plan is a product of extensive community input and aligns with the Maine Growth Management Act. It offers a framework for future decision-making, addressing housing, land use, and infrastructure to enhance the quality of life for all residents.

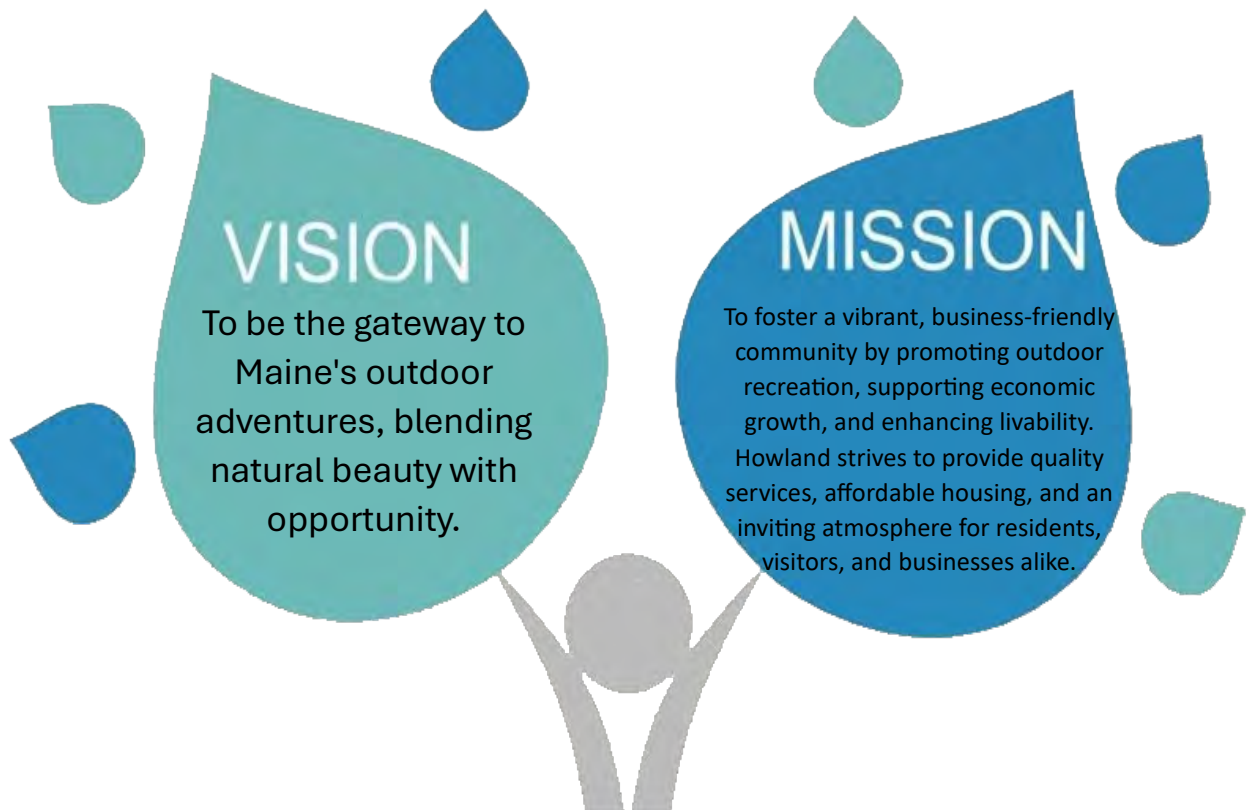
This Comprehensive Plan not only acknowledges the structural and economic changes since the 2004 version but also emphasizes community-driven solutions. Through collaboration with residents, stakeholders, and officials, the plan charts a course toward a balanced and prosperous future, ensuring that growth remains aligned with the town's values and priorities.

### ***Purpose and Vision***

The purpose of this Comprehensive Plan is to create a clear framework for decision-making over the next decade and beyond. By addressing key issues related to land use, housing, infrastructure, and community services, the plan will ensure that Howland remains a vibrant,

connected, and sustainable community. It sets forth a vision that balances future growth with the town’s natural beauty, historic charm, and close-knit sense of community.

This plan asks fundamental questions: What kind of town do we want Howland to become? How can we manage growth while preserving the features that make Howland special? The answers to these questions form the core of the plan, helping to guide local government, residents, and stakeholders in making informed choices that will benefit future generations.



### ***Statutory Context***

Developed in accordance with Maine’s Growth Management Act, this plan serves not only as a local planning tool but also as a vehicle to position Howland for state and federal funding opportunities. The goal of the act is to “To encourage orderly growth and development in appropriate areas of each community, while protecting the state's rural character, making efficient use of public services, and preventing development sprawl.” A comprehensive plan that



is found to be consistent with this act makes municipalities eligible for State grants and loans and allows municipalities to legally impose zoning and other growth and land use-related ordinances. The plan will align with state goals, ensuring that Howland continues to benefit from available resources to improve infrastructure, protect natural resources, and promote smart growth.

### ***Looking Forward***

Howland is facing new opportunities and challenges. This plan anticipates continued demand for affordable housing, changes in regional transportation needs, and the impact of climate change. By planning strategically for these issues, Howland can ensure a future that fosters economic opportunity, enhances the quality of life for residents, and protects the environment. Through careful planning, community engagement, and collaboration with regional partners, Howland can navigate these challenges and emerge stronger in the years to come.

## ***Public Participation Summary***

Participation from the Howland community played an essential role in the comprehensive planning process. Throughout the plan's four phases, a Comprehensive Planning Committee consisting of varied community leaders and members held public meetings to discuss plan chapters and the planning process. In February of 2024, a survey was distributed to the town to assess public perceptions of Howland's quality of life as well as community opportunities and challenges. To enhance participation, surveys were accessible online and on paper in the Town Office. Upon the deadline, sixty-eight individuals participated in the survey via online form and mail. While not all respondents answered all questions, unanswered questions are classified as "No response," for the purposes of capturing the total number of respondents throughout the survey analysis. The survey and analysis are a joint effort between Eastern Maine Development Corporation and the Town of Howland. Through the community survey, personal interviews, and Comprehensive Planning Committee, local involvement shaped and enriched the plan's vision and analyses.

## ***Regional Coordination***

As a small community, Howland actively collaborates with neighboring municipalities to foster regional development and improve residents' quality of life. It hosts EMS services for the newly established Maine Highlands District 1 and collaborates with several local school districts, including MSAD 31, AOS 43, and Northern Penobscot Tech Region III.

By partnering with adjacent towns, Howland utilizes shared strengths to address common challenges, thereby building a more robust and resilient rural community. The town will continue to effectively manage essential resources, including education, emergency services, natural

resources, and water. Given the rural nature of Howland and its neighbors, no conflicting policies or strategies have been identified.

## *Evaluation*

Howland's Comprehensive Plan is a collaborative effort that reflects the community's shared aspirations, values, and dedication to a sustainable future. It emphasizes the appreciation for its rural identity, the preservation of natural resources, and the flourishing of a vibrant, interconnected community. This plan is designed to honor Howland's past while preparing for future challenges.

This comprehensive plan has been assembled and compiled with the genuine intention that all of the data and information contained herein is reasonably accurate and correct. The information contained in this plan was gathered from the sources cited. Some of the sources were found to be more detailed and more recent than other sources. Where appropriate, future application of the information contained in this plan should be preceded by a check of the sources to see if additional or revised information is available. Most of the information contained in the plan is considered current enough and of sufficient detail to support the conclusions and recommendations offered. Note that while this information is suitable for general planning, it may not be appropriate for site-specific decisions.

The community will consistently assess the implementation of land use strategies, track new development, and monitor the completion of capital investment projects. As new information becomes available, the Comprehensive Plan will be updated to ensure it remains relevant and current.



# POPULATION & DEMOGRAPHICS





# Population And Demographics

## Population Growth

Originally land of the Penobscot Nation, European colonizers settled into the area in 1818, and quickly named it after John Howland, one of the passengers of the Mayflower. The town was incorporated on February 10, 1826, from township T1 R7 NWP. It later set off land to form the town (now township) of Mattamiscontis in 1839.

As Seen in chart 1.0, Howland has seen some fluctuation over the last 100 years, but largely remained stable in population growth. Although population has trended towards a decrease more recently, overall, the population has increased in this time period by 370 people. On top of this, since 2020, Maine has seen higher population growth than the rest of New England. Given that, population may well increase beyond predicted projections in the next 10-20 years (Chart 1.1).

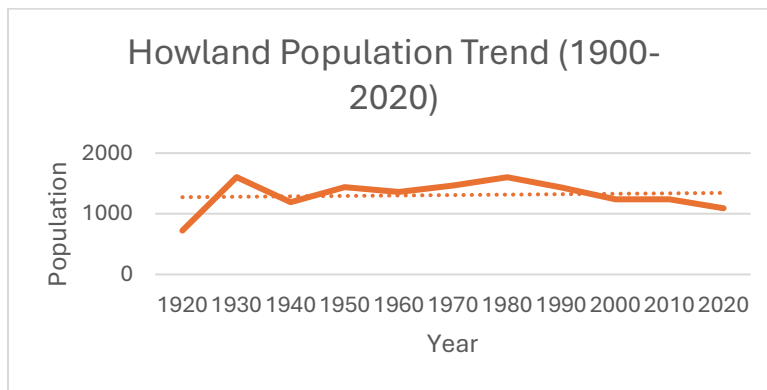


Chart 1.0: Population of Howland through the last 100 years (1920-2020). Source: U.S. Census Bureau

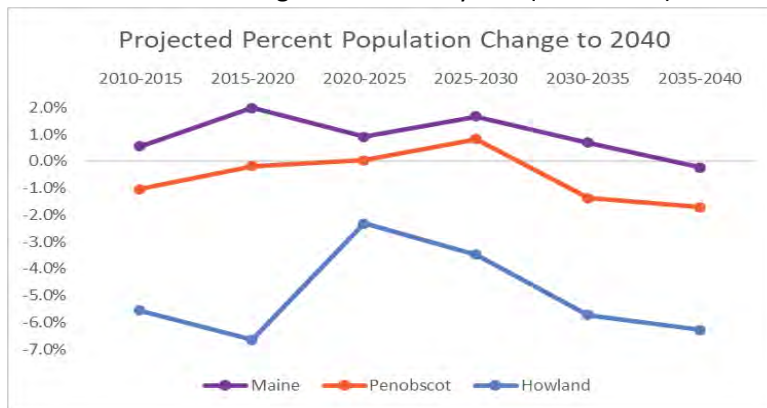
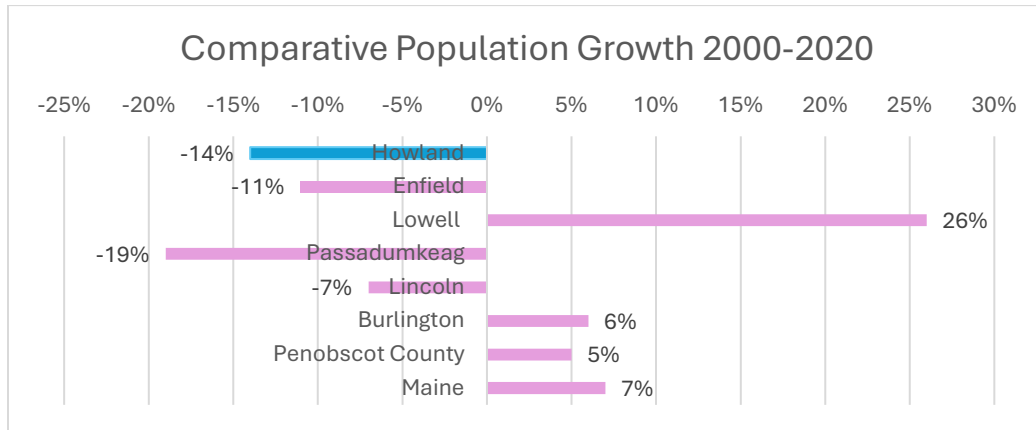


Chart 1.1: Projected population fluctuation of Howland, Penobscot County, and the State of Maine within 20 years. Source: Maine State Economist

## Population and Demographics

Howland's population projections are similar to Penobscot County and State; however, the decrease is greater overall. Only time will tell if this is accurate, given the changing population dynamics after the mass migration during the COVID-19 Pandemic.

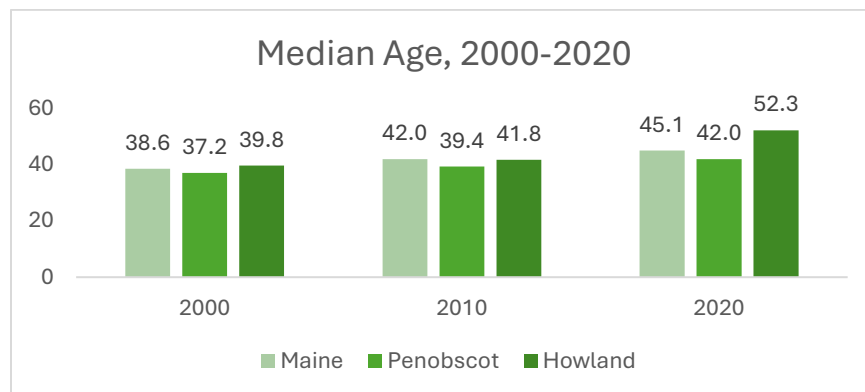
Compared to other towns, Howland has seen a greater decrease in population size over the last 20 years due to the existence of several mills over the last few decades.



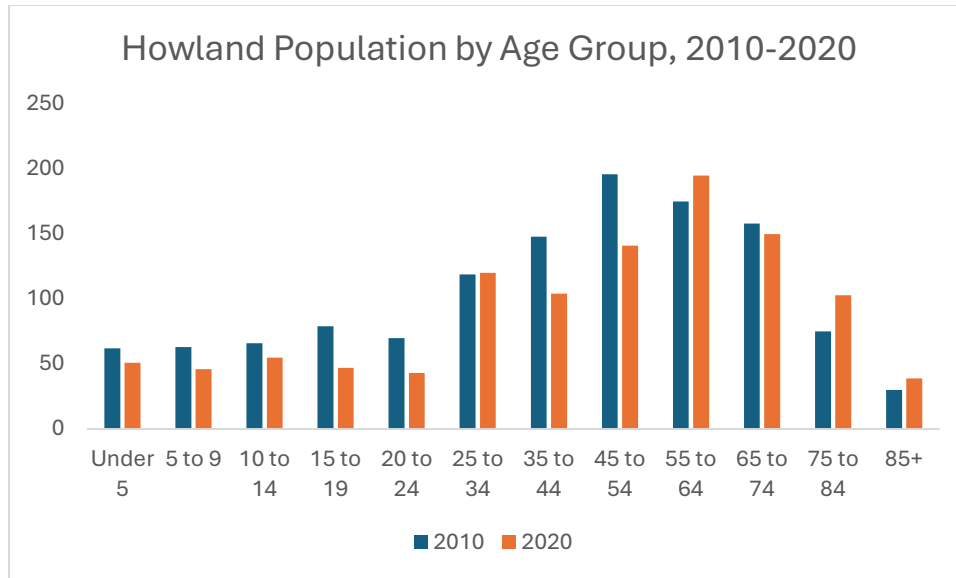
**Chart 1.2:** Comparative population growth of Howland and adjacent towns. Source: U.S. Census Bureau

## Age Distribution

The median age at the time of the 2020 census was 52.3. That's much older than the state average of 45.1 and the county average of 42 years (Chart 1.3). It's also a rather large jump comparatively from 2000. The population change reflects the trend of overall aging in the town, and what may be needed in years to come.



**Chart 1.3:** Median Age in Howland, Penobscot County, and Maine from 2000-2020. Source: U.S. Census Bureau.



**Chart 1.4:** Change in population age group in Howland Maine from 2010 to 2020. Source: Maine State Economist

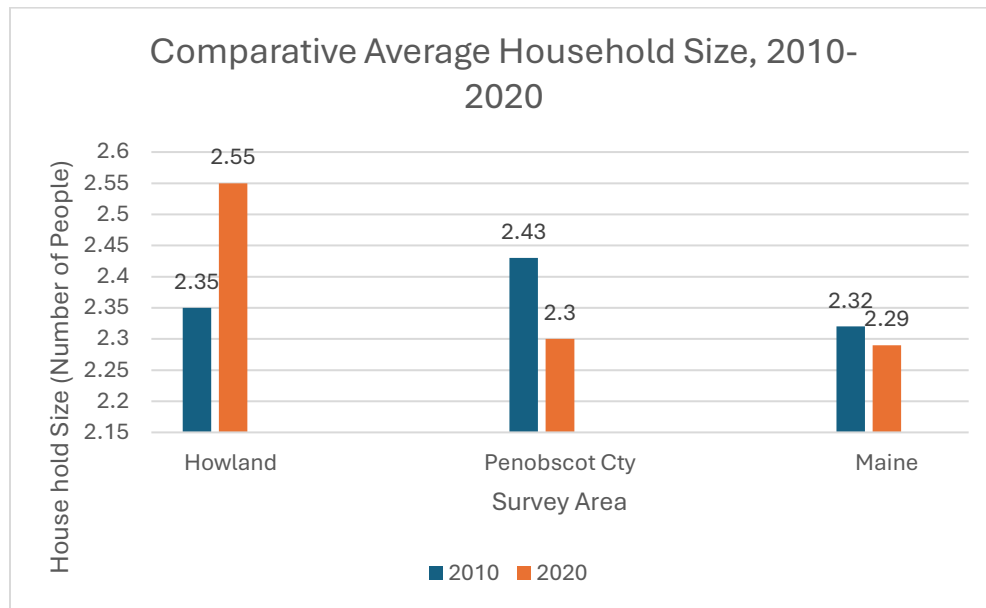
Chart 1.4 shows a decline in school-age children from 2010 to 2020, and an increase in the elderly population. Individuals aged 55-64 now represent the most dominant age group where 10 years previously, they were the second most dominant. If this trend is to continue, some implications of this change may be that due to the reduced number of working-age individuals may result in the decline of the local workforce, making it difficult for businesses to find employees and potentially leading to further decline in economic growth. With that, may come a reduction in services. With a decreased population, the reduction of certain services could lead to the consolidation or closure of institutions, making it harder for residents to access essential services. This may cause shifts in infrastructure, housing demands, and even social dynamics, noting the average age of the population.

### ***Household Size***

Defined by the U.S. Census Bureau, household size is determined by counting all the people occupying a housing unit. Over time, average household size is increasing at the local level in Howland, while the state and county are decreasing. This difference may be influenced by overall migration patterns, age demographics, and variations in housing preferences. Looking at specific dynamics and the population trends in Howland, there are fewer total households from 2010 to 2020 (493-479), which is often associated with greater average household size. Put simply, less housing stock may lead to more instances of cohabitation. This could be a result of lower residential mobility from higher housing costs. This sentiment seems to be echoed by community voices.



There is a greater likelihood that because a majority of residents are aging, and as housing gets more expensive than wages can keep up with, younger family members are moving in to manage the home and mitigate expenses and costs of elderly housing or of housing in general. This trend reflects similar ones in the more rural US, where housing costs continue to rise, and fewer people can afford to move out of familial homes.



**Chart 1.5:** Household Size across Howland, Penobscot County and The State of Maine. Source: U.S Census Bureau

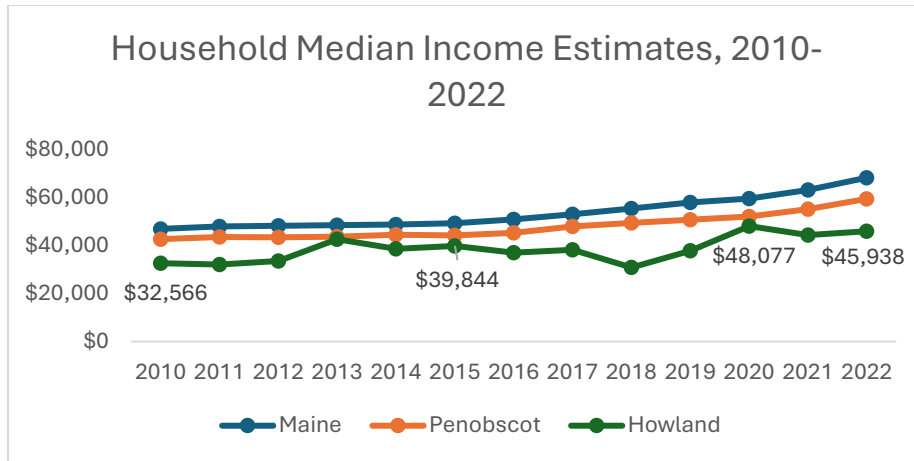
### ***Seasonal Housing***

According to the U.S. Census Bureau, seasonal housing is defined as vacant housing units intended for occupancy only during certain seasons of the year and are found primarily in resort areas. The community reports that there is little seasonal housing in Howland, and little to no demand for it.

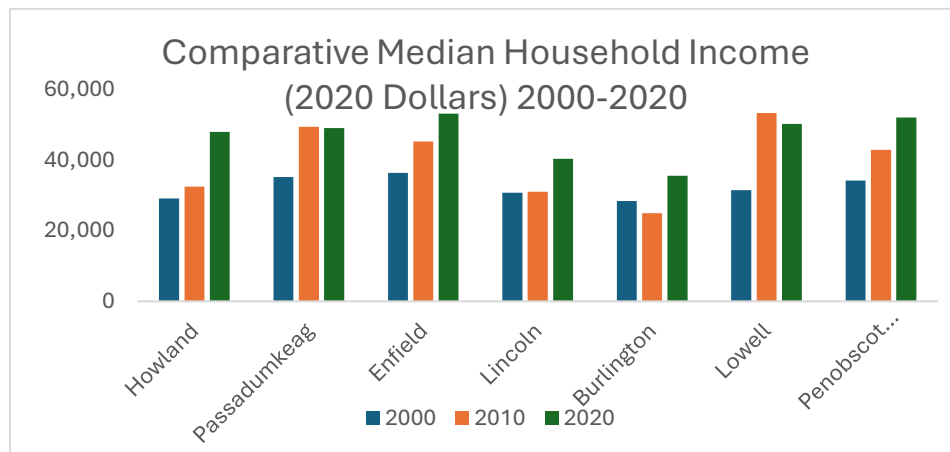
### ***Income***

The income in Howland has stayed relatively stable in the last 10 years, growing only slightly. It is comparably lower than that of the state and of Penobscot County. Its rise from \$32,566 in 2010 to \$45,938 in 2022 is an increase of 41% (Chart 1.5). Again, comparing Howland’s income to that of the county in 2022 (\$59,438), the median income is approximately \$13,500 lower as of 2022. Going back and looking to chart 1.4, this rise is likely indicative of higher income typical of those near retirement age and likely earning their peak salary.

## Population and Demographics

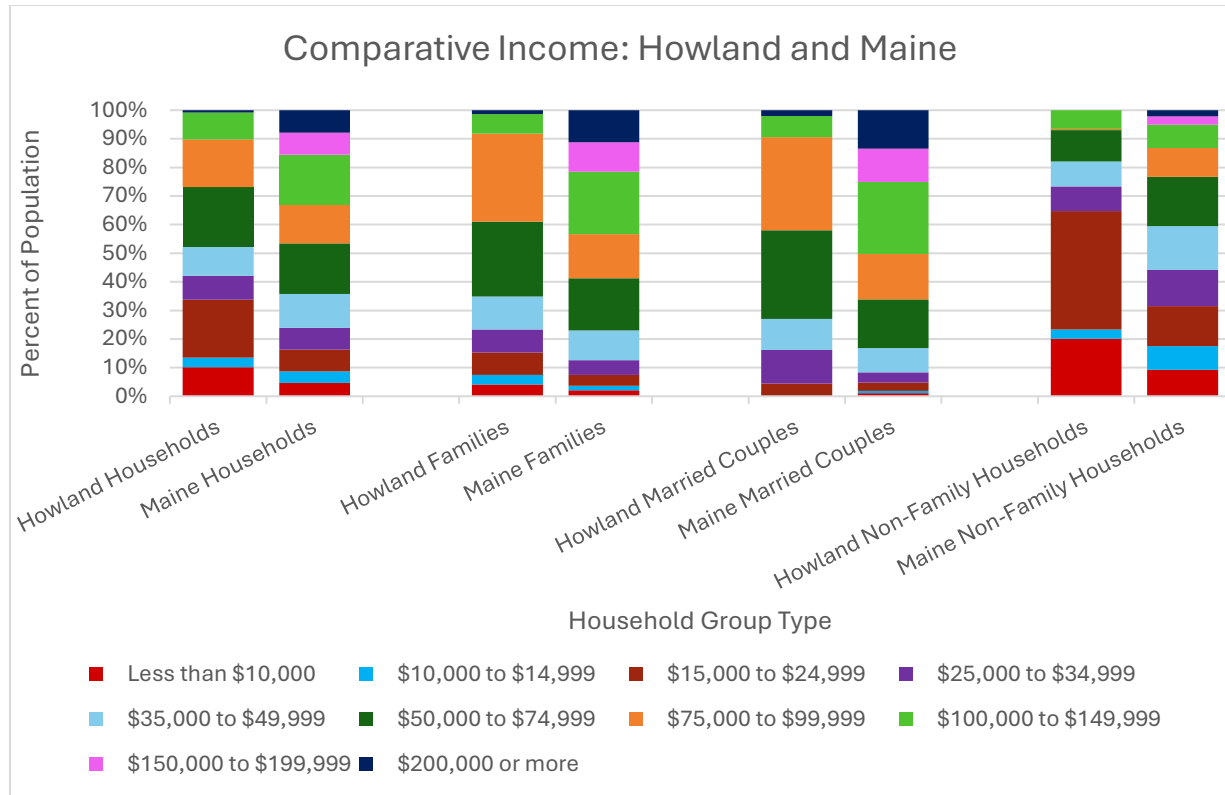


**Chart 1.6:** Household and Median income estimates for The State of Maine, Penobscot County, and Howland, 2010-2022. Source: Maine State Economist



**Chart 1.7:** Comparative Median Household Income (2020 Dollars) 2000-2020. Source: U.S. Census Bureau

Looking at incomes across the region, chart 1.7 shows income growth across several adjacent towns. Although Howland did not have the highest median income in 2020, it certainly saw the greatest immediate growth from 2010-2020 out of all the included municipalities, as well as the county (shown above).



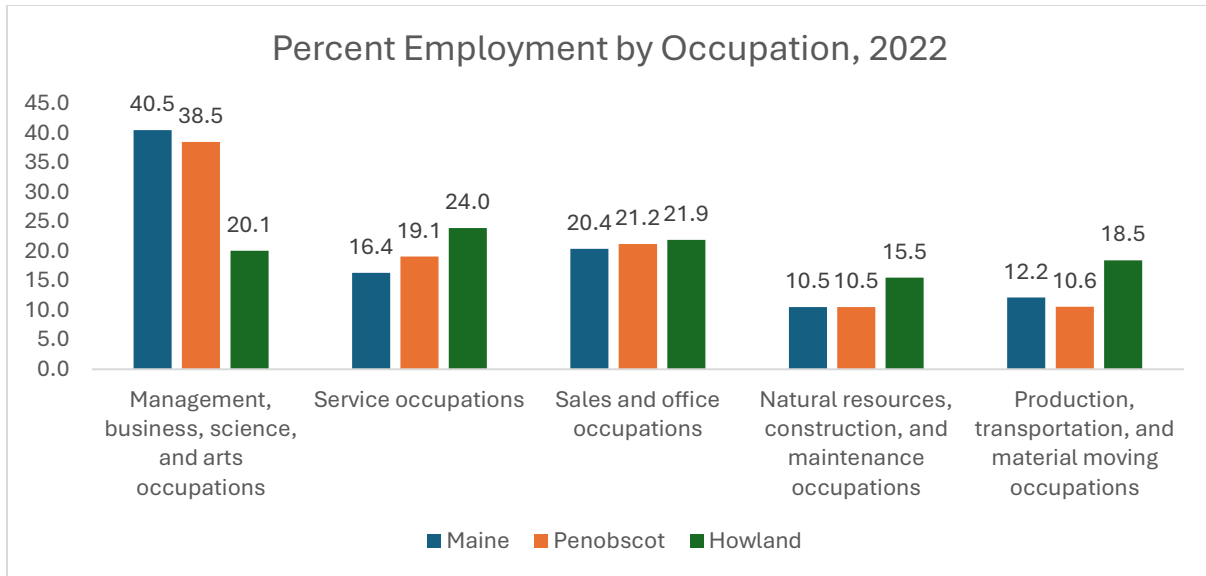
**Char 1.8:** Comparative Income percentages of Households in Howland and Maine in 2022. Source: U.S. Census Bureau

As for comparing Howland’s income to Maine’s as a whole, the data in chart 1.8 show some stark differences between income and living situations. What seems to be most evident, is the greater percentage of people in “Non-Family Households” and households in general making under \$24,999 (<60%). Although non-family households can be a householder who lives alone or with an unmarried partner, historic trends with households in other municipalities across the US making similar salaries suggest that more people in Howland are seeking out roommate-type living situations. An implication of what this graph is showing is that Howland may pay closer attention to addressing low-income housing for residents in this situation.

### **Employment**

Among the population employed in Howland, there is a rather even distribution across noted sectors, with the most workers -by 2,1% concentrated in service occupations (Chart 1.9). Looking at the state and county, most employment is concentrated in management, business, science, and arts occupations.

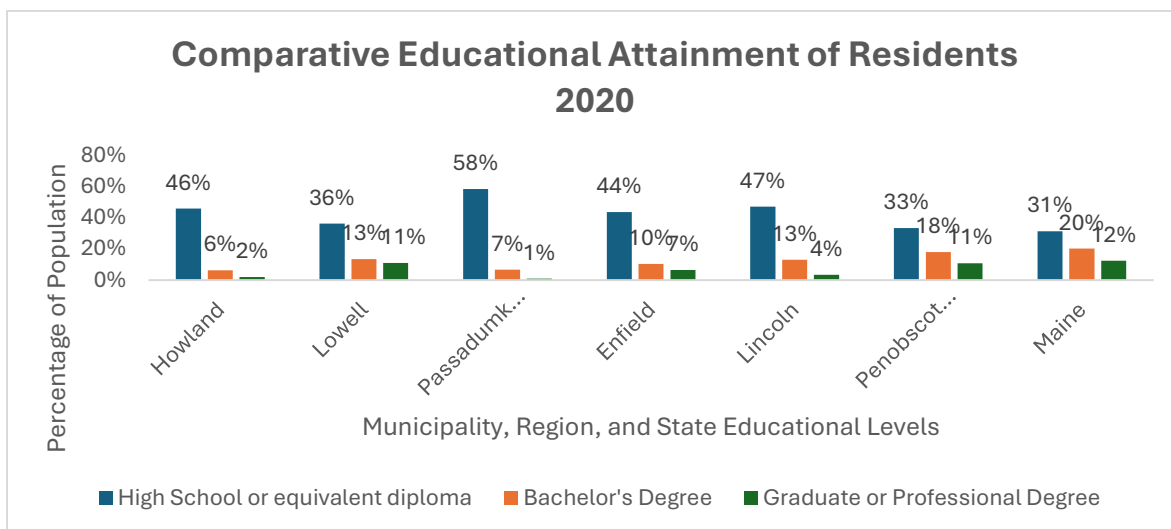
## Population and Demographics



**Chart 1.9: Percent employment by occupation in Howland, Penobscot County, and Maine.** Source: Maine State Economist, <https://econ.maine.gov/index/comprehensive>, obtained February 24, 2024

## Education

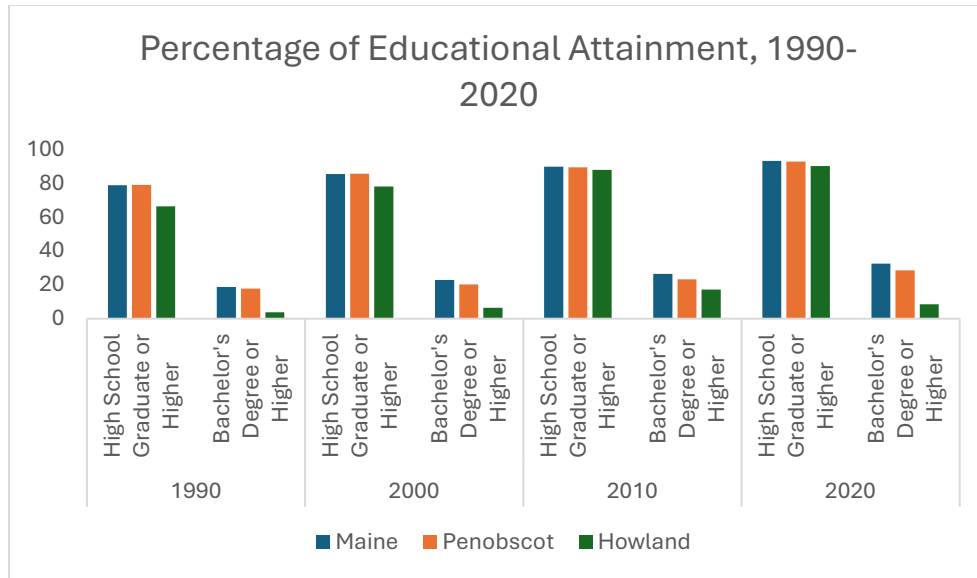
As of 2020, Howland’s secondary educational attainment is only slightly less than the average of Penobscot County. Like the surrounding communities, Howland’s residents have more post-secondary degrees than the county and state as a whole, and have more high school diplomas or equivalent. Below is a chart comparing the surrounding community, the county, and the state. Data was sourced from the US Census Bureau.



**Chart 1.10: Comparative Educational Attainment of Residents 2020.** Source: U.S. Census Bureau. obtained February 9, 2024



Following the trend of a declining population, changes potentially occurring to education in Howland may increase the need for local community involvement and partnerships, as a decreased population can lead to further consolidation of school systems and decreased class sizes.



**Chart 1.11: Percentage of Educational Attainment (1990-2020) in Howland.** Source: US Census, ACS Educational Attainment for the Population 25 Years and Over, 5-yr estimates, via Maine State Economist, obtained February 9, 2024

## Analyses

### 1. Is the rate of population change expected to continue as in the past, or to slow down or speed up? What are the implications of this change?

Based on charts 1.0 and 1.1, Howland’s population is expected to steadily decrease until at least 2040. This change, however, does not account for out-of-state populations coming into the area to settle and work from home. If the decrease in population is to come to fruition, the implications for Howland are potentially intensified economic challenges, with potential job losses and decreased local business activity. The declining population might strain local services, impacting schools, healthcare facilities, and other community resources. This can lead to a diminished sense of community vitality and may necessitate strategic planning to adapt to changing demographics, potentially requiring revitalization efforts to attract new residents or industries.

If it were more accurate that Howland is experiencing a slight surge in population growth as seen in other Maine municipalities, the town could see stimulated economic activity, create job

opportunities, and potentially attract new businesses. However, it may also put a strain on local infrastructure, demand for housing, and pressure on public services.

**2. What will be the likely demand for housing and municipal and school services to accommodate the change in population and demographics, both as a result of overall change and as a result of change among different age groups?**

Following past and projected trends, it is likely that there will be less demand for housing, municipal, and school services. With fewer residents, there may be a surplus in housing units, leading to decreased property values and potential challenges in maintaining housing stock. Reduced population also impacts the demand for municipal services such as waste management, road maintenance, and public utilities. The town may need to reassess service levels based on the shrinking population.

Where the bulk of the population is also aging, there may be increased demand for senior-specific housing options such as assisted living facilities or accessible housing. Related, if younger demographics are leaving the town, or not entering the population through birth or migration, this can impact demand for school services. Fewer students may require adjustments in school budgets, staffing, and facility usage.

**3. Does your community have a significant seasonal population, is the nature of that population changing? What is the community's dependence on seasonal visitors?**

Howland experiences a seasonal influx of visitors, particularly those traveling to Cold Stream Pond in nearby Enfield. This seasonal population typically includes tourists, vacationers, and outdoor enthusiasts attracted to the natural beauty and recreational opportunities in the area. However, it's important to note that the town's dependence on seasonal visitors is not changing significantly for several reasons.

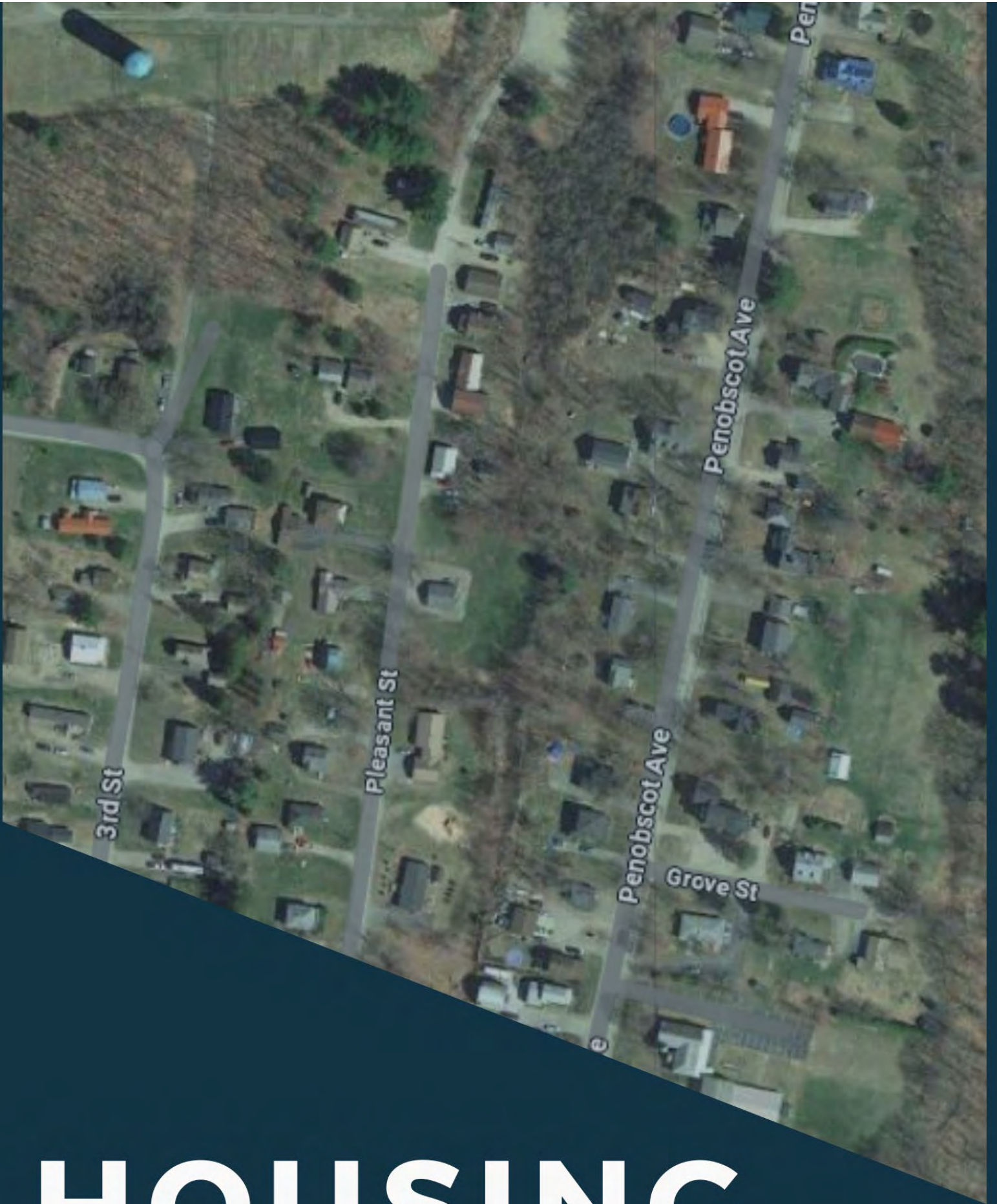
Howland's economy may benefit from seasonal tourism, but it is not solely reliant on it. The town currently has little infrastructure to support tourist activities that involve staying in town. Additionally, Howland's economic development strategies are geared to encourage year-round economic activity and community development.

**4. If your community is a service center or has a major employer, are additional efforts required to serve a daytime population that is larger than its resident population?**

The Community is not a service center, nor does it have a major employer like it used to. With the daytime population not exceeding the resident population, the strain on infrastructure such as roads, utilities, and public services may be more manageable. This means that existing infrastructure can typically handle the needs of both residents and daytime workers without

## Population and Demographics

requiring substantial upgrades or expansions. Furthermore, since the population dynamics do not create a significant imbalance, local services such as healthcare facilities, schools, and public amenities may already be adequately sized to meet the combined needs of residents and daytime workers. This creates more efficient utilization of resources and a more balanced delivery of services.



# HOUSING



## ***Housing (Housing)***

### ***Purpose***

Housing represents the major investment of most individuals in Howland. Housing, especially its affordability, is very important to the well-being of residents. The purpose of this section is to:

1. Describe the characteristics and changes of the housing stock in Howland.
2. Identify the relationship between housing characteristics and demand in Howland and the region.
3. Predict the size, characteristics, and affordability of housing needed to meet the demands of the future population.

### ***State Goal***

To encourage and promote affordable, decent housing opportunities for all Maine citizens.

### ***Policies***

To encourage and promote adequate workforce housing to support the community's and region's economic development.

To ensure that land use controls encourage the development of quality affordable housing, including rental housing.

To encourage and support the efforts of the regional housing coalitions in addressing affordable and workforce housing needs.

### ***The State of Housing***

Just as Howland lies at the confluence of the Penobscot and Piscataquis Rivers, it also lies at the confluence of two major issues facing the State of Maine. Population is going down, and the housing crisis is as real here as in any other rural town. Howland faces a pivotal juncture in its housing landscape, prompting a meticulous examination of various facets to chart a course for sustainable housing development. This chapter examines the current state of housing in the town, and delves into critical questions shaping the state of housing in the community by looking into past trends, assessing the current scenario, and anticipating future needs.

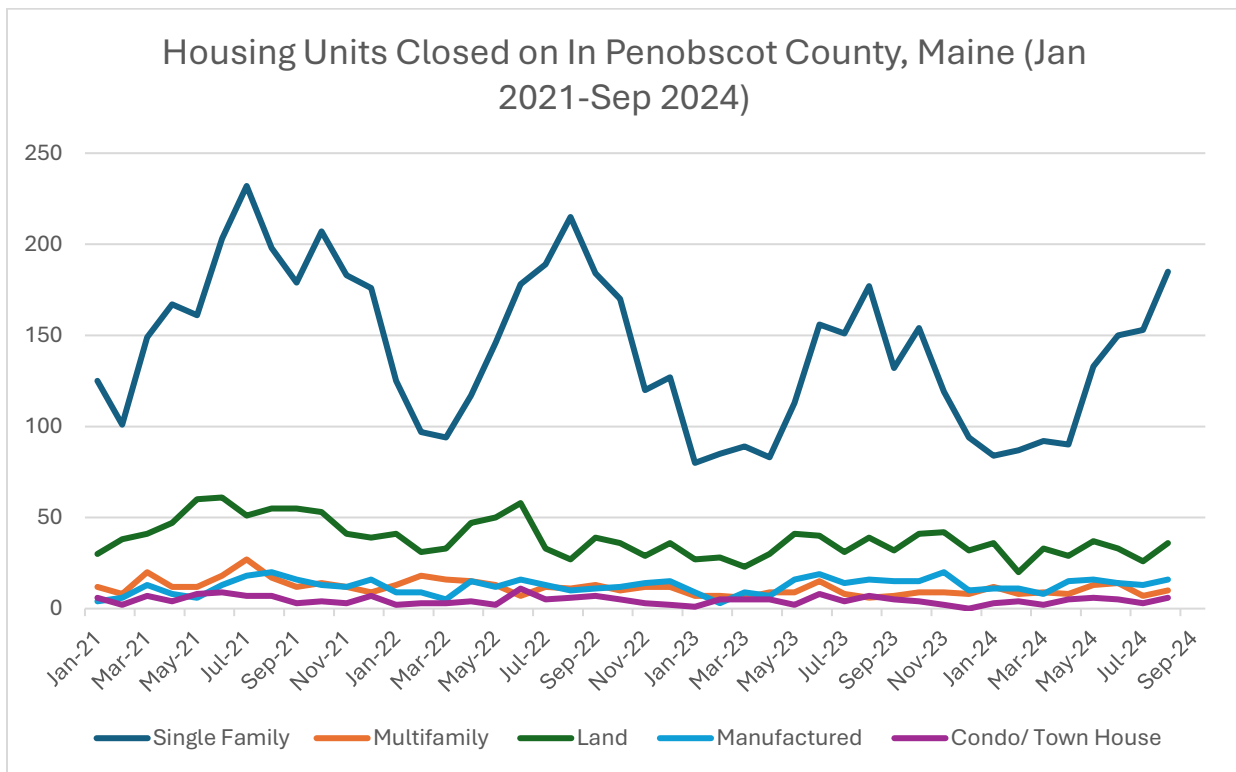
### ***Stock***

## Housing (Housing)

The last 12 years have seen barely any fluctuation in housing stock. Overall, the availability of housing units has gone down (Figure 2.0). Similarly, the number of vacant units has fluctuated only slightly, while overall going down, especially after 2018. As Howland remains one of the cheaper places to buy a home in Penobscot County, the trend of fewer vacant units may prove to continue.

The data on types of housing sold is not available on the municipal level. Looking to popular sites like zillow, realtor.com, and redfin, a total of 80 properties were sold in Howland in the last 5 years. Data are readily available for Penobscot County for the last three and a half years (2021-2024) (Chart 2.0). We can use these data to determine what types of housing Howland should focus on in the next decade.

Single family homes were the most sold in Penobscot County in 2020.



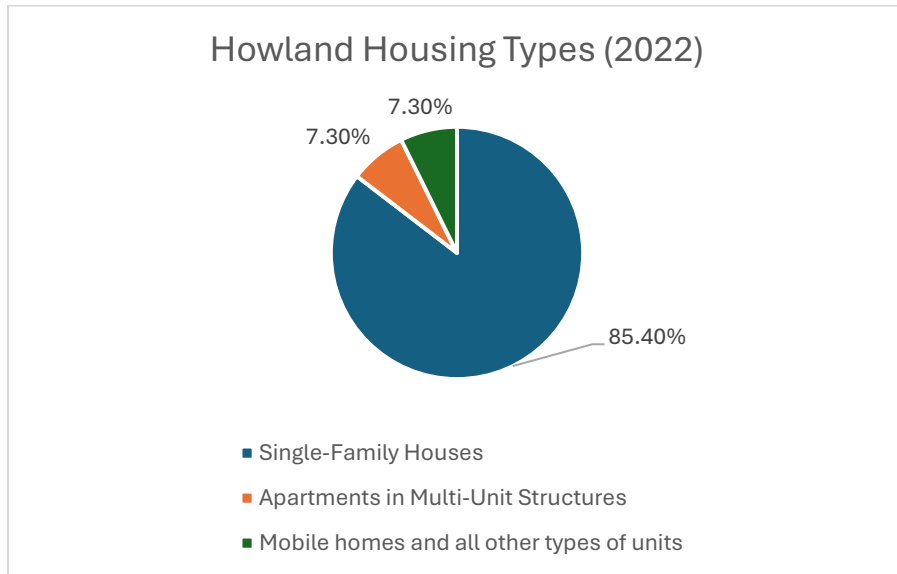
**Figure 2.0:** Housing Units Closed on In Penobscot County, Maine (2021-2024). Source: Maine Home Connection.<sup>1</sup>

In 2010, Howland had housing 639 Housing units. By 2020, the town had 71 fewer units, bringing the total to 568. As indicated in the pie chart below, approximately 85% of all housing units in Howland are single-family homes. In 2010, there were approximately 10% more apartments and

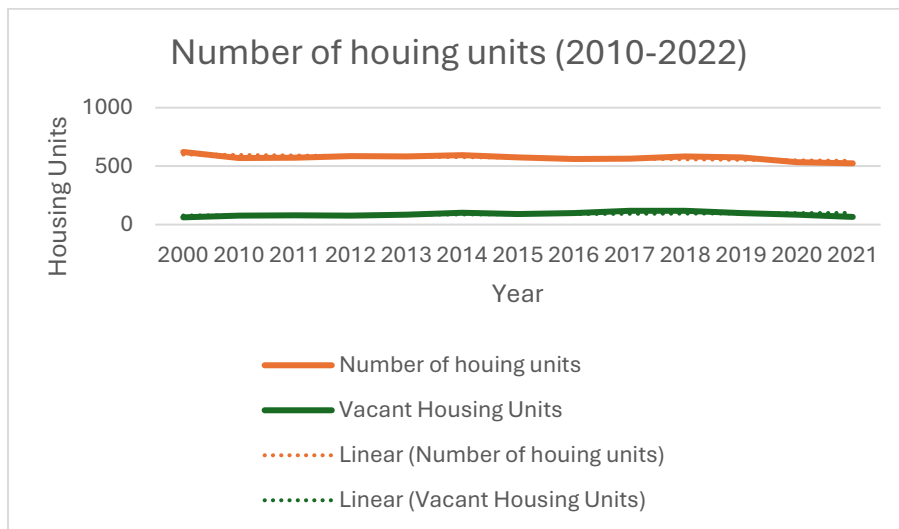
<sup>1</sup> <https://mainehomeconnection.com/stats/>

## Housing (Housing)

mobile homes. The second most common housing types are both mobile homes, and apartments in multi-unit structures, both representing about 7% of the town's housing stock.



**Figure 2.1:** Types of housing, Howland Maine (2022). Source: US Census Bureau ACS Data.



**Figure 2.2:** Fluctuation in housing, Howland Maine (2010-2022). Source: US Census Bureau ACS Data.

Looking more regionally, housing stock has gone down in more than just Howland. The changes are more reflective of the general migration to city centers like Bangor, Lewiston/Auburn, and Portland. Percentagewise, Howland has seen the least reduction in the region, with the exception of Lowell, which had no apparent growth in housing stock from 2010-2020 (Chart 2.1).

**Chart 2.1:** Regional Housing Stock Growth 2010-2020. Source: US Census Bureau

## Housing (Housing)

	2010	2020	Net change	
<b>Howland</b>	<b>570</b>	<b>568</b>	<b>-2</b>	<b>-0.35%</b>
Edinburg	69	64	-5	-7.81%
Enfield	937	891	-46	-5.16%
Lagrange	380	348	-32	-9.19%
Lowell	315	315	0	0.00%
Lincoln	2866	2683	-183	-6.82%
Maxfield	61	60	-1	-1.67%
<b>Penobscot County</b>	<b>73860</b>	<b>74878</b>	<b>1018</b>	<b>1.37%</b>
<b>Maine</b>	<b>721830</b>	<b>739072</b>	<b>17242</b>	<b>2.38%</b>

### Occupancy

Below is a snapshot of Howland's overall housing stock and occupancy. Between 2000 and 2020, housing occupancy in Howland had remained relatively the same. Of the 621 total housing units in Howland in 2000, 559 were occupied and 62 were vacant (90% and 10% respectively). With the removal of approximately 53 housing units between 2000 and 2020, the percentage of units that were occupied and vacant were 87% and 13%. Looking more closely at percentage changes, owned units have appeared, and vacant units have gone up slightly, while renter units have gone down over time. Usually, data like these would suggest less competition for rentals and rent prices going down. However, the town states the opposite. Rents have apparently gone up significantly and there is reportedly more competition.

**Chart 2.1:** Howland Housing Occupancy 2000-2020. Source: US Census Bureau

	2000		2010		2020	
	#	%	#	%	#	%
<b>Total Housing Units</b>	621		570		568	
Occupied	559		493		494	
Owner	401	64.57%	377	66.14%	409	72.01%
Renter	158	25.44%	116	20.35%	85	14.96%
Vacant	62	9.98%	77	13.51%	74	13.03%
Seasonal	N/A		N/A		N/A	
Vacancy rate	N/A		4.8		2.1	

### Affordability

The affordability of housing in Howland, Maine, presents a significant challenge for residents, particularly for individuals earning 80% of the median income in the region, which stands at \$47,731.60. The average price of a house in Howland and neighboring communities is \$158,305.50, which translates to an average mortgage payment of approximately \$1,400 per month at today's interest rates ranging from 6% to 8%, depending on factors like down payment, mortgage length, and credit score.



## Housing (Housing)

When considering the national guideline that housing costs should not exceed one-third of a person's income, the average mortgage payment should ideally be around \$1650 a month for someone earning the median income. Similarly, individuals at 80% of the median income should be spending approximately \$1325 a month on housing expenses. However, with the average mortgage amounting to \$1,400 per month, these figures indicate that owning a home in Howland is generally unaffordable for individuals making these incomes.

Moreover, utilities such as heat, internet, electricity, water, and sewer add an additional financial burden, averaging around \$580 per month. When combined with the mortgage payment, total housing costs exceed the recommended affordability threshold for both median-income earners and those at 80% of the median income. This affordability gap highlights the challenges faced by residents in securing affordable and suitable housing options.

The unaffordability of housing can have several implications for the community. It may lead to a decreased ability for individuals and families to build wealth through homeownership, impacting long-term financial stability and wealth accumulation. Limited affordable housing options can also contribute to population outmigration, particularly among younger demographics and lower-income residents, affecting community vibrancy and economic vitality.

