



**Background Report – Town of  
Stratford Growth Management  
Strategy and Development  
Charge Study**

Phase I Background Report

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Prepared for:

Town of Stratford

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**BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY**

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## **BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY**

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**BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY**

**Table of Contents**

**1.0 INTRODUCTION..... 1**

**2.0 PART 1 – BACKGROUND RESEARCH..... 3**

2.1 PLANNING BACKGROUND REVIEW..... 3

IMAGINE STRATFORD (2014): TOWN OF STRATFORD OFFICIAL PLAN..... 5

2.2 THE TOWN OF STRATFORD ZONING AND DEVELOPMENT BYLAW #45.....10

2.3 DEMOGRAPHIC AND HOUSING ESTIMATES .....15

    2.3.1 Town of Stratford Growth Management Strategy and Development  
          Costs Study.....15

    2.3.2 Census Populations and Statistics Canada Population Estimates .....15

    2.3.3 Recent Population Trends .....16

    2.3.4 Demographic and Housing Forecasts .....19

    2.3.5 Regional Population Estimates.....20

    2.3.6 Regional Dwelling Unit Estimates.....22

    2.3.7 Town of Stratford Population Estimates .....23

    2.3.8 Town of Stratford Household Estimates .....27

2.4 TRANSPORTATION ASSESSMENT .....30

    2.4.1 References.....30

    2.4.2 Mobility networks.....30

    2.4.3 Transit.....32

    2.4.4 Active Transportation .....34

    2.4.5 Vehicular .....36

2.5 WATER AND WASTEWATER SYSTEM REVIEW .....38

    2.5.1 Water .....38

    2.5.2 Wastewater .....40

2.6 STORMWATER NETWORK REVIEW.....47

2.7 CULTURE AND RECREATION INFRASTRUCTURE .....49

    2.7.1 Culture and Recreation .....49

    2.7.2 Recreation Programming and Events.....49

    2.7.3 Natural Heritage .....52

    2.7.4 Arts and Cultural Assets.....53

2.8 WATERSHED STUDY .....54

    2.8.1 Description of Natural Hydrologic Features .....54

    2.8.2 Land Use and Areal Pollutant Loading .....57

    2.8.3 Existing Water Quality .....59

    2.8.4 Assimilative Capacity of Receiving Waters and Recommendations.....68

**3.0 PART 2 – MAPPING ANALYSIS OF DEVELOPMENT OPPORTUNITIES.....69**

**4.0 CONCLUSION .....73**



# BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY

## LIST OF TABLES

Table 1	Population Changes – 1971-2022.....	18
Table 2	Stratford Housing Stock Estimates .....	30
Table 3	Service Timetable .....	32
Table 4	Summary of Wellfield Pumping Capacity .....	38
Table 5	Summary of Wastewater Lift Station Catchments and Flows .....	42
Table 6	Summary of Watercourses and Topographic Sub-Catchments.....	57
Table 7	Approximate Land Use Distribution by Sub-Catchment .....	58
Table 8	Area-based Phosphorous Loading Rates for Select Land Uses.....	59
Table 9	CCME Trophic Status .....	68
Table 10	Degree of Nutrient Over-Enrichment.....	68

## LIST OF FIGURES

Figure 1	Population Estimates and Census Counts, Queens County, 2001-2021 .....	<b>Error!</b> <b>Bookmark not defined.</b>
Figure 2	Population Growth and Change, PEI, Queens and Capital Region, 1971-2020 .	<b>Error!</b> <b>Bookmark not defined.</b>
Figure 3	Population Estimates, Capital Region and Queens County, 2001-2041 .....	<b>Error!</b> <b>Bookmark not defined.</b>
Figure 4	Dwelling Unit Estimates, Queens County and the Capital Region, 2016-2041 ...	<b>Error!</b> <b>Bookmark not defined.</b>
Figure 5	Population Estimates, Town of Stratford, 2001-2041 .....	24
Figure 6	Future Population by Age, Town of Stratford, 2016-2041 (2016-2021 Trend) ....	<b>Error!</b> <b>Bookmark not defined.</b>
Figure 7	Five-year Net Migration Estimates, Queens County, Scenario 1, 2001-2016 and 2011-2016 .....	<b>Error! Bookmark not defined.</b>
Figure 8	Dwelling Unit Estimates, Town of Stratford, 2016-2041 .....	28
Figure 9	Dwelling Unit Estimates by Structural Type, Town of Stratford, 2016-2041 .....	<b>Error!</b> <b>Bookmark not defined.</b>
Figure 10	Roadway, Transit and Active Transportation Networks .....	31
Figure 11	Average Daily Ridership – 2009 - 2022.....	33
Figure 12	Sites Targeted for Road Safety Improvements .....	37
Figure 13	Water Infrastructure .....	40
Figure 14	Wastewater Infrastructure and Catchments .....	41
Figure 15	Existing Wastewater Lift Station Hierarchy .....	43
Figure 16	Existing Major Wastewater Catchments.....	44
Figure 17	Future Wastewater Lift Station Hierarchy.....	46
Figure 18	Major Wastewater Catchments – Post Improvements.....	47
Figure 19	Stratford Community Campus Plan.....	51
Figure 20	Primary Watersheds within Stratford Municipal Boundary.....	55
Figure 21	Watershed Sub-Catchment Boundaries.....	56
Figure 22	Water Quality Summary for Kinlock Creek.....	61
Figure 23	Water Quality Summary for Jack’s Creek.....	63
Figure 24	Water Quality Summary for Moore’s Pond.....	65
Figure 25	Water Quality Summary for Kelly’s Pond .....	67



**BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND  
DEVELOPMENT CHARGE STUDY**

**LIST OF APPENDICES**

APPENDIX A ENGAGEMENT SUMMARY



# BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY

## 1.0 INTRODUCTION

The Background Studies Report is a review of the existing policies and infrastructure framework for the Town of Stratford. The goal of this review is to determine the most efficient and cost-effective approach to accommodate desirable growth and development in the Town. Through this background study, we will be able to define:

**Expected level of growth in Stratford** – The potential increase in population and dwelling units has been calculated for the Housing Needs Assessment based on three levels of growth tied to the town’s recent growth experience. Further analysis will help determine the growth potential for the Stratford.

**Infrastructure required to support the expected growth** – As growth occurs, it can be expected to place demands on existing infrastructure that will require its upgrading, replacement, and expansion. The cost of needed infrastructure upgrades must be calculated as well as the triggers that will determine their timing.

**Development style and pattern** – The ability of Stratford to accommodate development will depend on the mix of units that the Town chooses to permit. Higher density residential types will allow more dwelling units on the town’s limited land base but may exceed infrastructure capacity and community acceptance.

The report is broken into the following sections to better understand the Town’s existing guidelines. The different sections will provide a complete scope of growth to develop and will be used to evaluate the growth scenarios.

<b>LAND USE PLANNING FRAMEWORK</b>	A review of the existing planning policies will help determine the possible growth opportunities, housing needs, and community priorities.
<b>DEMOGRAPHIC AND HOUSING ESTIMATES</b>	The population and housing estimates will be help reveal growth, housing demand and unit mix as well as distribution of development. Further, this section will also include the current state of the commercial and industrial sectors in Stratford and elaborate on the potential and desirability of the expanding employment opportunity within the Town.



**BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY**

<b>INFRASTRUCTURE ASSESSMENT</b>	A review of the infrastructure and other utilities that are critical to development will help determine current capacities and identify issues that may impede development locally and within the municipality.
<b>TRANSPORTATION ASSESSMENT</b>	A review of the circulation movement will provide a full understanding of the current logic of local transportation as well as provide an early assessment of opportunities to encourage new transportation options that would lessen pressure on vehicular infrastructure such as active transportation.
<b>WATER AND WASTEWATER SYSTEM</b>	A review of the existing infrastructure and current data will help confirm water supply and wastewater pumping capacities as well as areas experiencing capacity issues. This review will also provide information on planned upgrades to the existing networks will also be gathered to provide a complete understanding of areas where servicing capacity may continue to be limited. This will help to inform the growth scenarios and allow for the best utilization of existing water and wastewater systems.
<b>STORMWATER NETWORK</b>	A review of previous plans and studies completed for the Town, including the 2004 Town Stormwater Management Plan, 2010 Climate Change Adaption Plan, 2010 Low Impact Development Guidelines and 2012 Impacts of Climate Change on Stormwater Management, Stantec will create an overview of existing and planned stormwater infrastructure. From this overview, areas of limited or no additional capacity will be identified.
<b>CULTURE AND RECREATION INFRASTRUCTURE</b>	An assessment of current culture and recreation infrastructure relative to accepted standards will be completed (e.g., parks by type per capita, libraries per capita, etc.) including a review of the 2011 Arts and Culture Infrastructure Study, 2011 Natural Heritage Study, 2019 Urban Forest Study, and available documentation of recreation facilities and programs.





# BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY

## WATERSHED STUDY

A review of available data to complete a review of wetland extent and function within proposed development areas, primarily considering provincial wetland mapping data. Assimilative capacity assessment of major receiving water of stormwater runoff (direct and indirect) in areas of proposed development will include a categorical assessment of potential assimilative capacity considering watercourse/waterbody size, watershed location, existing degree of watershed impact and integrate existing water quality information where available.

As we start to consider how best to accommodate future growth in Stratford, this report will also identify and evaluate the development possibilities of the Town including new development and the potential of redeveloping current sectors with higher densities. Attention will be given to the immediate boundaries, outside of the territory to understand their own strategy to identify shared opportunities. A series of maps have been included to schematically represent the information for the best comprehension.

The future growth possibilities identified in this report have been shaped by an extensive engagement program. The engagement program summary is provided in Appendix 1. Stantec and the Town of Stratford want to thank all those who participated in the various workshops and events, as the input we received throughout the process is extremely valuable in helping determine what the community prefers as the best growth option for Stratford.

When reading this background report, it is essential that the complexities and constantly changing market conditions be considered and realized. Communities are always changing based on population increases or decreases, technology, market conditions, various demographic data, community values, operation and capital budget planning and many other variables. With these points in mind, it is essential that growth management related work, including the future population forecasting, be considered a living document which needs to be re-evaluated and updated as communities change.

Lastly, this report and the growth scenarios presented, are based on population forecasts to 2041. We know that the community will continue to change in the future and well beyond 2041. When completing population forecasting, which was part of this project, years ending in 1 and 6 are utilized because these are Census years, and the fullest range of data is available for Census years. Moreover, we have not made estimates beyond 20 years in the future because the numbers become increasingly speculative.

## 2.0 PART 1 – BACKGROUND RESEARCH

### 2.1 PLANNING BACKGROUND REVIEW

A detailed review of the Town of Stratford's current policy framework was performed to help understand the Town's vision and goals. Following the review, we focused on emphasizing the proposed future community development, exploring the residential pattern in the relationship with other uses, determining the trend for the community, and learning more on the type of growth the Town believes in. These

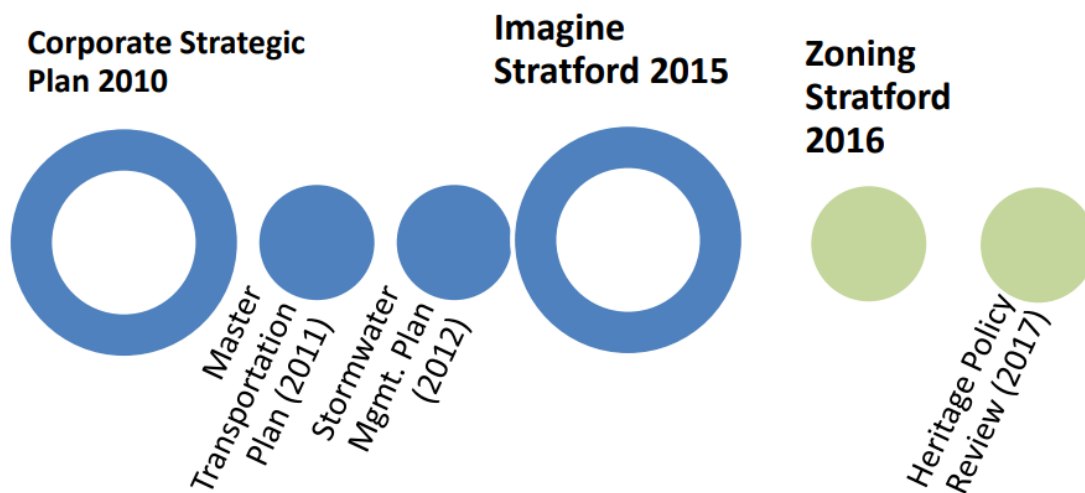


## BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY

background policy documents revealed the Town's commitment to growth, density, core, development and the path for achieving its vision.

We understand that the Town of Stratford's policy framework is comprised of the following key policy documents:

- Corporate Strategic Plan, 2010
- Master Transportation Plan (drafted 2011)
- Stormwater Management Plan (drafted 2012)
- Imagine Stratford: 2015 Town Official Plan
- Zoning Stratford: 2016
- Development Bylaw Heritage Policy and Bylaw Review: 2017



The Corporate Strategic Plan sets out the general direction towards building the best community possible. The Master Transportation Plan aims to boost the connections and linkages between the Town's neighborhoods, commercial spaces, public spaces and neighboring communities and give certainty to landowners as to how the community will take shape as development occurs. Moving from the streets to ditches, the Stormwater Management Plan aims to better manage water flows from the individual property to the Northumberland Strait taking into consideration the sensitive coastline. The Official Plan policies direct the development and shape of the Town's growth. The Official Plan also provides the foundation for the Zoning and Development Bylaw and the direction for Council's decision-making.



## **IMAGINE STRATFORD (2014): TOWN OF STRATFORD OFFICIAL PLAN**

Adopted in 2015, the Official Plan emphasizes the Core Development Plan of 2008. Under the intention to “build the best community possible”, the plan sets the vision of a more sustainable future where:

- residents social, physical and spiritual needs are met
- our culture is rich and diverse and our heritage is protected and celebrated
- our natural environment is protected and respected
- there is a thriving local economy
- there is an open, accountable and collaborative governance system<sup>1</sup>

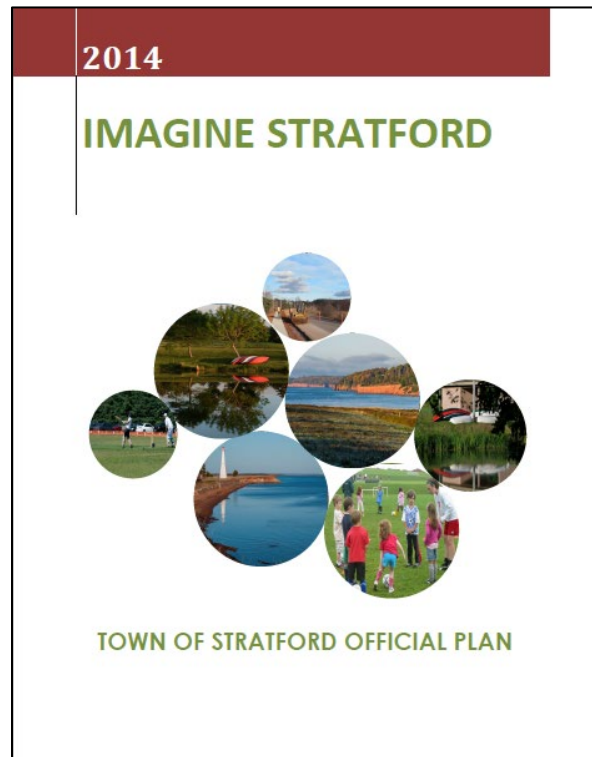
The Official Plan proposes a holistic approach based on long-range planning policy that illustrates the Town’s goals, objectives and policies concerning the nature, extent and pattern of physical, social, cultural and economic development as well as environmental stewardship within the Town. The sections below describe the Official Plan’s commitment to each factor that influences growth in the Town.

### **Housing**

The Official Plan identifies a shift in housing trends from predominately single-detached houses to a diversity of housing types, including low-rise apartments and semi-detached units. The Official Plan further identified that Stratford has some of the highest priced houses and the highest rent prices in the Charlottetown area and is considered overpriced. The Town’s future growth projection and an increased demand for other housing types suggests that development in the Town should focus on affordable housing and providing a more diverse mix of housing types. This shift to more diverse housing units and higher density will also foster an affordable housing market capable of attracting new homeowners and residents.

The Official Plan lists the following objectives and policies regarding Housing:

1. Stratford is a community where housing is responsive to the needs of the population.
2. Stratford is a community that is accessible and affordable for all to reside in, especially families and seniors.
3. Stratford is a community that preserves the character of existing neighborhoods.
4. Stratford is a community where housing developments are well designed, inclusive and connected to the community.



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<sup>1</sup> - Imagine Stratford, p.4



## BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY

5. Stratford is a community where housing development is balanced with our ability to sustain resources and affordable service delivery.

### Transportation

The Official Plan identifies transportation as an essential link for the progress of the Town identifying that the *“key challenge of travel demand management is addressing the overwhelming automobile mode”*. Other modes of travel should be developed and made viable to be effective. The Town is committed to developing active transportation and pedestrian networks *“as more residents seek opportunities for physical activity”*. The Official Plan also notes that sidewalks currently exist on most of the Town’s busiest streets, but further expansion and connection of these sidewalks should be considered. Several excellent segregated and attractive trails and walkways have been established, but continued expansion and the eventual connection of these systems would greatly contribute to the overall health and wellness of residents.

The Official Plan considers active transportation as the foundation of the plan. The intent is to minimize street crossings, maximize cycling safety and comfort. It is therefore important that new roads not be allowed to compromise this intent. The Town in collaboration with the Department of Transportation and Infrastructure hired Delphi-MRC consultants to develop a Transportation Master Plan in accordance with the Town’s sustainability vision and principles.

### Infrastructure and Services

The Official Plan identifies a range of supply of various municipal services including central water supply system, collection and treatment of sanitary waste, police services and fire services. The Town shares responsibility with the provincial government for storm water management and emergency measures. The Official Plan is committed to meeting the current and future needs of the residents, recognizing climate change impacts, providing sustainable cost-effective water services, minimizing environmental impacts and putting a strong emphasis on green energy and conservation for a cohesive community.

### Recreation, Parks, and Open Spaces

The Official Plan states that parks and open spaces provide the community with opportunities for learning, leisure, spiritual renewal and recreation. It supports the mental, physical, social well-being and health of residents with a commitment to developing long-term plans and provisions of recreational facilities that promote healthy lifestyles, foster socialization, creation of community gardens etc. The Plan recognizes and understands the importance developed recreational areas and provides its support to upgrade facilities and programs that foster health, well-being and the Town’s unique identity.

### Natural Environment

Objectives about Natural Environment are based on the Natural Heritage Study. Notably, the study has identified significant habitat areas and recommends involving private landowners in developing long term management plans for these areas. Significant features such as streams, ponds and ravines should be acquired through open space dedication and negotiations with landowners. The plan also recommends the development of an accessible waterfront area and public shore access points.

### Economic Development

The Official Plan identifies Stratford as a place to attract economic development. Although, the Town is experiencing high growth and high disposable incomes, the *“residents of Stratford and the Council do not wish to see the Town become dominated by commercial activity”*. At the same time, the Official Plan is committed to making Stratford a destination with designated core business and service areas. The “Buy Local” initiative aims to support the local economy and strengthen it over time. The plan also recognizes the fundamental importance of farming that must remain an economically viable enterprise.



## BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY

### Land Use Planning

The Official Plan intends to protect the current neighbourhood character with an increase in higher density development. While the character of our established neighborhoods must be protected, current development costs dictate that new, fully serviced residential subdivisions must become more efficient. The plan suggests that more than 1,269 acres of vacant residential land is available in Stratford. This means there is potential for more than 4,000 new residential units in the Town on lands that are already designated residential.

As demand grows for new, more innovative and somewhat higher density residential development forms, the Town must carefully review such development to prevent adverse impacts on the existing established neighborhoods.

The plan forecasts the following two future demand-based scenarios, which were established in 2014:

#### Scenario I

**Average Growth:** In this scenario, the growth rate for the next five years would remain the same as the previous past five years resulting in an estimate demand to be for 796 residential units in the next five years.

#### Scenario II

**Maximum Growth:** In this scenario, the Town's annual growth rate will be the same as the maximum annual rate within the past five years resulting in 1,583 residential units in the next five years approximately.

#### Overview

- Maintain the character of existing neighbourhood
- Should consider new uses like institution as attraction for density
- Open spaces are great of social quality of life
- Attachment to good design must be reflected in the typologies
- Limit commercial uses to specific areas
- Importance of agriculture and protection of land; orient development elsewhere
- TransCanada Highway as a Main Street
- The government's involvement on roads, but less into active transportation and transit might represent a financial burden of importance that could lessen the interest in investment for such infrastructures.
- The importance of great recreation, parks and open spaces in the quality of life for resident is an existing asset that can be use to encourage resident to live outside their property and strengthen the sense of community. In Stratford, parks and recreational development (facilities and activities) must be ecologically sound and aesthetically inspiring.
- Uses must be well positioned to protect the existing neighborhoods, to be well connected between each other, but also to manage the different uses and density respecting the existing fabric of those neighborhoods.
- The attachment to arts, culture and heritage should be emphasize in Stratford's design for the built environment and open spaces, as well as appreciated and supported as part of the Town's health and beauty.
- Productive farmland in active agricultural must be protected and use until it is required for appropriate urban development. Agriculture plays a significant role in its overall character, environment and economy.



## BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY

### The Core Area Plan

The Core Area Plan was adopted by the Town as a subsidiary to the Official Plan. It included a strong commitment to sustainability stating that *“as a minimum requirement, all aspects of the Town Plan and future economic development will conform to at least one aspect of sustainability, and more often than not, individual concepts will conform to multiple aspects of interconnected sustainable development issues”*.

The Plan divides the Core Area into several “nodes” which include the Waterfront Core, the Town Centre Core, and the Mason Road Core. The Plan highlights that the Core Areas have the capacity and ability for a wide range of high-quality development, attractive public realm as well as opportunities for cultural and economic exchange. The aim of the Core Area Plan is to focus on sustainable practices that will make Stratford a vibrant, healthy, and viable community for the long-term at the building level, site level and community level.

The Waterfront Core is identified as the heart of Stratford’s future downtown with a strong emphasis on creating the Waterfront as a *“primary location for high profile functions and events such as festivals, concerts, and ceremonies and will be the focal point of a mixed use downtown full of retail shops and residential living”*. Currently, the Waterfront Core Area is divided into the north core and south core with the south core promising more opportunities for development. The plan recommends medium density residential units encouraging 4-storey heights, ground floor commercial and interesting street connections. The Waterfront Plaza should be a focal point incorporating hard and soft landscaping, street furniture and highest quality architectural elements making the plaza home to activities, social interaction and a place of reflection.

