# Background Report

February 9, 2021



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This Background Report was completed by UPLAND Planning + Design Studio, in association with Wendy Shearer for the Town of Mahone Bay.

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### Contents

Introduction	
The Environment	04
Demographics	
Infrastructure and Services	
Housing	28
The Economy	
Land Use	
Heritage Preservation	
References	

**ABB** 

03 Introduction

The Town of Mahone Bay is currently undertaking a review and update of its Municipal Planning Strategy and Land Use Bylaw, a project that has been called "Plan Mahone Bay." The Municipal Planning Strategy and Land Use Bylaw are the primary land use planning documents that determine how our communities will grow, develop, and function.

Land use planning influences how we use the land within our communities, how we invest in infrastructure, and it influences the types and locations of buildings that are developed. Mahone Bay's existing Municipal Planning Strategy and Land Use Bylaw were adopted in 2008, and since that time, there have been many changes within the town and region.

In Nova Scotia, land use planning is legislated and required under the *Municipal Government Act*. This piece of legislation gives municipal councils the ability to control how land is used through the Municipal Planning Strategy and Land Use Bylaw.

The Municipal Planning Strategy acts as the blueprint for the community and provides high-level detail and direction for how the community will develop. Municipal Planning Strategies include the vision, goals, and policies that direct growth. The Land Use Bylaw takes the Municipal Planning Strategy and establishes specific, detailed rules that must be followed for development within the town.

The rules and regulations within the Land Use Bylaw must agree with and be supported by the policies within the Municipal Planning Strategy, which must also agree with and be supported by the content of the *Municipal Government Act*.

This Background Report lays the foundation for the updated Municipal Planning Strategy and Land Use Bylaw by exploring some of the fundamental characteristics of Mahone Bay. This report was developed through the analysis of existing plans, documents, and other sources of information, and includes analysis on the natural environment; socio-economic characteristics including demographics and population trends; housing supply; the local economy; and built form and heritage. The findings from this Background Report will play an integral role in the development of policies and regulations as they relate to growth and development in Mahone Bav.

## The Environment

05 Introduction

07 Environmental Profile

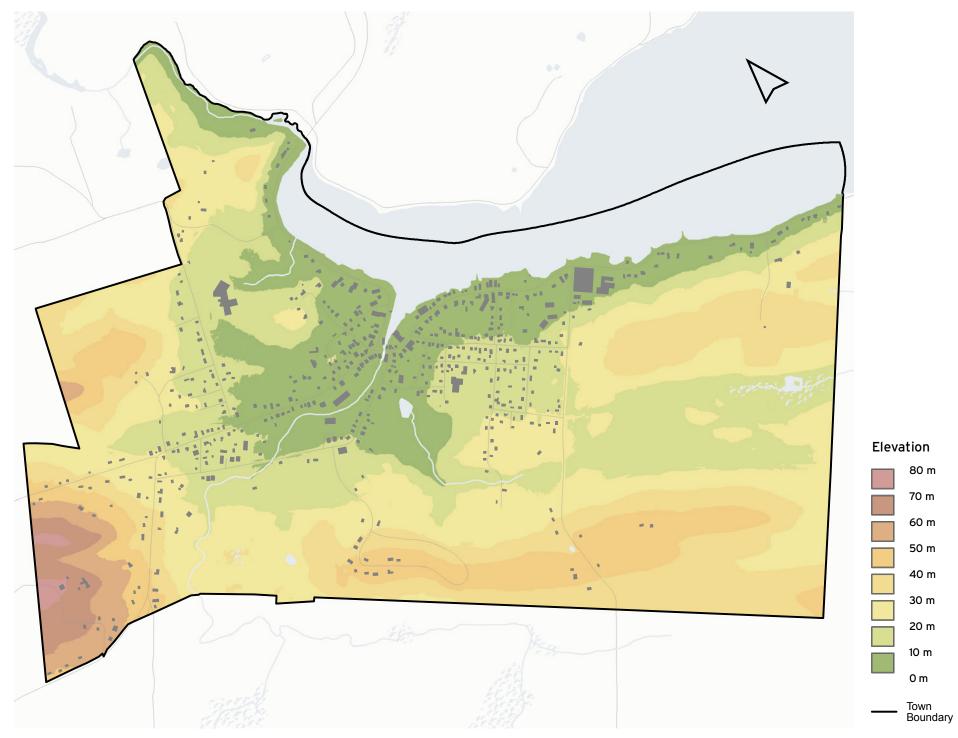
09 Climate Change and Sea Level Rise

Plan Mahone Bay Background Report

The Town of Mahone Bay is located on the northwest coast of Mahone Bay along Nova Scotia's South Shore. The bay on which the town is located and the physical environment surrounding the town has had a significant impact on how the community has developed. The availability of clean drinking water, the availability of raw materials and resources, and the ability to develop infrastructure and buildings are all influenced and impacted by the topography and geology of the town and surrounding areas.

The landscape and environment also play an important role in recreation and the local economy, attracting visitors from around the world to take in the region's beauty. Balancing development with the need to ensure a healthy environment must be considered as the Town plans ahead into the future.

The environment must also be considered for its potential impact on humans, buildings, and other infrastructure. Wetlands, slopes, and other areas within the town could potentially be hazardous to humans, and development should be only considered in special circumstances in these areas. Additionally, as the climate continues to change, the town may face more severe storms, higher sea levels, coastal erosion, and more frequent flooding. These impacts could be detrimental and the Town must look to adapt its infrastructure and development patterns to ensure the safety of the community. This section seeks to explore the most fundamental characteristics of the environment in Mahone Bay and how climate change could impact the town.



### **Environmental Profile**

Mahone Bay does not exist in isolation from its surrounding environment but makes up a small part of the local and regional ecosystems along the South Shore and within Nova Scotia. To appropriately manage and plan for an area, ecological landscape classifications systems are used to identify and map areas of ecological similarity. Ecological landscapes can be described and classified based on an area's soil type, vegetation cover, bedrock, climate, topography, among other factors. Ecological landscapes are applied at numerous scales, from the global or continental scale (ecozones), down to the site-specific scale (ecosite).

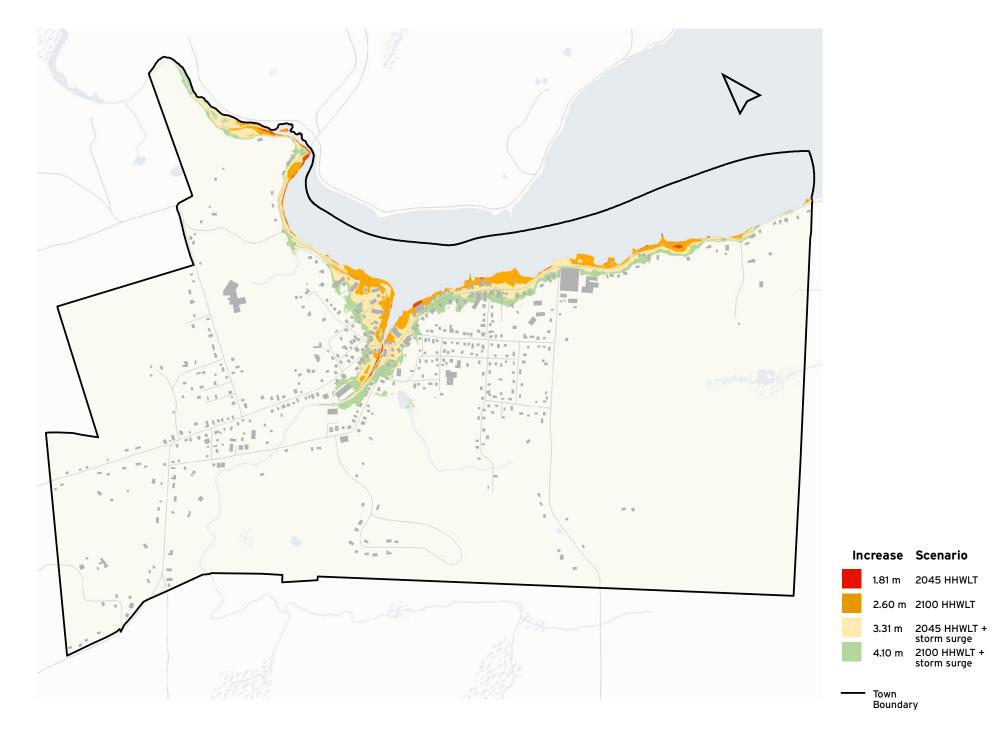
Mahone Bay is located within the Atlantic Maritime ecozone and within that the Western ecoregion. This ecoregion encompasses areas that extend from Yarmouth to the Halifax peninsula, making up 30.5% of the province.<sup>1</sup> This ecoregion is characterized by mild winters and warm summers and receives between 1300 and 1500 millimetres of precipitation annually.<sup>2</sup>

Within the Western ecoregion, Mahone Bay is located within the LaHave Drumlins ecodistrict. As the name suggests, this ecodistrict is characterized by drumlins, which are hilly deposits left by glaciers, and often resemble a teardrop shape from above. Glaciation has also influenced the types of soils that are predominant in the area, which are mostly well-draining, shallow, sandy loams, except for the soils developed on drumlins. These soils are often deeper and less stony that surrounding areas.<sup>3</sup>

Much of the LaHave Drumlins ecodistrict is forested (75.2%), which supported the early shipbuilding industry, and today supports the region's Christmas tree industry.<sup>4</sup>

In addition to the landscape, watercourses and water bodies have played an important role in the town's history. The most significant water body within the town is the Atlantic Ocean. The shoreline of the coast not only frames the extent of the town, but it also played a significant role in the early Mahone Bay economy. Shipbuilding, fishing, and shipping in addition to agriculture and forestry were all significant in the early days of Mahone Bay.<sup>5</sup> Today, the shoreline and the town's lasting built heritage attracts visitors from around the world. Other significant water features in the town include the Ernst Brook (also known as the Maggie-Maggie River) and the Mushamush River. Both of these watercourses flow through the town and empty into the Atlantic Ocean.