### ***Regulations and Policy***

Housing development in Howland, as anywhere is shaped by its local regulations. Residential zoning regulations, which include minimum lot sizes, frontage requirements, and density standards, often limit housing density and increase per-unit land costs. This can pose challenges for developers aiming to build affordable housing. Additionally, shoreland zoning regulations, designed to protect water resources, restrict development near the town's waterways. However, these measures are critical for environmental preservation, and it's important to remember that they help to preserve the delicate riverine and wetland ecosystems of Howland.

Building codes and enforcement also influence housing development in Howland. The town adheres to Maine's Uniform Building and Energy Codes (MUBEC), ensuring safety and energy efficiency in new constructions. However, compliance with these codes can elevate construction costs, particularly for developers focused on affordable housing. Additionally, limited local resources for code enforcement can lead to delays in permitting and inspections, further slowing housing projects.

In response to Maine's LD 2003 law, Howland is updating its zoning ordinances to comply with state requirements aimed at increasing housing density and promoting affordability. The town's comprehensive plan underscores the importance of addressing housing needs, identifying affordable and diverse housing options as critical priorities. At the same time, the plan emphasizes the need to balance development with preserving the way Howland wants to remain.

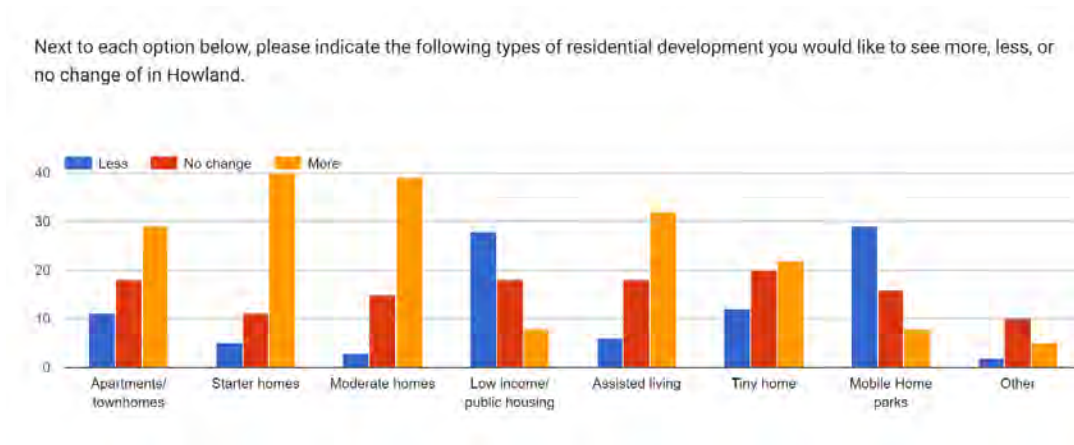
## Housing (Housing)

This dual focus influences decisions on housing density and the types of developments pursued. Additionally, partnerships with regional organizations provide technical assistance, resources, and access to funding opportunities, helping Howland address its housing challenges effectively.

### **Community Survey Results**

Sixty-eight of approximately 1094 residents completed the housing section of the community survey. Survey results indicate 59% of respondents support development of more starter homes while 43% stated that there is least need for mobile home parks (Figure 2.3).

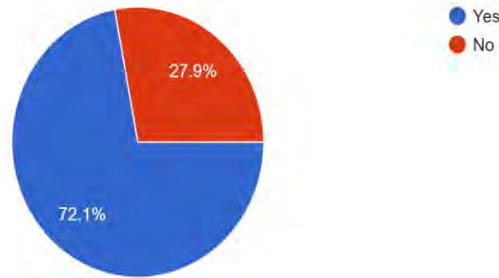
When prompted about the availability of housing, 72.1% responded that they felt it was a challenge for low to moderate-income earners to find affordable housing (Figure 2.4). As well, among housing issues important to Howland, the majority of respondents indicated that addressing abandoned properties and homes is their primary concern, which is similar to the adjacent community of Enfield. Other issues raised, in order of respondent importance, increasing middle-income housing, the amount and quality of housing stock, and elderly options (Figure 2.5). The town may plan to further investigate methods of addressing these abandoned properties and houses for planning more effective future land use.



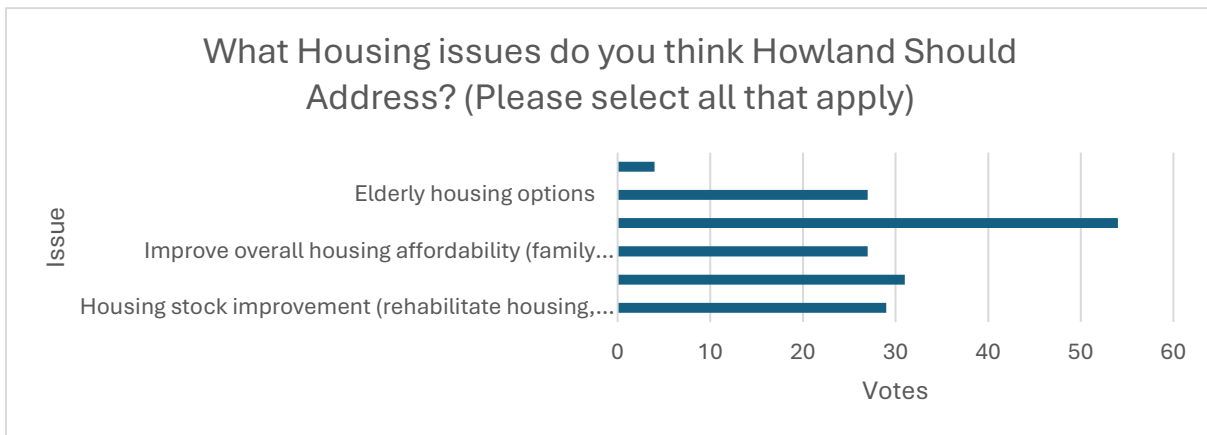
**Figure 2.3:** Perceived Housing needs of survey respondents in Howland, Maine. Source: Howland Community Survey

## Howsing (Housing)

Do you think that it is challenging for low- and moderate-income people to find affordable housing in Howland?  
68 responses



**Figure 2.4:** Perceived housing challenges to low- and moderate-income residents by survey respondents in Howland, Maine. Source: Howland Community Survey



**Figure 2.5:** Perceived housing issues by survey respondents in Howland, Maine. Source: Howland Community Survey

## Analyses

- 1. How many additional housing units (if any), including rental units, will be necessary to accommodate projected population and demographic changes during the planning period?**

According to population projections in the previous chapter, Howland's population appears to be decreasing, along with its housing stock. Based on these trends, Howland should not need an increase in housing stock, but rather, an increase in the quality of stock, as the town reports general infrastructural breakdown of its housing units. Over the next 10 years some replacement units or renovations may be required to maintain the existing housing stock.

**2. Is housing, including rental housing, affordable to those earning the median income in the region? Is housing affordable to those earning 80% of the median income? If not, review local and regional efforts to address issue.**

In the Howland region, which includes 5 other communities, the median income is \$59,664.50. 80% of the median income in the region is \$47,731.60. The average price of a house in these same communities is \$158,305.50 where the average mortgage for a house at this price with today's rate (6-8% depending on percent down, mortgage length, and credit score) comes out to approximately \$1,400 per month. If we go by the national argument that housing costs are supposed to be one-third of a person's income, average mortgage should amount to approximately \$1657.34 a month. Similarly, those making 80% of the median income should be spending \$1325 a month. Utilities are also an important factor housing costs. On average, those are \$580 (Heat, internet, electricity, water/sewer) If these data are accurate, then owning a home is overall unaffordable in Howland for just one person. Making the above-mentioned incomes.<sup>2</sup> With rentals, the average rent in and around town is set at \$760 per month on average. Adding on the same amount for utilities, rentals are overall affordable.

For those who wish to own a home, at least two people must be willing to split the costs to be able to afford the average. The only tangible local solutions to housing issues are zoning and land use policies:

Reviewing and updating zoning regulations and land use policies to incentivize affordable housing development, streamline approval processes, and allocate land for affordable housing initiatives can support affordability goals. Once Howland's Comprehensive Plan is completed, substantial efforts will be made at a local level to mitigate affordability issues, using the above solution.

Regionally, the town is coordinating with other adjacent towns to seek cost cutting measures in other areas, and combine resources, to figure out a way to make housing more affordable to the general public, using the guidelines provided by a recent housing study<sup>3</sup>.

Another posited solution was to provide financial assistance programs, grants, or tax incentives for homebuyers or developers focusing on affordable housing can make homeownership more attainable for individuals earning 80% of the median income.

**3. Are seasonal homes being converted to year-round use or vice-versa? What impact does this have on the community, if any?**

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<sup>2</sup> US Census Bureau Data. Accessed March 15<sup>th</sup>, 2024

<sup>3</sup> State of Maine Housing Production Needs Study.

[https://www.maine.gov/future/sites/maine.gov/future/files/inline-files/State%20of%20Maine%20Housing%20Production%20Needs%20Study\\_Executive%20Summary\\_Final\\_10.3.23.pdf](https://www.maine.gov/future/sites/maine.gov/future/files/inline-files/State%20of%20Maine%20Housing%20Production%20Needs%20Study_Executive%20Summary_Final_10.3.23.pdf). Accessed March 2024

## Housing (Housing)

There is currently no observable trend of converting year-round homes into seasonal housing or vice versa. However, this issue is significant and prevalent in the broader region and across the state of Maine, particularly in larger population centers. The impact of such conversions, or the lack thereof, can have several implications for the community.

Arguments exist around the subject that the conversion of homes into seasonal housing can lead to a reduction in the available housing stock for permanent residents. This can contribute to increased competition for housing, potentially driving up prices and making it more challenging for individuals and families to find affordable homes in the area. It may also lead to demographic shifts, with a potential decrease in the year-round population. Conversely, the conversion of seasonal housing into year-round homes could address some of the housing affordability challenges by increasing the supply of available housing for permanent residents.

#### **4. Will additional low- and moderate-income family, senior, or assisted living housing be necessary to meet projected needs for the community? Will these needs be met locally or regionally?**

Between 2010 and 2020, the 55-64 age group were the fastest growing in Howland (Chart 1.4). In 2020, the 55-64 age group was the most dominant age group, representing about 9% of the community. If, in the future, assisted living and senior housing, including low- and moderate-income housing is inadequate, Howland will work with appropriate entities to satisfy any needed housing. These needs will most likely be met regionally, as Howland has facilitated more regional cooperation to solve some of the more wicked issues facing most municipalities.

#### **5. Are there other major housing issues in the community, such as substandard housing?**

There are some issues the community is aware of. Firstly, much of the housing stock is aging, having roughly 25% built before prior to 1940. These may require renovations, repairs, or modernization to meet current housing standards and preferences. The cost of maintaining older homes can be a burden for homeowners, particularly those on fixed incomes.

There are also challenges related to infrastructure, including access to reliable utilities such as water, sewer, electricity, and internet connectivity. Inadequate infrastructure can impact housing quality and livability. As of 2020, there are reportedly 9 housing units lacking complete kitchen facilities according to the US Census Bureau.

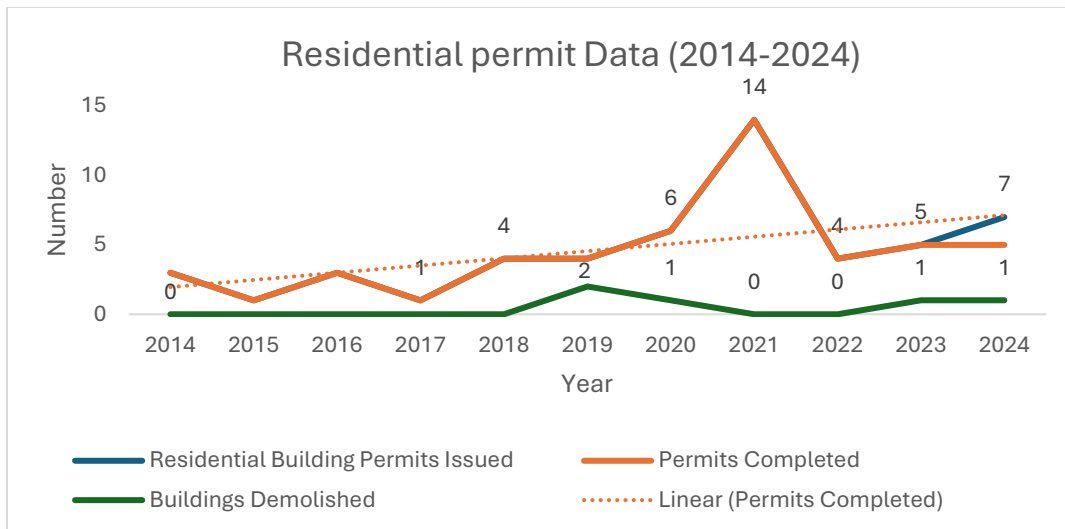
The most pertinent issue to Howland residents is the housing crisis outlined by the 2023 housing study, but made even more real by interacting with residents. Howland wants to meet all the requirements of the study to build roughly 84,000 housing units throughout Maine by 2030. Dividing these numbers to reflect region, then county needs means that Howland, with Penobscot county, would need to build 1250 Units by 2030. One feasible strategy Howland may pursue to meet these numbers is to look for specific grant funding that could fund building more units throughout town.



**6. How do existing local regulations encourage or discourage the development of affordable/ workforce housing?**

With the approval of the Comprehensive Plan will come conversations surrounding local regulations related to various types of housing development, including affordable and workforce housing. There are currently no regulations that discourage the development of affordable and workforce housing in town. Some residents posit that the tree growth tax law is prohibitive to development, as fees to remove property from it incur a high fee, which may prevent development of a given parcel.

Tracking residential permitting in the last decade, these data show an annual, albeit modest increase in residential growth through permitting. It is important to note that Howland Zoning Ordinance does not require a permit for a demolition (demo). Only if the demo is in Shoreland is a permit actually required. Howland’s lenient permitting requirements may serve as a reprieve for those looking outside a city to relocate and build a new home.



**Figure 2.6:** Residential Permits and Demolitions in Howland, Maine. Source: Town of Howland.

**Strategies**

Stabilize housing prices

Promote Land Use ordinances to support establishment of greater senior and low-income housing

Maintain, enact or amend growth area land use regulations to increase density, decrease lot size, setbacks and road widths, or provide incentives such as density bonuses, to encourage the development of affordable/workforce housing.

## Housing (Housing)

Support the efforts of local and regional housing coalitions in addressing affordable and workforce housing needs.

Maintain, enact or amend ordinances to allow the addition of at least one accessory apartment per dwelling unit in growth areas, subject to site suitability.

Create or continue to support a community affordable/workforce housing committee and/or regional affordable housing coalition.

Designate a location(s) in growth areas where mobile home parks are allowed pursuant to 30-A M.R.S.A. §4358(3)(M) and where manufactured housing is allowed pursuant to 30-A M.R.S.A. §4358(2).

Meet the requirements of the housing study to help alleviate the housing crisis by setting housing production and reinvestment targets at the local level and consider the different housing typologies that can support housing production across the income spectrum

Support the efforts of local and regional housing coalitions in addressing affordable and workforce housing needs.

Seek to achieve a level of at least 10% of new residential development built or placed during the next decade be affordable.



# TRANSPORTATION



## ***Transportation***

### ***State Goal***

To plan for, finance and develop an efficient system of public facilities and services to accommodate anticipated growth and economic development.

### ***Policies***

To prioritize community and regional needs associated with safe, efficient, and optimal use of transportation systems.

To safely and efficiently preserve or improve the transportation system.

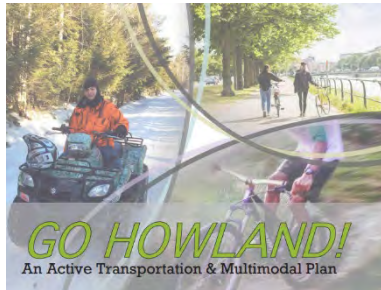
To promote public health, protect natural and cultural resources, and enhance livability by managing land use in ways that maximize the efficiency of the transportation system and minimize increases in vehicle miles traveled.

To meet the diverse transportation needs of residents (including children, the elderly and disabled) and through travelers by providing a safe, efficient, and adequate transportation network for all types of users (motor vehicles, pedestrians, bicyclists).

To promote fiscal prudence by maximizing the efficiency of the state or state-aid highway network.

### ***Importance of Mobility***

In order to sufficiently connect people to their daily needs including education, healthcare, food, and job opportunities, reliable transportation is essential, particularly in a rural setting like Howland. Without access to transportation, residents' participation in the local and regional economies is limited. While the majority of local residents rely on private vehicles to access their daily needs, continual monitoring of any transportation challenges that may arise will be key to ensuring long-term community prosperity. When it comes to transportation infrastructure, regularly assessing opportunities for the enhanced connectivity of people to local trails, businesses, and the downtown area will advance both community and economic development.



## ***The Multimodal Plan***

In 2020, an important study was conducted with support from the Maine Department of Transportation (DOT) to plan the town's active transportation. Its vision was to modify its current transportation system into an “age-in-place friendly with safe and comfortable pedestrian and bicycle facilities, integrated into the current transportation system, accommodating for alternative modes of transportation.” According to its vision. It’s important to incorporate elements of this study for a more cohesive comprehensive plan, and to reduce any potential redundancy.<sup>4</sup> The Plan emphasizes that a safe and comfortable network is essential to encourage and increase pedestrian and bicycle trips in Howland, which the town supports and encourages.

## **Community Concerns**

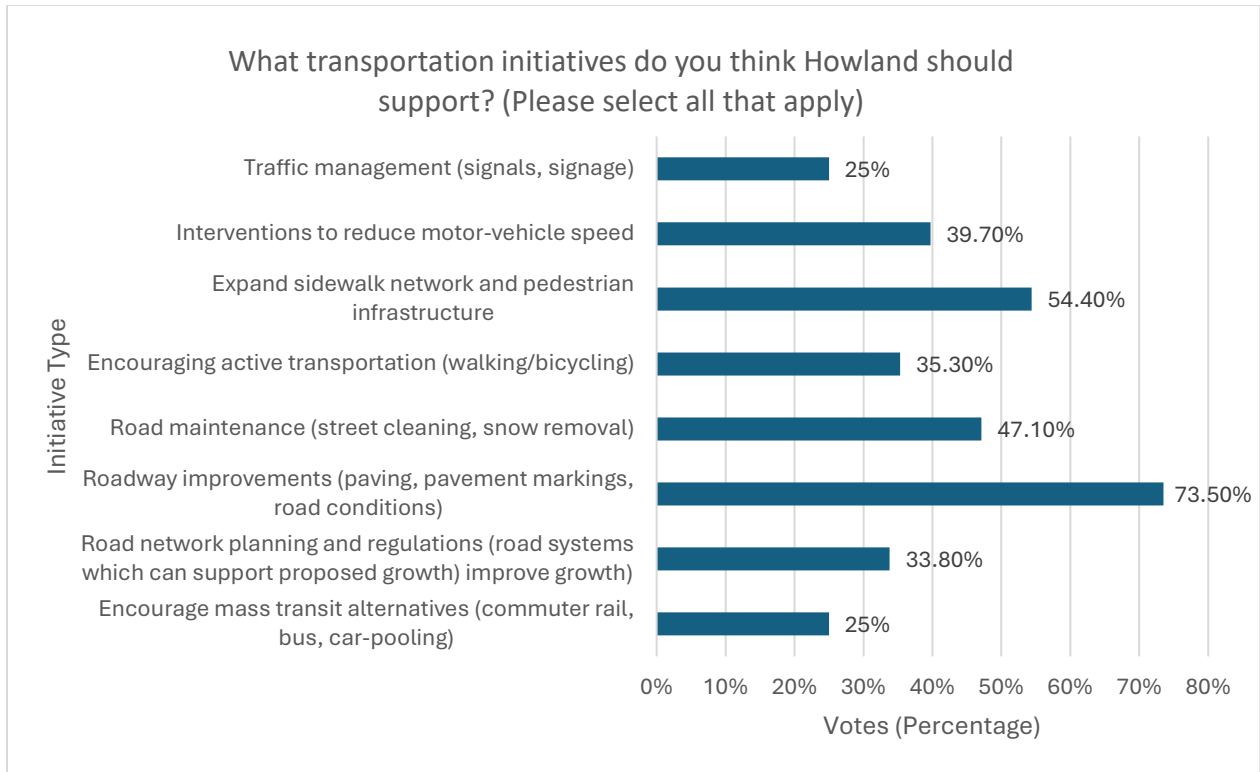
As part of the analysis, a community survey was distributed to Howland to gauge concerns for transportation in the community and region. Below are those results, as well as the town’s plans to address those concerns.

The survey showed residents of Howland were concerned with roadway improvement and road maintenance. These include services like paving, pavement markings, and road conditions. The 2<sup>nd</sup> most important concern for Howland residents was expanding the sidewalk network and pedestrian infrastructure like walking and biking. The graph below gives a snapshot look into what will be reviewed in more detail in the following paragraphs.

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<sup>4</sup> Howland Multimodal Study. 2020. [HowlandATPDocumentDRAFT123019.pdf](#). Accessed May 2024.





**Chart 3.0:** Community Response to Potential Transport Initiatives in Howland, ME. Source: Town of Howland

What the survey missed according to the town, is the importance of ATVs and snowmobiles which are so intrinsically tied to the more rural areas of Maine. The Multimodal study touches on their importance by making one of the goals to be to integrate ATVs and similar vehicles into the plan and safely accommodate for a range of users on the transportation network. Specifically, Howland May seek funds to better accommodate ATVs and Snowmobiles to have access to the 95'er restaurant and gas station to eat and fuel up. This is because Howland is at the crossroads of a large and intricate trail system that reaches all across the state. The use of current trail systems heavily depends on public-private partnerships between the town, the clubs, and homeowners. Cooperation is essential for all future planning efforts.

## Roadway Inventory

### Highway

Of the 367 miles of interstate in Maine, approximately 7.46 miles run through the town. This key interstate highway on the East Coast, is easily accessible from Howland through the Lagrange Road. This interstate enables convenient travel to major cities like Bangor, and other destinations throughout the state and beyond. I-95 serves as an essential conduit for transportation to and from Howland, connecting it to regional hubs and facilitating both local commuting and regional travel. Last year, crack sealing was performed to maintain the interstate.

**State Routes**

State Aided roads in Howland span approximately 16.34 Miles of the 17 Miles of road in town (excluding private drives).

Street name	Approximate mileage	Traffic Level	Condition	Last Maintenance	Recommended Treatment
LaGrange Rd./ rt 155	5.5	Minor Arterial	Good	2018	Crack sealing, Patching
County Rd/Rt. 155	.49	Minor Collector	Good	2016	Crack sealing, Patching
Edinburg Rd./ Rt. 116	1.06	Minor Collector	Fair	2020	Crack sealing, Patching
Maxfield Rd.	4.09	Minor Collector	Good	2020	N/A
N. Howland Rd.	1.66 of 2.56	Minor Collector/ local	Poor	2020	East of Seboeis Rd. - Reconstruction
Seboeis Road	3.38	Minor Collector	Good	2023	N/A
Water street	1.5	Major Collector	Good	2023	Sidewalk repair, Deep pavement repair, Resurfacing

**Table 3.0:** State Owned Roads in Howland: Source Town of Howland

Maine Department of Transportation Planned Capital and Maintenance Work 2024-2026 (Howland Maine)

Road	Work Plan Year	Description	Scope of Work	Estimated Funding
Route 6/155	2024	Route 155/I95 Bridge (#6068) over Interstate 95. Located 0.26 of a mile east of Maxfield Road. FHWA INFRA Grant recipient.	Highway-Bridges Bridge Deck Replacement	\$5,660,000
Interstate 95 Southbound	2024	I-95 SB over Seboeis Road Bridge (#6070) over N. Howland Road. Located 2.21 miles north of Route 155.	Highway-Bridges Bridge Superstructure Replacement - PE Only	\$465,000
Route 155	2025	Lagrange Road Bridge (#2443) over Japhenas Brook. Located 1.81 miles west of Interstate 95 on ramp.	Highway-Minor Spans Bridge Replacement	\$2,100,000
Seboeis Road	2026	Large culvert (#46277) located 5.73 miles north of North Howland Road.	Highway Safety and Spot Improvements	\$792,000

## Economy

			Rural Highways Large Culvert Rehabilitation	
North Howland Road	2026	Mile Brook Bridge (#5110) over Mile Brook. Located 0.63 of a mile north of Crocker Avenue.	Highway-Bridges Bridge Replacement	\$3,800,000

**Table 3.1:** Maine Department of Transportation Planned Capital and Maintenance Work 2024-2026 (Howland Maine). Source: Maine Department of Transportation

The town's primary arteries are served by State Routes and a State Aided Route. LaGrange Road, County Road, and U.S. Route 6/155 give access to the town from I-95 and serve the town east of the Penobscot and Piscataquis River. The Edinburg Road, State Route 116 branches off Routes 6/155 heading south along the Penobscot River. The rest of the town between the Penobscot and Piscataquis Rivers is served by State Aid Road, Water Street. It's also pertinent to note that AADT counts have gone up on all state routes in Howland.

### Town Roads

Town-owned roads in Howland span approximately 5.23 Miles of the 17 Miles of road in town (excluding private drives).

Street name	mileage	Traffic Level	Condition	Last Maintenance	Recommended Treatment
Front street	.08	Medium	Fair	Approx. 2010	Preventative; Patch, crack sealing
Main street	.13	Medium	Good	Approx. 2016	Slab replacement
North Howland Road	1.29 of 2.56	Low	Good	Approx. 2018	Crack sealing, Patching
Penobscot Avenue	.95	Medium	Fair	Approx. 2014	Full Depth patching
Willow street	.15	Medium	Poor	Approx. 2015	Resurfacing
River Road	1.29	Medium	Good	2019	N/A
Caron Drive	.34	Low	Good	2019	N/A
Cemetery Road	.08	Low	Good	Approx. 2017	Crack sealing
Chase Street	.08	Low	Fair	Approx. 2014	Patch, crack sealing
Coffin Street	.27	Low	Poor	Unknown	Reconstruction
Crocker Road	.12	Low	Poor	Approx. 2000	Reconstruction
Cross Street	.21	Low	Fair	Approx. 2006	Patch, crack sealing
Davis Street	.06	Low	Fair	Approx. 2005	Resurfacing
Dekin Street	.06	Low	Fair	Approx. 2000	N/A
First Street	.07	Low	Poor	Unknown	Reconstruction
Grove Street	.06	Low	Fair	Approx. 2000	Resurfacing
Keith Street	.09	Low	Fair	Approx. 2000	Resurfacing
Mann Street	.13	Low	Poor	Approx. 2000	Reconstruction
Pleasant Street	.22	Low	Poor	Unknown	Reconstruction
Ring Street	.09	Low	Fair	Approx. 2000	Resurfacing
Terrio Street	.27	Low	Good	Unknown	Unknown

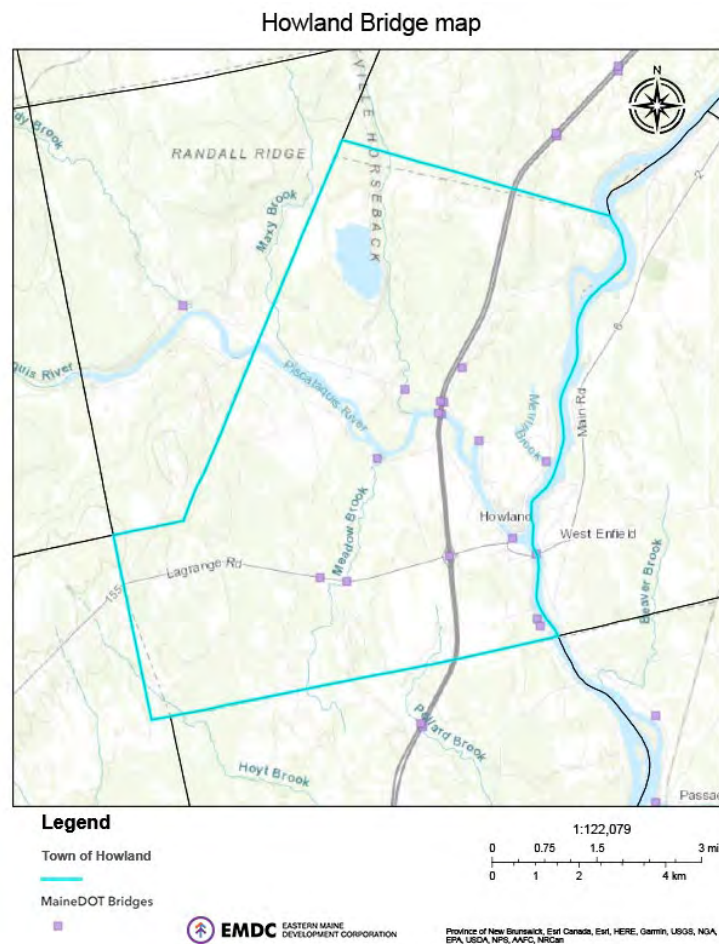
## Economy

Third Street	.17	Low	Poor	Approx. 2005	Reconstruction
Valley Avenue	.24	Low	Poor	Approx. 2005	Reconstruction
York Street	.07	Low	Poor	Approx. 2010	Patch, crack sealing

Table 3.2: Town Road Inventory, Howland, ME. Source: Town of Howland.

## Bridges

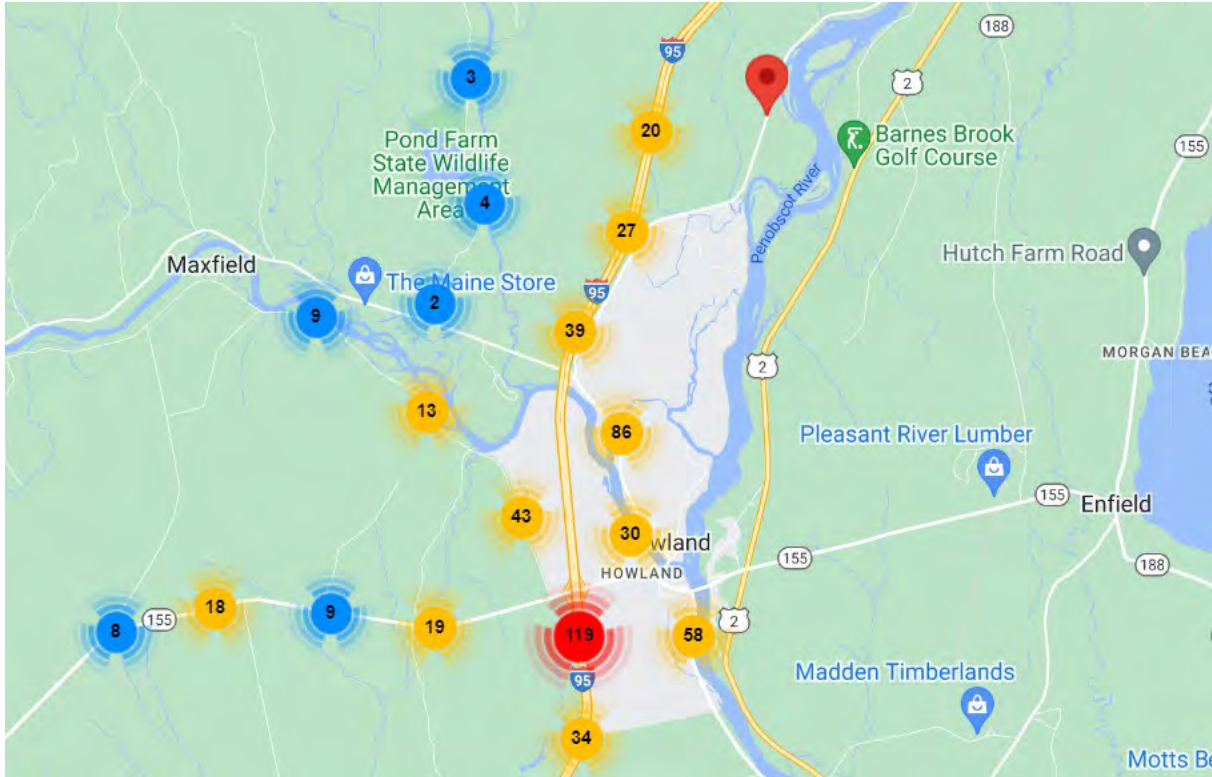
There are currently 15 bridges in Howland as shown in Graphic 3.0. Of these 15, 1 on Penobscot Ave. is maintained by the town. The bridges are all in good shape. This year, the bridge over I-95 is being repaired by the DOT.



**Map 3.0:** Howland Bridge Map. Source: Maine Office of GIS

## Crashes

The map below shows crashes over the last 13 years. Generally, there were 434 crashes during this period, making the average crash rate 43.4 crashes per year. More crashes happened on the highway. Looking more closely at the data, more crashes happened in June around 5pm in the evening on the highway. The most common type of crash is when a car goes off-road.



**Graphic 3.0:** Crashes in Howland, ME from 2010-2023. 542 crashes are mapped. Source: Maine Public Crash Query Tool, Maine DOT, <https://mdotapps.maine.gov/MaineCrashPublic/PublicQueryMap>, obtained February 14, 2024

## Analyses

### 1. What are the transportation system concerns in the community and region? What, if any, plans exist to address these concerns?

Reviewing the concerns highlighted by the community survey, it seems clear that the main issues for Howland residents are roadway improvements, and expanding sidewalks.

A concern is the lack of bus service for the municipality’s seniors and Amish community. A regular service to Bangor or Lincoln would be convenient. Bus service from the 95’er is available, but not easily accessible. An Uber-type service may be successful, however, there are currently no plans to address these issues. As the State of Maine embraces renewable energy, increasing the number of electric vehicle charging stations will be crucial. Howland is well positioned along Interstate 95 to provide a place for travelers to stop and recharge an electric vehicle. Eastern Maine Development Commission is currently working on a strategy to support the future increase of electric vehicles in northern Maine communities.

### 2. Are conflicts caused by multiple road uses, such as a major state or U.S. route that passes through the community or its downtown and serves as a local service road as well?



## Economy

Howland has several State-aided routes that pass-through town, as well as the more well known I-95 Highway. Of the approximate 367 miles of interstate in Maine, approximately 7.41 miles (14.82 total miles of road to maintain for both southbound and northbound) are in Howland. With easy access on and off the I-95, Howland experiences a slight increase in traffic volume seasonally. There are currently no traffic concerns or conflicts resultant from the highway. The community's proximity to Interstate 95 increases opportunities for tourism and provides local residents with a convenient connection to jobs, healthcare, education, and more. To support both residents and visitors, the community's downtown area needs additional public parking as well as better signage to identify where public parking is available.

### **3. To what extent do sidewalks connect residential areas with schools, neighborhood shopping areas, and other daily destinations?**

Howland has a walk score of 10 out of 100 from walk score.com<sup>5</sup>. In comparison to larger cities in Maine, Howland is far less walkable than Portland – 62 (Maine's largest city), Bangor – 40, or nearby Lincoln – 52. To address the current limited pedestrian infrastructure, upgrade and expansion of sidewalks are prioritized by the town's residents.

State aided roads are extensive in Howland, and the town wants to expand sidewalks along all roads. One issue that not just Howland runs into though is that sidewalks must be engineered along state aided routes. In order for that to happen, the town needs to be willing to pay for it according to the Maine DOT. It is currently more expensive than a small town can afford.

### **4. How are walking and bicycling integrated into the community's transportation network (including access to schools, parks, and other community destinations)?**

Howland utilizes a holistic approach aimed at enhancing accessibility and promoting active lifestyles by building on current elements in its infrastructure network. One important aspect of this network is the Heart of Penobscot Country bike trail that starts in Howland and ends in Bangor. The 83-mile ride follows the Penobscot River, swings west through woods and farmlands, and finally south through the agricultural fields of western Penobscot County. The trail stands alone and apart from the town right now. However, residents may soon devise ways to integrate the trail and promote it for tourism purposes.

Through collaborative efforts with local authorities and community stakeholders, Howland can implement innovative solutions that prioritize the integration of walking and bicycling into its future transportation infrastructure, ultimately enhancing quality of life and promoting sustainable mobility practices.

### **5. How do state and regional transportation plans relate to your community?**

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<sup>5</sup> Walkscore.com. <https://www.walkscore.com/score/howland-maine?street=enfield%2C+maine>. Accessed April 5<sup>th</sup>, 2024

At the regional level, Eastern Maine Development Commission (EMDC) and Bangor Area Comprehensive Transportation System (BACTS) administers a Regional Transportation Program that offers municipalities in Penobscot County with transportation planning assistance and technical support. To enhance the program and the services it provides, EMDC partners with a number of entities including MaineDOT, Maine Better Transportation Association, and the Federal Highway Administration.

**6. What is the community's current and approximate future budget for road maintenance and improvement?**

Four-five years ago, the town took out a loan for over \$1,000,000 to fix local roads. The town is paying that off at approximately \$98,000 per year. Although funds are being appropriated to pay off that loan, and there is no set-in-stone future budget yet, the town plans to allocate \$150,000 per year in the future for road repair and maintenance.

**7. Are there parking issues in the community? If so what are they?**

Howland has ample parking throughout town. There are only a few places needing review. These are the post office and the Gerald Hutchinson Jr. baseball field. The lack of parking at the post office creates hazards for older residents sending and receiving mail. This issue is not new either. The 2004 Comprehensive Plan described inadequate adherence to parking regulations causing safety concerns by the post office. The baseball field is located on a State Route (155). As such, the lack of adequate parking for sporting events, as well as others, has the tendency to create greater traffic right by the fire and EMS Station where the field is adjacent to.

**8. If there are parking standards, do they discourage development in village or downtown areas?**

Howland follows the parking standards set by the state accordingly, and has standards outlined in their zoning ordinance. One standard was highlighted in the 2004 Comprehensive Plan, outlining the future of parking standards that will regulate the number of parking spaces to be provided depending upon type of development proposed. There is also a Winter Parking Ban Policy and agreement in place. These create regulations that support sustainable parking development and maintenance throughout town.

**9. Do available transit services meet the current and foreseeable needs of community residents? If transit services are not adequate, how will the community address the needs?**

The existing transit services in Howland, Maine are limited, with Conchord Coach providing a bus occasionally across from the 95'er and the only other options being Uber and Lyft, which are both prohibitively expensive and largely unavailable. These services may not adequately meet the current or foreseeable transit needs of the community. These notions are partly what brought on the multi modal study for Howland. Key concerns include the lack of reliable and affordable transportation options for commuting to regional employment centers, schools, and healthcare

## Economy

facilities, as well as insufficient accessibility for residents without personal vehicles or those with disabilities. Limited frequency and capacity further constrain these services, particularly as the demand increases, even if population falls.

To address these inadequacies, the community may explore regional coordination efforts to expand Conchord Coach's offerings or establish a local shuttle service in partnership with neighboring towns. Micro transit solutions, such as on-demand community shuttles or volunteer driver networks, could provide flexible and affordable alternatives. Additionally, pursuing funding opportunities through programs like Maine DOT's rural transit grants and further fostering public-private partnerships to develop shared-ride options may enhance local transit options. Finally, gathering data to demonstrate the need for expanded services can strengthen advocacy efforts and support long-term transit planning for Howland.

### **10. Do the local road design standards support the community's desired land use pattern?**

Not at this time. There may be a plan to introduce them after the Comprehensive Plan is approved by the town.

### **11. Do the local road design standards support bicycle and pedestrian transportation?**

There are bike lanes, and language in the town ordinance accommodating future bike travel. However, residents say not yet.

### **12. Does the community have local access management or traffic permitting measures in place?**

The Planning Board reviews all permits and ensures that proper access to existing roadways is prioritized in the process.

### **13. Do planned or recently built subdivision roads (residential or commercial) simply dead-end or do they allow for expansion to adjacent land and encourage the creation of a network of local streets? Where dead-ends are unavoidable, are mechanisms in place to encourage shorter dead-ends resulting in compact and efficient subdivision designs?**

Residential subdivision roads, like Penobscot Avenue may be extended to allow access from Water Street. Where dead-ends are not avoidable there are no mechanisms in place to encourage shorter dead-ends resulting in compact and efficient subdivision designs.

## ***Conditions and Trends***

- 1. List location and overall condition of roads, bridges, sidewalks, and bicycle facilities, including any identified deficiencies or concerns.**

Shown in above tables (3.0, 3.2) and graphic 3.0. The town does not currently have any bicycle facilities. Howland currently has sidewalks along several roads in town, Front, Penobscot, and Water Street. One sidewalk crosses a median island on Coffin Street terminates at the south side of the bridge and connects via a crosswalk to Lagrange Road. Sidewalks are also located on Bridge Street and River Roads. Pedestrian crossings are located at the intersections of River Road and Coffin Street at the end of the bridge, Coffin and Front Streets, at the entrance and exit to the Howland Middle/High School, and in front of the post office along Penobscot Street. All of the town’s existing sidewalks are in need of an upgrade. There is expressed want from the town for greater walkability. A great hindrance to more sidewalks along state routes is that towns must pay the bill for engineered sidewalks which are ADA compliant. Howland may explore grants to help with this. Below is a map of current sidewalks and trails provided by the recent multimodal study.

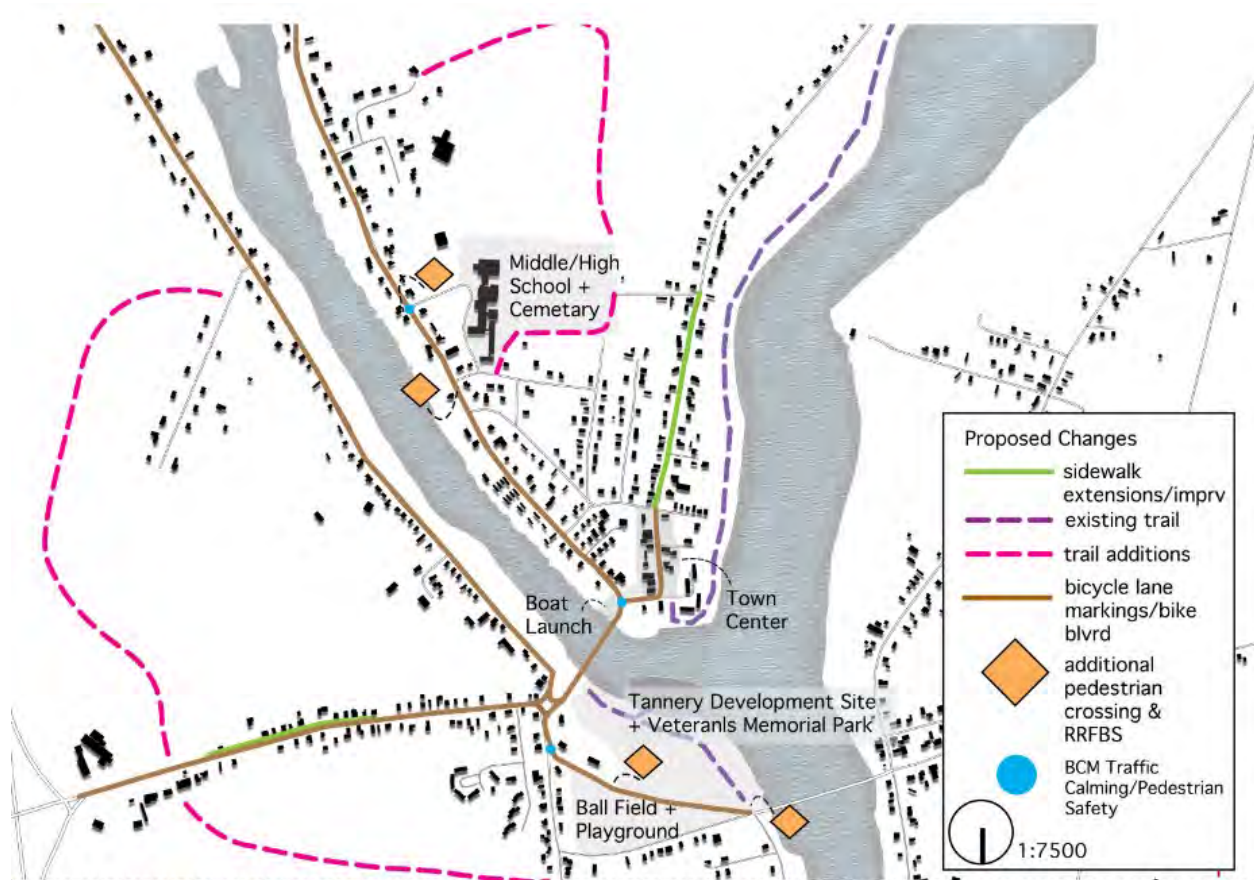


**Graphic 3.1:** Current sidewalk and trail conditions in Howland Maine. Source: Maine Department of Transportation 2020

**2. Identify potential on and off-road connections that would provide bicycle and pedestrian connections to neighborhoods, schools, and other activity centers.**

The trails in Howland allow for multi-modal use, mountain biking and walking. The Trail that crosses the Tannery Site has a separate ATV/mountain bike trail and pedestrian trail, however it is short. The trail starting at the legion and running along the Penobscot River is in need of repair, often floods and has many branches down. Both trails are not very long and do not serve to connect much of the town to the larger transportation network. According to a recent multimodal study, these trails could be improved and used to connect the schools to downtown Howland and

the youth center, provide a comfortable walking alternative that provides a larger circuit for exercise, and provides an opportunity to experience nature for all residents. Below is another map from the multimodal study depicting potential connections.



**Graphic 3.2:** Potential sidewalk and trail connections in Howland Maine. Source: Maine Department of Transportation 2020

**3. Identify major traffic (including pedestrian) generators, such as schools, large businesses, public gathering areas/activities, etc. and related hours of their operations.**

Major traffic generators in Howland include the school, I-95, the newer fish bypass along the Penobscot River, the Tannery Park, and the baseball fields. All except the school, the park, and the field do not close unless there are special circumstances. The field and the park are open from sunrise to sunset. Traffic around the school is generally highest at 730 am and 2 pm.

**4. Identify policies and standards for the design, construction, and maintenance of public and private roads.**



There are road standards for public roads which are outlined in the town shoreland ordinances (Section H)<sup>6</sup>.

**5. Identify airports within or adjacent to the community and describe applicable airport zoning and airspace protection ordinances your community has in place.**

The closest airports to Howland are Located in Lincoln and Old Town (18 and 23 mi. away). Even further, is Bangor International airport, which is 40 mi. away. No specific ordinances pertaining to airport zoning or airspace protection are needed at this time, or anticipated for the future.

**6. Where are municipal parking areas and what is their capacity, and usage?**

Municipal parking areas include the Town Office (~30 spaces), Tannery Park (~12 spaces), The Gerald Hutchinson Jr. Ball Field (~35 spaces). There are usually spare spaces at the town office and Tannery Park lots, however, the Gerald Hutchinson Jr. Ball Field is more often than not, inundated and overcrowded, with cars close enough to the main road to potentially get hit by traffic passing through.

**7. Identify existing and proposed rail terminals within your community including potential expansions.**

There are currently no rail terminals in Howland. The closest, Amtrak, is in Brunswick, which is 140 miles from Howland. The State of Maine and Downeast Scenic Railroad Company own a rail line that formerly ran between Bangor and Calais with a stop in Ellsworth. In accordance with Maine’s goals to reduce carbon emissions from personal transport, Howland may consider passenger rail if it becomes financially feasible. The closest rails are in Enfield and Lincoln, and offer transport for goods only.

Developing a new railroad terminal would require significant funding, which might come from federal or state grants, private sector investment, or public-private partnerships. Programs like those under the Federal Railroad Administration or Maine DOT might offer support for rural transportation infrastructure projects.

**8. What are potential on and off-road connections that would provide bicycle and pedestrian connections to neighborhoods, schools, waterfronts and other activity centers?**

See conditions and trends #3. See also Howland Multimodal study.

## ***Strategies***

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<sup>6</sup> Howland Shoreland Ordinance. <https://cdn.townweb.com/howlandmaine.com/wp-content/uploads/2020/11/Shoreland-Zoning-Amended.pdf>

## Economy

Develop or continue to update a prioritized improvement, maintenance, and repair plan for the community's transportation network.

Actively participate in regional and state transportation efforts.

Maintain, enact or amend local ordinances as appropriate to address or avoid conflicts with:

- a. Policy objectives of the Sensible Transportation Policy Act (23 M.R.S.A. §73);
- b. State access management regulations pursuant to 23 M.R.S.A. §704; and
- c. State traffic permitting regulations for large developments pursuant to 23 M.R.S.A. §704-A.

To prioritize community and regional needs associated with safe, efficient, and optimal use of transportation systems.

To safely and efficiently preserve or improve the transportation system.

Maintain, enact or amend ordinance standards for subdivisions and for public and private roads as appropriate to foster transportation-efficient growth patterns and provide for future street and transit connections.

To promote public health, protect natural and cultural resources, and enhance livability by managing land use in ways that maximize the efficiency of the transportation system and

# ECONOMY



## ***Economy***

**State Goal:** Promote an economic climate that increases job opportunities and overall economic well-being.

### ***Policies and Town Goal(s):***

To support the type of economic development activity the community desires, reflecting the community's role in the region.

To make a financial commitment, if necessary, to support desired economic development, including needed public improvements.

To coordinate with regional development corporations and surrounding towns as necessary to support desired economic development.

Look into expanding the tourism industry

### ***Renewed Prosperity in Mind***

When planning for future growth, a focus on economic development is crucial. Howland's commitment to prioritizing the revitalization of the downtown area, expansion of trails, and survival of local businesses, largely contribute to economic development in the community. Through involvement in regional planning processes, Howland may create a vision for local economic development and realize the significant role that rural small towns play in the greater regional economy. A community-driven Economic Development Committee (EDC) at one point, led local efforts for strengthening business development, increasing local spending, creating jobs, and attracting both residents and visitors to town. The continuation of community-led initiatives to enhance economic development is key to creating and sustaining growth for the present and future population.

### ***Summary of Howland's Economy***

There are relatively few employers in Howland, aside from the schools, with most residents commuting to nearby towns and cities. The Town's previous largest employers, the Atlas Plywood Company and the tannery mill, closed in the last 70 years, as did the largest regional employer in the last decade, the Lincoln pulp and tissue mill in Lincoln. The current largest employer is the school. Recent unemployment rates in Howland have trended lower than County and State averages. Wages decreased from 2013 to 2018 but have since increased, in all industries, especially in construction. Local job potential has and will likely continue to be in home-based occupations and telecommuting, especially with recent increases in broadband access. Economic

## Economy

growth in neighboring communities, such as Enfield or Lincoln could provide additional sources of jobs for Howland’s residents.

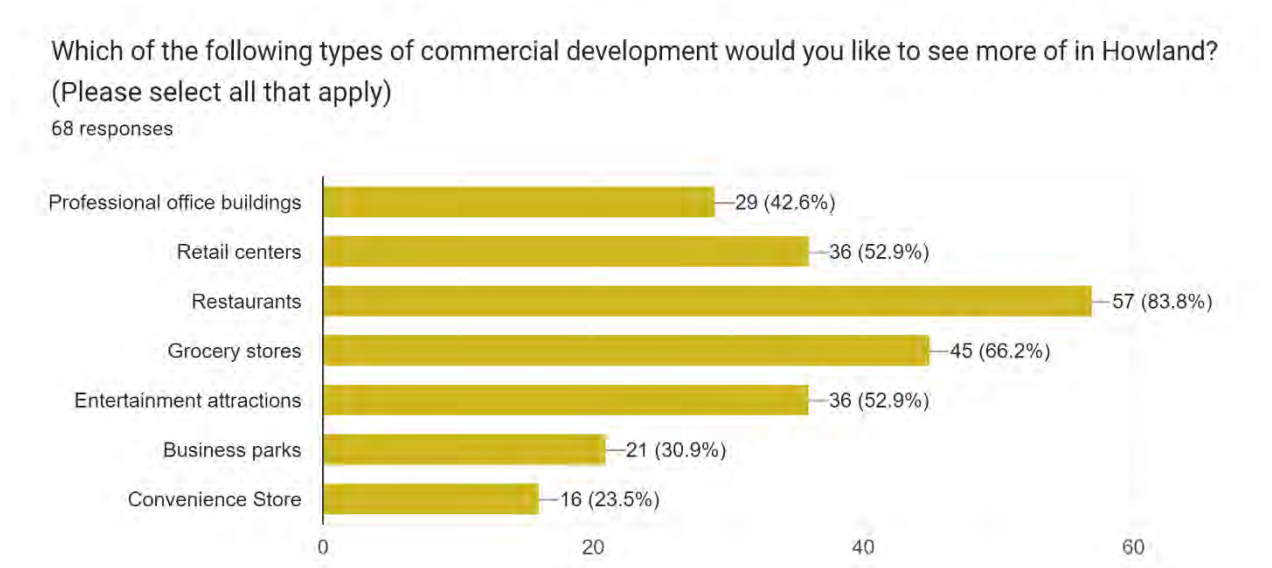
### *Historic perspective*

Howland has always been prized for its water resources used to facilitate the logging industry that Maine was once known for. As such, the town was once home to several mills as well as lumber barons that resided there. At one time, the town had great prosperity, which continued with brief interruptions through the later years of the 20<sup>th</sup> century. It wasn’t until the last mill closed in 2015 that the town faced a true crisis of identity. With the lumber industry all but a memory, the town will face new growing pains that a new Comprehensive Plan can offer great guidance through.

The story of Howland’s economy is one of boom and bust then boom again. It may be similar to many other towns in that it has experienced industrial booms and several severe “lows”, but its residents are supremely resilient to tough times and complex problems.

### *Community Survey Results*

The community survey determined what residents find to be most important for the development of the town’s economy.