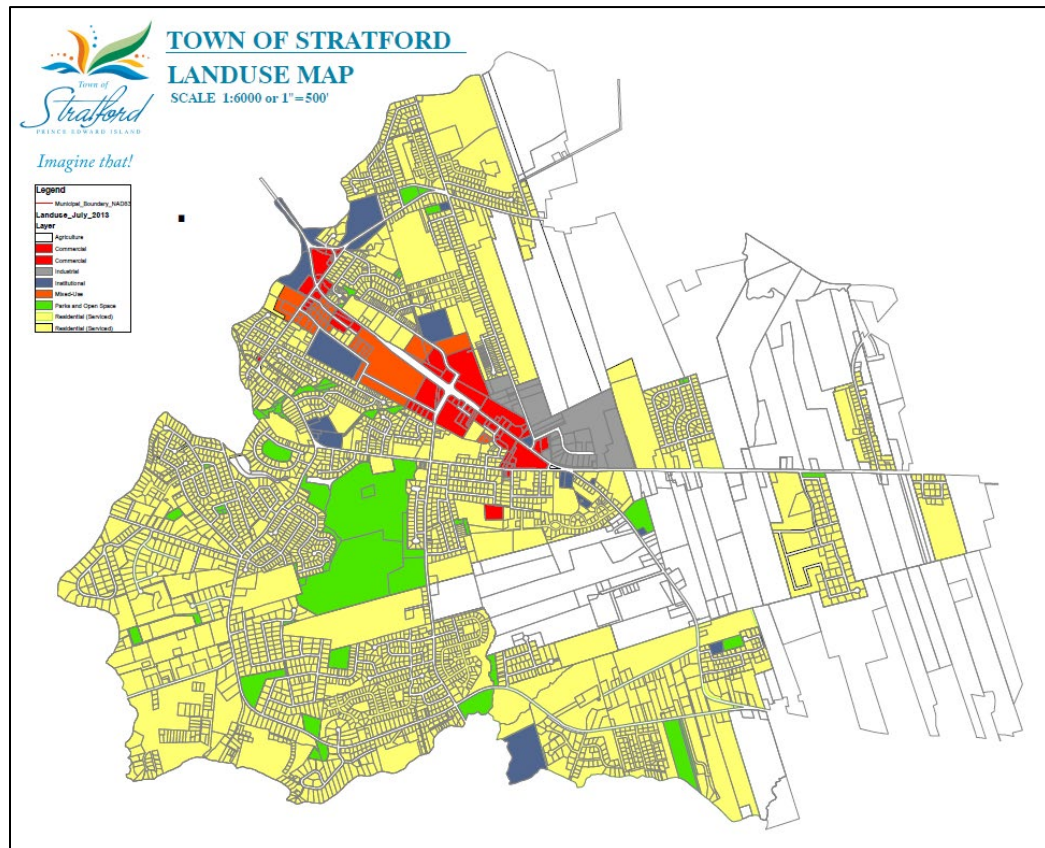
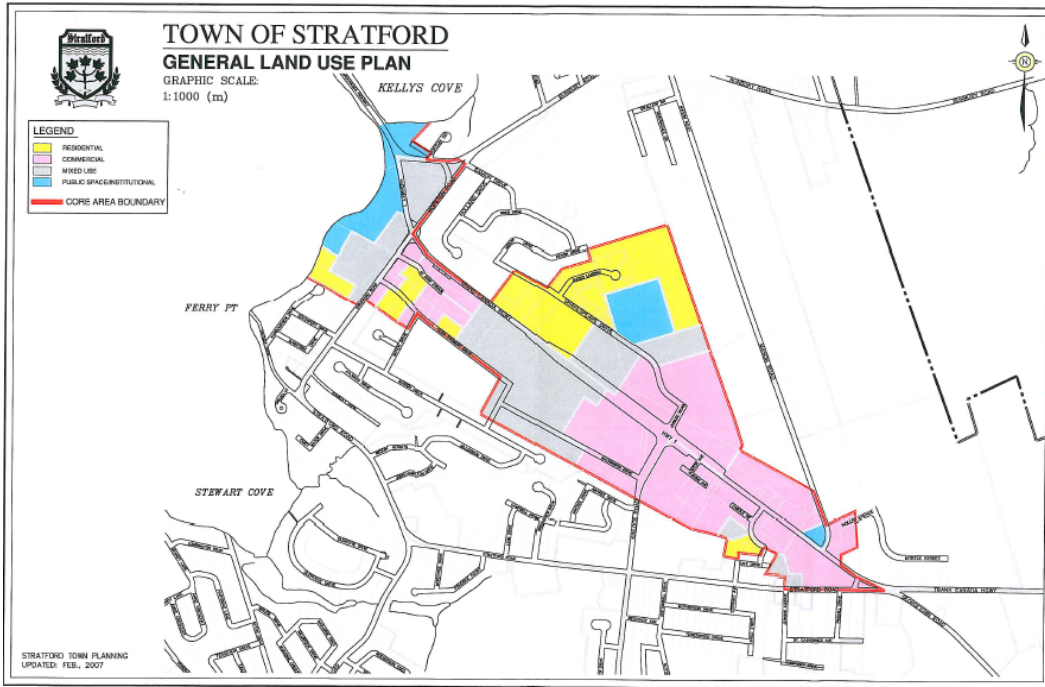
The Town Centre Core Area is located between the Waterfront Core (Hopeton/Keppock Road) and Kinlock Road and is identified as the geographical centre of Stratford and civic heart of the community. The Core Area Plan provides emphasis that the Town Core *“should be surrounded by high quality residential development on three sides and high-quality mixed-use development (commercial and residential) to the south, connecting Town Hall to the Highway”*. The future development should respect important natural features, build effective pedestrian connections, and provide quality landscape design. The Plan suggests that a diverse variety of housing including single family home, condominium, apartment, town house, and duplex providing a mix of housing styles and typologies. The new development should be an organic but modern extension of the existing residential neighbourhoods.

The Mason Road Core Area, similar to the Waterfront Core Area is identified as a “gateway to and from the Stratford Commercial Core and the Stratford Industrial Park”. It is understood that the current concerns of the Mason Road intersection with the Trans Canada Highway has prompted the need for a new intersection to provide effective solutions and opportunities to maximize commercial expansion. The Plan highlights that the “Mason Road Core is one of the Stratford core areas that will accept properly designed big box development”.

Overall, the Core Area Plan provides design guidance for long-term economic planning, encouraging development in the community along with commercial services and greenspace to support year-round activity and opportunities for social interaction. The Plan identifies the need to push for developing the Waterfront Core which will create more sustainable growth opportunities for the Town fueling its economy and becoming an attractive place for families to put down roots.



**BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY**



## **2.2 THE TOWN OF STRATFORD ZONING AND DEVELOPMENT BYLAW #45**

A zoning bylaw controls the use of land in the community. It states exactly: how land may be used, where buildings and other structures can be located, the types of buildings that are permitted and how they may be used. A review of the Town of Stratford Zoning and Development Bylaw #45 was conducted to establish zones that permit multiple unit residential dwellings.

The following residential, commercial, industrial, agricultural and institutional zones were reviewed to provide an in depth understanding of the housing typology permitted in the Town of Stratford. Based on these zones, a further review was conducted to determine the maximum permitted building height in these zones. It was found that the existing zoning policy framework of the Town supports low-rise residential dwellings with a maximum building height of 4 storeys.

The following zones describe the permitted residential uses:

### **Residential Zone**

- Low Density Residential Large Lot R1L
- Low Density Residential R1
- Medium Density Residential R2
- Multiple Unit Residential R3
- Planned Unit Residential Development PUD
- Waterfront Residential WR
- Town Centre Residential TCR
- Mason Road Residential MRR
- Sustainability Subdivision Overlay SS
- Waterfront Mixed Use WMU
- Town Centre Mixed Use TCMU
- Mason Road Mixed Use MRMU

### **Commercial Zone**

- General Commercial
- Highway Commercial C2
- Neighbourhood Commercial
- Town Centre Commercial
- Mason Road Commercial

### **Industrial Zone**

- Industrial Zone M1
- Business Park M2

### **Agriculture Zone**

- Agriculture Reserve Zone A1
- Agriculture and Open Space O1





# BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY

## Institutional Zone

Town Centre Open Space TCOS  
 Waterfront Public Space WPS  
 Public Service and Institutional PSI  
 Town Centre Institutional TCI

Housing Types	Description	Max. Building Heights	Remarks
Low Density Residential Large Lot R1L	<u>Permitted Uses:</u> Single Dwellings Secondary Dwelling Units		
Low Density Residential R1	<u>Permitted Uses:</u> Single Dwellings Secondary Dwelling Units <u>Conditional Uses:</u> Duplex or Semi-Detached Dwellings <u>Special Permits:</u> Group Homes		
Medium Density Residential R2	<u>Permitted Uses:</u> Single Dwellings Duplex or Semi-Detached Dwellings (up to 40% of units in a Block); Townhouse Dwellings having up to three (3) dwelling units (up to 40% of units in a Block); Secondary Dwelling Units <u>Conditional Uses:</u> Duplex up to 100% of the block Town House Dwellings or Row House Dwellings having up to six (6) Dwelling Units (owned either individually or as Condominiums) Group Homes <u>Special Permits:</u> Town House Dwellings or Row House Dwellings having up to six (6) Dwelling Units, owned either individually or as Condominiums, and can be up to 40% of units in a Block Seniors Homes	Duplex and Semi-Detached Dwellings: 11 m / 36 ft	
Multiple Unit Residential Zone R3	<u>Permitted Uses:</u> Duplex Dwellings and Semi-Detached Dwellings Townhouse Dwellings up to six (6) units Multiple Attached Dwellings Supportive Housing <u>Conditional Uses:</u> Apartments with over 12 units <u>Density:</u> The maximum density in a R3 Zone shall be no greater than 25 Dwelling Units per acre.	10.5 m / 35 ft.	
Planned Unit Residential	<u>Permitted Uses:</u> Single Dwellings	10.5 m / 35 ft.	



**BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY**

Housing Types	Description	Max. Building Heights	Remarks
Development Zone PUD	Duplex Dwellings and Semi-Detached Dwellings Townhouse Dwellings up to six (6) units (owned either individually, or as Condominiums) <u>Density:</u> The maximum density in a PURD Zone shall be no greater than ten (10) Dwelling Units per acre, or fifteen (15) dwelling units per acre if parking is provided in the rear yard and accessed by a private lane that is buffered from all buildings and a minimum outdoor private amenity area of 25 sq. m. per Dwelling is provided.		
Waterfront Residential Zone WR	<u>Permitted Uses:</u> Town House Dwellings or Row House Dwellings Apartment Buildings (owned either individually or as condominiums) Accessory Buildings <u>Conditional Use:</u> Commercial uses on the first floor of a building	<u>Townhouses</u> Max: 3 stories, 13 m / 40 ft Min: 2 stories, 6 m / 20 ft  <u>Apartments</u> Max: 4 stories, 15 m / 50 ft Min: 3 stories, 13 m / 40 ft	Buildings having a height greater than 4 stories may be approved by Council where the impact on view planes of the waterfront are minimized, adequate parking is provided, adequate fire protection facilities are provided and the impact on the streetscape is minimized via building design features such as tiered building heights with taller building elements setback from the lot line. Taller buildings will be encouraged to be located in the middle of blocks rather than at intersections.
Town Centre Residential Zone TCR	<u>Permitted Uses:</u> Single Family Dwellings Duplex Dwellings or Semi-Detached Dwellings Town House Dwellings or Row House Dwellings (owned either individually or as Condominiums or by a single owner) Apartments (owned by a single Property Owner or as Condominiums) Innovative “cluster” style Housing <u>Special Permits:</u> Group Homes	<u>Townhouses</u> Max: 10.5 m / 35 ft  <u>Cluster Housing</u> Max: 10.5 m / 35 ft Max Density: 15 units/acre  <u>Apartments</u> Max: 12 m / 40 ft Max Density: 25 units/acre	



**BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY**

Housing Types	Description	Max. Building Heights	Remarks
Mason Road Residential Zone MRR	<p><u>Permitted Uses:</u>                      Single Family Dwellings;                      Duplex Dwellings and Semi-Detached Dwellings                      Town House Dwellings or Row House Dwellings up to six (6) units (owned either individually or as a Condominium)                      Accessory Buildings</p>	<p><u>Building Height:</u>                      All Development in an MRR Zone shall be restricted to a maximum of 2 stories and no greater than 10.5 metres (35 ft.) in height.  <u>Density:</u>                      The maximum density in a MRR Zone shall be no greater than ten (10) Dwelling Units per acre.</p>	
Sustainability Subdivision Overlay SS	<p><u>Permitted Uses:</u>                      Single Dwellings                      Duplex Dwelling and Semi-Detached Dwellings                      Townhouse Dwellings                      Clustered Townhouse Dwellings  <u>Special Permits:</u>                      Multiple Attached Dwelling                      Senior Home</p>		<p><u>Density:</u>                      In a <u>Certified Sustainable Subdivision</u>, the overall maximum density (number of units per acre) will remain the same as in the original zone, but Council may grant a proportionately higher density in the buildable area.                      In a <u>Gold Sustainable Subdivision</u>, Council may increase the overall maximum density of the original zone by up to 25 percent.                      In a <u>Platinum Sustainable Subdivision</u>, Council may increase the overall maximum density of the original zone by up to 50 percent.</p>
Waterfront Mixed Use Zone WMU	<p><u>Permitted Uses:</u>                      Apartment Units, other than on the first floor</p>		
Town Centre Mixed Use Zone TCMU	<p><u>Permitted Uses:</u>                      Apartment Units, other than on the first floor                      Innovative “cluster” style Housing Group Homes  <u>Conditional Uses:</u>                      Single Dwellings                      Duplex Dwellings or Semi-Detached Dwellings                      Town House Dwellings or Row House Dwellings (owned either individually or as Condominiums or by a single owner)                      Apartments (owned by a single Property Owner or as Condominiums)</p>	<p><u>Townhouses</u>                      Max: 10.5 m / 35 ft   <u>Cluster Housing</u>                      Max: 10.5 m / 35 ft                      Max Density: 15 units/acre   <u>Apartments</u>                      Max: 12 m / 40 ft                      Max Density: 30 units/acre   <u>Other uses</u>                      Max. 1 storey, 12 m (40ft)</p>	



**BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY**

Housing Types	Description	Max. Building Heights	Remarks
Mason Road Mixed Use Zone MRMU	<u>Permitted Uses:</u> Apartments (owned by a single Property Owner or as Condominiums) Apartment Buildings with commercial uses on the first floor Town House Dwellings or Row House Dwellings (owned either individually or as Condominiums or by a single owner) Group Home	<u>Townhouses</u> Max: 10.5 m / 35 ft  <u>Apartments</u> Max: 12 m / 40 ft Max Density: 25 units/acre  <u>Other uses</u> Max: 3 stories, 12 m (40ft) Max. Density: 25 units/acre	
<b>Commercial Zone</b>			
General Commercial Zone C1	<u>Conditional Uses:</u> Commercial Dwelling Units	Max: 10.5 m / 35 ft	
Highway Commercial Zone C2	<u>Conditional Uses:</u> Commercial Dwelling Units	As per C1	
Neighbourhood Commercial Zone C3	<u>Permitted Uses:</u> Commercial Dwelling Units	Max: 11 m / 36 ft	
Town Centre Commercial Zone TCC	No housing	Max: 10.5 m / 35 ft	
Mason Road Commercial Zone MRC	No housing	Max: 10.5 m / 35 ft	
<b>Industrial Zone</b>			
Industrial Zone M1	No housing	Max: 11 m / 36 ft	
Business Park Zone M2	No housing	Max: 11 m / 36 ft	
<b>Agriculture Zones</b>			
Agriculture Reserve Zone A1	<u>Permitted Uses:</u> Single Dwellings	Max: 10.5 m / 35 ft	
Agriculture and Open Space Zone O1	No housing	Max: 10.5 m / 35 ft	
<b>Institutional Zones</b>			
Town Centre Open Space Zone TCOS	No housing	Max: 10.5 m (35 ft.)	
Waterfront Public Space Zone WPS	No housing	4 stories, 15 m (50 ft.)	
Public Service and Institutional Zone PSI	<u>Permitted Uses:</u> Group Homes	10.5 m (35 ft.)	
Town Centre Institutional Zone TCI	<u>Permitted Uses:</u> Group Homes	10.5 m (35 ft.)	



## **BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY**

However, our review noted the probability of permitting a higher building height in the Waterfront Residential Zone. The Waterfront Residential Zone (WR) permits a building height of greater than 4 storeys and which may be approved by Council. This allows for increased height and higher densities in a location that can maximize on view and proximity to the downtown core. The provision of permitting taller building to the middle of the block rather than at intersections also shows that a higher density can be accepted within reason.

### **2.3 DEMOGRAPHIC AND HOUSING ESTIMATES**

#### **2.3.1 Town of Stratford Growth Management Strategy and Development Costs Study**

Stantec prepared population and housing forecasts for the Charlottetown Growth Study and Housing Needs Assessment completed in 2022. The predictions contained in our final report were generated from a demographic and housing model developed by Stantec staff and applied for many previous projects including Stantec's 2014 Town of Stratford housing study. The model generates detailed population and housing estimates for municipalities and other sub-areas in the context of future estimates that it also generates for Canada and its provinces and territories. It has been employed for planning, housing, and recreation studies in seven provinces and two territories.

#### **2.3.2 Census Populations and Statistics Canada Population Estimates**

The population numbers presented in this section, including our population forecasts, are based on Statistics Canada population estimates for all the geographies (i.e., PEI, Queens County, and Stratford and other municipalities and sub-areas of Queens County). We use population estimates rather than Census numbers because estimates – despite their name – are more accurate than Census counts. Estimates prepared by Statistics Canada adjust Census numbers to account for under and over count. Statistics Canada uses vital statistics and other data to correct Census counts for individuals who are missed by the Census because they did not file a Census response and to account for other errors in compilation of the Census that may result in both under and over counting such as loss or mis-recording of submitted forms, double counting, and transcription mistakes.

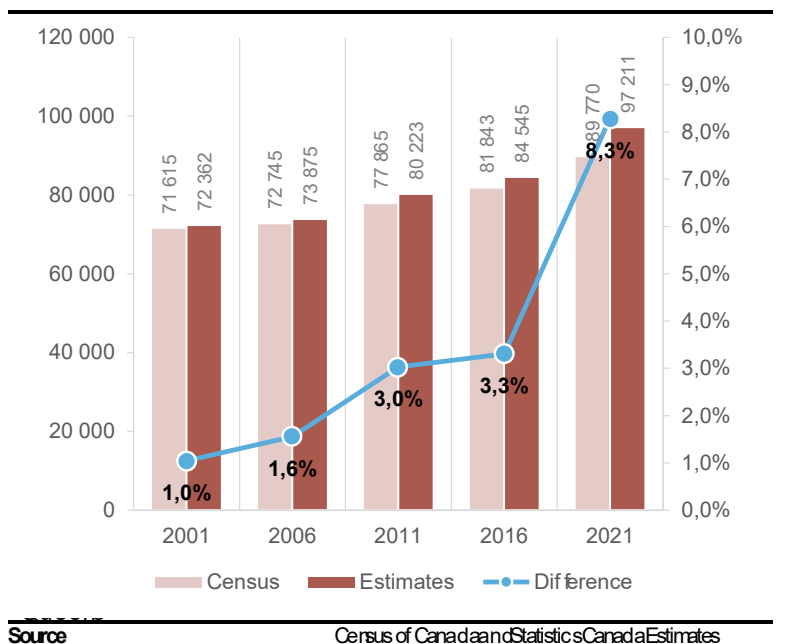
Undercounting is the most important factor. Statistics Canada recognizes that some people do not respond to the Census despite the legal requirement to do so. Specific groups are more prone to non-response. Groups with high levels of non-response have traditionally included young adults, recent immigrants, and indigenous people. Key reasons for under-reporting are mobility, language barriers, and cultural issues. Undercounting normally exceeds overcounting so Statistics Canada population estimates are usually higher than Census counts.



# BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY

PEI has historically had low levels of undercounting because its population has traditionally been among the most stable in Canada. With the recent increase in-migration to the province, however, undercount has risen substantially. This is particularly true of Queens County and the municipalities that form the Capital Region (i.e., the City of Charlottetown and the Towns of Cornwall and Stratford), which have been the primary destination of immigrants to PEI. As **Figure 1** taken from our regional study illustrates, the difference between Census

**Figure 1 Population Estimates and Census Counts, Queens County, 2001-2021**



counts recorded for Queens County and estimates calculated by Statistics Canada has widened substantially in the past two decades from 1.0% for the 2001 Census to 8.3% in the most recent census in 2021. The difference in 2021 was 7,441 people, who we do not want to ignore in our assessment of the region or Stratford’s future.

### 2.3.3 Recent Population Trends

Housing markets are regional. Residents generally make the choice to live in a region because of economic opportunities, particularly the availability of suitable employment or education options; family or social relationships; cost factors, the most notable of which is home prices and rents; and lifestyle preferences. Within the region the choice of a particular community is based largely on the same factors, although more specific features may be taken into account such as the time required to travel to school or employment, the quality of local infrastructure, taxes, or proximity to friends and relatives or preferred activities. It is best, therefore, to consider future growth in a community like the Town of Stratford in the context of expectations for the Capital Region and Queens County.

Future growth, based on Stantec estimates for the region prepared for the regional Growth Study and Housing Needs Assessment, is expected to be strong. After many years of slow growth from 1971 to 2009 when the population of PEI rarely increased by more than 1% in a year and occasionally declined, the Island experienced a surge in growth that gained momentum over the subsequent decade (**Figure 2**).

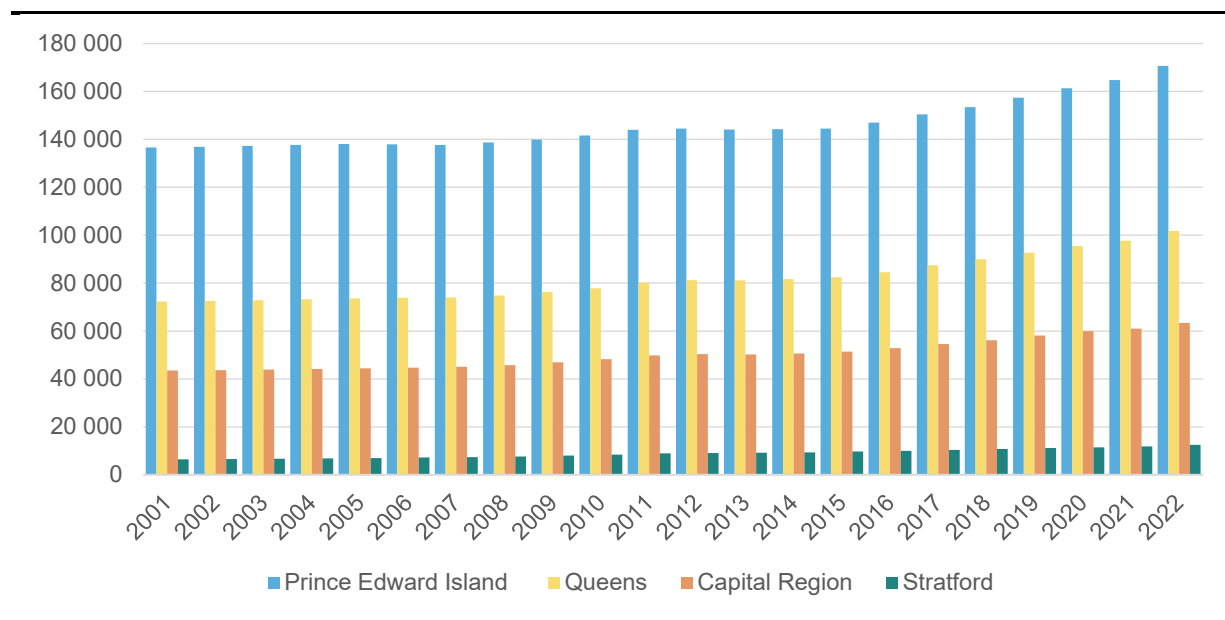


## BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY

In both 2010 and 2011, the province increased its population by more than a percentage point. After a lull from 2012 through 2015 when annual gains fell below 1% again, larger increases have ensued since 2016 with annual increases exceeding a percentage point each year and topping 2% per year in five of the seven years to 2022. Queens and the Capital Region more than matched this upward trend. Their substantial growth began in 2008 and both areas have exceeded 1% growth nearly every year since. In four years, in each case, annual growth has reached more than 3%. In 2022, Queens County added 4.17% to its population and the Capital Region 3.87%.

Stratford, for its part, has grown faster than the province or the region continuing a pattern of accelerated growth that dates back to the formation of the municipality through amalgamation in 1995. The town achieved annual growth rates in excess of 2% in every year from 2001 to 2008 and then increased its growth significantly thereafter. For three years from 2009 through 2011, its population increased by more than 5% each year. While it slowed thereafter, the town's smallest annual increase to 2022 was 1.35% in 2012 and it was below 2% just one other year in the subsequent decade. Frequently, it topped 3% and last year (2022), it grew by 5.58%. Since 2001, the Town has nearly doubled its population and has increased its share of population in the Capital Region from 15.0% to 19.6%.

**Figure 2 Population Growth and Change, PEI, Queens and Capital Region, 1971-2020**



**BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY**

**Table 1 Population Changes – 1971-2022**

Year	PEI		Year	PEI (cont'd)		Queens		Capital Region		Town of Stratford	
	Pop.	% Change		Pop.	% Change	Pop.	% Change	Pop.	% Change	Pop.	% Change
1971	112,591		2001	136,665	0.14%	72,362		43,488		6,393	
1972	113,460	0.77%	2002	136,880	0.16%	72,574	0.29%	43,697	0.48%	6,543	2.35%
1973	114,620	1.02%	2003	137,227	0.25%	72,860	0.39%	43,887	0.43%	6,679	2.08%
1974	115,962	1.17%	2004	137,680	0.33%	73,221	0.50%	44,115	0.52%	6,840	2.41%
1975	117,724	1.52%	2005	138,064	0.28%	73,574	0.48%	44,376	0.59%	7,004	2.40%
1976	118,648	0.78%	2006	137,867	-0.14%	73,875	0.41%	44,651	0.62%	7,205	2.87%
1977	119,902	1.06%	2007	137,711	-0.11%	73,968	0.13%	45,017	0.82%	7,321	1.61%
1978	121,684	1.49%	2008	138,749	0.75%	74,860	1.21%	45,767	1.67%	7,596	3.76%
1979	122,885	0.99%	2009	139,891	0.82%	76,220	1.82%	46,955	2.60%	7,991	5.20%
1980	123,735	0.69%	2010	141,654	1.26%	77,859	2.15%	48,184	2.62%	8,447	5.71%
1981	123,551	-0.15%	2011	143,963	1.63%	80,223	3.04%	49,825	3.41%	8,873	5.04%
1982	123,588	0.03%	2012	144,530	0.39%	81,233	1.26%	50,390	1.13%	8,993	1.35%
1983	125,102	1.23%	2013	144,094	-0.30%	81,163	-0.09%	50,224	-0.33%	9,173	2.00%
1984	126,563	1.17%	2014	144,283	0.13%	81,683	0.64%	50,619	0.79%	9,352	1.95%
1985	127,619	0.83%	2015	144,546	0.18%	82,382	0.86%	51,376	1.50%	9,747	4.22%
1986	128,436	0.64%	2016	146,969	1.68%	84,545	2.63%	52,784	2.74%	10,029	2.89%
1987	128,641	0.16%	2017	150,402	2.34%	87,421	3.40%	54,611	3.46%	10,368	3.38%
1988	129,289	0.50%	2018	153,396	1.99%	89,868	2.80%	56,141	2.80%	10,728	3.47%
1989	130,153	0.67%	2019	157,419	2.62%	92,695	3.15%	58,132	3.55%	11,129	3.74%
1990	130,404	0.19%	2020	161,305	2.47%	95,437	2.96%	59,918	3.07%	11,445	2.84%
1991	130,369	-0.03%	2021	164,758	2.14%	97,642	2.31%	61,014	1.83%	11,758	2.73%
1992	130,827	0.35%	2022	170,688	3.60%	101,709	4.17%	63,373	3.87%	12,414	5.58%
1993	132,177	1.03%									
1994	133,437	0.95%									
1995	134,415	0.73%									
1996	135,737	0.98%									
1997	136,095	0.26%									
1998	135,804	-0.21%									
1999	136,281	0.35%									
2000	136,470	0.14%									

Source

Statistics Canada Estimates





### **2.3.4 Demographic and Housing Forecasts**

Stantec’s final report for the Charlottetown Region Growth Study and Housing Needs Assessment, submitted on May 16, 2022 included detailed predictions of population and housing needs for the City of Charlottetown and the Towns of Cornwall and Stratford, which comprise the Capital Region, as well as related sub-areas of Queens County. Our forecasts covered the future Census years 2026, 2031, 2036, and 2041. The population estimates were created for five-year age groups (i.e., 0 to 4 years, 5 to 9, 10 to 14, etc. to 90+) for all geographic areas considered and for all the Census years estimated.