Although there any many low-lying areas and properties in Mahone Bay, especially along the coastline, the elevation within the town gradually increases as the distance from the coast increases, as seen on the map at left. The inland areas of the town are made up of rolling, forested, hills that provide significant benefits to the community including their use for recreation and leisure, in addition to the ecosystems services they provide more generally.



### **Climate Change and Sea Level Rise**

Planning for the future of Mahone Bay must take a proactive approach to climate change and the way the Town plans for future development, infrastructure and vital community services. Climate change will have many impacts on Atlantic Canada including rising sea levels, more frequent storm events, changes in storm surge, increased flooding, and shoreline erosion.<sup>6</sup> The historical development patterns in Mahone Bay have resulted in significant infrastructure including roads and services being located along the town's coastline and may require significant measures to protect property. Even today, during high tide events. Ernst Brook, which drains into the Atlantic Ocean, can back up with seawater and cause flooding along the town's streets and low-lying areas.<sup>7</sup>

As the earth's climate warmed through the 20<sup>th</sup> century-and continues to rise through the 21<sup>st</sup> century-global mean sea levels rose. It is predicted that they will continue to rise through the 21<sup>st</sup> century and beyond. Sea level rise can be attributed to two primary factors: as the earth's temperature has warmed, glaciers, ice sheets and ice caps have melted, adding significant amounts of water to the oceans. Earth's rising temperatures have

also resulted in the thermal expansion of the oceans (as water is warmed, it takes up a greater volume) which has also contributed to sea level rise.<sup>8</sup> In Atlantic Canada, sea level rise is exacerbated by crustal subsidence, a process in which the coastlines are gradually subsiding due to the earth's surface rebounding from post-glacial conditions.<sup>9</sup>

As sea levels rise, the impacts of storm surge may also increase. Storm surge can be described as the difference in sea level between the predicted astronomical tide and the actual tide.<sup>10</sup> The primary cause of storm surge is the strong winds that push water towards the shore.<sup>11</sup> As the wind pushes water to the shore, the level of the tide increases, creating a storm surge.

In 2016, CBCL completed the Mahone Harbour Flood Prevention and Shoreline Enhancement Plan which identified how the town may be impacted by sea level rise and identified potential sea level rise adaptation techniques. Using various modelling methods and sea level rise scenarios, the Plan established a series of extreme sea level scenarios that account for sea level rise and storm surge events for various locations around the town. The Plan recommended the minimum elevation for waterfront structures be between 2.8 metres and 3.6 metres above sea level (CGVD28), depending on the building's projected lifespan.

Relative to 2015 sea levels, the Plan found sea levels may rise 0.29 metres by the year 2045 and 1.08 metres by the year 2100.<sup>12</sup> The map at left depicts the projected sea level rise for the town, which has been added to the highest astronomical tide possible for the town (the HHWLT). Thus, the projected 2045 and 2100 extreme sea levels are 1.81 metres and 2.60 metres, respectively. Using a principle of precautionary planning, a 1.5 metre storm surge-the storm surge produced by Hurricane Juan in 2003 in Halifax-was added to the 2045 and 2100 extreme sea levels for a worst case scenario.

In addition to sea level rise, other impacts of climate change the town and region may experience include higher rates of inland flooding as precipitation rates increase; higher incidents of hot days over 30 degrees, which could result in drought; and impacts on plant and animal species including potential invasive species.<sup>13</sup>

## Demographics

11Introduction13Population15Age Profile

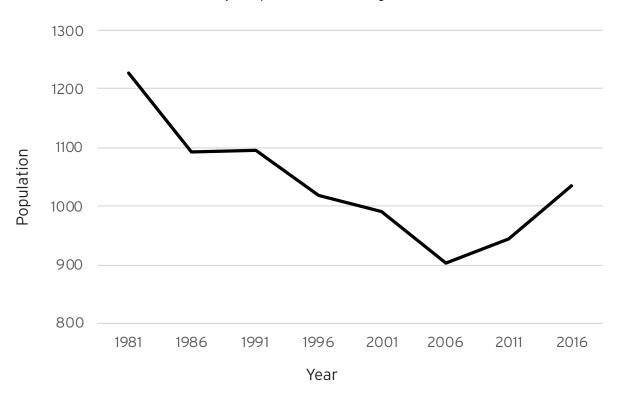
While communities are often considered as the sum of their parts, it is important to take a deeper look into who actually lives in a community and how demographics have shifted as social, political and economic changes have occurred.

Each one of the 1.036 residents of Mahone Bay has different needs, and this influences many different aspects of the community. The demand for housing and housing options, infrastructure needs, and the service and commercial needs of residents are all influenced by who lives in the town. These influences enable land use planning to play a role in how the population may change in the future. The ability to develop housing or a business and the availability of services and infrastructure can be regulated through land use planning and can influence who may choose to live or establish a business in Mahone Bay. This section explores historical population trends and the current demographic profile of the town to understand what the future needs of the community may be.

**1,036** Recorded population in Mahone Bay in 2016.

9.9%

Percent population growth between 2011-2016.



#### Mahone Bay Population Change - 1981 to 2016

Table 1. Mahone Bay Population Change 2001 - 2016			
Year	Mahone Bay Population	Growth Rate	
2016	1,036	9.9%	
2011	943	4.3%	
2006	904	-8.8%	
2001	991		

Table 2. Lunenburg County Population Change 2001 - 2016				
Year	Lunenburg County	Growth Rate		
2016	47,126	-0.4%		
2011	47,313	0.3%		
2006	47,150	-0.9%		
2001	47,591			

Population

According to the 2016 Statistics Canada

Census, 1,036 residents live in Mahone Bay, up

from 904 residents in 2006. This 15% growth

in population over the 10 years between 2006

and 2016 regained a significant portion of the

2006. In 1981, according to Statistics Canada,

population that was lost between 1981 and

the town's population stood at 1,228<sup>14</sup> but declined by 26% to 904 residents in 2006.<sup>15, 16</sup>

Unlike the majority of municipalities

province for any municipality.

in Nova Scotia, between 2011 and 2016 Mahone Bay was one of few municipalities

that experienced a growth in its recorded population. In fact, the 9.9% growth in population between 2011 and 2016 (Table 1)

was the highest percentage of growth in the

At the regional level, the decline in the

population of Lunenburg County, of which

Mahone Bay is a part, between 2011 and 2016

population change in Nova Scotia more broadly: declining birth rates, increasing death rates, and migration from the county to larger urban centres. However, with the lifestyle changes brought on by COVID-19, there is the potential for rural regions to retain, or even grow their populations as remote working has become increasingly necessary and possible.

Although Statistics Canada does not collect information related to permanent and seasonal residents, inferences can be made from the proportion of dwellings occupied by usual residents. Between 2006 and 2016, the proportion of dwellings occupied by usual residents increased from 85.5% to 87.7%. This increase would suggest more individuals who reside in Mahone Bay live in the town year-round.<sup>17, 18</sup>

In addition to population data, Statistics Canada collects information related to changes in residency. The majority of residents of Mahone Bay who have moved within the last year, and within the last five years, have moved from within the town itself and from elsewhere in Nova Scotia (Table 3).<sup>19</sup> Finally, compared to Nova Scotia as a whole, Mahone Bay has a higher proportion of residents who are immigrants to Canada (16% in Mahone Bay compared to 6% within Nova Scotia), and a higher proportion of residents who are not Canadian citizens (8% in Mahone Bay compared to 3% within Nova Scotia).

