

Central Colchester

Municipal Planning Strategy



Municipality of the County of Colchester

Adopted by Colchester County Council

June 20, 2002

Approved by the Minister of Service Nova Scotia & Municipal Relations

July 15, 2002

Text and Map Amendments

Administrative Amendments - September 2002
Flood Plain Amendments - March 2003
Mobile Home Exemption - February 2004
Accessory Residential Uses C-2 & RM Zones- February 2004
Cluster Developments - June 2006
Salmon River Future Land Use Map – RL to RG, July 2007
Truro Heights Growth Center (Apartments) – November 2014
Rural Fringe Area Future Land Use Maps, Schedule 1, RG to RM – December 2015
Management of future growth in Onslow and Upper Onslow – July 2015
Rezoning of Existing Residential and Institutional uses in Commercial zones – September, 2016
Salmon River Future Land Use Map – RL to RG, July 2017
Bible Hill/Valley Future Land Use Map – RL to RH, May 2018

TABLE OF CONTENTS

VISION & SCOPE	1
LEGISLATIVE MANDATE	2
PART 1: INTRODUCTION	
1.1 Settlement	3
1.2 Natural History	3
1.3 Inter-Municipal Co-operation	4
1.4 Purpose of Strategy	5
1.5 Approach	6
1.6 Strategy Objectives	6
1.7 Review of Planning Documents	7
PART 2: MUNICIPAL SERVICES & INFRASTRUCTURE	
2.1 Introduction	9
2.2 Municipal Infrastructure	9
2.2.1 Water	10
2.2.2 Sewer Services	12
2.2.3 Storm Water Systems	13
2.2.4 Transportation Systems	14
2.2.5 Street Lighting and Utilities	19
2.3 Recreation and Open Space	20
PART 3: ENVIRONMENT	
3.1 Waste Management	22
3.2 Flood Risk Areas	
3.2.1 Introduction	22
3.2.2 Boundaries & Flood Plain Areas	24
3.2.3 Land Uses in Flood Risk Areas	25
3.2.4 Flood Way Modification Zone - Developed Areas	27
3.2.5 Flood Proofing Standards	30
3.2.6 Ponding, Reinstatement, & Soil Conservation	31
3.2.7 Remedial Measures	32
3.2.8 Mapping Amendments	33
3.2.9 General Flood Plain Issues	34
3.3 Storm Water Drainage Systems	
3.3.1 Introduction	36
3.3.2 Water Quality	36
3.3.3 Natural Drainage Channels	37
3.3.4 Watershed Planning & Management	38
3.4 Land Use & Environmental Quality	40
PART 4: URBAN GROWTH CENTERS	
4.1 Introduction	42
4.2 Growth Centers	43
4.3 General Development Considerations	

4.3.1 Non-Conforming Uses & Structures	45
4.3.2 Accessory Structures & Uses	46
4.3.3 Parking & Loading Areas.....	47
4.3.4 Temporary Uses	48
4.3.5 Signs.....	48
4.3.6 Subdivision of Land	49
4.4 Residential Land Use Policy	
4.4.1 General.....	50
4.4.2 Low Density Residential	53
4.4.3 Medium to High Density Residential	55
4.4.4 Residential Development Options.....	57
4.5 Commercial Land Use Policy	
4.5.1 General.....	62
4.5.2 General Commercial (C-1) Zone	64
4.5.3 Highway Commercial / Light Industrial (C-2) Zone	67
4.5.4 Community Commercial (C-3) Zone.....	68
4.5.5 Local Commercial (C-4) Zone	69
4.6 Institutional Land Use Policy	
4.6.1 General.....	71
4.6.2 Nova Scotia Agricultural College.....	72
4.6.3 Nova Scotia Provincial Exhibition Grounds.....	73
4.6.4 Institutional Uses in Other Land Use Designations.....	74
4.7 Industrial Land Use Policy	
4.7.1 General.....	75
4.7.2 Industrial Development Options	76
4.8 Parks & Recreation	
4.8.1 Introduction.....	78
4.8.2 Public Open Space.....	78
4.8.3 Private Open Space	79

PART 5: RURAL FRINGE AREA

5.1 Introduction.....	81
5.2 The Rural Fringe Area	81
5.3 Rural General (RG) Zone	82
5.3.1 Resource Based Land Uses.....	83
5.3.2 Low Density Residential Land Uses - Rural Areas	85
5.3.3 High Density Residential Land Uses - Rural Areas.....	86
5.3.4 Commercial Land Use - Rural Areas.....	88
5.4 Institutional Land Uses - Rural Areas.....	89
5.5 Industrial Land Uses - Rural Areas	90

PART 6: IMPLEMENTATION & ADMINISTRATION

6.1 Introduction.....	92
6.2 Clear Proposal Required	92
6.3 Municipal Planning Strategy Amendments	93
6.4 Land Use Bylaw Amendments	93
6.5 Development Agreements.....	95
6.6 Interpretation	96
6.7 Notice of Agreement or Amendment	97

Central Colchester Municipal Planning Strategy - 2001

Vision & Scope:

The Municipality of Colchester first adopted the original Central Colchester Municipal Planning Strategy and Land Use Bylaw in August of 1994. This marked a fundamental change in approach to land use planning; first the Strategy consolidated five previous documents into one, and; second it identified land beyond the sewer serviced area that was most likely to be under the pressure of development in the future. The planning effort for Central Colchester was designed to complement the development of the Municipality's Service Delivery Strategy and Subdivision Bylaw by adding a more comprehensive set of guidelines aimed at directing community growth to the urban core of Colchester County. Eight years has passed since its adoption and, as with all planning documents, a review of Council's policies are necessary to ensure that community development directions represent current objectives.

The purpose of this Strategy is to offer a level of land use planning direction in the area of Colchester County that has undergone the most significant growth and change over the years. The recent Municipal Government Act also contains Statements of Provincial Interest which compel municipalities to address five topics of provincial concern; flood risk areas, agriculture, housing, drinking water and infrastructure. These represent a Provincial view towards sustainable development and provide guidance and parameters to municipalities who are contemplating their future. This Strategy enables a local context and framework for these principles; giving the community and Council guidance as it makes decisions on land use planning.

Mission Statement

Central Colchester is a region that is rich in history, culture, and economic diversity. The many high quality communities found throughout Central Colchester are a testament to its long lasting prosperity and the optimism that guides its future. This Strategy aims to identify those strengths that have made Central Colchester a vibrant and unique area to live, work and play. Through the policies expressed herein, this Strategy is a framework for future growth and change that provides new and continued opportunities for those who are and will be affected by it. The documents represent the general community development interests of citizens, government, community and special interest groups and are built on principles of equity, sustainable development and contemporary land use planning practices.

The Strategy comprises two main components; first, it identifies “Growth Centers” that generally follow limits of sewer servicing. Central servicing allows these areas to be more densely developed urban environments which consequently becomes susceptible to a broader range of land use issues and interests. In these areas, this Strategy provides a much higher level of land use planning direction, usually expected under such circumstances. Secondly, the Strategy identifies a “Rural Fringe” that encompasses the outlying rural communities. While perhaps the issues in these areas are somewhat more general, there are municipal and provincial interests that exist and may only be dealt in the context of a Strategy such as flood plain, high intensity development, infrastructure, and resource based land uses.

Adoption of these documents will replace the former 1994 Central Colchester Municipal Planning Strategy and Land Use Bylaw.

Legislative Mandate

Authority to prepare the Central Colchester Municipal Planning Strategy - 2002 for the Municipality of the County of Colchester is given pursuant to Part 8 of the Municipal Government Act, Chapter 18, S.N.S. 1998.

This Municipal Planning Strategy comprises statements of policy with respect to the use of lands within Central Colchester, the provision of municipal services, the Statements of Provincial Interest, and other matters related to the physical, social, and economic development of the area affected.

PART 1: INTRODUCTION

1.1 Settlement

The first inhabitants of Central Colchester were the ancestors of the native Mi'kmaq peoples. Evidence of these early societies dating as far back as 11,000 years has been found in archeological investigations in Debert. Until the arrival of the Europeans, these people evolved a semi-nomadic way of life based on hunting and gathering.

In the mid 1700's the first Acadian settlements were established at the head of Cobequid Bay. This was attractive due to the expanse of fertile marshlands that were later dyked and farmed in much the same manner as was practiced in France. After more than a century of settlement, the Acadians were expelled and their lands offered up for British sponsored colonialism.

In 1760, forty-two Ulster Scots arrived from New Hampshire. The area settled was known as the Township of Truerow Grant, containing some 80,000 acres and including the areas of Bible Hill and Salmon River, westward to the Shubenacadie River.

As the area developed, the Town of Truro became the regional centre servicing an agriculture, and forestry driven economy. The Village of Bible Hill was incorporated as a Village in 1953 to provide urban type services to the community. Since World War II, a more diverse economy emerged which increased a demand for housing and other associated land uses and servicing needs. Continued growth through the past twenty years has spurred the growth of surrounding suburban communities, such as Valley, Salmon River, Truro Heights, and Hilden.

1.2 Natural History

Most of Central Colchester encompasses the eastern extension of Cobequid Bay and is comprised of two physiographic types: Triassic Lowlands, and Carboniferous Lowlands. The Cobequid Bay is bordered on either side by soft red conglomerate and sandstone of the Triassic age, forming a low, gently rolling landscape. Overlying the bedrock is a thick mantle of loose material, up to 10 metres (30 feet), including some glacial till.

Much of the Triassic Lowlands which includes Truro to the north side of the Cobequid Bay is covered with glacial deposits many of which are now exposed in river terraces. The Salmon and North Rivers, which flow into the Cobequid Bay are drowned estuaries with buried river channels beneath the river bed deposits. Soils are comprised of well drained Truro soils developed from the red sandstone intermixed with poorly drained soils of the similar origins. The Harmony series which is characterized by gravelly sandy loams have developed over gravelly sandy clay loams are also present. Herbert soils are found in outwash areas while finer textured Cumberland and Stewiacke soils on alluvial material are predominant along streams and rivers and Acadia soils have formed on the dykelands.

The rich soils of the Lowlands have provided very good farming conditions and a significant amount of land is under crop production and pasture. Forested areas are characterized by

stable stands of spruce, hemlock, white birch, red maple, and white pine. Rich interval sites in the Truro area support Alleghenian floral species.

The remaining areas of Central Colchester including Truro Heights, Hilden, Harmony and Greenfield falls in an area known as the St. Mary's Fault Block. The relief changes in this area from a uniform upland along the Cobequid Hills in the north to a hilly topography in the south as the fault slices narrow and are crosscut by fast flowing streams draining into the Cobequid Bay.

Soils are predominantly of the Horton Group and are derived from Halifax quartzites and the softer Shulie sandstones. The well drained sandy loam Halifax soils are also found within this area together with pockets Aspotogan soil and peat evident in the Hilden - Irwin Lake area. The Shulie soils which are gravelly silt loams to sandy loams and are closely associated with Millbrook gravelly clay loams.

The fair to poorly drained soil characteristics that cover much of this area has supported stands of balsam fir, white spruce, white pine, red spruce and hemlock. The pockets of well drained soils has produced some intolerant hardwoods while much of the remaining areas have grown up in tolerant hardwood species.

1.3 Inter-Municipal Co-operation

The community planning process is one that has historically been applied to individual municipal jurisdictions. While this approach has generally served municipalities well and has offered a mechanism for each to articulate its own community development objectives, it does present some limitations. Locally, transportation, flood plains, stormwater management, municipal servicing, and peripheral land uses have varying degrees of influence on development patterns that result in the region. These, by nature, are systems that can only be effectively managed through the cooperation of neighboring municipalities.

In recent times, Colchester, Truro and Bible Hill have shared such difficulties and engaged in several joint efforts to address complex inter-jurisdictional issues. Traffic and flood plain studies, development projects that transcend municipal boundaries, recreation initiatives, and regional public works facilities have been successfully approached through mutual co-operation. The Municipal Government Act provides a framework for two or more municipalities to jointly carry out planning projects and adopt inter-municipal planning documents to address matters of mutual concern. Inter-municipal cooperation can also be achieved with less formality and without compromise of individual municipal autonomy and political accountability by joint committees, shared funding, and staff cooperation. These alternatives have provided useful tools for Truro and Colchester in designing common development standards for flood risk areas and the development of a strategy dealing with inter-jurisdictional properties. Not only have these approaches been practical but they have also been a cost effective means of studying certain issues.

In January of 2000, Truro and Colchester Council's approved the Inter-Municipal Planning Strategy for Inter-Jurisdictional Properties for an area of land along the western municipal boundary. This, being the first such planning document to be adopted in the Province, was created to enable the two Council's to jointly consider development agreements for commercial projects on lots located in shared jurisdictions. Due to the nature of inter-

municipal planning documents, it is intended that the planning policy contained within that particular document be considered in advance of relevant policy and requirements of this Strategy.

In 1996, the Town of Truro and Municipality of Colchester with the assistance of the Department of Housing and Municipal Affairs jointly carried out a project that examined development alternatives in the developed parts of both the Town and County exposed to flood risks. A Study Steering Committee was assembled to oversee the Truro Flood Plain Study completed in 1998 by Environmental Design & Management Ltd. This provided the necessary scientific study base for both municipalities to advance a “cut and fill” concept aimed at modifying flood risk lines in urban areas to facilitate meaningful and economic development patterns. In 1998, a Joint Planning Advisory Committee was formed to develop the draft Inter-Municipal Planning Strategy and Land Use Bylaw for Flood Risk Areas which transformed many of the Study recommendations into suggested land use policy and regulations. Council reconsidered its involvement in the joint adoption and administration of these documents and decided an independent approach would better serve the Municipality’s interests. Council does however, recognize that the proposed documents contained some useful policy direction and regulatory approaches that should be incorporated into this Strategy.

The Millbrook Native Council has recently engaged in a number of economic development initiatives that, if successful, will influence the type and form of development around the Millbrook Reserve. Also, the Reserve borders two of Central Colchester’s Growth Centres, Hilden and Truro Heights and it will be important to examine existing and future land use patterns to ensure that mutual development objectives can be achieved. Council generally supports such endeavours and wishes to improve its relationship with the Band in recognition of this.