Three sets of estimates were generated based on trends experienced in Canada, PEI, and the Capital Region. The forecasts were based on 2011 to 2016 when growth in the Capital region was healthy but not as strong as the subsequent 2016 to 2021 period. The second set of estimates was based on the two periods combined (i.e., 2011 to 2021) and the third set was based on the 2016 to 2021 period alone when local growth was very strong. The first scenario based on 2011 to 2016 resulted in the lowest overall population from the region; the second combining the two periods gave intermediate numbers; and the third based on 2016 to 2021 generated the highest numbers and is the high scenario.

As all three scenarios are based on the recent experience of the region, they are clearly realistic. As noted in the Final Report for the Growth Study and Housing Needs Assessment, the estimated 2041 population for the Province of PEI in our medium scenario was within 905 of the Province of PEI’s estimate of 2041 population, suggesting that our methodology aligns well with the Province’s practice. The application of our model was necessary to create sub-provincial estimates for Queens County and the municipalities of the Capital Region.

The forecasts contained in this report are largely derived from the 2022 regional study. By the close of our work on the study, population and housing data was available from the 2021 Census and was incorporated in the model used to develop future estimates, as was some other annually collected statistical data relevant to population and housing estimation. In the year since completion of the regional study, limited additional annual data has been released, most notably 2020 and 2021 fertility or birth rates and 2020 mortality or death rates. While it is important to employ the most recent birth and mortality rates to ensure the best possible future estimates, the updates have very modest impact on results. In addition, Statistics Canada has revised its population estimates reaching back as far as 2006, presumably based on superior data now available. Again, the changes are generally small but do have a discernible influence on our forecasts.

Readers will find the following presentation very similar to the summary of demographic and housing estimates contained in the 2022 regional study, but with moderate differences in population and housing figures. The primary difference in the following summary is the focus on Stratford and the implications of its expected growth on housing needs and land development requirements in the town. We have nevertheless included an overview of regional population and housing trends and estimates to establish the context in which the Town of Stratford is developing. In our model, all estimates of natural increase are determined through extrapolation of long-term trends in births and deaths for PEI based on annual



## BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY

estimates of both by five-year age-sex cohorts published by Statistics Canada. Migration estimates are developed within the model for each relevant area based on past census periods. As noted, our initial projection is based on the five years from 2011 to 2016; our second reflects change in the extended period from 2011 to 2021; and the third and final period reflects the very strong growth experienced since 2016.

As stated above, we employ Statistics Canada population estimates for Canada, the provinces and territories, census divisions (Kings, Queens, and Prince Counties in PEI), and all census subdivisions (i.e., municipalities and indigenous communities, and other local subareas such as the lots that identify many rural areas in PEI) as the basis for calculating future populations. Estimates for Canada, PEI, and its census divisions provide the same detail as census counts. Statistics Canada estimates for census subdivisions are for total populations only but we have developed age and sex profiles using the age-sex profiles recorded by the Census for the census subdivisions comprising the region. As a result, our model produces estimates of population by five-year age and sex cohorts for the municipalities of the Capital Region and for other areas of Queens County comprised of remaining census subdivisions. The model also generates migration estimates for the same groupings, which are useful for understanding the sources and impacts of growth, and its influence on local age structure.

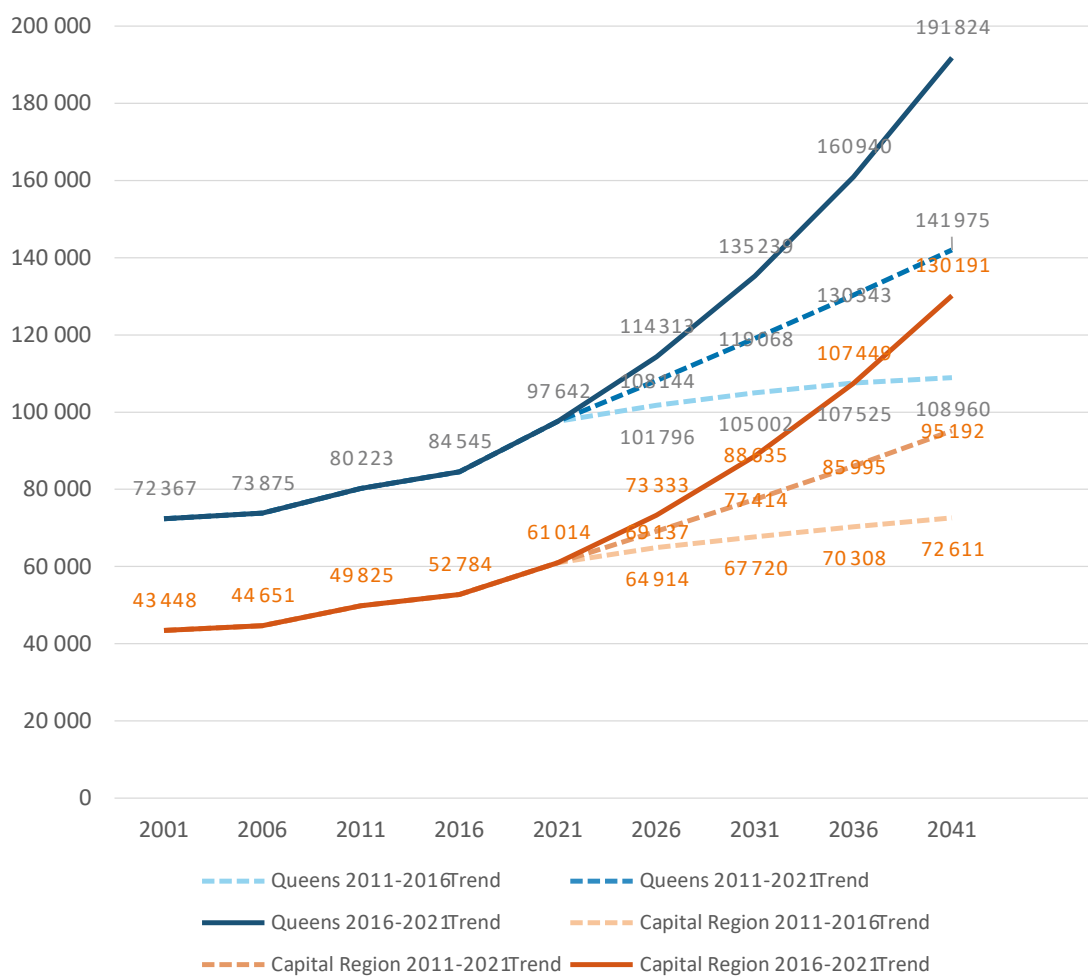
### 2.3.5 Regional Population Estimates

**Figure 3** illustrates the three population scenarios created for the Charlottetown Region Growth Study and Housing Needs Assessment modified by consideration of recently issued data including adjustments to population estimates issued by Statistics Canada in the past year. As noted, although growth in Queens County and the Capital Region from 2011 to 2016 was strong, it has accelerated since 2016. Our first scenario based on the 2011 to 2016 period, therefore, results in the smallest population increase of the three generated for the region. It anticipates growth in Queens County from 97,642 in 2021 to 108,960 by the horizon year of 2041 and from 61,014 to 72,611 in the Capital Region. The second scenario combining the slower rate of growth between 2011 and 2016 with the increased growth experienced since 2016 results in a stronger upward trend reflected in an increase in County population to 141,975 and in the Capital Region to 95,192. The third and final scenario focuses on the region's robust growth from 2016 to 2021 and predicts the County will have 191,824 residents and while the Capital Region will have 130,191 by 2041.



**BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY**

**Figure 3 Population Estimates, Capital Region and Queens County, 2001-2041**



Source: Statistics Canada Estimates 2001 to 2021, Stantec estimates 2026 to 2041

Readers who compare these results with our earlier report on the region will notice that the estimates have increased in all three scenarios. The third scenario based on 2016 to 2021 trends shows the biggest increases with the expected 2041 population increasing from 189,642 to 191,824 (2,182 or 1.2%) in Queens and 128,101 130,191 (2,090 or 1.6%) in the Capital Region. The differences are moderate but add to the concern for housing demand that the Regional Growth Study clearly established.

The key driver behind each projection is migration. Projections of expected birth and death rates are the same for all three scenarios. Since 2006, Queens County and the Capital Region has gained residents through migration who are in their reproductive years. These new residents, furthermore, have brought children with them who not only augment the increase in population but are also growing into young adults who can be expected to replenish the local population when they form families and become



## BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY

parents. The influence of these changes in the region's age profile are incorporated in PEI's birth and death rates over the period.

Also, since 2006 migration rates into Queens County have been strong and rising. In the 2006 to 2011 period, five-year migration rates for most cohorts other than the 25 to 29 group, were between 5 and 10%. The 25 to 29 group, however, lost about 9%. With rising rates in subsequent five-year periods, estimated net migration over the extended period from 2006 to 2021 rose to averages over 10% or even 20%. Within the 15-year period, the region's attraction clearly grew. While the broad profile is similar, with the highest levels of in-migration expected for family-aged cohorts, neutral results are anticipated for infants, and net out-migration is expected in the older cohorts. The increase in in-migration since 2016 is particularly noteworthy with high rates of in-migration in all groups from 5 to 55 years and spectacular percentages in excess of 50% for young adults in their twenties, notably including the 25 to 29-year group from which Queens was losing population 20 years ago.

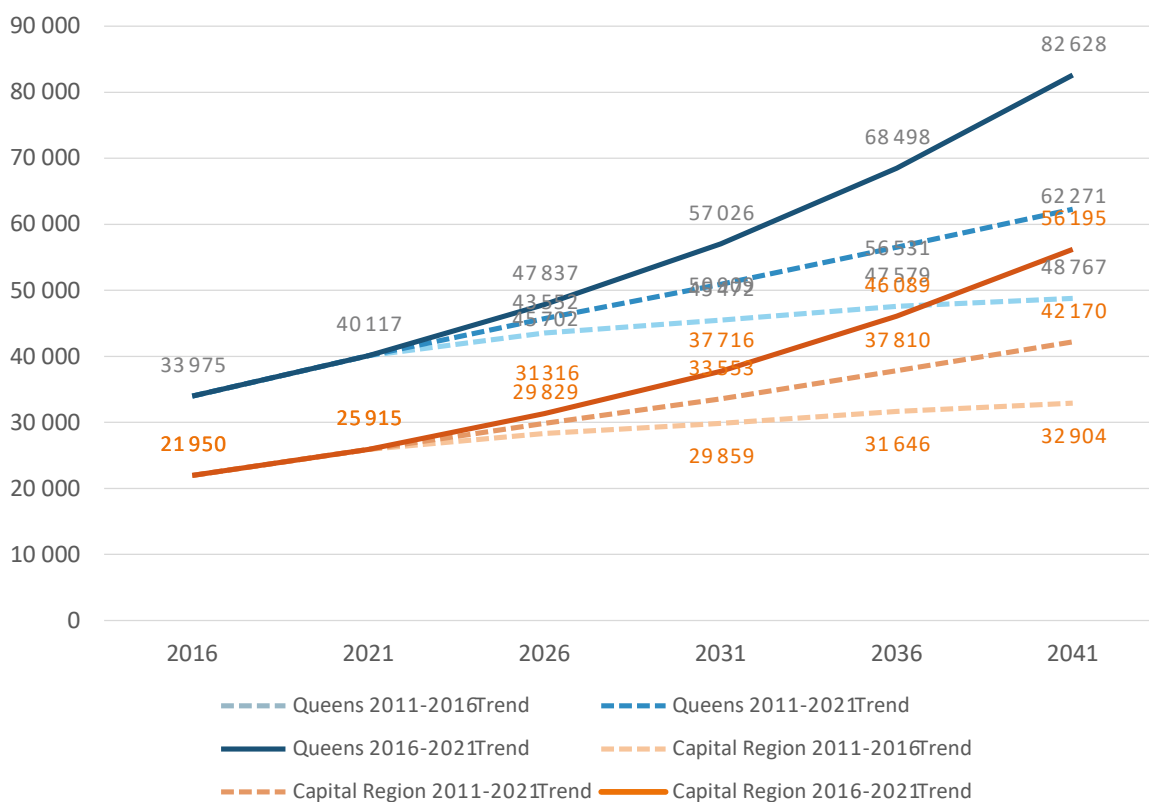
### 2.3.6 Regional Dwelling Unit Estimates

Housing requirements are directly related to population. In-migrants to the region require housing for the long-term. Domestic residents also need accommodation as they age, particularly as they move into adulthood and, especially, as they form families, and as they look to downsize later in life. Population estimates can be employed to develop future housing estimates by applying age-specific headship rates to calculate the number of dwelling units in each of nine structural types recognized by Statistics Canada. Our projection of dwelling units in the region was developed from our population estimates. Estimates show the influence of differing population age profiles associated with each scenario based on household formation rates recorded for each ten-year age cohort beginning at age 15. Recognizing from our review of building approvals that new units added in the region have been shifting moderately from single-detached housing, we assumed we assumed a 1.5% increase in rates of household formation and a shift of 1.0% from detached homes to attached and apartment units over each five-year census period. We further adjusted our estimates for the Capital Region to incorporate a 3.75% shift from ownership to rental in each five-year period to reflect continuation of the move from owned to rental accommodation documented from 2006 to 2021 and reinforced by municipal building permit applications and approvals since 2016.

Our estimates assume 40,117 dwelling units in Queens County in 2021 and 25,915 in the Capital Region in all scenarios before applying trends from the 2011 to 2016, 2011 to 2021, and 2016 to 2021 periods to generate alternative scenarios for the 2026 to 2041 period (**Figure 4**) in the same manner as we employed to develop population estimates. The three future estimates range from 48,767 dwelling units in Queens County and 32,904 in the Capital Region by 2041 in Scenario 1 based on trends from 2011 to 2016 to 82,628 and 56,195 in Scenario 3 based on the more recent 2016 to 2021 period. Scenario 2 combines the two periods (i.e., 2011 to 2021) to create a scenario between the two extremes, anticipates 62,271 dwelling units in Queens and 42,170 in the Capital Region by the 2041 horizon year.



**Figure 4 Dwelling Unit Estimates, Queens County and the Capital Region, 2016-2041**



Source: Statistics Canada Estimates 2001 to 2021; Stantec estimates 2026 to 2041

### Town of Stratford Population Estimates

The forecasts prepared for the regional Growth Study and Housing Needs Assessment, as noted, included equally detailed forecasts for the Town of Stratford as well as for Charlottetown and Cornwall, and additional rural areas of Queens County outside the Capital Region. Future population estimates for the town suggest accelerating growth that will increase population to between 25,167 and 32,441 in 2041, more than doubling Stratford’s current population of 11,758 in the first case and approaching a three-fold increase in the second case (**Figure 5**). The latter estimate constitutes 24.9% share of predicted 2041 population in the Capital Region and 16.9% of Queens County up from shares of 18.9% and 12.0%, respectively, in 2021.

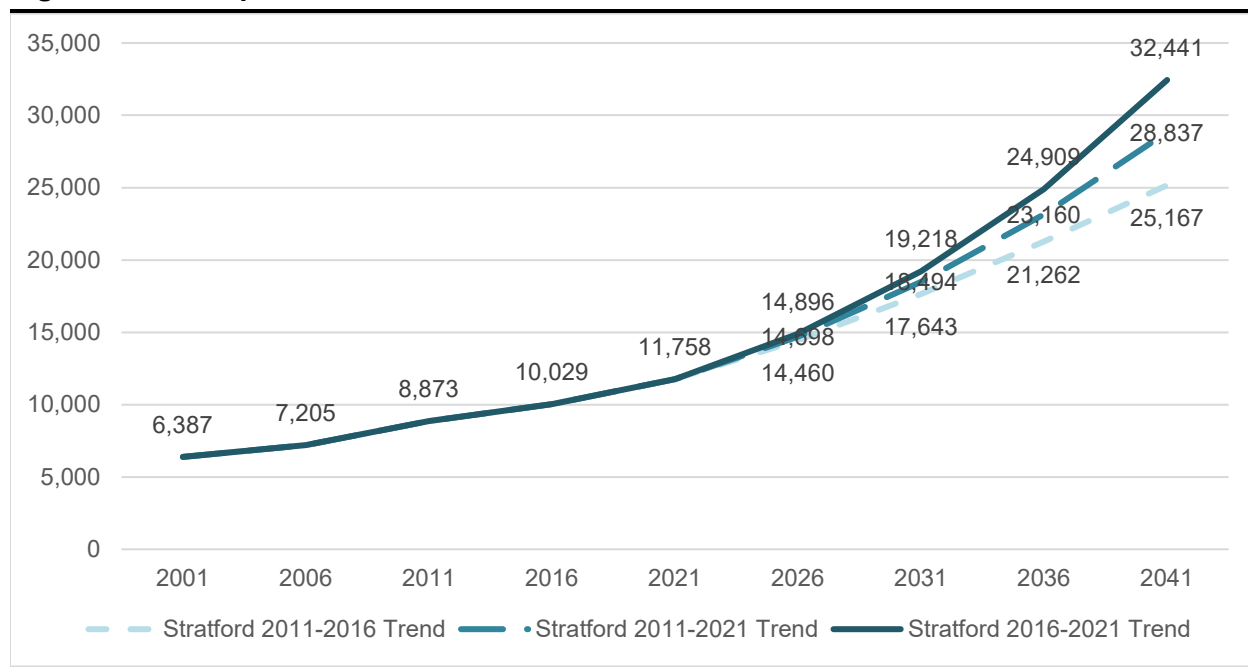
Migration, which is the dominant driver of population growth, has been strongly positive for most of Stratford’s history. The town experienced positive in-migration in nearly every age-sex cohort from 2006 to 2011 (**Figure 7**). The following five years from 2011 to 2016 saw continued growth but more moderate in-migration for all age groups as the Town faced constraints on its development. The most recent five years, from 2016 to 2021, saw the restoration of in-migration for most groups, with the interesting



**BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY**

exception of older cohorts from 70 to 89 years, which saw substantial out-migration. More broadly, over the past decade (2011 to 2021), the town has experienced a steady inflow of young, middle-aged, and active senior residents, but outflow of older seniors.

**Figure 1 Population Estimates, Town of Stratford, 2001-2041**



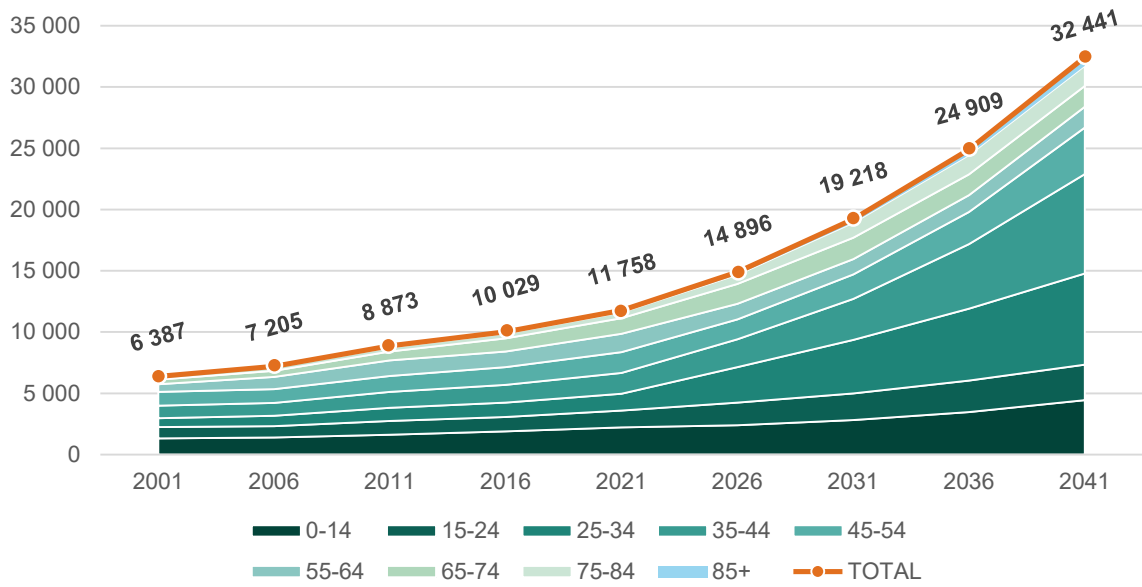
Source: Statistics Canada Estimates 2001 to 2021, Stantec estimates 2026 to 2041

While the pattern of migration to Stratford does not differ greatly from the region as a whole, the strong attraction of the town for young adults and families is likely to sustain further growth that should maintain a relatively youthful population. As illustrated in **Figure 6** showing population by age group to 2041 in our third scenario based on 2016 to 2021 trends, the town can expect to continue to have the bulk of its population under 45 years of age, which is rare in Atlantic Canada. With its largest numbers in these groups, the natural increase (i.e., births) in the community will reinforce in-migration. The bulk of adults will continue to be in child-bearing years and, by 2041, their current children will be old enough to form their own families and ensure Stratford continues to have many children in its population.



**BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY**

**Figure 6 Future Population by Age, Town of Stratford, 2016-2041 (2016-2021 Trend)**



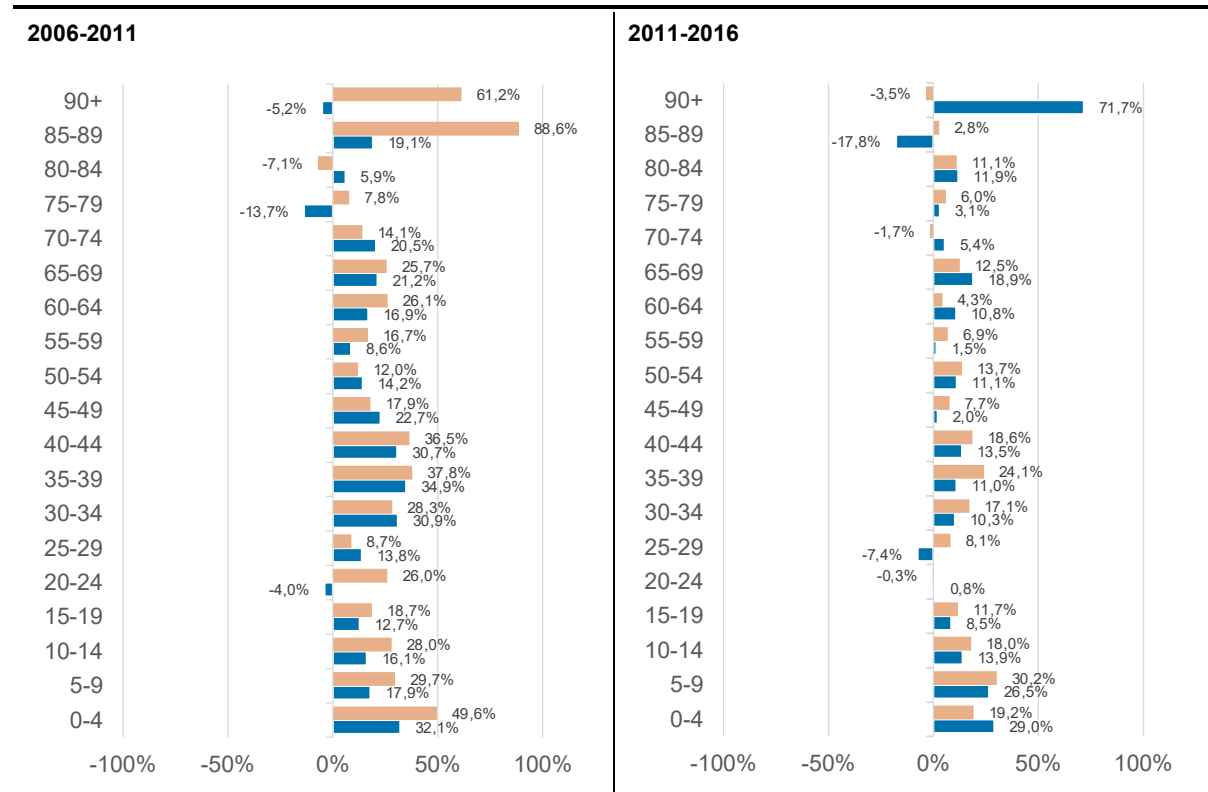
Source

Statistics Canada Estimates 2001 to 2021; Stantec estimates 2026 to 2041



**BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY**

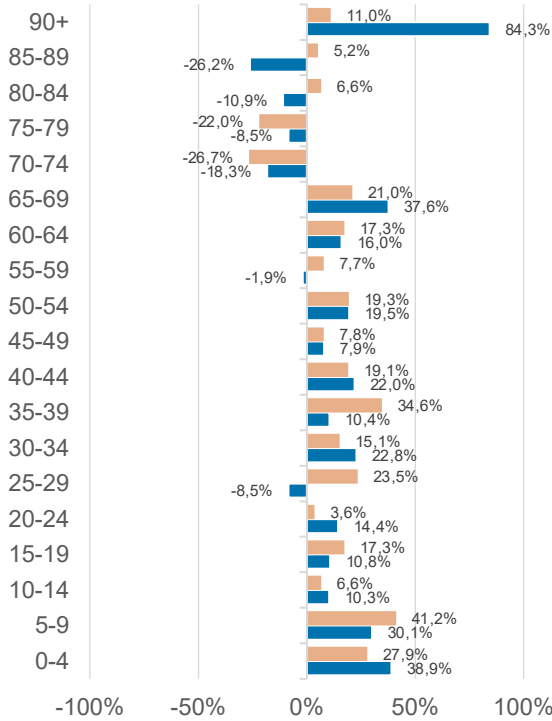
**Figure 7 Five-year Net Migration Estimates, Queens County, Scenario 1, 2001-2016 and 2011-2016**



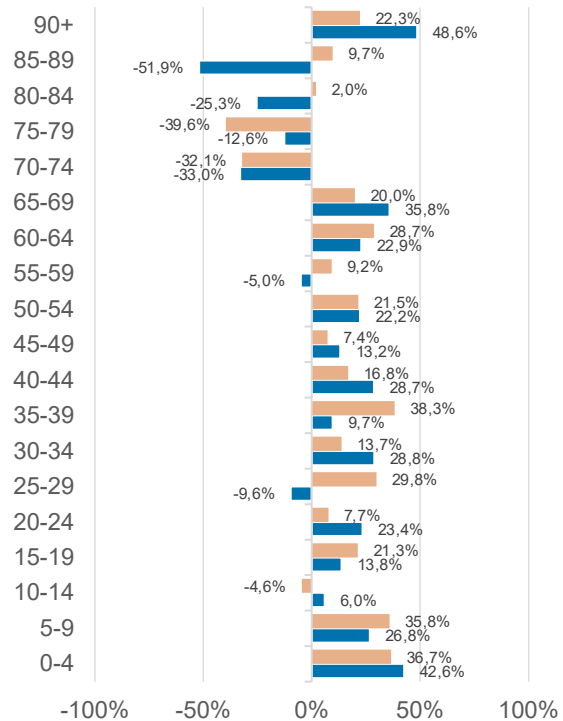


# BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY

2011-2021



2016-2021

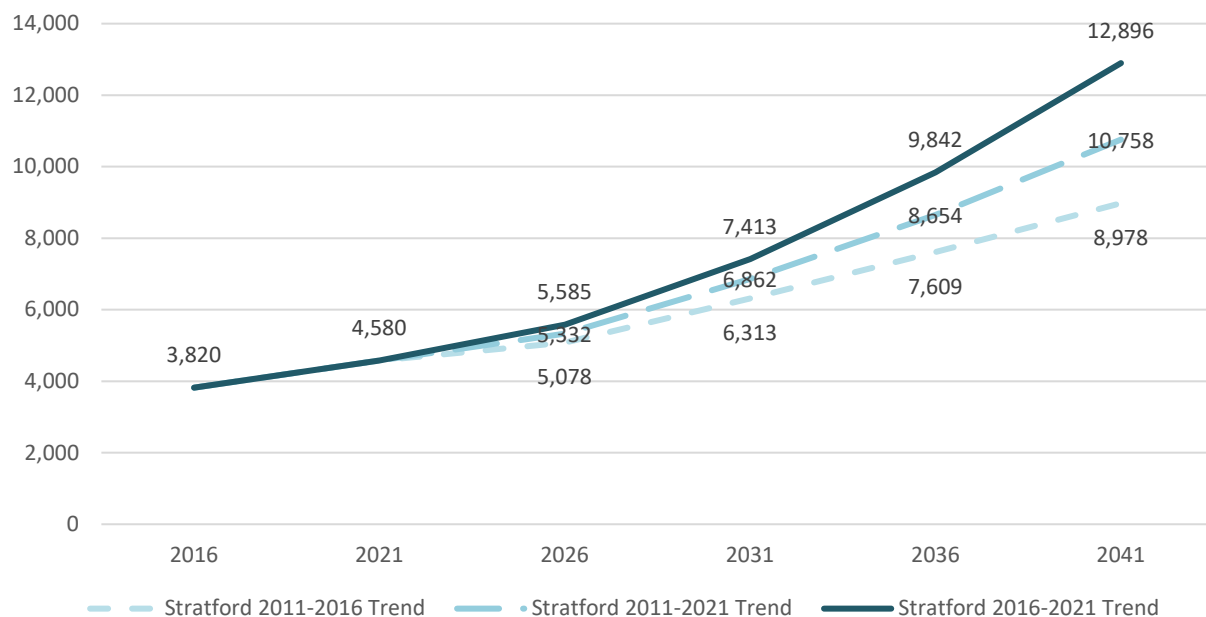


## 2.3.7 Town of Stratford Household Estimates

Estimates of future housing needs in the town parallel the strong expected increase in population. Predictions of dwelling unit requirements by 2041 based on the 2011 to 2016 trend suggest an increase to roughly twice the town's current 4,580 units in keeping with the doubled population and the prediction of 12,896 units based on the 2016 to 2021 trend comes close to tripling the 2021 supply in the town (Figure 8).



**Figure 2 Dwelling Unit Estimates, Town of Stratford, 2016-2041**



**Source** Statistics Canada Estimates 2001 to 2021, Stantec estimates 2026 to 2041

The type of housing required by the Town’s population is difficult to predict. Most housing in Stratford is currently single-detached homes as it is throughout the Capital Region. In the balance of the province, the dominance of single-detached homes is even stronger. Housing preferences can be expected to change with the age structure of residents. Single-detached homes tend to be preferred by family-aged residents as they typically live in households of two to five related members who benefit from multiple rooms and access to private open space. Younger adults and many seniors, on the other hand, prefer attached housing units or apartments because they require less effort to maintain and are usually more affordable. Our model incorporates changing age structure in its calculations to account for this influence.

Other more difficult to predict factors may also play a part; however, ability to pay, for one, may force some residents into less expensive housing. Many may make the choice voluntarily, though, particularly if they would like to have money for other interests like travel or their children’s education, or wish to avoid the operation and maintenance responsibilities that are normally part of homeownership. Some groups may also simply be more comfortable with different types than others. While Islanders have typically opted for single-detached homes, it appears that many in migrants are willing to consider higher density options, either because they are more affordable, because many are young adults, or because they are more accustomed to row housing and apartment accommodation.

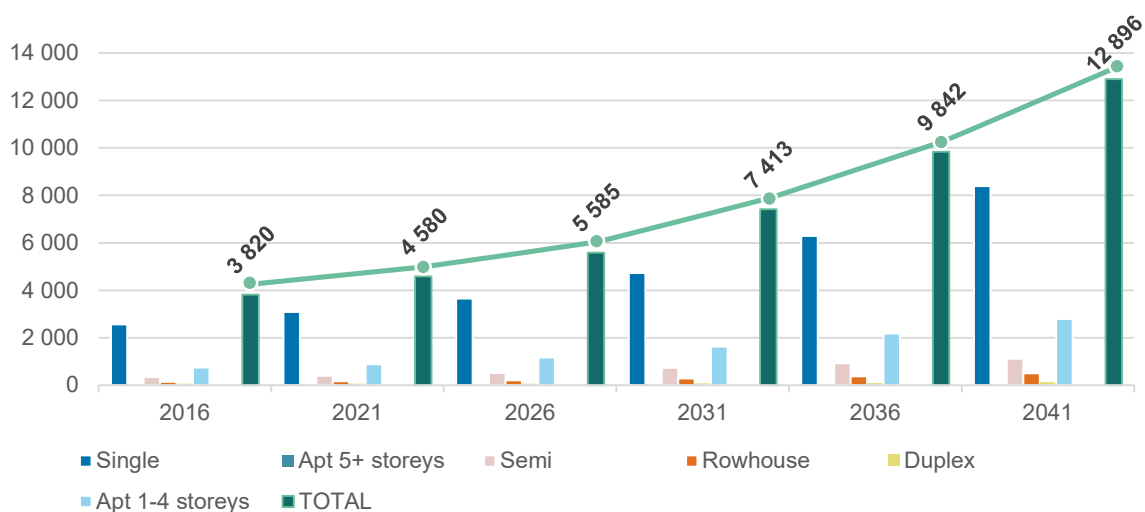


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As pointed out in the regional study, while the Charlottetown Census Agglomeration of which Stratford is a part has a relatively high proportion of residents in apartments relative to similar-sized Census Agglomerations in Canada, three Quebec regions (i.e., Saint-Hyacinthe, Shawinigan, and Rimouski) have more and many larger urban centres (i.e., Halifax, Montreal, Toronto, and Vancouver) have much more. In the case of Quebec communities, Stantec noted that their residents have been historically more accepting of alternatives to single-detached housing. With respect to larger centres, it is clear that as urban areas grow and land prices increase, residential density necessarily increases. As the Capital Region grows and Stratford increases its population, it is likely that residents will move to higher density housing forms, an assumption that we have built into our modelling. The shift can however be expected to take place slowly as the base of predominantly single-detached housing in the region is well-established and will only be gradually displaced.

The expectations reflected in **Figure 9** should nevertheless be considered cautiously. Aside from adjustments to our model assuming a modest shift to apartments and rental versus ownership, they reflect the continuation of current housing preferences in communities within Queens County, including Stratford. They suggest a small reduction in the proportion of households accommodated in single-detached dwellings from 2026 through 2036, but significant recovery of the single-detached housing share in 2041. The apparent reason for this late reversal is the dominance of family-aged individuals in Stratford's population. As residents under 45 form families and have children, they have traditionally sought single-detached homes to accommodate their increasing households. The potential to shift families in Stratford to alternative housing forms and/or to accommodate young adult, senior, and lower income households in the town are major issues for this study.

**Figure 1 Dwelling Unit Estimates by Structural Type, Town of Stratford, 2016-2041**



**BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY**

**Table 2 Stratford Housing Stock Estimates**

Year	TOTAL	Single	Apt 5+ storeys	Semi	Rowhouse	Duplex	Apt 1-4 storeys	Other Attached	Movable Dwelling
2016	3,820	2,565	10	345	135	20	745	0	10
2021	4,580	3,085	0	401	173	24	886	0	12
2026	5,585	3,657	0	512	211	28	1,165	0	13
2031	7,413	4,727	0	730	279	37	1,623	0	16
2036	9,842	6,293	0	917	378	56	2,181	0	17
2041	12,896	8,388	0	1,112	499	85	2,797	0	16
Percentage of Total									
2016		67.15%	0.26%	9.03%	3.53%	0.52%	19.50%	0.00%	0.26%
2021		67.35%	0.00%	8.75%	3.77%	0.52%	19.35%	0.00%	0.26%
2026		65.47%	0.00%	9.16%	3.77%	0.50%	20.85%	0.00%	0.24%
2031		63.77%	0.00%	9.85%	3.76%	0.50%	21.89%	0.00%	0.22%
2036		63.95%	0.00%	9.31%	3.84%	0.57%	22.16%	0.00%	0.17%
2041		65.04%	0.00%	8.62%	3.87%	0.66%	21.68%	0.00%	0.12%

Source Stantec Estimates

## 2.4 TRANSPORTATION ASSESSMENT

### 2.4.1 References

The transportation assessment is based on the following documents:

- Imagine Stratford – Town of Stratford Official Plan (2014).
- Town of Stratford – Active Transportation Plan – Background analysis (February 2023).
- T3 Transit Map.
- Stratford Waterfront Plan (September 2021).

### 2.4.2 Mobility networks

Figure 10 presents the roadway, transit, and active transportation networks of the Town of Stratford.



Figure 3 Roadway, Transit and Active Transportation Networks



**BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY**

**2.4.3 Transit**

**2.4.3.1 Service description**

The transit service in Stratford is provided by T3 Transit. Route 7 is the transit line that serves central Stratford, Bunbury Road, and the residential neighborhoods located in the southern part of the Town. Route 7 is formed of two branches as shown on **Figure 11**:

1. Kinlock Road branch -> Keppoch Road -> Stratford Road (southern part of the Town).
2. Bunbury Road branch -> Mason Road -> Shakespeare Drive (northern part of the Town).

A known gap is the lack of transit service in the eastern part of the town.

**2.4.3.2 Service timetable**

Route 7 timetable is presented in **Table 3**. There are 12 departures during the weekday, and 5 departures on Saturday. Midmorning and midafternoon routes were recently added to the Ts transit schedule. Furthermore, an on-demand evening service leaving Charlottetown was also recently introduced, which provides pick-up or drop-off along any Bunbury or Kinlock T3 identified bus stop.

**Table 3 Service Timetable**

Monday to Friday		Saturday	
Route 7 – Kinlock Road -> Stratford Road	Route 7 – Bunbury Road -> Shakespeare Drive	Route 7 – Kinlock Road -> Stratford Road	Route 7 – Bunbury Road -> Shakespeare Drive
6:30 AM	6:30 AM		
7:15 AM	7:15 AM		
7:45 AM	7:45 AM		
8:15 AM	8:15 AM		
10:00 AM	10:00 AM		
12:00 PM	12:00 PM		
2:00PM	2:00 PM	8:15 AM	8:15 AM
3:30 PM	3:30 PM	10:15 AM	10:15 AM
4:15 PM	4:15 PM	12:15 PM	12:15 PM
4:45 PM	4:45 PM	3:15 PM	3:15 PM
5:15 PM	5:15 PM	5:15 PM	5:15 PM
5:45 PM	5:45 PM		
8:00 PM (Charlottetown Departure)	8:00 PM (Charlottetown Departure)		



## BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY

The frequency of service is about 30 minutes during the weekday commuting periods. On Saturday, the frequency is 2 to 3 hours. However, it's worth noting that the bus service is provide in one direction, which results in anyone with intentions of travelling within Stratford, must travel through Charlottetown and back, for one of those journeys.

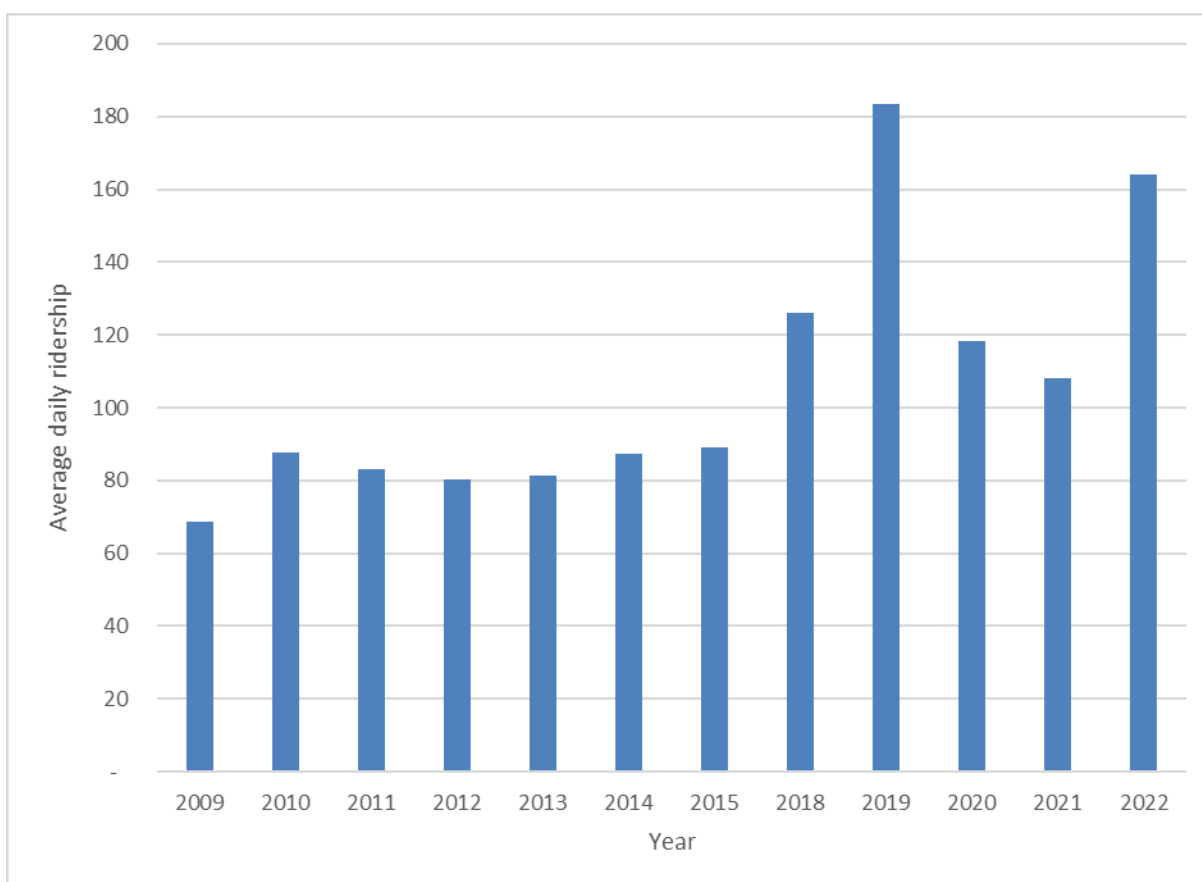
### 2.4.3.3 Stops

There are 14 stops along the two branches of Route 7. In addition, all “Stop Signs” and posted “Bus Signs” are considered flag stops by T3 Transit.

### 2.4.3.4 Ridership

Ridership data was provided from 2009 to 2022. **Figure 11** shows the average Daily Route 7 ridership through the years.

**Figure 4 Average Daily Ridership – 2009 - 2022**



## BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY

A steady increase has been observed from 2013 to 2019, with a big increase in 2019. The pandemic had a visible impact on ridership, but in 2022, the ridership has rebounded and is near the 2019 peak.

### 2.4.3.5 Transportation Plan – Transit Objectives

The Stratford transportation plan has recommended the following course of actions to improve public transit:

- Demand management:
  - Prioritize capital programs that encourage less-polluting methods of travel such as public transit, carpooling and fuel-efficient vehicles.
  - Continue current investment in transit service through measures aimed at improving rider comfort, and travel time to and from Charlottetown.
- Supply management:
  - Review transit routes to reduce travel time, especially to downtown Charlottetown.

## 2.4.4 Active Transportation

### 2.4.4.1 Network description

**Figure 10** shows the active transportation network within the Town of Stratford.

The Town of Stratford active transportation network is a varied mix of sidewalks, multi-use paths, paved shoulders, and gravel and natural paths. In 2020, the Arterial Active Transportation Network (AATN) was completed. The AATN runs along Shakespeare Drive/Jubilee Road, Glen Stewart Drive / MacKinnon Drive, Mason Road, Keppoch Road, Kinlock Road, and Georgetown Road. The AATN consists of a combination of sidewalks and multi-use paths.

Sidewalks are mainly found on main arterial roads. Paved shoulders are present on one or both sides of the roads. Although they do not meet provincial standards for bike lanes, their width provides a wider travel lane that make it easier for cyclists and pedestrians to share the roadway with cars.

The Trans Canada Trail runs along the Trans-Canada Highway from the Hillsborough Bridge through Fullerton's Creek Conservation Park. It consists of segments of paved and gravel multi-use path that provide a central artery through the Town. Recently, some extensions of the Trans Canada Trail were completed in the east end of the Town connecting Fullerton Creek Conservation Park and Mount Herbert.

The Hillsborough Bridge active transportation (AT) corridor is now completed. It consists of a 1.8 km protected multi-use active transportation trail between Charlottetown and Stratford. The bi-directional





## **BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY**

asphalt trail will have a 3.0 m width with a guardrail to protect users from motor vehicles. In Stratford, the Hillsborough bridge AT corridor will connect with the Trans Canada Trail.

Further extension of the active transportation network will come with the Stratford Community Campus Plan, and the Stratford Waterfront Core Area Plan.

The new multi-use path within the Stratford Community Campus will include connections between Mason Road and Williams Gate, and between Bunbury Road and Hollis Avenue. The Stratford Waterfront Core Area Plan proposes several new facilities to promote active transportation in the area.

Known gaps in the active transportation network include Stratford Road and Bunbury Road.

### **2.4.4.2 Transportation plan – Active transportation objectives**

The Stratford transportation plan has recommended the following course of actions to improve the active transportation offering:

- Demand management:
  - Prioritize capital programs that encourage less-polluting methods of travel such as public transit, carpooling and fuel-efficient vehicles.
  - Provide safer pedestrian crossings.
  - Require inclusion of walking and cycling facilities in all future private development projects and insure connectivity.
  - Provide end-of-trip bike parking and storage facilities at destination points.
  - Permit certain new land uses and activities in parks to encourage walking and cycling.
- Supply management:
  - Provide sidewalks with a consistent minimum sidewalk width.
  - Upgrade the Stratford trail to permit bicycle use.
  - Undertake a safety analysis, in collaboration with the province, to assess the appropriateness of the recently designated cycling routes to identify improvements necessary so that the routes function as effective bicycle facilities.



## **2.4.5 Vehicular**

### **2.4.5.1 Roadway network**

The roadway network of the Town of Stratford is characterized by the presence of Highway 1, which bisects the town, of arterial roads (Bunbury Road (Road 21), Stratford Road and Georgetown Road (Road 26)), and a collection of public and private local roads. The Province of Prince Edward Island owns and maintains all road (other than private roads) in Stratford.

The main typology of the local street network is one typically found in suburban areas with its combination of grids, loops, and cul-de-sac.

Highway 1 (Trans-Canada Highway) runs through the Town of Stratford. It connects Stratford to Charlottetown via the Hillsborough Bridge. In 2021, the AADT of Highway 1 was about 22,000 vehicles per day between Stratford Road and Georgetown Road, a 1.1% increase compared to 2019.

Besides the Trans-Canada Highway, Stratford Road, between the Trans-Canada Highway and Keppoch Road, and Bunbury Road are the roads with the highest AADT. An AADT of 8,760 vehicles per day was recorded on Stratford Road (a decrease of 1.1% from 2019). For Bunbury Road, the recorded AADT was 7,500 vehicles per day in 2021 which represents an increase of 8.3% compared to 2019.

The Town has targeted 10 sites for geometric improvements related to road safety as shown in **Figure 12** below.

Other intersections have been targeted for improvement, per the 2014 Transportation Plan:

- Keppoch Road and Owen Lane (rationalize turning radii).
- Hopeton Road at Bunbury Road (roundabout).
- Langley / Rosebank at Keppoch Road (remove one minor leg).
- Bayside at Stratford Road (remove wye).

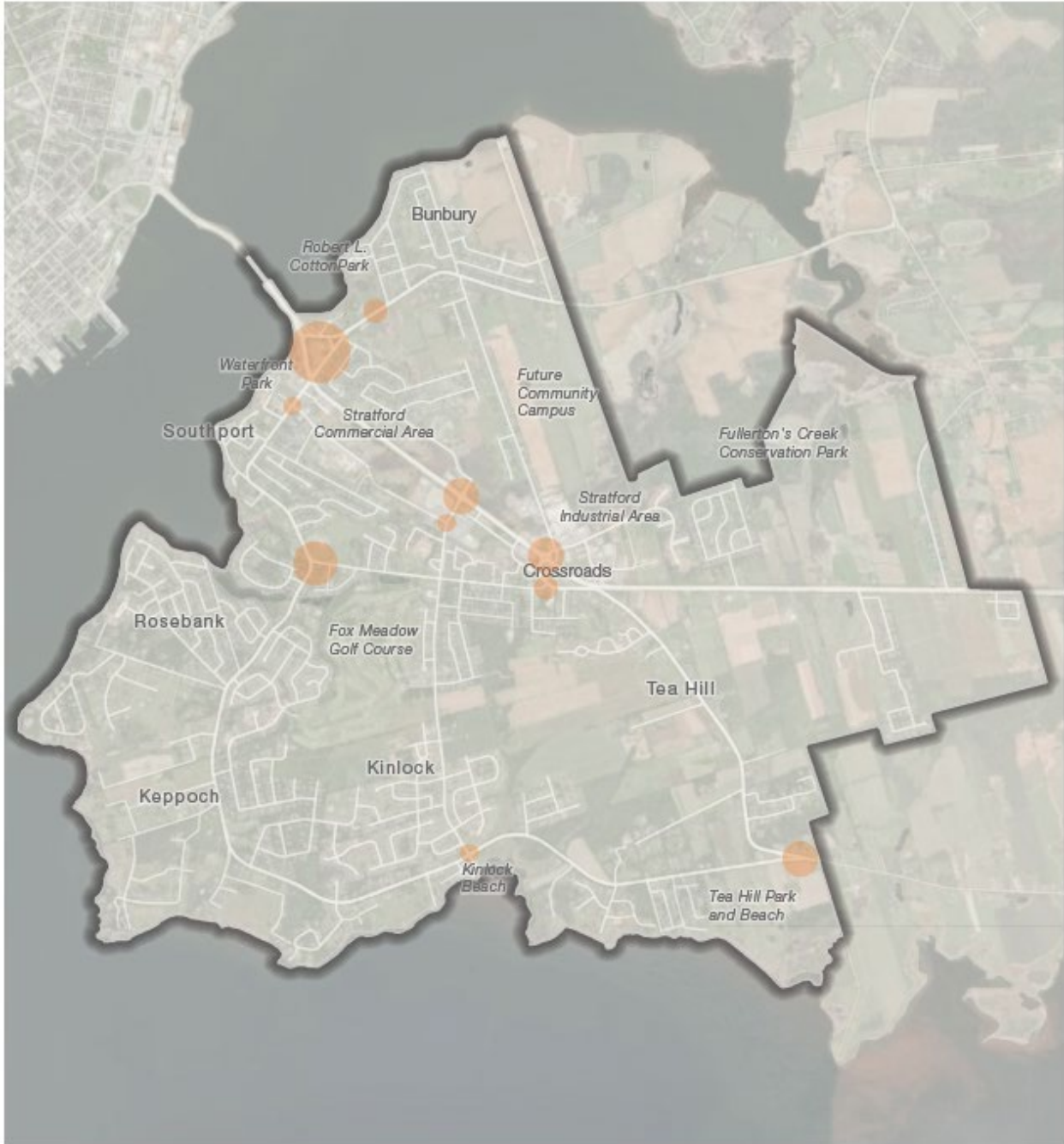
The Stratford Road/Trans-Canada Highway intersection was targeted for improvement over the next few years to relieve congestion as it is approaching capacity during peak periods.