	Table 3. Mahone Bay Mobility Status			
	As a proportion of total population	1 Year Ago	5 Years Ago	
	People who didn't move residences	91%	59%	
r,	People who moved residences	9%	41%	
	As a proportion people who moved residences	1 Year Ago	5 Years Ago	
	Moved from within Mahone Bay	35%	38%	
	Moved from elsewhere in Nova Scotia (excluding Mahone Bay)	53%	37%	
	Moved from elsewhere in Canada (excluding Nova Scotia)	12%	17%	
	Moved from outside of Canada	0%	7%	

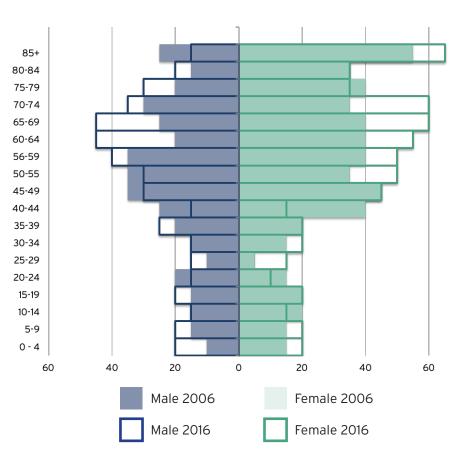
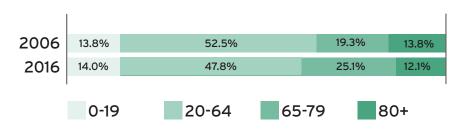




Table 4. Mahone Bay age profile change 2006 - 2016				
	2006	2016	Change	
Total	905	1,036	14.5%	
Young (0-19)	125	145	16.0%	
Working Age (20- 64)	475	495	4.2%	
Retired (65-79)	175	260	48.6%	
Elderly (80+)	125	125	0.0	

#### Mahone Bay Population Age Profile - 2006 and 2016



80

Mahone Bay Population Pyramid - 2006 and 2016

### Age Profile

Since 2006, Mahone Bay's population has aged. In 2006 the median age of residents was 54.5 years but increased to 57.7 years in 2016. Over this 10-year period, the proportion of residents between the ages of 65 and 79 grew by nearly 50% from 175 individuals in 2006 to 260 in 2016 (Table 4). Despite this increase, the number of residents 80 years of age and older remained the same between 2006 and 2016. <sup>20, 21</sup>

There are significant implications for the town and the community as the population ages. One of these implications is the changing housing preference for people living in Mahone Bay. As an individual ages, they may look to move, downsize, or swap ownership for the rental market. Additionally, factors such as proximity to healthcare and services also play a more important role in where someone chooses to live. As the Town looks towards its future, it may need to prioritize enabling a wide variety of housing options for current and future residents.

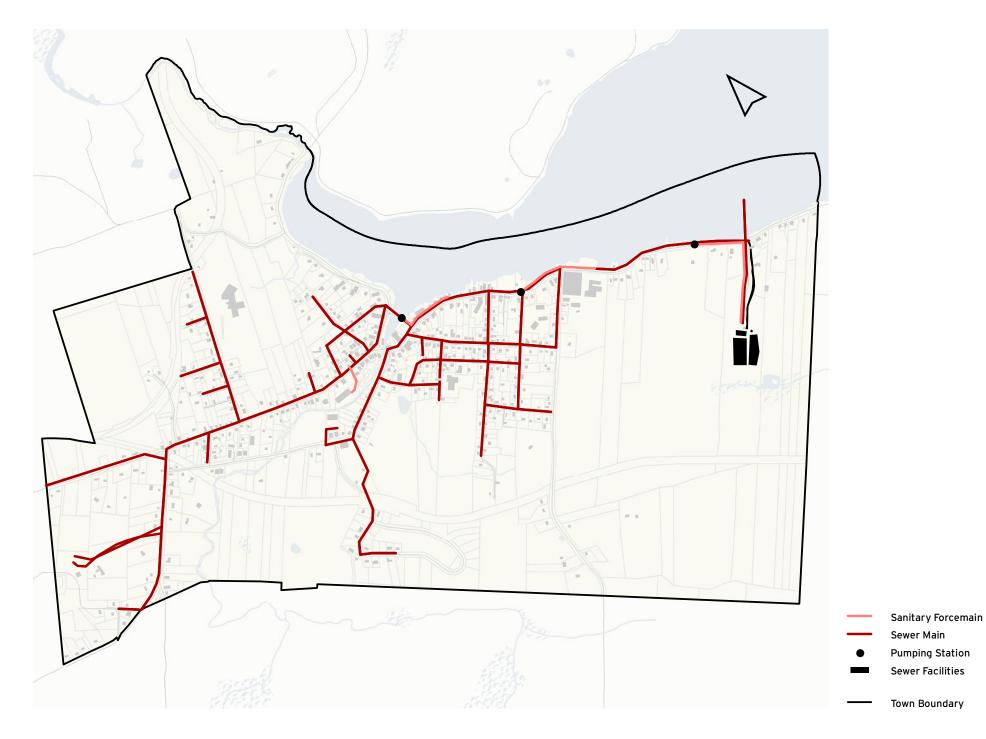
In addition to experiencing growth in retired (ages 65-79) individuals, the town experienced modest growth in youth and the working age population. The proportion of working age (20-64) residents slightly increased between 2006 and 2016 by 4.2%, while the proportion of youth (0-19) grew by 16.0%. Despite the growth in the proportion of youth population being more than three times that of the working age population, these cohorts grew by the same number of individuals (20) over the 10 years between 2006 and 2016.

### Infrastructure and Services

- 17 Introduction
- 19 Sanitary Sewer
- 21 Drinking Water
- 23 Electric Utility
- 25 Road Network and Sidewalks
- 27 Parks and Trails

Infrastructure is essential to keeping our communities functioning and is one of the primary services provided by municipal governments. Streets and sidewalks provide the conduits to travel within the town and region, water and sewer services ensure we have access to clean drinking water and keep our waterways clean, and many other infrastructure and services provided by municipal governments make our communities safe and enjoyable places to live and visit.

As one of the primary services provided by municipalities, the construction and maintenance of infrastructure is also one of the primary costs for any government. Roads, sidewalks, and above- and below-ground infrastructure all require regular upkeep. Where new infrastructure is needed, it must be planned in a way so that it does not burden the Town or taxpayers. This section explores the Town's current inventory of above- and below-ground infrastructure and services.



### **Sanitary Sewer**

Central wastewater (sanitary sewer) systems use a network of pipes and other infrastructure to move waste from residential and commercial properties to a treatment facility. To move untreated wastewater, sanitary sewer systems can use gravity mains, where wastewater flows via the force of gravity to the wastewater treatment facility, which is located at a relatively low elevation in the community. However, where gravity mains are not feasible due to topography, lift stations (pumps) may be required to move waste.

Mahone Bay's sanitary sewer system, which services approximately 497 properties,<sup>22</sup> consists of a network of over 10.5 kilometres of sewer mains and a total of three pumping stations, which pump effluent to the treatment facility from serviced properties. The Town's treatment facility, built in 1994, is located in the southern portion of the town and is accessed via Main Street.

The town's wastewater treatment facility, a wastewater lagoon, has a design flow capacity of 852 m<sup>3</sup> per day. In 2019 the average flow was 680 m<sup>3</sup> per day meaning the system is operating at approximately 80% capacity.<sup>23</sup>

While the majority of properties in Mahone Bay are connected to the sanitary sewer system, a 2018 study completed by ABLE Engineering and the Bluenose Coastal Action Foundation found there are approximately 30 properties that are not currently connected. These properties dispose of their waste through either on-site systems (e.g. septic beds) where the wastewater is treated on the property, or it is presumed some properties have straight pipe septic systems that discharge untreated sewage directly into the harbour.<sup>24</sup> As outlined in their report. changes to the Nova Scotia Environment Act in 2007 eliminate the concept of legal nonconformance<sup>i</sup> for straight pipe septic systems, meaning properties must comply with the regulations which prohibit the discharge of untreated sewage into the environment.<sup>25</sup>

Mahone Bay's sanitary sewer system is a combined system, meaning that in addition to transporting and treating wastewater, it also treats precipitation run-off that flows into storm drains. This type of wastewater system is not uncommon, but during high precipitation events, the treatment plant may overflow. Combined wastewater treatment systems generally increase the cost to operate a wastewater system as they are required to treat precipitation unnecessarily.

There are solutions to preventing precipitation from being treated in a wastewater treatment facility including the separation of wastewater and stormwater pipes, but this can be a costly fix for any municipality. Within the scope of a Municipal Planning Strategy and Land Use Bylaw, however, regulations to reduce stormwater run-off through lot coverage regulations and other mechanisms can be considered.

i Another common term for this is 'grandfathering'. The term 'grandfather clause' has its roots in racial discrimination during the late 19<sup>th</sup> century where a group of U.S. States established requirements, including literacy tests, poll taxes among other requirements, to vote. These requirements were designed to disenfranchise African Americans following the 15<sup>th</sup> Amendment (which granted African American men the right to vote). As these voting requirements also impacted white Americans, U.S. States passed laws that granted a person the right to vote if they were eligible to vote prior to the 15<sup>th</sup> Amendment, or if they were descendants of someone who could vote to ensure white Americans were still able to vote. (NPR, 2013)

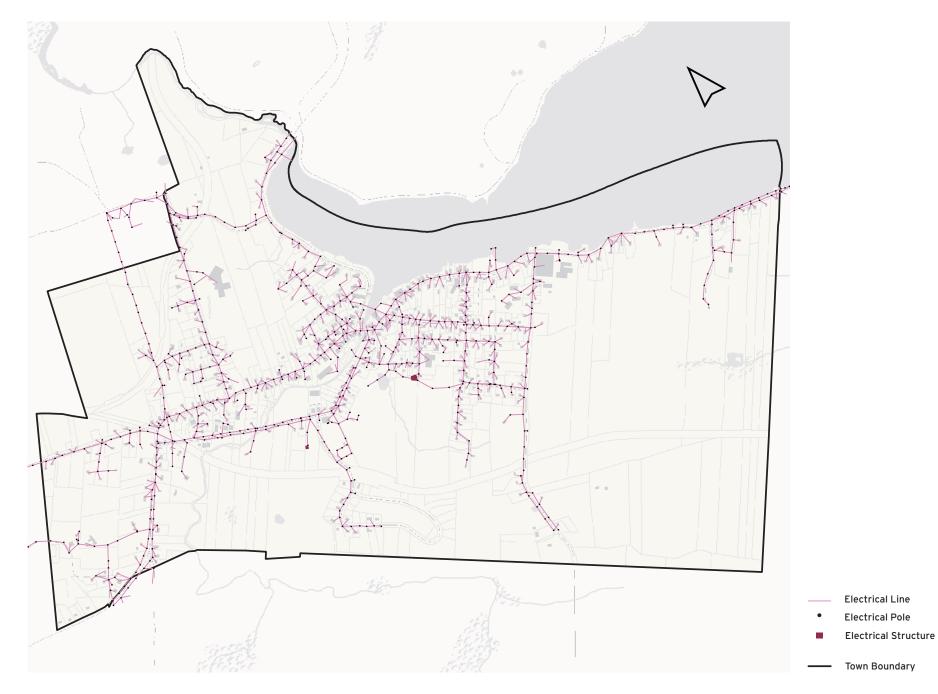


### **Drinking Water**

Clean drinking water is essential for any community to function effectively. Drinking water in Mahone Bay is derived from Oakland Lake, which is located outside of the town's boundary in the Municipality of the District of Lunenburg. Oakland Lake and its watershed are protected under the Oakland Lake Watershed Protected Water Area Regulations within the Nova Scotia *Environment Act*. These Regulations establish strict controls on the types of land use and other activities that can be conducted within the protected area to ensure Oakland Lake remains a viable drinking water source for Mahone Bay.