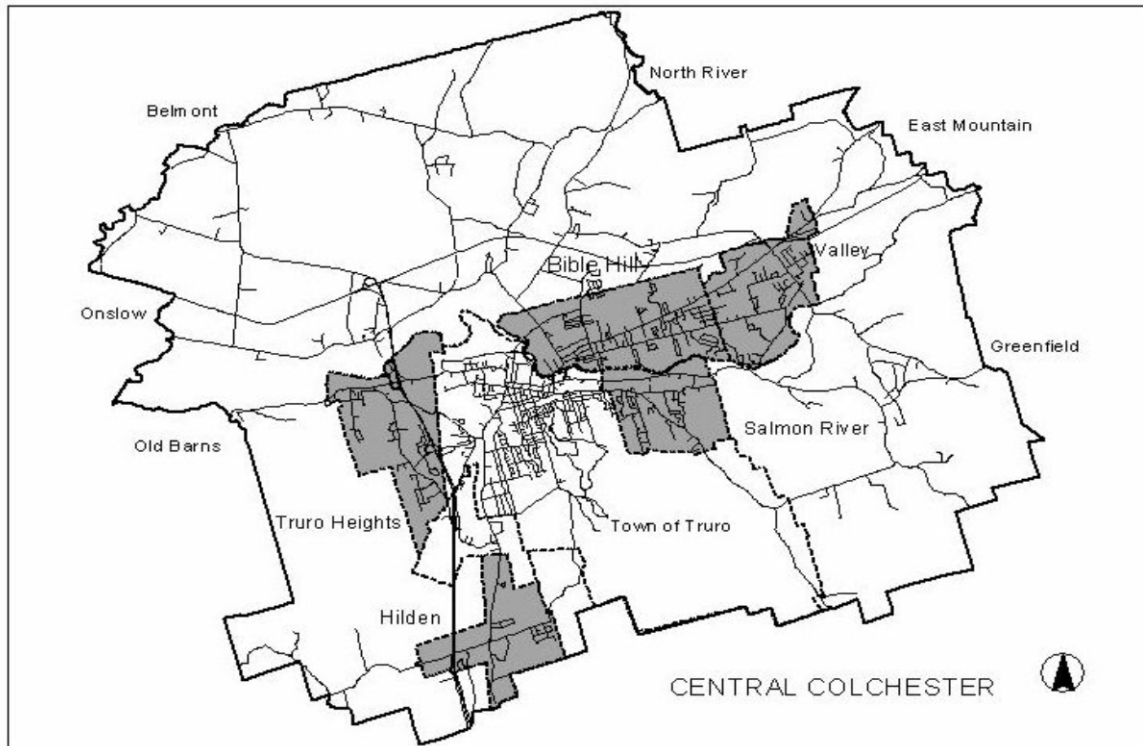
It shall be a policy of Council to:

- I-1 Promote inter-municipal cooperation with the Town of Truro, the Village of Bible Hill and the Millbrook Native Council as a means of addressing planning related projects of mutual interest.***
- I-2 Regard the Truro-Colchester Inter-Municipal Planning Strategy for Inter-Jurisdictional Properties as the primary policy document for the area of land affected by that Strategy.***
- I-3 Consider the incorporation of relevant concepts and approaches outlined in the Draft Inter-Municipal Planning Strategy and Land Use Bylaw for Flood Risk Areas into this document.***

1.4 Purpose of Strategy

The purpose of this Strategy and accompanying Land Use Bylaw is to provide a vision for community growth and a process that guides future decisions in this regard. To this end, the Strategy and Bylaw are premised on growth management principles, relevant development standards, application of the Provincial Statements of Interest in a local context, and the provision of public services within the defined area of Central Colchester, including the Village of Bible Hill.

1.5 Approach



Continued urbanization of communities in Colchester County along with increased infrastructure costs encouraged Council to evaluate and rationalize the provision of services to each community. The encouragement of development to appropriate locations is of utmost importance to curtail the cost of servicing development and to avoid conflict between incompatible land uses. Urban Growth Centres and a Rural Fringe Area are delineated to complement Council's strategy for community growth.

This Strategy represents a community's blueprint for growth. To this end, the development of policies and process contained within these planning documents has involved a considerable amount of consultation with special interest groups, other levels of government and institutions, and the general public.

1.6 Strategy Objectives

This Strategy is intended to accomplish the following objectives:

General:

1. Compliment other objectives and policies of Council expressed in the *Municipal Service Delivery Strategy, the Subdivision Bylaw, the Mobile Home Park Bylaw, the Sewer Bylaw,*
2. Identify the physical, social, and economic qualities of Central Colchester and provide a framework that builds upon these strengths;
3. To provide for a community development pattern that allocates a variety of land uses in compatible and meaningful arrangement, with sufficient land to accommodate future growth;
4. To provide a variety of municipal services throughout Central Colchester in manner prescribed by the Service Delivery Strategy;
5. Establish a criteria and procedure through which amendments may be considered to the Municipal Planning Strategy and Land Use By-law;
6. Promote principles of sustainable development that recognize the importance of Central Colchester's natural resources and features.

Urban Areas:

1. Identify "Growth Centres" within Central Colchester and encourage the establishment of urban type development in these areas;
2. Provide a range of residential, commercial, industrial, institutional, and recreational land use types appropriate to the development patterns of each Growth Centre;
3. Provide a variety of urban services to each Growth Centre including but not limited to solid waste collection, disposal, and recycling, sewage collection and treatment, public parkland, street lighting, sidewalks, street paving, and storm water management systems;
4. Identify possible capital projects and infrastructure improvements that support continued and sustainable urban development.

Rural Areas:

1. Identify a "Rural Fringe" area around the urban growth centres and encourage the establishment of rural types of development in these areas;
2. to identify, protect, and enhance the natural resources and qualities essential to retaining a healthy rural environment;
3. reduce the fragmentation of farmland that could restrict future expansion of farms and supporting the farming communities efforts to increase the economic viability of the agricultural industry;
4. Aim to minimize conflicts between agricultural and non-compatible land uses;
5. To protect the natural environment in general by encouraging orderly and efficient use of natural resources and identify areas of environmental significance and aim to protect these through management, conservation and preservation.

1.6 Review of Planning Documents

From time to time, it is necessary to carry out a review of Council's community development policies expressed in this Strategy to ensure that they are current and properly reflect the

direction that a community wishes to pursue. Changes in demographic and economic profiles are usually recorded on a five year cycle and therefore this Strategy should be reviewed in a similar time frame.

It shall be a policy of Council to:

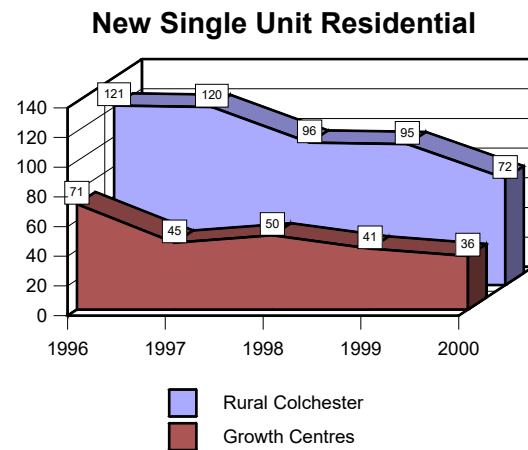
I-4 Commence a review of this Strategy on the fifth anniversary of its adoption to ensure that policy and future development directions are current and represent the interests of those affected by the documents.

PART 2: MUNICIPAL SERVICES AND INFRASTRUCTURE

2.1 Introduction

The provision of services throughout Central Colchester has been funded by various agencies over the years, involving the Village of Bible Hill, the Province of Nova Scotia, the Municipality of Colchester and citizen / volunteer groups. In 1994, the Province undertook a study of services in which they traditionally provided and attempted to rationalize a more logical approach towards service delivery. The Act to Provide for Municipal Reform was enacted in 1995 and generally made municipalities responsible for “land based” services (local roads, sidewalks, sewer systems, etc.) while the province assumed the provision of “people” services (ie. corrections, social services, etc.).

The Village of Bible Hill is an incorporated form of local government and provides certain types of services to its residents. Sewage collection, recreation, street lights, sidewalks, fire protection, and road paving are among the main services funded by the Village through a special tax rate. In other parts of Central Colchester, the Municipality applies an “Urban Service Rate” for street lights, sidewalks, sewage collection, and specific recreation projects which currently include the Scotia Pool and Cobequid Trail. In addition, the Municipality sets an “area rate” in specific sub-regions for garbage and compost collection, fire protection, and street paving. All remaining services, (ie. sewage treatment, solid waste disposal, snow plowing and road maintenance etc.) are paid for out of the Colchester’s general tax rate.



Council’s rationalization of service provision, adopted under the Service Delivery Strategy, establishes a framework for future servicing decisions. It aims to identify and provide the types of services normally expected in different parts of the Municipality while reducing the dependency on petitions and an abundance of area rates. Policy direction contained in the Service Delivery Strategy is further amplified in this Section.

2.2 Municipal Infrastructure

The provision of municipal services has traditionally responded to community growth patterns within Central Colchester. Capital projects are expensive to install and maintain but are necessary for public health and safety, environmental quality, and assist in achieving sustainable development patterns. The types and extent of these services are dependent on how a community is intended to grow which is balanced by the Municipality’s ability to pay and maintain such services. Based on the “economies of scale” principle, urban types of development will be encouraged to locate within “Growth Centres” where services are

available and higher densities make their provision affordable. This will aid in reducing the amount of sprawl development while protecting rural qualities and resources.

It shall be a policy of Council to:

MS-1 Encourage development requiring an extensive range of municipal services to establish in Growth Centers to help achieve sustainable and efficient development patterns.

MS-2 Maintain, improve, and expand municipal services and facilities as circumstances warrant and subject to Council's ability to pay for such improvements.

MS-3 Periodically review the types and methods of service delivery to ensure that they represent the needs and expectations of the community while ensuring that the provision of such remain cost effective.

2.2.1 Water

Most residents of Central Colchester draw water supply from groundwater sources through on-site wells. A few exceptions exist where central water distribution systems have been installed at the Nova Scotia Agricultural College, the College Park Water Utility (Maple Blvd. / Scenic Drive.), the former Nova Scotia Youth Training Centre, as well as most manufactured housing developments. The Robie Street area of Lower Truro and Stella-Jones site in Bible Hill are serviced by extensions of the Town of Truro water system.

Recent incidents both nationally and locally, have served as a reminder of the importance of a safe water supply. Many expect more rigorous standards and testing will be applied to drinking water systems as public health and safety will continue to be at the forefront of water related issues. A study of the local groundwater resources in the early 1970's indicated an adequate supply for the foreseeable future but little research on this topic has been completed in recent time.¹ However, in 1989 when the Municipality contracted Sobey & Associates to carry out a feasibility study for Valley that examined a preliminary water system concept for the community that was largely based on the earlier Hennigar study (1971). Developments that require extraordinary amounts of water, like certain commercial, industrial, and high density residential uses will likely be subject to approval from the Department of Environment and Labor and their impacts should consequently be considered by Council. In any respect, management of the present groundwater source is essential since there is a continuous risk of contamination from an endless range of potential pollutants. Accidental spills, although local in appearance, can have a widespread and long term effect on groundwater not to mention devastating implications on the expenditure of public money.

The *Municipal Government Act* contains a Statement of Provincial Interest with respect to Drinking Water which elevates the importance of this resource. Its purpose is to "...*protect the quality of drinking water within municipal water supply watersheds.*" The Statement lists several provisions that must be incorporated in to planning strategies that aim to address issues of water quality and quantity. Land use types, densities, development practices,

combined with the area's physiographic characteristics all play a role in protecting this resource. Council recognizes the significance of drinking water and accordingly addresses this issue through a variety of related policies contained elsewhere in this Strategy.

Building lot sizes in the un-serviced areas of this Strategy are based on the soil capability respecting on-site sewage disposal and the need to separate the system from an on-site water supply. While the Subdivision Bylaw establishes minimum lot sizes in these areas, lot sizes are dependent on soil conditions and are apt to be adjusted by the Nova Scotia Department of Environment and Labour upon completion of a soil analysis. On-site well water supply for domestic purposes or wells that are withdrawing less than 20,000 litres per day are largely unregulated by the Department except their location relative to an on-site sewage system.

In Growth Centers development is at a density that places greater strain on the groundwater regime and increases the risk potential for contamination. Many of the Growth Centers have a user base or sufficient densities that may soon support a water utility or warrant expansion of the Truro system. In 1992, Truro completed the construction of an expanded water supply in the Lepper Brook area. The source, which was increased to 500 million gallons, was designed in consideration of servicing development growth occurring in peripheral regions of Truro. This augments the newly constructed water filtration facility and could supply urban areas of Central Colchester should the Town consider expanding its utility service area.

Other options exist for water supplies in Upper Onslow, north of Bible Hill, the Chiganois River, and in Valley. With exception to Upper Onslow there has been no study on the quantities of water in these locations nor has there been any steps taken to provide proper protection of these resources. This does underline the importance, however, of examining the region's long term needs as well as identifying water supply alternatives so that Council may respond accordingly to ensure that these can remain viable options.

It shall be a policy of Council to:

MS-4 Consider the impact of development patterns and land use on water supply, quality, and quantity generally;

MS-5 Consider the impact and availability of groundwater supply for a development agreement or rezoning involving a project that requires well construction approval from the Nova Scotia Department of Environment and Labour.

MS-6 Consult periodically with the Nova Scotia Department of Environment and Labour on the quality and quantity of groundwater.

MS-7 Identify and explore ways to protect water supply sources for a public system and review the feasibility and need for constructing a central water distribution system within the Growth Centres.

MS-8 Consider appropriate land uses development standards and practices in other parts of this Strategy that aim to protect drinking water quality and quantity.

2.2.2 Sewer Services

Construction of a public sewer system in Colchester County began in 1957 with the installation of the Village of Bible Hill system. Addition of the Tatamagouche system in 1965 lead to the adoption of a Sewer By-law in 1966 which has guided the use of sewer lines throughout the Municipality. This Bylaw has recently undergone an extensive review to better address issues of quality control, installation procedures, and other measures necessary to enable the proper treatment of sewage.