Except for the Keppoch / Georgetown intersection, the types of improvements required to improve road safety have not been identified at the other sites.



**BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY**

**Figure 5 Sites Targeted for Road Safety Improvements**



Source: Town of Stratford – Active Transportation Plan – Background analysis (February 2023)



# BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY

## 2.4.5.2 Travel patterns

As with most suburban areas, private automobile is the main mean of transportation for commuting to work. Drivers and automobile passengers represent 96.5% of all commuters. Transit riders (1%), pedestrians (1%) and cyclists (0.3%) represent less than 3% of all commuters.

## 2.4.5.3 Transportation plan – Automobiles

The strategy pursued by the Town of Stratford for reducing private automobile dependency is focused on reducing its overall environmental impact, and on improving road safety.

On the demand management side, the Town wants to promote the use of alternate modes of travel, and the use of fuel-efficient vehicles. For example, several electric vehicle charging stations have now been installed by, or in collaboration with, the Town.

On the supply management, the development of the roadway network should not impede the stated objective of promoting active transportation, especially cycling.

## 2.5 WATER AND WASTEWATER SYSTEM REVIEW

### 2.5.1 Water

There are currently three active wellfields in the Town of Stratford, located at Pondside, Cable Heights, and Fullerton. A fourth station is located at Beacon Hill; however, it is currently not in use and during discussions with the Town of Stratford staff, the expectation is for this wellfield to be decommissioned in the future due to required upgrades and a lack of a protective zone around the wellfield. A summary of current wellfield pumping capacity is found below in **Table 4**.

**Table 4** Summary of Wellfield Pumping Capacity

Wellfield Name	Peak Pumping Rate (L/s)
Pondside	26.5
Cable Heights	22.7
Fullerton	28.4
<i>Beacon Hill</i>	<i>Inactive</i>
<b>Total</b>	<b>77.6</b>

In addition to the wellfields and water stations, the Town currently maintains approximately 86 km of watermains and one reservoir (water tower) with approximately 757 m<sup>3</sup> of storage capacity.

In 2022 a Water System Review was completed for the Town of Stratford by CBCL. The study outlines different pressure zones within the Town and the suggested upgrades where required to meet Basic Fire Flow as described in the Fire Underwriters Survey (FUS). Generally, the Town's water demands are well



## **BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY**

met with the current infrastructure. Below are a few key findings of the report as they relate to the future growth of the town.

- Area number five near upper Tea Hill is above the 40 m contour and is considered to be in the booster zone. To meet fire flow requirements for a residential zone (3,600 L/min), this location will ultimately require a fire rated booster pump and replacement of small diameter watermain with a new 300 mm main.
- The Community Campus area will meet the fire flow requirements once construction of the new 250 mm and 300 mm diameter watermains between Duffy Road and Hollis Avenue are complete.
- The lower Tea Hill area is not currently serviced by municipal water services. To meet the FUS requirements, a new 300 mm diameter watermain will need to be extended from Kinlock Road.
- The core area around the Trans-Canada Highway and waterfront is currently capable of meeting the 11,000 L/min requirement for commercial and industrial areas without any additional upgrades or revisions to the current infrastructure; however, the duration of the fire water supply is limited due to the current storage capacity of the existing reservoir. To meet the 2.4-hour fire duration as stipulated in the (FUS), an additional reservoir will be required.

### **2.5.1.1 Planned Upgrades and Improvements**

During discussion with the Town of Stratford's Infrastructure Department and with review of active tenders issued, the following planned improvements were noted.

- The Town issued a request for proposal (RFP) in early 2023 for the installation of a second water tower as recommended in the Water System Review. The RFP outlines the plan to construct a second water tower adjacent to the existing tower near Strawberry Hill. The new tower is expected to provide an additional 1,900 m<sup>3</sup> of storage for a total of 2,657 m<sup>3</sup>. The total reservoir volume is expected to meet the needs of approximately 16,000 residents and will resolve the 2.4-hour fire duration requirement for the core area.
- The construction of the proposed Community Campus will complete the water loop between Duffy/Bunbury Road to Hollis Avenue. A 250 mm main will extend from the existing stub at Bunbury Road, south into the campus, a 200 mm main will extend west toward Mason Road and a 300 mm main continues south to Hollis Avenue to connect with the existing 300 mm main.

### **2.5.1.2 Future Development**

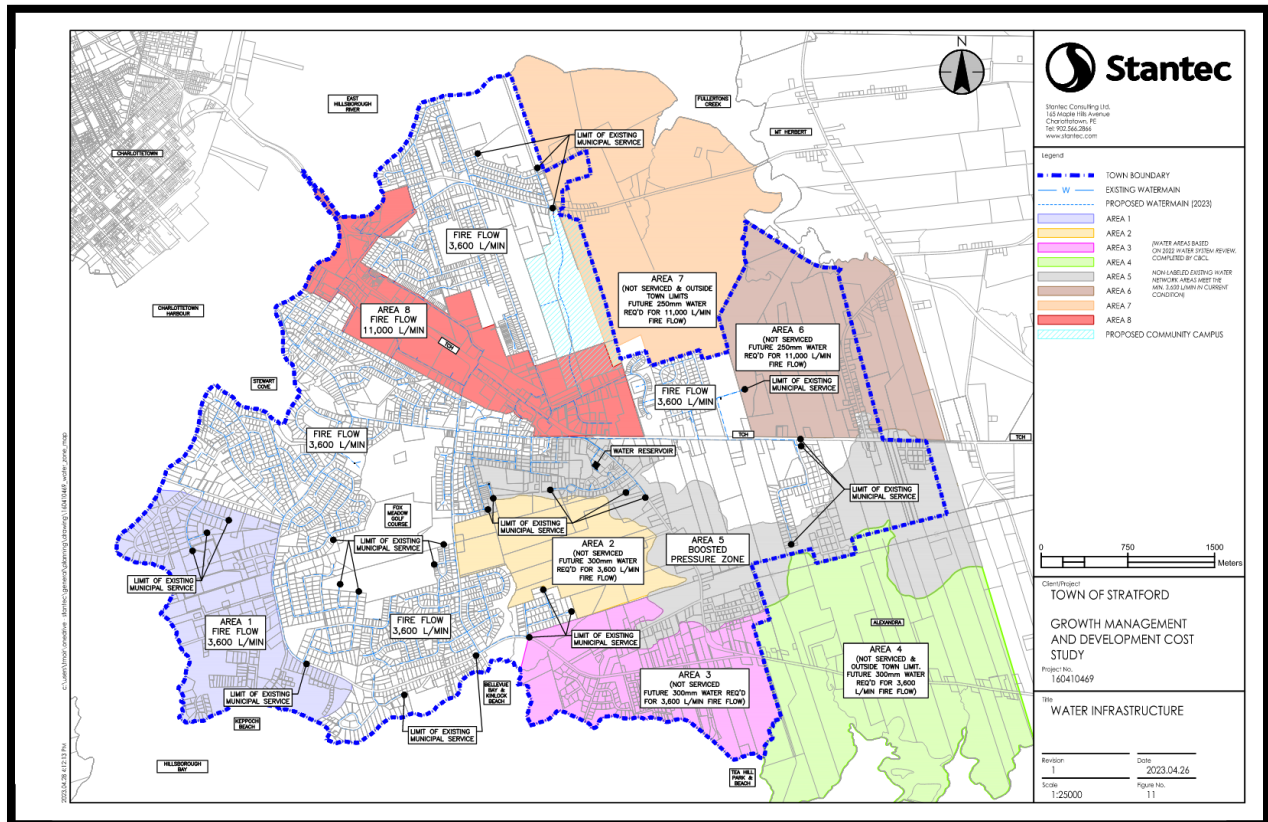
In review of the Town's existing infrastructure (including planned upgrades for 2023), the central core (Area 8) and the undeveloped land west of the proposed Community Campus, offer the most cost effective and efficient opportunities for increased development and densification. Development of individual lots will experience typical servicing costs associated with private lot development, but without



# BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY

major offsite municipal infrastructure upgrades, as the existing infrastructure provides sufficient flow capacity in the current state.

**Figure 6 Water Infrastructure**



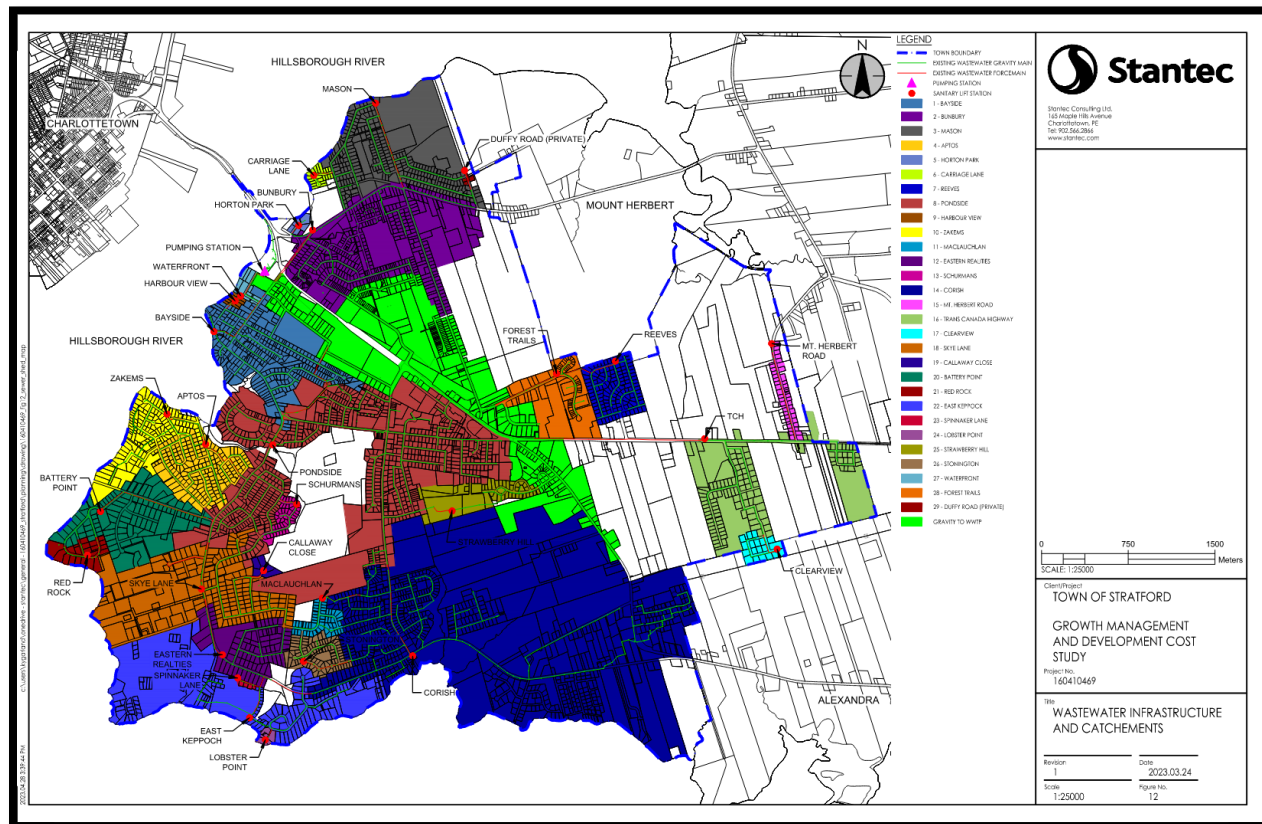
## 2.5.2 Wastewater

The Town of Stratford currently maintains approximately 87 km of gravity wastewater sewer mains and an additional 16 km of wastewater force-mains. A total of twenty-eight (28) duplex wastewater lift stations and one (1) private lift station service the twenty-nine (29) catchment areas (**Figure 14**) within the Town. Effluent from all lift stations is directed to a large pumping station located in the northwest portion of the Town, near the entrance to the Hillsborough Bridge. Effluent from the pumping station is pumped via a twin 450 mm forcemain across the Hillsborough Bridge to the Charlottetown Pollution Control Plant (CPCP) for treatment prior to release into the Hillsborough River.



# BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY

**Figure 7 Wastewater Infrastructure and Catchments**



Several of the lift stations service small areas of well-established residential developments that are fully developed and unlikely to experience land-use change or further densification, therefore, wastewater flows in these areas are unlikely to increase in the future. A review of the existing catchment areas shows sixteen (16) of the lift stations have non-serviced area, land either not yet developed or developed but not connected to the sewer system. **Table 5** below details the design areas and flows for all catchments based on information collected from the design briefs prepared at the time of installation of each lift station. Existing flow data for these lift stations was not currently available.



**BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY**

**Table 5 Summary of Wastewater Lift Station Catchments and Flows**

<b>Wastewater Lift Station Name</b>	<b>Design Catchment Area (ha)</b>	<b>Design Pumping Capacity (per pump) (L/s)</b>
Bayside	77	37.9
Bunbury	97	53.6
Mason	52	17.3
Aptos*	-	-
Horton Park*	-	-
Carriage Lane*	-	-
Reeves	23.9	16.6
Pondside		63.1
Harbour View*	-	-
Zakems	17.8	7.04
MacLauchlan	29	8.5
Eastern Realities	84	20.1
Schurmans*	-	-
Corish	46.9	25.2
Mt. Herbert Road	25.4	12.8
Trans-Canada Highway (TCH)	74	43.6
Clearview*	-	-
Skye Lane*	-	-
Callaway Close	3.3	1.2
Battery Point*	-	-
Red Rock*	-	-
East Keppoch	-	9.5
Spinnaker Lane*	-	-
Lobster Point*	-	-
Strawberry Hill*	-	-
Stonington	22.1	11.1
Waterfront		20.47
Forest Trails	25	30
Pumping Station**	-	240

\* Design Briefs were not available for these lift stations.  
 \*\*The pumping station is a triplex station with two 450 mm forcemains. Pumps may be upgrades to convey an anticipated 20-year peak flow of 570.9 L/s.

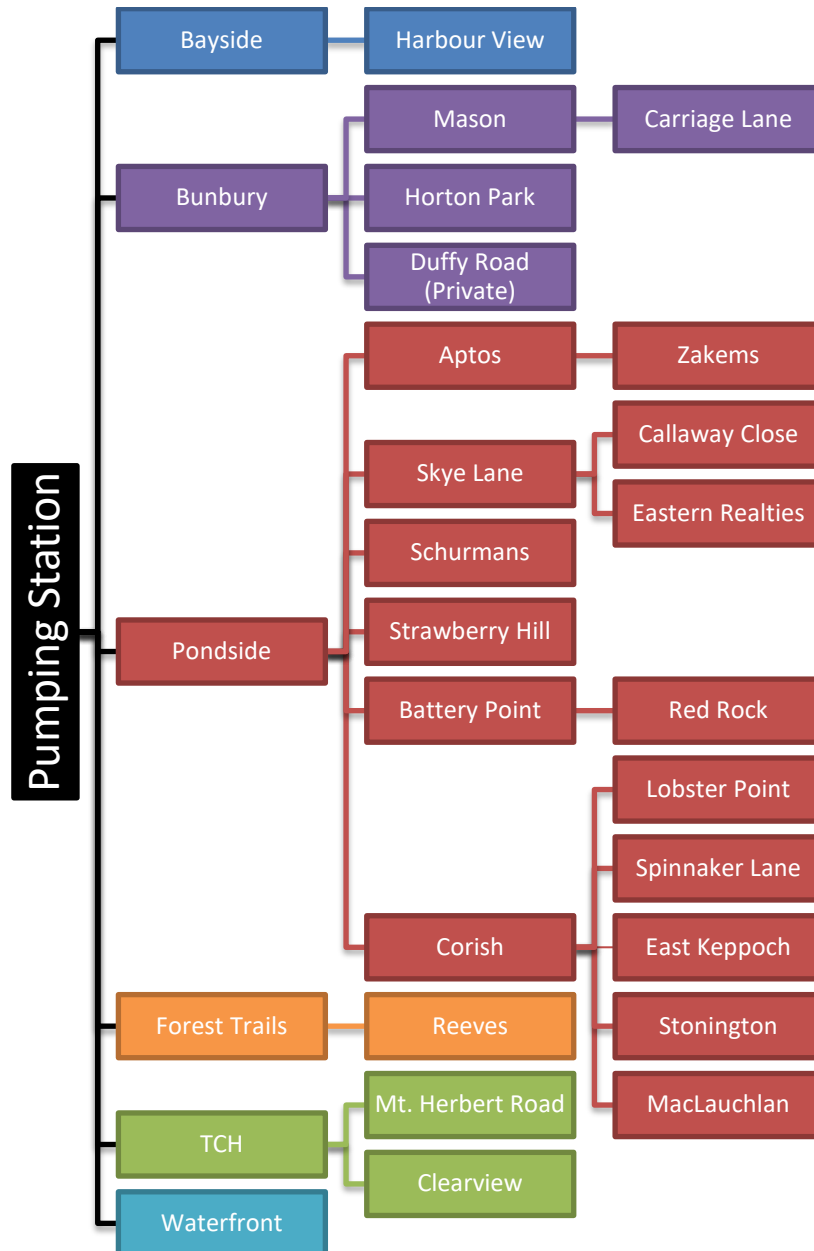
There are seven main catchment areas that contribute directly to the pumping station, six of which are pumped and one that flow by gravity. All other lift stations pump their effluent to one of these six lift





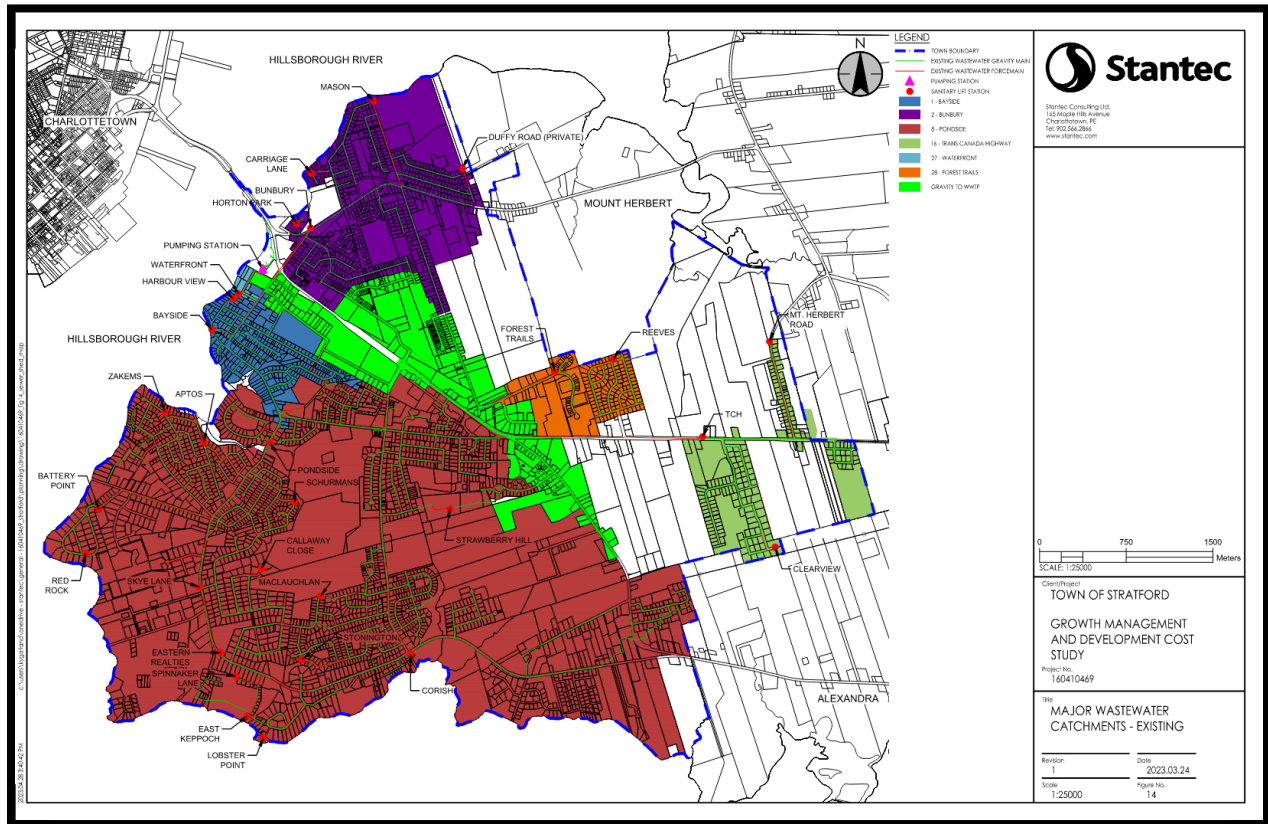
stations. The following **Figure 15** and **Figure 16** provide a hierarchical summary of the lift stations and mapping of the overall catchments for these six lift stations.

**Figure 8 Existing Wastewater Lift Station Hierarchy**



# BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY

**Figure 9 Existing Major Wastewater Catchments**



As shown in the above figures, the pondside lift station currently handles a significant proportion of the Town’s wastewater flow. Relying so heavily on a single lift station represents a significant risk within the system.

### 2.5.2.1 Planned Upgrades and Improvements

In discussion with the Town of Stratford Infrastructure Department, the following planned improvements for the existing wastewater collection system were noted.

- Upgrades to Bunbury Lift Station to increase pump capacity. This work is to be completed in 2023/24.
- Upgrades to Corish Lift Station to increase pump capacity. This work is to be completed in 2023/24



## BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY

- Installation of 1,160 m of gravity wastewater mains, 980 m of wastewater forcemain and a duplex wastewater lift station to service the Community Campus development located on the eastern edge of the municipality. This work is to be completed in 2023/2024
- Extension of forcemain from Corish Lift Station to connection at 600 mm gravity wastewater main located near the intersection of MacKinnon Drive/Glen Stewart Drive and Perley Drive. It is anticipated that this scope of work will be undertaken in 2024.
- Redirect flows from gravity main located on Stratford Road to Bayside Lift Station via diversion manhole located at the intersection of Stratford Road and Keppoch Road. No timeframe was provided for the completion of this work.
- Decommissioning of Aptos Lift Station with corresponding upgrades to Zakems Lift Station. No timeframe was provided for the completion of this work.
- Improvements to the Mason Road Lift Station and associated forcemain. No timeframe was provided for the completion of this work.
- Decommissioning of Harbourview Lift Station, install gravity sewer main to direct flow to Waterfront Lift Station. No timeframe was provided for the completion of this work.
- Decommissioning of Reeves Lift Station, install gravity sewer main to direct flow to Forest Hills Lift Station. No timeframe was provided for the completion of this work.
- Decommissioning of MacLauchlan Lift Station. Decommissioning is contingent on the installation of a new Lift Station, by a private developer, to be located in Foxwoods Subdivision (Phase 2) to where flow from MacLauchlan Lift Station will be directed via gravity main. Timing of this work will be contingent on the development of Foxwoods Subdivision Phase 2.