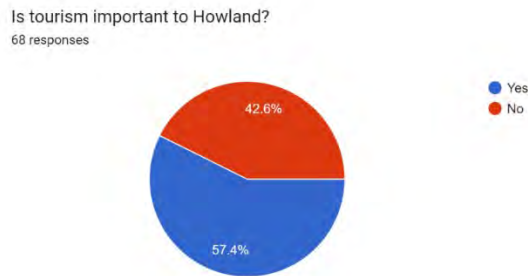
**Figure 4.0:** Commercial Development Preferences in Howland, Maine. Source: Howland Community Survey

Currently, there is one restaurant in Howland, named the 95 Handy Stop, located just off the highway on LaGrange Road. This is a popular spot, but residents voiced interest in having something closer to the town’s center.

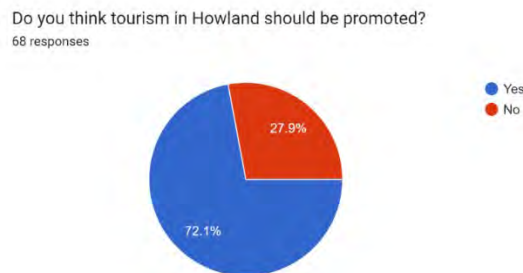


## Economy

The survey also indicated that respondents valued tourism in Howland, even though it lies barely nascent in the town (Figure 4.1, 4.2)



**Figure 4.1:** Perceived importance of Tourism in Howland Maine. Source: Howland Community Survey



**Figure 4.2:** Thoughts on promotion of Tourism in Howland, Maine. Source: Howland Community Survey

## Analyses

- 1. Is the economy experiencing significant change, and how does this, or might this, affect the local population, employment, and municipal tax base?**

The town has lost several mills that provide work for town residents. All those mills have closed down approximately in the last 100 years, similar to other Maine towns dependent on this industry. With the mills, one-third to one-half of Howland's population has left in pursuit of better-paying jobs. A number of businesses have also closed. This culminated in lost tax revenue. With all this, Howland is now left with a blueprint of what the town looked like at its most prosperous, and what it can look like again soon, with the right policies and strategies.

As Howland develops its new economies, it may look to other towns in the United States as examples or templates of how it wants to move forward. As an example, the town of Triana, Alabama went from 496 people to 2890. The town does not boast much for industry, but attributes its growth to nearby Huntsville growing as a technical hub for the Southeast. Similarly in Enfield, new companies have been arriving since 2020, which may lead to a similar favorable

result. In Lincoln, the new Battery storage facility may also offer greater opportunities for Howland’s economic expansion.

**2. Does the community have defined priorities for economic development? Are these priorities reflected in regional economic development plans?**

There is an Economic Development Committee in Howland. Although inactive at the moment, it has been hard at work to solve the complex issues facing the town. Its Mission Statement is “To plan for the Town’s current and future economic development in a manner that balances community growth and local needs.” The priorities set forth by the mission statement are unique to the smaller town, and not wholly reflected in EMDC’s regional CEDS plan, which boasts regional connectivity, as well as economic opportunity and prosperity.

**3. Is there a traditional downtown or village center in the community? If so, is it deteriorating or thriving?**

Along Main Street is the town center where two major river systems, The Piscataquis and Penobscot Rivers, connect with ATV and snowmobile trails. There have been noticeable changes in the downtown area that suggest some deterioration.

Possible solutions the town may explore to revitalize its downtown area are focusing on a small section of the historic downtown, making it as easy as possible to convert buildings for new uses via TIF and expedited permitting, and to offer unique amenities to residents, workers, and tourists.

“Howland has good bones.” Is something residents often say. The town is committed to exploring any potential revitalization efforts to enhance its appeal and functionality.



**Graphic 4.0:** Historic Main Street of Howland, ME. Source: Greenpasture.com. Accessed March 2024

**4. Is tourism an important part of the local economy? If so, what steps has the community taken to support this industry?**

According to the Community Survey, tourism is a very important part of Howland's economy. Although the town has not yet taken action to capitalize on tourism as an industry, it is positioned with a good infrastructure base to create captivating tourism-based attractions. It helps that the town is located off of I-95 on the way to the popular Cold Stream Pond, located in Enfield.

**5. Do/should home occupations play a role in the community?**

There are numerous individuals who operate businesses from their homes. Some local home-based occupations include crafters, quilters, farmers, a daycare, a beautician, accountants, tutors, music instructors, bakers, a potter, and those offering small appliance repairs.

Where traditional economic drivers such as large mills or vibrant downtown areas are absent, home occupations offer a unique and transformative opportunity for economic growth and community resilience. These small, often family-run enterprises can diversify the local economy, create jobs, and foster a sense of self-reliance. By enabling residents to generate income without leaving their community, businesses like these sustain local demand for goods and services. Moreover, they can serve as a springboard for future small business development, gradually expanding the town's economic base.

If the town aims to encourage home occupations, this will require a supportive regulatory environment. Howland's existing zoning and land use ordinances may be evaluated and potentially revised to reduce unnecessary barriers, such as restrictive permitting processes or limits on signage and customer traffic. Thoughtful planning would promote access to resources like certain grants, technical assistance, and high-speed internet, all of which are critical for home-based businesses to thrive.

**6. Are there appropriate areas within the community for industrial or commercial development? If so, are performance standards necessary to assure that industrial and commercial development is compatible with the surrounding land uses and landscape?**

Because the community was previously a popular mill town, there are quite a few sites appropriate for commercial or industrial development. The top three are potentially the site between town hall and the park, the hundreds of acres for sale by the highway close to outer LaGrange Road, and some smaller spaces near the rotary. The town's land use districts serve as a foundational framework for any new development. These districts provide a structured approach to designate suitable zones for different types of development, taking into account factors such as infrastructure, environmental impact, and compatibility with surrounding land uses. As the town is already primed for development, any industry or commercial development would be welcome and easily compatible with the town.

- 7. Are public facilities, including sewer, water, broadband access or three-phase power, needed to support the projected location, type, and amount of economic activity, and what are the issues involved in providing them?**

### **Water/ Sewer**

Howland has a public sewer and water system that could support much larger growth. It was designed 30 years ago with expansion in mind. The sewage plant does need repairs and upgrades before it gets expanded, though.

### **Three Phase Power**

Three Phase Power is currently available Throughout Howland’s village center, and extends down the road to the Highway. Expanding to three phase power in key areas such as along Water Street, Penobscot Ave, and along the LeGrange Road will have the most significant impact on economic development, as these are the most traveled. Three phase power provides businesses with access to more efficient and reliable electrical infrastructure, spurring greater economic development.

### **Broadband Access**

Broadband is a necessity for businesses, community services, students, and individuals who work from home. Slow and unreliable internet places Howland on the wrong side of the digital divide and out of contact with customers, clients, educational opportunities, and our many visitors.

Internet service in Howland is currently provided by Spectrum, GoNetSpeed, and TDS Telecom. Howland is working to expand its broadband network. The town has made great strides in providing increased broadband service in the last 5 years, and is continuously seeking ways to improve.

- 8. If there are local or regional economic development incentives such as TIF districting, do they encourage development in growth areas?**

TIF districting may be used to encourage and/or attract development to growth areas in Howland. Technical assistance with TIF districting applications is available through Eastern Maine Development Commission. A TIF district is finalized following approval by community residents and the Department of Economic and Community Development (DECD).

- 9. How can/does the community use its unique assets such as recreational opportunities, historic architecture, civic events, etc. for economic growth, if any?**

Howland Boasts its position at the confluence of the Piscataquis and Penobscot Rivers. Such access to water means plentiful water-based activities. Generally, boating, fishing, swimming rafting, walking trails, etc. Howland Does not currently advertise these assets as much as it should. The town is currently devising ways to develop and improve these assets. Howland has especially good bass fishing, which culminates in a once-a-year derby, which will be celebrating its 6<sup>th</sup> year in 2024.



**Graphic 4.1:** Fishing Derby Poster for 2023, Howland, ME. Source: Howland Community Facebook. Accessed: May 2024.

Another special part of the town that is not talked about enough is the “Prom Parade” put on by Penobscot Valley High School. Every year, kids attending show off their transportation to the event. Some come in tractors, some in classic cars, and others even appear in makeshift vehicles. The event is lauded by everyone in town, yet no advertisement or celebration of it can be found in the news or other media sites.

Howland may engage in new marketing strategies to better advertise all its important assets for many more Mainers to enjoy.

### ***Conditions and Trends***

- 1. What are the local and regional economic development plans developed over the past five years, which include the community?**

#### **Local**

In the last 5 years, there was an economic development committee started by the town. As the endeavor was completely volunteer, and support has been hard to find to maintain said committee, it has stopped meeting for the time being. The town may start it up again as more support or funding becomes available.

#### **Regional**

In 2021 EMDC released the Regional CEDS Plan which outlines economic development for the region.



**2. Where does the community’s population work and where do employees in your community reside? A description of the major employers in the community and labor market area and their outlook for the future.**

According to the survey which accounts for roughly 6% of the population, the majority of workers are employed out of town. Howland has approximately 25 businesses. Of the town’s population of residents that are 16 years or older, approximately 50.6% participate in the labor force. Bangor, Lincoln, Orono, and Old Town make up the majority of where people are employed. Most residents of working age in Howland reside in or around the village center. In town, the biggest employers are The Town of Howland, the High School, Cummins Healthcare, and the Handy Stop.

As seen in other rural areas of the state and around the country, the town is seeing a larger exodus of its young residents to nearby cities in search of employment. The hope is that more investors and developers will recognize the town’s beauty and potential, to help the town prosper. What may also happen, is that Howland will lean into its potential as a bedroom community for the bigger cities, and gear development toward residential opportunity.

**3. Are there any economic development incentive districts, such as tax increment financing districts, in the community? If so, what are they?**

Howland does have TIF districts. They encompass The LaGrange Road through the area where King’s Bridge connects to Enfield. There is also a small district by Water Street where the old corner store was, and another on Willow Street where the old fire station is.

**4. Are there public investments that are foreseen to support economic development (local tax dollars, creating a tax increment financing district, a Community Development Block Grant or other grants, bonding, impact fees, etc.)?**

As Howland is small and rural, the town is currently exploring opportunities, but haven’t found yet any tools of public investment support.

There are some funds in the town’s TIF account that would aid in future public investments. The issue with that is that there are several priorities to take into account when planning to use these funds. Utilizing public investments can help lay the groundwork for sustainable economic development. Howland will continue to look into their benefits and ways to seek these types of investments out.

## ***Strategies***

If appropriate, assign responsibility and provide financial support for economic development activities to the proper entity (e.g., a local economic development committee, a local representative to a regional economic development organization, the community’s economic development director, a regional economic development initiative, or other).

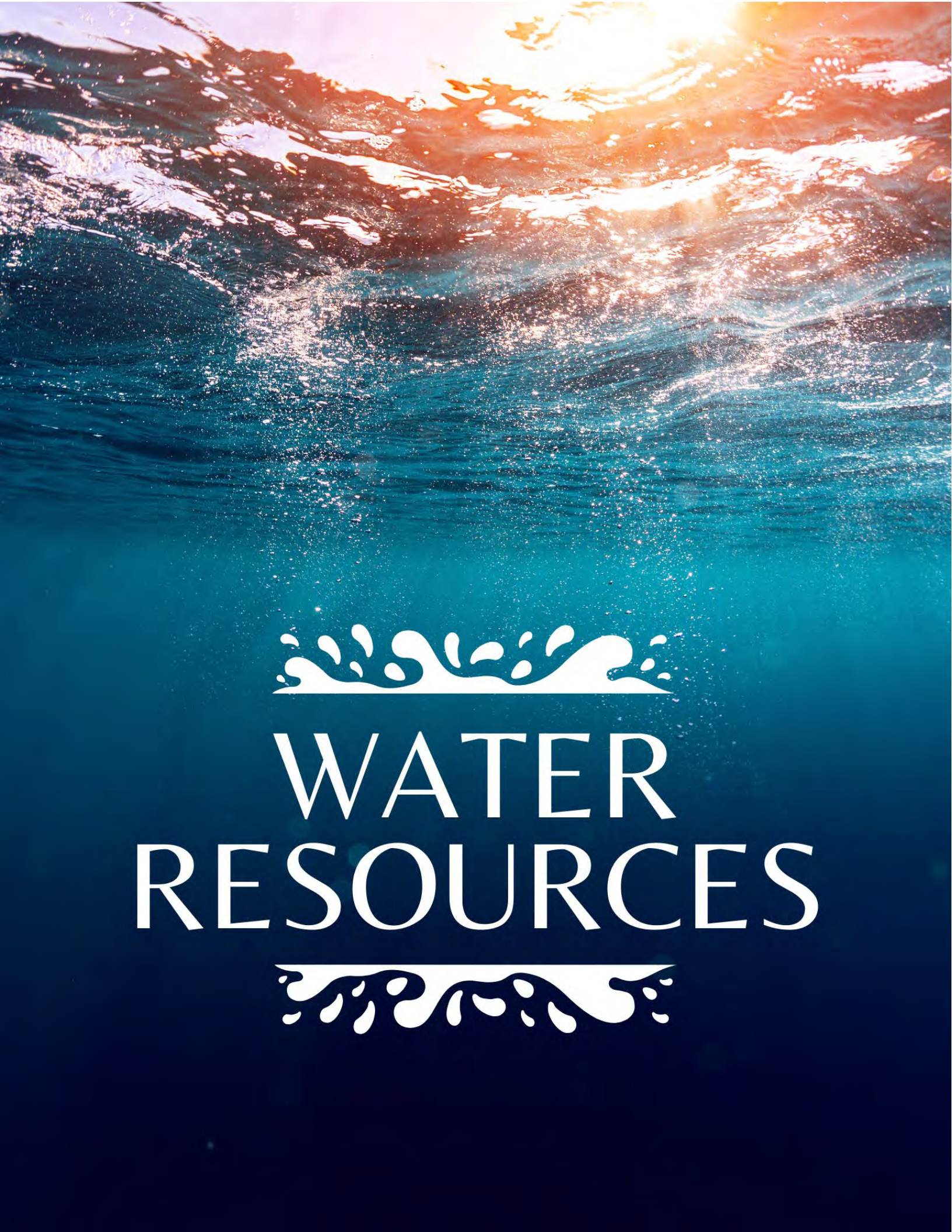
## Economy

Enact or amend local ordinances to reflect the desired scale, design, intensity, and location of future economic development.

If public investments are foreseen to support economic development, identify the mechanisms to be considered to finance them (local tax dollars, creating a tax increment financing district, a Community Development Block Grant or other grants, bonding, impact fees, etc.)

Participate in any regional economic development planning efforts.





# WATER RESOURCES





## ***Water Resources***

### ***State Goal***

To protect the quality and manage the quantity of the State's water resources, including lakes, aquifers, great ponds, estuaries, rivers, and coastal areas.

### ***Town Goal(s) and Policies***

To protect current and potential drinking water sources.

To protect significant surface water resources from pollution and improve water quality where needed.

To protect water resources in growth areas while promoting more intensive development in those areas.

To minimize pollution discharges through the upgrade of existing public sewer systems and wastewater treatment facilities.

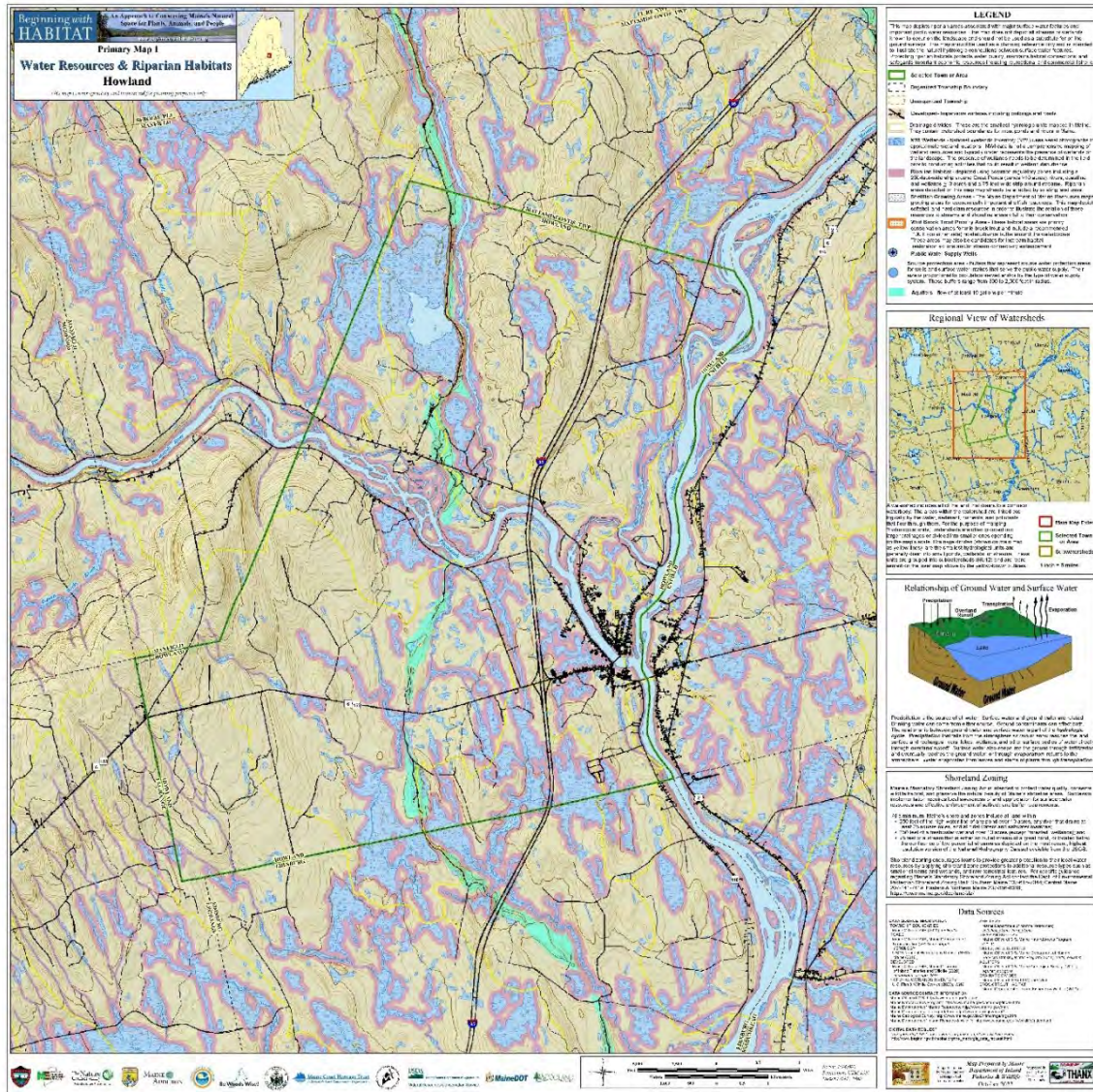
To cooperate with neighboring communities and regional/local advocacy groups to protect water resources.

### ***Protection and Preservation***

The presence of water, in general, has a significant impact on various aspects of a given region, let alone a municipality. From clean reliable drinking water and wastewater management, to maintaining ecosystem health and providing recreation, Howland's water is the most vital for sustaining the life in and around town. Howland has a lot of opportunity to leverage its water resources for economic development, especially noting its existence at the confluence of two great Maine rivers.

Towns situated at the confluence of two major rivers hold immense importance across various aspects. They become a hub for trade and commerce, benefiting from easy access to waterways that facilitate the transportation of goods and encourage the development of trade routes. Such a location ensures reliable access to abundant water resources, crucial for agriculture, industry, and sustaining the local community's water needs. They often serve as tourist attractions, offering scenic beauty, recreational activities, and historical insights, contributing significantly to a region's tourism sector and overall economic prosperity. Ensuring the environmental sustainability of these areas is crucial, as they support unique ecosystems, biodiversity, and

wildlife habitats, requiring preservation efforts for long-term ecological balance. Just like for any town in Maine or beyond with such characteristics, the water resources in Howland are completely unique, and require thorough analysis to determine the best courses of management action.



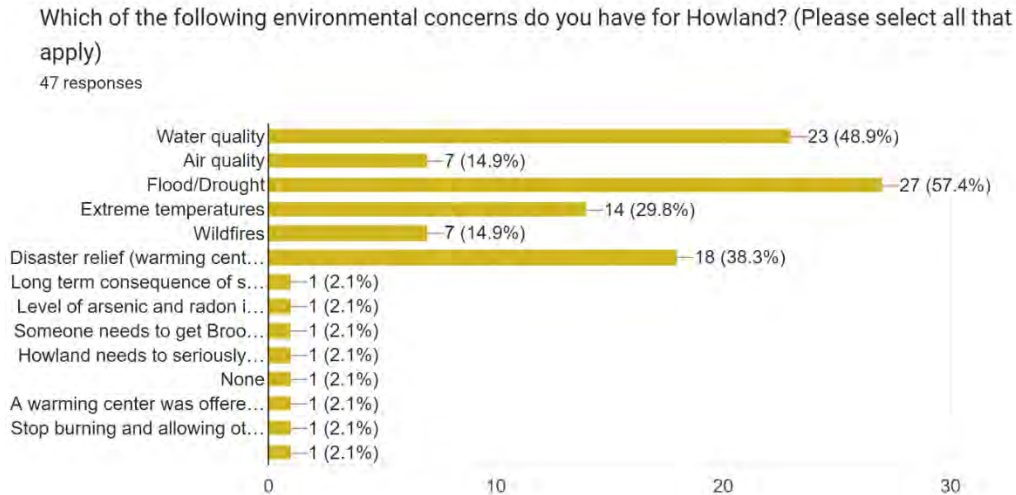
Map 4.0: Water Resources and Riparian Habitats in Howland, ME. Source: Beginning with Habitat

## Community Survey

Unsurprisingly, respondents of Howland’s community survey were more concerned with aspects of water resources & riparian habitats when it came to resiliency (Figure 4.0). The town, like many others in Maine



is surrounded by water and beholden to the changes in flow, quality, or biodiversity. As such, the people of Howland are acutely aware of their responsibility as stewards for the sustainable future of the Penobscot River, Piscataquis River, and all other water bodies in town.



**Graph 4.0:** Environmental Concerns in Howland Maine: 2024. Source: Howland Community Survey

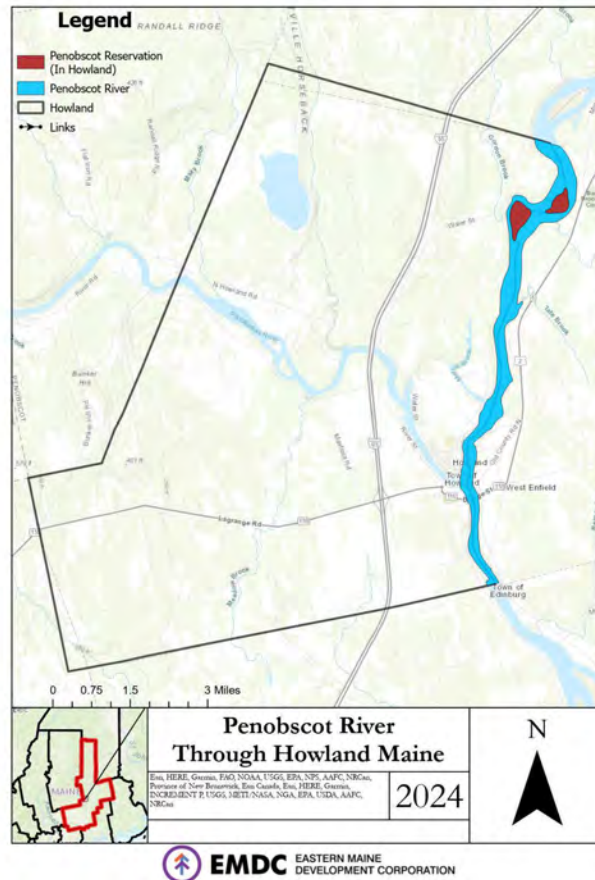
### ***The Penobscot River (Panawáhpskewtək<sup>w</sup>)***

Howland is located in the Penobscot River Basin with the river forming the Town's Eastern border. Much of Howland’s history can be attributed to the presence of the Penobscot River, which served as the main source of transportation for both the native Penobscot peoples and white settlers. The Penobscot River, with a drainage area of 8,592 square miles, is Maine's largest river basin. From Howland, it flows south for approximately 102 miles to the Penobscot Bay.

There is a dam in the Penobscot River located between Howland and the West Enfield area. The West Enfield Dam is owned by Brookfield Renewable and is used to generate power. In 1984, the dam was expanded by 9.5 megawatts to have a total capacity of 13.6 megawatts. At that time, it was also relicensed for 40 years.

Prior to 2018, The Penobscot River at Howland had a water quality rating of C. It’s recent reclassification to B is due to clean up efforts over the years. Upgrading a Class C River to a Class B river means that wastewater dischargers are regulated more strictly to protect a broader range of uses. According to the Maine DEP, the switch to class B rating means the water around Howland is suitable drinking water supply after treatment; fishing; agriculture; recreation in and on the water; industrial process and cooling water supply; hydroelectric power generation, except as prohibited; navigation; and as habitat for fish and other aquatic life. The habitat must

be characterized as unimpaired. The Penobscot River is protected under the local Shoreland Zoning Ordinance. The Penobscot River is also protected under the local Floodplain Management Ordinance.



**Map 4.1:** Map of the Penobscot River along Howland, Maine. Source: ArcGIS

### Value

The part of the Penobscot River situated in Howland stands as a pivotal ecological entity, wielding substantial value within its riparian habitat. Its intricate network of tributaries, diverse aquatic and terrestrial ecosystems, and dynamic hydrological regime collectively contribute to its ecological significance. The river supports a rich assemblage of native fish species, notably acting as a critical spawning and nursery ground for Atlantic salmon (*Salmo salar*). The intricate wetlands, floodplains, and forests that envelop its banks provide crucial nesting and foraging habitats for a myriad of avian and mammalian fauna. Furthermore, The Penobscot River, through its interconnectedness with downstream estuarine environments, fosters nutrient cycling, sediment transport, and the maintenance of aquatic biodiversity. However, anthropogenic activities and historical dam construction have disturbed its natural dynamics, necessitating comprehensive management strategies to preserve and restore its ecological integrity and

sustained functionality. Recognizing its intricate role within the regional landscape, diligent conservation efforts are imperative to ensure the river's continued ecological value.

The river also has cultural value to the Penobscot Nation, which continues to thrive there despite heavy colonization. To the Penobscot people, their river represents identity, spirituality, and livelihood. The river allows them to make baskets, pottery, birch canoes, and moccasins as they have done for over 10,000 years. All of the islands in the river officially belong to the Penobscot nation and as such, are governed by them. The presence of the nation allows for better collaboration for land and river management in and around the area.

### ***Threats***

There are potential threats that could undermine the river's ecological equilibrium and functional integrity. Among these threats, the encroachment of invasive species presents a paramount concern. The establishment of non-native species such as the northern pike (*Esox lucius*) and the zebra mussel (*Dreissena polymorpha*) has the potential to disrupt indigenous ecosystems by outcompeting native species for resources and altering habitat structure. Additionally, the alteration of flow regimes due to anthropogenic activities, particularly dam construction and water diversions, has the potential to hinder migratory fish movements, disrupt sediment transport, and modify habitat availability. This, in turn, could undermine the reproductive success of iconic species like the Atlantic salmon and jeopardize the stability of riparian and floodplain habitats. Climate change further compounds these threats by introducing uncertainties in precipitation patterns, stream temperatures, and extreme weather events, potentially exacerbating invasive species proliferation and altering ecosystem dynamics.

There are other fish species that are known to be established in the Penobscot River and are considered a threat, including largemouth bass (*Micropterus salmoides*), white catfish (*Ameiurus catus*), and most significantly, northern pike (*Esox lucius*). Pike were identified down river in Pushaw Lake in 2003 and are considered a very significant threat to the entire Penobscot Watershed. Maine Inland Fisheries and Wildlife installed barriers in the outlet dam at Cold Stream Pond to prevent northern pike, and other non-native species, from entering the lake on their own from below. However, there is always the possibility that someone will purposely move northern pike, or any other non-native or invasive species further north.

### ***The Piscataquis River***

The Piscataquis River is the third largest tributary of the Penobscot River, found mostly in Piscataquis County. It starts from the confluence of its East Branch and West Branch in Blanchard. The river flows in a mostly eastern direction until it meets the Penobscot at Howland. It is approximately 65 miles (105 km) in length. It has an area of 1,453 square miles at its confluence with the Penobscot River in the Town of Howland. Agriculture and forestry are the main land uses in the Piscataquis River drainage basin. The character of the watershed is

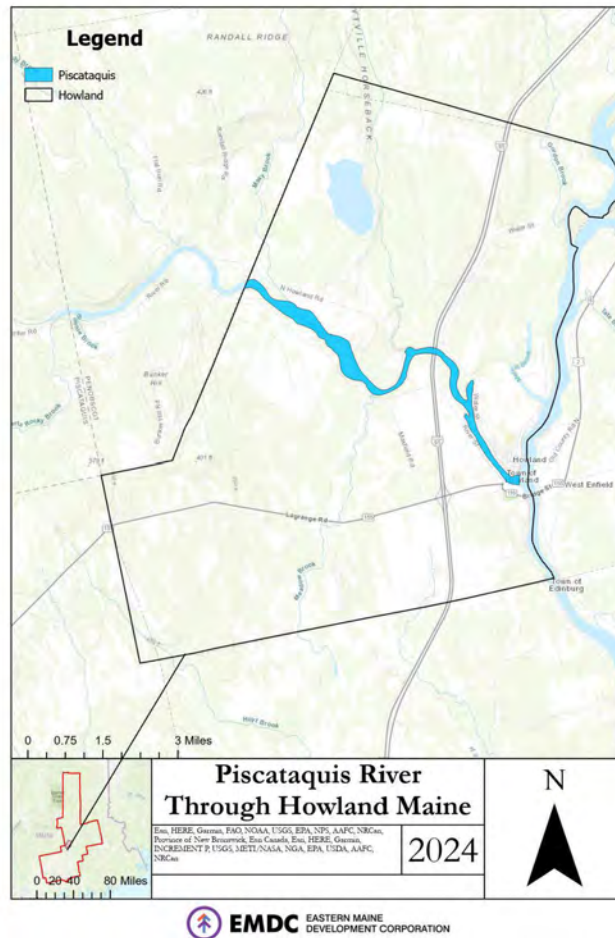
predominantly rural. Atlantic salmon and American eel (*Anguilla rostrata*) use it as breeding and rearing habitat.

The headwaters of the East and West Branches of the Piscataquis River, above the town of Blanchard, support wild brook trout (*Salvelinus fontinalis*). The main stem of the Piscataquis between Guilford and Sebec is stocked with yearling brook trout in the spring and yearling brown trout in the fall. Stocking efforts in this area have created a fishery where one did not exist prior to 1990. Small-mouth bass are also present in the Piscataquis below Guilford and provide great fishing. In addition, many of the ponds that drain into the Piscataquis are stocked yearly with brook trout, salmon, or splake.

In addition, a fish bypass was constructed in 2015 as a part of the Penobscot River Restoration Project to allow fish to swim into the Piscataquis River where it joins the main stem of the Penobscot River. This landmark, large-scale, collaborative effort reconnects habitat for 11 species of native sea-run fish while maintaining or increasing energy production.<sup>7</sup>

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<sup>7</sup> Penobscot River Restoration Project: Howland Fish Bypass Overview. <https://www.nrcm.org/wp-content/uploads/2016/06/Howlandbypassfacts.pdf>. Accessed 5.31.24.



**Map 4.2:** Map of the Piscataquis River as it runs through Howland, Maine. Source: ArcGIS

**Threats**

Since 1997, there has been a general fish consumption advisory for all inland surface waters due to Mercury contamination. Sources of mercury in the Piscataquis River watershed are primarily from atmospheric deposition and from naturally occurring rock formations. Mercury levels are average compared to the rest of the state. As posited by the 2022 SWAT report, there is also the threat of NPS toxics and nutrients from urban and agricultural sources to be aware of.

**Chart 4.0:** Chemical data Taken from Station S-152 (Dover-Foxcroft, Maine)

Year	Dissolved Oxygen Concentration	Temperature (Deg. C)	pH STU	Specific Conductance US/CM
2021	(10.37 mg/l, 130.2 %	26.3	7.94	107.0



Data from 2021-2022 SWAT Report<sup>8</sup>

According to the Penobscot Nation, the drainage is affected by discharges from two large municipal treatment plants, a textile mill, non-point source pollution from agricultural and forestry operations and at least six dams. Significant turbidity and suspended solids within the river are caused by erosion in or near poorly constructed haul roads, skid trails, and stream crossings. Excessive macrophyte and algae growth downstream of one treatment plant suggests the need for additional controls at the facility.<sup>9</sup>

Beyond chemical threats posed by Mercury, there are invasive species threats, and other biological/ physical threats to be aware of when looking at the Piscataquis River. Similar to the Penobscot River, the establishment of non-native species has the potential to disrupt indigenous ecosystems by outcompeting native species for resources and altering habitat structure. More specific information about Invasive species in and around the river can be found at the [Piscataquis County Soil and Water Conservation District website](#).

## **Other waterbodies**

### **Lakes and Ponds**

Pond Farm Pond is another important body of water located within Howland, and is controlled by the Maine Inland Fisheries and Wildlife (MIFW). This pond is about 139 acres With a Max depth of 11 ft and a mean depth of 2 feet.

Table 4.1: Recorded Chemistry of Samples taken Pond Farm Pond. Source: Maine Department of Environmental Protection<sup>10</sup>

Sample Year	Dissolved Organic Carbon	Dissolved Oxygen	pH	Total Alkalinity	Total Phosphorus	Temperature
2006	12 mg/l	8.4 mg/l	6.1	4 mg/l	0.049 mg/l	23 deg c
2011	9.6 mg/l	7.5 mg/l	6.6	4 mg/l	0.024 mg/l	24 deg c
2016	9.9 mg/l	8.83 mg/l	6.52	3 mg/l	26 ug/l	18.9 deg c

<sup>8</sup> <https://www.maine.gov/dep/water/monitoring/toxics/swat/2021-2022/2021-2022%20SWAT%20Report.pdf>

<sup>9</sup> Penobscot Waters. <https://www.penobscotnation.org/departments/department-of-natural-resources/water-n%C9%99pi-resources/penobscot-waters/> Accessed: 6.01.2024

<sup>10</sup> Pond Farm Pond Biomonitoring station. Maine Department of Environmental Protection Biological Monitoring Program. Aquatic Life Classification Attainment Report. [https://www.maine.gov/dep/gis/datamaps/lawb\\_biomonitoring/station\\_web/W-138W.htm](https://www.maine.gov/dep/gis/datamaps/lawb_biomonitoring/station_web/W-138W.htm) Accessed 6.10.2024



**Pond Farm Pond** MIDAS # 9863  
Howland, Penobscot Co. - Delorme Page 33 - 139 acres

0 0.1 0.2 0.3 0.4 0.5 Miles

Boat Launch Lake Sample Stations # Depth (FT)

**Map 4.3:** Map of Pond Farm Pond. Source: Lakes of Maine

### ***Streams***

There are a number of streams located in Howland. These include The Emerson Runaround, Gordon Brook, Hoyt Brook, Maxy Brook, Meadow Brook, Merrill Brook, Pollard Brook, and Seboeis Stream.

Seboeis Stream, a small tributary of the Piscataquis River, originates in central Seboeis Plantation and flows south for to its confluence. Seboeis Stream has a drainage area of approximately 2.4 square miles. The Stream also has its own ATV Club.

### ***Wetlands***

Wetlands (bogs, peatlands, fens) are one of the most productive ecosystems in the world, comparable to rain forests and coral reefs. They're important for maintaining stream flow and stabilizing groundwater levels in addition to providing very important habitats for wildlife. For humans, wetlands provide natural water quality improvement, flood protection, shoreline erosion control, opportunities for recreation, and aesthetic appreciation and natural products.

State law requires this wetland to be zoned Resource Protection under the Shoreland Zoning Laws. Howland has taken the appropriate steps in protecting its high value wetlands. All of the forested wetlands have been protected under the Howland Shoreland Zoning Ordinance.



**Map 4.4:** Wetland Map of Howland, Maine. Source: State of Maine.

## ***Water Quality Classification***

The State has four classes for freshwater rivers, three classes for marine and estuarine waters, and one class for lakes and ponds. A close comparison of the standards will show that there is not much difference between the uses or the qualities of the various classes. All attain the minimum fishable-swimmable standards established in the Federal Clean Water Act. Most support the same set of designated uses with some modest variations in their descriptions.

The classification system should be viewed as a hierarchy of risk, more than one of use or quality, the risk being the possibility of breakdown of the ecosystem and the loss of use due to either

natural or human-caused events. Ecosystems that are more natural in their structure and function can be expected to be more resilient to a new stress and show more rapid recovery. Classes AA, GPA, and SA involve little risk since activities such as waste discharge and impoundment are prohibited. The expectation to achieve natural conditions is high and degradation is unlikely. Class A waters allow impoundments and very restricted discharges, so the risk of degradation while quite small, does increase since there is some small human intervention in the maintenance of the ecosystem. Classes B and SB have fewer restrictions on activities but still maintain high water quality criteria. Classes C and SC waters are still good quality, but the margin for error before significant degradation might occur in these waters in the event of an additional stress being introduced, (such as a spill or a drought) is the least.

In Howland, Sebeois Stream is classified as a Class A River and Merrill Brook and Gordon Brook are classified as a Class B Rivers. The Piscataquis River is classified as a Class B River and the Penobscot River at Howland is also classified as a Class B. The following are descriptions of each class, uses and characterizations:

**Class A** - These waters are suitable for drinking after disinfection; fishing and recreation; industrial process and cooling water supply; hydroelectric power generation; and as habitat for fish and other aquatic life. The habitat is characterized as natural. Dissolved oxygen content is greater than or equal to 7 PPM (or 75% saturation). Aquatic life and bacterial content are as naturally occurs.

**Class B** - These waters are suitable for drinking after treatment; fishing and recreation; industrial process and cooling water supply; hydroelectric power generation; and as habitat for fish and other aquatic life. The habitat is characterized as unimpaired. Dissolved oxygen content is greater than or equal to 7 PPM (or 75% saturation) except for the period critical to spawning of indigenous fish species (Oct 1<sup>st</sup> – May 14<sup>th</sup>) when the 7 day mean dissolved oxygen concentration shall not be less than 9.5 PPM. Between May 15<sup>th</sup>- Sept 30<sup>th</sup> the number of Escherichia coli bacteria of human origin may not exceed a geometric mean of 64/100 milliliters or an instantaneous level of 427/100 milliliters. Discharges shall not cause adverse impact to aquatic life.

**Class C** - These waters are suitable for drinking after treatment; fishing and recreation; industrial process and cooling water supply; hydro electric power generation; and as habitat for fish and other aquatic life. Dissolved oxygen content is greater than or equal to 5 PPM or 60% saturation, except in identified spawning areas. Between May 15<sup>th</sup> and Sept 30<sup>th</sup> the number of Escherichia coli bacteria of human origin may not exceed a geometric mean of 142/100 milliliters or an instantaneous level of 949/100 milliliters. Discharges may cause some changes.

## **Water Quality Protection**

### **Past Efforts**

During the time of heavy resource extraction efforts in Maine, the residents of Howland maintained stewardship over the rivers that abutted and flowed through it, and its other wetlands and waterways. Despite the lack of accurate scientific equipment, the close-knit community was able to document the quality of the waters as it pertained to the quality for drinking and swimming.

Since the inception of the Mandatory Shoreland Zoning Act passed by the Maine legislature in 1971, and the Clean Water Act in 1972, Maine has undergone various changes and utilized many tools to monitor, assess, protect, and improve its water resources. Through the decades, supra-community collaboration has remained key to foster progress in water quality monitoring, assessment, and improvement, and will continue to indefinitely.

### **Present Efforts**

The town’s shoreland zoning which outlines protection measures are stricter than the base guidelines set by the Maine DEP. It’s important that the community continuously aid in monitoring because of the significance of the ecosystem services these waterbodies provide. The town’s biggest priority is keeping the two rivers as pristine as possible, improving on quality standards and allowing access for everyone. There are four boat launches in town -2 on Penobscot 1 on Piscataquis, and another on Pond Farm Pond. Measures of water resource protection around every water source utilizes their shoreland The Penobscot River in particular, is of increased importance because of recent efforts by a variety of agencies including NRCS, TNC, Maine DMR, ASF, and Maine Audubon to improve and increase the amount of fish passages through barriers. Since the new fish passage was completed at the Howland Dam in 2015, the newer project is centered around the West Enfield dam. The goal is to improve all native fish passages, but especially for the endangered Atlantic salmon population. These actions were due to start in 2022, and will continue through 2024 according to the National Oceanic and Atmospheric Administration (NOAA).

**Table 4.2:** Barrier threats to Atlantic Salmon in Howland.

<b>Watershed</b>	<b>Threat</b>	<b>Activity</b>	<b>Recovery Action</b>	<b>Location</b>
Penobscot River	Partial barrier	Engage in West Dam Hydro relicensing		Howland/ Enfield

It’s important to note that all waters are connected; pollution to one source will affect another within a watershed. It is important to remember that everything occurring in a watershed and

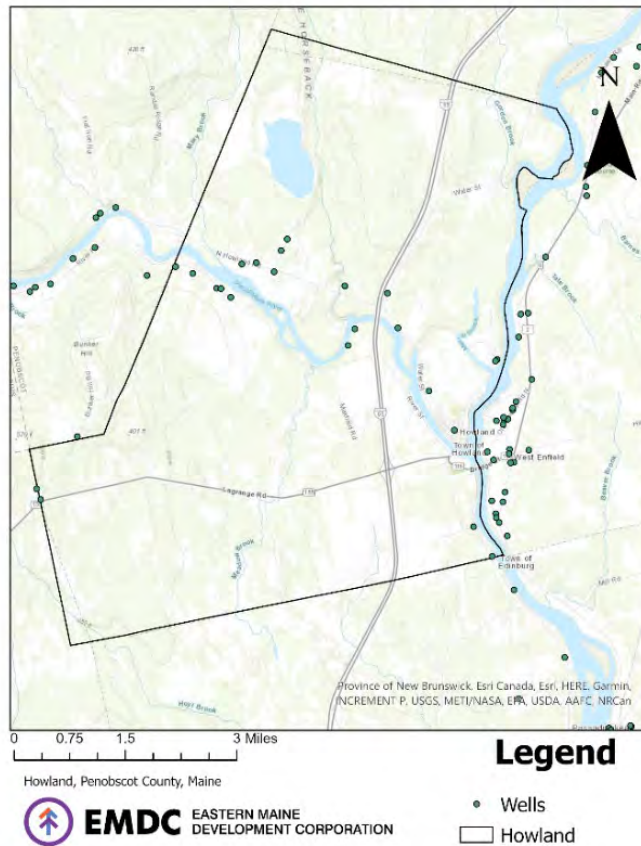


everything that can be transported by water will eventually reach and impact the water quality of a waterbody. In other words, these activities may disturb the watershed. The disturbed and developed land contributes pollutants and other substances to the lake. Therefore, lake water quality is degraded. Activity anywhere in a watershed, even several miles away, has the potential to impact lake water quality.

### ***Groundwater and Aquifers***

Groundwater is a major source of drinking water in Howland and is pumped a public water system. That said there are individual wells drilled down to the underlying aquifer. The known sand and gravel aquifers located in the Town of Enfield (next to Howland), based on information provided by the State Department of Conservation, include a large and significant aquifer which traverses Enfield from north to south and runs underneath or very close to the Dodlin Road for a major portion of its distance. This aquifer not only provides Howland and Enfield's water, but Lincoln's water and that for Poland springs bottling enterprises. Looking to the future, droughts may become more prevalent throughout Maine and last longer. To mitigate the possibility of droughts in the future, it is important to routinely and thoroughly monitor the state of groundwater and aquifers. Below is a map of estimated wells dug in Howland. Although this map shows most of the wells found, some are still missing.

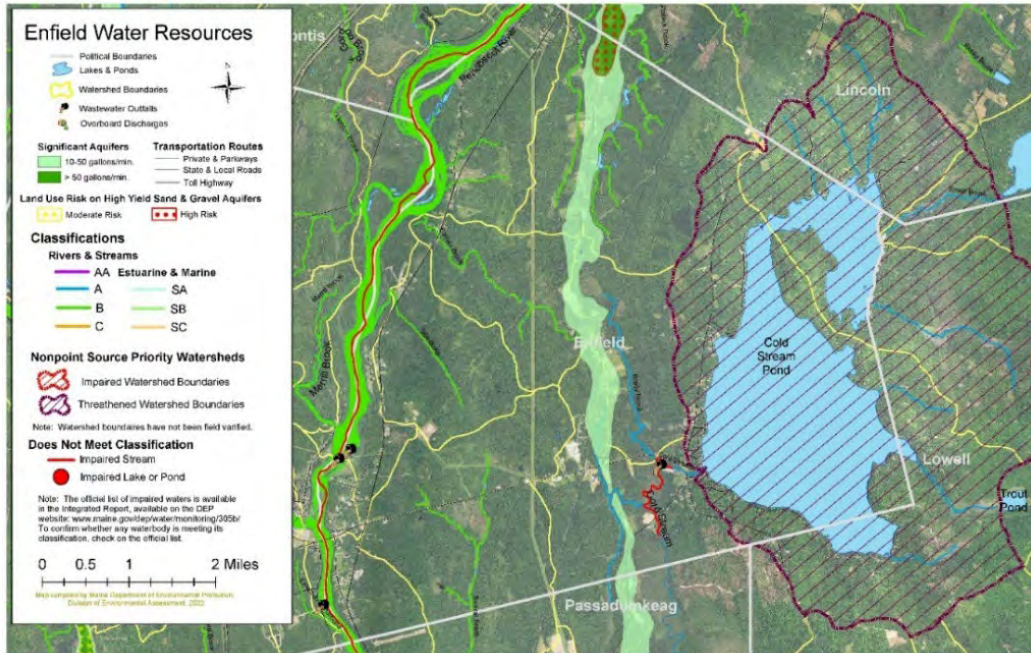
Maine Well Database (Howland, Maine 2024)



**Map 4.5:** Well Database of Howland Maine. Source: State of Maine

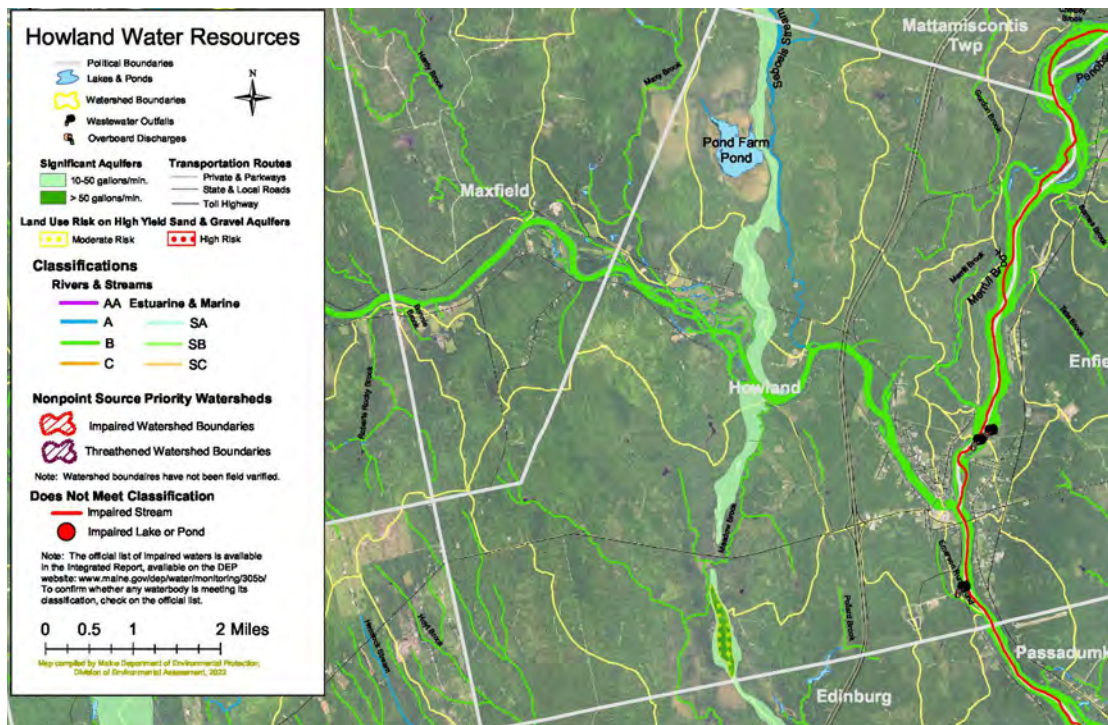
***Aquifers***

An aquifer currently supplying the drinking water for Lincoln and Howland lies under Lincoln, Enfield, and Passadumkeag. The high yield section underlies Lincoln and Enfield around the towns' boundary. The municipal wells for the water supply are located in Lincoln. Howland is considering their future needs for drinking water, which upgrading their municipal water supply system for Lincoln and Howland, which uses the aquifer.



**Map 4.6:** Enfield Watersheds that supply water for Howland’s drinking water. Enfield, Maine. Source: State of Maine

Howland also has its own aquifer. At one time, it was tested to see if it would be an adequate source of drinking water for the town, but its resources were limited, emphasizing the need to continue sharing resources with Enfield and Lincoln.



**Map 4.7:** Watersheds in Howland Maine. Source: State of Maine

The aquifers as indicated are the known deposits of coarse-grained surface materials in all probability that can supply useful volumes of groundwater to properly constructed and developed wells. Boundaries are based on the best-known information and enclose areas that tend to be the principal groundwater recharge sites. Recharge to these specific aquifers, however, is likely to occur over a more extensive area than that shown on the water resources map. The groundwater and aquifer are well protected by current shoreland and Aquifer/groundwater protection zoning regulations, thanks to the efforts of the town and local organizations and stewards in the area

### ***Flood Management***

Our complex network of rivers and streams give our state a unique landscape, and unique opportunities for water recreation. It also makes the state as a whole more susceptible to periodic flooding.

### ***Dams And Fish Crossings***

#### ***Howland Dam***

Several federally-approved hydropower (primarily hydroelectric power generating) projects are located on the Piscataquis River. There was one such dam on the Piscataquis River located in Howland owned by the PP&L, Inc., commonly referred to as the Howland Dam. This dam had a capacity of 1,875 kW before being repurposed as a fish bypass in 2015 as a part of the Penobscot River Restoration Project. Below is a map (Chart 4.2) depicting the crossing and barriers for fish in Howland.





**Map 4.8:** Fish Passage Barriers in Howland, Maine. Source: State of Maine

### ***The West Enfield Dam***

The West Enfield Dam is located on the Penobscot River in the towns of Howland and West Enfield. The project operates a run-of-river facility which means all the flow entering the headpond is used immediately and not stored for later use. The rock-filled crib dam was constructed at the site in 1894. The original dam was replaced with the existing concrete structure in 1988 when Bangor-Pacific Hydro Associates redeveloped the entire project. The project is equipped with state of the art upstream and downstream fish passage systems, as well

### ***Run Around Dam***

Located in Merrill Brook, this dam was built in 1894, and is owned by Bangor-Pacific Hydro associates, and is the last Barrier dam in Howland (Map 4.8). Although this dam has no



discernable bearing on the migration of salmon or other important fish species, Howland may consider the possibility of creating a fish passage through this dam in the future.

### ***Penobscot River Restoration Project***

The Penobscot River Restoration Project is one of the largest river restoration projects to recover endangered wild Atlantic salmon in the United States. This approach to river restoration will reconfigure hydropower facilities and maintain energy while opening up more than 500 miles of habitat to 10 native species of sea-run fish, improve water quality, boost wildlife, and create new opportunities in communities along New England's second largest river.

The Penobscot River Restoration Project is the result of a conceptual agreement among Conservation groups, the Penobscot Indian Nation, PPL Corporation, State of Maine, U.S. Department of Interior's Bureau of Indian Affairs, National Park Service and Fish and Wildlife Service, that gives a new or existing not-for-profit corporation, to be agreed upon by parties to the agreement, an option to purchase Veazie, Great Works, and Howland dams for approximately \$25 million.

Another aspect of dam removal that bears mentioning is that it has significantly contributed to the resurgence and proliferation of river herring (*Alosa spp.*) in the Piscataquis and Penobscot rivers near Howland. As a keystone species in both freshwater and marine ecosystems, river herring are highly responsive to restoration efforts, making them a focal point for the Downeast Fisheries Partnership's initiatives to rejuvenate fisheries in eastern Maine. The removal of dams in Veazie and Great Works Dams has led to a notable recovery of herring populations, further bolstered by the implementation of a fish passage in Howland. Known to the Passamaquoddy as "the fish that feeds all," herring play a crucial role in the food web, providing sustenance for a wide array of organisms within riverine ecosystems. Alewife (*Alosa Pseudoharengus*) populations alone grew from near zero in 2010 to six million in 2023 on the Penobscot.<sup>11</sup>

### ***Shared Resources***

The greatest bodies of water, The Penobscot and Piscataquis Rivers, either run through, or along side the town, and as such, are the collective responsibility of not only Howland, but of every person living along these bodies of water. Effective stewardship of these waterways necessitates a collaborative approach, where abutting municipalities play a crucial role in implementing conservation strategies, monitoring environmental health, and educating residents about sustainable behaviors. Howland may soon work more closely with other communities by engaging in initiatives to reduce nutrient runoff, controlling invasive species, and promoting responsible

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<sup>11</sup> <https://www.nature.org/en-us/what-we-do/our-priorities/protect-water-and-land/land-and-water-stories/ija-river-restoration-maine/#:~:text=Large%20dam%20removals%20a%20decade,in%202023%20on%20the%20Penobscot.>

land use. The towns of Northern Maine are unique in that their communities is easily mobilized, having a sense of shared responsibility among citizens to ensure that the protection of these rivers.