From Oakland Lake, water is pumped nearly three kilometres to the Town's Water Treatment Plant located at 70 Zwicker Lane, which is approximately 75 metres above sea level. To make the water safe for human consumption, the water is treated and stored in the water storage reservoir before it is transported via gravity to the town. Mahone Bay has over 14 kilometres of water mains, with the majority put in place during the 1940s. The Town's water utility services nearly 500 customers, adding approximately two new service connections each year.<sup>26</sup> Because of the age of the Town's drinking water system, a current problem that exists is that water is lost through leaks in the system, a result of depreciated water lines. Remediating this problem involves finding the leaks and replacing the water lines, an extremely costly task. While fixing these water lines is outside of the scope of a Municipal Planning Strategy and Land Use Bylaw review, the updated planning documents will look to support growth and development that efficiently uses existing services.

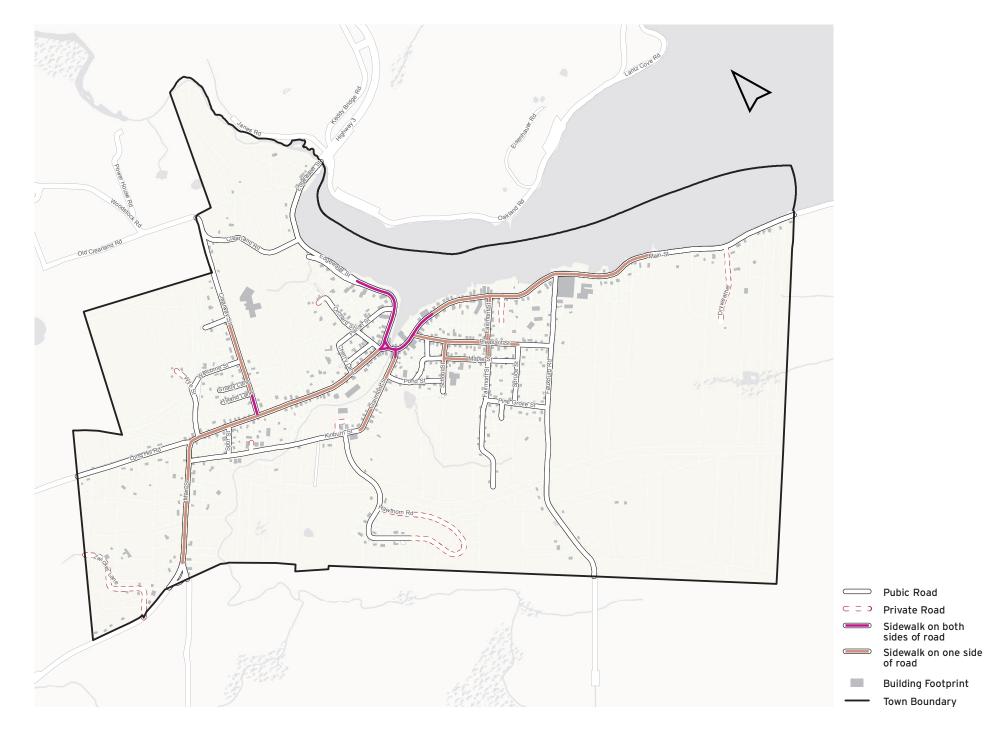
The Water Treatment Plant has a design capacity of treating 981,965 litres per day with a current approval to withdraw 710,000 litres per day from Oakland Lake. In 2019, the average amount of treated water from the plant distributed to the town was 611,674 litres per day, meaning the plant operates at approximately 86% of its capacity based on the approved amount of water it can withdraw from Oakland Lake. Nevertheless, a 2008 hydrological assessment study found that the treatment plant could service a population of approximately 1,600 in Mahone Bay.



### **Electric Utility**

The Town of Mahone Bay is one of six municipalities or communities in Nova Scotia that operates its electric utility. The Mahone Bay Electric Utility, which is wholly owned by the Town, distributes electricity purchased from Nova Scotia Power and generated by the Town to residents of Mahone Bay and to several properties outside of the town's boundary. The Mahone Bay Electric Utility shares resources with Riverport, another community with its own electric utility.

By owning its utility, the Town has greater flexibility to pursue renewable energy production to supplement electricity that is purchased from Nova Scotia Power. Currently, the Town is pursuing renewable energy production through the Alternative Resource Energy Authority (AREA), of which Mahone Bay is a partner with the Towns of Antigonish and Berwick. This partnership runs the Ellershouse Windfarm, a 10 turbine wind farm with a maximum output of 23.15 MegaWatts. This wind farm supplies approximately 40 percent of Mahone Bay's and its partners' electricity requirements.<sup>27</sup> Through the flexibility that is enabled by owning its electric utility, the Town and community can also pursue additional measures to generate it's own power, including through renewable sources. As part of the Municipal Planning Strategy and Land Use Bylaw review, potential tools and strategies to enable additional renewable energy production sources will be explored, such as small- and large-scale solar generation systems.



#### **Road Network and Sidewalks**

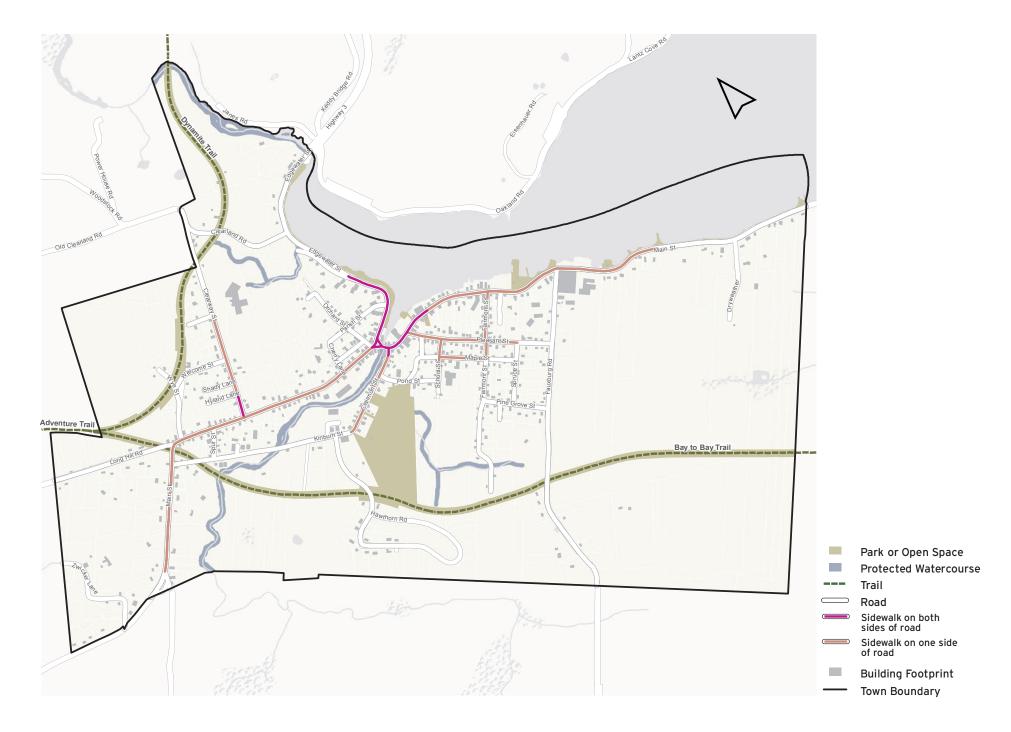
Mahone Bay is serviced by an extensive road network that connects people to services, amenities, employment, and the region of Lunenburg County and beyond. There are over 18 kilometres of local and private roads in the town.

Of the 18 kilometres of roads within Mahone Bay, over 16 kilometres are Town-owned. Two of these Town-owned streets, Edgewater Street and Main Street, intersect centrally within the town, helping to move automobile traffic to and throughout Mahone Bay. There is also a network of local streets, which are often directly connected to either Edgewater Street or Main Street, that help stitch the town's residential and commercial areas together.

In addition to Town-owned roads, there are approximately two kilometres of private roads in the town. In rural areas, private roads are often used to provide service to agricultural, forestry or recreational areas, areas that municipalities often deem unnecessary or undesirable for public roads. In the case of Mahone Bay, many of the private roads are used to service residential areas. Unlike public roads, private roads are maintained by the residents who live on the road, which can often lead to conflicts among land owners based on residents' desired level of service and road standard.