Over time, seven Sewer Districts were created within Central Colchester; Bible Hill, Valley/ East Mountain, Salmon River, North River, Hilden, Truro Heights and Mingo's Corner. Recognizing the influence of a sewer system on community development patterns, Council implemented five corresponding land use planning strategies, beginning in Bible Hill in 1978. Strategies were never completed for North River, East Mountain and Mingo's Corner.

During the development of the Service Delivery Strategy 1993, staff studied vacant land patterns within each of the Municipal Sewer Districts. At that time and based on current development trends, it was estimated that there remained at least one hundred years of growth potential combined. A more recent analysis confirms that there still remains a considerable amount of serviceable land within such areas, perhaps more than was originally estimated. Council expressed its desire to restrict the expansion of Sewer Districts and make municipal services more cost effective by encouraging development of vacant land within the existing service areas. Policy SDS 2 of the Service Delivery Strategy clearly states Council's intention in this respect.

Community	Growth Centre Development Potential - 2000				
	Serviceable Acreage	Undeveloped Acreage		Estimated Land Supply (Years)	Projected Population Growth
Bible Hill	1731	525	30%	54	16,524
Salmon River	1128	820	73%	318	9747
Valley	1397	911	65%	103	11,960
Lwr. Truro/Truro Hgts.	1373	805	59%	259	10,843
Hilden	1250	942	75%	453	10,424
Total	6879	4003	60%	237	59498

The Municipality completed a joint trunk sewer project in 1991 extending from Valley to Lower Truro to provide treatment of effluent generated from each sewer district. This new infrastructure provides a sewage collection network for the urban core including Truro and ultimately sewage processing at a regional plant prior to discharge into the Salmon River. The completion of the central treatment facility in Lower Truro brought four smaller treatment

plants to be abandoned in Bible Hill, Hilden, Valley, and Salmon River and effluent is now transported to Lower Truro for processing. The sequence batch reactor system at the regional treatment facility in Lower Truro provides secondary processing prior to discharge.

It shall be a policy of Council to:

MS-9 Require all new development located within a Sewer Area be connected to a municipal sewer system subject to Municipal Sewer By-law;

MS-10 Treat collected sewage at the regional treatment facility prior to discharge into the Salmon River;

MS-11 Require lot development not within a Sewer District to comply with the lot requirements of the Municipal Subdivision By-law and Nova Scotia Department of Environment and Labour for the installation of on-site sewage disposal system.

MS-12 Limit the provision of central sewage collection to existing Municipal Sewer Districts and not alter such boundaries until the need for an expansion is clearly demonstrated.

2.2.3 Storm Water Management

Issues associated with storm water management have been more evident in recent years. The Truro Flood Plain Study completed in 1997 by Environmental Design & Management Ltd. reviewed the occurrence of local flooding in flood plain areas noting that “...*stormwater flooding is a chronic problem in much of the Study Area...*” This is different from the type of flooding mapped under the Canada-Nova Scotia Flood Damage Reduction Program where, flood lines were determined from the Salmon and North Rivers as the flood source, influenced by the area’s extreme tides. Flooding, regardless of its source continues to be a frequent and aggravating problem for many property owners affected by this condition.

Storm water management problems are not limited to the flood plain and many areas upstream experience localized flooding. Hilden, Salmon River, Bible Hill and parts of Valley have all had random flooding during times of high precipitation. Urban development or areas of high density usually pronounce problems associated with storm water management since the ratio of impermeable to porous surfaces is reduced. This together with improper forest management practices, malfunctioning and undersized storm drainage systems are among the primary reasons for localized flooding.

Little has been done to address the storm water problems which is perhaps due to the fact that Council's legislative authority has been vague. The Municipal Government Act now enables municipal planning documents to create policy and regulations in this regard. Storm water management is not an issue isolated to a single municipality or specific region. Drainage systems are far more wide-ranging and form an integrated network throughout a watershed area. For such an exercise to be truly meaningful, it will be necessary to involve a variety of groups. The town of Truro, Village of Bible Hill and Departments of Transportation, Environment, Natural Resources and Agriculture will all be able to offer valuable input in this regard.

It shall be a policy of Council to:

MS-13 Recognize storm water flooding as serious condition affecting many properties in Central Colchester and support further study and other mitigation initiatives;

MS-14 Monitor areas affected by stormwater flooding and consider the establishment and/or participation in a storm water task force that would examine the causes and potential solutions to such flooding problems.

MS-15 Solicit involvement of the Town of Truro, Village of Bible Hill, Millbrook Native Council, Departments of Transportation, Natural Resources, Environment, and Agriculture and other storm water management interest groups towards the preparation of a storm water management plan for Salmon River watershed area. (This is further amplified in the Environmental Section of this Strategy)

MS-16 Consider the development and inclusion of storm water management practices and guidelines in appropriate municipal bylaws and regulations.

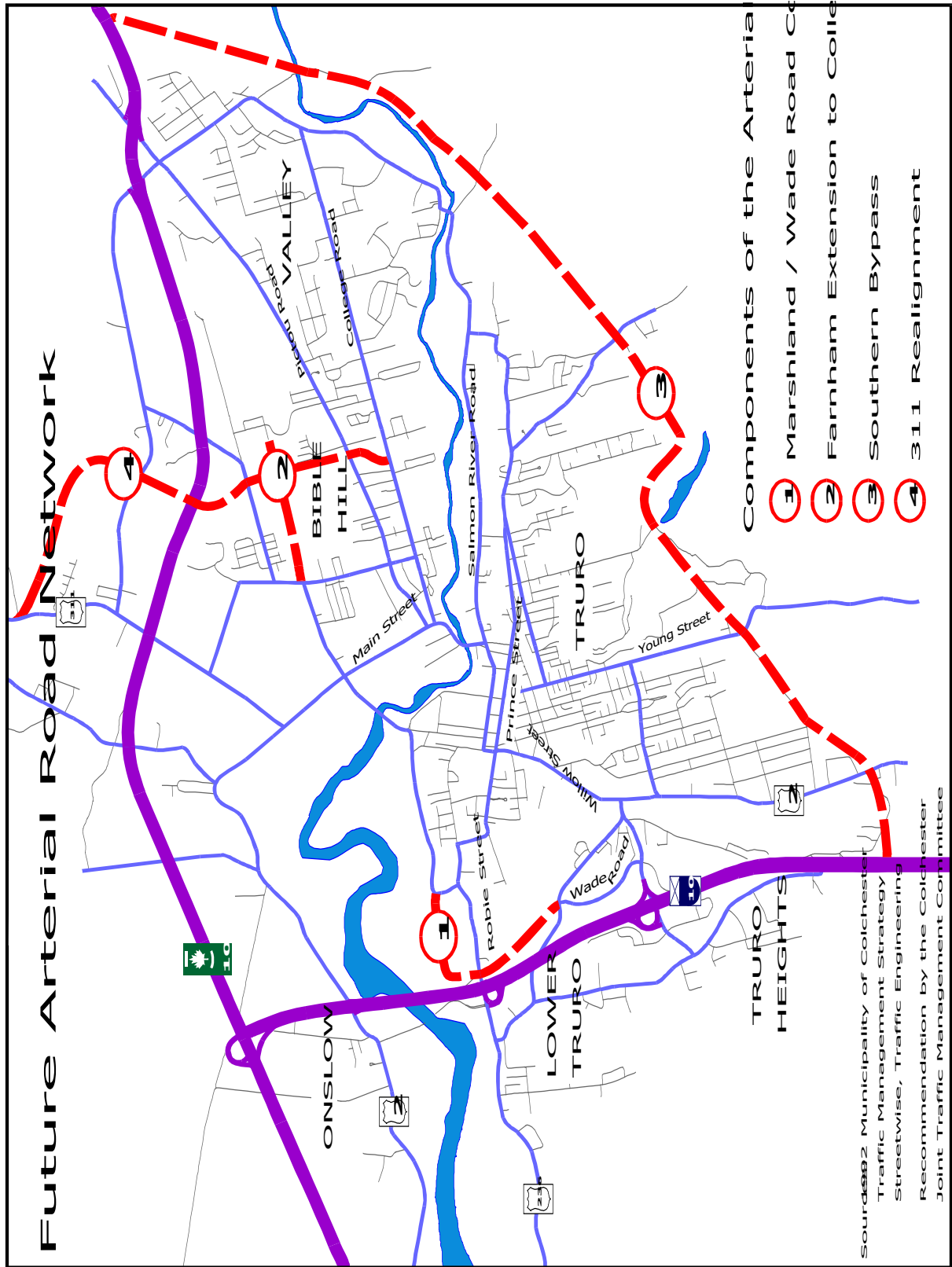
2.2.4 Transportation Systems

Perhaps one of the most distinct influences on community growth patterns are transportation networks. Considering a population's dependency on vehicular transportation, the importance of safe and efficient transportation linkages has never been more prominent. Since 1995, rural municipalities such as Colchester have become responsible for ownership and maintenance of new local roads. The Department of Transportation has retained ownership of local roads prior to this date and maintains these through an agreement with the Municipality. All 100 series highways remain a provincial responsibility.

i) Arterial & Collector Roads

Each Growth Center is serviced by several roads that function as an arterial or collector. By nature the function of these roads is to move traffic efficiently from and to key points within a community. To accomplish this, it is a good practice to minimize the number of new intersections or concentrating local traffic at a few intersections to reduce the traffic flow

interference. Additionally, certain types of land uses such as commercial, institutional, and higher density residential development are suited to collector road corridors due to visibility,

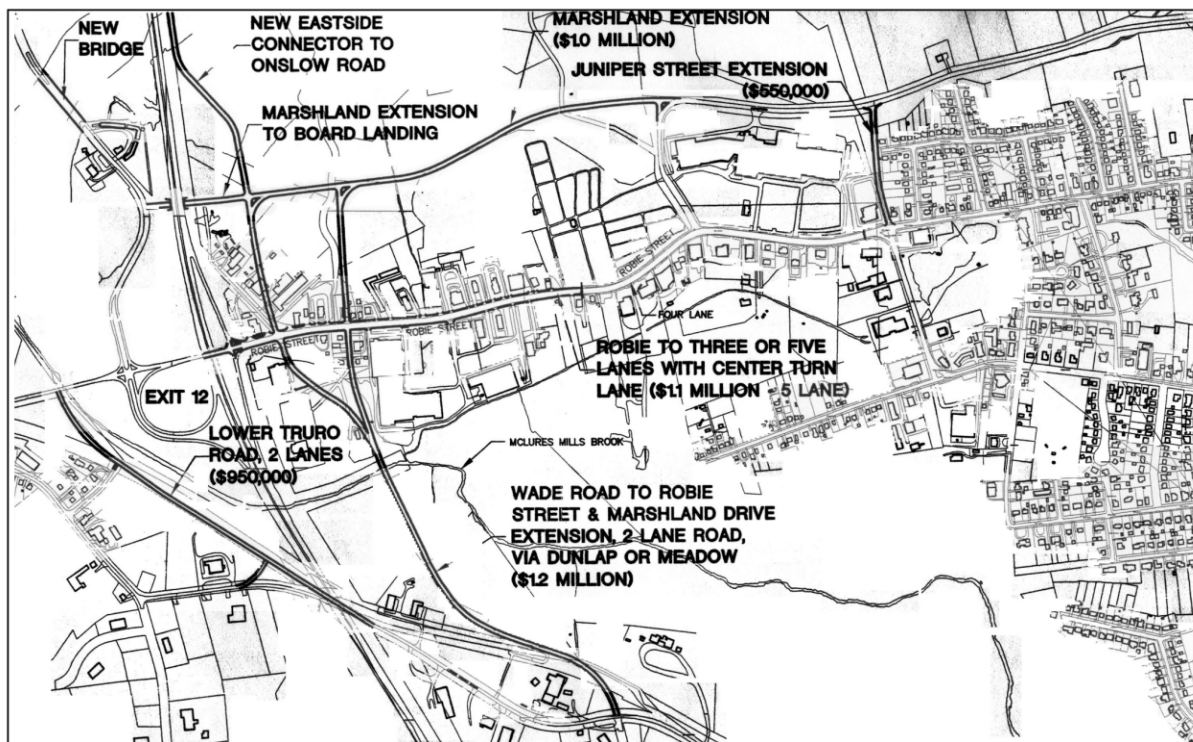


traffic volumes, access and the high intensity of such land use activities. These can act as a good transition between active areas of the community and the quieter residential neighborhoods. The function of certain roads may change over time and Council should periodically monitor the performance of road systems.

The shared responsibility for roads necessitates a coordinated approach to effective transportation management. Study of the region's transportation network began in 1992 with the completion of the Traffic Management Study by Streetwise Engineering. A principle recommendation contained within this Study included the long term implementation of an arterial - collector road network to extending from Farnham Road to Queen Street in Salmon River that would help alleviate some of the congestion experienced on sections of College Road, Pictou Road and Main Street. The Study reported that:

"...Arterial roadways serve the function of carrying relatively high volumes of traffic from one part of the region to another. To enhance the function and safety of this roadway, the number of intersections will be minimized. The Colchester Arterial Strategy is a twenty year plan of phased improvements designed to provide adequate service to the expected volumes of regional traffic".

The arterial road concept was advanced in 1993 with the preparation of a Functional Alignment Study for the portion of road proposed in Bible Hill and North River also prepared by Streetwise Engineering. The report was received by Council in that same year but further action on its recommendations were delayed due to a variety of other transportation related issues and priorities. One component of the Farnham Road Extension has, however, been re-examined by both the Department of Transportation and the Municipality. Due to changing circumstances, continuation of the Farnham Road Extension offers little value to the overall road network and should terminate at Pictou Road. By not extending the Farnham Road Extension beyond Pictou Road, the proposed road network can use the existing portion of Hazel Drive, including its intersection with Pictou Road. This alteration would be more



ARTM & SGE
ROBIE STREET AND HIGHWAY 102
TRANSPORTATION STUDY

IMPROVEMENTS THAT HAVE BEEN CONSIDERED

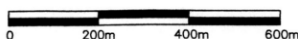


FIGURE 5

economical and sensitive to land use and property ownership patterns in the area. Since this time, the Municipality has been involved in a number of joint transportation planning projects with the Department of Transportation and Public Works, the Village of Bible Hill, and the Town of Truro. In 1997, a Study was completed for Bible Hill and Valley focusing on specific traffic design issues in the area by Atlantic Road and Traffic Management. This generally built upon earlier work but its purpose was to examine, in more detail, problem areas, such as the seasonal flooding of Park Street, a new bridge crossing at Murray Siding, and intersection improvements along Main Street at College and Pictou Roads.