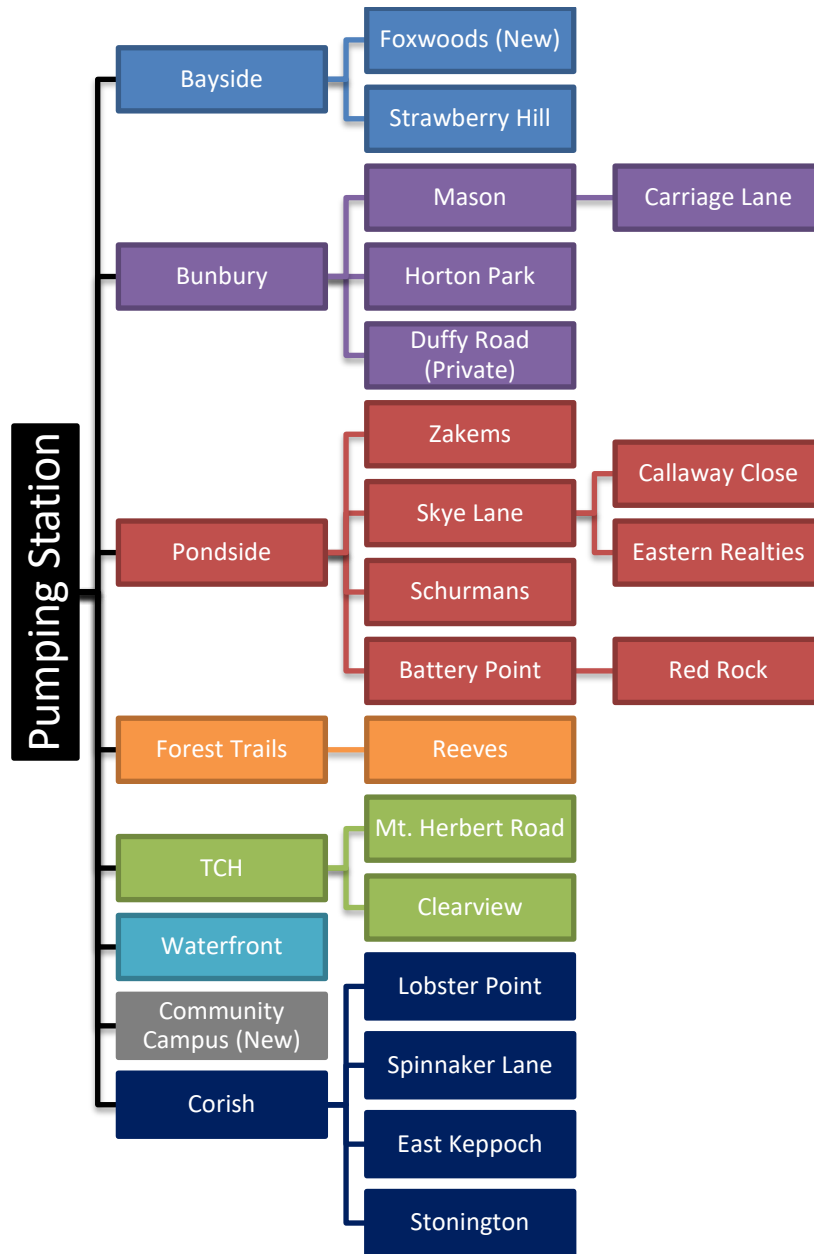
All work associated with the above noted improvements is contingent on the Town receiving funding from external sources to complete these works.

The above listed improvements will significantly reduce the area which is serviced by the Pondsides lift station. By redirecting flow to other lift stations and connections points within the gravity mains, the Town will be addressing a significant risk in their current network.

Upon completion of all planned improvements noted above, there will be eight lift stations which contribute effluent flow directly to the pumping station via gravity main. All other lift stations will direct flow to one of these eight. This will result in changes to the lift station hierarchy and catchment mapping shown above. **Figure 17** and **Figure 18** below reflect these changes.

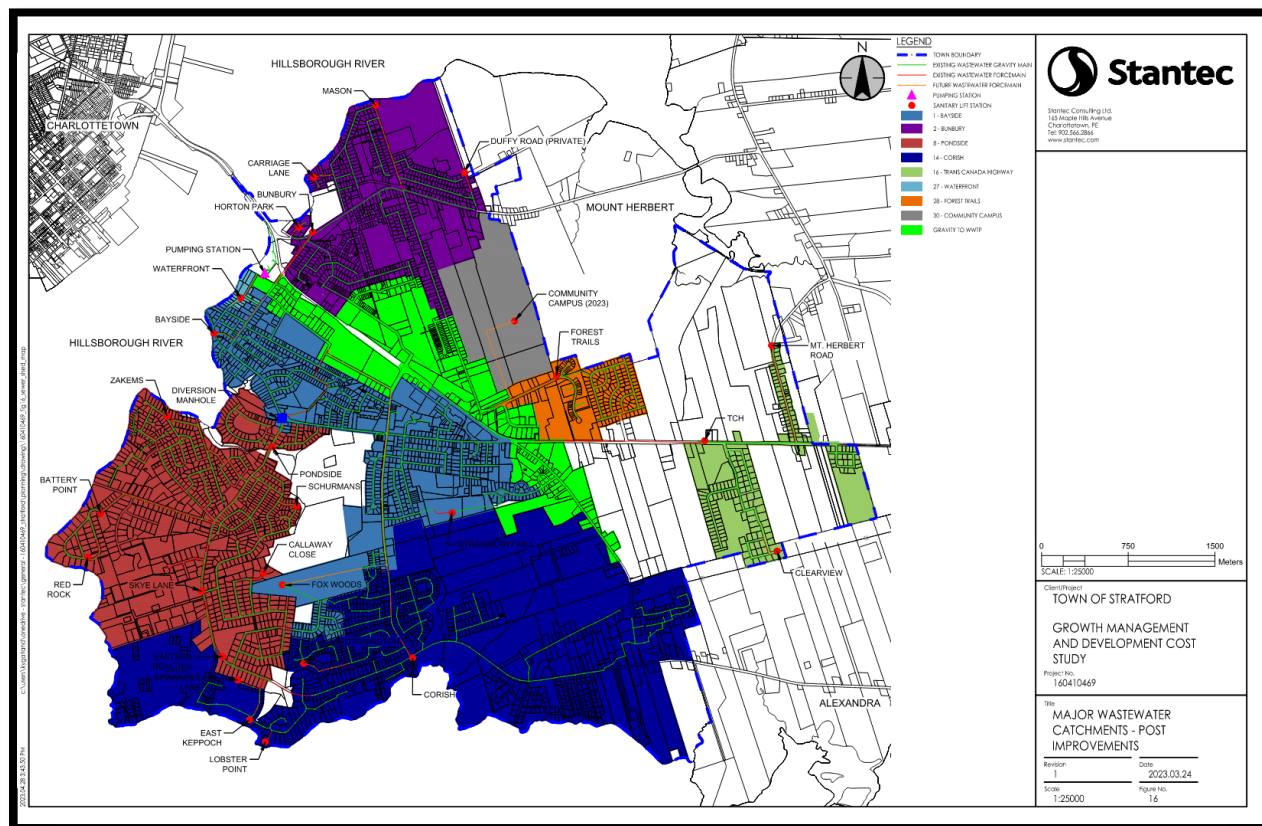


Figure 10 Future Wastewater Lift Station Hierarchy



# BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY

**Figure 11 Major Wastewater Catchments – Post Improvements**



## 2.6 STORMWATER NETWORK REVIEW

Within the Town of Stratford, all public roadways and stormwater infrastructure, including pipes, manholes, catch basins, culverts, and ditches, are the responsibility of the PEI Department of Transportation and Infrastructure (PEI DTI). As a result, the costs associated with the maintenance and upkeep of this infrastructure is also the responsibility of the provincial government. Furthermore, the review and approval for any new stormwater infrastructure required for development within the Town is completed by the province.

In recent years the province has instituted the requirement that any new development must limit post-development peak flow to equal or less than pre-development peak flow, with the most recent guidelines requiring the use of rainfall data adjusted for climate change in the post-development calculation. Any development which is not able to meet this requirement can alternately review the capacity of the downstream stormwater mains to the closest outfall and determine if any upgrades are required to accommodate the increase flow from their development. These upgrades would then be the responsibility of the developer to complete. Additionally, developments within the Town of Stratford which are adjacent



## BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY

to the shoreline and can demonstrate no impact to adjacent properties due to increase post-development flows, may not need to satisfy this requirement.

Although the stormwater infrastructure is currently approved and maintained by the provincial government, there are opportunities for the Town of Stratford to collaborate and improve on the stormwater infrastructure moving forward. A report completed by CBCL in 2012 titled *Low Impact Development Guidelines*, noted recommendations for policies and design guidelines regarding stormwater. Some of the recommendations are as follows:

- In collaboration with the PEI DTI, complete master drainage plans based on anticipated future development for each watershed within the Town that would be used to identify required upgrades and direct future improvements.
- New development within the Town be required to limit post-development peak flows to equal or less than pre-development peak flows. As noted above, this policy is currently in place via the provincial approval process.
- The Town requires the completion of stormwater management plans for all new development or redevelopment of existing sites. Provide a list of acceptable Best Management Practices (BMP's) which can be used to achieve the provincial requirements noted above.

In discussion with the PEI DTI, the idea of establishing major conveyance and stormwater management facilities was echoed like the first bullet above. This willingness to collaborate would benefit the Town as the impacts of climate change continue to escalate with the increase in frequency and intensity of storm events. Establishing overland drainage routes and storage facilities used to service larger areas of land will help to limit the impacts of flooding from large storms and enable for more densified development which may otherwise be impeded by the requirement to control peak flows.

PEI DTI also indicated that any roadway within new developments located in the more densely populated Towns, such as Stratford and Cornwall, will require a curbed cross-section with storm sewer mains rather than the traditional road cross-section with ditches. This change will also have an impact on the flows resulting from storm events as ditches not only provide for conveyance of stormwater but also allow for infiltration. With a curbed and piped system this will increase the resulting runoff, increasing the importance of having sufficient overland drainage routes and stormwater facilities to avoid downstream flooding and damage.

### 2.6.1.1 Planned Upgrades and Improvements

In discussion with staff at the Province of Prince Edward Island Transportation and Infrastructure Department, the only noted future improvement is for the upsizing of the existing stormwater main located along Bunbury Road. A timeline for when this is to be completed was not available, however, it was noted that this improvement is tied directly to the full build out of the Kelly Heights residential subdivision.



## **2.7 CULTURE AND RECREATION INFRASTRUCTURE**

### **2.7.1 Culture and Recreation**

As part of our review, we have evaluated the town’s recreation programming and events, and available assets to support this work, as well as key community arts and culture infrastructure. This review included the 2011 Stratford Library & Cultural Centre Report, 2011 Natural Heritage Study, 2019 Urban Forest Study, and available documentation of recreation facilities and programs, mainly from the Town’s website and/or other online sources.

### **2.7.2 Recreation Programming and Events**

The Town of Stratford delivers a wide variety of recreation programs and events for its residents. Focusing on all ages, the town provides opportunities for soccer, baseball, softball, volleyball, hockey, cricket, ball hockey, basketball, tennis, badminton, family fun night, fitness classes, walking, and often partners with Go PEI for various events too. In addition, the Town also hosts special events such as Canada Day celebrations, Stratford WinterFest, a New Year’s Day Levee, Remembrance Day, and Children’s Christmas Party. With the population growth expected to continue, the demand for additional programs and events within the community is expected to continue. Expansion plans are well-underway with the proposed Community Campus plan, which is noted below and shown in Figure 19.

A central recreational asset for the community is the Stratford Town Centre complex. Not only does the facility provide the main administrative offices for the town, but it also contains the Stratford Recreation Centre, which is attached to the building on the southeast side. It contains room rental space, a gymnasium, walking track and fitness equipment. It is a modern facility, well used by residents and therefore an integral part of the Town’s recreation department.

Just outside the Town Centre complex is the Stratford Dog park and a splash pad.

Furthermore, the Town owns and maintains a range of popular parks, open spaces, and trails which are popular with Stratford residents.

The parks, open spaces and trails include:

**Fullerton’s Creek Conservation Park** is a 140-acre conservation area around the Town of Stratford’s wellfield. The area includes walking trails, a multi-purpose field and viewing platform overlooking Fullerton’s Marsh.

**Keppoch Park** is an active park and contains a soccer field and playground equipment.

**Kinlock Park** is a popular centrally located multi-use facility with tennis courts, baseball field, soccer pitch and playground equipment.



## BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY

**Pondside Park**, formally the site of a government fish hatchery, is an 11-acre park consisting of both active and passive spaces with open and wooded areas and some small streams. The park is used by residents for a variety of recreational activities including picnics, tennis, basketball, ball hockey, outdoor rink in the winter and used by the Red Cross (park and pond) for summer programs. The Park is also one of the remnant forest areas in the town with diverse tree species and a small area of old growth forest which provide refuge and food sources for many birds.

**Rankin Park** is a small, but popular neighborhood park.

**Reddin Park** is another active and passive space with playground equipment, a walking trail, and a natural area.

**Robert L. Cotton Memorial Park** is a tribute to Robert L. Cotton and is one of four parks currently in the process of a Town Master Planning Exercise.

**Tea Hill Park** is a 15-acre property with public access to Tea Hill Beach. The park features the town's new cricket pitch, a beach volleyball court, playground equipment and public washrooms. Tea Hill Park is one of the town's most popular facilities including picnicking, swimming, youth soccer programs, various public functions such as Canada Day Celebration, as well as other family reunions and corporate outings.

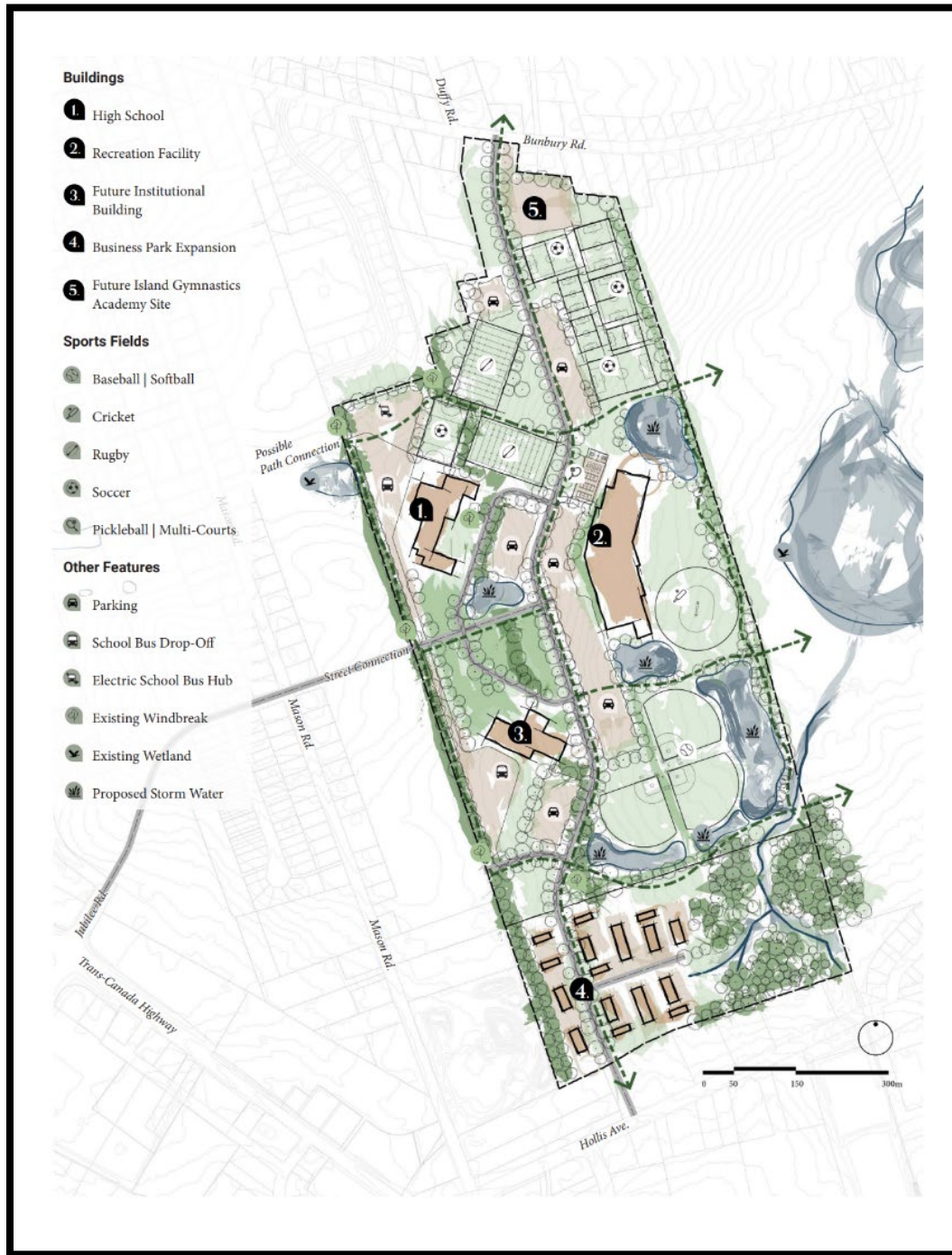
Additionally, Stratford has nearly 30 km of trails throughout the Town to complement the 20 km of sidewalk and 40 km of roadside bike lanes. These trails are a mix of natural, paved, and gravel surfaces over public and private lands. Some of the trails within the town include Fullerton's Creek Conservation Park Trail System, Clearview Estates Trail System, Kinlock Creek & Area Trail System, Tuckers Way Hiking Trail, Pondside Park Hiking Trail, Robert L. Cotton Trail, and the Trans Canada Trail.

In terms of facilities and other recreation assets, the town owns and maintains the Stratford Skatepark. Constructed in 2018, the park provides features for skateboarding, in-line skating, and BMX biking.





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**Figure 12 Stratford Community Campus Plan**



## **BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY**

The Town has also established several outdoor skating rinks and has made use of other seasonal assets to be able to offer such services. The Bunbury Outdoor Hockey Rink is the largest facility, while the Pondside multi-use courts offer hockey and ringette, and the Parkside tennis courts offer skating only. Other outdoor facilities include:

- Bunbury Park Ball Field
- Keppoch Park Soccer Field
- Kinlock Park Ballfield
- Kinlock Park Tennis Courts
- MacNeil Fields (baseball and softball)
- Stratford Outdoor Soccer Complex
- Tea Hill Cricket Pitch

Given the rapid population growth in Stratford, the Town has identified the need for additional and enhanced new recreation facilities. The Town has moved ahead with its plans to create a series of new recreational amenities, including a new recreation complex that is expected to be connected to a new high school. The Stratford Community Campus will be developed over a period of years and will include the new high school, sport fields, multi-use courts, trails, and a community wellness centre. There is also sufficient land for a junior high school in future. As noted previously, the Community Campus Plan is shown in Figure 19.

### **2.7.3 Natural Heritage**

In 2011, the Town completed a Natural Heritage Study. The study was intended to serve as a guide to managing the natural heritage while maintaining economic and environmental sustainability throughout the community. The primary goals of the study were to:

1. Increase the understanding of Stratford's natural heritage features and systems.
2. Provide information and a frame of reference for the acquisition and preservation of natural areas and features.
3. Provide a framework for the development of enforcement of land-use planning policy.
4. Encourage and facilitate private stewardship and public education.

The report covers applicable protective and regulatory legislation for buffer zones and wetlands, and provides recommendations on protection and acquisition measures, as well as specific advice for the protection of coastal marsh, salt marsh, freshwater wetland, natural landscapes, buffer and riparian zones, coastal zones, and high sloped areas.

The study has been a guiding document for the Town's land-use planning efforts, strategic acquisitions, and the development of environmental policy. As a result, the Town's natural heritage has significant importance and value by Stratford's residents. These values helped build a case for the town hiring an



## BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY

Environmental Sustainability Coordinator and establishing various environmental initiatives, such as a Residential Tree Planting Program.

### 2.7.4 Arts and Cultural Assets

Most arts and cultural assets and organizations are located in the City of Charlottetown, which is only a short commute away. This would include performing arts venues, visual arts and craft opportunities and most multi-use spaces, socially those with large seating capacities. The Town is home to Camp Gencheff, which provides quality programs for adults and children with intellectual and physical disabilities and provides rental options of their facilities. Both St. Joachim's and Our Lady of the Assumption offer Parish Halls also offer rentals opportunities to community groups and can accommodate a variety of events, such as meals, anniversary/birthday parties, wedding receptions, meetings, concerts, dances, fitness classes and other similar activities. Other options include the Cotton Centre, the Stratford Youth Centre, with the main facility being the Stratford Town Centre which has several meeting spaces (such as the Southport Room, Battery Point Room, Keppoch/Kinlock Room) and a large gymnasium.

The Town has also made efforts to increase public art in the community. The Town website contains a list of works that have either been donated to the Town or commissioned. The collections include work as recent as 2022, such as *Leap and Mothwings*.

In terms of local service groups, the Mayflower Seniors' Club seems to be the most popular and successful, with over 150 members. The Club has dedicated meeting and activity space in the Cotton Centre located in the Robert L. Cotton Memorial Park on Bunbury Road. With a very low membership of only \$7.00 annually, the club is open at all times for the use of our seniors for crafts, card playing, knitting or just conversations outside of activity times. The Seniors' Room is also available for public rentals, such as family reunions, birthday parties, religious functions or community meetings. Two other very notable and committed service groups in the community are the Stratford Area Lions Club and the Stratford Area Watershed Improvement Group.

The Stratford Public Library is located at 25 Hopeton Road and is well used by the community. The town completed the Stratford Library & Cultural Centre Report in 2011 to evaluate options for future growth of the facility. Based on the research completed, consultations and a thorough assessment of the various options, the report recommended that the mandate for a new library and cultural facility include the following:

- Geographic Mandate: residents of the Town of Stratford
- Artistic Mandate: all art forms with emphasis on literary, dance, music, and visual arts programming
- Specialization: serving all ages with a particular emphasis on programming for children and youth.

The report presented two options (A and B), both of which contemplated additions to the Town Hall Building, with one larger than the other (by approximately 7,000 square feet). The addition contemplated library spaces, studio spaces, meeting space, and administrative storage/mechanical/servicing areas. Option A also included a small performance space and a small cafe space. The Class D estimated costs



## BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY

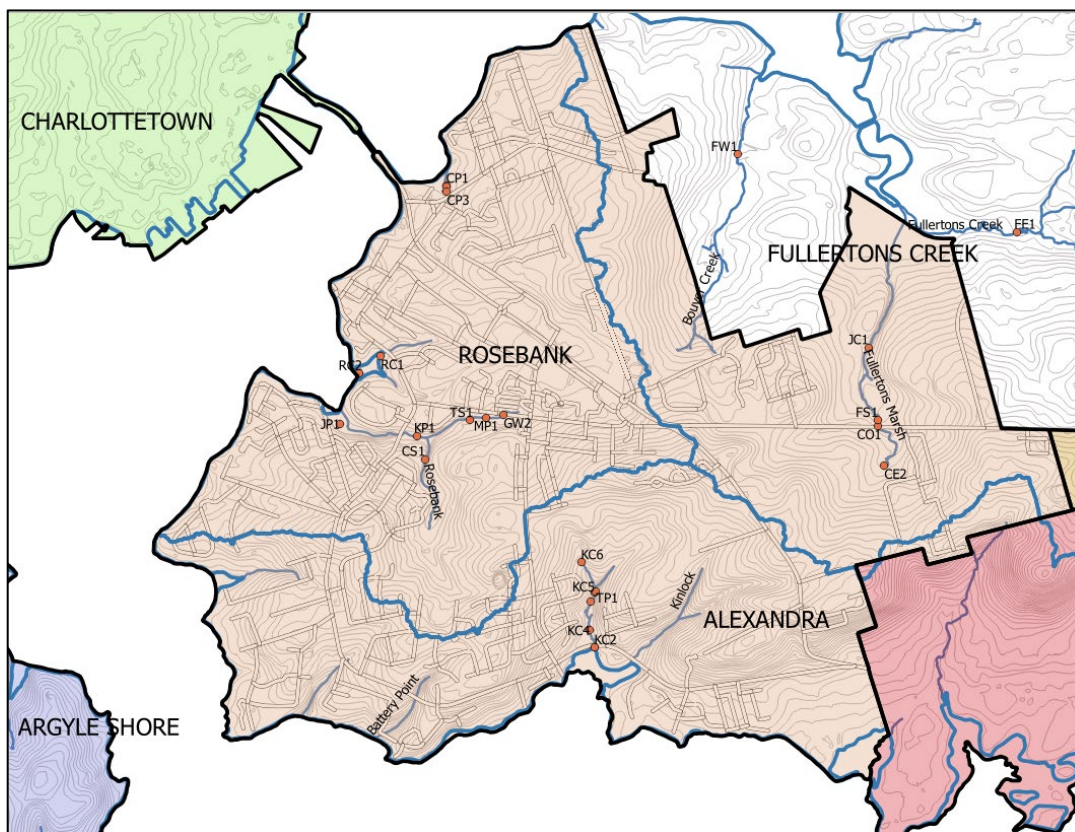
for the two options were, \$6,266,993 for Option A and \$4,110,955 for Option B. The report also details anticipated revenue and expenses for both options.

### 2.8 WATERSHED STUDY

#### 2.8.1 Description of Natural Hydrologic Features

The Town of Stratford municipal boundary is located within three primary watersheds draining to the Hillsborough River at the confluence of Hillsborough, West and North Rivers at the northwest boundary, and to Hillsborough Bay along the south, as depicted in **Figure 20**. The Fullerton's Creek Watershed drains approximately 3,259 hectare (ha) to the shores of the Hillsborough River. The Rosebank Watershed drains approximately 855 ha to the river confluence and the Alexandra Watershed drains approximately 2,074 ha to Hillsborough Bay. Primary drainage pathways within each watershed include surface runoff to adjacent watercourses, shore-direct surface runoff and discharge from the stormwater collection system.