From a regional perspective, Highway 325, Highway 103, and Highway 3 provide access to the town. Highway 3 runs parallel to Highway 103, connecting many communities along the South Shore, including Bridgewater and Lunenburg, to one another. Although the portion of Highway 103 that provides access to Mahone Bay is not twinned, Provincial and Federal governments have undertaken steps to twin additional segments of the highway, and it is expected that by 2023, the highway will be twinned from Halifax to Hubbards (Exit 6). The twinning of the highway may result in increased development pressure for the region, including Mahone Bay, as the area is seen as a more viable place to live and work, especially for individuals commuting to and from Halifax for employment.

In addition to the road network, the town's core areas are served by a sidewalk network that stretches almost the entirety of Main Street and extends along Edgewater Street. Streets with sidewalks also extend into the town's residential areas including along sections of Fairmont and Pleasant streets. Sidewalks are essential pieces of infrastructure and provide residents and visitors with the opportunity to navigate the town's streets as a pedestrian to access many of its shops, restaurants and natural areas.



### Parks and Trails

There are numerous outdoor amenities for residents and visitors to enjoy within the town, including the town's parks and trails that make up part of Mahone Bay's open space network. One of the key assets in the town's open space network is Jubilee Park. Jubilee Park consists of several amenities including a natural adventure playground, old-growth forests and a network of trails that attracts people of all ages.

Two segments of the Rum Runners Trail (the Dynamite Trail and the Bay to Bay Trail) traverse and intersect within Mahone Bay. The Dynamite Trail, which connects Martin's River to Mahone Bay connects with the Bay to Bay Trail, which connects Mahone Bay to the Town of Lunenburg. Where these two trails intersect is the beginning of the Adventure Trail that connects Mahone Bay to Bridgewater. There is also a trail along the waterfront that runs parallel to Edgewater Street, providing residents and visitors access to Mahone Harbour.

Four other significant pieces of the open space network include the playing fields at the Mahone Bay Centre and Bayview School and the two cemeteries within Mahone Bay. However, open space networks do not necessarily need to be 'natural'. The Michael O'Connor Memorial Bandstand is often a venue for musical concerts, performances, and a place to view the harbour and waterfront. Additionally, the Mahone Bay Pool and Mahone Bay Tennis Courts are vital assets to the community. Planning for the future of Mahone Bay must take into consideration how these assets can be preserved and enhanced for future generations.

29 Introduction31 Households33 Housing Supply

Plan Mahone Bay Background Report

Housing

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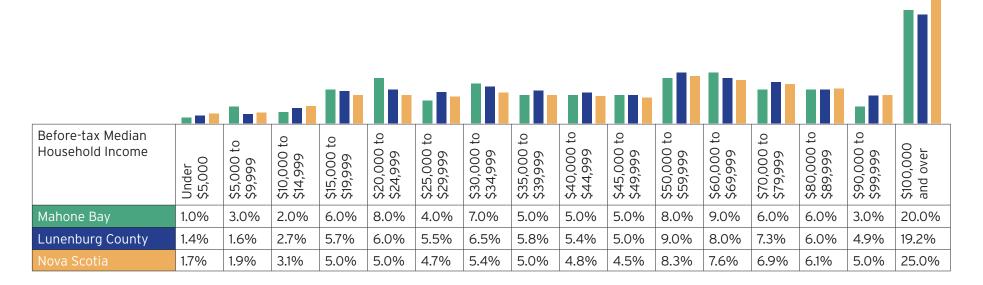
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Housing and shelter are one of our most primary needs as humans. No matter a person's life stage, they require safe, affordable, and appropriate housing. The housing needs for a young family may be different than a single parent or an elderly couple. As Mahone Bay prepares for a resilient future, housing options that reflect the local diversity and the changes in housing demand will be required. The community should be prepared to accommodate people of all ages and abilities, with a variety of incomes, and from a range of household sizes. This section looks to understand the current housing demand, supply, and affordability. Percent of houseohlds that earn less than \$30,000 per year.

Average household size in Mahone Bay

### \$53,035

Median housesehold income in Mahone Bay.



Plan Mahone Bay Background Report

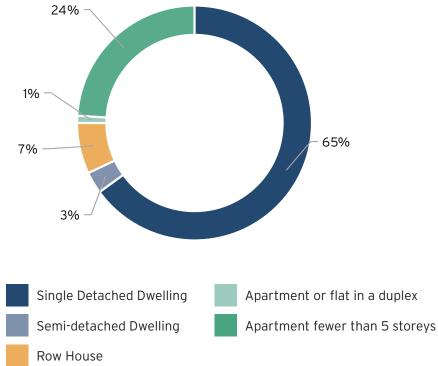
### Households

In Mahone Bay, the average household size, according to the 2016 Statistics Canada Census, is just shy of two people per household (1.9). The average household size in Mahone Bay is smaller, on average, compared to both Lunenburg County and the Province as a whole, where the average is 2.2 and 2.3 persons per household, respectively. <sup>28</sup> Since 2006, the average household size in Mahone Bay has decreased from 2.0 persons per household.<sup>29</sup>

Shrinking household sizes are not unique to Mahone Bay as trends nationally have pointed to smaller households. Research has found that more adults are living alone,<sup>30</sup> families are having fewer children,<sup>31</sup> divorce rates are increasing,<sup>32</sup> and like what is happening in Mahone Bay, the population is ageing. These factors, among others, have implications for the types and styles of housing that fit the lifestyle of people within the town and what they are able to afford. In Mahone Bay, incomes are relatively similar to those across the region (Lunenburg County) but are notably lower than those across the province. The median before-tax household income in Mahone Bay is \$53,035 a year, compared to \$54,833 in Lunenburg County and \$60,746 in the province.<sup>33</sup>

At the local level, there is a substantial variety in the median before-tax income for individual households in Mahone Bay. While 24% of households within Mahone Bay earn less than \$30,000 before-tax annually, nearly 20% of households earn more than \$100,000 beforetax annually.<sup>34</sup> The ranges in income reflect a need to have a variety of housing options that can accommodate current and future residents in the community.

Statistics Canada also has metrics that measure the level of residents within lowincome categories. Generally, in Mahone Bay, there is a greater prevalence of residents within the low-income measure than within Lunenburg County and Nova Scotia. Specifically, the prevalence of low-income is greater for Mahone Bay residents aged 0-17 years old and residents 18-64 years old compared to Lunenburg County and Nova Scotia. However, the prevalence of low income for Mahone Bay residents aged 65 years of age and older is lower than within Lunenburg County and is comparable to the province.<sup>35</sup>



Occupied Private Dwelling Types - 2016

### 65%

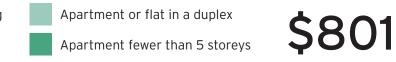
Mahone Bay's housing supply that is single-detatched dwellings.

\$259,412

Median value of dwellings in Mahone Bay.

\$934

Median monthly shelter costs for owned dwellings.



Median monthly shelter costs for rented dwellings.

### Housing Supply

Based on the 2016 Statistics Canada Census, single-detached dwellings are the most common housing type in Mahone Bay, accounting for 65% of the total housing supply. Apartments that are fewer than five storeys are the second most common housing type, making up an additional 24% of housing units in the town – a proportion that was 10% higher than the total share of apartments in all of Nova Scotia. Row houses, semi-detached dwellings, and apartments or flats in duplexes make up the remaining 11% of the housing stock in the town.<sup>36</sup>

Over the past 60 years in Mahone Bay, residential development has occurred in waves. More than half (55%) of the occupied private dwellings in Mahone Bay were constructed before 1960. This was followed by a wave of housing construction through the 60s and 70s when another 19% of the current housing stock was built. Another boom occurred between 2006 and 2010 when an additional 14% of the current stock was built.<sup>37</sup>

An examination of housing tenures revealed that 63% of the town's housing stock is owner-occupied and 37% are rental units, compared to the province where 69% of units are owner-occupied and 31% are rental units. Monthly shelter costs within Mahone Bay vary depending on the type of tenure a resident is living in. For home-owners, the median monthly shelter cost is \$934 while the median monthly shelter cost for renters is \$801. <sup>38</sup>

In addition to housing supply, Statistics Canada has metrics that measure the condition of housing and the extent to which the town's housing stock requires repairs. According to the 2016 Statistics Canada Census, a large majority of occupied private dwellings in the Town of Mahone Bay are in good condition, requiring only regular maintenance or minor repairs. Conversely, 6.9% of private dwellings required major repair, which compared favourably to Lunenburg County as a whole, where 8.8% of occupied private dwellings were in need of major repairs. <sup>39</sup>

Despite having a housing stock that is in relatively good condition, a large portion of the town's households spends more than 30% of their income on housing. The Canadian Housing and Mortgage Corporation (CMHC) and Statistics Canada use this threshold to identify households that may be experiencing housing affordability issues. Approximately 34% of households in Mahone Bay spend more than 30% of their income on housing. These rates are considerably lower in Lunenburg County and across the province, which had rates of 18.7% and 21.6%, respectively.

## The Economy

35 Introduction37 Employment39 Commuting

Plan Mahone Bay Background Report

# Introduction

A strong local economy is essential in providing meaningful employment opportunities and in turn, it is integral in supporting a high quality of life for residents. While land use planning cannot directly result in economic development, it can support a strong local economy by ensuring an adequate supply of land to support economic initiatives.