In September 2000, Atlantic Road and Traffic Management completed the Robie Street / Highway 102 Transportation Study in the vicinity of Lower Truro. This particular area has been a long standing concern, often validated by the high number of accidents and periods of extreme congestion. The Study offered a number of recommendations, including an extension of Marshland Drive to Dunlop Avenue, a redesign of Robie Street, an extension of Wade Road to Robie Street, a continuation of Juniper Street to Marshland Drive, and the reconstruction of the Board Landing Bridge. While the results of this review are relatively new, the Department regards the general Robie Street area as a priority and intends to commence discussion of implementing the recommendations shortly.

II. Local Roads

Local Roads are generally those that are now deeded to the Municipality through the subdivision process and exist to provide internal traffic movement within a node of development. Since construction of such roads relies entirely on the subdivision process, the completion of internal road networks can take years to complete. Often times, road reserves and dead ended streets serve as access points to adjacent properties and connections are required as new roads are built. This comes often as a surprise to residents who have, for many years, enjoyed the luxury of a dead ended street. Nonetheless, the continuation of such roads is necessary to provide linkages for local traffic as neighborhoods develop and internal road networks will help reduce the number of new intersections with collector and arterial roads. Under normal circumstances, local roads are capable of handling at least two thousand vehicles daily. Where a new development creates additional traffic that would increase numbers in excess of this threshold, alternative access should be considered or a traffic impact analysis prepared.

It shall be a policy of Council to:

MS-17 Establish an urban street hierarchy and list streets that now function as collectors in the Growth Centers in the Land Use By-law which may be amended when circumstances warrant;

MS-18 Continue to participate in joint transportation planning exercises with the Town of Truro, the Village of Bible Hill, and the N.S. Department of Transportation and Public Works and consider future improvements aimed at mitigating traffic related issues.

MS-19 Identify possible future road linkages within each Growth Center which will guide the subdivision and development of vacant land.

MS-20 Consult with the Nova Scotia Department of Transportation and Public Works or the Municipal Director of Public Works when a proposed zoning map amendment or development agreement is likely to result in total traffic volumes that exceed two thousand vehicles a day on local roads or potentially impact on acceptable levels of service.

MS-21 Under circumstances identified in Policy MS-20, Council may require an applicant to prepare, at his/her expense, a traffic impact analysis that demonstrates the impact of a proposed amendment or change on existing traffic patterns.

MS-22 Designate “Transportation Reserves” on the Future Land Use Map and create a corresponding zone in the Land Use Bylaw as a means of identifying areas of land necessary for future transportation linkages.

iii. Railway

The greater Truro area has played a significant role in the development of railway systems throughout Nova Scotia. Appropriately named, the “Hub Town” serves as an important focal point for the Canadian National Railway linkages across the province. Both freight and passenger rail services continue to use existing lines and following a decline in usage of the last decade or more, the use of rail transportation is on the rise again and becoming a more viable distribution alternative. This, combined with the fact that the CNR’s main lines exist here, assure the greater Truro area of ongoing rail service into the future. This is of obvious benefit to businesses in the industrial parks in Truro and Debert that are presently serviced with spur lines.

As rail based corporations streamlined their operations over the last number of years, a number of routes have been abandoned and sold to other interests. The rights of way often comprise a significant amount of land and uninterrupted access areas of the municipality. In the past, these linkages have provided useful corridors for road and trail development. The Municipality should work towards acquiring these in the future in the interest of broader community transit needs.

It shall be a policy of Council to:

MS-23 Consider the acquisition of abandoned railway rights of way for municipal transportation initiatives.

iv. Airport

Central Colchester’s primary source of air transportation is the Halifax International Airport located approximately 70 kilometers southwest of Truro. This facility provides a broad range of national and international passenger and cargo air services.

The former CFB Debert Base located just beyond the Central Colchester boundary also contains airport infrastructure that was once used for military purposes. With the base closure completed in 1998 and the well established Debert Industrial Park close by, a unique opportunity exists for air cargo services. From an industrial development point of view, this is an

important asset to the area and Council should explore ways to re-establish air service here.

It shall be a policy of Council to:

MS-24 Consider initiatives aimed at restoring air service at the former CFB Debert facility as a means of enhancing industrial transportation options.

v. Cycling & Pedestrian Routes

Local transportation considerations should not be restricted to motorized vehicles. Alternative modes of transportation such as cycling and walking should be encouraged with safe routes made available through special lanes and trails. When properly integrated into a community and separated from motorized vehicles, these facilities encourage a safe and healthier mode of transportation that can potentially reduce demands on road capacities, particularly in an urban setting.

Sidewalk construction is a municipal capital expenditure that is generally funded by the “Urban Service Rate”. The Municipality, through its Service Delivery Strategy, has identified sidewalk projects that are mostly located along collector roads in Central Colchester. These have been completed and provide safe pedestrian movement along busy streets.

It shall be a policy of Council to:

MS-25 Recognize alternative forms of transportation such as cycling and walking and consider the provision of facilities / improvements within Central Colchester for pedestrian and recreation purposes.

MS-26 Monitor the need for and consider the expansion of future sidewalk projects in urban areas of Central Colchester as a means of improving pedestrian safety along high volume roads.

2.2.5 Street Lighting & Utilities

Utilities form essential components of the Municipality’s infrastructure program. Electricity, telecommunications, and in the near future, natural gas are distributed and regulated by individual utility providers. The Municipality’s involvement with the provision of such services is somewhat limited but due to the fact that these are located within Municipally owned rights-of-way, the Municipality does play a role in setting certain standards for the delivery of such services. With exception to natural gas, these have been laid out in Colchester’s Standard Specifications for the Design and Construction of Municipal Services. Review of these standards will be necessary from time to time, and like other primary services the Municipality provides, are a major factor that influences the pattern and form of development that occurs throughout Central Colchester.

The installation of natural gas lines in Central Colchester, scheduled to occur in late 2001, has been delayed indefinitely. This is a new energy alternative that most maritime communities have no experience with particularly in terms of its supply and distribution. While it is likely gas companies will bear the expense of distributing the commodity to homes, businesses and industries, there are a host of issues that the Municipality must address before such projects commence. Design standards (ie. location within existing public rights-of-way and new subdivisions), new building inspection procedures, and updated property information records are just a few items that the municipality will have to consider in the interests of public safety and proper service delivery.

Street lighting services are a little different than the utilities described above. Increased population densities in the sewer serviced areas results in higher activity levels such as the movement of traffic and people. Street lights provide a safer and more secure urban environment for vehicles and pedestrians. Installation of the service is carried out by Nova Scotia Power at the Municipality's request with operating costs paid for by the Municipality. Policies SDS-16 to SDS-17 of the Service Delivery Strategy speak further on the provision and funding of street lighting to urban communities in Central Colchester. Council intends to monitor the need for street lighting in other areas affected by this Strategy.

It shall be a policy of Council to:

MS-27 Work with individual utility providers to ensure that property owners throughout Central Colchester are afforded an acceptable level of utility services.

MS-28 Review utility distribution projects and standards with individual service providers to optimize scheduling of municipal capital improvements as well as ensuring a suitable fit that is consistent with community development objectives.

MS-29 Monitor changes in the delivery of services by utilities and consider the impact such changes in terms of the Municipality's Service Delivery Strategy, the Subdivision Bylaw and the Standard Specification for the Design and Construction of Municipal Services.

MS-30 Encourage the Natural Gas Task Force or similar groups to develop a strategy of priority areas in Central Colchester that should be serviced with natural gas.

MS-31 Monitor the need for and consider the expansion of street lighting in Central Colchester as a means to improve safety and security within urban communities.

2.3 Recreation & Leisure Services

Currently, community associations can take on the responsibility to develop and maintain recreation sites and oversee programming activities. Cost and time commitment required by

volunteer organizations has forced these groups to focus on a few, large sites while the small "pocket parks" within subdivisions remain undeveloped. The Municipality's Leisure Services Department assists these groups by offering organizing and programming support.

In the spring of 1994, Council contracted the Recreation Resource Centre of Acadia University to prepare and conduct a Recreation Needs Assessment. The study area corresponds with the boundaries of this Strategy and is intended to explore how people spent their leisure time, what they would like to improve, as well as the Municipality's role in recreation. Recommendations of the study had been incorporated into the Service Delivery Strategy and helped form the basis of the Municipality's Draft Parkland Strategy, June 2000.

In the Village of Bible Hill the Village Commission developed and maintains a series of neighborhood, community, and regional parks as well as other recreational facilities. The lands acquired in Bible Hill through the five percent subdivision provision are deeded to the Village. The Commission also provides recreational programming services to its community, and has participated with Council in the Recreation Needs Assessment. The Village has also recently completed a recreation master plan intended to provide guidance on the provision and delivery of recreation services.

It shall be a policy of Council to:

MS-32 Continue to support community associations in their pursuit of developing recreation initiatives.

MS-33 Promote recreational master planning as a means of identifying community recreational needs and develop a process through which facilities and programs may be delivered to residents of Central Colchester.

MS 34 Continue to work with the Town of Truro and the Village of Bible Hill to develop a strategy for the provision of recreational facilities and programming throughout the region.

PART 3: ENVIRONMENT

3.1 Waste Management

Preserving environmental quality has been a long standing priority of Colchester Council that has been demonstrated, in part, by the completion of two major capital projects. The Colchester Wastewater Treatment Facility completed in 1996 marked a significant milestone in the collection and treatment of sewage in the Truro -Central Colchester region while the Waste Management Park in Kempton provides a fully augmented waste disposal service for tires, garbage, recyclables, and organics. These combined with ongoing collection and management programs has made Colchester a leader in the waste management field.

Therefore it shall be a policy of Council to:

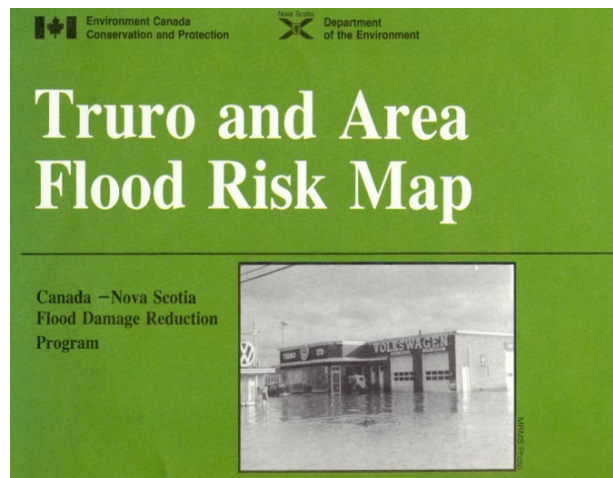
EP-1 Continue to assume a proactive role towards the maintenance and betterment of environmental quality in the Truro - Central Colchester Region and promote the use of innovative approaches to improve waste management practices.

3.2 Flood Risk Areas

3.2.1 Introduction

Flooding in Central Colchester is perhaps one of the most serious environmental conditions that affects nearly 1100 properties. Development in flood prone areas has occurred practically since the beginning of the community's formation in the early 1700's and evidence of the early Acadian dikes can still be found in parts of Lower Truro. Originally, this development was sparse, consisting of agricultural structures, homes and small businesses mostly located in peripheral areas of Robie Street, Main Street, North River, Lower Truro, and Onslow. Improvements to transportation systems during the late 1960's and early 1970's had a dramatic effect on development patterns particularly along Robie Street. Twinning of the 102 Highway provided excellent exposure to large undeveloped tracts of land and soon the area succumbed to pressures of commercial development.

The persistence to develop in flood risk areas brought about many dangers that have historically been difficult to manage in any meaningful way. Community planning within the Municipality is relatively new and responded to substantial growth in many of the urban areas. The intermittent occurrence of flooding and limited flood damage resulting until recently, did not create an urgent need to develop policy and regulations in this regard. Often, property owners relied on historical data and local folklore to protect new buildings from flood damages.



The confluence of the Salmon and North Rivers with their many tributaries is a complex and unpredictable water system. Its interface with the significant Bay of Fundy tides has resulted in it being one of the most studied flood plains in North America. Since the 1900 there have been no less than a dozen studies that have examined components of the river system and flooding. These have been generally specific to certain issues and offered little help to formulate a comprehensive overview of the nature and characteristics of this flood plain. It was not until the Canada - Nova Scotia Flood Damage Reduction Program in late 1970's when uniform construction standards were developed together with the formal designation of five flood risk areas in the province of Nova Scotia, one of which included the Salmon and North Rivers. This designation and the resulting federal - provincial agreement respecting flood damage relief pressured municipal governments to recognize the serious nature of flooding and conditions necessary for basic development standards; first that development must be prohibited in areas flooding at a relative frequency of once every twenty years, and; second that buildings must be flood proofed in areas flooding at a frequency of once every one hundred years. Together, these are the two basic principles on which planning documents in both Colchester and the remainder of the province are required to be based.

For more than a century, there have been many proposals aimed at solving the flooding problems experienced in Central Colchester. Dykes, piers, tidal and headwater dams, river realignments, ice parks, aboiteaux and channel alterations have all been designed to solve one problem but have either created others or were far too costly. Circumstances in the mid 1990's prompted planning staff from both Truro and Colchester to consider a joint management approach to flood related issues involving a balanced "cut and fill" process that could enable alterations to established flood boundaries, subject to certain criteria. It is envisioned that this approach could have the following advantages:

- flood prone areas could continue to flood naturally without significant damage to property;
- allow existing developed areas to change and continue to develop without affecting the capacity of the flood plain to flood;
- minimize random infilling of the flood plain which decreases the storage capacity of flood waters, and reduce the likelihood of future flood damage;
- approach could be non-capital or maintenance intensive to governing bodies; and
- would not interfere with upstream management of storm water runoff.