The Penobscot River, in particular, is the largest river in Maine and runs through several towns and cities. This River contains multiple threatened species and species of concern. Of the several which are endangered, threatened, or of special concern, only three habitat in Howland's portion along the Penobscot. These include Brook floaters (*Alasmidonta varicose*), tidewater mucket (*Leptodea ochracea*), and yellow lamp mussel (*Lampsilis cariosa*).

Of greatest importance to the Penobscot River is the Atlantic salmon (*Salmo salar*). Maine is home to the only remaining populations of wild Atlantic salmon in the United States. Salmon face a large suite of threats to survival in both fresh and saltwater environments, including dams, pollution, and (historically) overfishing. Water quality is an essential component of suitable habitat for spawning and rearing. Maine DEP monitors the water quality and biological communities in Maine's Atlantic salmon rivers and streams in close collaboration with state and federal agencies and non-profit groups, with the goal to restore and enhance the populations of this endangered species. Work is guided by Maine's water quality standards).

The issue with protecting wildlife is that most organisms don't recognize municipal borders. The protection and conservation of species that have habitat along Penobscot and Piscataquis Rivers will necessitate regional cooperation. That said, there are already state-wide efforts for these species' protection, but further effort from the surrounding municipalities would make any regulations surrounding their protection more effective.

### **Pollution**

Because Howland has quite a few sources of water, it's important to keep track of any and all potential pollution. Disposing of waste properly, maintaining septic tanks, and reducing sediment run-off are a few of many ways to mitigate pollution in the town.

### **Point Source**

Point source pollution comes from specific, identifiable sources, such as industrial facilities or wastewater treatment plants discharging contaminants directly into water bodies. Point-source pollution might arise from factories, sewage treatment plants, or other industrial activities that release pollutants into nearby waterways, leading to localized pollution and possible adverse effects on aquatic ecosystems. There are currently know areas for potential point-source pollution in Howland.

### Non-Point Source

Non-point source pollution is more diffuse and arises from multiple sources, making it challenging to pinpoint a specific origin. In Howland, this could include runoff from forested or agricultural lands, or construction sites, carrying pollutants like fertilizers, pesticides, oils, and debris into rivers and streams during rainfall events.

There are no recent occurrences of non-point source pollution reported in Howland. However, the town is acutely aware of improvements needed, and that the town plans to make. Howland recently got a grant to improve the salt/ sand shed as well as move it closer to the recycle center located on Argyle Road. Another concern is where large culverts are deteriorating, and might be depositing unregulated discharge into the river. Immediate culvert repair or replacement is needed to mitigate this possibility.



**Map 4.9:** Drainage areas in Howland, Maine. Source: State of Maine DOT

The wastewater is managed through a combination of private septic systems (minimal) and a centralized wastewater system where it is treated and discharged into the Penobscot River or recycled.

All buildings reportedly have up-to-date septic systems, sanding of roads is done to state standards, and shoreland zoning is managed well by the town Code Enforcement Officer and Planning Board.

When refuse is burned, it's done to all Maine DEP standards. The only real potential for non-point source pollution in the community may arise from excessive flooding in the areas that abut the Penobscot and Piscataquis Rivers. Certain conditions after heavy rains would have to manifest for this to be possible though. The town is working on strategies for future management of this area.

### ***Community Needs***

Beyond continued monitoring, the town communicated that there is a need to replace old sewer and water lines. The biggest priorities are Cemetery Rd. and at the End of Penobscot Ave. The town continues to operate under best management practices for the area, making it known that the water resources are a point of pride, and using the abundance of water as an opportunity to foster community education and engagement in continued sustainable water practices. Strong consideration must be given to how humans interact, and change the surrounding ecosystems and potential impacts, including flooding, changes in precipitation, and long-term impacts on water quality in local lakes, ponds, the Piscataquis and the Penobscot Rivers. There are several climate resilience resources available to the town through the [Maine Climate Change Adaptation Toolkit](#), an interagency initiative led by the Maine Department of Environmental Protection. The community should refer to these resources when considering preventative measures against climate change impacts.

Maine Flood Hazard Map (Howland)



Map 4.10: Howland Maine Floodplain map. Source: State of Maine

### Public Water systems

Howland’s current sewer water system runs partially on wells, but mostly on a centralized public water utility. Every year the town reports on drinking water quality. Below are the results for 2023.



**Table 4.3:** 2023 Drinking water quality Testing. Source: Town of Howland

Contaminant	Date	Results	MCL	MCLG	Source
<b>Microbiological</b>					
Total Coliform	2023	0 pos	1 pos/month or 5%	0 pos	Naturally present in the environment.
<b>Inorganics</b>					
Arsenic	4/15/20	1.5 ppb	10 ppb	0 ppb	Erosion of natural deposits. Runoff from orchards, glass and electronics production wastes.
Barium	4/15/20	0.0009 ppm	2 ppm	2 ppm	Discharge of drilling wastes. Discharge from metal refineries. Erosion of natural deposits.
Chromium	4/15/20	1.2 ppb	100 ppb	100 ppb	Discharge from steel and pulp mills Erosion of natural deposits.
Copper 90th % Value (4)	1/1/19-12/31/2	0.245 ppb Range (0.0721-0.259ppb)	AL=1.3 ppm	1.3 ppm	Corrosion of household plumbing systems
Fluoride (3)	4/15/20	0.1 ppm	4ppm	4ppm	Erosion of natural deposit. Water additive which promotes strong teeth
Lead 90th% Value (3)	1/1/19 – 12/31/2	1.4 ppb Range(0-1.5ppb)	L=15 ppb	0 ppb	Corrosion of household plumbing systems
Nitrate Nitrogen	9/11/2023	0.51 ppm	10 ppm	10 ppm	Runoff from fertilizer use. Leaching from septic tanks, sewage. Erosion of natural deposits.
<b>Disinfectants and Disinfection Byproducts DISTRIBUTION SYSTEM</b>					
Total Trihalomethane (Tthm) (9)	6/13/2022	9.4 ppb	80 ppb	0 ppb	By-product of drinking water chlorination.
Chlorine Residual (Add chlorine residual information)					

Chlorine Residual	Range (0.19-0.25)	MRDL=4ppm	MRDL=4ppm		By-product of drinking water chlorination.
All other regulated drinking water contaminants were below detection levels.					

Access to clean and reliable water is a fundamental requirement for human life. By providing a public water system, Howland ensures that residents have access to safe drinking water, sanitation facilities, and hygiene standards. This creates a healthier living environment and improves the overall quality of life for the community. On top of this, a reliable public water system is an essential factor in attracting new residents. People are more likely to settle in an area that offers basic amenities, including access to clean water. As the population grows, it stimulates local economic activity, such as increased demand for housing, retail, and services.

### **Strategies**

Amend the land use ordinance as applicable to incorporate stormwater runoff performance standards consistent with:

- a. Maine Stormwater Management Law and Maine Stormwater regulations (Title 38 M.R.S.A. §420-D and 06-096 CMR 500 and 502).
- b. Maine Department of Environmental Protection’s allocations for allowable levels of phosphorous in lake/pond watersheds.
- c. Maine Pollution Discharge Elimination System Stormwater Program

Consider amending the land use ordinance, as applicable, to incorporate low impact development standards.

Enact public wellhead and aquifer recharge area protection mechanisms, as necessary.

Encourage landowners to protect water quality. Provide local contact information at the municipal office for water quality best management practices from resources such as the Natural Resource Conservation Service, University of Maine Cooperative Extension, Soil and Water Conservation District, Maine Forest Service, and/or Small Woodlot Association of Maine.

Adopt water quality protection practices and standards for construction and maintenance of public and private roads and public properties and require their implementation by contractors, owners, and community officials and employees.

Participate in local and regional efforts to monitor, protect and, where warranted, improve water quality.

Provide educational materials at appropriate locations regarding aquatic invasive species.

## Water Resources

Encourage town contractors to attend Maine Local Roads workshops and get DEP certification (to work around local bodies of water)

Monitor water bodies for PFAS

Work to allow fish passage at stream crossings identified in Stream Habitat Viewer (a Maine DEP resource)



A photograph of a dense forest. The scene is filled with tall, slender trees, likely deciduous, with their trunks creating a vertical rhythm. The forest floor is a mix of brown, fallen leaves and vibrant green ferns. Sunlight filters through the canopy, creating dappled light and shadows on the ground. The overall atmosphere is serene and natural.

# NATURAL RESOURCES



## ***Natural Resources***

### ***State Goal***

To protect the State’s other critical natural resources, including without limitation, wetlands, wildlife and fisheries habitat, sand dunes, shorelands, scenic vistas, and unique natural areas.

### ***Town Goal(s) and Policies***

Promote inter-local relations among municipalities for a coordinated regional effort to protect natural resources by way of increased communication.

Explore ways to improve, expand, and balance recreational activities with conservation practices around the town’s vital natural resources by utilizing campaigns already undertaken by other towns and cities in Maine as a blueprint.

To conserve critical natural resources in the community

To coordinate with neighboring communities and regional and state resource agencies to protect shared critical natural resources

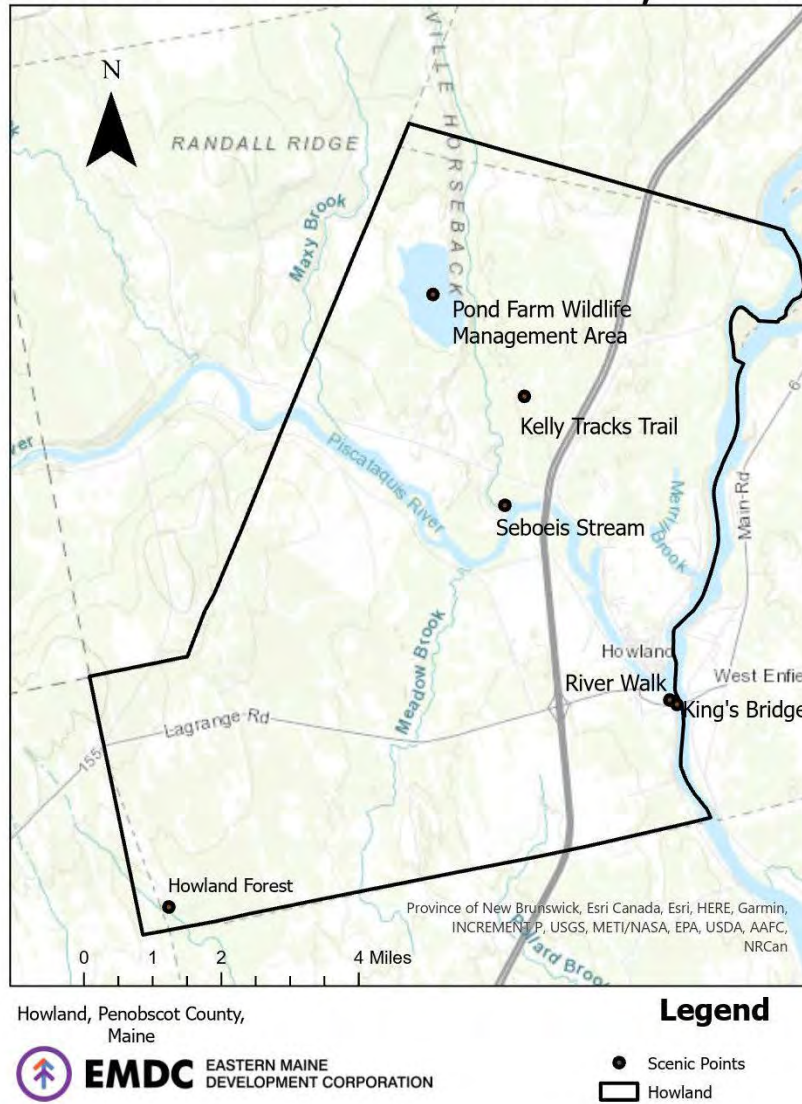
### ***Natural Community & Wildlife Protection***

Scenic beauty, diverse wildlife habitats, and tourist attractions are just some of the many benefits provided by the natural resources in Howland. From open wetlands, the pond, rivers, hills, and low peaks, the community’s natural geography supports a variety of wildlife habitats such as deer, bald eagles, mussels, salmon, brook trout, and small-mouth bass. Local ordinances for land use and shoreland zoning provide regulatory protection for areas rich in natural communities and wildlife habitats.

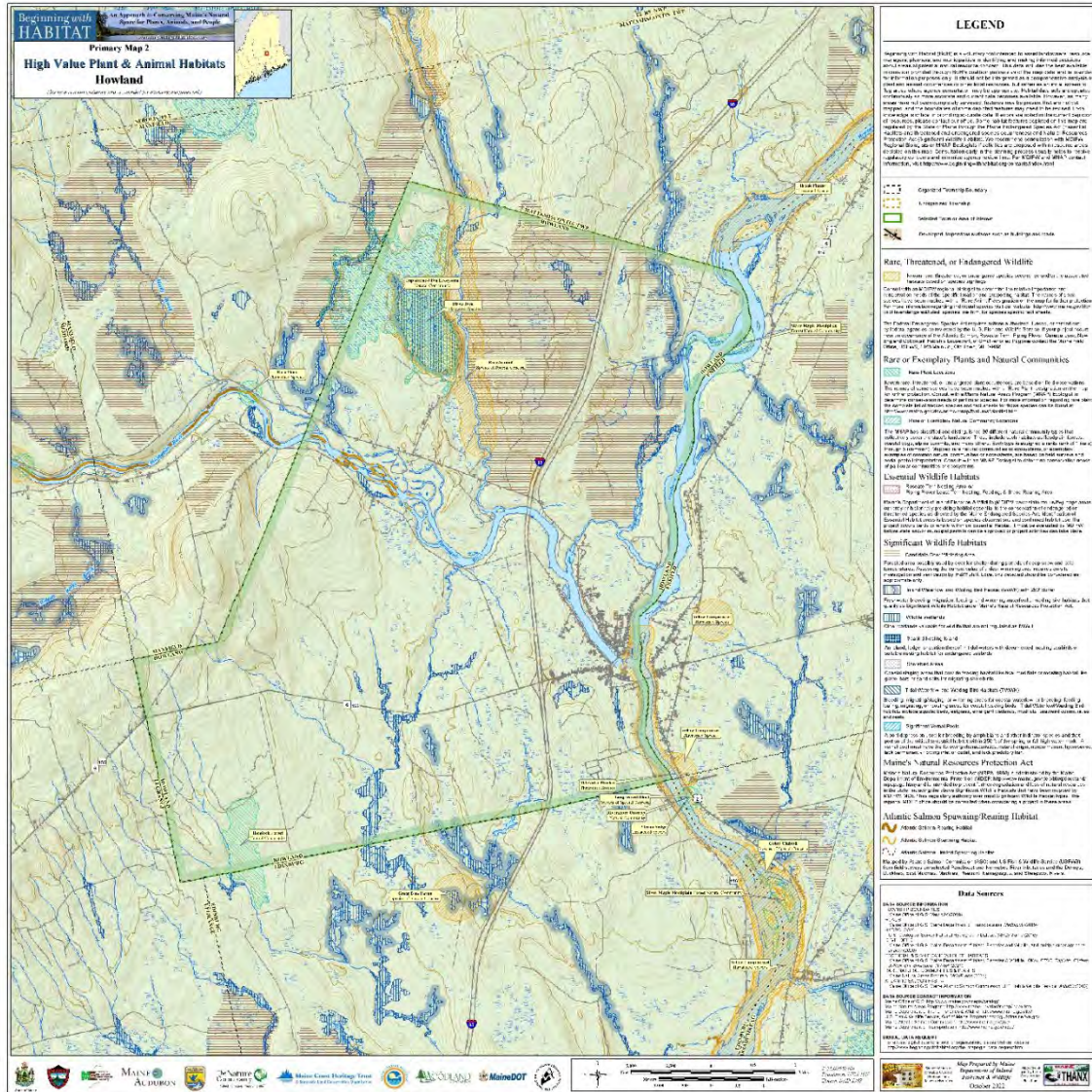
The Natural Resource chapter of Howland's Comprehensive Plan aims to balance growth with environmental stewardship, reflecting Howland’s commitment to preserving its rich natural resources. This chapter will emphasize sustainable management of water bodies, forests, and wildlife habitats, all critical natural resources. It will outline strategies to protect these resources while supporting community needs and economic development, ensuring that future generations inherit a healthy and vibrant ecosystem.



# Scenic Points in Howland, Maine



**Map 5.0:** Scenic Points of Howland, Maine. Source: Town of Howland

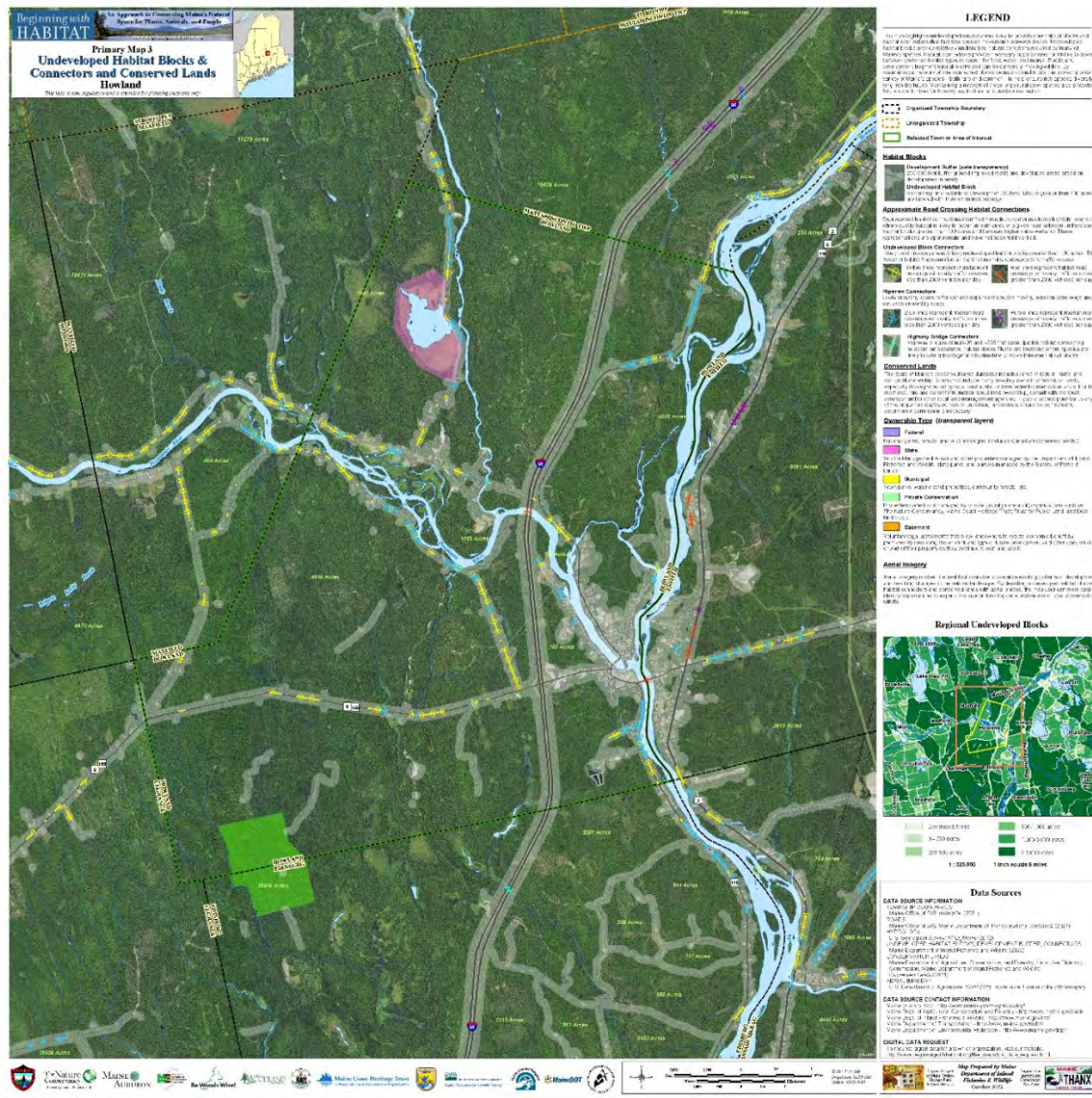


Map 5.1: High Value Plant and Animal Habitat in Howland, Maine. Source: Beginning With Habitat









**Map 5.3:** Undeveloped Habitat Blocks and Connectors and Conserved Lands in Howland, Maine. Source Beginning With Habitat.

### Deer Wintering Areas

Deer Wintering Areas (DWAs) in Maine plays a pivotal role in the broader context of natural resource management. These habitats are critical for sustaining white-tailed deer populations, as they offer essential elements for winter survival, including thermal cover and accessible forage. Effective management of these areas is integral to maintaining a balanced ecosystem. Robust management practices not only ensure the well-being of deer but also have cascading effects on other wildlife species and vegetation. By preserving and strategically managing DWAs, we contribute to biodiversity conservation, enhance forest health, and promote ecological resilience.

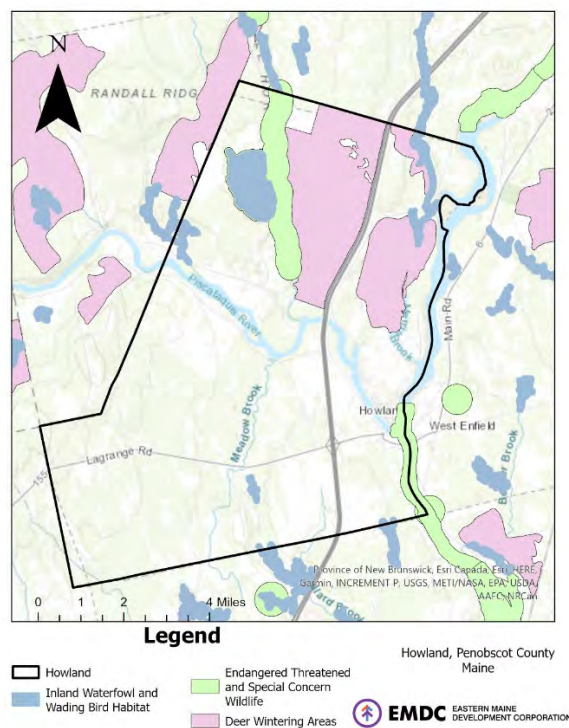
Recognizing the interconnectedness of these habitats with the overall ecosystem underscores the relevance of their robust management in the broader spectrum of natural resource stewardship.

***Inland Waterfowl and Wading Bird Habitat***

These are significant ecosystems that support a diverse array of avian species. The state's numerous lakes, ponds, and wetlands provide critical breeding grounds and stopover points for waterfowl and other birds like herons, egrets, and ibises during their migratory journeys. These habitats offer abundant food resources, nesting sites, and protection for bird spp. Birds often rely on the rich abundance of aquatic life found in these habitats, including fish, amphibians, and invertebrates. Maintaining and preserving these habitats is essential for the conservation of birds, contributing to biodiversity and maintaining ecological balance.

Below is a map showing the critical natural resource areas designated by the State of Maine. Showing these on an overlay of the town will be helpful as it creates potential future land use plans and ordinances to help mitigate habitat loss in these areas.

Critical Natural Resources in Howland



**Map 5.4:** Critical Natural Resources in Howland, Maine. Source: State of Maine

***The Howland Research Forest***

In November 2007, the Northeast Wilderness Trust purchased and permanently protected the 550-acre Howland Research Forest. The forest is located in Edinburg and Howland. The forest is a critical site for long-term ecological studies. Managed by a coalition of research institutions, it



provides valuable data on forest dynamics, carbon cycling, and climate change impacts. The forest's old-growth stands are meticulously monitored to understand ecosystem processes and biodiversity. Studies conducted here contribute to global knowledge on sustainable forest management and environmental conservation, making the Howland Research Forest as a key asset in addressing contemporary ecological challenges.

Not only is this forest being a testament to the high-value natural resources in Northern Maine, but a historic landmark as well. A short distance from the Penobscot River and the route Thoreau followed north to Mount Katahdin in the summer of 1846 (an adventure chronicled in "The Maine Woods"), is an unassuming wooden shed, which is part of the research forest. Protected as forever wild in 2007 by Northeast Wilderness Trust, the Howland property – unknown to nearly everyone outside a small circle of climate scientists – has led a double life as one of the wildest and, simultaneously, most closely studied patches of ground in the United States. This makes it highly similar to the path that Thoreau once walked (aside from the meteorological towers surrounding the area).

Howland Forest is managed by the Environmental Physics group of the University of Maine through the Center for Research on Sustainable Forests, and is currently funded by the Department of Energy through its AmeriFlux program and the USDA Forest Service.

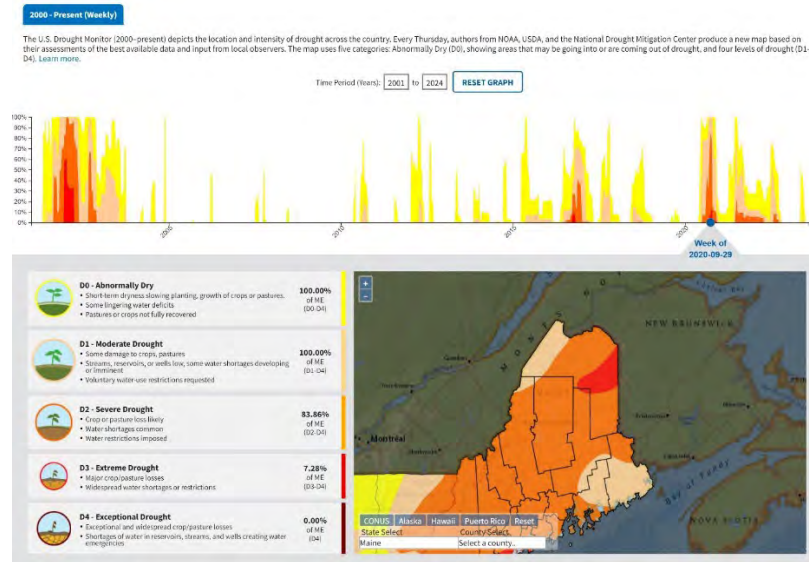
### ***Threats to Natural Resources***

As previously stated, Maine has seen increased instances of drought throughout the state since at least 2000. Drought in Howland would mean losses to plant growth, increases to fire and insect outbreaks, altered rates of carbon, nutrient, and water cycling, and at worst, local species extinctions. In short, it could lead to the loss of area in water bodies around the state. The following graphic shows drought conditions from 2000 to the present, with a highlight point on a certain week in 2020 when recent drought conditions were at their worst. With the recent instance of drought, Maine is also projected to see an increasing number of extreme precipitation events, and increasing total yearly precipitation.<sup>12</sup> From 2022-2024, Maine has seen exceptionally wet weather the affected snow and ice, flood conditions, and disaster watches. Planning for climate resilience will require preparing for drought conditions, as well as frequent heavy rainfall events and flooding.

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<sup>12</sup> <https://www.wgme.com/news/local/rising-temperatures-in-northeast-lead-to-heavier-rainfall-boosting-flood-risks-in-maine-raining-rain-wet-weather-spring-showers-5-2-2024>

## Natural Resources



**Graphic 5.0:** U.S Drought Map of Maine. Source: U.S. Drought Monitor

To mitigate the effects a drought may have, Howland has included strict regulations into their shoreland zoning. When doing any development around any areas where there are prominent water resources, the town follows the shoreland zoning code accordingly. Local shoreland zone standards are consistent with the state guidelines and are updated to the current state levels.

Acid rain may no longer immediately threaten ecosystems, however, recent fires all over the country and beyond have caused prevailing winds to bring the smoke to our region causing a phenomenon called “dirty rain”. Despite more fires in Ohio, California, and parts of Canada, Maine has not yet received deposits of harmful chemicals from dirty rain. If drought conditions persist throughout the US, causing more fires, the likelihood of dirty rain depositing chemicals into Maine’s soils and waterways becomes more likely. To mitigate this, Howland may use similar tactics it uses to prevent runoff or non-point source pollution, being cautious of when a dirty rain event may occur, and monitoring the town’s ecosystems for harmful chemicals.

Another newer problem occurring throughout Maine is due to our growing understanding of polyfluoroalkyl substances (PFAS). PFAS break down very slowly and are persistent in the environment. This means that PFAS may build up in people, animals, and the environment over time. Health agencies are working to understand more about the health effects of low-level, long-term exposure. As of now, our understanding of PFAS is that exposure may cause a number of different health risks:

Potential Health Impacts from PFAS
Decreases in fertility or increases in high blood pressure in pregnant women
Reduced ability of the body's immune system to fight infections including reduced vaccine response
Child development effects including low birth weight, accelerated puberty, bone variations, or behavioral changes
Increased risk of some cancers including prostate, kidney, and testicular cancers
Interference with the body's natural hormones
Increased cholesterol levels and/or risk of obesity

**Graphic 5.1:** Potential Health Impacts from PFAS. Source: State of Maine

According to Maine’s EPA, technology for the treatment, concentration, and destruction of PFAS is still in its early stages and at this time, there is no universal, cost-effective way to remove PFAS from all media. Furthermore, technologies currently available to manage PFAS vary based upon the type of media. For example, removing PFAS in water requires different considerations and processes than removing PFAS from soil, sludges, leachate, vegetables, milk, beef, or other contaminated media. This is because each media type has unique characteristics which may pose challenges with existing technology. Both the Federal Government, the State of Maine, multiple academic institutions, and private industry are researching new technologies and methods for treating, concentrating, and destroying PFAS. It is anticipated that options will be evolving rapidly over the next few years. To mitigate any potential presence of PFAS in Howland, residents can continue to keep their standards for drinking water updated. The town may also continue monitoring for the presence of PFAS.

## Protection

### Organisms

There are several Endangered or Threatened Species, and Species of Special Concern that have one or more habitat ranges in or around Howland.

#### Endangered, Threatened, and Special Concern Organisms in Howland

Common Name	Latin Name	Listing Status	Type	Location
Black Tern	<i>Chlidonias niger</i>	State Endangered	Bird	Along Seboeis Stream
Brook Floater	<i>Alasmidonta varicosa</i>	Threatened	Mussel	Penobscot River
Wood Turtle	<i>Glyptemys insculpta</i>	Special Concern	Reptile	Within Natural Habitat Range
Cobra Clubtail	<i>Gomphurus vastus</i>	Special Concern	Dragonfly	Penobscot River
Tidewater Mucket	<i>Atlanticoncha ochracea</i>	Threatened	Mussel	Cold Stream Pond

## Natural Resources

Yellow Lampmussel	<i>Lampsilis cariosa</i>	Threatened	Mussel	Beaver Brook Area
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As for plants, no plant species listed as Endangered, Threatened, or of Special Concern have been documented within this town according to the state of Maine.

### ***Rare and Exemplary Natural Communities***

#### Habitat Communities in Howland

Habitat Type	Brief Description	Status	Location
Hemlock Forest	This closed canopy forest type is dominated by hemlock (>50% cover) or, less often, hemlock is co-dominant with red spruce, red oak, yellow birch, red maple, or sugar maple (very rarely with northern white cedar, near the coast).	S4 Apparently secure in Maine.	Refer to beginning with habitat map on Pp. 46
Silver Maple Floodplain Forest	Sites occur in a floodplain setting with mineral soil. Silver maple is the dominant tree. There is a dense herb layer with sensitive fern and, locally, ostrich fern. Spring ephemerals are frequent.	S3 Rare in Maine (on the order of 20-100 occurrences).	Refer to beginning with habitat map on Pp. 46
Unpatterned Fen Ecosystem	Fens are peatlands in which groundwater or water from adjacent uplands moves through the area. As a result, plants are exposed to more nutrients, and the vegetation is typically different and more diverse than that of bogs. Peat is moderately- to well-decomposed and of variable thickness.	S5 Demonstrably secure in Maine.	Refer to beginning with habitat map on Pp. 46

### ***Regional Cooperation***

As stated in a previous chapter, wildlife, and organisms in general, do not recognize municipal or human-made boundaries, which makes management on a regional level crucial to sustainability. Shared ecosystems, such as the Penobscot River, and Piscataquis River watershed and surrounding habitats like the Howland Forest, demand synchronized efforts to address common challenges, such as invasive species propagation, habitat degradation, and water quality maintenance. Collaborative initiatives enable the pooling of expertise, data, and resources, fostering the development of comprehensive strategies that account for regional variations and collective impacts. The integration of scientific research and local knowledge within a collaborative framework enhances the efficacy of conservation actions, facilitates data-driven decision-making, and maximizes the long-term viability of natural resources. In an era marked by escalating anthropogenic pressures and environmental uncertainties, the unity of Howland and adjacent municipalities may serve as a model for prudent and sustainable natural resource management.



In particular, the Beginning with Habitat (BwH) program designates Focus Areas of Statewide Ecological Significance (“Focus Areas”), based on the presence of rare plants, animals, and natural communities, and the supporting landscape conditions that contribute to the long-term viability of the species, habitats, and community types. Howland includes a portion of the Piscataquis River which also covers portions of nine other towns along its waters. Appreciation of these special places can give momentum to municipalities, land trusts, and regional initiatives working on strategic conservation plans and help to focus conservation efforts.

Large undeveloped habitat blocks are depicted on the above BwH map (Map 5.3), and are an important resource to consider when discussing how to protect and connect habitats that run through town. Large undeveloped habitat blocks are critical for supporting the full diversity of species in a region, and can be great opportunities for regional collaboration on resource protection and landscape connectivity. The Howland research forest is a great example of regional coordination between the town, Lagrange, the University of Maine, and the world. The Howland Forest is one of the oldest research forest in the United States, and serves as a host to various model and sensor development efforts as well as numerous studies focusing on nutrient cycling, forest ecology, ecosystem modeling, acid deposition, remote sensing, climate change, and carbon sequestration.<sup>13</sup>

Howland shares several large undeveloped habitat blocks with the neighboring towns of Edinburg, Maxfield, and Lagrange, sharing a long shoreline of the Penobscot River with the communities along its shores, and sharing the Piscataquis rivers with the many communities that run from close to Greenville on the east branch, and East Moxie on the West Branch.

With the construction of the fish bypass on the Penobscot River, communities surrounding it have seen great support and stewardship for it. It is important for communities to continue to collaborate for the sake of the health not only the fish populations in The Penobscot, but for the ecosystems as a whole.

### ***The Future of Natural Resources Through Land Use Planning***

It is important to prioritize land use planning through the lens of natural resource management, as using ecological standards help to foster greater sustainability and indefinite use. The trajectory of future land use planning holds the promise of advancing ecological sustainability. A data-driven approach, grounded in spatial analysis, remote sensing technologies, and ecological modeling, can further inform the identification of critical habitats, ecological corridors, and areas of high conservation value. Integrating this scientific foundation with stakeholder engagement and participatory processes can yield dynamic land-use strategies that harmonize human needs with ecosystem imperatives. Adaptive management frameworks, underpinned by ongoing monitoring and assessment, may be implemented to refine land-use plans in response to changing environmental conditions. Moreover, a forward-looking approach should encompass climate resilience considerations, acknowledging the potential impacts of human-driven changes

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<sup>13</sup> <https://crsf.umaine.edu/forest-research/howland-research-forest/>

in the climate, on natural resource dynamics. Ultimately, the prospective evolution of land use planning in Howland pivots upon the fusion of scientific rigor, community collaboration, and holistic ecological stewardship to foster both human and natural systems.

### ***Strategies***

Ensure that land use ordinances are consistent with applicable state law regarding critical natural resources.

Designate critical natural resources as Critical Resource Areas in the Future Land Use Plan.

Through local land use ordinances, require subdivision or non-residential property developers to look for and identify critical natural resources that may be on site and to take appropriate measures to protect those resources, including but not limited to, modification of the proposed site design, construction timing, and/or extent of excavation.

Through local land use ordinances, require the planning board (or other designated review authority) to include as part of the review process, consideration of pertinent BwH maps and information regarding critical natural resources.

Initiate and/or participate in interlocal and/or regional planning, management, and/or regulatory efforts around shared critical and important natural resources.

Pursue public/private partnerships to protect critical and important natural resources such as through purchase of land or easements from willing sellers.

Distribute or make available information to those living in or near critical or important natural resources about current use tax programs and applicable local, state, or federal regulations.

# AGRICULTURAL &



# FOREST RESOURCES



## ***Agricultural and Forest Resources***

### ***State Goal:***

To safeguard the State's agricultural and forest resources from development which threatens those resources.

### ***Policies and Town Goal(s):***

To safeguard lands identified as prime farmland or capable of supporting commercial forestry.

To support farming and forestry and encourage their economic viability.

Establish a Community Garden

Expand the Farmers Market

### ***Summary of Howland's Agricultural and Forest Resources***

Howland's agricultural and forestry sectors were once integral to the town's economic vitality and cultural heritage, especially for communities along the Penobscot River. The same could have been said for all of rural Maine. Maine's 8,100 working farms covering about 1.3 million acres remain crucial to Maine's economy by supporting rural livelihoods and contributing to the state's rich agricultural heritage. The agricultural sector is characterized by diverse and high-quality products, including its iconic wild blueberries, potatoes, and maple syrup, while its extensive forests, covering approximately 89% of the state, support a robust forestry industry. Maine's forests are part of the largest contiguous block of undeveloped forestland east of the Mississippi. This expansive forestland, with the economic value that it provides for fiber production as well as the relatively undeveloped and remote landscape that it creates, is in large part what defines Maine's distinctive character.

In 2010, agriculture, forestry, fishing and hunting, and mining made up 8% of Enfield's labor force. In 2020, that number is down to 4.2% according to US census data. This is consistent with the trend of decreasing pastures and farmable forests throughout Maine, and the US. It is projected that Howland will lose more pasture in the near future.

This chapter outlines the current state of agriculture and forestry in Howland, examines local trends, and presents strategies to promote sustainable practices. This plan emphasizes the importance of supporting



local farmers and forest managers, encouraging value-added production, and aligning with state conservation goals to enhance both economic opportunities and environmental stewardship

### ***Summary From The 2004 Comprehensive Plan***

#### ***Agricultural Resources***

The agricultural landscape in Howland is characterized by a limited number of personal-use farms, with no commercial farming operations currently in the town. Development pressures threaten the irreversible conversion of valuable soils to non-agricultural uses. Despite the absence of digital soil survey data, efforts will be made to evaluate and protect prime agricultural soils once this information becomes available. Existing farmland protection measures in Maine include the Farm and Open Space Tax Law, which provides tax incentives for preserving agricultural land, and the Farmland Registration Program, which protects farmers' rights and buffers farmland from incompatible development.

#### ***Forestry Resources***

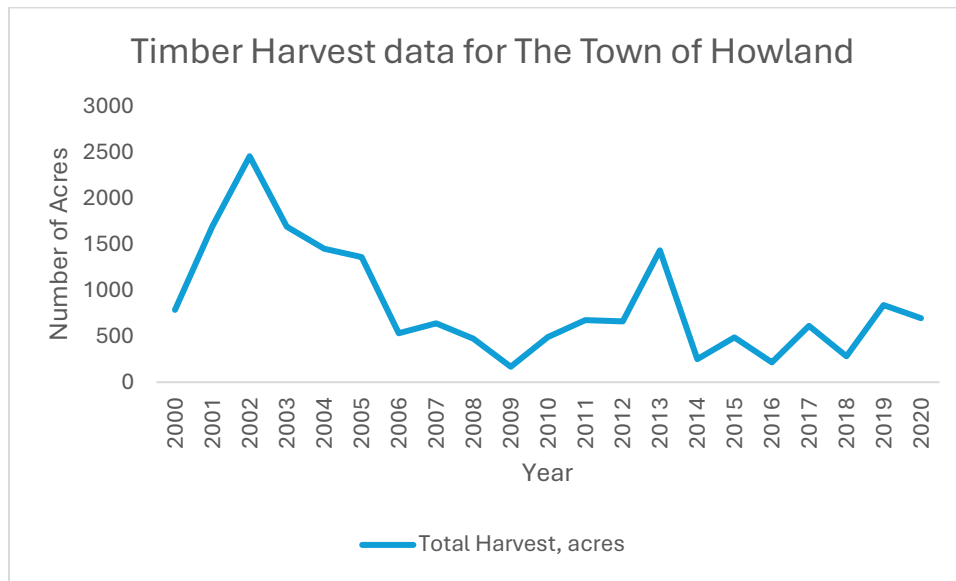
Forests cover approximately 75% of Howland's total land area, with a diverse mix of coniferous, deciduous, and mixed forests. The town is involved in significant research through the Howland Integrated Forest Study, which examines environmental impacts on forest health and contributes to global climate change studies. Sustainable forest management is supported by various state measures, including the Tree Growth Tax Law, which encourages the conservation of timberlands through favorable tax valuations, and the Forest Practices Act, which regulates clear-cutting and promotes sustainable harvesting practices. Additionally, local ordinances such as the Ordinance to Regulate Timber Harvesting aim to ensure environmentally responsible forestry operations. At the time of this comp plan, approximately 75% of Howland's total area (23,305.56 acres), was forested. Coniferous forests made up 3,169.11 acres, deciduous forests made up 5,156.65 acres and mixed forests made up 9,161.52 acres of the total 17,487.28 acres of forested land in Howland.

These initiatives collectively support the sustainable management of Howland's agricultural and forestry resources, balancing development with the need to preserve these essential components of the town's natural heritage and economic foundation.

#### ***Forestry***

Forestry in Maine is a legacy industry, and has been declining steadily since the 1990's. This trend is also apparent in Howland (Map 6.0). Over the last 20 years, there has been a significant shift in market demand for forest products. Global competition and the rise of alternative materials have

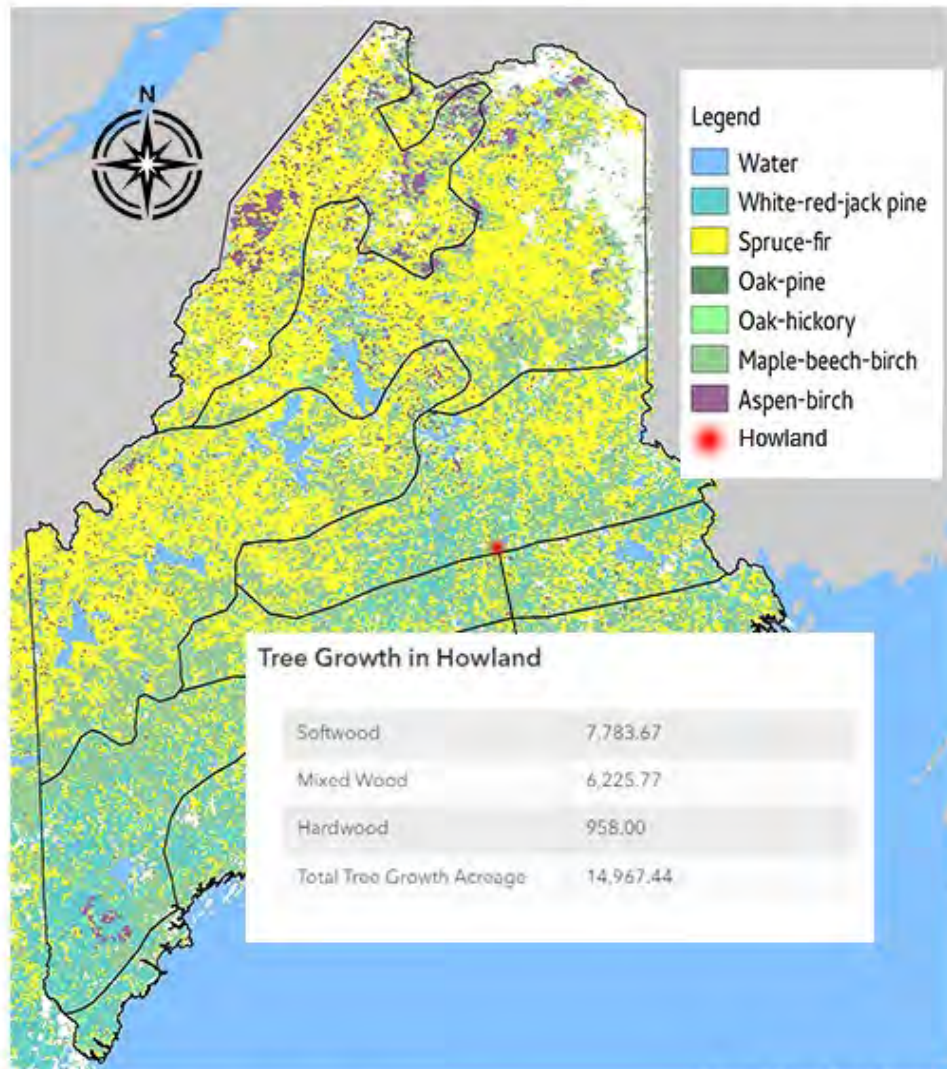
impacted the traditional markets for timber and paper products. This reduced demand can lead to less harvesting activity as the profitability of forestry operations declines. The increased use of digital media has also led to a decrease in the demand for paper, impacting the pulp and paper industry, which has historically been a significant part of Maine's forestry sector. Howland is a relatively small town with limited infrastructure and resources to support large-scale forestry operations. The town is not as dependent on forestry compared to other regions in Maine, leading to a shift in focus towards other sectors.



**Chart 6.0:** Timber Harvest data in Howland, Maine over the last 20 years. Source: State of Maine

Forests should be effectively managed and harvested so they are commercially viable and continue to be home to many unique habitats. Loss of forestland is attributed to fragmentation and development, land valuation/taxation, and productivity decrease. A majority of forested land is owned by few individual landowners. The forested land in Howland is not only important economically, but the undeveloped land provides recreational opportunities and contributes to the rural nature of the community valued by residents and non-residents alike. As evidenced by the classification under the Tree Growth Tax Law program in neighboring towns, forested land is of regional, as well as local, importance. Current protection of forested land includes the State Forest Practices Act which regulates clearcutting and establishes regeneration standards. Below is a map of Maine’s forested ecosystems separated by ecoregion.

# Tree Growth In Howland 2024



Source: US Forest Service Forest Inventory & Analysis forest type cover



**Map 6.0:** Tree Growth in Howland, Maine. Source: State of Maine

As shown above (Map 6.0) the forested land enrolled in Maine’s Tree Growth Tax Law has decreased since 2004. There is a growing sentiment that the Tree Growth Tax Law has become increasingly restrictive to development. Some landowners have voiced concerns about the substantial penalties incurred if their land is removed from the Tree Growth Tax program. There is interest in developing certain areas along outer Penobscot Avenue, but current regulations would impose significant fines on the landowner for converting the land from tree growth use to

development. Established in 1972, This tax law aims to encourage the long-term management and conservation of forest lands by providing property tax incentives to landowners. The law reduces property taxes for landowners who commit to managing their forested land for commercial timber production. By doing so, the state seeks to ensure a sustainable supply of timber, preserve forested landscapes, and protect wildlife habitats, thereby promoting environmental and economic benefits. The law also discourages the conversion of forest lands to non-forest uses, supporting the overall health of Maine's forest ecosystems.

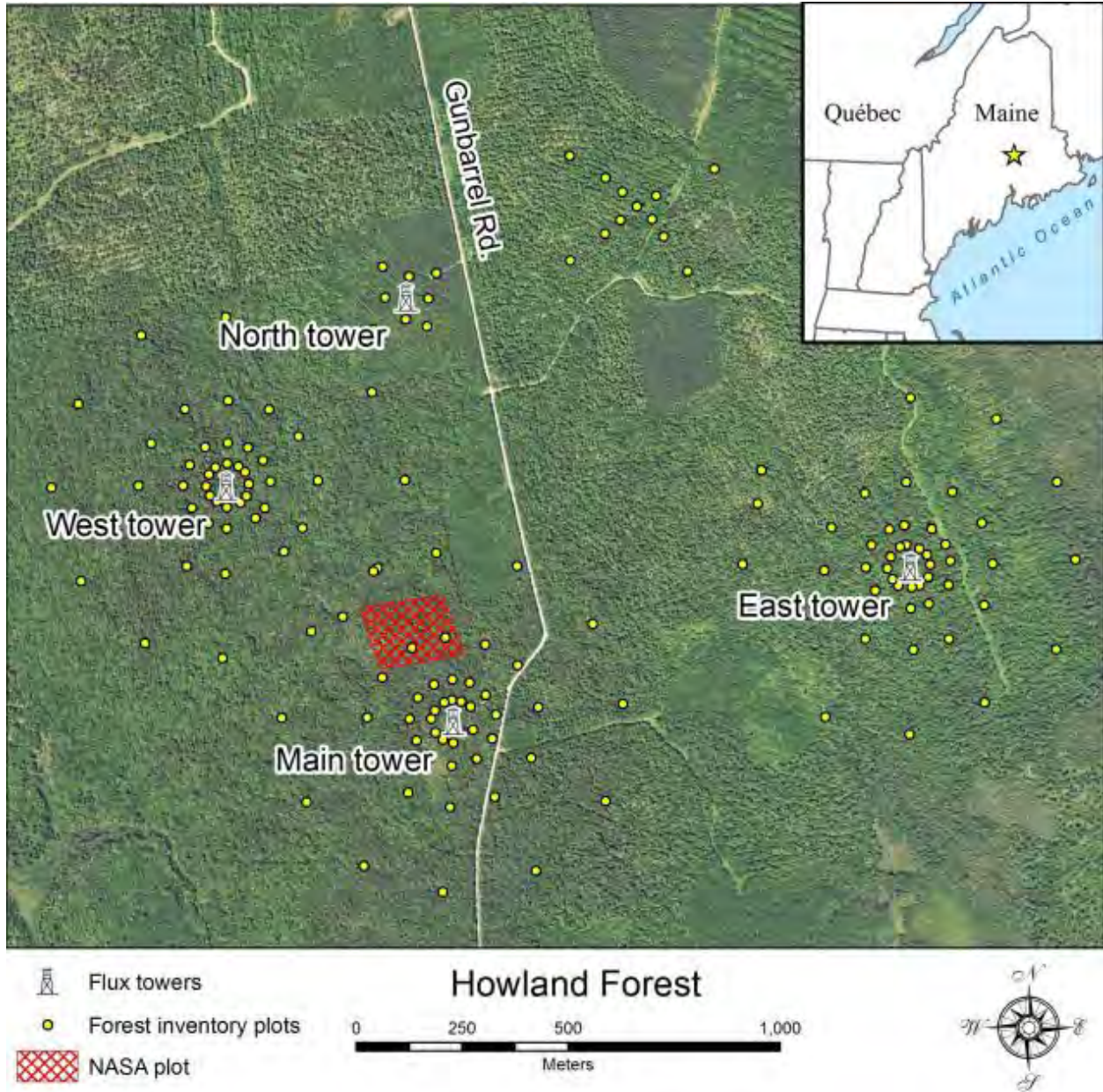
### ***Protection***

There are no local efforts aside from those of the Penobscot Nation, University of Maine, Maine Forestry Service, and the Maine Department of Environmental Protection (DEP) to protect certain forested lands. The Penobscot Nation works closely with state agencies for sustainable management of forested lands. This same strategy is used by each municipality adjacent to lands currently acknowledged as belonging to the Penobscot Nation. Howland does not feel like it needs to take further action at this time, as there have been no incompatible uses affecting the local logging industry. Furthermore, there are no large tracts of industrial forest land that have been sold since 2007, when the university helped to purchase the Howland Forest. There is currently 700+ acres of forested land for sale on the outer Lagrange Road that may be sold in the future for industrial, commercial, or residential development, depending on the town's greatest needs. If there are any ecological changes, the town plans to address them as needed, and is open to working together to preserve their way of life, and progress into the future.

### ***Howland Research Forest***

The Howland Research Forest started as a partnership between International Paper and the University of Maine to study air quality and global climate effects on forest health. The forest partnership was initiated in 1986, as a national research program of "acid rain" effects on forests, the research program has grown to involve nutrient cycling, air pollution, effects of global climate change, weather data collection, atmospheric monitoring, remote sensing, and ecosystem modeling. In 2007, the Howland Research Forest was purchased by the [Northeast Wilderness Trust](#), solidifying its place as one of the most important research hubs in the Northeastern United States.





**Map 6.1:** Flux Towers in the Howland Research Forest< Howland and Edinburg Maine. Source: University of Maine.

Since the program’s inception, scientists from numerous universities, U.S. Environmental Protection Agency, U.S. Forest Service, U.S. Department of Energy, the National Science Foundation, and the National Aeronautics Space Administration have collaborated and provided research support in many of the projects. The 2,000-acre ecosystem study site is contained within International Paper’s 15,000-acre Northern Experimental Forest in Howland. All research programs are administered through the University of Maine, but they are also collaborating with [Woodwell Climate Research Center](#), [Arizona State University](#), [Emory University](#), and [San Diego State University](#) on an innovative, multi-scale, and cross-disciplinary study to identify the

conditions and mechanisms driving methane sink/source activity across soil moisture gradients in northern forests.