This section explores the economic characteristics of Mahone Bay. It reports on the town's labour force and employment rates. This section also outlines travel patterns for employment-related trips.

NAICS Code Classification for Mahone Bay and Lunenburg County (2016)				
	Mahone Bay		Lunenburg County	
Total Labour Force Aged 15+		435		22,610
Agriculture; forestry; fishing and hunting	0.0%		5.4%	
Mining; quarrying; and oil and gas extraction	0.0%		0.5%	1
Utilities	0.0%		0.5%	
Construction	10.3%		8.1%	
Manufacturing	9.2%		13.8%	
Wholesale trade	3.4%		2.1%	
Retail Trade	14.9%		12.7%	
Transportation and warehousing	0.0%		2.5%	
Information and cultural industries	3.4%		1.7%	
Finance and insurance	3.4%		2.2%	
Real estate and rental and leasing	2.3%		1.2%	
Professional; scientific and technical services	11.5%		4.3%	
Management of companies and enterprises	0.0%		0.0%	
Administrative and support; waste management and remediation services	5.7%		5.0%	
Educational services	4.6%		6.1%	
Health care and social assistance	16.1%		13.4%	
Arts; entertainment and recreation	0.0%		2.1%	
Accommodation and food services	6.9%		6.8%	
Other services (except public administration)	4.6%		4.9%	
Public administration	3.4%		4.9%	

# Employment

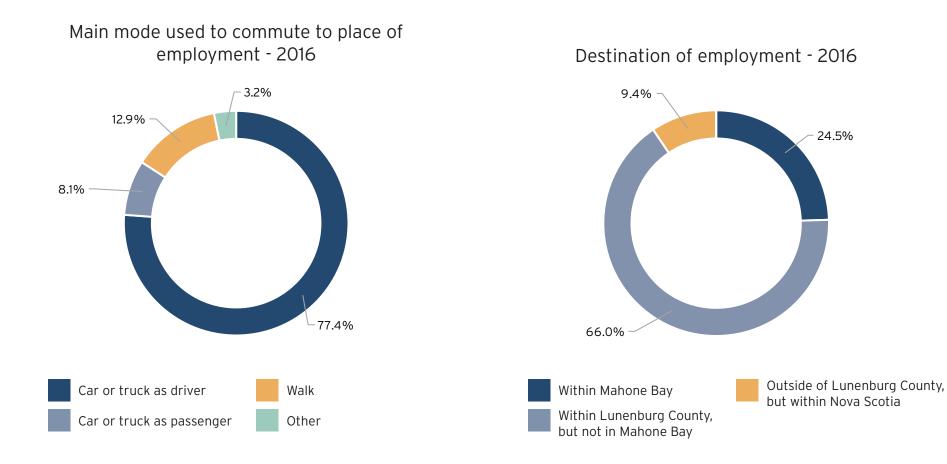
The growth rate of the town's labour force (residents of Mahone Bay over the age of 15 who are either employed or unemployed) exceeded the growth rate of the town's overall population change between 2006 and 2016. The labour force in Mahone Bay grew from 370 individuals in 2006 to 435 individuals in 2016, a growth of over 17%, while the population grew by nearly 15% over this same time period. Conversely, there are 430 individuals not in the labour force (individuals who were unwilling or unable to offer labour services), up from 380 in 2006.<sup>40, 41</sup>

The number of residents who are employed in Mahone Bay increased from 345 to 385 between 2006 and 2016, while the number of residents who are unemployed increased from 25 to 50 over this same 10-year period.<sup>42 43</sup> This information, and the information above, would suggest that the increase in employed persons can partially be attributed to the town's growth in its working age (20-64) population.

Using the North American Industry Classification System (NAICS), which establishes a categorization system for employment sectors, the major employment sectors for Mahone Bay residents can be analyzed (Table 5). The health care and social assistance sector accounts for 16.1% of the employed labour force in Mahone Bay, making it the largest employment sector in the town. The South Shore Regional Hospital in Bridgewater and the Fishermen's Memorial Hospital in Lunenburg collectively employ approximately 1,062 people, potentially employing many town residents. The Mahone Bay Nursing Home is also a key employer in this economic sector.

The health and social assistance sector is followed by the retail trade sector, which accounts for a further 14.9% of the employed labour force in Mahone Bay. A further 6.9% of the labour force is employed within the accommodation and food services sector. These two sectors, which support Mahone Bay's tourism industry, employ over 20% of the town's labour force. However, these employment data are collected during the week of May 1 to May 7, meaning these data potentially under-represent individuals in these tourism-based sectors.

Compared with data from Lunenburg County, Mahone Bay residents are underrepresented in economic activities related to agriculture, forestry, fishing and hunting, transportation and warehousing, and manufacturing. However, this data does not capture individuals living outside of the town but who work within Mahone Bay's boundary. Many of the employers within the town, including RPS Composites, likely employ people living outside of the town's boundary.



# Commuting

According to the 2016 Statistics Canada Census, more than two-thirds (67.5%) of the employed labour force reported having a usual place of work, meaning their place of employment had a fixed address. A further 19.5% of the employed labour force reported that they worked from home and 11.5% reported having no fixed workplace address.<sup>44</sup>

The majority (66%) of employed Mahone Bay residents (with a usual place of work) commute to a municipality outside of the town's boundary but within Lunenburg County for employment. A further 9.4% of employed residents commute to a location outside of Lunenburg County for their employment–up from 6% in 2006. Conversely, the percentage of employed residents who commute to work within Mahone Bay decreased from 26% to 25% between 2006 and 2016. <sup>45,46</sup> This trend would suggest residents of the town are increasingly choosing to commute longer distances for their employment.

As nearly 75% of the town's employed residents travel outside of the town's boundary for work, it is unsurprising that over 77% of the town's labour force drive an automobile to work while 8.1% travel to work as a passenger in a private automobile. For Lunenburg County, those numbers are 87% and 6% respectively, indicating somewhat less dependence on the automobile within Mahone Bay as compared with the County as a whole.

While Statistics Canada did not report any individuals as usually travelling to work by either bicycle or public transportation, nearly 13% of the employed population walk to work most of the time. Compared to Lunenburg County as a whole, the percentage of people who walked to work in 2016 is nearly three times greater in Mahone Bay.

# Land Use

Introduction 41 43

Land Use

Discriminatory Practices in Land Use Planning 44

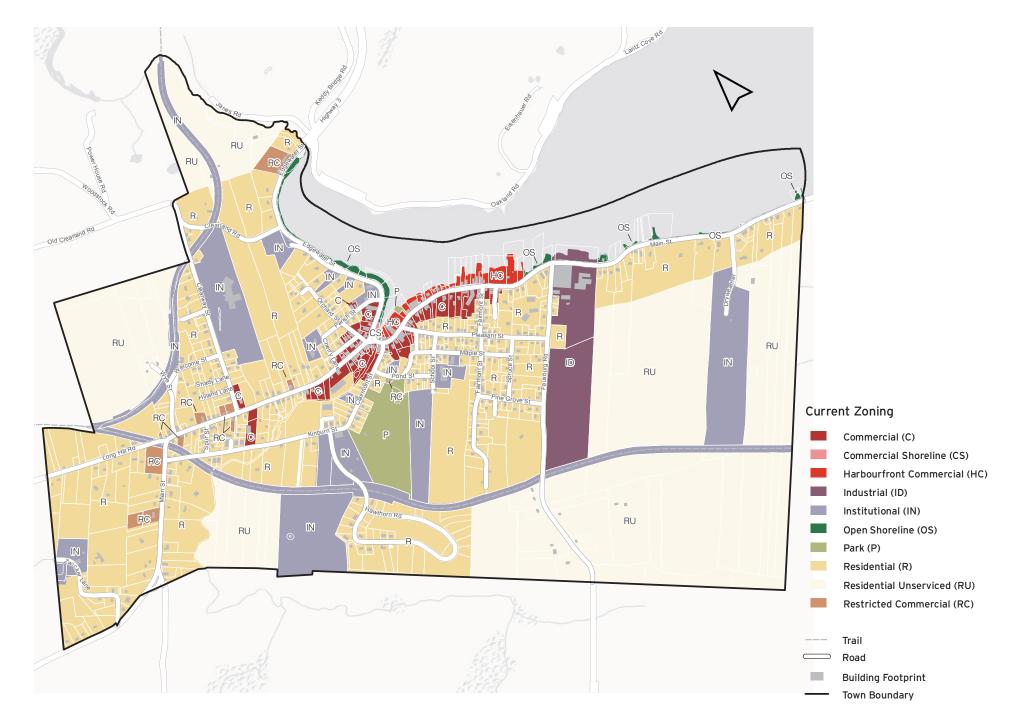
45 **Regional Planning** 

# Introduction

As "creatures of the Province" municipalities are limited in their scope of what and where they can regulate. Typically, municipal jurisdiction ends at the high-water mark along the coast; however, municipalities are enabled through legislation to control how land is used within their boundaries.

The policies and regulations within the Municipal Planning Strategy and Land Use Bylaw are the primary tools used to control how we use the land in our communities. These documents control what type of development can happen where and under what conditions. In addition to zoning, planning can utilize tools such as design guidelines and heritage conservation districts to shape a community.

This section analyzes the existing land use zones within Mahone Bay which will influence future land use zones and planning. This section also seeks to examine how land use planning has been used as a tool for discrimination.