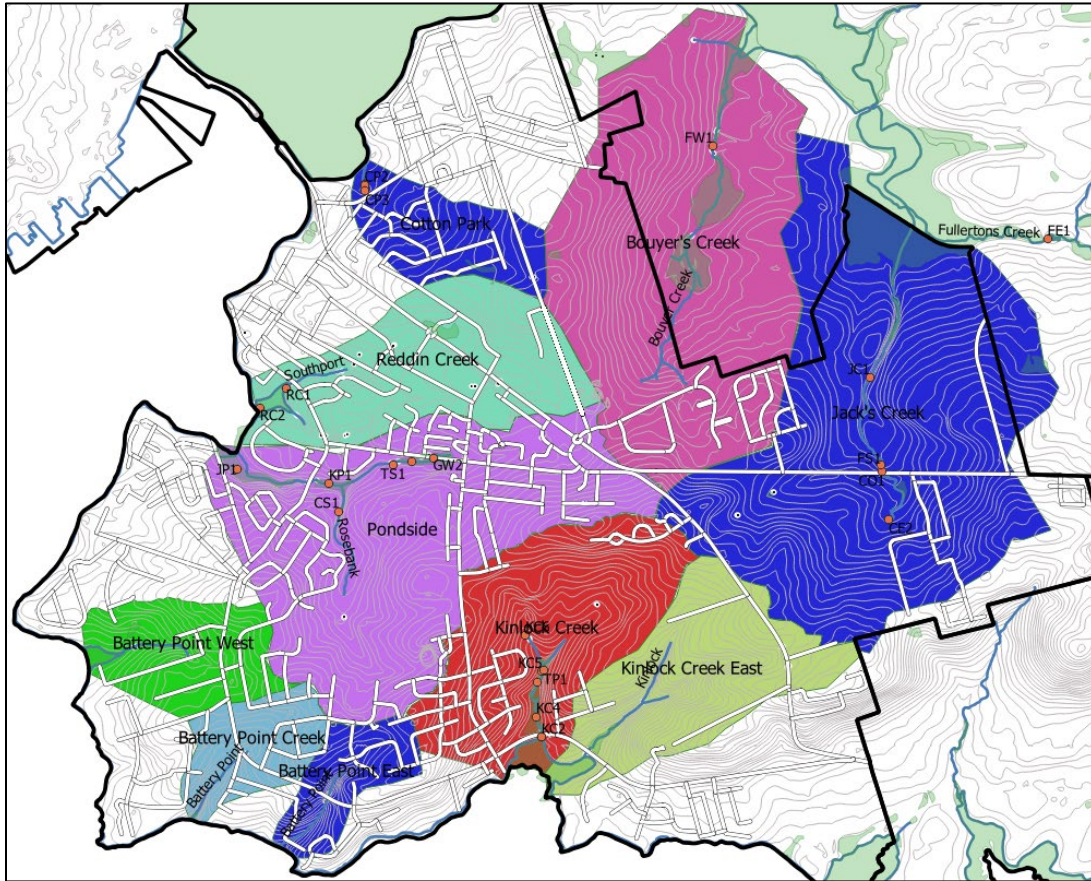
**Figure 13 Primary Watersheds within Stratford Municipal Boundary**

**2.8.1.1 Watercourses and Associated Sub-Catchments**

There are several watercourses identified within each primary watersheds, with each watercourse and associated tributary streams draining a sub-catchment of the primary watershed to a surface water outlet location (**Figure 21**). Within the boundaries of the Town, five (5) primary watercourses are identified in the Alexandra Watershed, two (2) in the Rosebank Watershed and two (2) in the Fullerton’s Creek Watershed. It is noted that surface runoff from within Town boundaries drains topographically to one (1) watercourse in unincorporated areas of the Fullerton’s Creek Watershed.



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**Figure 14 Watershed Sub-Catchment Boundaries**



# BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY

A summary of watercourses, sub-catchments and attributes is given in **Table 6**, below.

**Table 6 Summary of Watercourses and Topographic Sub-Catchments**

Primary Watershed	Primary Watercourse ID	Sub-Catchment ID	Sub-Catchment Area (ha)
Rosebank	Rosebank Creek	Pondside	328
Rosebank	Reddin Creek	Reddin Creek	158
Alexandra	Battery Point Creek West	Battery Point West	78
Alexandra	Battery Point Creek	Battery Point	54
Alexandra	Battery Point Creek East	Battery Point East	46
Alexandra	Kinlock Creek	Kinlock Creek	185
Alexandra	Kinlock Creek East	Kinlock Creek East	139
Fullerton's Creek	Fullerton's Marsh Creek	Jack's Creek	382

## 2.8.1.2 Wetlands and Waterbodies

Saltwater marshes are identified at the outlet of most watershed sub-catchments, including Jack's Creek, Reddin Creek, Pondside, Battery Point West, Kinlock Creek and Kinlock Creek East. These marshes are located at the interface between the freshwater stream discharge and the marine receiving waters of the Hillsborough River and Bay. Inland wetlands are identified within the Pondside watershed, adjacent to the Trans-Canada Highway, and the Battery Point West Watershed, within an undeveloped forested area. The wetlands are 1.5 ha and 0.36 ha in respective size with no identified drainage outlets. A 0.45 ha wetland is identified in the Pondside watershed adjacent to the Stratford Road and forms the headwater of the drainage path through Rosebank Creek. Wetlands are identified through available provincial GIS mapping and may not represent the actual presence of wetlands within the Town. Identification and classification of wet areas via aerial imagery interpretation and field-delineation is recommended prior to development of natural areas.

The presence of significant waterbodies within Town boundaries is limited to the Pondside sub-catchment within the Rosebank primary watershed. The headwaters of the Pondside sub-catchment flow through Moore's Pond, Kelly's Pond and Jordan's Pond prior to discharge into Stewart's Cove, and ultimately the Hillsborough River.

## 2.8.2 Land Use and Areal Pollutant Loading

### 2.8.2.1 Land Use by Sub-Catchment

Land use varies within Town boundaries, with low-to-medium density residential, commercial and industrial areas adjacent to and interspersed with agricultural and forested areas. The highest density of developed area is located within the Rosebank Watershed and western area of the Alexandra Watershed. Land use by sub-catchment watershed is shown in **Table 7**, below. Land use is based on current land



## BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY

cover from publicly available aerial imagery and is an aggregate of land cover within both publicly and privately owned lands.

**Table 7 Approximate Land Use Distribution by Sub-Catchment**

Primary Watershed	Sub-Catchment ID	Sub-Catchment Area (ha)	Approximate Land Use Distribution
Rosebank	Pondside	328	Med- Density Residential (30 ha) Forested (75 ha) Agricultural (223 ha)
Rosebank	Reddin Creek	158	Med-Density Residential (143 ha) Agricultural (15 ha)
Alexandra	Battery Point West	78	Low-Density Residential or Open Lands (38 ha) Forested (20 ha) Agricultural (20 ha)
Alexandra	Battery Point	54	Low-Density Residential or Open Lands (31 ha) Forested (15 ha) Agricultural (8 ha)
Alexandra	Battery Point East	46	Low to Med-Density Residential (30 ha) Forested (16 ha)
Alexandra	Kinlock Creek	185	Med-Density Residential (71 ha) Agricultural (99 ha) Forested (15 ha)
Alexandra	Kinlock Creek East	139	Low Density Residential (61 ha) Agricultural (45 ha) Forested (33 ha)
Fullerton's Creek	Jack's Creek	382	Low to Med-Density Residential (70 ha) Agricultural (224 ha) Forested (88 ha)

### 2.8.2.2 Areal Phosphorous Loading by Land Use

Phosphorous is a commonly selected indicator parameter to assess water quality with developed and undeveloped watersheds. Phosphorous is considered a limiting nutrient in natural systems, meaning vegetation growth within waterbodies and watercourses is typically controlled by limited concentrations of phosphorous present in natural systems (USEPA 2022). Anthropogenic sources of phosphorous, including agricultural runoff, urban and residential runoff, poor erosion and sediment control during construction, and wastewater discharges or leakages, contribute to the increase in phosphorous in receiving water systems. Impacts of increased phosphorous concentrations include increased vegetation growth and reduced dissolved oxygen concentrations; impacting fish habitat and increasing mobilization of certain sediment-associated metals. Where the Town is primarily serviced by centralized wastewater





## BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY

treatment systems, phosphorous loading rates are primarily associated with changes in land use. Phosphorous loading rates for select land uses are provided in **Table 8**, below. In absence of mitigation, changes in land use from forest/parkland, wetland or undeveloped areas to commercial and residential development represent increases in area-based phosphorous loading to receiving water bodies.

**Table 8 Area-based Phosphorous Loading Rates for Select Land Uses**

Land Use	Phosphorous Loading Rate (g/m <sup>2</sup> ·yr)
<b>Developed Lands</b>	
Partially Cleared	0.0625 <sup>3</sup>
Roadway	0.35 <sup>3</sup>
Commercial Development	0.202 <sup>1</sup>
High-Density Residential	0.035 <sup>1</sup>
Medium-Density Residential	0.030 <sup>1</sup>
Low-Density Residential	0.025 <sup>1</sup>
<b>Natural Lands</b>	
Forest/Parkland	0.0024 <sup>2</sup>
Undeveloped/Grassed	0.015 <sup>2</sup>
Wetland	0.0024 <sup>2</sup>
<b>Agricultural Lands</b>	
Row Crops	0.026 – 0.1860 <sup>2</sup>
Row Crops with Soil Conservation Practices	0.010 – 0.030 <sup>2</sup>

<sup>1</sup>Waller and Hart 1986; <sup>2</sup> Reckhow *et al.* 1980; <sup>3</sup> MDEP 2000

### 2.8.3 Existing Water Quality

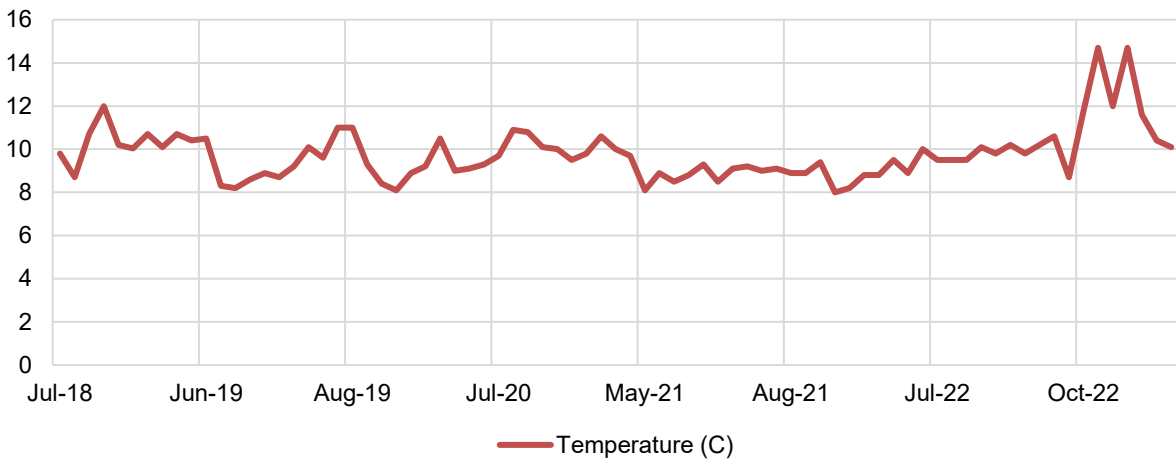
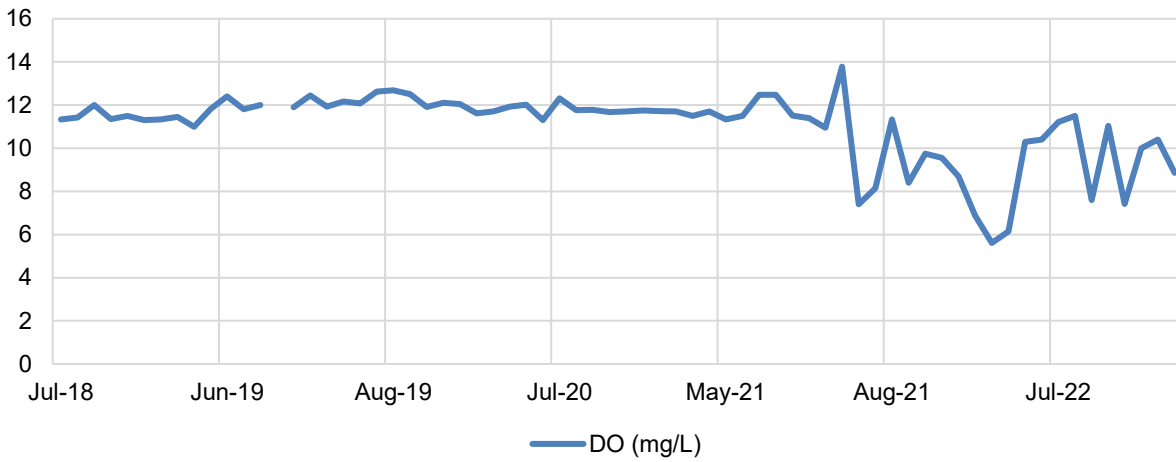
Water quality monitoring has been completed by the Stratford Area Watershed Improvement Group (SAWIG) at select watercourses and waterbodies within and exterior to Town boundaries. Monitoring typically includes in-situ measurements of pH, dissolved oxygen (DO), conductivity and temperature, with laboratory analysis of total phosphorous (TP), total nitrogen (TN), total suspended solids (TSS) and total dissolved solids (TDS). A review of water quality at select locations is provided in the following sections. Monitoring locations with multiple seasons of data are selected for review.



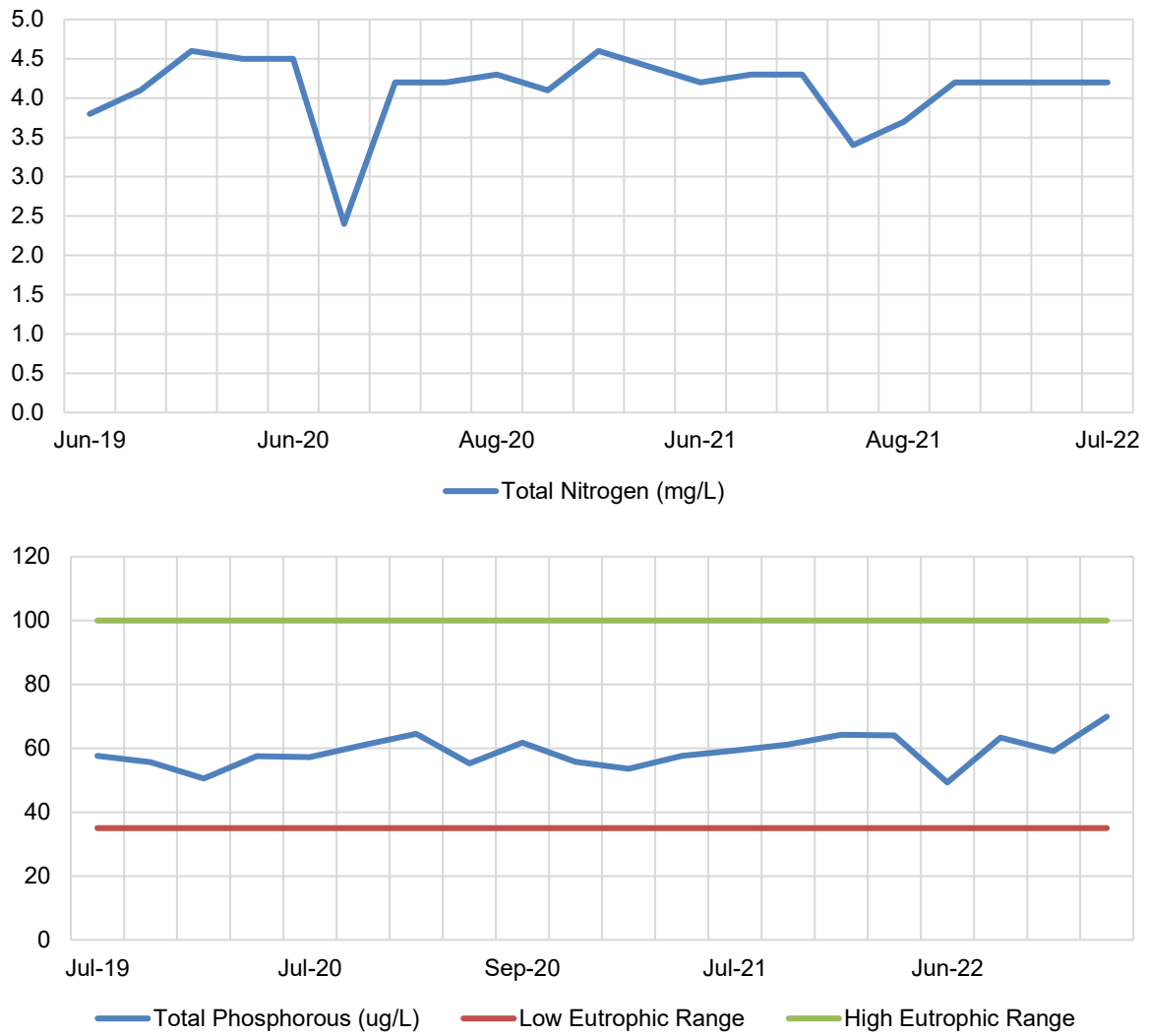
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**2.8.3.1 Watercourses**

Kinlock Creek



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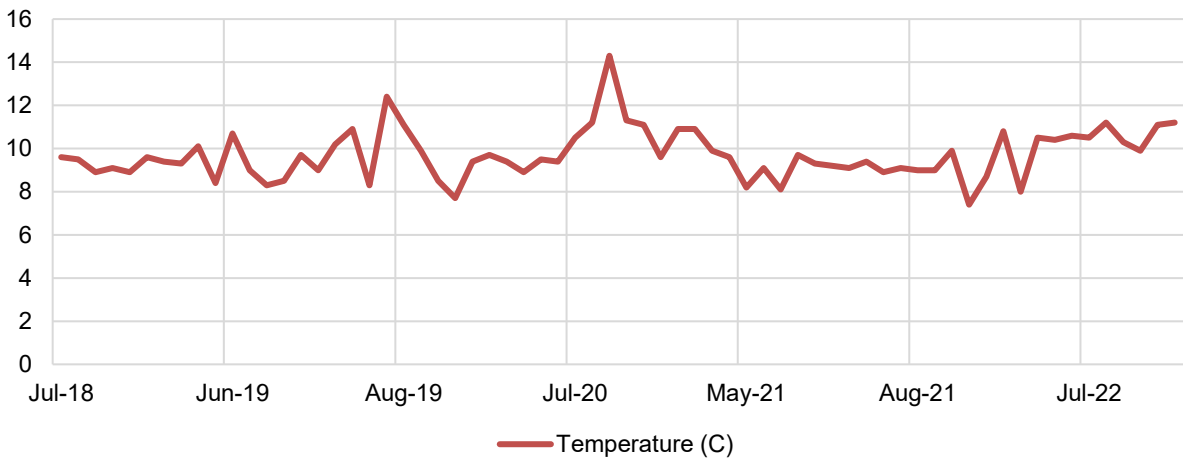
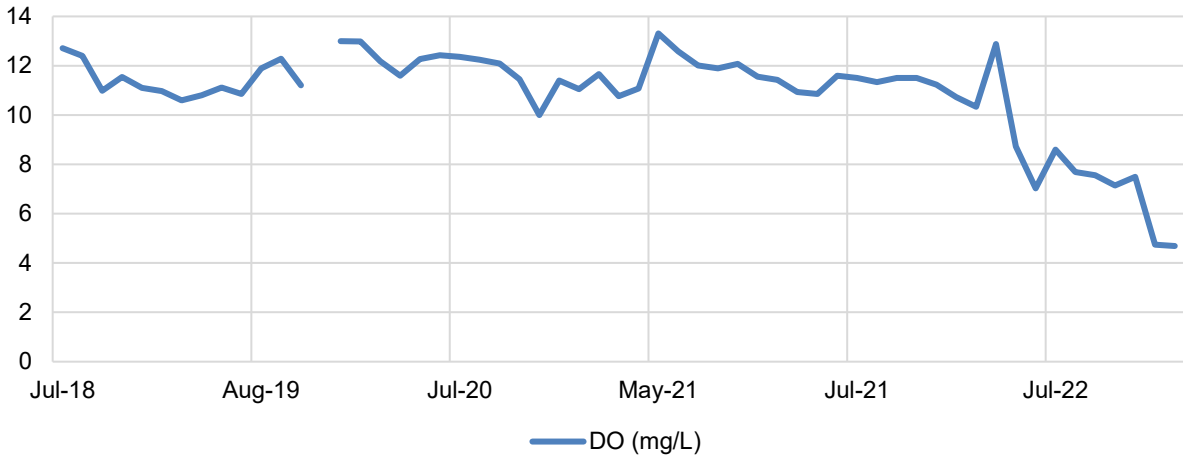


**Figure 15 Water Quality Summary for Kinlock Creek**

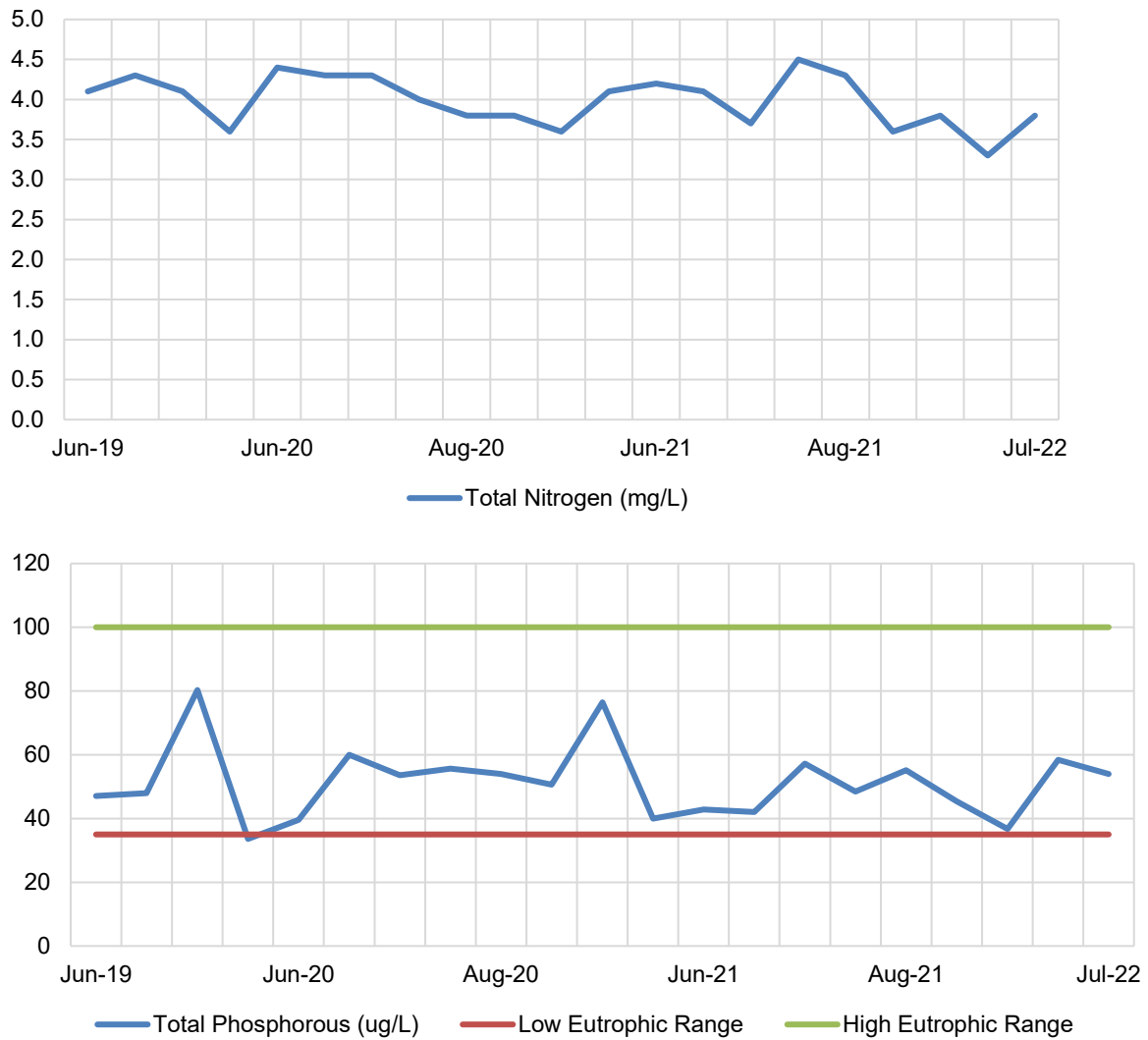


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Jack's Creek



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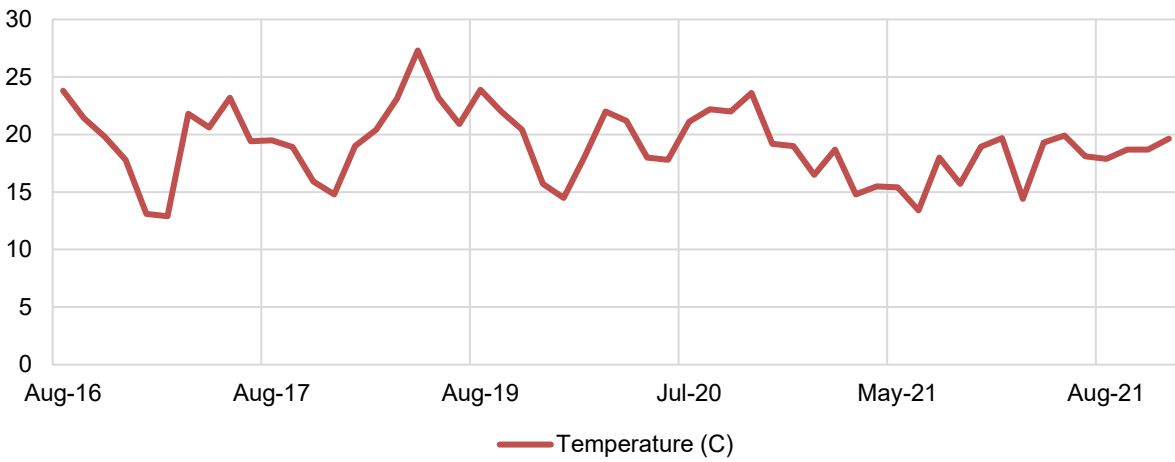
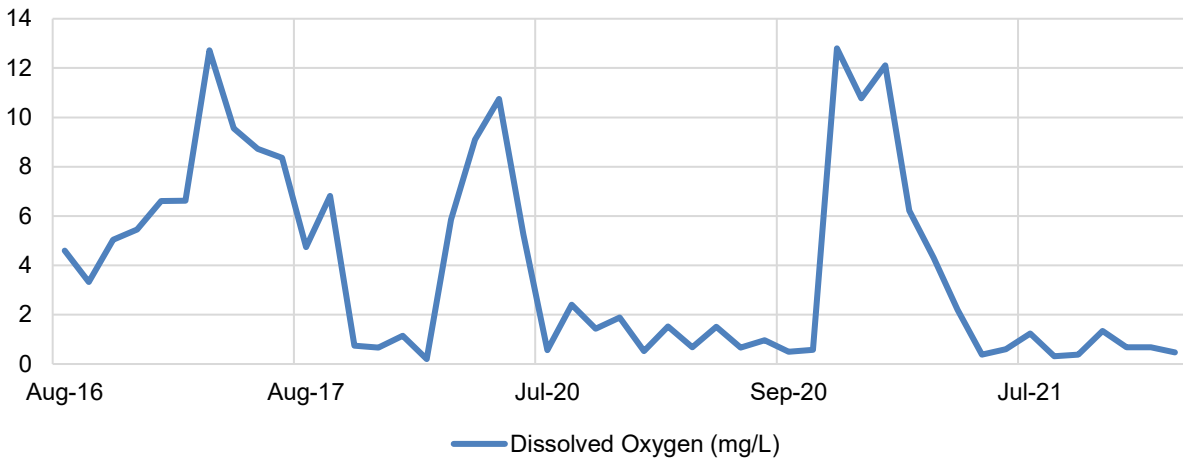