A meteorological tower high above sea level in the center of the study site collects data for environmental research linked to global climate change. The study site also houses several other research facilities and projects that have led to formulating improved models of forest succession and physiological processes. Other work has included the study of uptake and release of carbon by forests; these are part of larger efforts to understand the worldwide balance of carbon, an important link to global climate change.

The Howland Forest is a member of the AmeriFlux Network, which is a collaborative group of research sites that have as primary objectives 1. Quantifying the magnitude of net annual CO<sub>2</sub> exchange in major ecosystem/biome types and 2. Determining the response of CO<sub>2</sub> fluxes to changes in environmental factors and climate changes.

The forest is within both Howland and Edinburg, requiring collaboration between both town's as well as the University of Maine. This forest is an example of not only scientific cooperation, but International cooperation on a grander scale.

## ***Agriculture***

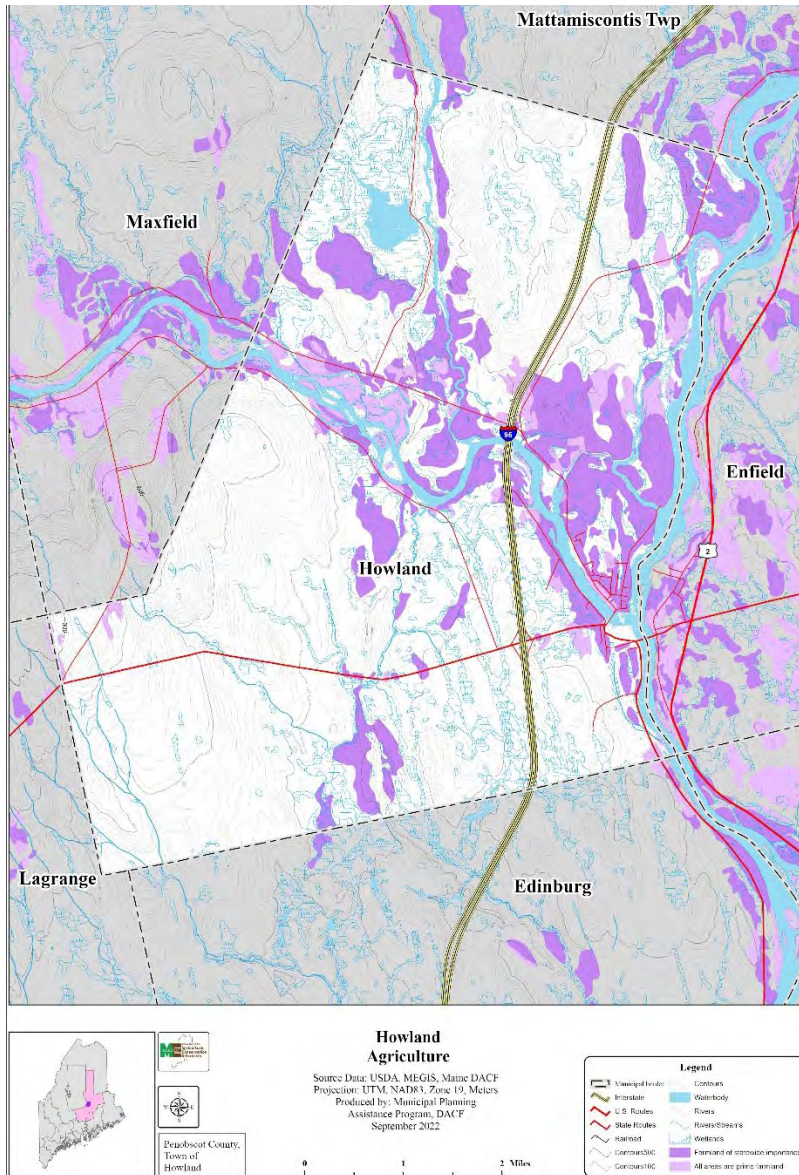
### ***Farmland***

Howland has only a few personal-use "hobby" farms, and one small commercial farm, known as Foxgreen farm, which can be found on North Howland Road. On top of the business operating from 9-5 on 5 days a week, they also operate a stand at the Howland Farmers Market. All the used farmland in Howland makes up about 20 acres. As seen in Map 6.1, Howland's more urban area contains quite a bit of farmlands of statewide importance. With this information, Howland may promote more hobby farms to capitalize on such good land for farming. There are 3 known parcels in Howland currently being farmed on.

### **Farms in Howland**

<b>Farm</b>	<b>Owner</b>	<b>Acreage</b>
Foxgreen Farm	Private	10.00
Maine Garden Supply	Private	5:00
Maine greenhouse supply	Private	5.00





**Map 6.1:** Howland Agricultural Lands (2022). Source: State of Maine

### ***Current Agricultural Issues***

Despite being a relatively rural area, Howland, faces challenges in sustaining its agricultural sector. One issue is the irreversible conversion of prime farmland to non-agricultural uses due to development pressures. As urban areas expand and land values increase, the financial allure of selling farmland for development can be difficult for landowners to resist. Personal-use farms dominate the local landscape, but without commercial farming, there is less economic incentive and support for maintaining and expanding agricultural activities. Additionally, combined factors like population decline and increased prices of land are adding to the lack of creating and sustaining new agricultural land in town.

### ***Farmland Protection measures***

*Farm and Open Space Tax Law* - Farmland is eligible for the Farm and Open Space Tax Law Program (Title 36, MRSA, Section 1101, et seq.) if that farm consists of at least five (5) contiguous acres in a single town and has shown gross earnings from agricultural production of at least \$2,000 during one of the last two years or three of the last five years. The Farm and Open Space Tax Law encourages landowners to conserve farmland and open space by taxing the land at a rate based on its current, rather than potential, use if landowners agree not to develop their property. The benefits of this program are that it enables farmers to continue their way of life without being forced out of business by excessive property taxes, which can be brought about by rising land valuations.

*Farmland Registration Program* - Another program is the Farmland Registration Program designed to protect the farmers' right to farm their land. Upon registration, a farmer is guaranteed a 100-foot buffer zone between the productive fields and new incompatible development, such as residential development. The Farmland Registration Program also lets new and potential abutter know that a working farm is next door.

*Mandatory Shoreland Zoning and Subdivision Law* - State legislation provides environmental guidelines and mandates shoreland zoning and subdivision which consider agricultural issues.

The Town of Howland has no efforts or groups focused on protecting its farmlands. Unfortunately, old farmers are retiring, causing further reduction of agricultural pastures. The town may investigate regional programs or groups to protect the farmlands it already has to incentivize growth, or those on the state level to promote the protection of farms from development or altered uses.

*The Food Sovereignty Act* – This piece of legislation empowers local communities by granting them the authority to regulate the production, processing, and distribution of locally produced foods. This act significantly benefits towns like Howland by fostering local food systems, encouraging small-scale farming, and enhancing food security. By reducing bureaucratic barriers and allowing residents to purchase directly from local producers, Howland is able to support a more agricultural economy, promote sustainable practices, and ensure that fresh, healthy food options are accessible to residents. Local control strengthens community ties and promotes economic resilience. Howland anticipates that these efforts will attract new farmers to the area and stimulate investments in sustainable agriculture.

### ***Community Forestry and Agricultural Practices***

Aside from the local farmers market every Sunday from May-October, there are no local initiatives to promote community farming or forestry, or tree street programs. As well, the community does



not have any town or public woodlands under management, or that it foresees would benefit from further forest management. On the state level, Food Sovereignty was passed that allows small farms in any town as well as individuals to sell what they grow, cook, and produce on their property. The initiative has led to local farms selling any excess produce out of their homes. Howland has some opportunity to promote and plan for building up these industries as both were once greater part of the town's economy. The town may explore options like expanding the Farmland, or Open Space Property Tax Programs, which work to reduce property tax to support working farmland. The community wants to protect and support farmland for future use, however, Howland does not feel the need to act immediately to protect farm lands beyond or outside what state regulations already mandate.

### ***Strategies***

Consult with the Maine Forest Service district forester when developing any land use regulations pertaining to forest management practices as required by 12 M.R.S.A. §8869.

Consult with Soil and Water Conservation District staff when developing any land use regulations pertaining to agricultural management practices.

Amend land use ordinances to require commercial or subdivision developments in critical rural areas, if applicable, maintain areas with prime farmland soils as open space to the greatest extent practicable.

Limit non-residential development in critical rural areas (if the town designates critical rural areas) to natural resource-based businesses and services, nature tourism/outdoor recreation businesses, farmers' markets, and home occupations.

Encourage owners of productive farm and forest land to enroll in the current use taxation programs.

Permit land use activities that support productive agriculture and forestry operations, such as roadside stands, greenhouses, firewood operations, sawmills, log buying yards, and pick-your-own operations.

Include agriculture, commercial forestry operations, and land conservation that supports them in local or regional economic development plans.





# **HISTORIC & ARCHEOLOGICAL RESOURCES**



## ***Historic and Archaeological Resources***

### ***State Goal***

To preserve the State's historic and archaeological resources.

### ***Town Goal(s)***

Get surveyors to mark buildings for historic preservation

### ***State Policy***

Protect to the greatest extent practicable, the significant historic and archaeological resources in the community.

### ***Historic Resource Protection***

The settlement of what is now known as Howland began in the early 1800s. The Town of Howland is located in the central portion of Penobscot County in central Maine, approximately 30 miles north of the City of Bangor. The Town is bordered by the Township of Mattamiscontis on the north, the Town of Enfield on the east, the Town of Passadumkeag on the southeast, the Town of Edinburg on the south, and the Towns of Lagrange, Medford, and Maxfield on the west. The total land area contained within the corporate limits is 31.3 square miles. The Penobscot River is joined by the Piscataquis River, just upstream of State Route 155 Bridge in Howland. The Town Village is located on a point of land where the Piscataquis and Penobscot Rivers meet. Before its colonial settlement, the area was occupied by the Penobscot Nation, who are still living in there today.

Sometime before 1820, Major William C. Hammett of Massachusetts and William Emerson, purchased a tract of land north of the Waldo Patent. Mr. Hammett owned the land on the north of the Piscataquis River and Mr. Emerson owned that on the south. In October 1825, the inhabitants of Township 1 Range 7, west of the Penobscot River and North of the Waldo Patent petitioned to incorporate the Township and name it Howland. It is speculated that the name of the Town was chosen by the signers of the petition for incorporating the Town in honor of John Howland who came to this country on the Mayflower. On February 10, 1826, the Governor approved the grant request of the petitioners.<sup>14</sup>

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<sup>14</sup> Gary Sage – *A Brief History of the Town of Howland*

## ***The Red Paint People***

It is thought that the point of land where the Penobscot River and the Piscataquis River meet (the Town Village) was at one time a burial ground of the Red Paint People. This belief is supported by the fact that when the first schoolhouse was built in 1901, skeletons along with pottery and weapons were found. These remains were surrounded with a red-colored material, which is assumed to have been a custom of these people. The same type of evidence was also found when the Town installed water and sewer lines in 1989 and 1990. Some of artifacts found were donated to the Lafayette National Park Museum located in Acadia National Park near Sieur de Mont Springs by the late John Ferguson of Howland.



The “Red Paint People,” considered one of New England’s earliest peoples, had been present here dating back to around 3,000 B.C., according to data collected up to 2024. They left behind many cemeteries that were often filled with grave goods, which included tools well as large amounts of iron oxide, red ochre. The tribe is named for this characteristic red ochre frequently found by archeologists when they examine burial sites. They manufactured various bone and stone tools; some of which were intricately decorated. Archaeological evidence infers that “Red Paint People” were primarily fishermen and hunter/gatherers and occupied sites near Lake Champlain in New York, along the coast of Maine, and northward to Labrador. Some of the largest sites, with the most faunal remains, are located along the coast of Maine.<sup>15</sup> Some coastal sites show evidence of year-round occupation, discrediting an older theory that these people were seasonal nomads, living the summers on the coast and the winters inland. Today, you can find descendants among Maine’s Wabanaki people: Mi’kmaq, Maliseet, Penobscot, and Passamaquoddies.

An archaeological Site Survey was conducted at the junction of the Piscataquis and Penobscot Rivers which produced evidence of a Moorshead Burial Tradition Cemetery and Woodland Village Site. Unfortunately, the site was destroyed because of development. In *The Lost Red Paint People of Maine, A few things we don’t know about them and more that we know we don’t*, Walter Brown Smith notes no burial sites like these have been discovered outside the State of Maine. He further identified 28 known sites, mostly in the southern-central part of the State, including the one Howland. Another survey was done in 2022 (Map 7.0).

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<sup>15</sup> Morgan Atherton and Brian Alward University of Southern Maine - <http://www.usm.maine.edu/gany/webaa/newpage1.htm>



## John Howland



John Howland, who came to this country on the Mayflower during a violent storm, almost drowned when a mountainous wave swept him overboard into the Atlantic Ocean. After a struggle, he finally managed to haul himself to the surface. He was then rescued, by means of a boathook along with the rope. By November 11, 1620, he had sufficiently recuperated from his oceanic adventure and was the thirteenth signer of the Mayflower Compact. A few days later, December 6, he was one of ten chosen to make the third exploration along the shore and took part in the first encounter with the Indians at Plymouth. Once established in the Colony, Howland quickly rose to a position of responsibility and respectability. He was one of the eight Plymouth “Undertakers” who assumed the Colony’s debt. In the 1630s, he was an Assistant or member of the Governor’s Council, and from 1641 to 1670 was frequently a deputy or representative to the General Court. He was the first agent at the Cushnoc (Augusta) Pilgrim post. John Howland married Elizabeth Tilley, a fellow Mayflower passenger and had ten children. He died on February 24, 1673 at the age of 80. There is a Howland Monument erected by his descendants on Plymouth’s Burial Hill. The Pilgrim John Howland Society maintains the homestead property at “Rocky Nook” in Kingston and operates the “Howland House” in Plymouth. The Howland House was the home of Jabez Howland, son of John and Elizabeth Tilley Howland.<sup>16</sup>

## Percy Spencer



Percy Spencer was born July 19, 1894 in Howland and was orphaned at a young age. Although he never graduated from grammar school, he became Senior Vice President and a member of the Board of Directors at the Raytheon Company, receiving 150 patents during his career. While working for the Raytheon Company, Spencer discovered a more efficient way to manufacture magnetrons. In 1941, magnetrons were being produced at a rate of 17 per day. Spencer set out to create a simpler magnetron that could be mass-produced. The result was a magnetron that replaced precision copper bars with lamina and replaced soldered internal wires with a simple solid ring. These improvements and others allowed for the faster production of 2,600 magnetrons per day. In 1945, Spencer created his most popular invention, a device to cook food using microwave radiation. Raytheon saw the possibilities of this, and after acquiring Amana Refrigeration in 1965, was able to sell microwave ovens on a large scale. The first microwave oven was called the Radarange, and today, there are over 200 million in use throughout the world.

<sup>16</sup> Information taken from: *Pilgrim Hall Museum* - <http://www.pilgrimhall.org/howlandjohn.htm> *Pilgrim John Howland Society Biographies* - <http://www.americanrevolution.org/how3.html>

Because of his accomplishments, Spencer was awarded the Distinguished Service Medal by the U.S. Navy and has a building named after him at Raytheon. He was inducted to the Inventors Hall of Fame in 1999. Percy Spencer died September 8, 1970.<sup>17</sup>

### ***A Classic Mill Town***

A large part of Howland's History are the Mills that occupied the space, as well as the hearts of many of the town's previous and current residents. Colonial settlers migrated and developed their settlements around mills. Echoes of those settlement patterns can still be seen today. The establishment of mills along these waterways attracted settlers who were involved in or supported the logging industry, leading to the growth of a community centered around these economic activities. As the mills flourished, so did the town, with settlement patterns emerging around these industrial centers, fostering a population that was closely tied to the ebb and flow of the logging trade.

The settlement pattern also closely followed that of the Penobscot Nation, who find great wealth by the rivers water from which they get their name. As the river became a critical artery for the transportation of timber, the presence of mills along the riverbanks shaped the economic activities of the region, but also influenced where communities within the Penobscot Nation re-established themselves after being colonized. The interaction with the emerging colonial economy impacted the traditional settlement patterns of the Penobscot people, intertwining their communities with the broader economic currents of the time.



### ***Prehistoric Archaeological Sites***

Arthur Spiess of the Maine Historic Preservation Commission (MHPC) reports there are Forty-three (43) sites known, ranging in age from 7400 years to 19th century A.D. Fifteen (15) of these sites are or may be eligible for listing in the National Register of Historic Places. Most of these

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<sup>17</sup> *Inventors Hall of Fame* - [http://www.invent.org/hall\\_of\\_fame/136.html](http://www.invent.org/hall_of_fame/136.html)

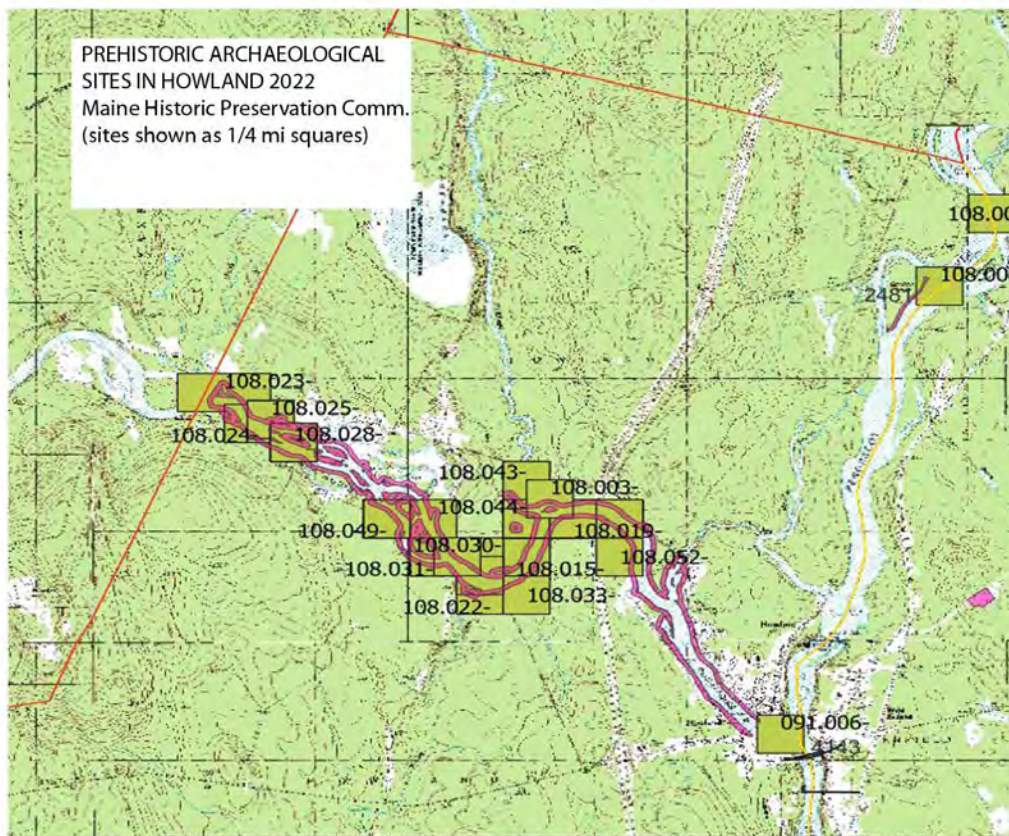
## Historic and Archaeological Resources

sites are on the banks of the Piscataquis River. Intensive work done for relicensing of Howland Dam.

A “Red Paint” or Moorehead Burial Tradition cemetery existed at one time in “downtown” Howland. But it was excavated and destroyed before 1930 without any records being made.

The primary archaeological surveys to date have been focused on the Howland dam impoundment (and the fish passage project). The Piscataquis River banks can be considered surveyed.

As of 2023, the MHPC determined that there are further needs of survey, inventory, and analysis of sites. Backwater (old) channels of the Piscataquis River need surveying, and banks of the Penobscot, as well as alluvium along the Penobscot River and its back channels (*i.e.*, Merrill Branch need survey). Seboeis streambanks and the “horseback” or esker that parallels Seboeis Stream also need survey.



**Map 7.0:** 2022 Pre-Historic Archeological Sites of Howland, Maine. Source: Maine Historic Preservation Commission, State of Maine.

### ***Historic Archaeological Sites***

Leith Smith of the Maine Historic Preservation Commission (MHPC) reports there are no known historic archaeological sites in Howland; however, a professional survey has not been conducted. Leith Smith recommends that a professional survey of historic archaeological sites could concentrate on the first wave of settlement into the town during the late 18<sup>th</sup> and early 19<sup>th</sup> centuries.

### ***Historic Buildings, Structures and Objects***

The Maine Historic Preservation Commission is the central repository in the State of Maine for archaeological and historic buildings survey information and maintains an inventory of important sites including buildings or sites on the NRHP. The standard of what makes a historic or archaeological resource worthy of preservation should normally be eligibility for, or listing in, the National Register of Historic Places. Because the National Register program accommodates buildings and sites of national, state, and local significance, it can include local values. Kirk Mahoney of the MHPC reports no known historic buildings and structures in the Town of Howland. A comprehensive survey of Howland's historic above-ground resources should be conducted in order to identify properties that may be eligible for nomination to the National Register of Historic Places.

Although there are no historic places of significance marked in Howland, the town takes pride in some of its older buildings that remain standing. One of which, is the oldest house in town, which was built in/ around 1850 and is located along Route 155.

### **National Register of Historic Places**

The National Register of Historic Places (NRHP) is the official list of the Nation's cultural resources worthy of preservation that are significant in American history, architecture, archaeology, engineering, and culture. Authorized under the National Register Preservation Act of 1966, the National Register is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect our historic and archaeological resources. The National Register is administered by the National Park Service under the Secretary of the Interior. Properties are listed in American history, architecture, archaeology, engineering, and culture. These resources contribute to an understanding of the historical and cultural foundation of the nation. Listing in the National Register includes the following results:

- Recognition that a property is of significance to the nation, the state, and the community;
- Consideration in the planning for federal or federally assisted projects;
- Eligibility for federal tax benefits; and



- Qualifications for federal assistance for historic preservation, when funds are available.

### ***Maine Historic Preservation Commission***

Established through a legislative act in 1971, the Maine Historic Preservation Commission is the state agency that functions as the State Historic Preservation Office in Maine. As such, the Commission is responsible for the identification, evaluation, and protection of Maine's significant cultural resources as directed by the National Historic Preservation Act of 1966. The Commission oversees the statewide survey program, nominates properties to the National Register of Historic Places, reviews development activities for their effect on cultural resources, co-ordinates rehabilitation projects under the Preservation Tax Incentives Program, assists local governments in survey work and the design of preservation guidelines, and is involved in a variety of public education activities.

### ***Threats***

Historical and archaeological resources must first be identified before they can be protected from any potential threats. Potential archaeological sites are often threatened by development because their location and existence are not obvious. The banks of the Penobscot River needs survey (see above, some underway), as does the shores of the other rivers and streams that run through the area. Extensive areas of glacial outwash-based soils, or aeolian-sand-based soils also need survey in advance of construction/disturbance. Fortunately, most archaeological sites tend to be located along streams and rivers or "fossil shorelines, and are afforded some protection through shoreland zoning, flood plain management, and similar ordinances. Potential sites in Howland are within wetland, shore land and floodplain areas and are offered some protection since most development is not possible within these areas.

Although occupied historical structures are not as vulnerable to destruction, renovation work may destroy the historic value of the building. Vacant historic buildings may be in danger of being lost through neglect. Hopefully, by identifying the historic buildings and sites in town these threats can be eliminated.

Historic resources, such as old homes, graveyards, and historic sites are a valuable part of a community's character and contribute to the town's uniqueness. An inventory of historic buildings helps to create a feeling of community pride, encouraging further preservation of town landmarks to provide the best picture of the past. The National Register of Historic Places, administered by the National Park Service, is a listing of those buildings, districts, structures, objects, and sites judged worthy of preservation for their historical, cultural, or archaeological value.

## ***Resource Protection Measures***

### ***Maine Historic Preservation Commission***

The MHPC is the central repository in the state for archeological and historic buildings survey information. Survey files include computer files, map sets, paper data forms, field notes, unpublished reports, photographic archives, and published works. Archeological files are exempt from the “right to know” legislation and are accessible only with permission from MHPC staff, to protect sensitive archaeological sites and landowners’ privacy. Summaries of sensitive archaeological information are made available on a case-by-case basis.

The MHPC contains an inventory of sites, yet has no jurisdiction over these sites. The MHPC coordinates funding for inventory and restoration of historic sites. Towns with historic protection ordinances may also be eligible for monies through MHPC. Funding for inventory and restoration is (sometimes) available depending on legislative appropriation.

### ***National Register of Historic Places***

MHPC also coordinates a National Register of Historic Places. Sites registered by the owner with the National Register of Historic Places are protected through federal legislation, but only protected against any intervention or development by a federal agency. Eligible sites include those with only local significance or value.

Listing a property on the National Register provides protection only when federal funds are used for a project, which would affect the historic property. More complete protection is provided by a local historic preservation ordinance.

### ***Local Ordinances***

Local adopted ordinances, such as land use and subdivision ordinances, can protect historic area zones from harmful impact and regulate their development. Howland has a land use ordinance that has not yet been used to protect historic areas. No regulations currently require applicants proposing development in areas that may contain historic or archaeological resources to conduct a survey for such resources.

### ***Shoreland Zoning Ordinance***

Because archaeological sites are found along shores (99% of Maine's known prehistoric archaeological sites are located near water), shoreland zoning will often provide protection of such sites. To the extent that the future archaeological sites may be identified on the banks of water bodies within the community, they may be partially protected from development by state mandated setbacks in shoreland zones.

## Historic and Archaeological Resources

### ***The Site Location Law***

The law requires consideration of impact on historic resources.

### ***Easement and Initiatives***

Individual landowners, historic societies, or nonprofit agencies may apply a number of development restrictions to their properties on a voluntary basis. These restrictions may be strengthened by deed constraints or easements.

### ***Public or Nonprofit Ownership***

Public ownership of historic resources is another option for protection of historic buildings or sites.

## ***Local and State Strategies***

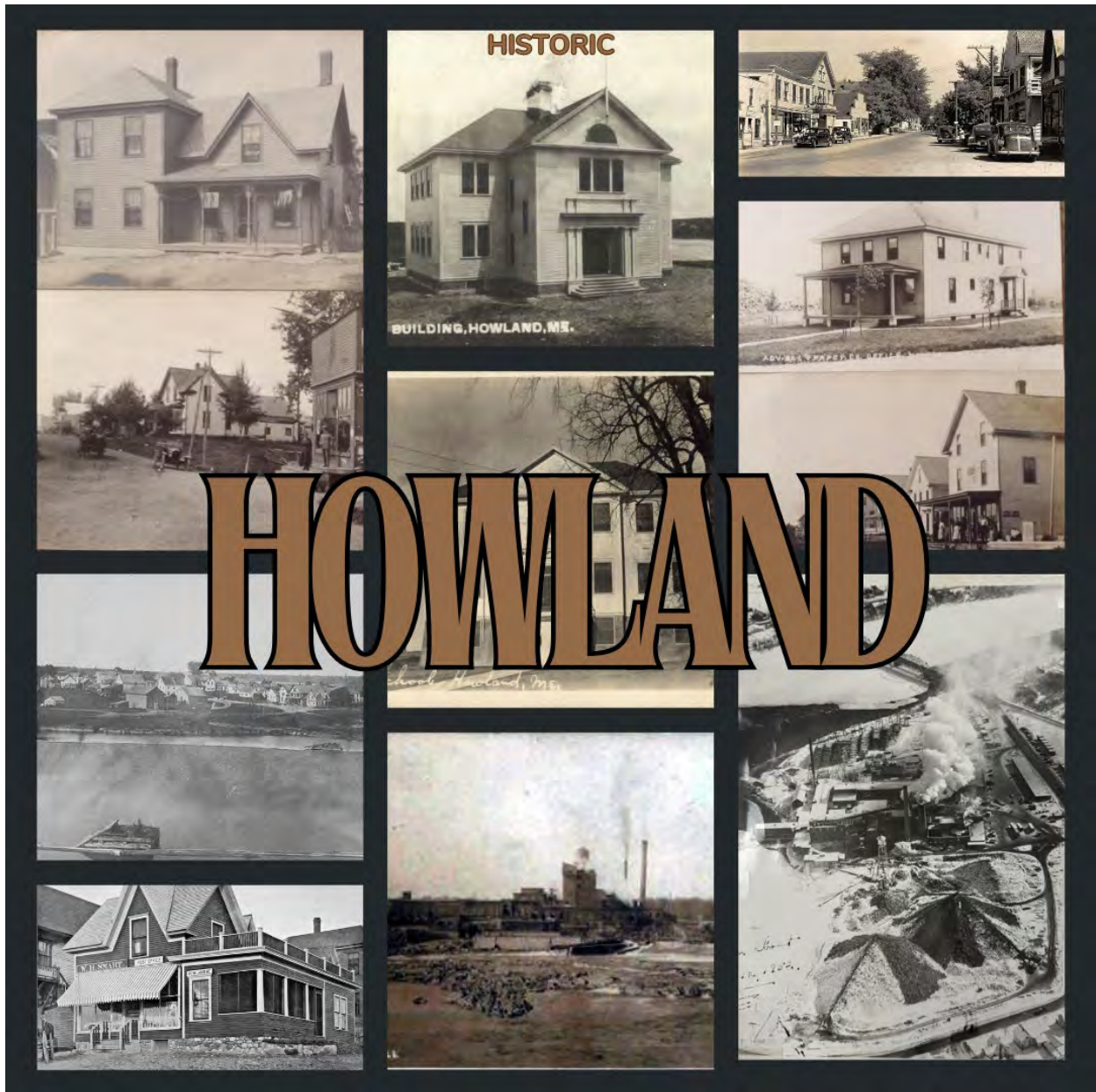
Establish historic sites and properties

Plan a survey for potential archeological sites

For known historic archeological sites and areas sensitive to prehistoric archeology through local land use ordinances require subdivision or non-residential developers to take appropriate measures to protect those resources, including but not limited to, modification of the proposed site design, construction timing, and/or extent of excavation

Adopt or amend land use ordinances to require the planning board (or other designated review authority) to incorporate maps and information provided by the Maine Historic Preservation Commission into their review process

Work with the local or county historical society and/or the Maine Historic Preservation Commission to assess the need for, and if necessary, plan for, a comprehensive community survey of the community's historic and archaeological resources







# **PUBLIC FACILITIES & SERVICES**

## ***Public Facilities and Services***

### ***State Goal***

To plan for, finance and develop an efficient system of public facilities and services to accommodate anticipated growth and economic development.

### ***Policies***

To efficiently and effectively meet the needs of the community to utilize public facilities and services.

To provide public facilities and services in a manner that promotes and supports growth and development in identified growth areas.

### **Howland's Essential Infrastructure**

Municipal facilities and services are provided by local government. Their purpose is to protect public health, safety and welfare, and enhance the well-being of residents of the community. Services and facilities, their availability, quality, and adequacy are a reflection of the community, in so far as it contributes to the Town's desirability as a place to live and work or establish an industry or business.

Reviewing Howland's facilities and services is also the first step toward creating a capital improvement program. Planning future investment in capital items has become extremely important. The town is proud of the facilities and services it offers. These can be found in Map 9.0.

### **Municipal Administration**

The Town of Howland is part of Senate District 7 and House District 138. The town has a Board of Selectmen/Town Meeting/Manager form of government, with a five member Select Board, a five-member Planning Board, and a five member Timber Harvesting Committee. The Town's fiscal year ends on December 31 and the Town's Annual Meeting is held on the second Monday in March.

The Town employs a Town Manager, Town Clerk, Water and Sewer Clerk, Fire Chief, Public Works Department, Water Treatment Plant Operator, Librarian, Recreation Director, Code Enforcement Officer and Plumbing Inspector and Electrical Inspector.

The Howland municipal building is located at 10 Bridge Street. The Building houses the offices of the Town Manager and Town Staff, and also serves as a State Police Sub Station, the EMS District Hub, and the Town's Library Howland Public Library

## **Analyses**

### **1. Are municipal services adequate to meet changes in population and demographics?**

Resources for municipal services are well-positioned to accommodate a modest rise in population. The town's existing municipal services have been maintained and scaled to handle potential growth. Howland is ready to respond proactively to shifts in population and demographics, ensuring that its infrastructure and services continue to meet the needs of residents.

The town's forward-looking approach, reflected in this Comprehensive Plan, highlights an understanding of the importance of preparedness in a changing economic and physical landscape. For instance, Howland's investments in water and sewer infrastructure and its adherence to state and federal standards (such as the Floodplain Management Ordinance) demonstrate a commitment to resilience and sustainability. These measures are essential for supporting a growing population while safeguarding existing resources.

That said, even if the population continues to fall, and the median age increases, Howland's municipal services are well-equipped to meet the needs of its residents if this may be the case. A declining population may reduce strain on some municipal resources, and an aging demographic brings its own set of challenges and opportunities. For instance, older residents may require enhanced healthcare access, expanded senior services, and more intense infrastructure improvements such as pedestrian-friendly streets and ADA-compliant public spaces.

As exemplified by the establishment of Central Maine Highlands EMS District #1, the town is well-suited to collaborative solutions, such as shared service agreements with neighboring towns or regional partnerships to maintain efficiency as demand for certain services shifts. Additionally, by maintaining high-quality infrastructure and public safety services, Howland ensures its appeal to both long-term residents and those seeking a slower-paced lifestyle, potentially stabilizing the population over time.

The town's readiness for any municipal change extends beyond basic services. The town's community values ensure that future changes align with what residents value most about living in Howland. This balance is crucial for attracting new residents while maintaining the high quality of life current residents enjoy.

### **2. Has the community partnered with neighboring communities to share services, reduce costs, and improve services?**

Howland has partnered with several other communities to create the new highlands EMS district. Howland invited [other municipalities they've contracted with regarding fire and EMS](#) to review the budget and find a solution to create a sustainable service hub for the region. Fire and EMS services have taken quite a hit over the past few years. From staffing shortages to high prices for

gear and equipment it's hard to maintain a cost-effective department. This solution quells those fears while increasing availability and range of EMS services.

Howland also shares its wastewater with Enfield and its drinking water with Lincoln.

**3. *If the community has public sewer system, what issues or concerns are there currently and or anticipated in the future? Is sanitary District extension policy consistent with future land use plan as required by (38 M.R.S.A. 1163), or will it be?***

Howland's public sewer system is a vital component of its infrastructure, and while it is currently sufficient for existing demand, there are areas where improvements and expansions may be necessary to address future needs. If population growth or increased commercial activity occurs, the town will need to expand its system to accommodate additional users. However, upgrades to the existing infrastructure are advisable regardless of growth, as proactive investment ensures the system continues to function efficiently and in compliance with state and federal standards.

One of Howland's strengths is the foresight demonstrated in the design of its wastewater treatment facility. Built 30 years ago, the facility includes lagoons that were intentionally sized to allow for future expansion. This strategic planning positions the town to handle moderate increases in sewer demand, whether from new businesses, additional households, or the extension of service areas, and shows consistency with the towns future land use plan.

**4. *If community has a public water system, are any public water supply expansions anticipated? If so, have suitable sources been identified and protected? Is the water district extension policy consistent with the Future Land Use Plan?***

The communities public water system relies on Lincoln's, which is connected to an aquifer in Enfield. There is immediate anticipation for public water to be expanded to the western part of Enfield, leading to a growth in households that utilize this resource. The aquifer in Enfield is already being used, and it has been determined that the system when eventually expanded, could carry West Enfield easily. There is still some concern about the usage by Poland Spring Company, which is owned by BlueTriton Brands. Any expansions Howland makes will be consistent The Future Land Use Plan.

**5. *Are existing stormwater management facilities adequately maintained? What improvements are needed, if any? How might future development affect the existing system?***

The Town of Howland's existing stormwater management facilities are adequately maintained, reflecting a proactive approach to infrastructure maintenance. There are areas the town is monitoring to be upgraded sometime in the future, especially if expansion were to happen soon or quickly. One area of particular concern is 3rd Street, which may require prioritized improvements to ensure continued system efficiency. Future development due to a shrinking population, or one that is maintained, will not need any changes for at least 20 years. However,



the town recognizes that rapid or large-scale development, particularly in areas such as Penobscot Avenue, could overwhelm existing stormwater infrastructure. Care is taken when considering a strategy for any scenario.

With relocation of the salt and sand shed to Lagoon Lane from Valley Avenue, the town's storm water management system will be that much easier to maintain. Partly in thanks to 75% CDS (Congressionally Directed Spending) Funds from Senator Collins' office, this change will help to mitigate environmental concerns such as contamination.

The town is particularly enthusiastic about its recent initiative to map the water and sewer line network using GIS software. This effort will provide multiple benefits. First, it will streamline the process of accurately locating utility lines. Additionally, from an economic development perspective, the GIS network will offer developers a valuable tool for planning future projects.

### **Impact of Future Development on Stormwater Management**

While modest or steady development will not significantly impact the current stormwater system, large-scale projects or rapid expansions could pose challenges. For instance, increased impervious surfaces from development could lead to higher volumes of runoff, potentially exceeding the capacity of the existing system. The town's focus on maintaining flexibility and preparedness is critical in this context. Careful consideration of stormwater impacts during the planning stages of development will be essential, particularly in high-risk areas like Penobscot Avenue.

#### ***6. How do residents dispose of septic tank waste?***

Septic tank waste in Howland is managed privately by residents. Homeowners with septic systems are responsible for routine maintenance, which typically includes hiring licensed septic service providers to pump and dispose of waste. These providers then transport the waste to the Howland Treatment facility.

The private management of septic systems ensures that individual properties remain compliant with environmental standards, reducing the risk of groundwater contamination and safeguarding local ecosystems. The effectiveness of this system, however, depends on homeowners' awareness of and commitment to regular maintenance.

#### ***7. Is school construction or expansion anticipated during the planning period? Are there opportunities to promote new residential development around existing or proposed schools?***

School construction or expansion is not currently anticipated during the planning period in Howland. However, there are opportunities to promote residential development around existing schools as part of broader community development initiatives. Proximity to schools can make neighborhoods more attractive to families and support the vitality of the community.

To address housing needs, Howland is collaborating with Lincoln and EMDC to host a regional housing event. This event will convene stakeholders from across the housing sector, including developers, contractors, municipal leaders, and legislators, to network and create actionable plans for residential developments. These efforts are informed by the findings of a comprehensive housing study published in 2023, which highlights the importance of targeted housing solutions to meet current and future demand<sup>18</sup>.

Strategically aligning residential development with existing schools not only supports the goals of the housing study but also strengthens Howland’s appeal to families, which contributes to long-term community sustainability. Thoughtful planning around schools can help balance housing growth with infrastructure capacity, ensuring that new development complements the town’s character and resources.

***8. Is the community's emergency response system adequate? Are there improvements needed?***

In 2024, Howland helped lead the creation of Maine’s first EMS District known as the Central Maine Highlands EMS District #1. The districting was borne from an acute awareness of the costs of maintaining an EMS department for the several towns that Howland was already committed to serving. The district uses cost-sharing efforts to maintain and bolster services to several communities around Howland.in Penobscot a well as Hancock counties.

This system is so new that it is not yet feasible to determine if improvements will be needed, aside from how it fairs after the purchase of new equipment. As it stands, the emergency response system is very adequate at this time.

***9. Is the Solid Waste Management System meeting current needs? Is the community reducing the reliance on waste disposal and increasing recycling opportunities? Are improvements needed to meet future demand?***

Howland’s current Solid Waste Management System is not only meeting current needs, but could take much more. The town designed it with greater development in mind.

The town is planning to start taking organic compounds in its composting and expand the compost facility with the right equipment from the state. One improvement that it would like to see is the ability to recycle glass to address the growing volume of glass waste that currently ends up in landfills, contributing to environmental degradation. Despite strong community backing and the recognized environmental and economic benefits, Howland lacks the financial resources and infrastructure to initiate this program. The town once had a redemption center, which closed in 2016. The nearest one is currently in Lincoln.

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<sup>18</sup> [https://mainehousing.org/docs/default-source/default-document-library/state-of-maine-housing-production-needs-study\\_full\\_final-v2.pdf](https://mainehousing.org/docs/default-source/default-document-library/state-of-maine-housing-production-needs-study_full_final-v2.pdf)

**10. Are improvements needed in the telecommunication and energy infrastructure? If so, please explain**

Howland is making strides in modernizing its infrastructure by bringing fiber optic internet and solar energy to the town, aiming to enhance both telecommunications and energy systems. The introduction of high-speed fiber optic internet will significantly boost connectivity, supporting local businesses, education, and overall quality of life by providing reliable and fast internet access. Concurrently, the town's commitment to integrating solar energy will promote sustainability, reduce energy costs, and lessen the community's carbon footprint.

**11. Are local and regional health care facilities and public health and social service programs adequate to meet the needs of the community?**

For healthcare services, Howland has the Cummings healthcare facility in town. In the region, there is the Health Access Network (HAN) Located in Enfield, and Lincoln, Penobscot Valley Hospital in Lincoln, The Lincoln VA Clinic, and Community Health and Counseling Services in Lincoln, which are the most notable. Most healthcare facilities for Howland residents are a minimum 20-minute drive from the center of town. If possible Howland residents want greater health care facilities in town in the future.

Howland itself is not an ambulance desert, but according to a recent study, some communities around Howland are distinguished as such, denoted by a 25-minute minimum wait to reach an emergent care facility.<sup>19</sup>

Along with the rest of the state, the town's health care and public health services are lacking. This will continue to affect the entire population of Howland. Residents who are experiencing poverty may go to the town hall by making an appointment to seek general assistance pursuant to Title 22, MRSA section 4305. Howland Methodist Church has a food pantry in which residents don't qualify for general assistance, may qualify for food from the food pantry. The Town gives the Church a \$500 donation at Thanksgiving and at the end of the fiscal year, the Select Board sometimes authorizes an additional donation. The Church also has a clothing program and sponsors a meal for donations which is open to the general public. Although these services are currently sufficient, There is a growing need to examine potential disaster scenarios to determine future needs in that area.

**12. Will other public facilities such as town offices, libraries and cemeteries accommodate projected growth?**

Even though Howland is not projected to grow significantly, the town is taking proactive steps plan for flexibility in the maintenance of public facilities such as its town office, library, and

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<sup>19</sup> <https://digitalcommons.usm.maine.edu/cgi/viewcontent.cgi?article=1013&context=ems>

cemetery remain capable of meeting the community's needs. The town office, which was built on the site of the old Tannery Mill in 2022, continues to enhance efficiency and service quality, ensuring they are equipped to handle current demands and any unexpected changes. The Library (inside the town office) is focused on maintaining and upgrading its resources and services to support lifelong learning and community engagement. The cemetery is managed with careful planning to ensure sufficient capacity and dignified maintenance. Since there is only one public cemetery, the town remains aware that significant growth in population would require alternate planning structures and are prepared to make changes as needed. Beyond these 3 key facilities, the town takes pride in its vigilant planning and management practices to accommodate any type of growth. These reflect Howland's commitment to providing a high standard of public services and infrastructure, regardless of growth projections.

***13. To what extent are investments in facility improvements directed to growth areas?***

The growth areas in Howland are identified in the future land use chapter (Map 12.1). These areas include a portion of Merrill Brook area, Lagrange Road, a portion of North Howland Road, and about 80 acres above Howland's mixed-use district. Identified facility improvements, most of which are in the downtown village area, are located in close proximity to rivers, and along Lagrange Road. Growth is not expected to occur where the majority of facilities in need of improvements happen to be located (e.g. Town Office, Fire Department, etc.). Although the whole of the village area is expected to experience some growth as revitalization efforts are made, this does not demarcate it as a growth area for planning purposes. A community center has been opened at the old town office building. This may help to attract more business for the village and Main Street area.

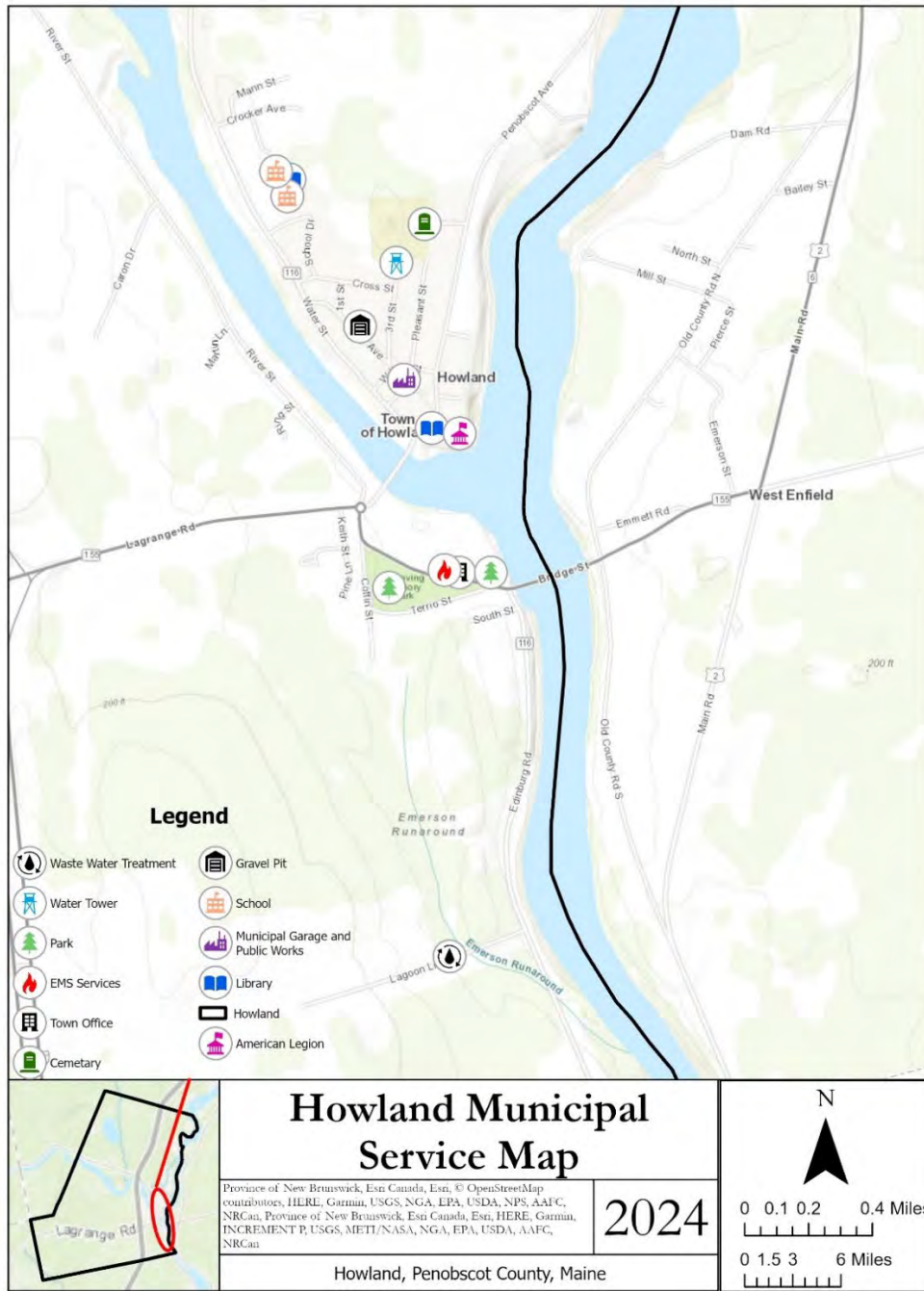
***14. Does the community have a street tree program?***

Howland does not currently have a street tree program; however, the Town does support the preservation and protection of its green spaces, lands, and natural resources.

## ***Conditions and Trends***

***1. location of facilities and service areas (mapped as appropriate)***





**Map 8.0:** Location of Public Facilities and Service Areas, Howland, Maine. Source: Town of Howland.

**2. Capacity and anticipated demand during the planning period**

During the planning period, capacity and anticipated demand will be expected to remain largely the same as it has during the last decade, with the exception of EMS Services. There appears to be a growing need for EMS services, but as costs grow, and hospitals around Maine consolidate

offices, stations, and staff, communities are having to rethink how they provide these services to their residents. As Howland’s demographics change, the Town will consider how best to staff departments to support residents and attract and retain staff members. The community anticipates an increase in demand for public facilities during the next 10-12 years. The sizeable capacity of the public water system is equipped to add more customers, including residences and businesses. The community is ready to attract and retain new businesses and individuals, and support more multi-unit housing projects.

**3. Identification of who owns/manages the systems**

Most public facility and service systems in Howland, with the exception of the electricity, broadband, HAN, and the food pantry, are owned by the town. The EMS District is located within Howland, but is collectively owned by Howland, Enfield, Seboeis, Maxfield, Lowell, Lagrange, Passadumkeag, and Burlington. The Highschool and Middle school for the area is also located by Howland, but is owned by the school district.

**4. estimated costs of needed capital improvements to public facilities; and**

These costs are listed in the Capital Investment Plan located in the Fiscal Capacity and Capital Investment Plan chapter.

**a. Sewerage and/or Water Supply – Identify number and types of users, and percent of households served.**

Howland shares its water supply with Lincoln and its sewerage with a portion of Enfield. In total, about 85% - 90% of the population of Howland (1094) is served. That includes 100% of the businesses. The public sewer system operates in the same way, but the treatment facility is in Howland. Below is a chart from the 2023 Annual report showing the water and sewer statistics.<sup>20</sup>

**Table 8.0:** Water and Sewer Statistic in 2022 and 2023 in Howland Maine. Source: Town of Howland.

	2022	2023
Residential Water Customers	380	371
Residential Sewer Customers	413	411
Commercial Water Customers	10	9
Commercial Sewer Customers	14	14
Government Water Customers	12	12
Government Sewer Customers	12	11
New Customers	35	19
Connections	20	27
Disconnections	29	20
Collection Notices	216	225

<sup>20</sup> <https://cdn.townweb.com/howlandmaine.com/wp-content/uploads/2024/06/doc02387320240611103254.pdf>

Sewer Liens Put On	10	3
Dig Safes	62	65
Completed Work Orders	81	68

**b. Septage – Identify any community policies or regulations regarding septage collection and disposal**

Howland uses a lagoon system situated on Lagoon Lane, which is approved by the Maine Department of Environmental Protection (MDEP). The State of Maine regulates the site and ensures compliance with the Subsurface Wastewater Disposal Rules authored by the Department of Health and Human Services (DHHS) and the Maine Center for Disease Control and Prevention.

**c. Solid Waste – Describe the community’s solid waste management system. Identify types and amounts of municipal solid waste and recycled materials for the past five (5) years**

Solid waste is disposed of at The Howland Transfer Station located on Lagoon Lane and serves as a transfer and recycling center. It opened in 2018. Residents can dispose of their household garbage themselves or have it picked up on a weekly basis by a trash removal service.

**Solid Waste Management**

There 2 employees at the Howland Transfer Station. The Town has implemented a pay-as-you-go sticker program where residents purchase stickers for their trash bags to help reduce the costs of handling municipal solid wastes. Stickers can be purchased at the transfer station or at the Town Office, and are priced at \$7.00 for 10 stickers. This program is working very well for the Town. There is no municipal roadside trash pick up; however, some residents contract with private haulers to pick up waste.

In 2022, the Town of Howland appropriated a total of \$90,662 for solid waste management (including \$12,000 in receipts for bags), and expended a total of \$46,565.33.

**Recycling**

The Recycling Center is part of the Transfer Station, located on Lagoon Lane, and is open Tuesdays from 8:00 a.m. to 3:00 p.m., Thursdays from 2:00 to 7:00 p.m., and Saturdays from 8:00 a.m. to 4:00 p.m. There are two part-time employees at the recycling center. Below is a chart of what is accepted.

## Public Facilities and Services

	RECYCLABLE	NON-RECYCLABLE	REQUIREMENTS
CARDBOARD AND BOXES	CORRUGATED CARDBOARD, BROWN PAPER BAGS	WAX COATED CARDBOARD	CLEAN/DRY. ALL CARDBOARD BOXES BROKEN DOWN
PAPER	OFFICE PAPER, FAX PAPER, NEWSPAPER, MAGAZINES, PHONE BOOKS, BOOKS, REGULAR ENVELOPES	SECURITY ENVELOPES, TISSUE PAPER, CARBON PAPER.	REMOVE HARD COVERS ON BOOKS
TIN AND ALUMINUM CANS	ALL STEEL AND TIN CANS	GLASS JAR LIDS, ALUMINUM FOIL, PIE TINS	REMOVE LABELS. RINSE OUT.
PLASTIC	#1 or #2 MILK JUGS, LAUNDRY DETERGENT, SHAMPOO BOTTLES, BLEACH BOTTLES, FABRIC SOFTNER BOTTLES	PLASTIC BAGS, STYROFOAM, TARPS ALL PLASTIC CONTAINERS WITHOUT NECKS	#1 & #2 RINSED OUT AND COVERS REMOVED
COMPOST	LEAVES, SAWDUST BARK, GARDEN STOCK, PINE NEEDLES, BRUSH, CHRISTMAS TREES	TABLE SCRAPS, PANELING, PLYWOOD, PRESSURE TREATED	NO ROCKS, BRICKS OR BRUSH
GLASS	CLEAN FOOD GRADE GLASS NO LIDS, LABELS OR COVERS	WINDOW & AUTO GLASS	PLACE ON TABLE INSIDE RECYCLING ROOM
USED OIL	NONE		NO LONGER ACCEPTED AT FACILITY PLEASE CHECK WITH YOUR LOCAL SERVICE CENTER

The recycling center has a small take or leave building where if you have an item that you believe would benefit someone else it can be placed inside the building. We do not accept clothing and the attendants have last say whether or not an item can be left for reuse.