# Land Use

The Town of Mahone Bay regulates a total of 3.87 square kilometres within the Land Use Bylaw.

The Town uses a series of land use zones to control how land is used and developed in Mahone Bay. Land use zones are one of the primary tools used within land use planning by regulating what types of development can happen where. For example, a land use zone may permit residential uses, like single dwellings, but may not permit industrial uses. Within the existing Land Use Bylaw, there are a total of 10 land use zones (Table 6).

Table 6. Land Use Zones and Total Area				
Zone	Hectares (h)			
Commercial	9.74			
Commercial Shoreline	0.19			
Harbourfront Commercial	3.36			
Industrial	113.73			
Institutional	53.32			
Open Shoreline	3.56			
Park	7.34			
Residential	156.11			
Residential Unserviced	136.47			
Restricted Commercial	3.57			

Under the existing Land Use Bylaw, development is considered through three permitting processes:

- As or Right development can proceed provided a property owner's plans meets all the requirements of the Land Use Bylaw and a permit is received.
- Site Plan Approval a proposed development must meet additional criteria and standards within the Land Use Bylaw, such as landscaping and design standards, and is subject to approval from the Development Officer.
- 3. Development Agreement a legal agreement between Town Council and a property owner. Development Agreements provide Council greater control over details of a proposed development and any mitigation measures that may be required as part of the development.

As Table 6 suggests, a large portion of the town's area is zoned for residential land uses. The Residential Zone permits a limited range of residential uses-single and double dwellings-and encompasses areas along the town's main streets and in the peripheral regions along the town's boundary. The Residential Unserviced Zone, which permits a greater range of uses, including commercial and industrial uses, is located in the outlying areas of Mahone Bay.

Commercial areas within the town are concentrated along the coast and Main Street and Edgewater street, although there has been recent commercial growth farther inland near Clearway Street. The four land use zones dedicated to commercial uses permit a range of commercial uses throughout Mahone Bay.

Industrially zoned land is exclusively located in the southern area of town along Fauxburg Road and is home to RPS Composites.

The Park Zone, which is applied to the Michael O'Connor Memorial Bandstand and Jubilee Park, limits development to park and open space uses. Conversely, the Open Shoreline Zone is applied to select areas along the waterfront to preserve the open space character. Finally, the Institutional Zone, which is applied to select areas around Mahone Bay, permits a range of cultural and civic uses including libraries, municipal services, parks, among other uses.

# **Discriminatory Practices in Land Use Planning**

Land use planning has a long history in Canada and Nova Scotia, and while the practice is promoted today as a tool that enables community development and prevents land use conflicts, land use planning's origins are largely based in discrimination and racism.<sup>47</sup> Even today, land use planning tools are used in ways that discriminate and perpetuate racism.

French and British expansionism and colonialism between the 17<sup>th</sup> and 19<sup>th</sup> centuries represent one of the first instances of land use practices being used to assert control over Indigenous peoples in Canada. Europeans asserted control by governing development practices, the adoption of street grids, and the fortification of towns against, and to subjugate, local Indigenous peoples.<sup>48</sup> These practices were conducted on the unceded land of Indigenous peoples and have reinforced a legacy of colonization that has continued throughout Canadian history.

During the 1950s and 1960s, planners assisted in a process called "urban renewal" which often involved the clearing of urban 'slums' from the landscape in order to promote redevelopment. These 'slums', although often the by-product of municipal disinvestment or neglect,<sup>49</sup> were home to living communities that had many positive characteristics that were stigmatized. One of the most prominent examples of the urban renewal movement in Nova Scotia was the displacement of Africville residents, an African-Nova Scotian community in Halifax, from their traditional lands.<sup>50</sup>

While land use planning has been used to discriminate against low-income and racialized communities, planning has also been used to protect wealthy groups and areas that are seen as more 'desirable'. Strict zoning regulations, especially those that protect residential land uses, or those that prohibit certain types of development can prevent people from living in a community. Often these types of regulations are written to protect areas that are predominantly 'single-family' dwellings.

Within Mahone Bay's existing Land Use Bylaw, mobile homes are prohibited as a land use. In many instances, mobile homes represent a viable form of housing development and can help increase the town's density and population. Other regulations in the Land Use Bylaw such as limiting residential development types, strict lot standards, and architectural controls can help reinforce barriers to development in Mahone Bay– barriers that traditionally impact low-income households.

The examples above, whether designed with discriminatory intent or not, actively prevent and exclude people from choosing Mahone Bay as a place to live. Any policies and regulations developed through the Plan Mahone Bay process must be examined through an equity lens to reduce and eliminate the real and perceived barriers to live in the town.

Land use regulations must also be developed to regulate the use of land and not the people on it. The Supreme Court of Canada has ruled on cases pertaining to planning matters including on restrictive covenants that prohibited the sale of land to a person of colour (*Noble and Wolf v. Alley, 1951*) and a case that distinguished between the use and users of land (*Bell v. Queen, 1979*). These cases, although few in number, provide important examples and guidance to ensure basic human rights are not infringed upon by land use regulations.

# **Regional Planning**

Recent amendments to the *Municipal Government Act* have established minimum planning standards that all municipalities across Nova Scotia must comply with. Although The Town of Mahone Bay has used land use planning for many years, not all municipalities in Nova Scotia currently do.

Mahone Bay is surrounded by the Municipality of the District of Lunenburg (MODL), so land use planning must also be considered at the inter-municipal and regional level. Currently, MODL lacks comprehensive planning, meaning that not all land within the municipality is controlled through zoning or other land use tools. There are seven areas in the municipality that are currently planned comprehensively, including Blockhouse, Indian Harbour and Prince's Inlet, three areas that abut Mahone Bay's boundary. However, there are areas northwest and southwest of Mahone Bay that do not use land use zoning. The Municipality of the District of Lunenburg is currently undertaking a review and update of its planning documents to ensure they comply with the changes in legislation which will result in land use planning and zoning being applied to the entirety of the municipality.

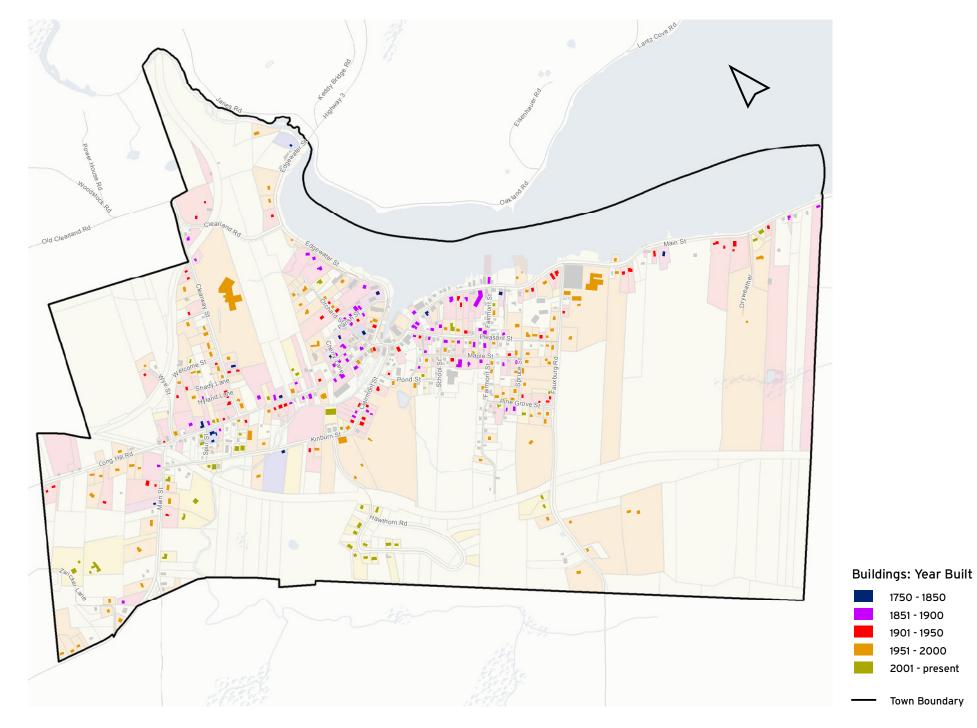
# Heritage Preservation

47 Introduction
49 Mahone Bay Historical Overview
52 Heritage Values Exhibited in Mahone Bay
53 Character Defining Elements

# Introduction

Mahone Bay has a unique story in its history of land stewardship, peace and friendship treaties between the Indigenous and European settlers, and in its built history. What is now the Town of Mahone Bay is within the traditional and unceded territory of the Mi'kmaq who continue to live here, and who have used the land and sea to harvest food. The later populations of French Acadians, followed by German protestants, also left a lasting legacy on the area, seen in its architecture, prior to the incorporation of Mahone Bay as a town in 1919.

This section will explore a historical overview of Mahone Bay before investigating some of the character-defining elements of the town and the heritage values that are exhibited in Mahone Bay.



## Mahone Bay Historical Overview

The Town of Mahone Bay has a long and significant history that is visible today in the varied collection of buildings and cultural landscape features and the oral histories that celebrate its cultural origins. Human activities in the area began more than thirteen thousand years ago and continue to today.