**Figure 16 Water Quality Summary for Jack's Creek**

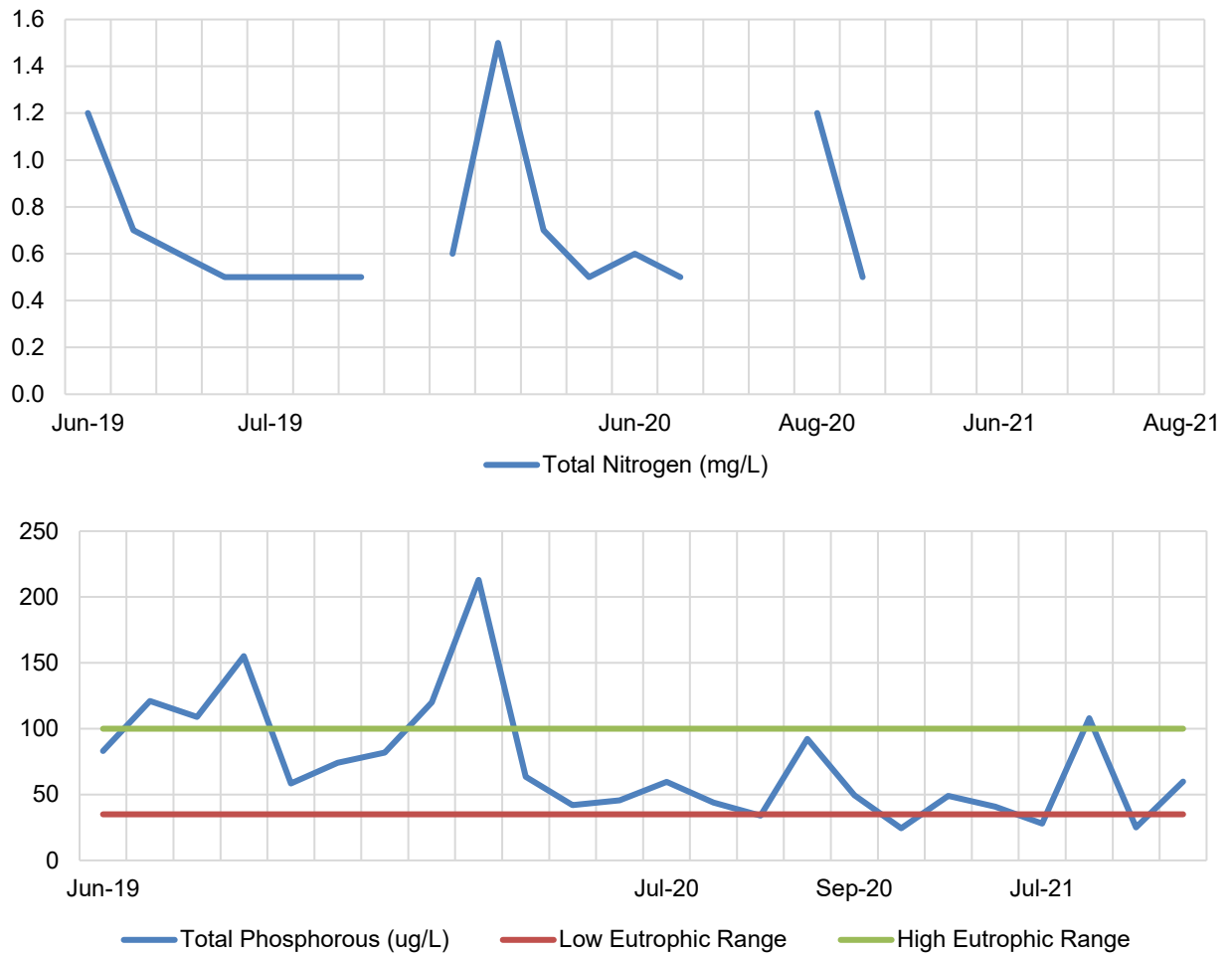


2.8.3.2 Waterbodies

Moore's Pond



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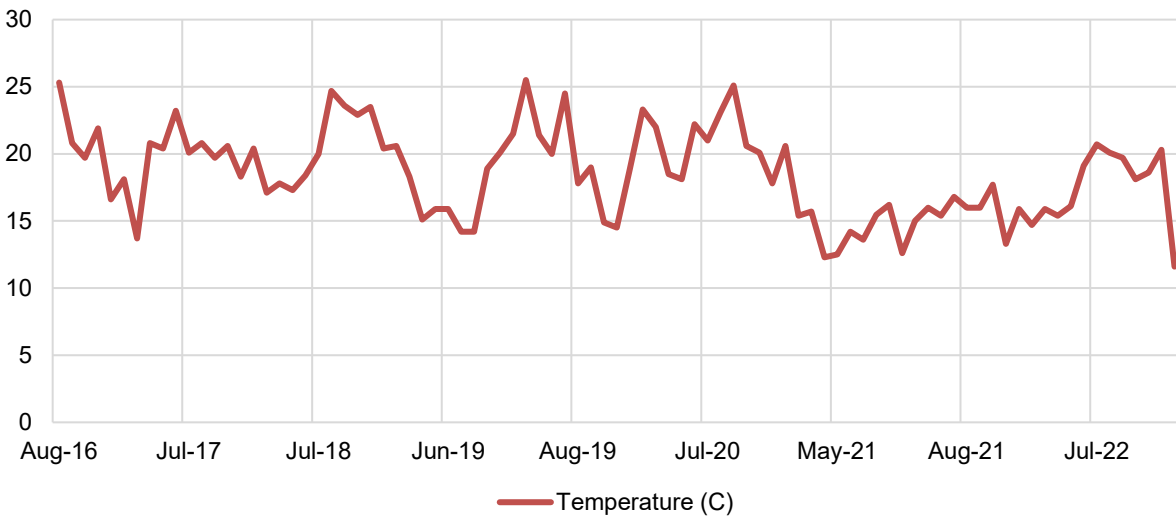
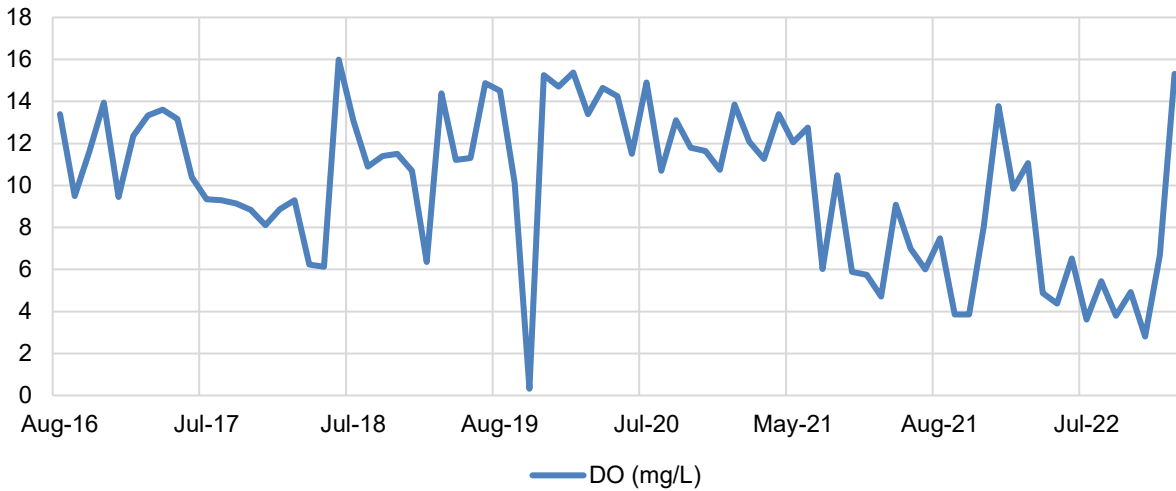


**Figure 17 Water Quality Summary for Moore’s Pond**



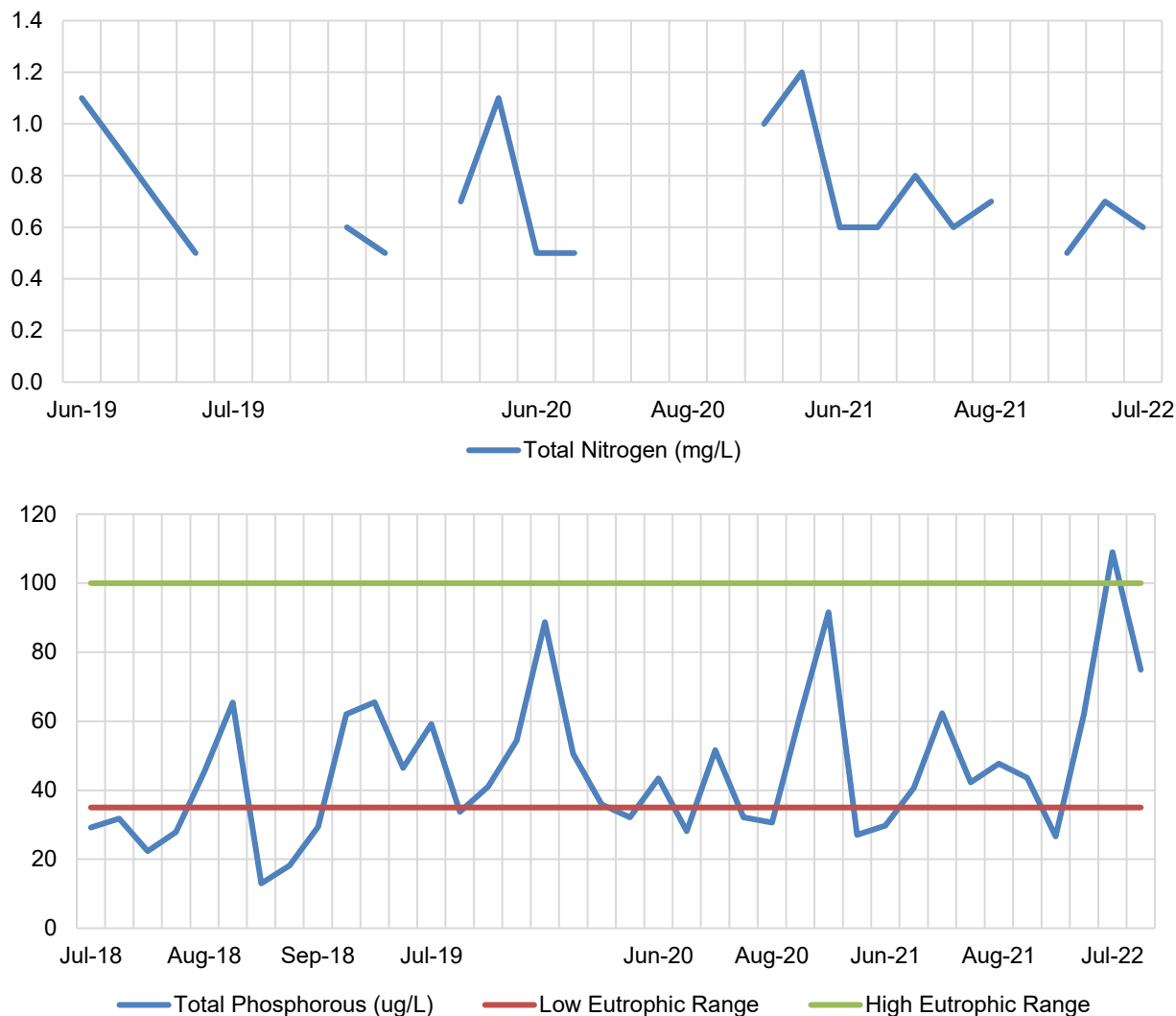
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Kelly's Pond





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**Figure 18 Water Quality Summary for Kelly’s Pond**

**2.8.3.3 Summary of Results**

The Canadian Council of Ministers of the Environment (CCME) provides a nutrient guidance framework which includes trophic status trigger ranges for total phosphorus in freshwater environments (**Table 9**) (CCME 2004). Elevated phosphorous concentrations can cause increased vegetation and algal growth, with potential adverse effects including decrease in biodiversity, decline in ecologically sensitive species, increase in biomass/sedimentation, increase in turbidity and potential anoxic oxygen conditions (CCME 2004). Adverse effects are typically associated with eutrophic and hyper-eutrophic status. Natural water systems are typically within the 10 to 50 ug/L range (Wetzel 2001), indicating eutrophic status may occur



## BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY

in natural systems; however, eutrophic and hyper-eutrophic conditions are typically associated with anthropogenic or human inputs.

**Table 9 CCME Trophic Status**

Trophic Status	Trigger Range (ug/L)
Ultra-oligotrophic	< 4
Oligotrophic	4-10
Mesotrophic	25-35
Meso-eutrophic	20-35
Eutrophic	35-100
Hyper-eutrophic	> 100

Total phosphorous monitoring results for assessed watercourses (Kinlock Creek, Jack’s Creek) and water bodies (Moore’s Pond, Kelly’s Pond) indicate high phosphorus concentrations at all locations. Moore’s Pond is consistently eutrophic to hyper-eutrophic (74 mg/L, average) where concentrations in Kelly’s Pond are slightly lower (46 mg/L, average), indicating consistently eutrophic. Kinlock Creek and Jack’s Creek are both categorized as eutrophic with average total phosphorous concentrations of 59 mg/L and 51 mg/L, respectively.

Bricker et al. (1999) propose additional criteria to assess trophic status as follows in **Table 10**.

**Table 10 Degree of Nutrient Over-Enrichment**

Degree of Nutrient Over-Enrichment	Total Dissolved N (mg/L)	Total Dissolved P (mg/L)	Chlorophyll a (ug/L)	Dissolved Oxygen (mg/L)
Low	0 – 0.1	0 – 0.01	0 - 5	>4
Medium	>0.1 - < 1	>0.01 - <0.1	>5 - <20	-
High	>1	>0.1	>20 - 60	<4

While data is reported as total concentrations, not dissolved, total nitrogen is reported as higher in both Kinlock Creek and Jack’s Creek at 4 mg/L on average. Dissolved oxygen is highest and most consistent in these watercourses. The lowest reported dissolved oxygen concentrations occur in Moore’s Pond.

### 2.8.4 Assimilative Capacity of Receiving Waters and Recommendations

The assimilative capacity of a receiving waterbody or watercourse corresponds to its capacity to assimilate a given pollutant load into the natural environment without causing adverse or deleterious effect. Assimilative capacity considers the incoming pollutant loading, the background or natural system pollutant concentration and the flushing capacity or flow capacity of the receiving water to determine a post-assimilation water quality concentration. This concentration is typically assessed as acceptable through comparison to relevant water quality objectives or guidelines.



## **BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY**

Solely considering current trophic status of the assessed waterbodies/watercourses, the capacity for these receiving waters to further assimilate phosphorous is considered limited and additional phosphorous loading to these receivers are likely to increase the trophic status and occurrence of adverse effects. Referencing Section 2.9.2.2, Table 6, land use changes from natural to develop lands consistently increase total phosphorous loading to receiving waters on an annual basis. The conversion of intensively farmed row crop to developed lands represent the sole scenario where development alone may reduce the annual phosphorous loading to receiving waters. Based on this, when planning land use changes, it is not recommended to route overland surface runoff or direct surface discharge (from a point-source stormwater discharge pipe, ditch or outfall) directly to these receiving waters without implementing mitigation or treatment.

With respect to overland surface runoff, development that may increase total annual phosphorous loading may be mitigated through phosphorous reduction measures such as lot-based low-impact development features, limiting phosphorous-based lawn fertilizer use, and initiating street sweeping programs. Mitigation of direct surface discharge to local watercourses may include installation of treatment structures (sediment/phosphorous reducing catch basins) or include master planning of storm catchment systems to collect and discharge to a water body with sufficient assimilative capacity.

### **3.0 PART 2 – MAPPING ANALYSIS OF DEVELOPMENT OPPORTUNITIES**

Using the initial findings of the background research, we evaluated and identified three development possibilities for the Town. These included new development and the possibility of redeveloping current sectors with higher densification. These development scenarios will be based on the growth management opportunities, option analysis and choosing a preferred option.

The scenarios will present all aspects of a community, ranging from transportation, type of housing, density and develop balanced criteria to meet the objectives of the Town of Stratford. Those criteria will be, for example:

- Environmental
- Financial
- Capacity to create affordable housing
- Create a complete community
- Employment opportunity
- Leisure and cultural benefits



# BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY

## Scenario 1

Scenario 1 represents a conservative approach to development proposing to maintain the status quo. This approach utilizes the current low and medium-low density housing typologies such as single detached, duplex, townhouse and low-rise residential buildings resulting in a total of 4,238 units. The pros and cons of this scenario are listed below:

### PROS

- No need to change the zoning
- Minimal impacts on the infrastructure

### CONS

- Will not meet the housing needs in the long term
- Will create generic development
- Will create urban sprawl



# BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY

## Scenario 2

Scenario 2 attempts to maintain a balance between the current situation and a potentially medium-high density scenario. This approach accommodates low, medium-low and medium-high density housing typologies such as single detached, duplex, townhouse, low-rise residential, multifamily medium density buildings resulting in a total of 6,176 units. The pros and cons of this scenario are listed below:

### PROS

- will meet the housing needs in the short term
- Better integration in the actual built context
- Densification located around the Trans-Canada Highway

### CONS

- Will not meet the housing needs in the long term
- Pressure on the existing infrastructure and services



# BACKGROUND REPORT – TOWN OF STRATFORD GROWTH MANAGEMENT STRATEGY AND DEVELOPMENT CHARGE STUDY

## Scenario 3

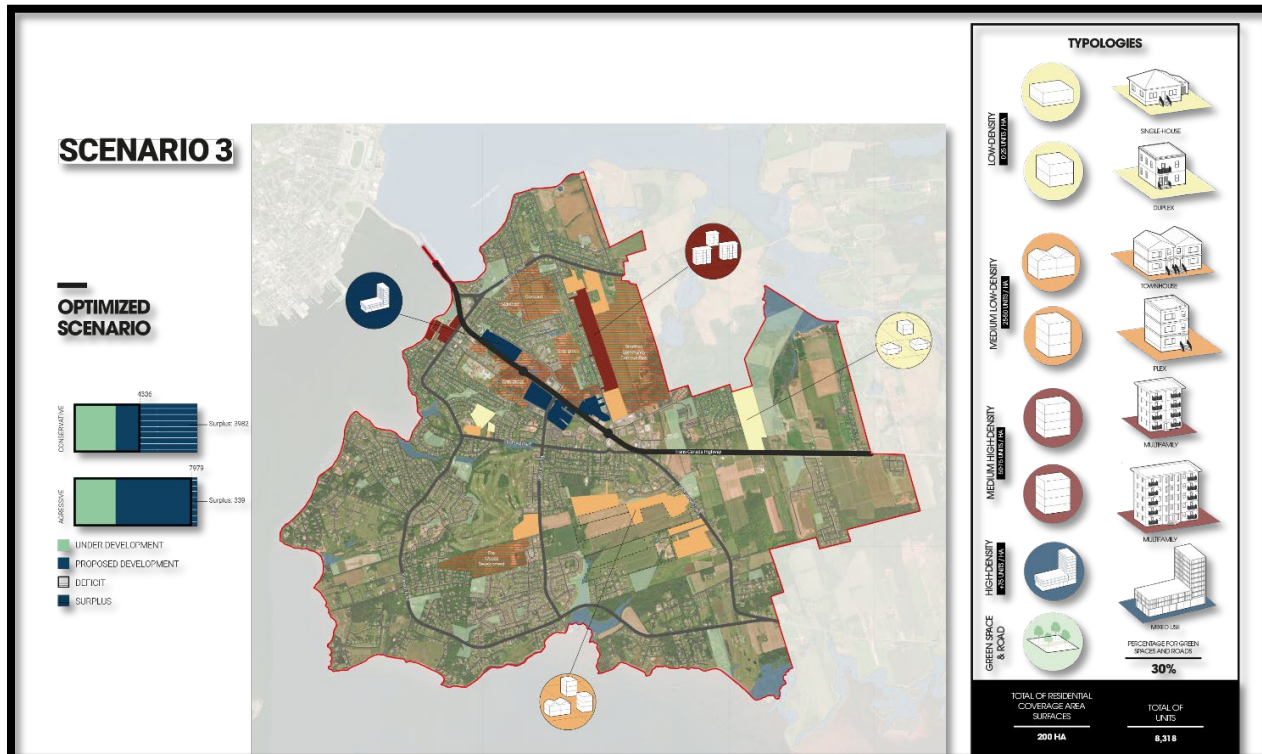
Scenario 3 attempts to optimize on the opportunity to create a higher density. This approach accommodates low, medium-low and medium-high density housing typologies such as single detached, duplex, townhouse, low-rise residential, multifamily medium density buildings as well as mixed-use buildings to increase density. This would result in a total of 8,318 units. The pros and cons of this scenario are listed below:

### PROS

- will meet the housing needs in the long term
- Will provide a complete community with more services and shops
- Will provide better active transportation networks

### CONS

- Will need a complete infrastructure plan
- Pressure on the existing infrastructure and services



## **4.0 CONCLUSION**

The Town of Stratford has a rapidly growing population and needs additional housing, including more diverse housing options. While a status quo approach can be taken, the background study results and growth scenarios presented indicate that it is not a realistic or desirable option. Additionally, the resulting costs and implications associated with the current development trends reinforce this view. The public engagement sessions that we hosted as part of this project confirm that residents of Stratford recognize and acknowledge that population growth is well underway, and changes are inevitable. Increasing the residential density and providing more housing options identifies as a way to manage growth related pressures.

The Town is in a good position to manage its growth expectations. Engineering infrastructure is relatively healthy and capacity exists in key areas, the transportation network is well maintained with opportunities for further enhancements to active transportation and transit, while public streets have capacity for growth, and recreational assets are available with new facilities planned in the community campus. Furthermore, there is land available within the town boundary to accommodate future growth and development opportunities.

In order for the Town to maintain its prosperity and continue to grow its economy, growth must be approached strategically. Managing growth and development pressures is not easy, but a proactive approach to organizing and planning for growth in the appropriate locations is essential. Identifying opportunities and removing barriers to housing supply will help address some of the challenges for the Town of Stratford.

The next step of this project to use the information contained in this report to provide a preferred growth option for the community and calculate the associated development related costs related to it. This strategy will position the Town to accommodate the expected growth projections and continue to ensure that the Town remains financially sound.



# **APPENDIX**





**Appendix A ENGAGEMENT SUMMARY**