In 2022, 182 tons of materials were recycled. Although the amount of recyclables the Town takes has fluctuated over the years, during the overall five-year period between 2018 and 2023, the Town increased the amount of waste recycled by **more than 15 percent**. The Town's recycling rates are shown in Table 8.1.

**Table 8.1:** Recycling (in tons) from 2020-2024 in Howland Maine. Source: Town of Howland.

Year	Recycling (tons)	Demo.	Total (in Tons)
2020	45.85 tons	98.06 tons	MSW 314.72
2021	20 Tons	88.84Tons	MSW 301.65
2022	32 Tons	182 Tons	MSW 269
2023	34.53 Tons	52.22 Tons	MSW 275
2024 (Estimates)	36 Tons	85 Tons	MSW 285



**d. Stormwater Management – Identify combined sewer overflows. For Municipal Separate Stormwater System (MS4) communities, describe plan and status of the major goals of the MS4 requirements**

Combined Sewer Overflows (CSOs) are discharges of untreated wastewater from municipal sewage systems that carry mixtures of sanitary sewage, stormwater, and sometimes industrial wastes. Discharges from CSOs occur during and shortly after rain events or snowmelt. Flows within the combined sewer system during these wet weather events can be as high as fifty (50) times the normal dry weather flows. Currently, Maine has 34 CSO permittees located in 31 communities (Portland, Lewiston, and Bar Harbor have two permits each). These communities collectively have 130 individual CSO discharge points. The CSO closest to Howland is located in Milford.

**e. Power and Communications – Availability of 3-phase power, Internet (including broadband), and cable within the community.**

There is currently 3-phase power available all throughout town. Broadband has expanded greatly in the last decade, and improvements are continuing to be made. Expansions of and updates to three-phase power would provide critical support for economic development, particularly as the town looks to attract businesses, support home occupations, and improve infrastructure. Howland’s solar farm enhances this opportunity, as three-phase power integrates seamlessly with renewable energy, optimizing distribution and reducing transmission losses.

Reliable, high-speed internet enables local businesses to thrive, attracts remote workers and entrepreneurs, and supports essential services like telehealth and online education. With fiber infrastructure already in place, Howland has a strong foundation for ultra-high-speed broadband, positioning the town to meet growing connectivity demands and enable next-generation technologies.

**f. Emergency Response System – Average call response times for fire, police, and emergency/rescue.**

Because Howland’s EMS system previously covered multiple towns in what is now Central Maine Highlands Fire & EMS District #1, the data that are available for 2023 are for the total average time. The totals for 2023 are 4 minutes, while the annual call volume was 1324 EMS and 274 fire.

**g. Education – Identify school administrative unit. Include primary/secondary school system enrollment for the most recent year information is available and for the ten (10) years after the anticipated adoption of plan.**

**Table 8.1:** Maine School Administrative District 31, Apportionment Of Membership. Source: MSAD 31.

<b>Maine School Administrative District 31<sup>21</sup></b>		
<b>Apportionment Of Membership</b>		
<b>Municipality</b>	<b>Date Joined/Reapportionment</b>	<b>Number of School Board Directors</b>
Edinburg	December 15, 1967	1
Enfield		5
Howland	Reapportionment "B" June 6, 1974	4
Maxfield	Realignment January 13, 1982	1* Vacant
Passadumkeag		2

School age children in Howland are part of the MSAD 31, AOS #43 Howland school district, and Northern Penobscot Tech Region III. If residents are in MSAD 31, they attend Enfield Station School for Elementary, move to Hichborn Middle School (106 enrolled), and then finally to Penobscot Valley High School. Total enrollment in 2023 for PVHS was 131 students. No school construction is planned for the future. At Enfield Station School, overall enrollment has decreased in the last 20 years from over 300 in 2003 to approximately 200 in 2023. At Hichborn Middle and PVHS, enrollment has also decreased from 165 to 131 over the last 10 years at PVHS, and 114 to 97 at Hichborn Middle School.

### **Enfield Station Elementary School**

The Enfield Station Elementary School is located on Hammett Road in Enfield. The School serves school children from Kindergarten to the fifth grade. The school was built in the early 1990s and is in good physical shape.

### **Hichborn Middle School**

Hichborn Middle School is located on Cross Street in Howland. The School serves children in Grades 6 to 8.

### **Penobscot Valley High School**

Penobscot Valley High School is located on Cross Street in Howland and serves students in Grade 9 to 12. In 2000, the Town was awarded a grant by the Department of Education to rebuild the High School. However, in 2002 new regulations were created that would require any new schools built to have a minimum of 300 students and the Department of Education decided

<sup>21</sup> [https://core-docs.s3.us-east-1.amazonaws.com/documents/asset/uploaded\\_file/4241/AOS43/4657039/MSAD\\_31\\_Board\\_2024-2025.pdf](https://core-docs.s3.us-east-1.amazonaws.com/documents/asset/uploaded_file/4241/AOS43/4657039/MSAD_31_Board_2024-2025.pdf)

not to release the funds to the Town. In the Fall of 2003 a local citizen concern group formed called Penobscot Valley Save our School (PVSOS) to work toward keeping the High School in Howland. Since then, the school was rebuilt and is in good condition. The money received after the COVID pandemic struck was crucial to schools operations as well. The Town and MSAD #31 are continuously working with the Department of Education to evaluate the most cost-effective and productive manner to address issues with the school as they arise.

**Table 8.2:** MSAD 31 School Enrollment (2014-2024). Source: Maine Department of Education.

Year	School			
	Enfield	Hichborn	PVHS	Homeschool
2014-2015	263	114	165	N/A
2015-2016	250	110	157	N/A
2016-2017	236	111	152	N/A
2017-2018	218	104	158	N/A
2018-2019	212	99	142	N/A
2019-2020	200	115	130	N/A
2020-2021	173	96	136	19
2021-2022	199	106	131	26
2022-2023	210	91	134	37
2023-2024	211	97	131	29
2024-2025	N/A	N/A	N/A	26

Partnering with other communities for education allows multiple municipalities to come together to provide a robust education system that allows the pooling of resources to provide the best education possible. Howland has a school choice program allowing parents a choice between two school districts or will pay for tuition at a private institution at the same rate as public school. As for any construction or expansion that may occur in during the planning period, the town would like a pre-school program to meet the growing needs of new parents. Once the comprehensive plan is set in place, the town may seek funds to partner with Enfield and add a regional preschool close to the elementary school. With the adoption of this plan, and acquisition of potential funds, Howland may increase enrollment for primary school age children in the next 10 years by approximately 100 students. By capitalizing on regional partnerships in SAD #31, other towns in the region may help to increase enrollment at PVHS by 100 students in the next 10 years.

**h. Health Care – Describe major health care facilities (hospitals, clinics) and other providers serving the community. Identify public health and social services supported by the community through municipal subsidy**

In 2023, the Town appropriated \$2,500 for general assistance and expended \$1,792. The Howland Methodist Church has a food pantry in which residents don't qualify for general assistance, may qualify for food from the food pantry. The Church also has a clothing program

and sponsors a meal for donations, which is open to the general public. The town also donates to multiple organizations that benefit the community each year. In 2023, it appropriated roughly \$1,300.

Howland relies on Health Access Network (HAN) across the river in Enfield for most of its healthcare needs. For greater emergencies, residents either travel 13 miles north to Lincoln, or 34 miles south to Bangor. There is also a nursing home in Howland called Cummings Health Care Facility, which holds 34 beds.

**i. Municipal Government Facilities and Services – Describe facilities and staffing for municipal, administrative, enforcement, and public works operations.**

The Town of Howland is part of Senate District 8 and House District 28. The Town of Howland has a Board of Selectmen/Town Meeting/Manager form of government, with a five-member Select Board, a five-member Planning Board, and a five member Timber Harvesting Committee. The Town’s fiscal year ends on December 31 and the Town’s Annual Meeting is held on the second Monday in March.

The Town employs a Town Manager, Town Clerk, Water and Sewer Clerk, Fire and EMS Service Chief – employed by the district, Public Works Department, Water Treatment Plant Operator, Librarian, Recreation Director, an Animal Control Officer, Code Enforcement Officer, Health Officer, and Plumbing Inspector and Electrical Inspector.

The Howland municipal building is located at 10 Bridge Street. The building holds the offices of the Town Manager, Town Staff, and also serves as a State Police Sub and EMS Services Station, as well as the Town’s Library (Thomas Free Public Library).

In 2023, \$213,610 was appropriated and \$205,122 was expended on general government, with an additional \$23,525 appropriated and \$28,825 expended for Town Hall maintenance and upkeep.

**FIRE DEPARTMENT**

The newly established Central Maine Highlands Fire District 1 provides first response to the Towns of Burlington, Edinburg, Enfield, Lowell, Maxfield TWP, Passadumkeag, Mattamiscontis, Grand Falls Plantation, Seboeis Plantation, and Summit Plantation as well as a small portion of Hancock County.

The Fire Department consists of 20+ paid staff. Where it was once the town's responsibility to purchase new equipment almost every year – ambulances are the highest priority (transport), the district took over in July.

**AMBULANCE SERVICE**



## Public Facilities and Services

The New EMS District owns the 3 ambulances, which are garaged at the Howland Fire Station. Emergency calls come to the Howland Fire Department and on-call EMTs are contacted. These EMTs are employees of Penobscot Valley Hospital. There are approximately 20+ EMT's and 6 paramedics roughly in Howland, of which several volunteer at scenes of emergencies.

### **EMERGENCY MANAGEMENT**

The emergency management director in Howland is the Fire Chief. The Fire Department takes the lead in implementing the Emergency Operations Plan. The Town Manager and Town Clerk assist in organization and administration in cases of emergencies.

At the time of the last Comprehensive Plan, the Town was in the process of preparing a Hazard Mitigation Plan. The town may continue this process during the planning period.

### **ROAD COMMISSIONER**

The Town Manager also acts as the Road Commissioner. In 2023, the Town of Howland appropriated \$294,194 for the Highway Department and expended \$265,125. As mentioned in the Transportation section of the plan, sidewalks need to be repaired on an annual basis and perhaps even completely redone within the planning period of this plan. In addition, there are several roads that could be built up and paved if resources allowed.

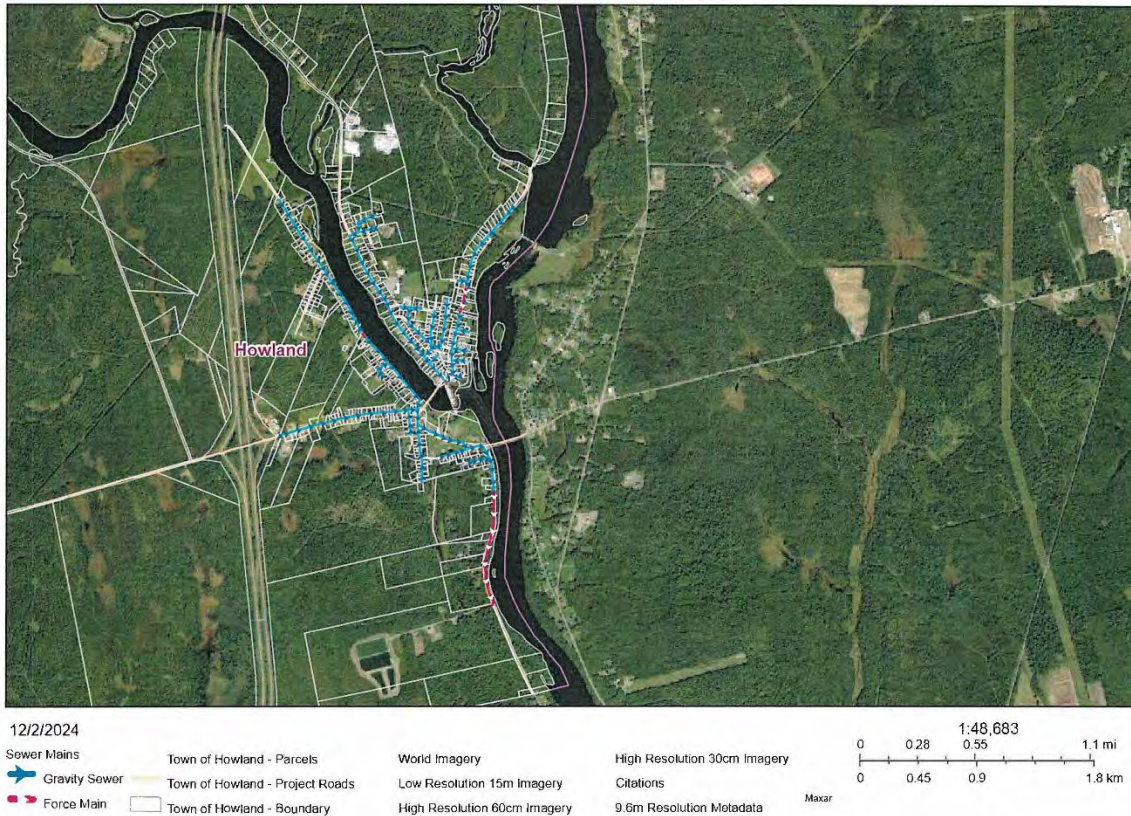
### **PUBLIC WORKS DEPARTMENT**

There are two full-time, and one half-time employees with the Town's Public Works Department. The Public Works garage is located on Willow Street. The town garages a backhoe, dump truck, and other equipment at the Municipal Garage. The Public Works Department maintains the Town's roads, sidewalks, manholes, municipal grounds, and also does digging at the cemetery for burials.

### **WATER DEPARTMENT**

The Howland Water Department is located on Bridge Street. The Lincoln Water District supplies Howland's water. The Town's municipal drinking water supply is safe and exceeds federal and state requirements. The water supply is a ground water aquifer that supplies all the municipal water needs of the Town of Howland and the Town of Lincoln. The Lincoln Water District operates and maintains four gravel packed wells in the aquifer. The water source has been in use since the Fall of 1961 and feeds 21 miles of water distribution mains, supplying 128 public fire hydrants, 28 private fire services and 1,500 water service connections for individual customers. As indicated in the Natural Resources section of this plan, the Lincoln Water District has a source water protection plan in place.

### Howland Sewer Line Map



**Map 8.1:** Location of Public Sewer Lines, Howland, Maine. Source: Town of Howland.

In 2024 Howland was awarded \$700,000 for repainting the interior of the water tank thanks again to CDS from Senator Collin’s office.

In 2023, the Water Department had receipts of \$228,520 and expenditures of \$206,225. Total unpaid water bills as of June 30, 2023 equaled \$16,254.

#### HOWLAND WASTEWATER TREATMENT FACILITY

The Howland Wastewater Treatment Facility was built in 1991 and also services the Town of West Enfield. The Facility uses a lagoon system designed to receive, hold, and treat wastewater. The Facility has four lagoons with a total acreage of 21.7 acres or 945,252 square feet. Specifications of each lagoon are shown in the table below.

**Table 8.3:** Howland Wastewater Treatment Facility, Lagoon Specifications. Source: Town of Howland

Howland Wastewater Treatment Facility				
Lagoon Specifications				
Lagoons	No.1	No. 2	No. 3	No. 4

## Public Facilities and Services

	13.5 MG	13.6 MG	8.3 MG	8.6 MG
<b>Volume</b>				
<b>Lagoon Sizes</b>	790' x 360' x 11'	820' x 360' x 13'	700' x 260' x 18'	700' x 260' x 18'
<b>Lagoon Acreage</b>	6.5 acres	6.8 acres	4.2 acres	4.2 acres
<b>Aeration</b>	None	None	None	None

**Table 8.4:** Howland Wastewater Treatment Facility System Information. Source: Town of Howland, Maine.

<i>HOWLAND WASTEWATER TREATMENT FACILITY</i>	
<b>SYSTEM INFORMATION</b>	
Design Flow	0.0161 MGD Licensed flow 0.0205 MGD
Actual Flow	0.148 MGD
Discharge To	Penobscot River
Year Built	1991
Design Engineers	Woodard and Curran
Septage Received	No
Collector System	8 miles gravity sewer, 5 pump stations
Staff Size	2 Full Time
Number of Users	476 Services
Billing Software	Trio
Comments	Also services West Enfield (2 additional pump stations)

Source: [www.lagoononline.com/howland.htm](http://www.lagoononline.com/howland.htm)

Additionally, the pump rails were all replaced at Pump Station #4 last year, on Penobscot Avenue. A significant valve replacement project at Lagoons #3 and #4 was successfully completed, requiring the hiring of divers to halt flows for the task. All sewer basins and gate valves were revamped in 2022 as well.

The town has a 10-year lifecycle plan for Public Works equipment, from plow trucks, to backhoes, to work trucks. The town is working on a plan of rehabilitation for all paved town roads. The town will require capital investments for sewer infrastructure, public buildings, public facilities (beach/boat launch), and downtown development (sidewalks, park) over the next 10 years as well. Ideas about adding water infrastructure have been proposed. The town is looking specifically at partnering with the town of Enfield to provide drinking water to West Enfield. Estimated costs

range from \$7-10 million over the next 10 years. This will be explained more in the Fiscal Capacity and Capital Investment chapter.

## ***Strategies***

### Expand Public Sewer/ Water

Expand Transfer stations services, days open in the summer months for increased seasonal residents

Continue to adapt and revise municipal services to respond to changes in the population (emergency services, housing, recreational opportunities, economic development, and planning).

Identify any capital improvements needed to maintain or upgrade public services to accommodate the community's anticipated growth and changing demographics.

Locate new public facilities comprising at least 75% of new municipal growth-related capital investments in designated growth areas.

Encourage local sewer and water districts to coordinate planned service extensions with the Future Land Use Plan.

If public water supply expansion is anticipated, identify and protect suitable sources

Explore options for regional delivery of local services.





# RECREATION

## **Recreation**

### **State Goal**

To promote and protect the availability of outdoor recreation opportunities for all Maine citizens, including access to surface waters.

### **Town Goal (s)**

Improve access to parks, trails, facilities, open spaces, and recreational activities that support physical activities and community well-being and to support and increase school / recreational program offerings, particularly year-round opportunities.

To explore funding opportunities for walking/ running trails around open spaces

To explore greater partnerships with big landowners in hopes of developing a greater network of trail systems

To convey the recreational needs of the Howland's residents

To facilitate access to recreational spaces for ALL residents

### **Policies**

To maintain/upgrade existing recreational facilities as necessary to meet current and future needs.

To preserve open spaces commonly utilized for recreation

To seek to achieve or continue to maintain at least one major point of public access to major water bodies for boating, fishing, and swimming, and work with nearby property owners to address concerns.

### **A Vibrant Hub for Recreation**

Outdoor enthusiasts are drawn to Howland for its extensive snowmobile and ATV trails, the inviting local sporting camp, the rich hunting opportunities in its verdant forests, and the abundant fishing, especially for bass, in the Penobscot and Piscataquis Rivers. The Town of Howland is committed to promoting these recreational activities while ensuring the preservation of the area's pristine natural resources.

Recognizing the significant contribution of outdoor recreation to the local economy, the Town is actively pursuing initiatives to enhance and expand these opportunities. The well-maintained snowmobile and ATV trails, managed by the dedicated snowmobile club, offer year-round

## Recreation

enjoyment for residents and visitors alike. Additionally, Howland boasts two public boat landings that play a key role in fostering outdoor activities within the community. In the near future, the town wants more riverside parks for picnicking and a campground or motel to help visitors become as captivated as residents who enjoy these spaces on a daily basis. As Howland also recognizes its demographic changes, it may aim to small piers to encourage fishing for handicapped residents.

As much of Howland's land is privately owned, it is imperative that visitors exercise respect and care to maintain access to these areas. The Town's efforts will focus on promoting its outdoor amenities and resources while steadfastly protecting the natural beauty and ecological integrity of the environment.

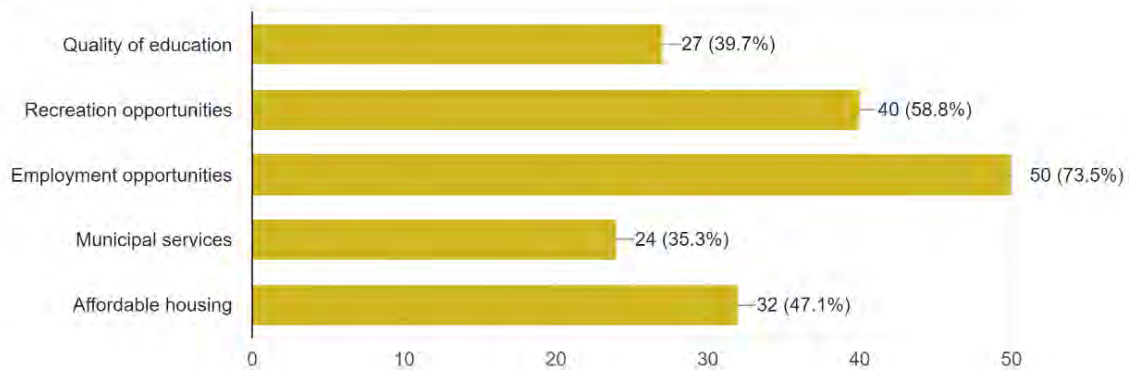
### ADD MORE ON PROM PARADE w/ PICTURES

## Community Voices

In the recent survey completed by residents, recreation finished second for areas of improvement, after employment opportunities (Chart 10.0). Luckily these two issues aren't necessarily mutually exclusive, and one problem may be able to be solved by another. Howland may use this as a guide to create employment opportunities through the growing popularity of recreation in tourism.

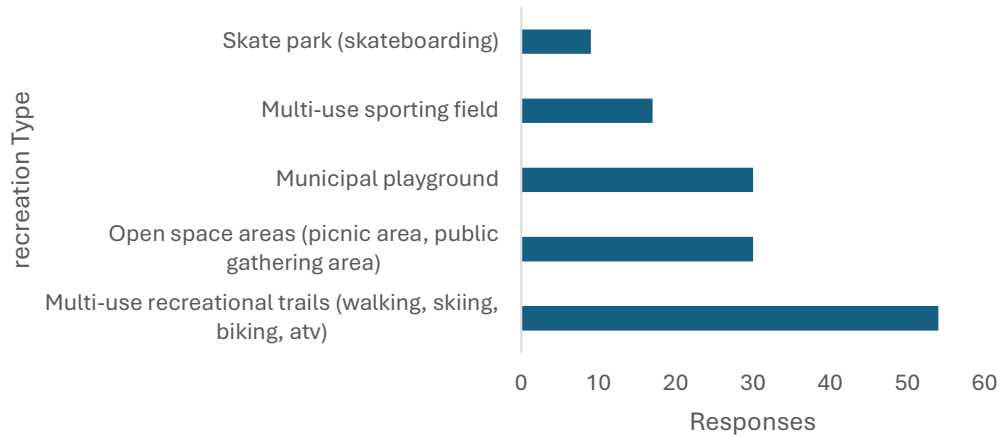
What areas would you would like to see improved in Howland. (Please check all that apply)

68 responses



**Chart 10.0:** Preferences For future opportunities in the Howland Community. Source: 2023 Howland Community Survey.

**What types of recreation activities would you like to have available to you in Howland? (Please select all that apply)**



**Chart 10.1:** Future Potential Recreation Preferences For the Howland Community. Source: 2023 Howland Community Survey

The high-ranked desire by residents for more multi-use trails is reflective of the town's adventurous spirit. Currently, Howland possesses a significant amount of land that could be developed into trails for walking, biking, and other activities. Given Howland's older population, (Chart 1.1), there is also a recognition of the importance of designing future trails with aging populations in mind. With this insight, Howland may pursue funding opportunities to develop accessible multi-use trails that will benefit current and future generations.

**Analyses**

**1. will existing recreational facilities and programs in the community and region accommodate projected growth or changes in age groups?**

Although the population of Howland is not expected to change drastically within the next 10 years, the Town has experienced a small influx of new residents since the COVID-19 pandemic began in 2020. Despite the slight growth experienced by the community during this time, the existing local recreational facilities and programs are expected to accommodate projected growth in the municipality. The town boasts a nice little league field, plenty of places to fish, summer programs for kids, a small river walk, etc.

For demographic changes, Howland is well-supported for children and healthy adults. The town is projected to only get older in the next 10 years. As it is right now, there are not a lot of accessible recreation options for older or handicapped folks. The town may investigate that soon, as it is set



## Recreation

to get a new community center, to solve these issues and accommodate any changes in age groups for recreation.

### **2. Is there a need for certain types of services or facilities or to upgrade or enlarge present facilities to either add capacity or make them more usable?**

There are several existing structures and areas within the town that would greatly benefit from upgrades and development. For example, the playground and ball fields currently lack sufficient parking, leading to safety concerns. Specifically, vehicles parked near the Gerald Hutchinson Jr. Softball Field are often situated close to Route 155, posing a risk to both parked vehicles and passing drivers. A regional playground committee is actively working to address these issues and could benefit from increased support.

The town is also making significant progress in enhancing recreational facilities. Recently, the former town office was converted into a community center, which celebrated its grand opening on August 19th.

### **3. Are important tracts of open space commonly used for recreation public-owned or otherwise permanently preserved?**

Encapsulated within Howland's 35.62 square miles are thousands of acres of forested land accessible to the public for a variety of activities including hiking, hunting, and ATV use. Some of the many publicly-owned areas utilized for recreation are the ball fields located by the town office, the multiple trails for ATV's and snowmobiles, the boat launch at Penobscot and Piscataquis Rivers, where swimming, fishing, and boating are permitted, and the parks by the town office and the schools.

### **4. Does the community have a mechanism, such as an open space fund or partnership with a land trust, to acquire important open spaces and access sites, either outright or through conservation easements?**

While Howland does not currently have mechanisms to acquire land in place, the town may consider pursuing ventures to create conservation easements in the future as priorities and needs evolve.

A conservation easement is a voluntary, legal agreement that permanently limits uses of the land in order to protect its conservation values. Also known as a conservation restriction or conservation agreement, a conservation easement is one option to protect a property for future generations.

### **5. Does the public have access to each of the community's significant water bodies?**

There are two public boat launches on the Penobscot River—one located above the dam and the other below—as well as a third launch on the Piscataquis River. All three are situated on easily

accessible roads, ensuring convenient use for both residents and visitors. These launches stand as a celebration of sorts, of Howland's natural landscape and fosters a greater connection to its waterways.

These launches offer direct access to two major rivers, further cementing the town's position as a gateway to the Northern Maine Highlands and the state's renowned outdoor recreation opportunities. Whether for boating, fishing, paddling, or simply enjoying the view, these launches invite everyone to explore the beauty and biodiversity of the region. Their locations also enhance Howland's role as a potential hub for outdoor enthusiasts traveling to and from the state's wilderness areas, reinforcing the town's identity as a community deeply rooted in its natural surroundings.

For thousands of years, the people of this region have built their lives around the waters. There are ancient myths supporting this deep connection. Ensuring sustainable, long-term access to water for all life is crucial. Continued access to these complex river networks is essential not only for preserving the region's ecological health but also for supporting the well-being of its communities.

**6. Are recreational trails in the community adequately maintained? Are there use conflicts on these trails?**

Although there are some maintenance improvements that need to be made, there are a few trails in Howland open for public use. One of the most important trails in town is the multi-use ATV and Snowmobile trails which rely on public-private partnerships. Howland's relationship with its private land-owners is only improving, and helps create a greater sense of community that everyone benefits from.

Howland envisions a future where the town is more deeply connected through intricate, accessible trails, that are maintained by the community at large, which allow for greater walkability, and greater enjoyment of Howland's beauty by both residents and visitors. Recreational trails are pivotal to fostering a sense of community and natural beauty.

**7. Is traditional access to private lands being restricted**

Yes, however landowners whose land contains a trail that has historically been accessible to the public are generally supportive of the maintenance and accessibility of these areas.

Over the last 20 years, more property has been posted to reduce accessibility and unpermitted uses. To address the growing issue of restricted access, a strategic approach involving public-private partnerships may be explored and implemented. Forming a Trail Access Advisory Committee with town officials, landowners, and community members will facilitate dialogue and planning. Incentives, such as tax benefits, recognition programs, and liability protections can encourage landowners to permit public access. Outreach efforts, including educational workshops and public forums, will help build trust and address concerns. Public funding, grants,

## Recreation

and crowdfunding can support trail development, while standardized and flexible access agreements will clarify terms and responsibilities. Launching pilot projects and showcasing successful partnerships will demonstrate the benefits, encouraging broader participation. Regular feedback and evaluations will ensure the effectiveness of the program and foster ongoing improvements.

### ***Conditions and Trends***

- 1. A description of important public and private active recreation programs, land and water recreation areas (including hunting and fishing areas), and facilities in the community and region, including regional recreational opportunities as appropriate, and identification of unmet needs**

Howland offers numerous valuable recreational opportunities, and these will expand with the introduction of the new Community Center. This facility will provide a venue for community gatherings and create space for a variety of new activities.

### ***Parks***

- Tannery Park
- Memorial Park
- The Public Playground
- George Hutchinson Jr. Softball Field
- The Parks by the Middle and High School.



### ***Municipal Summer Recreation Programs***

The Town's summer recreation program runs from June to mid-August. The Town employs a Recreation Director to run the programs. The program is open to 5 to 12-year-olds, but occasionally, the program will also offer softball to older girls. The following programs are available:

- Little League – At Memorial Park
- T-Ball – At Memorial Park

## Recreation

- Softball – At Memorial Park
- Advanced Baseball – At Memorial Park
- Soccer – At Memorial Park
- Basketball – At the School Gym



In addition to the formal summer recreation programs, the tennis courts at the High School are open to the general public when school is not in session.

The town also holds an annual fishing derby, as the Penobscot River is said to host some of the best bass fishing in the region, and arguably the Northeastern US.<sup>22</sup>

*Graphic 10.0: Derby Flyer. Source: Town of Howland*

### **Municipal Winter Recreation Programs**

The Municipal Winter Recreation program is limited to ice skating. The rink is located on Coffin Street. On occasion, the Boy Scouts used to use the ice rink for bonfires. There is some potential to start this again, but the time frame is unknown.

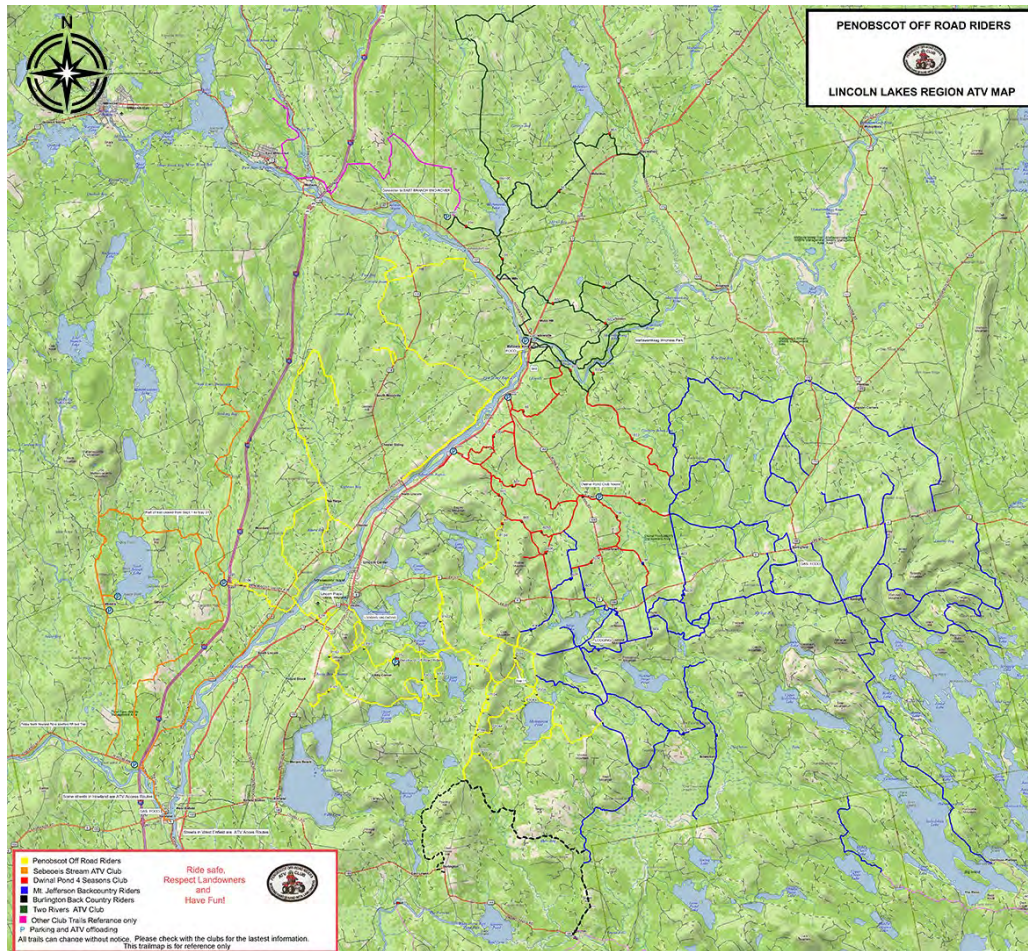
### **Snowmobile/ATV Clubs**

- Seboeis Stream ATV Club
- Twin Rivers Snowmobile Club
- Burlington Back Country Riders Club
- Cold Stream Cruzers
- Cold Stream Snow-Riders Club
- Lincoln Snow Hounds Club
- Penobscot Off Road Riders
- Enfield Cruisers

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<sup>22</sup> [https://fishguideme.com/kevins-magazine-articles/penobscot-river-smallmouth-bass/#:~:text=In%20its%20lower%20reaches%20\(from,and%20provide%20for%20excellent%20fishing.](https://fishguideme.com/kevins-magazine-articles/penobscot-river-smallmouth-bass/#:~:text=In%20its%20lower%20reaches%20(from,and%20provide%20for%20excellent%20fishing.)





**Map 10.0** Regional Multi-use trails around Howland, Maine. Source: Henry Carey

Locally, there are a few active ATV/snowmobile clubs. Cold Stream Riders, (who provided the map above) meet at the Barnes Brook Club House once the snowy season starts. Trails are maintained by club members with other surrounding clubs participating in some areas also. Generally, property owned by individuals is restricted with signage against public use with the land companies owning forested lands allowing ATV trails and hunting.

The most popular trail in Howland is Kelly Tracks, which is located along I-95 highway. Trail dragging is done by the clubs, and with a boom in membership, they might establish new trails soon.

### ***Regional Recreation Facilities***

#### **Baxter State Park**

Baxter State Park is in the heart of Maine, with Mt. Katahdin as its crown jewel. Baxter State Park, a wilderness area of 202,064 acres, was a gift to the State of Maine by former Governor Percival P. Baxter. In 1930 he made his first land purchase of 5,960 acres which included Katahdin, the

## Recreation

highest mountain in Maine. This land was given to the State in 1931. By resolve of the Maine Legislature in 1933, the area was officially designated as Baxter State Park and the summit of Katahdin was named "Baxter Peak" in his honor. His final gift of 7,764 acres was made in 1962.

The Park is a paradise for the naturalist, mountain climber, hiker, and photographer. Many orchids, ferns, alpine and other plants grow in abundance. Geologists will find interest in Baxter's rhyolite, Katahdin granite and many fossil types. Bird watchers, wildlife enthusiasts and winter trackers will find a variety of wildlife to pursue. Recreationalists can enjoy Alpine Skiing, Hiking, Technical Climbing, Camping and Winter Camping. There are 46 mountain peaks and ridges, 18 of which exceed an elevation of 3,000 feet, the highest being Baxter Peak at 5,267 feet. The park is intersected by about 175 miles of trails.

To protect the wilderness resource, the park limits access to parking lots/trailheads. Access is based on a first-come, first-served basis when parking lots fill up, that area is closed. Early arrival is recommended for day-use.

### **Mattawamkeag Wilderness Park**

At Mattawamkeag Wilderness Park there is something for everybody: for hikers, nearly 15 miles of wilderness trails; for the angler, good bass, salmon and trout fishing along the Mattawamkeag River; and for the canoe enthusiast, some 60 miles of Mattawamkeag River, including stretches of exciting "white water" from Island Falls and Danforth, as well as in the vicinity of the park itself. Indeed, the river offers some of the finest canoe runs in the state, although still relatively undiscovered.

Once visitors reach the park, they find camping convenience in a wilderness setting. The facilities include 50 campsites, 11 Adirondack log shelters, bathroom facilities, hot showers, a small store, and a large recreation building with a comfortable Maine fireplace. Picnic facilities are available for day visitors. The park is centrally located approximately 30 miles from Howland.

### **Lagrange - Medford Trail**

The Lagrange-Medford Trail is a 12-mile trail which runs from South Lagrange to Medford Center. The property is leased from the Bangor & Aroostook Railroad for year-round, multiple use. Snowmobilers, ATV riders, Equestrians and Hikers will find a hard gravel surface that travels through rural Maine with nice scenery of forests and farmland.

### **Seboeis Public Reserve Land**

The Seboeis Public Reserve Land contains a considerable amount of shoreline on two large lakes and is located south of Millinocket. Campers and day visitors on this 13,000-acre parcel enjoy fishing and impressive views of the nearby mountains, including Katahdin. Snowmobilers pass through the unit in winter, traveling from Milo to Medway.

- 2. An inventory of any fresh or salt water bodies in the community determined locally to have inadequate public access.**

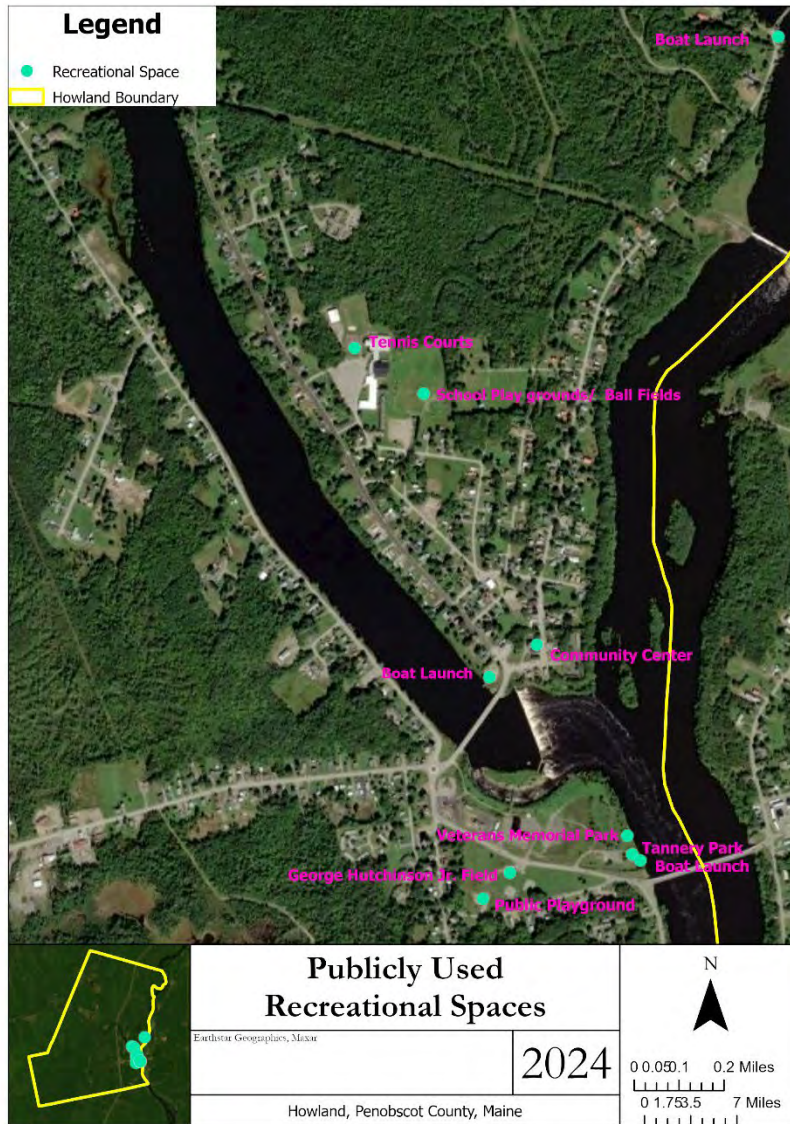
Although all water bodies offer adequate access to the public, an area of improvement is the establishment of a more accessible boat launch above the dam. There is a canoe trip that comes down the Penobscot, and before the dam, boat riders must get out of their canoes and carry them quite a distance from one boat launch to another, to get around the dam. The town may invest in a boat launch closer to the dam to make it easier for these canoers transferring their boats from one part of the river to another.

- 3. A description of local and regional trail systems, trail management organizations, and conservation organizations that provide trails for all-terrain vehicles, snowmobiling, skiing, mountain biking, or hiking.**

See 2., in Transportation Chapter: Conditions and Trends.

- 4. A map or list of important publicly used open spaces and their associated facilities, such as parking and toilet facilities.**





**Map 10.1:** Publicly Used Recreational Spaces, Howland, Maine. Source: Town of Howland

### ***Strategies***

Establish ADA compliant piers along the River Along the Penobscot River

Create a list of recreation needs or develop a recreation plan to meet current and future needs. Assign a committee or community official to explore ways of addressing the identified needs and/or implementing the policies and strategies outlined in the plan.

Work with public and private partners to extend and maintain a network of trails for motorized and non-motorized uses. Connect with regional trail systems where possible.



## Recreation

Work with an existing local land trust or other conservation organizations to pursue opportunities to protect important open space or recreational land.

Provide educational materials regarding the benefits and protections for landowners allowing public recreational access on their property. At a minimum, this will include information on Maine's landowner liability law regarding recreational or harvesting use, Title 14, M.R.S.A. §159-A.

# FISCAL CAPACITY & CAPITAL INVESTMENT PLAN



## ***Fiscal Capacity and Capital Investment Plan***

### ***State Goal***

To plan for, finance and develop an efficient system of public facilities and services to accommodate anticipated growth and economic development.

### ***Policies***

To finance existing and future facilities and services in a cost-effective manner

To explore grants available to assist in the funding of capital investments within the community

To reduce Maine's tax burden by staying within LD 1 spending limitations

### ***A Strong Financial Foundation***

A significant component of planning for future growth is determining which capital investments are most essential for achieving the community's vision. The next step is to consider sources for how the capital investments will be funded, whether that be grants, or donations. By having a Comprehensive Plan that is found consistent with the Growth Management Act by the State of Maine, the community will be given preferential consideration when applying for state grant programs. In turn, this will assist the community in funding their capital investment projects.

The primary funding source for municipal government is through property tax revenues. In order for a municipality to maintain a consistent mill rate year to year, town government must operate in a manner that is fiscally responsible. Large fluctuations in the tax rate can cause public outcry and can also discourage economic development. Stable municipal finances are the fundamental responsibility of town government, although the priorities change from one election year to another. It is important for Howland to diligently handle all yearly expenditures while concurrently planning for the Town's long-term objectives. As is the case with any business, the physical assets of Howland must be properly maintained through capital reserve accounts to protect the Town's continued economic health.

### **Analyses**

1. **How will future capital investments identified in the plan be funded?**

## Fiscal Capacity and Capital Investment Plan

Capital investments refer to the expenditure of municipal funds of \$20,000 or more to purchase assets of land, machinery, equipment, or buildings. There are a variety of capital investments that the Town of Howland has identified as being priority projects in their Capital Investment Plan. Projects related to outdoor recreation, Economic development, building revitalization, and public water/sewage will be funded in numerous ways, mainly a mix of TIF, donations, volunteer labor, tax funding, private funding, and state and municipal grants

### **2. If the community plans to borrow to pay for capital investments, does the community have sufficient borrowing capacity to obtain the necessary funds?**

The Capital Investment Plan identifies capital investments of \$20,000 or more that are anticipated over the planning period (10 years minimum). If the community approves the projects listed in the Plan, the diverse funding sources (e.g. state grants, municipal grants, donations, etc.) enhance borrowing capacity and increase the likelihood of project completion. The town is currently in good standing. Once all loans taken out for paving are sufficiently paid off Howland will move on to new loans for road construction.

### **3. Have efforts been made by the community to participate in or explore sharing capital investments with neighboring communities? If so, what efforts have been made?**

The new Highlands EMS District is an immense undertaking by multiple communities to engage in cost-sharing for the sake of public safety. Although brand-new, it is being looked to as the shining example to both save money and pool community resources. Further information can be found in the Public Facilities Chapter.

## Conditions and Trends

### **1. Identify community revenues and expenditures by category for the last five (5) years and explain trends.**

**Tables 10.0 &10.1:** Revenues and Expenditures for Howland Maine. Source: Town of Howland

Howland Public Revenues
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## Fiscal Capacity and Capital Investment Plan

Year	2019	2020	2021	2022	2023
Taxes (including Reimbursements)	\$1,293,726	\$1,251,297	\$1,283,835	\$1,528,164	\$1,606,290
Excise Tax	\$201,133	\$188,167	\$220,461	\$206,748	\$210,957
Intergovernmental Revenues	\$178,203	\$274,551	\$286,045	\$330,973	\$391,764
Grant Revenues		\$22,319	\$16,768	\$135,100	\$58,021
Charge for Services	\$1,328,483	\$1,327,694	\$1,467,650	\$1,582,561	\$1,280,590
Interest Earned	\$16,373	\$14,528	\$8,633	\$4,256	\$28,064
Interest and Fees on Taxes	19270	\$15,519	\$18,274	\$9,570	\$11,620
Solid Waste Revenues	22092	\$20,131	\$22,885	\$25,308	\$29,555
Insurance Proceeds and Reimbursements	\$49,361	\$7,340	\$195,595		
Other Revenues	5325	\$1,096	\$5,958	\$151,903	\$19,539
<b>Total Revenues</b>	<b>\$3,113,966</b>	<b>\$3,122,642</b>	<b>\$3,526,104</b>	<b>\$3,974,583</b>	<b>\$3,636,400</b>

Howland Public Expenditures					
Year	2019	2020	2021	2022	2023
General Government	\$255,752	\$243,142	\$255,930	\$255,916	\$289,568
Protection	\$1,195,077	\$1,268,330	\$1,353,771	\$1,557,973	\$1,701,072
Health and Sanitation	\$111,488	\$172,274	\$88,636	\$106,374	\$122,795
Public Works and Highways	\$747,357	\$424,865	\$245,334	\$181,523	\$249,437
Cultural and Recreation	\$30,088	\$42,399	\$47,244	\$52,497	\$49,620
Education Assessment	\$790,641	\$817,901	\$845,511	\$824,190	\$860,252
Unclassified	\$25,754	\$52,285	\$33,961	\$32,089	\$109,184
Other Assessments	\$207,505	\$715,907	\$213,348	\$104,746	\$109,184
Debt Service				\$316,377	\$3,935,174
Capital Outlay	\$515,379	\$180,321	\$1,227,044	\$2,705,420	\$215,991
<b>Total Expenditures</b>	<b>\$3,879,041</b>	<b>\$3,917,424</b>	<b>\$4,310,779</b>	<b>\$6,137,105</b>	<b>\$7,642,277</b>

Looking at the more interesting trends of the tables above, it shows that general taxes grew steadily in the last 5 years, while excise taxes fluctuated slightly. Intergovernmental revenues rose as well. Grant revenues seemed more volatile, with a major spike in **2022** to **\$135,100**, followed by a drop to **\$58,021 in 2023**.

Highlighting some expenditures, costs of police protection growth and health and sanitation reflects growing investments in public safety. Capital outlay fluctuates dramatically, peaking in **2022** at **\$2.7 million**, before dropping sharply to **\$215,991 in 2023**, suggesting major infrastructure investments in 2022 that tapered off in the following year.

## Fiscal Capacity and Capital Investment Plan

While revenues grew steadily, expenditures rose dramatically in the later years, particularly in **2022 and 2023**, driven by debt service and capital outlay. This may indicate that Howland undertook significant projects or borrowing during these years.

The substantial rise in expenditures, especially for debt and capital improvements, suggests a focus on long-term investments. The town may need to monitor its fiscal health closely to ensure sustainable growth and financial stability.

### **2. Describe means of funding capital items (reserve funds, bonding, etc.) and identify any outside funding sources.**

The items listed in the Capital Investment Plan below will be accomplished by utilizing a variety of funding mechanisms, including municipal grants, donations, volunteer labor, and municipal low-interest loans. Outside funding to achieve anticipated capital investments will be sourced from state grants, bank loans, and private funders for projects such as writing out private funder possibilities. Some things the town wishes to use capital investment to pursue are a splash pad, additional assisted living housing, and downtown development.

### **3. Identify local and state valuations and local mil rates for the last five (5) years.**

## **State and Municipal Valuations**

The State's Valuation is informed by fieldwork, meetings with local assessors, and a sales ratio study which measures the assessed value of residential and certain commercial properties relative to their actual selling price. It is used to determine things such as the levy of county taxes and state funds for education and revenue sharing, as well as to establish bond debt limits. Since the State Valuation process takes about 18 months to complete, this valuation lags behind actual market values and municipal assessments by nearly two years by the time it is final and certified.

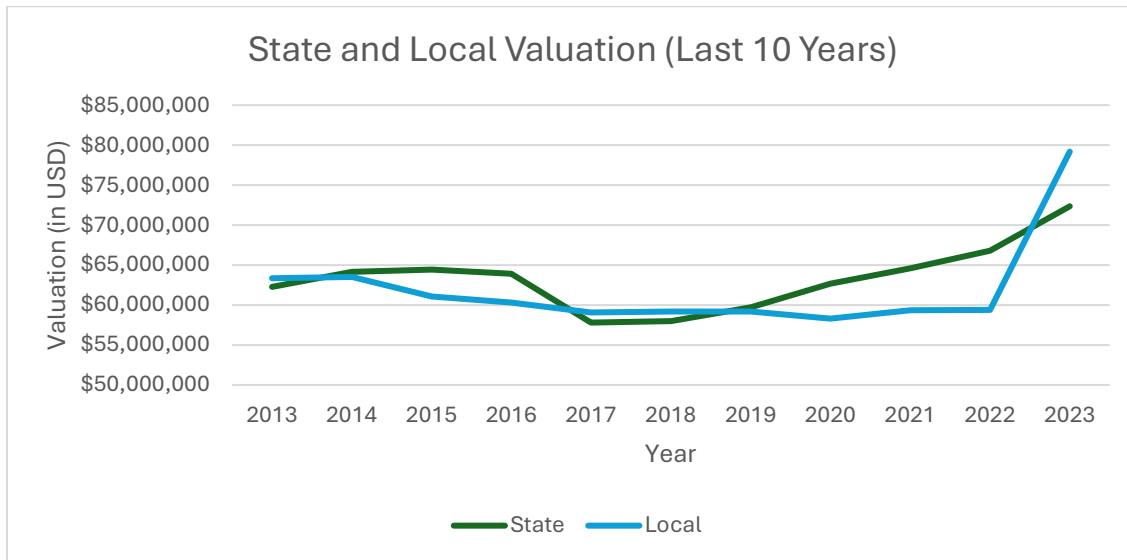
The form of valuation that occurs at the municipal level and is used to determine local taxes. The town's valuation is based on assessed values for real estate and personal property as determined by the Town Assessor. Operating grants and contributions are often sourced from county, state, or federal programs and include funds for education, school lunches, and retirement benefits.

Property taxes are assessed against land, buildings, and other assets and are a common self-sourced form of income. As such, reductions to county, state, or federal funding for these municipal programs often compel municipalities to rely on local property tax as a stable source of revenue.

The State Valuation shows an average increase from FY 2013-FY 2023. In total, it increased by approximately \$10 Mill., which is lower than the local valuation increases in all regards. Looking at local valuation, Howland has increased markedly in the last 10 years, from \$63,366,960 in 2013

## Fiscal Capacity and Capital Investment Plan

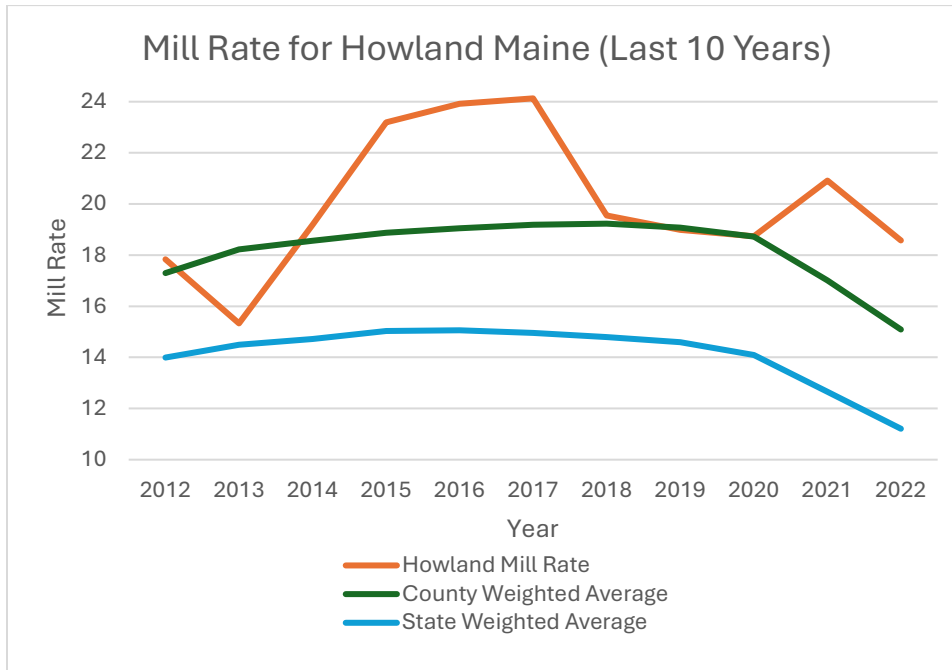
to \$79,185,110 in FY 23. The chart below gives a frame of reference for the changes in state and local valuations.