Such benefits had been premised on two key factors: first that the flood plain outside of developed areas is relatively pristine and needs to be protected; and second that the flood way or natural drainage patterns need to be maintained and in some cases restored.

To test the "cut and fill" concept, the Town of Truro, Municipality of Colchester and Province of Nova Scotia cost shared the Truro Flood Plain Study - 1997 completed by Environmental Design & Management (EDM) in 1998. The report scientifically concluded that the approach was indeed valid and had further identified a series of improvements and recommended process through which it could be implemented.

At the time, the joint project envisaged the development of an Inter-Municipal Planning Strategy and Land Use Bylaw that would enact policies and development standards common to both

municipalities. A Joint Planning Advisory Committee for Flood Risk was formed in 1998 and assigned the task of developing Inter-Municipal Planning documents for this purpose. Following a detailed public participation program the Committee put together a draft strategy and bylaw for Councils' consideration in April of 2000. At that point, Colchester County Council reconsidered its involvement in the joint project and in March of 2001 decided that the Municipality should pursue the flood plain issue independently but seeking to utilize many of the same principles and processes from the Draft Inter-Municipal Planning Strategy and Land Use Bylaw for Flood Risk Areas dated April 2000.

The "cut and fill" exercise can be complicated and difficult to visualize. Because of topographical variations throughout the flood plain, it will mean different outcomes for different properties. While this makes it difficult to quantify specific standards, the Land Use Bylaw will outline a series of design criteria that must be observed where it is impossible to set a numerical standard. To help illustrate this point, useful storage capacity cannot be gained simply by digging a hole in the ground; it must somehow be connected to the flood plain and its associated drainage patterns. There are a variety of deciding factors that must be taken into account such as water table elevations, spring high tides, property elevations, and existing drainage patterns that carry surface water from the property into the Bay of Fundy. For a "cut and fill" exercise to be successful, the site must therefore have positive drainage (ie. no standing water). This means that the lowest elevation of a property will most often determine the extent, nature and design of a "cut and fill" process. The Land Use Bylaw will contain conditions and standards to ensure that such objectives are accomplished.

Therefore it shall be a policy of Council to:

EFP-1 Recognize the flood standards established under the 1988 Canada - Nova Scotia Flood Damage Reduction Program except in certain areas where the 1:20 year flood line may be made flexible to accommodate a "cut and fill" process where there is no net loss to flood plain storage.

EFP-2 In recognition of the joint participation with the Town of Truro in the development of the "cut and fill" process in the draft inter-municipal planning documents, provide notice to the Town of proposed flood plain amendments and welcome the Town's comments and input in this regard.

3.2.2 Boundaries and Flood Plain Areas

The flood plain is composed of two main geographic areas; first the area that floods at a relative frequency of 1:20 years, referred to as the "flood way", and; second, the area that floods at a relative frequency 1:100 years, known as the "flood way fringe". Together these form the Salmon & North River Flood Plain illustrated on the infamous "orange" flood maps prepared under the 1988 Flood Damage Reduction Program. The flood plain became officially designated under the corresponding agreement between the federal and provincial governments in that same year that effectively removed their responsibility to pay flood damage relief claims for new development that did not meet the flood proofing standards contained therein.

Until 1998, the regulation of flood plains had been a municipal responsibility and had generally only occurred in areas where land use planning has been completed. In Colchester, flood plain

regulations has existed in Bible Hill, Salmon River, Lower Truro, and Valley since 1986, 1987, 1988, and 1991 respectively. The consolidated Central Colchester Municipal Planning Strategy in 1994 set out consistent development standards for flood risk areas which were based on those designed under the Flood Damage Reduction Program. Adoption of the Municipal Government Act in 1998 also brought into force the Statements of Provincial Interest, one of which concerns itself with the five designated flood plains in the Province. This statement is intended to state a formal provincial position on development in flood risk areas and moreover, obligates all affected municipalities to address such through municipal planning documents. The Statement is based entirely on the principles of the now expired Flood Damage Reduction Agreement and is the basis for any new or revised municipal policy and regulation in this respect.

There are many peripheral areas of the flood plain that are exposed to periodic flooding that is often the result of topographical characteristics. One such area is along the north side of the East Queen Street where the land is relatively low, flat and susceptible to flooding caused by ice dams forming along this particular section of the Salmon River. This type of flooding is unpredictable and bears the familiar public safety and property damage issues. This, combined with the historical recurrence of flooding, the area will be designated as Flood way on the Future Land Use Map and zoned accordingly, notwithstanding that it has not been identified as a 1:20 year flood risk area on the Flood Damage Reduction Mapping. Similarly, areas exist in Hilden along the McClure's Brook that frequently flood during periods of high precipitation. In the spirit of flood plain policy and in consideration of the physical characteristics that exist here, new development should not be encouraged and such areas will be designated and zoned Flood Way.



The Provincial Statement of Interest also allows municipalities to study alternatives concerning the development of land in flood risk areas. Approaches contrary to the Statement “...*may be permitted provided a hydro technical study, carried out by a qualified person, shows that the proposed development will not contribute to upstream or downstream flooding or result in a change to flood flow patterns.*” The Truro Flood Plain Study accomplishes this objective and has received the support of Environment Canada, N.S. Department of the Environment and Labor as well as Service Nova Scotia and Municipal Relations shortly after it was completed. The focus of the Study was in areas that were under significant development pressure, particularly throughout Truro, areas of Lower Truro, and Main Street / Farnham Road in Bible Hill which represents approximately 20% of the total flood plain. Other areas remain relatively pristine and development will not be encouraged to continue in the absence of supporting studies.

Therefore it shall be a policy of Council to:

- EFP-3** *Subject to Section 3.2.8, designate all land identified under the 1988 Flood Damage Reduction Program as “Flood Plain” and “Flood Way” shown on the Future Land Use Map- Environmental Conditions of this Strategy.*
- EFP-4** *Zone certain land within the 1:20 year flood frequency as E-1 Flow Way depicted in the 1997 Truro Flood Plain Study to ensure that primary drainage ways remain unobstructed. These areas are illustrated on Appendix 2 attached to this Strategy.*
- EFP-5** *Zone remaining land that corresponds with the 1:20 year flood frequency under Flood Damage Reduction Program as E-2 Flood Way, except areas described under Policy EFP-6 above as well as an area north of East Queen Street where ice damming has historically caused extensive flooding.*
- EFP-6** *Notwithstanding Policy EFP-4, zone land in the area examined under the Truro Flood Plain Study - 1997 and having a 1:20 year flood frequency as E-3 Flood Way Modification Zone which may be developed using a “cut and fill” procedure prescribed by this Strategy and accompanying provisions in the Land Use Bylaw.*
- EFP-7** *Identify and regulate land that corresponds with the 1:100 year flood frequency mapped under 1988 - Flood Damage Reduction Program as Flood Way Fringe in the Land Use Bylaw and permit the development of land in these areas provided all main buildings meet flood proofing standards established under the 1988 - Flood Damage Reduction Program and further amplified in the Statements of Provincial Interest Regarding Flood Risk Areas - Nova Scotia Municipal Government Act.*

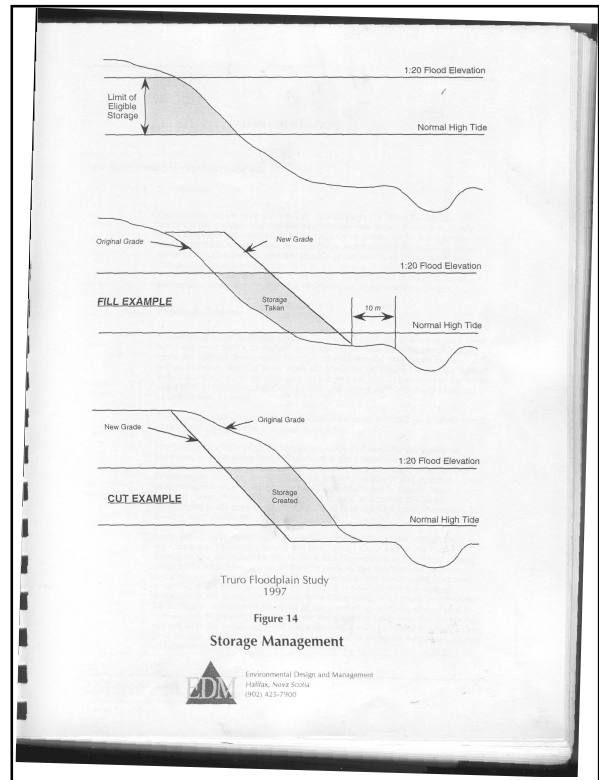
3.2.3 Land Uses in Flood Risk Areas

Flooding is a serious environmental condition that has direct implications on certain types of land uses that are situated in areas of high risk. Development in Central Colchester has encroached on the floodplain but fortunately many of these uses do not present serious safety or environmental issues. To ensure that such human and environmental risks are minimized, this Strategy will prohibit the establishment of certain land uses in areas exposed to varying degrees of flooding.

The E-1 Flow Way Zone delineate the primary drainage ways for flood waters. It is critical that their function be maintained and in some cases improved to ensure water can freely flow into the Cobequid Basin. These areas, together with land zoned E-2 Flood Way, create the highest risk of flooding and accordingly, structural development of any kind must not be allowed, particularly during seasons where heavy rainfall and freezing conditions are most likely to occur. Recreational activities, land cultivation, and in some areas, parking lots are among the only

types of uses suited to such areas. Even these activities may involve alterations to topography which can have significant effects on the extent and pattern of flooding in both the E-1 and E-2 Zones. Standards will be developed in the Land Use Bylaw outlining precise requirements for land forming and soil conservation practices.

The moderate risk of flooding in areas associated with the Flood Way Fringe Area (ie. 1:100 years) and the E-3 Flood Way Modification Zone, affords an expanded list of development options provided any such buildings meet flood proofing standards and subject to maintaining storage capacity in the “Hydrologic Regions” outlined later in this Strategy. These areas provide valuable flood water storage capacity and are generally less affected by ice or moving water. Consequently, development in such parts of the flood plain is tolerable with minimal repercussions since water will rise and fall around the structure in a relatively short time frame. In effect, these form small islands during a flood event that are high enough for the buildings to remain dry and safe. There are, however, certain types of land uses that are not suited to the Flood Way Fringe or Flow Way Modification Zone. Hospitals, senior citizen housing, homes for special care and similar types of uses could threaten the safety of individuals occupying such institutions if evacuation is necessary in the event of a flood. Other uses such as the warehousing or production of hazardous materials may increase the risks of environmental contamination during a period of flooding. For these reasons, the Land Use Bylaw will only permit these types of land uses in areas that are not affected by flood risks.



Therefore it shall be a policy of Council to:

EFP-8 Preserve flood dynamics by prohibiting permanent structural development in the E-1 Flow Way Zone and the E-2 Flood Way Zone except for temporary structures accessory to permitted agricultural, recreational, and / or resource land uses and set out specific requirements in the Land Use Bylaw for vegetation management and topographical alterations.

EFP-9 Subject to Section 3.2.4 of this Strategy, allow development in the Flood Fringe Area and the E-3 Flood Way Modification Zone provided that all main buildings are flood proofed in accordance with the policies of this Strategy and implementing Land Use Bylaw.

EFP-10 Not permit the establishment of institutional land uses, such as hospitals, senior citizen housing, special care facilities, and other activities that have a predominant safety consideration in areas that are not exposed to flood risk.

EFP-11 Protect environmental quality in all flood plain areas by not allowing any land use activity that has heightened potential of contaminating the Salmon and North River Flood Plains.

3.2.4 Flood Way Modification Zone - Developed Areas

The 1997 Truro Flood Plain Study was completed with the vision that the 1:20 year flood way boundary could be changed to accommodate development without affecting flooding patterns and dynamics. This of course, focused in the urbanized areas of Truro - Colchester where development pressures are highest and the complex interface exists between development and flooding.

The Study recommended a managed approach to flood plain protection in the urban core and is based on two fundamental principles; first the flood flow way must not be encroached upon in any manner, and; secondly flood water storage may be moved within a specific region provided there is no net loss to storage capacity. Adjustments to the 1:20 year flood line using this “cut and fill” procedure will need to be confined to certain areas limiting the extent to which fill can be moved in areas of mutual impact. The Land Use Bylaw will identify a number of “Hydrologic Regions” that display similar hydro-technical characteristics in which a “cut and fill” may be carried out on any properties within. Any development that encroaches in such areas must use the managed approach described and Council will encourage senior levels of government to respect these objectives.

The flood plain is not an environmental condition affecting Central Colchester alone. A significant area of land also exists in the Town of Truro having the same type of development constraint. One objective of the draft inter-municipal planning documents was to treat the flood plain as a single entity subject to a set of mutual development standards. In practice, this could accommodate a “cut and fill” exercise within a Hydrologic Region (which transcend political boundaries) regardless of whether the property is located in the Town or the County. There is no reason that this cannot occur under this approach provided the Town adopts similar provisions in their planning documents. It will be important that a process be designed for the exchange of topographical information should developments involve land located in both jurisdictions.

The process for developing land in the E-3 Flood Way Modification Zone will require a carefully monitored procedure that ultimately demonstrates no net loss to flood storage capacity and no interference with flooding dynamics. Professional assistance on such matters will be necessary given the area’s susceptibility to flooding together with liability issues that are ever present. To this end, the process shall consist of the following steps:

- 1. Preliminary Review**

Applicant would make application to the Municipality for a “cut and fill”, identify the properties involved, and the nature of the proposed development. The Municipality would supply existing property mapping, confirm whether the proposed development is permitted in principle and supply an instruction sheet for the applicant’s surveyor / engineer as well as a digital (computer) file of the property.

2. **Permit Application**

This second step will require representation of a landowner by a Nova Scotia Land Surveyor (NSLS) and / or a Professional Survey Engineer (P.Eng.). The proposal must fully describe the nature and extent of the topographical changes contemplated and validate its compliance with the intent and requirements of the Land Use Bylaw (ie. conservation of flood storage and maintenance of flood channels). The data and calculations in a graphical format must be submitted to the Development Officer who will review and decide whether or not a permit may be issued. Where more than one property may be involved in a “cut and fill” exercise, written permission from all affected landowners must accompany the application.