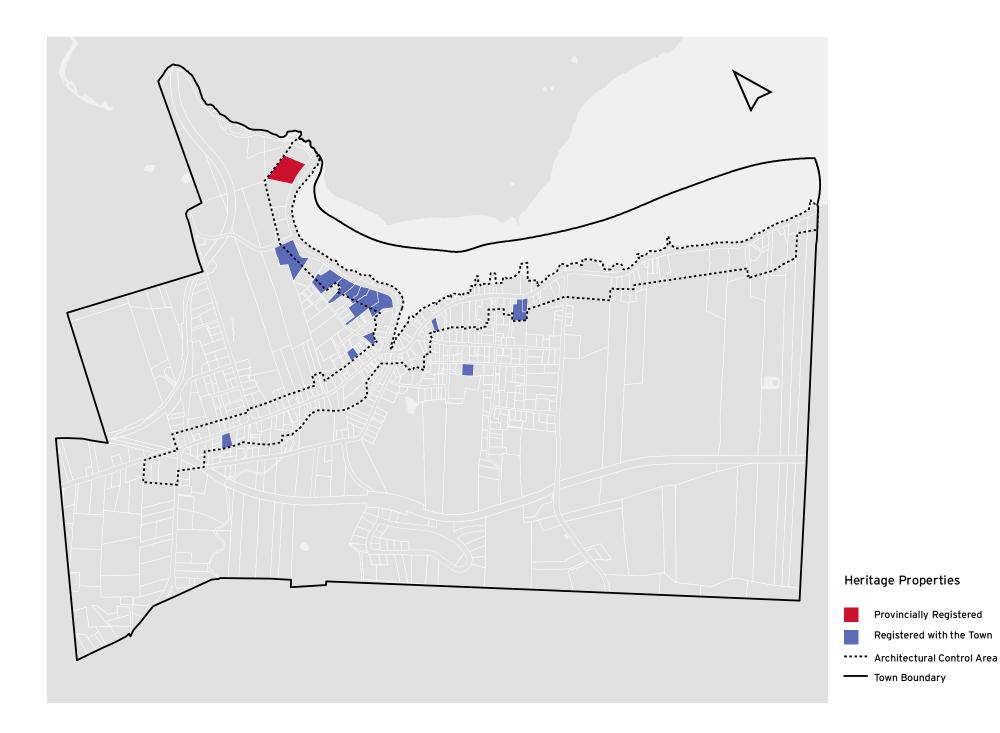
The setting of Mahone Bay has been integral to the continued evolution of the town. What is now the Town of Mahone Bay has two freshwater watercourses emptying into a sheltered bay that provided a safe harbour for fishing. The surrounding forests provided fuel, food and timber for settlement and industry. The topography of the area dictated the organic layout of the circulation network of roads within the settlement and connected the town with the neighbouring communities. The scenic quality of the setting continues to be a key component of the town's visual character. The town remains a human made construct integrated in a rich natural setting.

The town is within the traditional unceded territory of the Mi'kmaq who for centuries have lived here and harvested the bountiful food resources of the sea and forests in the area. Early settlement by non-Indigenous

peoples began with the Catholic French speaking Acadians who arrived after 1610. These early settlers farmed the land and traded with the Indigenous community. The British settlement policies, beginning after 1713, changed that pattern with the encouragement of Protestant German speaking settlers from central Europe. These new settlers who arrived by 1754 continued to farm and prosper with an early mill and expanded trade and commerce. Over the next centuries the town prospered and institutions of the school, the churches and cemetery were established. This legacy continues to support an active cultural and social community.

Evidence of later human activities beginning with settlement in the eighteenth century is visible in the extensive collection of buildings and the organic layout of the streets and other landscape features. An analysis of the map showing the periods of construction on lots within the town boundary confirms that there has been a continuous pattern of retention of early buildings mixed with infill and additions of new properties surrounding the earlier buildings. From the map at left, it is evident that there is a concentration of oldest buildings along Edgewater Street, Parish Street, and Cherry Lane on the east side of Ernst Brook and along Pleasant Street and Maple Street on the west side. Interspersed with these buildings built before 1900, are later infill and new development built throughout the twentieth century. Many of these later additions have taken place within the historic core, particularly along the waterfront as it evolved from the fishing and shipbuilding industry and their support trades to a waterfront based on recreational boating and tourism.

Additional development has occurred further out from the core along Main Street and extending along Clairmont and Clearway Streets. The latest concentrations of newer development extend beyond the historic core and consists of newer residential properties. The physical setting and scale of this incremental development pattern has been integrated in such a way that the overall landscaped appearance of the town has remained intact and contributes to its scenic appearance.



## Mahone Bay Historical Overview cont.

The eastern entrance into the town is dominated by a unique collection of historic buildings and features, the three churches, Bayview Cemetery and the intact historic views of the bay. The generally narrow setbacks of the commercial buildings create a comfortable pedestrian scale to the commercial core area. The crossroads is highlighted by the repurposed automobile service station and the iconic cenotaph. The original street layout and placement of buildings took advantage of the topography of the area with the land rising gently from the shore. Most of the earliest buildings were oriented to the harbour and built on the higher terraces that provided views to the bay. The curving alignment of Edgewater Street as it winds through the town has been impacted by the organic alignment of the bay. Leading from the main intersection are the key streets heading inland and connecting the core area with the lands beyond.

Many of the earliest buildings have been researched and listed on an inventory of historic structures. Statement of Significance have been prepared for 18 listed properties. A review of these Statements tells the story of the settlement of the community. The earliest properties were developed in the late 1700s by protestant German speaking settlers. The early land grant was subdivided and developed by families who prospered and expanded their holdings. By 1860 a large survey laid out an expansive plan for the Town that is still evident today in the property layout and divisions.

These listed buildings are of different types: three churches, a rectory and residences of a variety of colours, dates and architectural styles including vernacular, Gothic revival and Neo-classical. The range of built and landscape features creates a picturesque composition highlighted by the landmark churches. In general, the scale of buildings is one to two storeys with the exception of the church steeples that punctuate the view. This compact scale adds to the scenic visual character of the town.

In the nineteenth and early twentieth centuries the working waterfront focused on fishing and shipbuilding and related trades. After the second world war, the demand for ships waned and the waterfront evolved to meet the demands of recreational boating. Today the waterfront is concentrated on tourism activities; parkland, trails, parking pullouts and viewpoints to the picturesque bay.

# Heritage Values Exhibited in Mahone Bay

The Standards and Guidelines (S and G) for the Conservation of Historic Places in Canada (Second Edition) contains current best practice guidance for heritage. The recommended process includes articulating the heritage values associated with the historic place and the character-defining elements (CDE) that are evidence of those values. The list of CDEs is a key step in planning for the future of the heritage resources since these are the features that must be protected and integrated in plans.

Heritage Values may be tangible or intangible. Heritage value defined in the S and G is the aesthetic, historic, scientific, cultural, social or spiritual importance or significance for past, present or future generations. The heritage value of an historic place is embodied in its character-defining materials, forms, location, spatial configurations, uses and cultural associations or meanings. Applying these definitions to the town results in the following overview of its heritage values:

#### **Aesthetic Values**

> The picturesque visual composition of the town combining natural landscape features of topography and vegetation with the diverse building collection and views of the harbour.

- > The panoramic view of the townscape wrapping around the bay highlighted by the church steeples and tower rising above the buildings.
- > The variety and visual appeal of the building collection with diverse colours, styles and periods of construction.
- > The organic configuration of the streets and roads that reflects the natural setting.

## **Historic Values**

- > The longstanding association with the Mi'kmaq and the traditional and continuing uses of the natural resources.
- > The early settlement pattern of European immigrants, farming, commerce and increasing prosperity built on fishing, lumbering, shipbuilding and trade.
- > The continuous record of burials in the Bayview Cemetery with unique Germanic grave markers.
- > The establishment of a separate municipality in 1919.

## **Cultural Values**

> The pride and sense of community identity evidenced in the celebrations of the

churches and tourism promotion activities.

> Commemoration activities centred on the Settlers' Museum, volunteer work of heritage listing and interpretation, tourism promotion through tours and community events involving the churches.

## Social Values

- > The diverse nature of the residential building stock providing a range of types for families and seniors.
- > The continued operation of the school and other social services in the town.
- > Provision of commercial operations for the year-round local community as well as the seasonal tourist market.

## Spiritual Values

- > The legacy of the cenotaph as a place of remembering the sacrifices of community members who died in service to the nation.
- > The continued value of the churches as places for the community to come together.
- > The continuing link to the past expressed in the community volunteer managed Bayview Cemetery.
- > The provision of places to walk and rest along the waterfront for reflection and relaxation.

# **Character Defining Elements**

The variety of built, cultural and natural landscape features are the evidence of the heritage value of Mahone Bay. These are the components of the townscape that require safeguarding and integration in planning for the future. The character-defining elements (CDEs) may be summarized as follows:

- > The original organic street layout concentrating on the historic core and spreading inland to accommodate new development.
- > The layout and lotting pattern from the 1890 survey.
- > The views of listed buildings with their individual CDEs from the public road viewpoint.
- > Bayview Cemetery, once known as the "burial ground at Mush-a-Mush", the grave markers, tree collection and ornamental boundary fence.
- > The cenotaph in its original prominent location at the central crossroads intersection.

- > The unobstructed views to the bay from along Edgewater Street incorporating interpretation and recreation for both residents and visitors.
- > The scale and form of new construction dating post-1919 that complements the original form and materials.
- > The extensive collection of mature trees found along streets and in front yards that contribute to the visual appeal of the Town as a settlement set within a rich landscape setting.

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