**Chart 10.0:** State and Local Valuations for Howland, Maine. Source: Maine Revenue Services

## Mill Rate

The mill rate is the amount of tax levied per \$1,000 of assessed value. From 2013-2016, Howland's mill rate increased by ~36%. After peaking in 2017 at 24.05, the mill rate decreased to 18.57 in 2022.



**Chart 10.1:** Mill Rate for Howland, Penobscot County, and the State of Maine (2012-2022). Source: Maine Revenue Services

#### **4. How does total municipal debt (including shares of county, school, and utility) compare with the statutory and Maine Bond Bank recommended limits on such debt?**

In FY 2023, Howland's indebtedness was divided between governmental activities and business-type activities. Howland total outstanding debt balance as of June 30, 2024, was \$4,913,984. In accordance with the State of Maine, the town is subject to a statutory limitation of its general long-term debt equal to 15% of the State's valuation of the town. Following the 2021 state valuation of Howland which totaled \$65 million, the town's long-term debt is well below the statutory limit of \$9 Million.

### **Capital Investment Plan**

Most communities need more capital improvements than they can afford at one time. The cost of constructing new facilities, and rebuilding old ones, usually has to be spread out over a period of years. In part, capital improvement construction is spread out over time so that the future population, who benefit from the facilities, will help pay for them.

The comprehensive plan recognizes planned growth and a diverse mix of land uses within the town as an important aspect of fiscal planning. The primary implementation strategy for the fiscal capacity section is the development of a capital improvement plan (CIP). The purpose of a CIP is to establish a framework for financing needed capital improvements. A CIP guides budgeting and expenditures of tax revenues and identifies needs for which alternative sources of funding such as loans, grants or gifts will be sought. Capital improvements are investments in the repair, renewal, replacement or purchase of capital items. Capital improvements differ from operating expenses or consumables. The expense of consumables is ordinarily budgeted as operations. Capital improvements generally have the following characteristics: they are relatively expensive (usually having an acquisition cost of \$5,000 or more); they usually do not recur annually; they last a long time (usually having a useful life of three or more years); and they result in fixed assets. Capital items can include equipment and machinery, buildings, real property, utilities, and long-term contracts and are funded through the establishment of financial reserves.

Capital improvements are prioritized each year during the budget process based on the availability of funds and the political will of the community. A complete CIP describes expected yearly investment and allows for both changes in priorities and reduction of available funds. The CIP is intended to prevent an unavoidable capital improvement from occurring in a single fiscal year. The unexpected purchase of a sizeable improvement can overburden the tax rate and cause large fluctuations in tax bills from year to year.



## Fiscal Capacity and Capital Investment Plan

A CIP attempts to illustrate all expected capital improvements over a number of years. The longer the useful life of a capital item, the lower the annual provision for its eventual improvement. It is important that capital improvements be financially provided for each fiscal year, minimizing later expenses.

For the purpose of this plan, the total costs have been recognized with an indication of the expected time frame for each item that is desired. It is safe to assume that requests for improvements will exceed the available dollars. Therefore, setting priorities is a necessity. To be effective, the CIP must be based on well-thought-out priorities. A way to determine priorities is to have criteria for evaluating each project and to determine the funds available to pay for these projects as well as their operating and maintenance costs for the later years.

**Table 10.2:** Howland Capital Investment Plan. Source: Town of Howland

### Howland Capital Improvement Plan Guide

Item	Cost	Priority	Funding
PW Equipment	\$350,000	Medium	Loans, Taxation
Broadband Improvements	To be determined based on need	low	Grants, Loans
Downtown development (sidewalks, parks)	\$600,000	High	Grants, Loans, Bonds, Taxation, TIFF Funds, DOT Match funds (community partnership)
Community Walking Trails	\$10,000	Low	Grants
Road Improvements	\$3,000,000	High	LRAP Funds, Grants, Loans, Bonds, Taxation
Public Sewer/Water	\$500,000	Medium High	Grants, Loans, Bonds, Taxation, TIFF Funds
Public buildings and facilities	To be determined based on need	Medium	Grants, Loans, Bonds, Taxation

### ***Strategies***

Explore opportunities to work with neighboring communities to plan for and finance shared or adjacent capital investments to increase cost savings and efficiencies

# EXISTING LAND USE



## *Existing Land Use*

The Existing Land Use chapter serves as a cornerstone for understanding Howland's current land use patterns and lays the foundation for projecting future growth and development. By analyzing existing uses, regulations, and trends, the town can more effectively plan for the next decade, ensuring that future land use development aligns with community values and needs.

Like many small towns in Maine, Howland faces the challenge of balancing growth with the preservation of its rural character and natural resources. This chapter examines current land use practices, providing a snapshot of the community's zoning regulations, ordinances, and trends.

### *Analyses*

- 1. Is most of the recent development occurring: lot by lot; in subdivisions; or in planned developments? Is recent development consistent with the community's vision?**

Recent development in Howland primarily occurs on a lot-by-lot basis, with occasional subdivisions. Residential growth, particularly in shoreland areas, has been the most common, with a mix of year-round homes and few seasonal dwellings. The community's vision is focused on balancing growth while preserving its natural resources, community character, and small-town feel. Recent development aligns with this vision, encouraging modest growth that respects local zoning ordinances and environmental protections.

- 2. What regulatory and non-regulatory measures would help promote development of character, and in locations that are consistent with the community's vision?**

Howland's land use character is largely defined by its natural resources, including rivers, wetlands, and forestlands, as well as its small-town atmosphere and local charm. Regulatory measures like Shoreland Zoning and the Floodplain Management Ordinance play a critical role in protecting sensitive areas from overdevelopment. These ordinances not only safeguard natural resources but also help mitigate risks related to flooding and water quality degradation. Continued collaboration with state agencies such as MDIFW and DEP will ensure that Howland remains proactive in adapting to environmental challenges, such as increased instances of extreme weather patterns driven by changes to Maine's climate and shifting land use patterns. Updates to zoning ordinances, including encouraging cluster developments or overlay districts, could help direct development to areas best suited for growth while preserving open space and ecological integrity.

Non-regulatory measures are equally important in shaping development consistent with Howland's character. Conservation efforts by local groups, land trusts, and private landowners can protect critical natural areas and wildlife habitats. Community outreach programs can promote voluntary land stewardship and educate residents about the value of conserving natural

resources. Howland might also consider developing an Open Space Plan to identify and prioritize areas for protection while balancing future growth needs.

**3. Is the community’s administrative capacity adequate to manage its land use regulation program, including planning board and code enforcement officer?**

Howland’s Planning Board and Code Enforcement Officer are responsible for managing the town’s land use regulations, along with the board of selectmen. Their role in reviewing land use proposals ensures that new developments comply with existing ordinances, such as site design and subdivision reviews. This structure is adequate to maintain consistency with the town’s long-term vision for growth.

**4. Are floodplains adequately identified and protected? Does the community participate in the National Flood Insurance Program?**

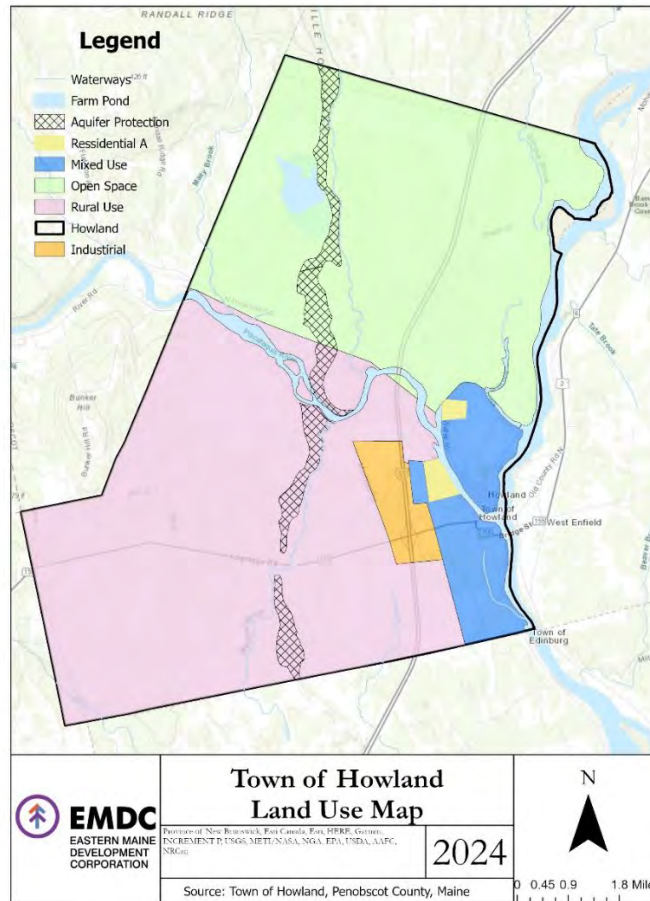
Howland actively participates in the National Flood Insurance Program (NFIP). Its Floodplain Management Ordinance is in place to protect areas prone to flooding, especially near the Piscataquis and Penobscot Rivers. Howland as not had any floodplain issues since 1987, but as alterations to the climate increase the frequency of extreme weather events, floodplain protection will remain a priority to ensure the town’s resilience against flooding.

***Conditions and Trends***

- 1. An existing land use map, by land use classification (such as mixed-use, residential, commercial, institutional, industrial, agricultural, commercial forests, marine, park/recreational, conserved, and undeveloped land).**



## Existing Land Use



**Map 11.0:** Current Land Use Map of Howland, ME. Source: Town of Howland, Maine.

### 2. A summary of current lot dimensional standards.

For each district in Howland, there are different dimensional standards. They are shown in the chart below.

	<b>Mixed Use</b>	<b>Industrial</b>	<b>Residential</b>	<b>Rural Residential</b>	<b>Recreation and Open Space</b>
<b>Lot Area</b>	Minimum 10,000. 13,000 for other uses	A minimum of one acre.	Minimum of 20,000 square feet. (100' X 200')	A minimum of 1 acre.	A minimum of 30,000 square feet.
<b>Frontage</b>	Minimum of 100 feet.	Minimum of 200 feet.	Minimum of 100 feet.	A minimum of 200 feet.	A minimum of 150 feet.

Existing Land Use

<b>Setback</b>	In front a minimum of 20 feet; on side a minimum of 10 feet; and in back a minimum of 10 feet.	In front a minimum of 50 feet, on the side and back a minimum of 20 feet.	In front 15 feet, on side a minimum of 15 feet, and in back a minimum of 15 feet.	A minimum of 20 feet all around.	In front a minimum of 25 feet, on the side a minimum of 15 feet and in back a minimum of 30 feet.
<b>Ground Coverage</b>	Minimum of 650 square feet.	N/A	Minimum ground coverage for one story dwelling unit – no restriction as long as setback requirements are met.	A minimum of 750 square feet.	A minimum of 750 square feet.
<b>Building Height</b>	Maximum of 30 feet.	A maximum of 30 feet.	Maximum of 30 feet.		A maximum of 30 feet.
<b>Animals</b>	The usual household pets may be kept. Usual household pets include, but not limited to, cats, dogs, ferrets, canaries, parrots, parakeets, hamsters, white mice and guinea pigs.	N/A	The usual household pets may be kept. Usual household pets include, but are not limited to, cats, dogs, ferrets, canaries, parrots, parakeets, hamsters, white mice and guinea pigs.	The usual household pets may be kept. Usual household pets include, but not limited to, cats, dogs, ferrets, canaries, parrots, parakeets, hamsters, white mice and guinea pigs. If other than the usual household pets are kept, a minimum of 2½ acres is needed.	The usual household pets may be kept. Usual household pets include, but are not limited to, cats, dogs, ferrets, canaries, parrots, parakeets, hamsters, white mice and guinea pigs. If other than usual household pets are kept, a minimum of 2½ acres is needed.

## Existing Land Use

<b>Mobile Home or Trailer</b>	Any mobile home or trailer placed on a lot shall be skirted. The skirting must have a minimum of two vents measuring at least 6" X 12" and placed so as to provide cross ventilation. There must be a removable opening by the water line to allow installation and service of the water meter. Contact water department for more information.	N/A	N/A		
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It's worth noting that with the addition of LD 2003, General land use as it pertains to housing will only get easier to manage. The benefits to people who are wanting/given the task of to take care of their parents when they're older will be particularly felt in towns where demographics are reportedly skewing toward elders.

**3. A description or map identifying the location of lots and primary structures created within the last ten years. Include residential, institutional, commercial, and industrial development.**

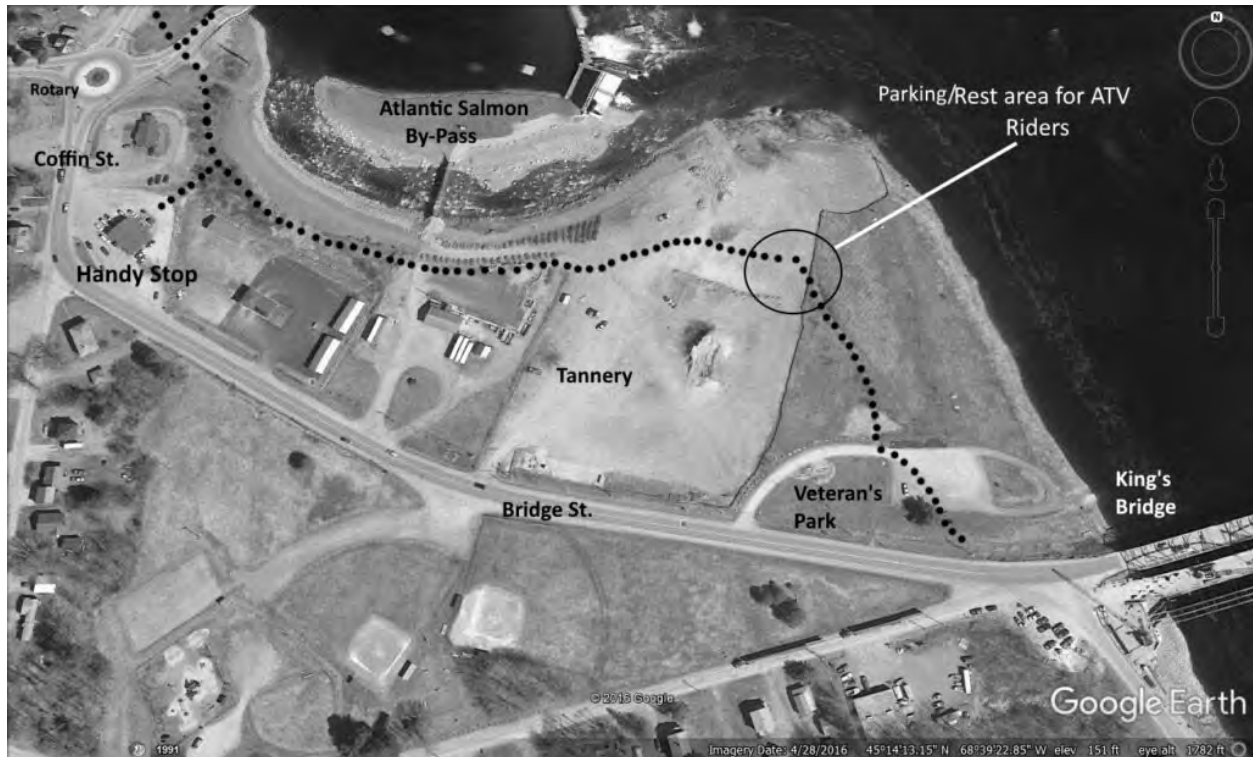
### Mixed Use

The benefits of mixed use are numerous. For Howland, it's creating a space where both housing developments can occur, and a village center can be expanded through both conventional and unconventional means. Howland has the amount of commercial businesses typical of its population size. Commercial development has occurred mainly within the village area (Mixed Use District) with an occasional home business in this area and in the more rural areas of the town. In the last 10 years, most prominently, the handy stop has expanded along bridge street, and businesses like Chubby's have also arisen. An example of a business not in the Mixed-Use district is Fox green Farm. Overall, there are less than 10 businesses that have successfully opened.

Howland also has little development pressure, as it is considered a bedroom community for Lincoln in the north, and Old Town, Orono, and Bangor further south. With its lower tax rates and well-known potential, it is an attractive community for those wishing to locate to the town.

## Existing Land Use

In the last 10 years, Howland successfully added the new municipal building, designed to house the library, town office, EMS services, and a warming/ cooling shelter for when the weather is less than agreeable. The new building was redeveloped from the old Tannery Mill located on Bridge Street.



**Map 11.1:** Old Tannery Lot site plan, used to prepare for potential construction. Source: Town of Howland, Maine.

### Residential

Land ownership patterns are characterized by residents as few people owning large parcels of land. There has purportedly been more housing built on the North Howland Road than anywhere else in town. The town states that at least 20 homes have been built in the last 10 years.

There has also been the addition of LD 2003 to Howland's land use ordinances, which were aimed at increasing affordable housing opportunities by loosening zoning restrictions. It allows for the construction of accessory dwelling units (ADUs) and encourages higher-density housing developments in designated growth areas, like parts of Howland, by providing a density bonus for affordable housing. The law addresses Maine's housing shortage by reducing barriers to development. For Howland, this could mean more affordable housing options, support for local economic growth, and a better alignment with state housing goals.

### Industrial



## Existing Land Use

Howland industrial economy is not as booming as it once was, but like many other former mill towns, it has the experience, and therefore, has better opportunity than most to poise itself for any industrial boom that may arise with the changing focus of Maine's industrial sector. When Howland's economy was more based in lumber harvesting and processing, this type of zoning did well to separate areas with heavier and potentially disruptive activities from residential neighborhoods.

Howland's largest industry is currently the Cedar Mill, located in town. A few short miles from the town's eastern border at King's Bridge is Pleasant River lumber, who's presence harkens back to when the lumber industry was more prominent in the area, and signals a potential return of the lumber industry as a way of solving today's economic issues.

- 4. Provide a brief description of existing land use regulations and other tools utilized to manage land use, including shoreland zoning, floodplain management, subdivision, site plan review, and zoning ordinances.**

## Zoning Ordinances

Howland's zoning ordinance establishes districts with specific land uses, such as residential, industrial, and mixed-use areas. Each zone has distinct requirements for lot sizes, setbacks, and permitted uses. The ordinance promotes balanced development while protecting residential neighborhoods, commercial areas, and natural resources.

### Subdivision

The subdivision regulations in Howland guide the division of larger tracts of land into smaller parcels. Developers must adhere to minimum lot size, road frontage, and public utility access requirements to ensure orderly development. These regulations are aimed at protecting public health, safety, and welfare, while maintaining community standards.

### Site Plan Review

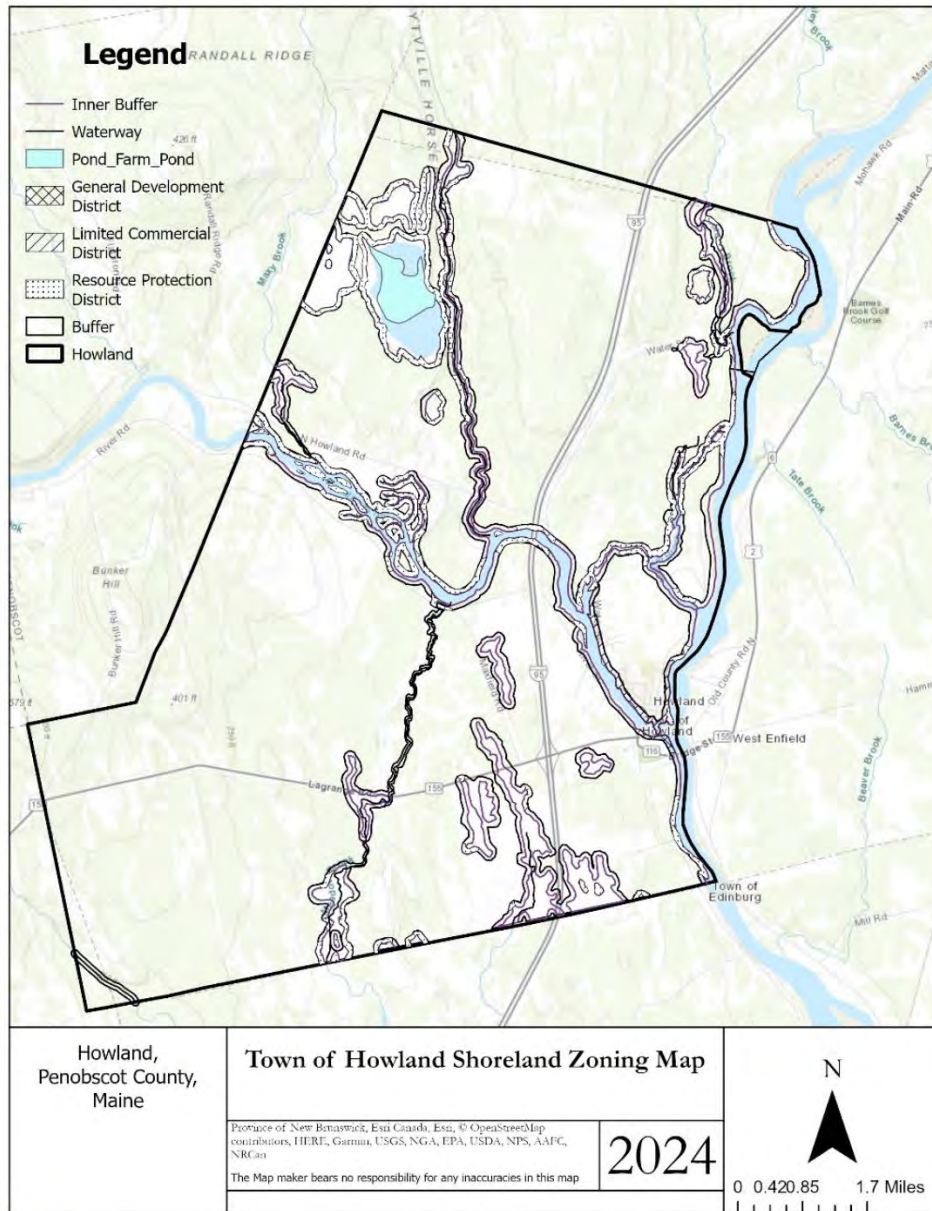
This tool allows the Planning Board to review proposed developments to ensure they align with Howland's land use goals. The board examines factors such as traffic safety, environmental impacts, water and sewer capacity, and aesthetic concerns to maintain the town's character and infrastructure integrity.

### Shoreland Zoning

The town adheres to regulations set by the Maine Department of Environmental Protection, ensuring that any development along water bodies complies with environmental standards to protect natural resources. Shoreland zoning ordinances manage construction activities within a designated distance from the shore, limiting land use to avoid environmental degradation.

## Existing Land Use

Howland's Shoreland Zoning Ordinance is designed to protect natural resources by regulating land use within 250 feet of water bodies and wetlands. Within this buffer zone, activities such as excessive vegetation clearing, unpermitted construction, and the installation of poorly managed wastewater systems are prohibited, as they could degrade water quality. These regulations ensure that development is conducted responsibly, preserving the ecological integrity of the area while allowing sustainable land use practices. The ordinance establishes zones like Resource Protection, Limited Residential, and General Development, each with specific land use restrictions. Key goals include preventing pollution, safeguarding wildlife habitats, controlling erosion, and managing building placements. Development in these areas is controlled to conserve natural beauty and ensure environmental sustainability. The ordinance was amended in 2018, and will continue to be updated as needed.



**Map 11.2** Howland Shoreland Zoning Map. Source: Town of Howland, Maine

### Floodplain Management

Howland’s ordinances include provisions for managing land use within floodplains to reduce the risk of damage from flooding. The regulations may require developers to follow specific building practices, ensuring structures in flood-prone areas meet safety standards.

Howland Flood Hazard Map



**Map 11.3:** Floodplain management map of Howland Maine. Source: Federal Emergency Management Agency.

### Other Ordinances

Junkyard Ordinance

Property and Grounds Maintenance Ordinance



Existing Land Use

Recreational Marijuana Ordinance Signed 2017

Sewer Use Ordinance

All Ordinances and policies can be found on the Town of Howland website.<sup>23</sup>

**5. Estimate the minimum amount of land needed to accommodate projected residential, institutional, commercial, or industrial development at least ten (10) years into the future.**

Howland estimates that approximately 50-100 acres will be needed for development in the next 10 years of the planning period. Over the last 10 years, population growth has decreased by approximately 100 as shown in the Population and Demographics chapter. However, this may be inaccurate since the COVID-19 Pandemic brought a strong influx of new residents throughout Maine. There are promising developments happening in Lincoln, which prompted Howland to take thoughtful consideration for what kind of development the town should plan for. Careful zoning will help accommodate this growth while preserving the town's character and infrastructure capacity.

The Comprehensive Plan cannot provide detailed solutions for all of the community's economic development issues. It does, however, identify many of the basic resources, facts, and local concerns so that the town's leaders, along with the residents can have better information for future decision-making on some of the town's most pressing land use matters.

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<sup>23</sup> <https://howlandmaine.com/ordinances-resolutions/>

An aerial photograph of a dam and its surrounding area. The dam is a long, low structure with water flowing over it. To the left of the dam is a large reservoir. To the right is a residential area with many houses and trees. The text "FUTURE LAND USE" is overlaid on the image in a large, bold, sans-serif font. "FUTURE" is in black, while "LAND USE" is in a dark blue color.

# FUTURE LAND USE

## ***Future Land Use Plan***

### ***State Goal***

To encourage orderly growth and development in appropriate areas of each community, while protecting the state's rural character, making efficient use of public services, and preventing development sprawl.

### ***Policies***

To coordinate the community's land use strategies with other local and regional land use planning efforts

To support the locations, types, scales, and intensities of land uses the community desires as stated in its vision.

To support the level of financial commitment necessary to provide needed infrastructure in growth areas.

To establish efficient permitting procedures, especially in growth areas.

To protect critical rural and critical waterfront areas from the impacts of development.

## ***Future Growth Requires Careful Thought***

The Future Land Use section of Howland’s Comprehensive Plan is designed to guide the town’s growth and development over the next decade. Rooted in a vision of sustainable and balanced development, this plan outlines strategies for preserving Howland's unique character while promoting economic vitality, housing opportunities, and environmental stewardship. As the town faces the challenges of shifting demographics, evolving housing needs, and changing economic drivers, careful land use planning is critical to ensuring that future growth aligns with community values and goals. The proposed land use patterns seek to protect natural resources, encourage responsible residential and commercial development, and support infrastructure improvements that enhance the overall quality of life for Howland residents. This section aims to provide a framework for making informed decisions that will shape Howland’s future in a way that fosters long-term prosperity and resilience.

### Analysis

#### **1. Does the Future Land Use Plan align and/or conflict with the community’s vision statement?**

The Future Land Use Plan for Howland is in strong alignment with the community’s vision statement, which emphasizes the importance of incremental change when it comes to fostering sustainable development. Howland envisions itself as a community that preserves its natural resources, enhances its quality of life, and promotes economic growth. The Future Land Use Plan supports this vision by designating appropriate growth areas to encourage development in key sections of town, while protecting environmentally sensitive areas. The plan seeks to promote residential and commercial development in areas with existing infrastructure, such as along the main transportation corridors, while preserving open spaces, wetlands, and other critical natural resources. There are no significant conflicts between the Future Land Use Plan and the community’s vision statement, as the Plan has been shaped by community input and data-driven land use considerations.

#### **2. Is the configuration of the growth area(s) shaped by natural opportunities and/or constraints (i.e. the physical suitability or unsuitability of land for development)? The location of public facilities? The transportation network?**

The configuration of Howland’s designated growth areas has been influenced by a combination of natural and infrastructural factors. The town’s geography, including wetlands, floodplains, and wooded areas, plays a key role in shaping where development is feasible or desirable. Areas identified for growth have been chosen based on the physical suitability of the land for development, with a focus on areas with fewer environmental constraints. Proximity to existing public facilities, such as schools, government buildings, and the Howland Wastewater Treatment Plant, further shapes the growth areas, ensuring that new development is supported by infrastructure. Additionally, the transportation network, including access to major roads like



Route 2, and 155 and the proximity to Interstate 95, has influenced the configuration of growth areas to ensure efficient connectivity and minimize traffic impacts.

### **3. How does the Future Land Use Plan relate to recent development trends?**

Howland's Future Land Use Plan is shaped by the ongoing housing crisis that affects both the state of Maine and the town itself. As part of the HUD Priority geography, Howland is acutely aware of the pressing need for affordable and accessible housing. Recent trends have shown that the demand for housing in the region has steadily increased, driven by both rising housing costs in urban centers and an influx of individuals and families seeking more affordable, rural living options. With Maine facing a significant shortfall in housing availability, particularly for low- and moderate-income (LMI) households, Howland's land use planning focuses heavily on addressing this gap by promoting housing development in areas that can support growth.

The Future Land Use Plan prioritizes residential development in designated growth areas that are already supported by public infrastructure, such as water, sewer, and transportation networks. By concentrating housing development in these areas, the town aims to provide a range of housing options—from single-family homes to multi-family units—while ensuring that new developments are affordable and accessible. The Plan also encourages infill development and the rehabilitation of older, underutilized properties, which can help meet the immediate housing demand without sprawl into undeveloped or environmentally sensitive areas.

Additionally, the Plan is responsive to HUD's objectives by identifying opportunities for affordable housing production that aligns with Howland's long-term growth strategy, ensuring that LMI residents can remain in the community and new residents can find housing that meets their needs. Housing growth is expected to focus on areas near the town center and along major transportation routes, leveraging Howland's position on the HUD Priority map to access potential funding and resources that support affordable housing initiatives.

### **4. Given current regulations, development trends, and population projections, estimate how many new residential units and how much commercial, institutional, and/or industrial development will likely occur in the planning period? Where is this development likely to go?**

Based on current regulations, population projections, and observed development trends, Howland is likely to see modest growth in residential housing, with an estimated 20–40 new residential units over the next decade. These units are likely to be concentrated in areas where infrastructure, such as public water and sewer systems, already exist or can be expanded. The majority of residential growth is expected near the town center, along primary roads like N. Howland Rd., Mattamiscontis Rd., and Route 155 (Lagrange rd.) and at the end of Penobscot Ave, Gardiner Lane, and in the existing residential neighborhoods.

In terms of commercial and industrial development, the town could see the addition of small-scale businesses or light industry, especially near transportation corridors like Interstate 95.

Commercial development will likely occur near the town’s central business district or in areas adjacent to existing commercial activities, while light industrial development could be focused on areas near the transportation network to take advantage of access to regional markets.

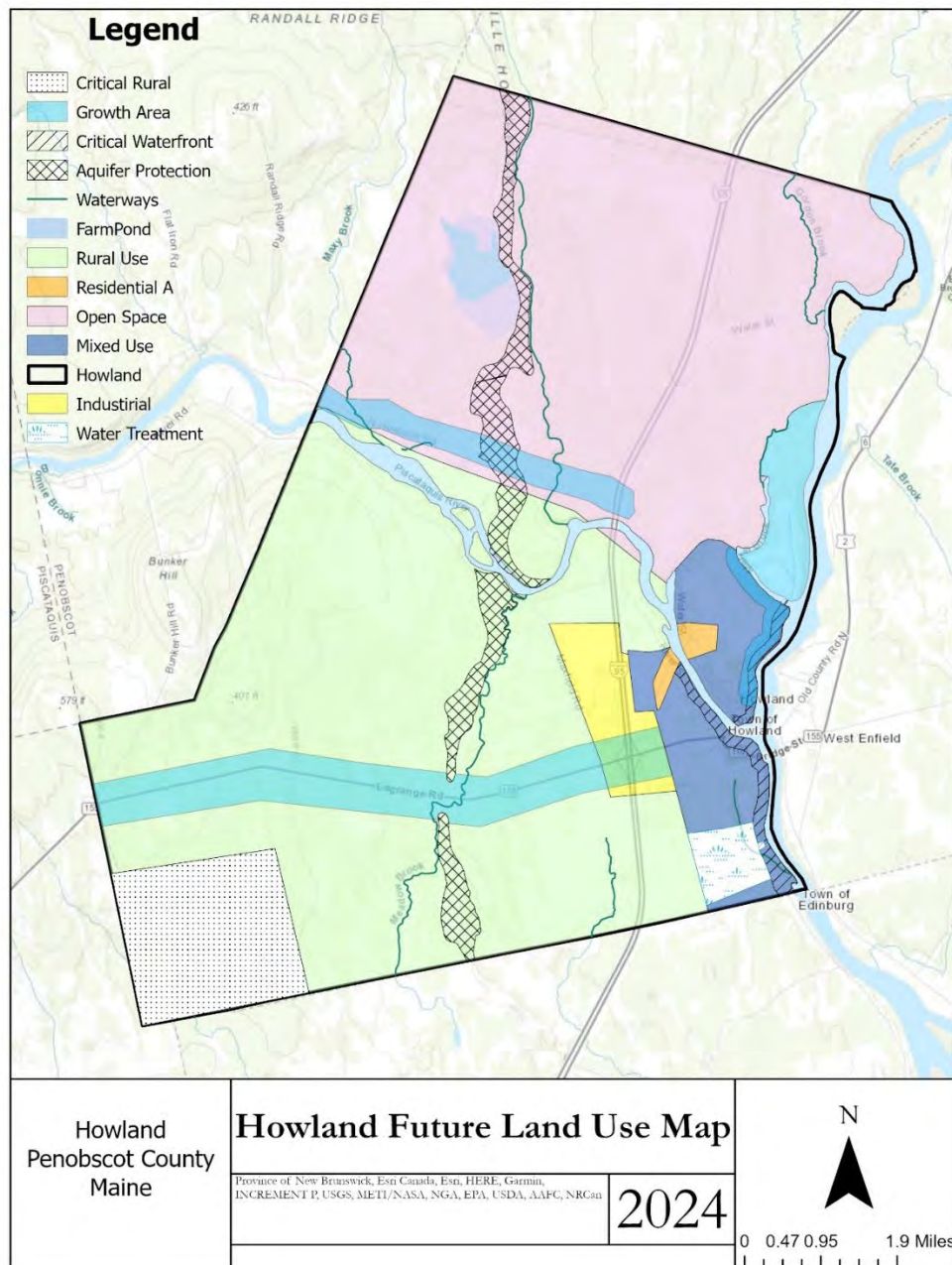
**5. How can critical natural resources and important natural resources be effectively protected from future development impacts?**

The Natural Resources chapter of Howland’s Comprehensive Plan emphasizes the importance of protecting critical natural resources such as wetlands, wildlife habitats, shorelands, and scenic areas. The town seeks to balance conservation with sustainable growth, focusing on preserving its rivers, ponds, and forests. Howland promotes regional cooperation, working with neighboring communities and state agencies to protect shared ecosystems like the Penobscot and Piscataquis rivers, and other significant natural areas.

Key strategies for preserving these resources include maintaining local ordinances, such as shoreland zoning, that align with state standards and ensuring developers account for critical natural habitats. The town recognizes the need for ongoing regional collaboration, especially given the shared habitats and ecosystems that transcend municipal boundaries. Initiatives such as the Beginning with Habitat program, and Howland Research Forest's global studies on carbon cycling and climate change, are essential for protecting biodiversity and advancing long-term ecological stewardship.

Looking forward, Howland plans to incorporate ecological sustainability into future land-use planning, guided by scientific data and regional partnerships.

## Future Land Use Map and Growth Areas



**Map 12.1:** Proposed Future Land Use in Howland, Maine. Source: Town of Howland, Maine.

Growth areas, by definition, include lands that are physically suitable for development or redevelopment; can be effectively served by public facilities; contain sufficient area to accommodate projected growth; and can provide a compact pattern of development within

existing natural constraints. The majority of the identified growth areas fall within the areas of town that are currently served by public water and sewer and accommodate the Town's most dense development. The town is working on expanding its public sewer and water.

The above map is the result of the combined efforts of the Comprehensive Plan committee to identify areas where growth will occur based on where growth is already apparent. During the planning period, Howland sees most growth occurring along the main Routes of LaGrange Road, North Howland Road, and along the river where Penobscot Avenue extends further North, toward Lincoln.

The districts here remain largely unchanged from Howland's existing land use map in Chapter 11. The addition of a Critical Rural, and Critical Waterfront district have been identified in future land use to account for Howland's apodictic relationship with the University of Maine, and to better protect and sustainably maintain its waterfront which requires greatest attention due to changes seen in weather patterns, so that Howland is best able to prepare for whatever comes. A narrative description of these districts is as follows:

### **Mixed Use**

The purpose of the proposed Mixed-Use District is to provide higher-density development, which promotes the traditional neighborhood and encompasses a broad range of uses including some commercial and residential as well as municipal services. Permitted uses include Single-Family and Multi-Family housing units (with usual accessory uses customarily incident to residential uses), Mobile Home Parks (subject to the regulations of the Mobile Home Park Ordinance), Nursing Homes, Boarding Homes, Churches, Schools, Municipal Facilities and Services, Service Organizations, Banks, Restaurants and Cafes, Beauty Shops, Medical/Dental Clinics/Offices, Professional Offices, Gas Stations, Day Care Centers, Bed and Breakfast Accommodations, Cemeteries, Greenhouses, Small Retail Businesses and Home-Based Occupations. The addition of LD 2003 is not expected to result in any significant changes to the Mixed-Use district, but simply enhance its applied effectiveness in land use.

The Mixed-Use District reflects Howland's vision by encouraging a variety of compatible uses. Flexibility in land use allows for a combination of residential, commercial, and light industrial activities, which can foster economic diversity and vibrancy. There are also natural constraints such as proximity to wetlands or floodplains, which necessitate careful site planning. Proposed uses include small-scale retail, offices, and medium-density housing, fostering a walkable, livable environment. Special considerations include buffering between residential and industrial uses and adopting architectural design standards to maintain the district's cohesive character. Municipal investments in streetscaping, pedestrian infrastructure, and utility upgrades will be key to supporting this district's growth.



### **Residential A**

The Residential District focuses on encouraging high-standard residential development with essentially one-family homes and preventing development which might be incompatible with single-family residential uses. This district prioritizes single-family and low-density housing but allows for clustered developments to maximize open space. Opportunities for growth are balanced by constraints such as soil limitations for septic systems and proximity to natural habitats. Proposed uses include detached homes, accessory dwelling units, and small-scale multi-family developments. Development compatibility is ensured through conservation subdivision provisions and buffers to protect nearby critical habitats. There are no anticipated municipal investments expected at this time.

There has also been the addition of LD 2003 to Howland's land use ordinances, which were aimed at increasing affordable housing opportunities by loosening zoning restrictions. It allows for the construction of accessory dwelling units (ADUs) and encourages higher-density housing developments in designated growth areas, like parts of Howland, by providing a density bonus for affordable housing. The law addresses Maine's housing shortage by reducing barriers to development. For Howland, this could mean more affordable housing options, support for local economic growth, and a better alignment with state housing goals. Using LD 2003, Howland has more opportunity to promote family-friendly development and balanced development of neighborhoods.

### **Industrial**

The Industrial District supports Howland's economic development by providing areas for manufacturing, warehousing, and other industrial activities. This district capitalizes on its proximity to major transportation routes, like I-95, ensuring access to markets while maintaining buffers to shield residential and natural areas from potential impacts. Constraints include noise, emissions, and waste management. Proposed uses focus on continuing to promote light and heavy industry, with a need for careful site design to protect adjacent uses and resources. Investments in road infrastructure and utility expansion will be necessary to support industrial growth in this district.

### **Rural Use**

The Rural Use District emphasizes Howland's connection to Maine's natural beauty by preserving large tracts of open space while allowing for low-density development. This district is suitable for agriculture, forestry, outdoor recreation, and scattered residential uses. Constraints include steep slopes (where the slope is greater than 7°), wildlife corridors, and limited access to infrastructure. Proposed uses align with conservation-oriented principles, such as clustered housing developments and recreational facilities like trails and campsites. Minimal municipal investment is anticipated, with a focus on partnerships to enhance recreational opportunities and conservation efforts.

### **Open Space**

The Open Space District embodies Howland’s commitment to preserving its natural resources and scenic beauty. This district is dedicated to conservation, recreation, and low-impact activities. Constraints include sensitive habitats and water quality considerations. Proposed uses include the creation of parks, trails, and conservation lands that provide public access to nature while protecting critical resources. Special considerations include ensuring adequate buffers and implementing erosion control measures. Municipal investments may include trail development, signage, and maintenance of public access areas.

### **Aquifer Protection**

The Aquifer Protection District safeguards Howland’s water resources by limiting development in areas critical to aquifer recharge. Constraints include soil permeability and the risk of contamination from certain land uses. Uses are restricted to low-impact activities such as conservation, recreation, and low-density residential development. Development standards prioritize groundwater protection through setbacks, buffers, and limits on impervious surfaces. Municipal investments may include monitoring systems and educational programs on water conservation.

### **Critical Rural Area**

The goal of establishing Critical Rural Area is to preserve Howland’s most sensitive natural environments, which are owned and managed by the University of Maine, and its partners, including wildlife habitats and pristine landscapes. Constraints include endangered species protection and limited development suitability due to environmental factors. No uses are being proposed by the town, except those that advance and preserve the University of Maine’s mission as it relates to this area.

Development in this district must adhere to stringent standards, as set by the University. Municipal investments are likely to focus on partnerships with The University of Maine and its partners, and Lagrange where more of the same land is located, to secure funding for targeted projects.

### **Critical Waterfront Area**

The establishment of the Critical Waterfront Area will capitalize on Howland’s riverside location, promoting recreation and eco-tourism while protecting the fragile river ecosystem. Constraints include floodplain management, erosion control, and habitat preservation. Proposed uses include riverfront parks, canoe launches, and low-impact commercial enterprises like bait shops or outfitters. Development considerations include enhanced setbacks, vegetative buffers, and flood-resistant construction. Municipal investments could include improvements to public river access points and stormwater infrastructure to support recreational and economic activities.

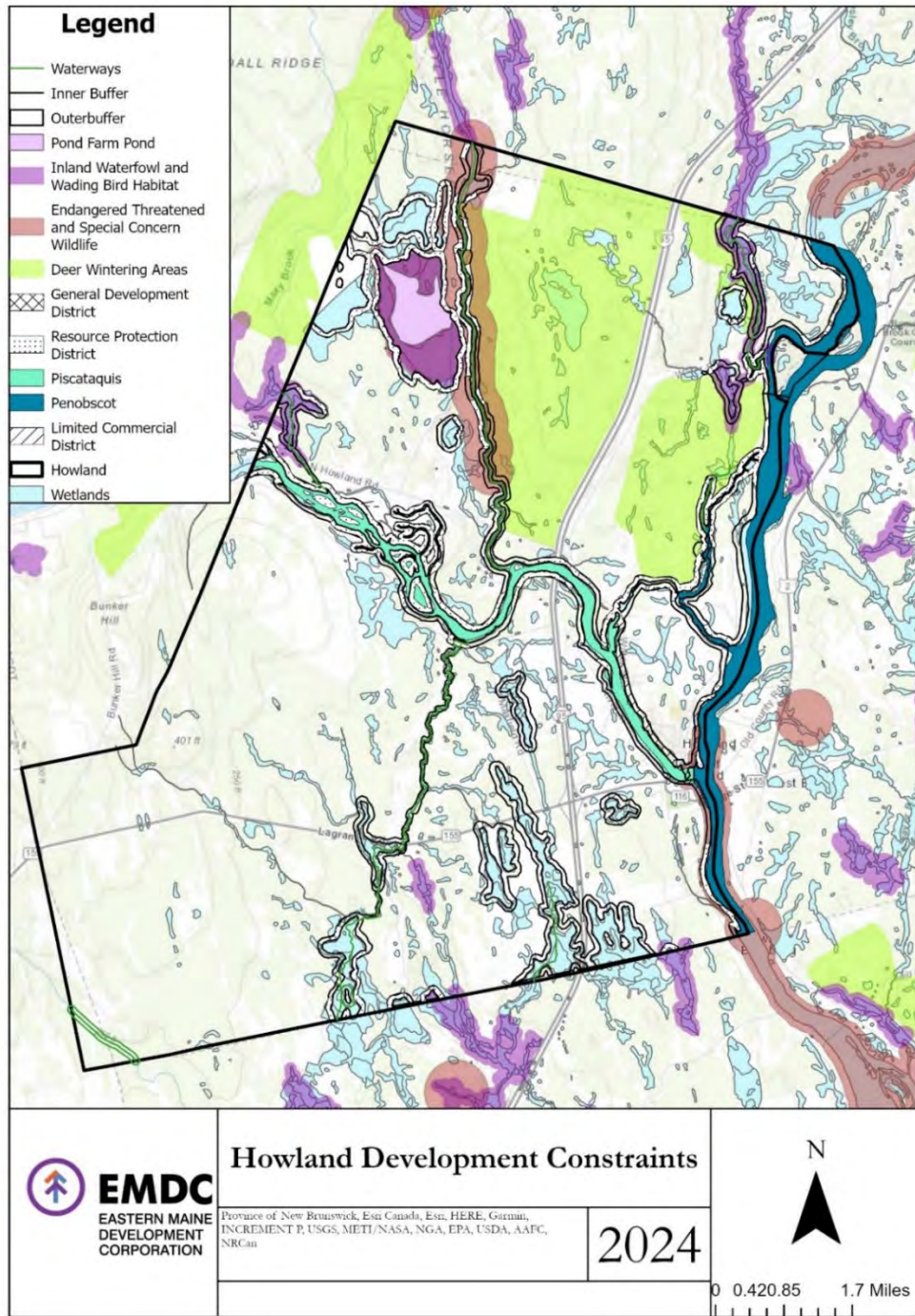
## ***Development Constraints***

To ensure the community's vision is at the forefront of future land use considerations, constraints to development, including conserved land, threatened wildlife habitat, wetlands, and slope are identified in the natural resource chapter. Being considerate and thoughtful when planning where future growth may be most suitable is essential to ensuring that the character, historical value, and the critical natural resources of the community are respected and acknowledged. Current and future residents, land developers, and prospective local business owners may find the following land use maps beneficial in the process of considering locations best suitable for their business or residence.

While Howland has largely identified elements of conservation and preservation as development constraints (Map 12.2), such as the shoreland zoning districts and critical natural areas, these factors can also present opportunities for sustainable development. Rather than viewing these districts as barriers, they can be integrated into Howland's vision to capitalize on its natural beauty. Howland can attract development that complements its environment and enhances the community's appeal as a desirable place to live and visit by leveraging those assets.

Bar Harbor, situated near Acadia National Park, offers a compelling example of how conservation and development can coexist. The town has successfully balanced the protection of its natural surroundings with vibrant economic growth. Through thoughtful zoning, strategic planning, public-private partnerships, and a committed staff and residents, Bar Harbor has cultivated a strong tourism economy while preserving its environmental integrity. For instance, the proximity to Acadia has inspired eco-friendly business practices, investment in green infrastructure, and the promotion of outdoor recreation opportunities. This synergy between preservation and development not only strengthens the local economy but enhances the quality of life for residents as well.

Howland may explore ways to utilize its natural features, such as the Piscataquis and Penobscot Rivers, as assets rather than obstacles. As touched on in previous chapters, investments in outdoor recreation, such as trails, canoe launches, and wildlife observation areas, will generate tourism and support local businesses. Encouraging development that aligns with the town's rural character—such as small-scale, environmentally conscious enterprises—could ensure that Howland grows while achieving its envisioned goals. Additionally, Howland may pursue partnerships with conservation organizations and look for grants aimed at environmental stewardship which would help fund projects that integrate preservation with economic and community development goals.



**Map 12.2:** Howland’s Development Constraints. Source: Maine Office of GIS, and Town of Howland, Maine.



## ***Strategies***

Using the descriptions provided in the Future Land Use Plan narrative, maintain, enact local ordinances as appropriate to:

- a. Clearly define the desired scale, intensity, and location of future development;
- b. Establish or maintain fair and efficient permitting procedures, and explore streamlining permitting procedures in growth areas; and
- c. Clearly define protective measures for critical natural resources and, where applicable, important natural resources.
- d. Clearly define protective measures for any proposed critical rural areas and/or critical waterfront areas, if proposed.

Include in the Capital Investment Plan anticipated municipal capital investments needed to support proposed land uses.

Meet with neighboring communities to coordinate land use designations and regulatory and non-regulatory strategies.

Provide the code enforcement officer with the tools, training, and support necessary to enforce land use regulations, and ensure that the Code Enforcement Officer is certified in accordance with 30-A M.R.S.A. §4451.

Track new development in the community by type and location.

Direct a minimum of 75% of new municipal growth-related capital investments into designated growth areas identified in the Future Land Use Plan.

Periodically (at least every five years) evaluate implementation of the plan in accordance with Section 2.7

# ***APPENDIX***

***Strategy Implementation Table***

The table below lists strategies in applicable chapters of the plan and local groups and entities that will play lead roles in their implementation along with a timeline that is broken down into the following categories:

- Ongoing – The strategy is something the town is actively working on, and is encouraged to continue doing as part of the implementation of the Comprehensive Plan.
- Immediate – A strategy that is on the verge of completion and the town is able to start and/or complete within five (5) years of adopting the Comprehensive Plan.
- Long-Term – These strategies require a significant lead-time that may involve prior actions to be completed. These strategies are anticipated to take more than five (5) years to complete.

Estimated timeframes for strategy completion are also provided. In addition to these strategies, Howland may annually review the Strategies in the Comprehensive Plan.