3. **Certification**

Legal certification by a professional land surveyor or survey engineer shall conclude the land alteration exercise. The statement is intended to affirm that the redistribution of fill has occurred as outlined in the application and in a manner required under the Land Use Bylaw. This will ensure maintenance of an accurate database for future reference and that all the work complies with the objectives of this Strategy. A prerequisite for certification will be the submission of a monumented new 1:20 year flood line located on the property together with the new contours in digital format. The Municipality will review the “as constructed” topographical information and, if satisfactory, issue a Certificate of Compliance.

The process can provide new alternatives for land that could not otherwise be developed. Changing flood lines can have serious implications and therefore the process and quality of information demands a high degree of commitment and accuracy to ensure these risks are minimal. The “as constructed” topographical information supplied by the applicant will be forwarded to appropriate government departments or agencies that hold an interest in flooding matters. This would also include the Town of Truro in cases where development in a “Hydrologic Region” that transcends municipal boundaries.

Therefore it shall be a policy of Council to:

EFP-13 Develop an approval process in the Land Use Bylaw with respect to development in the E-3 Flood Way Modification Zone consisting of the following steps:

1. **Prepare and submit an existing site plan showing all existing structures, topography and natural features including utilities and infrastructure, certified by a professional land surveyor or survey engineer;**
2. **Prepare and submit a proposed site plan showing all proposed structures, new topography, natural features, utilities and infrastructure including the “cut and fill” locations showing no net loss to flood storage, certified by a professional land surveyor or survey engineer;**
3. **Provide for the issuance of a development permit subject to legal certification should the above plans meet all applicable requirements of the Land Use Bylaw;**
4. **The applicant shall provide, within a specified time frame, a monument and contour of the new 1:20 year flood line and other contours altered through this process, certified by a professional land surveyor or survey engineer;**
5. **Provide for the issuance of a “Certificate of Compliance” which shall be based on the information supplied by the applicant and which shall not be binding on the Municipality in the event that information submitted was incorrect, incomplete, or misleading.**

EFP-14 Arrange for the transfer of new topographical information provided under EFP-13 to appropriate Provincial and/or Federal authorities as well as the Town of Truro.

EFP-15 Develop Hydrologic Regions in the Land Use Bylaw which are intended to limit “cut and fill” activities to specific geographic areas that display similar hydro-technical characteristics.

EFP-16 In the event that the Town of Truro adopts generally reciprocal flood plain provisions of the E-3 Flood Way Modification Zone, recognize and take into account part of any “cut and fill” procedure in a common Hydrologic Region located in the Town and arrange for the exchange of information resulting from such a process.

EFP-17 Encourage all levels of government to observe the objectives expressed in this Strategy with regard to land use and capital work programs in areas exposed to flood risks as described in the Provincial Statement of Interest Regarding Flood Plains.

3.2.5 Flood Proofing Standards

Traditional flood proofing standards recommended under the Flood Damage Reduction Program consist of elevating buildings by depositing fill in areas at risk which, by many, is viewed as the safest means. Essentially, fill is moved to the area being developed and raised to an elevation above the predicted 1:100 year flood event. This becomes the “minimum opening

elevation” for any main structure to be built on the site. It is important to recognize that in the 1988 Flood Damage Reduction Agreement between the Federal and Provincial Governments, the 1:100 year flood elevation was used as the minimum standard for any new construction in flood risk areas; anything less than this would not qualify for flood damage relief payments in the event of destruction.

Moving fill into the 1:100 year flood plain does in fact reduce the capacity of the flood plain to flood however it is marginal compared to the areas that flood on a more frequent interval. It is however, important to conserve as much of the storage space as possible and infilling must be limited to an area immediately around the buildings. There are cases where infilling may be necessary to address practical site design issues. For instance, an elevated development may not be able to accomplish safe, functional and convenient shopping cart access to parking areas below. There may also be other circumstances where an owner wishes to carry out land alterations only to improve site drainage, aesthetics, or for general maintenance considerations. In such cases, limited infilling should be allowed to overcome or accommodate such issues provided an equivalent amount of flood storage space can be supplied elsewhere in the same hydro-logic region. In cases such as this, limited infilling should be allowed to overcome these problems provided an equivalent amount of flood storage can be supplied elsewhere on the site. The Land Use Bylaw would identify a process for this to occur, similar in concept to the development provisions for the E-3 Flood Way Modification Zone.

The Truro Flood Plain Study -1997 briefly examined alternative flood proofing methods such as piers, buildings designed to flood, and lot layout re-design. It further suggested the a document named “Flood Proofing: A Component of Flood Damage Reduction. PORTFOLIO OF CASE STUDIES” prepared by James MacLaren Limited, Consulting Engineers, Planners and Scientists in 1978 could be a potential source of alternative flood proofing techniques that may have current applications. While these may not be suitable for all development scenarios, the document demonstrates that other flood proofing options exist which may better meet individual development needs. Further study should be considered and a process designed to accommodate innovative solutions in such areas.

Therefore it shall be a policy of Council to:

EFP-18 Require that any main structure permitted in an area exposed to flood risk be flood proofed to an elevation that exceeds the 1:100 year flood frequency indicated on mapping prepared under the Canada - Nova Scotia Flood Damage Reduction Program.

EFP-19 Develop standards in the Land Use Bylaw that set out specific requirements for the infilling of land for flood proofing purposes and limit the amount of infilling to an area immediately around the structure as a means of conserving flood storage.

EFP-20 Notwithstanding Policy EFP-18, apply the “cut and fill” principle to developments in the flood plain that require fill to better accommodate access, parking lots, accessory structures, improved drainage and aesthetics, or other landscaping features.

EFP-21 Explore other flood proofing alternatives that may better meet the individual needs of landowners and investigate how these may be incorporated into the Land Use Bylaw.

3.2.6 Ponding, Reinstatement, & Soil Conservation

The “cut and fill” approach can lead to undesirable excavations in the flood plain particularly to facilitate smaller forms of development. Random pits and ponds of water not only create safety issues, but can be unattractive and interfere with flood flow characteristics. Because of such concerns, the establishment of new ponds must be limited to planned developments that are part of a land use activity permitted in the flood plain.

Therefore it shall be a policy of Council to:

EFP-22 Restrict the creation of ponds to planned developments in the flood plain that are part of a land use activity permitted in the zone that they are located.

The practice of “cut and fill” will inevitably lead to areas of exposed soils. While land in the flood plain tends to be flat, the impacts of erosion on the river systems can be severe during a flood event or periods of high precipitation. This is primarily due to the fact that the flood plain is directly adjacent to the river and numerous drainage ways. It is necessary to keep the river channel free of sedimentation to both maintain environmental quality and to ensure the drainage system (including aboiteaux) function properly.

Therefore it shall be a policy of Council to:

EFP-23 Require that any soil disturbances in the flood plain be reinstated by appropriate means to minimize erosion and sedimentation and maintain environmental quality within the Salmon and North River systems.

The flood plain has traditionally been an important agricultural resource particularly in areas where large expanses of land are still farmed. The “cut and fill” procedure has the potential of placing a higher value on land due to the fact that elevated areas may be excavated to accommodate development elsewhere. The Province’s newly adopted Marshland Protection Act identifies areas of the flood plain where economically viable tracts of land exist for agricultural purposes.

Conservation of quality agricultural soils is important yet it will always compete with the economics of valuable flood storage capacity. It is however possible to remove topsoil, stockpile it on site, excavate the less desirable under burden, and then reapply the topsoil over the excavated site. This approach would encourage broader areas of disturbance (ie. four inch as opposed to a four foot deep cut to achieve the required fill) and as a result may affect drainage patterns. It is important that drainage of these lands be maintained as an integral system. Consequently, any land forming being done to achieve a cut and fill should be completed in accordance with the principles and practices of land forming to achieve proper drainage.

Therefore it shall be a policy of Council to:

EFP-24 Identify areas of the flood plain suitable for agricultural soil conservation.

EFP-25 Require that a prescribed depth of top soil be retained for reclamation of an area being excavated within the flood plain.

EFP-26 Set standards in the Land Use Bylaw for reinstatement of disturbed land in the flood plain subject to the principles and practices of land forming promoted by the agricultural industry.

3.2.7 Remedial Measures

A significant amount of development in the flood plain predates findings of the 1988 Flood Damage Reduction Program. The standard flood proofing approach for new development and expansions to existing structures, as discussed in earlier sections, is to elevate these above the 1:100 year flood elevation identified on the FDR mapping. This is normally accomplished by infilling the footprint of the building and sloping fill at outer edge of the structure to the natural grade.

Many development scenarios are flexible enough to apply the elevated flood proofing technique. Others however, are limited by their floor plans that cannot be easily raised. In these cases, it may be possible to accept alternative flood proofing methods such as dykes, piers, flood gates, etc. that ensure flood waters are kept out of the main structure. These types of approaches should be limited to situations where raising a structure is not reasonably practical and must be analyzed and designed by professionals in the hydrodynamics field. The mechanical and physical nature of flood proofing alternatives require a certain amount of maintenance and knowledge of their use in order to be effective. Development agreements can provide a means of ensuring ongoing tests, monitoring and maintenance are performed at specified intervals.

Similarly, there are many instances where existing homes are affected by periodic flooding and it is not always economical to flood proof these structures by conventional means. It is important though, that property owners be allowed the opportunity to use alternative approaches to protect their homes from flooding. Since this is directed at existing residential uses, development agreements need not be used and professional services would be preferable but not required.

Therefore it shall be a policy of Council to:

EFP-27 Consider alternative flood proofing techniques where it is clear that the use and expansion of the structure must remain at the existing elevation provided the expansion is subject to a development agreement. In addition to the criteria outlined in the Implementation Chapter of this Strategy, Council shall be satisfied that the following matters have been addressed:

- 1. the flood proofing technique has been designed by a qualified professional engineer;**
- 2. the approach does not impede or in any way restrict flood way drainage patterns including the formation and movement of ice;**
- 3. that the agreement provides for adequate and regular maintenance, testing, and monitoring of the flood proofing method, where applicable;**
- 4. that Council may require, at the applicant's expense, to provide a study from a qualified professional acceptable to Council, to assure that the proposed flood proofing method will not alter flood plain dynamics and is appropriate in consideration of localized flooding characteristics.**

EFP-28 Allow for the alternative flood proofing of existing private residential uses and encourage property owners to obtain professional advice in this regard.

3.2.8 Mapping Amendments

The level of scientific study on the Salmon and North River flood plains provides the necessary basis for comprehensive policy and regulations in this regard. While Council has no reason to question its accuracy in a general context, there is a chance that some discrepancies unknowingly exist. While the 1988 Flood Damage Reduction Program did designate and set standards for new development in the flood plain, its regulation was left with the municipalities affected by such conditions. Many parts of Colchester were not zoned until 1994 and consequently no restrictions on infilling were in force until after this date. Other areas zoned just prior to completion of the Flood Damage Reduction Program, in some cases, had flood plain requirements that were not entirely consistent with those of the Program. These were generally not changed until the planning documents underwent a review several years later.

In any event, the flood risk areas illustrated on the FDR mapping marked a point in time for which it was presumably accurate. Subsequent development since then perhaps lead to some inaccuracies that should be taken into account only if such changes occurred legitimately. Council will consider amending the flood plain zoning if an applicant can demonstrate that such changes are warranted.

Therefore it shall be a policy of Council to:

EFP-29 Consider amendments to land zoned E-1 Flow Way Zone, E-2 Flood Way, or E-3 Flood Way Modification and E-4 Flood Fringe where a hydro-technical study or topographical survey information indicates that

amendments are warranted. Under this Policy, Council may require, at the applicant's expense, to provide such a study from a qualified professional hydrologist, surveyor, or survey engineer of Council's choice.

EFP-30 Consider flood plain mapping amendments where a development, topographical alteration, or mapping error has lawfully occurred.

3.2.9 General Flood Plain Issues and Provisions

i) Variances & Development Agreements

The *Municipal Government Act* contains provisions that allows the Development Officer to consider variances under unique circumstances. As the term suggests, a variance allows for a slight deviation from the standards set under the Land Use Bylaw. In a similar way, a development agreement can contain a set of development standards that vary from those usually applied under traditional zoning.

The sensitive nature of the flood plain together with the high risks and associated legal implications do not lend themselves to vary flood plain development standards. To ensure that the objectives are not compromised, planning and/or administrative processes shall not permit the variation of development standards in flood risk areas except as provided for under Section 3.2.7.

Therefore it shall be a policy of Council to:

EFP-31 Not waive any of the Land Use Bylaw requirements for flood proofing under a minor variance or development agreement process except in circumstances described by Policies EFP-27 and EFP-28 of this Strategy.

ii) Flood Monitoring

The Salmon River has often been referred to as one of the most studied flood plains in Canada. While this may be true, it has been unfortunate that little has been done to organize and implement a flood monitoring program to compile data for future analysis. Too often, a large amount of effort is directed towards collecting flood event information for each study that has been completed on the river system. This obviously creates additional costs and each study's efforts more difficult than need be. Council intends to promote and support any initiative aimed at improving the quality of flood related data for future reference.

Therefore it shall be a policy of Council to:

EFP-32 Consider participating in any flood monitoring initiatives designed to record flood event characteristics and pursuing partnerships with the Town of Truro, the Province of Nova Scotia, Government of Canada, and any other interest group that has a stake in flood related issues.

iii) Public Infrastructure and Maintenance Projects

Infilling on the flood plain has not always occurred on privately owned land. Public projects like the twinning of the 102 Highway, the Town's gravel storage off Robie Street, construction of the trunk sewer line, and others may be necessary projects carried out with the public interest in mind. While the location of these is dependent on a number of siting criteria, there is the possibility that they may interfere with the flood plain dynamics. Council intends to observe the objectives expressed under this Section whenever possible but recognize that this may not always be possible because of competing factors. It will also endeavor to improve upon problem areas where practical such as the recent removal of a decommissioned sewage treatment plant located on Park Street.