<i>Chapter Title</i>	<i>Strategy</i>	<i>Responsible Agent(s)</i>	<i>Timeframe for Completion</i>
<b>Housing</b>	1. Stabilize housing prices	Town Manager, Selectboard and Planning Board	Ongoing
	2. Establish Land Use ordinances to support establishment of senior and low-income housing	Town Manager, Selectboard and Planning Board	Ongoing, 1-3 Years
	3. Support the efforts of local and regional housing coalitions in addressing affordable and workforce housing needs.	Selectboard, Planning Board	Immediate/ Ongoing
	4. Maintain, enact or amend growth area land use regulations to increase density, decrease lot size, setbacks and road widths, or provide incentives such as density bonuses, to encourage the development of affordable/workforce housing.	Selectboard, Planning Board and Assessing Agent	Long term, 5-10 Years

	5. Enact ordinances to allow the addition of at least one accessory apartment per dwelling unit in growth areas, subject to site suitability.	Town Manager, Selectboard and Planning Board	Completed; Compliant with LD 2003
	6. Designate a location(s) in growth areas where mobile home parks are allowed pursuant to 30-A M.R.S.A. §4358(3)(M) and where manufactured housing is allowed pursuant to 30-A M.R.S.A. §4358(2).	Town Manager, Selectboard, Planning Board and Assessing Agent	Immediate
	7. Seek to achieve a level of at least 10% of new affordable residential development built or placed during the planning period	Selectboard, Planning Board and Assessor	Long term, 5-10 Years
<b>Transportation</b>	1. Establish Drivers Education program through the schools or a public program	Town Manager, Selectboard, School Administrative District #31 Directors	Immediate
	2. Increase road maintenance, especially grading	Town Manager, Town select-people, Maine DOT	Immediate
	3. Continue to actively participate in regional and state transportation efforts.	Town Manager, Town select-people, Abutting towns, Maine DOT	Ongoing
	4. Enact local ordinances as appropriate to address or avoid conflicts with: a. Policy objectives of the Sensible Transportation Policy Act (23 M.R.S.A. §73);	Town Manager, Town Selectboard, Planning Board, Maine DOT	Immediate, 3-5 Years



	<ul style="list-style-type: none"> <li>b. State access management regulations pursuant to 23 M.R.S.A. §704; and</li> <li>c. State traffic permitting regulations for large developments pursuant to 23 M.R.S.A. §704-A.</li> </ul>		
	5. Enact ordinance standards for subdivisions and for public and private roads as appropriate to foster transportation-efficient growth patterns and provide for future street and transit connections.	Town Manager, Town Selectboard, Planning Board	Immediate, 1-3 years
<b>Economy</b>	1. Use TIF Money to Allocate public land for development	Town Manager, Selectboard, Planning Board	Long term
	2. Appoint a committee of several people to identify ways of attracting new businesses to Howland	Town Manager, Selectboard	Immediate, Ongoing
	3. Coordinate with other municipalities in efforts to spur regional economic development	Town Manager, Selectboard, Residents, Adjacent Towns	Immediate
<b>Water Resources</b>	<p>1. Adopt or amend local land use ordinances as applicable to incorporate stormwater runoff performance standards consistent with:</p> <ul style="list-style-type: none"> <li>a. Maine Stormwater Management Law and Maine Stormwater regulations (Title 38 M.R.S.A. §420-D and 06-096 CMR 500 and 502).</li> <li>b. Maine Department of Environmental Protection's allocations for allowable levels of phosphorus in lake/pond watersheds.</li> </ul>	Town Manager, Selectboard, Planning board	Immediate, Ongoing

	c. Maine Pollution Discharge Elimination System Stormwater Program		
	2. Consider amending local land use ordinances, as applicable, to incorporate low impact development standards.	Town Manager, Selectboard, Planning board	Immediate, Ongoing
	3. Maintain, enact, or amend public wellhead and aquifer recharge area protection mechanisms, as necessary.	Town Manager, Selectboard, Planning board, Code Enforcement Officer	Immediate, 1-3 years
	4. Encourage landowners to protect water quality. Provide local contact information at the municipal office for water quality best management practices from resources such as the Natural Resource Conservation Service, University of Maine Cooperative Extension, Soil and Water Conservation District, Maine Forest Service, and/or Small Woodlot Association of Maine	Town Manager, Selectboard, Planning board, Residents	Immediate, Ongoing
	5. Adopt water quality protection practices and standards for construction and maintenance of public and private roads and public properties and require their implementation by contractors, owners, and community officials and employees.	Town Manager, Selectboard, Planning board, Code Enforcement Officer	Ongoing
	6. Participate in local and regional efforts to monitor, protect and, where warranted, improve water quality.	Town Manager, Selectboard, Planning board, Code Enforcement Officer	Ongoing

	7. Provide educational materials at appropriate locations regarding aquatic invasive species.	Town Manager, Selectboard, Planning board, Town administrative staff	Ongoing
	8. Encourage town contractors to attend Maine Local Roads workshops and get DEP certification (to work around local bodies of water)	Town Manager, Selectboard, Planning board, Town administrative staff	Ongoing
	9. Monitor water bodies for PFAS	Town Manager, Selectboard, Planning Board	Immediate, Ongoing
	10. Create an Inflow/ flowage study to see how water resources are managed	Town Manager, Selectboard, Planning Board	Ongoing
<b>Natural Resources</b>	1. Ensure that land use ordinances are consistent with applicable state law regarding critical natural resources.	Town Manager, Selectboard, Planning Board	Ongoing
	2. Designate critical natural resources as Critical Resource Areas in the Future Land Use Plan.	Town Manager, Selectboard, Planning Board, MDIFW	Immediate, Ongoing
	3. Through local land use ordinances, require subdivision or non-residential property developers to look for and identify critical natural resources that may be on site and to take appropriate measures to protect those resources, including but not limited to, modification of the proposed site design, construction timing, and/or extent of excavation	Town Manager, Selectboard, Planning Board, MDIFW	Immediate, Ongoing

	4. Through local land use ordinances, require the planning board (or other designated review authority) to include as part of the review process, consideration of pertinent BwH maps and information regarding critical natural resources.	Town Manager, Selectboard, Planning Board	Immediate, 1-3 Years
	5. Initiate and/or participate in interlocal and/or regional planning, management, and/or regulatory efforts around shared critical and important natural resources.	Town Manager, Selectboard, Planning Board, Other Towns, Maine Department of Inland Fisheries and Wildlife	Immediate, Ongoing
	6. Pursue public/private partnerships to protect critical and important natural resources such as through purchase of land or easements from willing sellers	Town Manager, Selectboard, Planning Board, Adjacent towns, Cold Stream Pond Camp Association	Immediate, Ongoing
	7. Distribute or make available information to those living in or near critical or important natural resources about current use tax programs and applicable local, state, or federal regulations.	own Manager, Selectboard, Planning Board, Administrative Staff	Immediate, Ongoing
<b>Agricultural and Forest Resources</b>	1. Consult with the Maine Forest Service district forester when developing any land use regulations pertaining to forest management practices as required by 12 M.R.S.A. §8869.	Selectboard and Planning Board	Immediate/Ongoing



	2. Consult with Soil and Water Conservation District staff when developing any land use regulations pertaining to agricultural management practices.	Selectboard, Planning Board, DACF	Immediate/ Ongoing
	3. Amend land use ordinances to require commercial or subdivision developments in critical rural areas, if applicable, maintain areas with prime farmland soils as open space to the greatest extent practicable.	Selectboard, Planning Board	Immediate, 1-5 Years
	4. Limit non-residential development in critical rural areas (if the town designates critical rural areas) to natural resource-based businesses and services, nature tourism/outdoor recreation businesses, farmers' markets, and home occupations.	Selectboard, Planning Board	Immediate/ Ongoing
	5. Encourage owners of productive farm and forest land to enroll in the current use taxation programs.	Selectboard,	Immediate/ Ongoing
	6. Permit land use activities that support productive agriculture and forestry operations, such as roadside stands, greenhouses, firewood operations, sawmills, log buying yards, and pick-your-own operations.	Selectboard, All Howland Residents	Ongoing
	7. Include agriculture, commercial forestry operations, and land conservation that supports them in local or regional	Selectboard, All Howland Residents	Ongoing

	economic development plans.		
<b>Historic and Archaeological Resources</b>	1. Establish historic sites, properties	Town Manager, Selectboard, Planning Board, Property Owners, Local historic society	Ongoing, Immediate
	2. For known historic archeological sites and areas sensitive to prehistoric archeology, through local land use ordinances require subdivision or non-residential developers to take appropriate measures to protect those resources, including but not limited to, modification of the proposed site design, construction timing, and/or extent of excavation.	Town Manager, Selectboard, Planning Board, Local historic society, Penobscot Nation	Long term, 5-10 years
	3. Plan a survey for potential archeological sites	Town Manager, Selectboard, Planning Board, Property Owners, Local historic society, Penobscot Nation	Immediate, 3-5 years
	4. Adopt or amend land use ordinances to require the planning board (or other designated review authority) to incorporate maps and information provided by the Maine Historic Preservation Commission into their review process.	Town Manager, Selectboard, Planning Board	Immediate, 3-5 years

<b>Recreation</b>	1. Establish ADA compliant piers along the River Walk Along the Penobscot River	Selectboard and Planning Board, DACF	Immediate, 3-5 Years
	2. Create a list of recreation needs or develop a recreation plan to meet current and future needs. Assign a committee or community official to explore ways of addressing the identified needs and/or implementing the policies and strategies outlined in the plan.	Selectboard and Planning Board	Immediate, 3-5 Years
	3. Work with public and private partners to extend and maintain a network of trails for motorized and non-motorized uses. Connect with regional trail systems where possible.	Town Manager, Selectboard, Residents	Ongoing
	4. Work with an existing local land trust or other conservation organizations to pursue opportunities to protect important open space or recreational land.	Town Manager, Selectboard	Ongoing
	5. Provide educational materials regarding the benefits and protections for landowners allowing public recreational access on their property. At a minimum this will include information on Maine’s landowner liability law regarding recreational or harvesting use, Title 14, M.R.S.A. §159-A.	Town Manager, Selectboard, Town Administrative Staff	Ongoing
<b>Public Facilities and Services</b>	1. Expand Public Sewer/ Water	Town Manager, Selectboard and	Immediate, 3-5 years

		Planning Board, Enfield counterparts	
	2. Expand Transfer stations services, days open in the summer months for increased seasonal residents	Town Manager, Selectboard and Planning Board	Immediate, 3-5 years
	3. Continue to adapt and revise municipal services to respond to changes in the population (emergency services, housing, recreational opportunities, economic development, and planning).	Town Manager, Selectboard and Planning Board, Other Municipalities	Ongoing, Immediate
	4. Identify any capital improvements needed to maintain or upgrade public services to accommodate the community's anticipated growth and changing demographics.	Town Manager, Selectboard	Immediate, 1-3 years
<b>Fiscal Capacity and Capital Investment Plan</b>	1. Explore new generation streams by reviewing towns of similar size to diversify tax revenue	Town Manager, Selectboard	Immediate, 5 years
<b>Future Land Use Plan</b>	1. Using the descriptions provided in the Future Land Use Plan narrative, maintain, enact or amend local ordinances as appropriate to: <ul style="list-style-type: none"> <li>a. Clearly define the desired scale, intensity, and location of future development;</li> <li>b. Establish or maintain fair and efficient permitting procedures, and explore streamlining permitting</li> </ul>	Selectboard, Planning Board	Long term, 5-10 years

	<p>procedures in growth areas; and</p> <p>c. Clearly define protective measures for critical natural resources and, where applicable, important natural resources.</p> <p>d. Clearly define protective measures for any proposed critical rural areas and/or critical waterfront areas, if proposed.</p>		
	2. Include in the Capital Investment Plan anticipated municipal capital investments needed to support proposed land uses.	Selectboard, Planning Board, Town Manager	Immediate
	3. Meet with neighboring communities to coordinate land use designations and regulatory and non-regulatory strategies.	Selectboard, Planning Board, Code Enforcement officer, adjacent communities ( The Penobscot Nation, Lincoln, Enfield, Lowell, Burlington, Lagrange, Edinburg, etc.)	Immediate, Long-term, 1-5 years, 5-10 years
	4. Provide the code enforcement officer with the tools, training, and support necessary to enforce land use regulations, and ensure that the Code Enforcement Officer is certified in accordance with 30-A M.R.S.A. §4451.	Selectboard, Planning Board, Code Enforcement officer, Regional Partners like EMDC	Immediate, 1-3 years
	5. Track new development in the community by type and location.	Selectboard, Planning Board,	Immediate, Ongoing, and Long-term



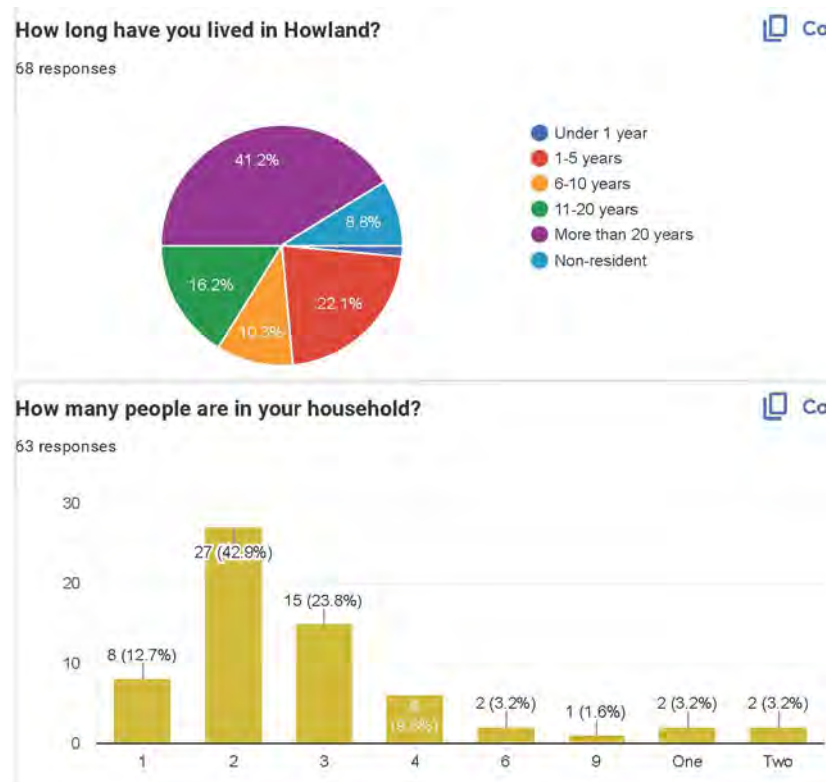
Appendix

		Assessor, Code Officer	
	6. Direct a minimum of 75% of new municipal growth-related capital investments into designated growth areas identified in the Future Land Use Plan.	Selectboard, Planning Board	Immediate, 3-5 Years
	7. Periodically (at least every five years) evaluate implementation of the plan in accordance with Section 2.7.	Selectboard, Planning Board, Comprehensive Plan Committee	Immediate, Long-term, 5 and 10 Years

## ***Howland Community Survey Results***

In February 2024 sixty-eight (68) individuals in Howland, Maine participated in a survey to assess public perceptions of quality of life as well as community opportunities and challenges. Based on 2022 census data, Howland has 1,212 residents occupying 494 dwellings full-time. 74 dwellings are occupied by part-time residents with the number of occupants/users unknown. While not all respondents answered all questions, unanswered questions are classified as “No response,” for the purposes of capturing the total number of respondents throughout the survey analysis. This survey and analysis are a joint effort between Eastern Maine Development Corporation and the Town of Howland.

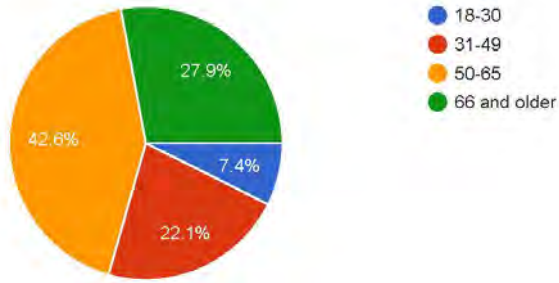
### ***Demographics***



# Appendix

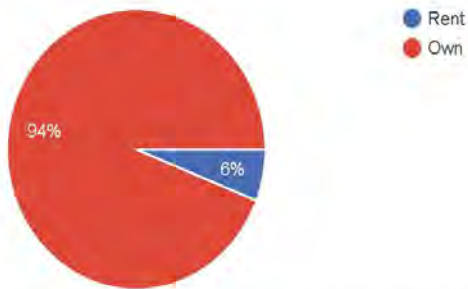
## Age bracket

68 responses



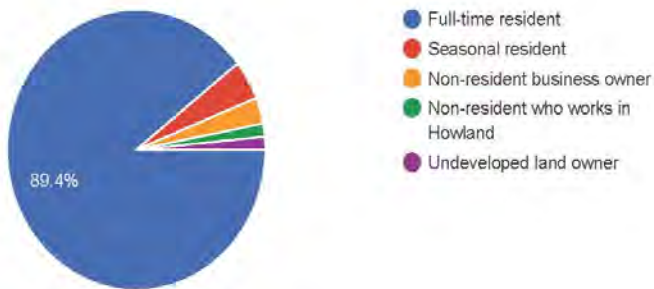
## Do you:

67 responses



## Which of the following best describes your relationship to Howland?

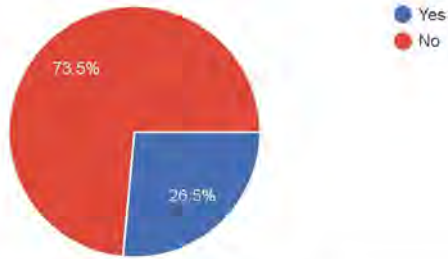
66 responses



Appendix

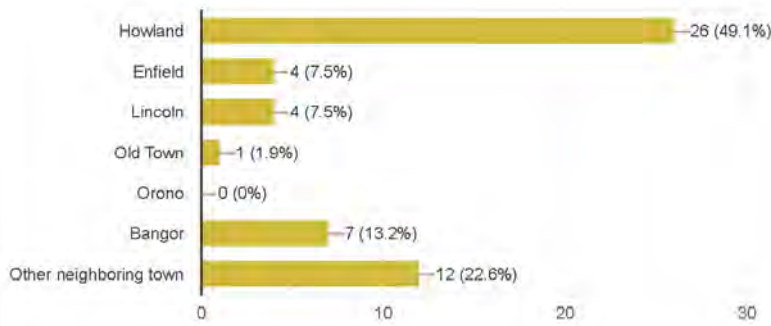
Do you have school-aged children under the age of 18 living at home?

68 responses



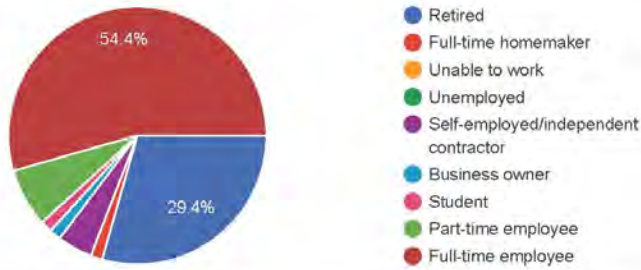
In what town do you work or attend school?

53 responses



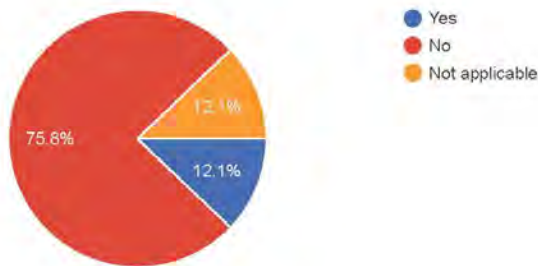
Which of the following best describes your employment?

68 responses



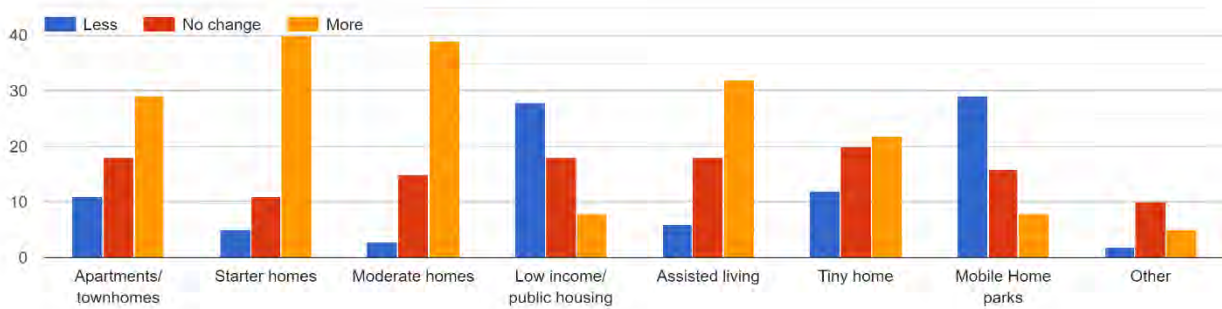
Do you work remotely from home?

66 responses

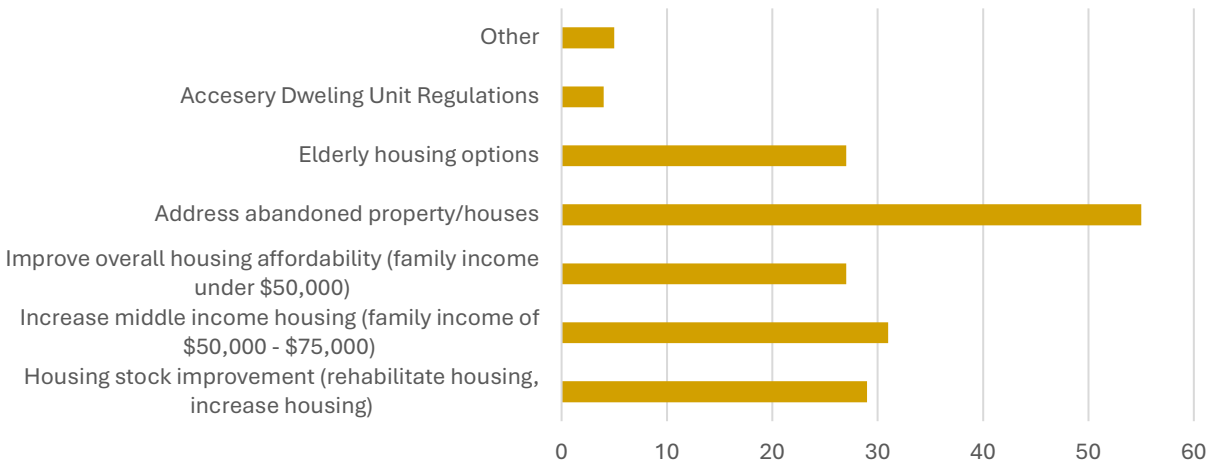


## Housing

Next to each option below, please indicate the following types of residential development you would like to see more, less, or no change of in Howland.



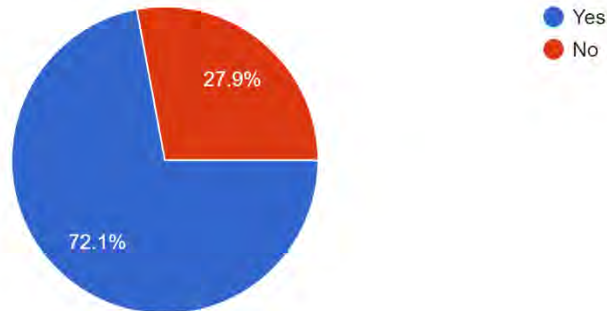
### What housing issues do you think Howland should address? (Please select all that apply) 68 responses



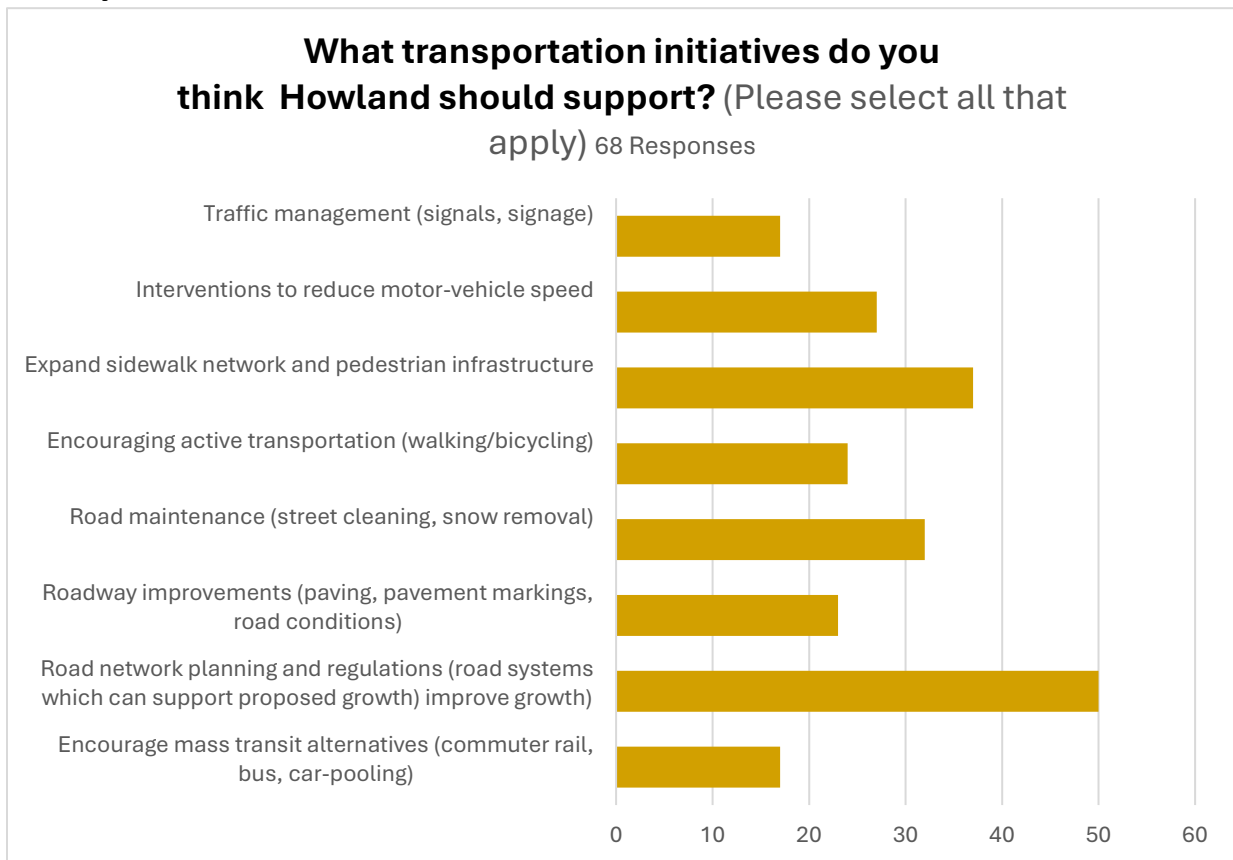


Do you think that it is challenging for low- and moderate-income people to find affordable housing in Howland?

68 responses



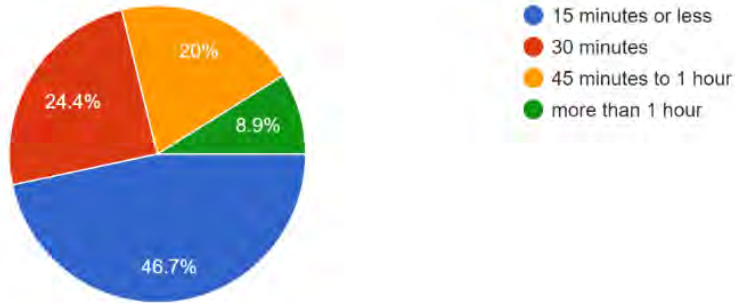
### Transportation



Appendix

If you commute to work/school, how many minutes on average is your commute?

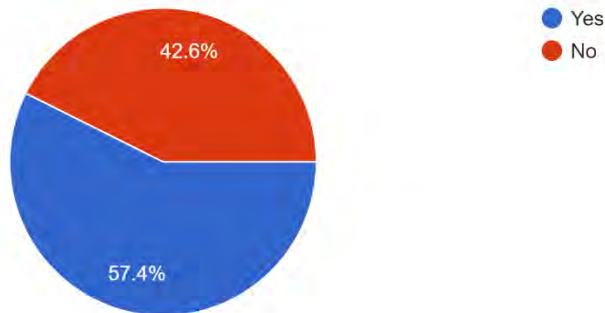
45 responses



***Economy***

Is tourism important to Howland?

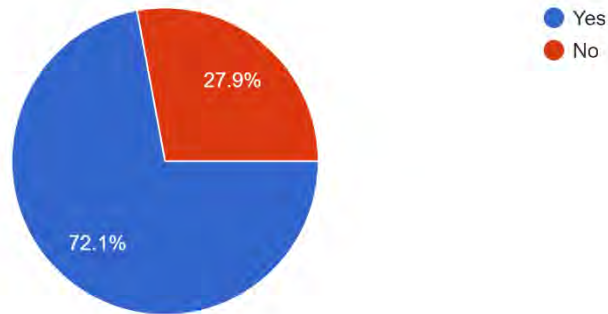
68 responses



## Appendix

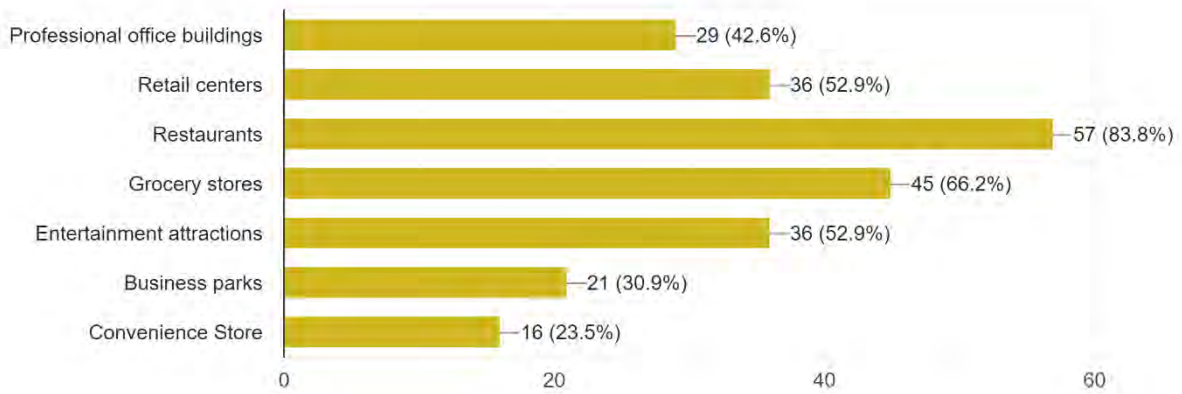
Do you think tourism in Howland should be promoted?

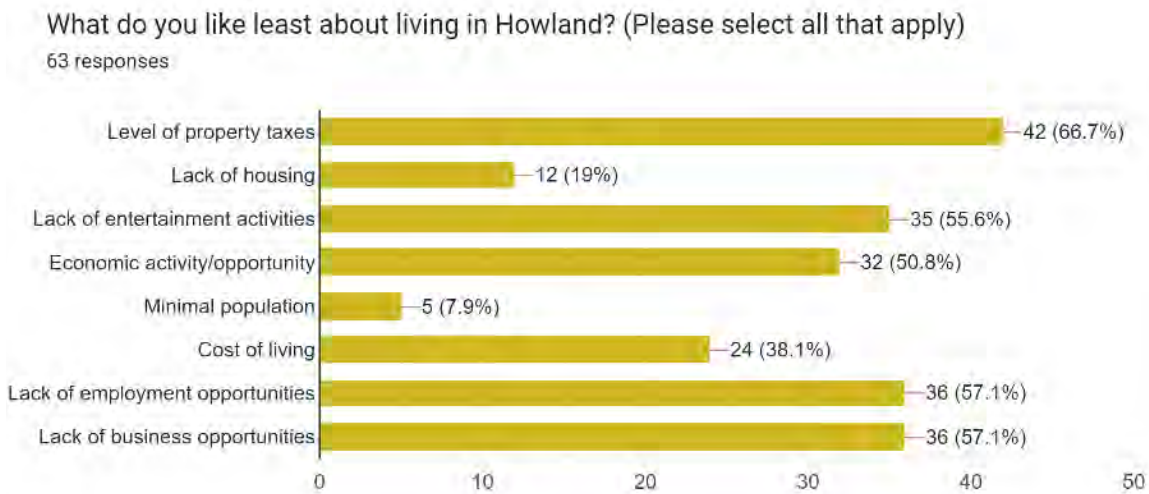
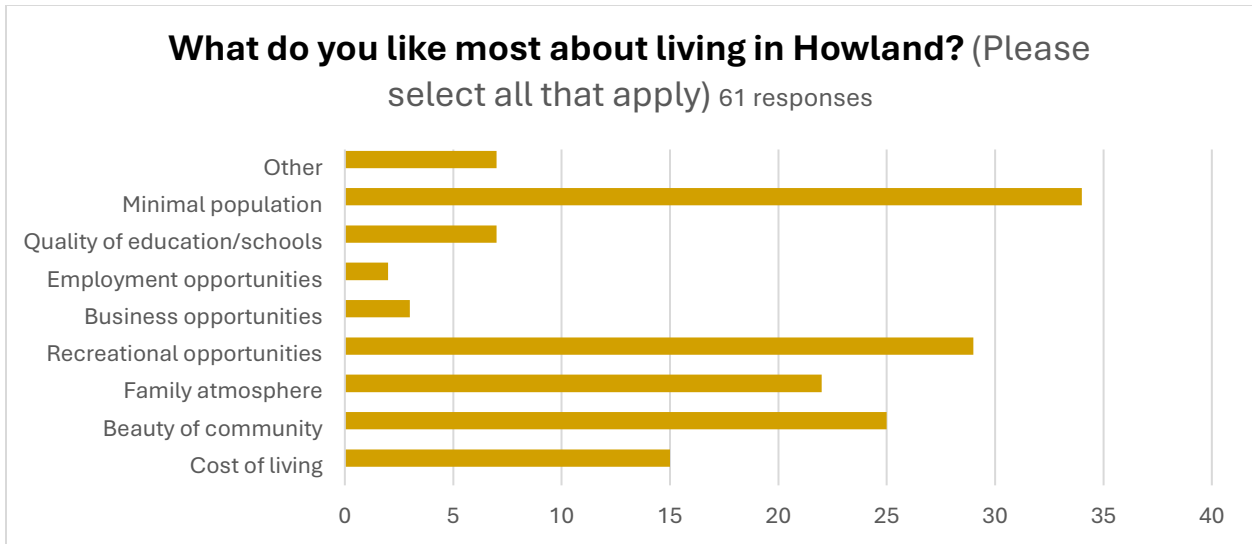
68 responses



Which of the following types of commercial development would you like to see more of in Howland?  
(Please select all that apply)

68 responses





**Recreation**



**Would you like to see other recreational opportunities provided? If yes, please list.**

13 responses

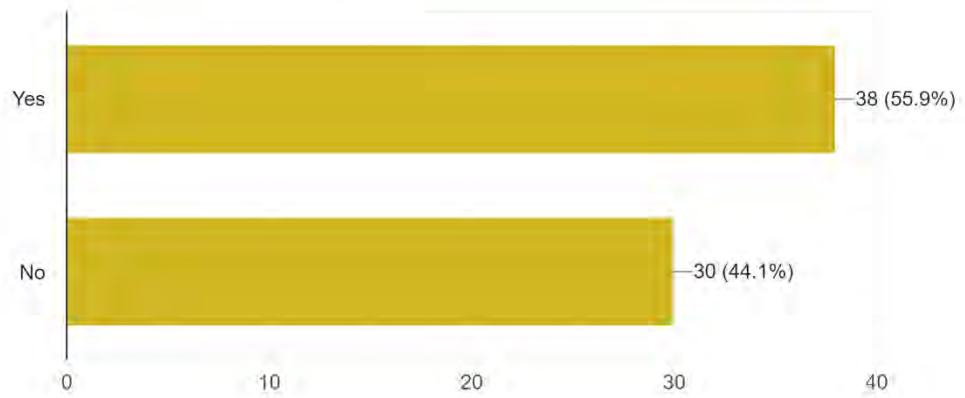
Splash pad for kids  
 Cross country skiing  
 Dog park for 4 leg family members  
 Basketball court, tennis court, year round ice arena, theater, bowling/pool hall, go cart tracks, amphitheater  
 Bandstand events at the park  
 event space  
 Gym and Shooting range.  
 More walking trails, along the river would be nice eventually. A bigger rec department for kids sports, more communication about the current rec opportunities. More town gatherings at the park, more interesting and versatile celebrations and events. More culture.  
 Senior citizens have nothing to do  
 Indoor year round multi use sports arena. Hockey, basketball, etc. Public indoor pool.  
 area to rent canoes or kayaks or just an area to push to canoe in and pull back maybe little booth to bring your catches in and get fileted at a small fee. Possible yearly event fair - Meet your Neighbors and Friends  
 Dog park  
 More benches strategically placed thru town for walking. More group activities. More organized communication from officials, not negative gossip from disgruntled residents.



### Public Facilities and Resources

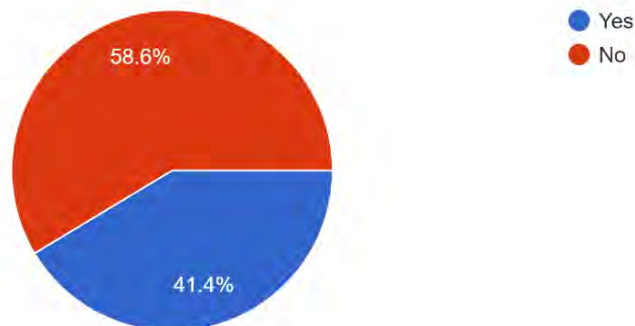
Are you satisfied with current public services provided?

68 responses



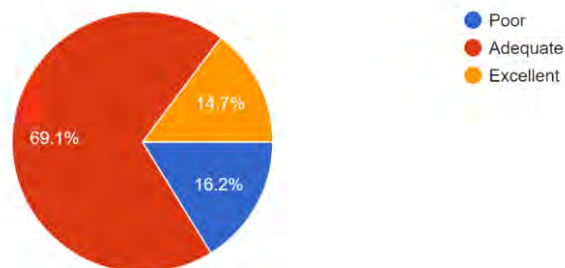
Are there any additional services you would like to see provided?

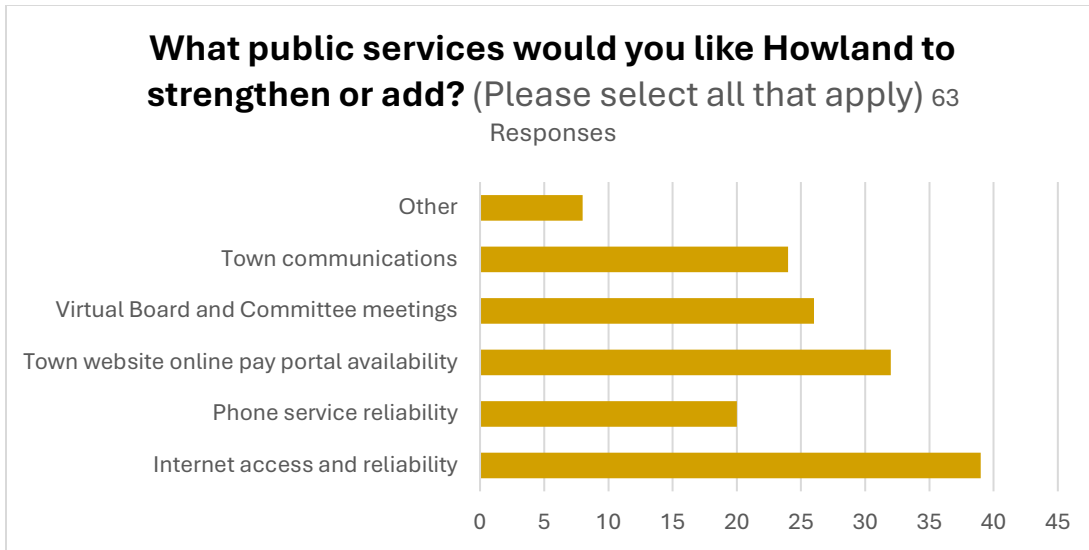
58 responses



What word would best describe the reliability of your cell phone coverage?

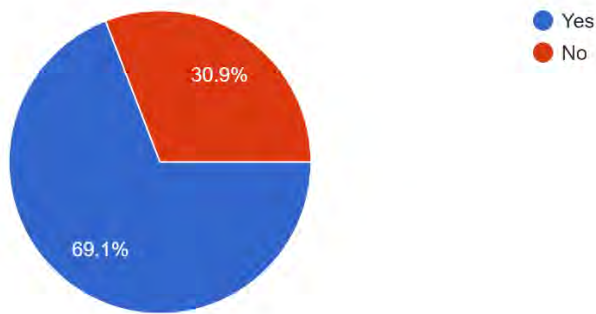
68 responses

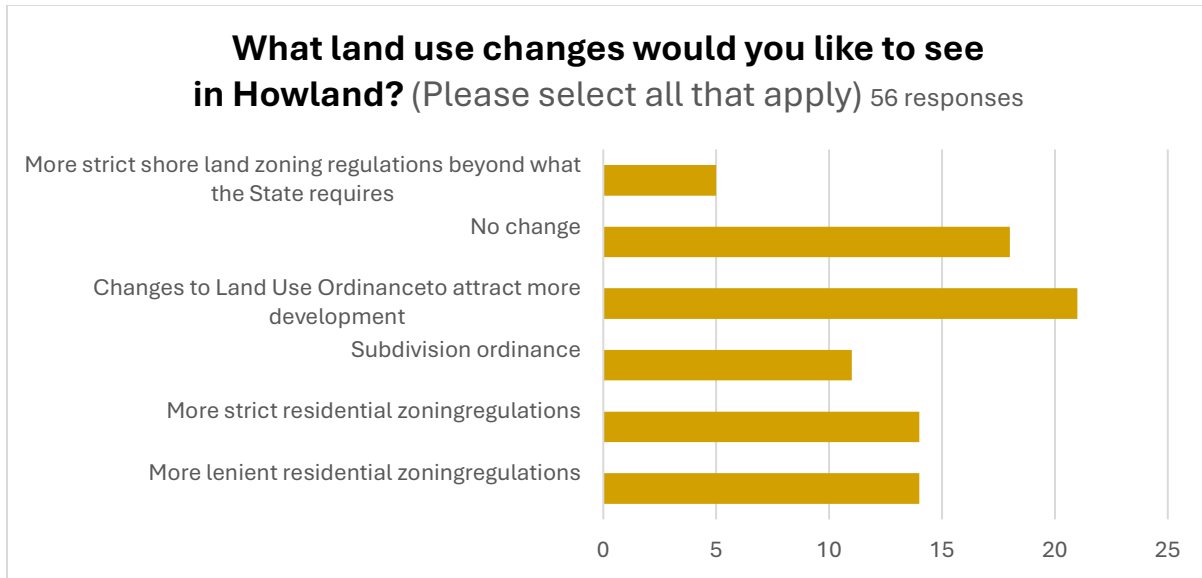




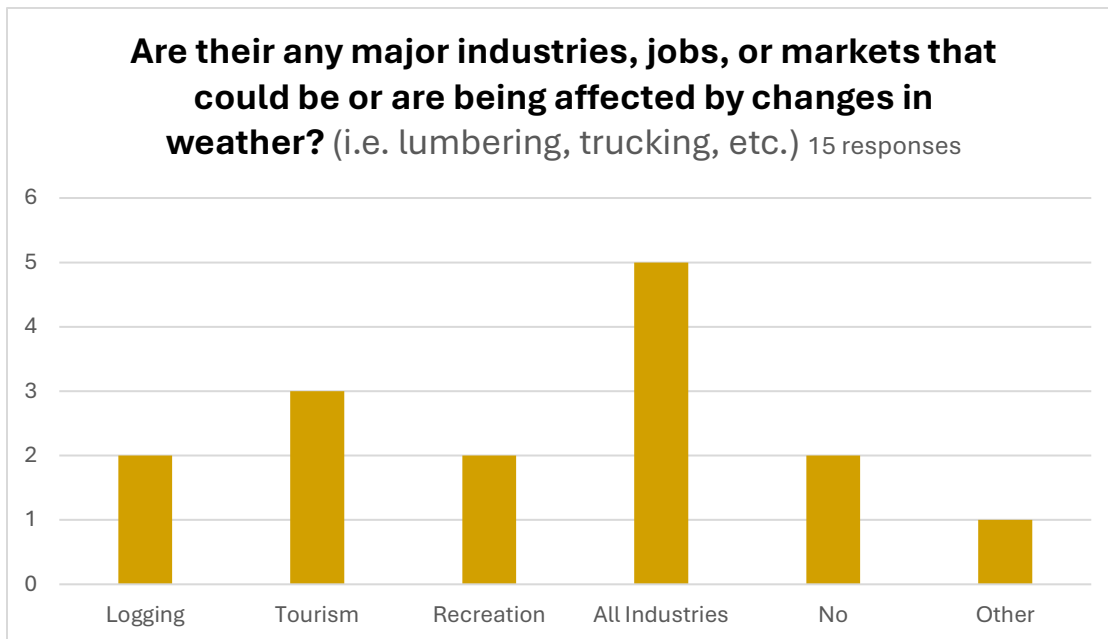
### Land Use

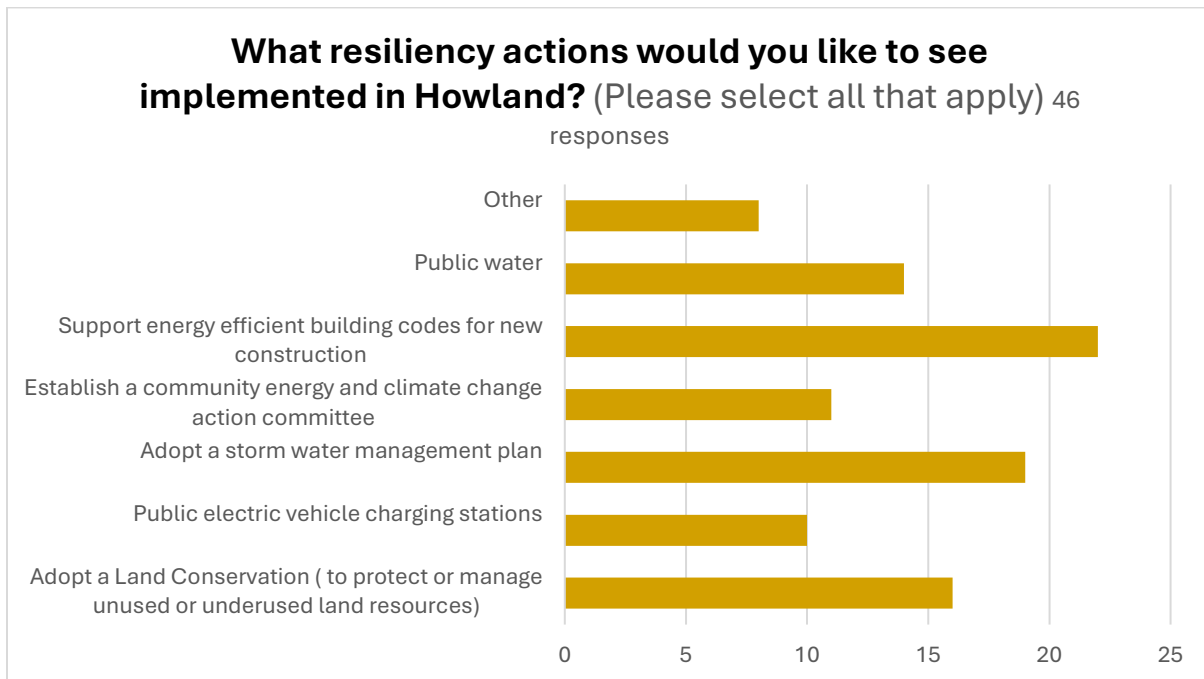
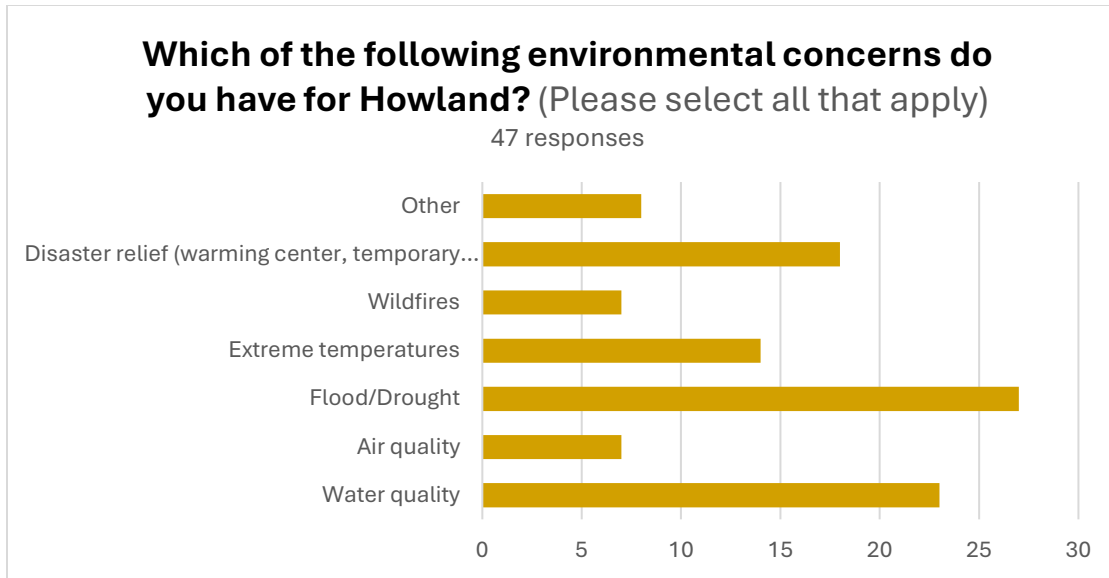
Are you satisfied with Howland's current Land Use policies/Zoning ordinance?  
68 responses





### Resiliency

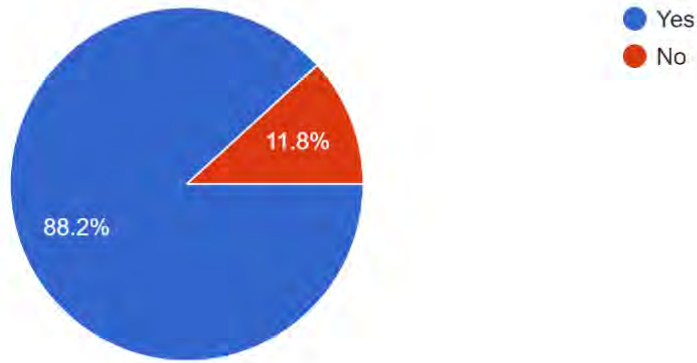




### Regional Coordination

Would you be willing to work with neighboring towns to share resources?

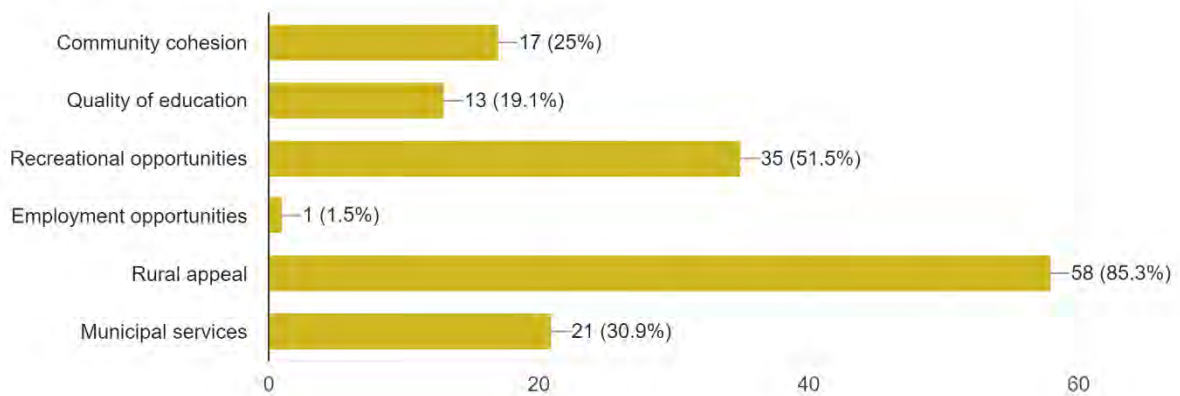
68 responses



### Visioning

What strengths do you believe Howland to have? (Please check all that apply)

68 responses

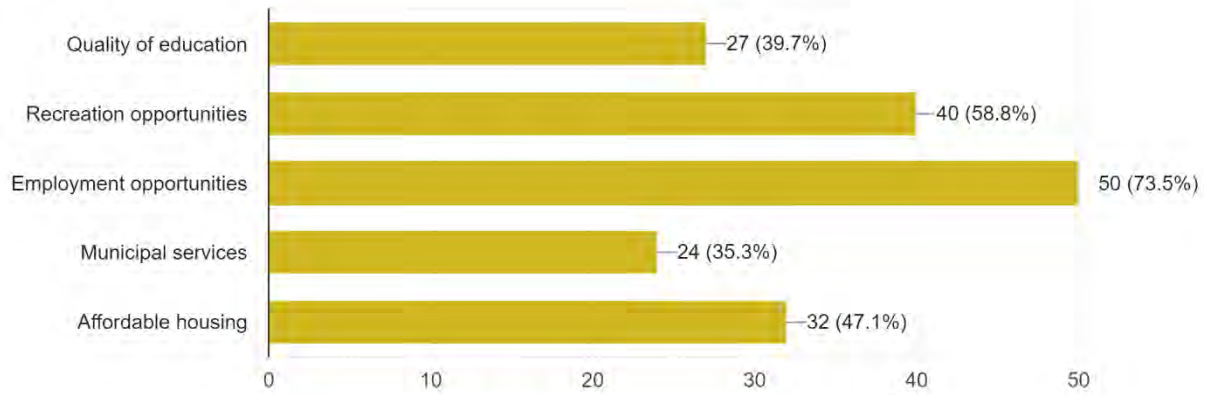




## Appendix

What areas would you would like to see improved in Howland. (Please check all that apply)

68 responses





## ***Closing Sentiment***

The residents of the Town of Howland take immense pride in their community spirit, a defining characteristic that has shaped the town’s identity for generations. While this Comprehensive Plan thoroughly captures Howland’s past, present, and future development efforts, it is the people—their values, resilience, and neighborly kindness—who truly breathe life into the town. To many, this sense of community is the soul of Howland, a quality that transcends the boundaries of maps and policies.

Howland’s residents are bound by a shared determination to support one another, a trait that resonates deeply in times of both celebration and challenge. Like the lyrics from “Iowa Stubborn” in *The Music Man*, Howland embodies a unique blend of perseverance and heart. This song celebrates the grit and unyielding nature of small-town America—qualities that are undeniably present in Howland. Here, the spirit of collaboration and mutual care prevails, ensuring that no resident feels alone or unsupported.

This strong community spirit is evident in countless ways. When a family faces hardship, neighbors rally together to provide meals, donations, or simply a shoulder to lean on. When a town project requires volunteers, residents step forward without hesitation, recognizing the value of contributing their time and skills for the collective good. Annual events and local traditions bring people together, fostering bonds that extend beyond day-to-day interactions. These connections create a network of support and camaraderie that strengthens the fabric of Howland.

Generations of families have called Howland home, and with each passing year, the community’s values are passed down, creating a shared history that residents cherish. This is a place where stories are exchanged at the 95’er and the Handy Stop, where children grow up feeling the safety of an entire town looking out for them, where a well-met hello can make someone’s day, and where new residents are welcomed with open arms and a helping hand (despite gruff nature). The new community center stands as a testament to these connections, making the village center a true place of gathering.

In Howland, progress is not measured solely by infrastructure improvements or economic growth. True progress lies in the ability to preserve and nurture the essence of what makes Howland special: its people. This Comprehensive Plan serves not only as a guide for future development but as a testament to the spirit that drives the town forward—a spirit that reflects pride, determination, and an unwavering commitment to community.

As Howland looks to the future, it is this collective heart and soul that will ensure the town’s success. Residents understand that challenges arise, but with their enduring sense of unity, there is no obstacle too great to overcome. Howland’s strength lies in its people, and as long as the community stands together, the town’s legacy will remain vibrant and strong for generations to come.

## Appendix

The story of Howland is not just one of place; it is a story of people—their kindness, resilience, and pride. This Comprehensive Plan, while focusing on land use, ordinances, and development, also serves as a reflection of the values that bind Howland’s residents. It is a love letter to the town and to the people who make it extraordinary. With this in mind, the future of Howland is bright, guided by the enduring spirit of a community that cares deeply for one another and the place they call home.