The Department of Agriculture and Marketing has the responsibility of maintaining approximately 17 kilometers of dykes and several aboiteaux in the lower Salmon River flood plain. Farmers, residents, businesses, and other property owners rely on this dyking system for protection against flood damage. From time to time, this type of infrastructure requires maintenance and improvement so that it may continue to function properly and offer some measure of security that residents have come to depend on.

Therefore it shall be a policy of Council to:

EFP-33 Encourage the improvement of flood plain storage and flood way dynamics in areas where this can be achieved over time and particularly where lands are owned or controlled by municipal and other levels of government.

EFP-34 Generally support dyke maintenance and improvement programs carried out by or under the supervision of the Nova Scotia Department of Agriculture and Marketing.

iv) Storm Water Management

Flooding along the Salmon River is often aggravated by localized storm water problems that tend to be more pronounced and occur more frequently in areas of the flood plain. This type of flooding is every bit as troublesome and costly as the tidal flooding shown on flood risk mapping. Regardless of the source of flooding, storm water is a major that should be addressed in the future, not only within areas exposed to flood risk but throughout the entire watershed. Cooperation with neighboring municipalities, villages and other levels of government will be necessary to develop a comprehensive masterplan capable of fully addressing this matter.

Therefore it shall be a policy of Council to:

EFP-35 In Conjunction with Section 2.2.3 of this Strategy, explore ways and means of managing storm water effectively in areas of the flood plain together with the upstream drainage systems that strongly influence the extent of flooding in low lying areas.

3.3 Storm Water Drainage Systems

3.3.1 Introduction

Rivers, streams, ditches, piped storm services, curbs and gutter collectively compose a water shed drainage system. This complex network of channels perform the principal function of directing storm water runoff in a receiving body such as the Bay of Fundy. Water quality control in these receiving water bodies has been an ever increasing area of interest. Watercourses are typically dynamic and self-regulating systems that are influenced by a whole host of factors including land use activities within the watershed. The rate and extent of development in Central Colchester has been a major factor in the deterioration of natural waterways. Council wishes to address this subject through the following policies with the hope that these may assist in the restoration of environmental quality.

3.3.2 Water Quality

Drainage systems provide a diverse habitat for many species of aquatic life. Conditions necessary for this to exist are directly affected by the quality of storm water entering the system. In an urban environment, piped and open drainage systems collect water from roof tops, roads, parking lots and lawns which is eventually directed into established rivers and streams. Runoff from these sources pick up a variety of contaminants such as petroleum products, fertilizers, trace metals, chlorides, (ie. road salt), and other toxic chemicals that can upset the ecological balance of waterways downstream. Sediment is an ever present problem and although, relatively inert, the consequences on ecosystems can be devastating.

Similarly, rural land use activities can also impact on water quality. Farming practices including the application of fertilizers, herbicides, and pesticides will eventually become not only present in drainage systems but also in domestic and irrigation water supplies. Forestry can be another major influence that changes watershed hydrology and is most evident in areas that have been clearcut or stream buffers have not been maintained. Vegetation has the effect of reducing runoff velocities and allow more time for storm water to infiltrate back into the ground. This helps to not only decrease the amount of runoff entering a drainage system but also recharge ground water sources. Much research and development has occurred locally on this subject. The Nova Scotia Agricultural College, Nova Forest Alliance, together with a number of provincial government departments have devoted time to examine ways and means of managing land use activities that directly impact water quality.

Erosion and sedimentation is a common problem in areas where vegetation has been stripped leaving soil exposed to rain and snowmelt. This can be a serious problem affecting not only water quality but the performance of drainage systems. In Colchester, where flooding is a major issue downstream and where drainage ways typically have gentler grades, it is necessary to minimize the amount of sediment being deposited in flood plain areas. Appropriate resource management practices are key to lessening the potential of erosion and sedimentation in waterways. Proper development practices too can reduce erosion during phases of construction.

Therefore it shall be a policy of Council to:

EDP-1 Recognize the variety of land use activities that affect water quality throughout Central Colchester and consider the establishment of a monitoring program in partnership with other municipal and senior government departments in the watershed area.

EDP-2 Encourage additional research and development of approaches that are aimed at improving the quality of storm water as well as reducing the amount of runoff, erosion and sedimentation.

EDP-3 Consider the development of standards in the Land Use Bylaw that incorporate modern land management practices and where appropriate, regulate land use activities that have heightened potential of watercourse contamination.

3.3.3 Natural Drainage Channels

Natural drainage systems are among the receiving waters of storm runoff from developed areas. As discussed above, the wide range of contaminants make these systems most vulnerable to ecological degradation since they do support a variety of habitats for many species of aquatic life. Storm water systems are obviously designed to collect and move water from higher elevations to major waterways and consist of both artificial and natural features. The efficiency of many manmade drainage systems largely depends on the geometry and capacity of this network of natural waterways. As well, controlled flows through retention can provide the least disruption or help stabilize the ecosystems that exist along these drainage corridors.

Drainage buffers along established water courses provide a measure of filtering before surface runoff finds its way into rivers and streams. This is important for a number of reasons; first, it can be effective in reducing velocity and erosion thereby allowing more time to infiltrate into the ground; second, many contaminants like sediment are filtered from the surface water, and; thirdly, they are easily maintained and can provide recreational opportunities. Environmental quality of the water systems themselves also require a certain amount of protection along fringe areas. Buffers along the fringe areas of river systems have the added benefit of creating habitat, maintaining water temperature, and stabilizing river banks.

Drainage buffers alone cannot control environmental quality. Numerous Best Management Practices (BMP) techniques have been developed that are capable of managing aspects storm water before it is released into natural waterways. These often times, create artificial environments that are incorporated into an overall or localized storm water management plan. Retention ponds, grass swales, artificial wetlands, infiltration basins, porous pavements, seepage trenches and filter strips are among the many possible solutions that can improve the quality of natural drainage systems. The application of these ought to be examined in the context of storm water management with a view to developing standards for such in related municipal bylaws and regulations.

Most development will involve some amount of earthwork that will expose soil for a period of time. It is a situation that is impossible to avoid but one that can be managed. Soils that are not protected from rain and snow will eventually erode and sediment be deposited in water systems. This condition is more prominent in areas that have steep slopes or where sandy soils exist.

Soil stabilization should be a requirement of any development project and accordingly the Land Use Bylaw will set out standards in this regard.

Therefore it shall be a policy of Council to:

EDP-4 Protect and improve upon the environmental quality of natural drainage systems by designating land on the Future Land Use Map - Environmental Conditions as "Natural Drainage Ways".

EDP-5 Zone land that has been designated "Natural Drainage Way" as E-5 Drainage Way Protection and prohibit the disturbance of vegetation and encroachment of development within a specified distance of the watercourse.

EDP-6 Set standards in the Land Use Bylaw with respect to techniques and time requirements for soil stabilization in all developments to reduce the risks of erosion and sedimentation.

EDP-7 Explore other Best Management Practices (BMP's) that may be useful in the general maintenance and improvement of storm water quality and consider including requirements for such in related municipal bylaws and regulations.

3.3.4 Watershed Planning & Management

Municipal land use planning has traditionally been carried out within the confines of a single jurisdiction. Similar to flood plain issues discussed in the previous section of this Strategy, effective storm water management is another topic that transcends municipal boundaries. Watersheds often encompass large tracts of land and mark the drainage boundary of a river system. Activities occurring in part of a watershed will invariably impact on the succession of channels through which water will flow until it reaches the Bay of Fundy or sea level.

The Ontario Ministry of the Environment published *Storm Water Quality - Best Management Practices* in 1991. While there are a variety of BMP manuals and research on the topic, this particular publication ties the management of storm water to land use planning. The following excerpt describes our present status in this respect.

“The overall process for urban development is well established, although details of implementation vary from municipality to municipality. Watershed planning is far less established as a practice. Over the last two decades, planning for flood control and hazard reduction have become common, but until recently little attention has been paid to water quality (except for point sources), aquatic resources, or other environmental resources. Efforts to address these issues have been improving but there is still a lack of consistent linkage between watershed planning and land use planning.”

Growth in Truro and Central Colchester will result in a corresponding need to develop watershed management plans for the entire watershed that the Salmon and North River’s drain. Obviously, Colchester is not the only stakeholder in such an exercise and it would be extremely beneficial to involve other jurisdictions. The Town of Truro, Village of Bible Hill, Millbrook First Nation, various community and interest groups, as well as provincial and federal departments that may include, Transportation & Public Works, Natural Resources, Environment, Agriculture, Fisheries Canada, and Environment Canada all, in some way or another, hold an interest in water quality and quantity.

Therefore it shall be a policy of Council to:

EDP-8 Recognize the factors affecting storm water quality and quantity and the importance of a comprehensive storm water management plan that addresses such issues throughout a watershed area.

EDP-9 Promote and participate in any planning exercise that is designed to improve environmental quality in the region through the effective management of water resources and solicit similar involvement from other municipal counterparts together with senior levels of government and special interest/community groups.

EDP-10 Generally support projects and programs that help improve and/or restore the environmental quality of natural waterways.

3.4 Land Use & Environmental Quality

Central Colchester has been fortunate with a broad range of land uses that offer the community many products, services, and economic prosperity. Development of any type will present some type of impact on the natural environment; for most it will be manageable while others have and will continue to have profound effects on environmental quality.

Certain types of land use activities need to be present for a community to exist. Petroleum and chemical storage, manufacturing plants, recycling and salvage operations are a few land uses that are common to any type of community. These can, however, present some level of risk to the environments in which they are located and ultimately to the health and well-being of those that live and work in Central Colchester. Communities across Nova Scotia are now grappling with the consequences of environmental disregard and pressures are now placed on governments to spend extraordinary amounts of money to restore a safe living environment. While many of these problems predate rigorous environmental standards, land use planning can also play a vital role in how such uses may become established in the future.

The need for favorable environmental conditions in Colchester has never been so great. The growth experienced over the last decade has stressed the resources the resident's require. Colchester relies mostly on wells for drinking water sources and anything that may threaten this resource must not be taken lightly. A central supply system is the only alternative to on-site sources and one that can represent an astronomical cost to the Municipality. Already, there have been remote incidents of groundwater contamination in Bible Hill and every effort must be made to curb further deterioration of water resources.

Pollutants, whether present in air, water, or soil are expensive to remediate and difficult to live with. It is Council's desire to promote a healthy community and participate in programs designed to achieve this end. Central Colchester is predominantly comprised of residential land uses that are sensitive to environmental degradation. Care must be taken to manage environmental quality since it is central to a healthy and livable communities.



Therefore it shall be a policy of Council to:

EDP-11 Promote clean industries and other land use activities that utilize state-of-the-art environmental technologies aimed at minimizing impacts on the natural environment.

EDP-12 Monitor land use activities within Central Colchester and encourage applicable authorities to take remedial measures or suspend land use activities that may pose a threat to groundwater resources and environmental quality generally.

EDP-13 Consider the potential environmental impacts stemming from air, noise and soil pollution with respect to new developments originating through a rezoning or development agreement.

EDP-14 Encourage the remediation of land that has been contaminated by past land use activities and work with senior levels of government and special interests groups to develop, apply, and monitor environmental standards.

PART 4: URBAN GROWTH CENTERS

4.1 Introduction

The Service Delivery Strategy provides clear direction in terms of maximizing the use of existing sewer services in defined Sewer Districts and further emphasizes that these not be expanded until land has been depleted or broader evidence suggests that an extension is warranted. Accordingly, one of the primary objectives of this Strategy is to direct urban growth to one of the five defined Growth Centers. Each Growth Center is unique in its own right and fulfills a specific role in the context of the larger Colchester community. Populations, land use composition, growth rates, and geographical features vary and have influenced the form of development that has occurred in each area. Considering the diversity, it is challenging to write comprehensive planning policy that reflects the specific desires of each community this Strategy embraces. It is therefore intended that policies under this Section provide a basic framework for community development directions. If the need arises, it is possible to create a secondary planning strategy that more precisely reflects a community's aspirations.

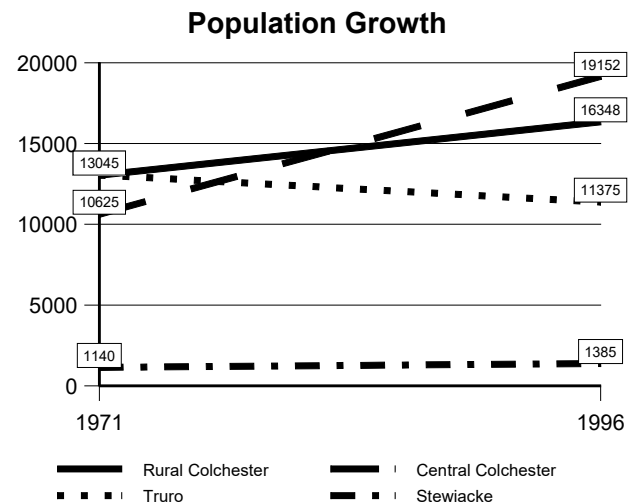
Community growth objectives have been documented for each of the Growth Centers for more than fifteen years through previous planning documents. Public consultation at the outset of this review exercise indicated a level of comfort with the planning direction that exists and no pressing issues have been identified. As much as possible, the urban growth center policies will continue to recognize the distinct characteristics of each area and encourage growth complimentary to existing land use patterns.

Each Growth Center offers a variety of development opportunities for residential, commercial, institutional and industrial land uses. The amount of potential varies and is a derivative of each Growth Centers characteristics and its role in the broader urban community. Policies in this Section are intended to facilitate development suitable to each community while at the same time provide a flexible approach to land use planning.

It shall be a policy of Council to:

GC-1 Create and define urban Growth Centers the boundaries which correspond with community boundaries described in previous planning strategies, the Service Delivery Strategy, and Subdivision Bylaw;

GC-2 Encourage intense urban development to establish within designated Growth Centers;



GC-3 Take a proactive approach to providing a range of community services to the Growth Centers outlined in the Municipality's Service Delivery Strategy;

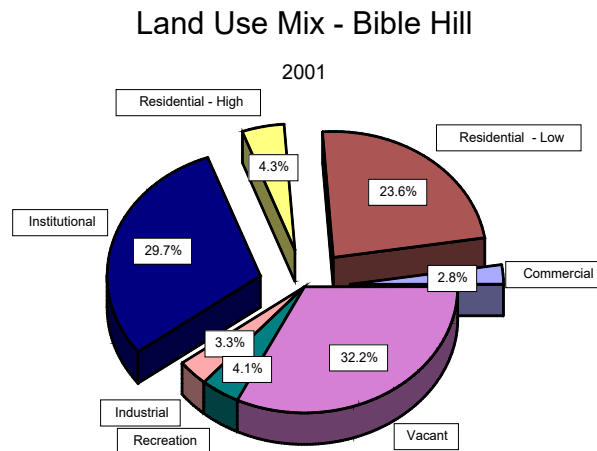
GC-4 Not expand the Growth Center boundaries until a need for additional urban land is demonstrated or as warranted by community growth patterns and ensure that any such changes be considered in the context of other municipal planning and growth management initiatives.

4.2 Growth Centers

Village of Bible Hill

Bible Hill was settled in the early 1700's and became incorporated as a Village in 1953. The village has historically developed as a bedroom community of Truro, characterized by a strong population and significant housing growth rates. Perhaps one of the most significant influences affecting development patterns in Bible Hill is the variety of institutional land uses located here. For nearly a century, the Nova Scotia Agricultural College (NSAC) has served as the maritime center for agricultural research and education. The facility, which now employs more than 450 people, occupies approximately 190 hectares or 20% of the available land mass, making it the single largest land use in the village. Bible Hill is also home to the Nova Scotia Provincial Exhibition Grounds, the former Youth Training Center, the regional detachment of the RCMP, and the north eastern regional office of the Nova Scotia Department of Transportation and Public Works.

Remaining areas of the village are primarily developed for residential purposes ranging from single to multiple unit structures. Much of the housing stock is recent, particularly in the areas between Pictou Road and College Road and along the south side of College Road. Commercial land uses have tended to locate along two principle corridors; Main Street which is the more historic commercial district, and; Pictou Road east of Vimy Road which has developed gradually over the last number of decades. Commercial land uses vary but it is interesting to note that there are a significant number of businesses tied to virtually all aspects of the automotive industry, as well as other retail and service types that cater to the local



population. Only two significant industrial use exists in the village. One is the Stella-Jones wood preservative plant located along the west side of Main Street and the other is Maritime Steel where drainage culverts are manufactured on the corner of Main and Park Streets.

Valley

Rampant residential development in Bible Hill has for the last two decades, spilled over into the neighboring community of Valley. As a result, much of the development that exists here is very recent and the general area has undergone the most rapid rate of growth in Central Colchester. The area is almost exclusively a single unit residential with a few scattered businesses located along Pictou Road, College Road, and Valley Cross Road.

Salmon River

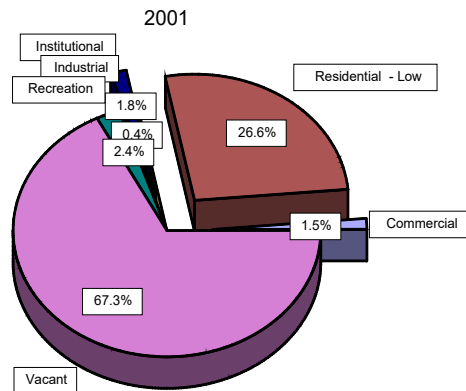
Located along the eastern boundary of Truro, Salmon River has become a well-established residential community. During the railway era, Salmon River functioned as an important shunting yard and loading station for rail cars. While much of the infrastructure remains, the industrial activity that once existed here has almost vanished.

The predominant land use in Salmon River is single unit residential, most of which, has been developed during the last thirty years. Older housing stock is found along East Queen Street, East Prince Street, Harmony Road and Miller Road. Commercial land uses are few and tend to be scattered along East Queen Street and East Prince Street. Many of these businesses service the local needs of nearby residents. The only significant industrial use in Salmon River is the Farmers Cheese Plant and distribution center located in an isolated area along East Queen Street.

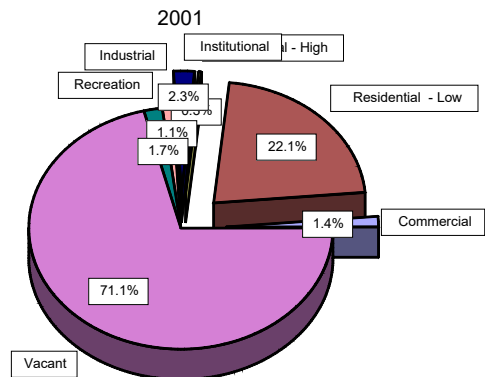
Hilden

Much like the other Growth centers, the community of Hilden has also developed primarily as a residential suburb. Most of the housing stock is single unit constructed over the last thirty years except a number of homes along older roads such Highway #2, Irwin Lake Road, and Truro Road. Commercial uses are generally local in nature, serving the immediate

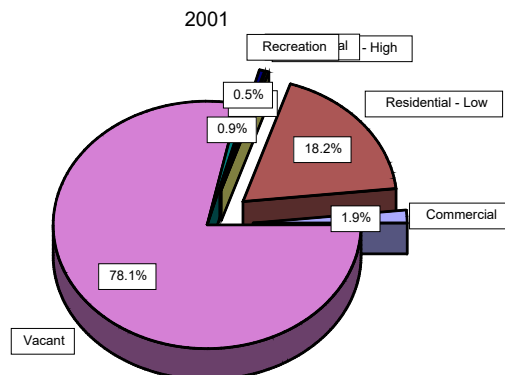
Land Use Mix - Valley



Land Use Mix - Salmon River



Land Use Mix - Hilden



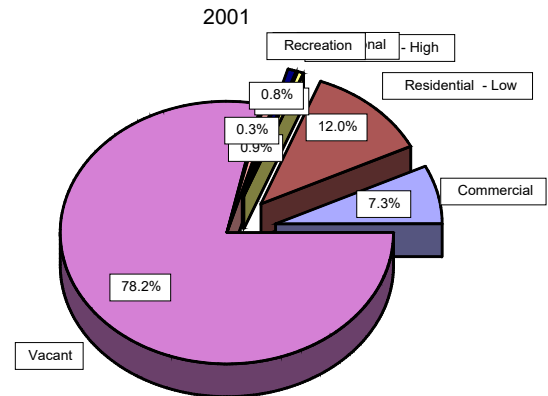
population. With a few exceptions these are almost entirely located within three principle nodes on the west side of Highway #2.

Lower Truro - Truro Heights

The Lower Truro - Truro Heights growth center is distinct from the others. Twinning of Highway #102 during the late 1970's has had a tremendous influence on the development patterns that exist here today. On the east side of the highway, most development has been commercial or light industrial uses, particularly along Robie Street, Lower Truro Road, and recently in the vicinity of Exit 13. Excellent highway access, visibility and land mass have been significant factors affecting this new growth.

Residential development has also maintained a steady growth rate and provided a variety of housing forms. Most of the housing has been constructed within the last twenty years and ranges from single unit to multi-unit structures. A significant portion of the residential structures in the area are duplex and quadplex rental units. Single unit residential units have been developed in four main areas; Kent Road, Oakwood Dr., Bayside Drive, and Morley Avenue.

Land Use Mix - Truro Heights

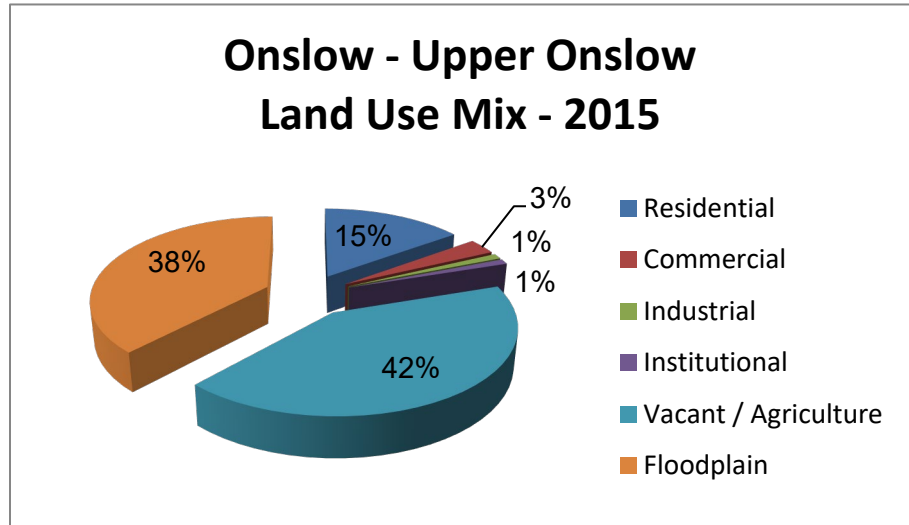


Onslow – Upper Onslow

The communities of Onslow and Upper Onslow form one of the newest Growth Centres which has largely been brought about by the installation of a new sanitary sewer system east of Highway #102. Although the area west of Highway #102 has had a sanitary sewer system for several decades, the Granville Drive subdivision has, for a number of years, been troubled with malfunctioning septic systems which served as a motive to extend the central sewer system east to service a potential area of approximately 4.7 square kilometers. While the system has ample capacity, only lots fronting on Onslow Road and Granville Drive are sewer serviced which will mean lots that do not have direct access will require on-site septic systems. It is expected though this service will create new development interests in the area and the system will expand as land is opened up, a trend which is already evidenced by several new commercial uses in the vicinity of the overpass. Additionally, other interests for higher density residential development have also been expressed by some property owners. The fact that the rate and type of development activity is increasing, Council in consultation with the community has decided a more comprehensive approach to land use planning is needed to better manage land use to avoid a random mix of incompatible uses.

Historically, much of the land in Upper Onslow has been farmed while remaining pockets grew organically, typically as a sparse mix of residential, commercial, institutional and industrial land uses. Onslow to the west of Highway #102 demonstrates similar features but is characterized as a more compact and densely populated community (influenced by the availability of central services) comprising residential, agriculture, institutional and a few commercial uses.

Development and population growth in both areas has been modest, however the availability of new services has spawned greater development interests and it is likely the rate of growth will accelerate. Recent changes in the circumstances both areas face now point towards transition and risks of random, diverse and higher density development need to be addressed through planning mechanisms that can lend a higher degree of predictability and assurance.



4.3 General Development Considerations

4.3.1 Non-Conforming Structures & Uses

Structures and land uses are usually made non-conforming when new policies and regulations are adopted or changed. The result is that the existing land use is no longer permitted in a particular zone or that existing structures no longer meet new development standards (ie. setbacks, building heights, sign sizes, etc.). Sections 238 to 242 of the *Municipal Government Act* outline several requirements in this regard and, by reference in the Land Use Bylaw, are intended to guide decisions when such conditions exist.

Policy direction contained within this Strategy is generally modelled on the development patterns that have evolved over time. It is possible, through this process, that certain uses will be made non-conforming by mapping error or incomplete property records. Changes to resolve such discrepancies will be considered by Council through appropriate amendments to the Municipal Planning Strategy and/or Land Use Bylaw.

While the purpose of these documents is not to create an abundance of non-conforming uses, certain developments have been established that do not complement present land use patterns. Although in their present form, such uses have not created grave nuisances to adjoining properties, Council recognizes that any changes may have

undesirable impacts. This Strategy will therefore identify specific non-conforming uses for which no amendments will be considered.

It shall be a Policy of Council to:

GC-5 Consider amending the Municipal Planning Strategy and/or Land Use Bylaw where a non-conforming use condition appears to have been created by oversight or mapping error.

GC-6 Notwithstanding other policies contained in this Strategy, the Land Use Bylaw shall contain a list of properties that are intended to carry non-conforming use status.

4.3.2 Accessory Structures and Uses

Accessory structures and uses are common elements to almost all development forms. As the term “accessory” implies, uses and structures of this type are generally secondary to the principle use made of a lot. These can consist of garages, swimming pools, satellite dishes, gazebos, decks, home occupations, outdoor storage, etc. The location and nature of accessory uses and structures can present some issues with respect to privacy, streetscape appearance, lot access, and neighborhood aesthetics.

A number of properties within the Growth Centers have accessory buildings that are still used for small scale agricultural uses. These are generally the remnants of older farming operations that have not yet been developed for alternate uses. While this Strategy does not intend to terminate this traditional accessory use, the Bylaw should contain standards that protect new residential development from associated nuisances such as, noise, odor and waste storage.

There has been some safety concerns associated with the location, security, and access of swimming pools. The Bylaw should set out requirements for fencing, gating and location for both above and in-ground pools.

Outdoor wood furnaces are a relatively new product and are becoming a more popular heating alternative. The low chimney height of detached heating units can cause emissions to linger particularly during inverted atmospheric conditions. In a densely populated setting however, the smoke produced can create health problems and affect enjoyment of one’s property. For these reasons, there is a desire not to allow such heating devices in Growth Centres.

It shall be a Policy of Council:

GC-7 Permit a variety of accessory uses and structures in all zones and set out requirements in the Land Use Bylaw for their size and location on a property.

GC-8 Set standards for the location of accessory uses and structures used for non-intensive agricultural purposes as a means of limiting the impacts of noise, odor, and waste storage on adjacent properties.

GC-9 Set out requirements in the Land Use Bylaw that address safety and considerations associated with swimming pools.

4.3.3 Parking and Loading Areas

Providing adequate space for vehicular parking is necessary from a convenience and safety point of view. Requirements for parking spaces are largely dependent on the types of land uses being served. In addition, commercial, industrial and some institutional uses not only need sufficient areas for staff and customer parking but also require loading areas for truck traffic and delivery vehicles. Parking lot arrangements take on a variety of forms and where possible communal parking facilities between adjacent properties should be encouraged. This will assist in better land utilization while at the same time improve safety by reducing the number of new driveway entrances.

High activity land uses such as commercial, institutional, industrial and apartment buildings can create traffic volumes that damage the stability of adjoining low density residential uses. While a transition from one use to another is inevitable, increased separation distances and screening will be required to ease such changes. Parking lots located along street frontages can interfere with pedestrian traffic and detract from streetscape qualities. Landscaped buffers between streets and parking areas can provide an effective separation that improves pedestrian safety and aesthetics.

The parking of commercial vehicles on residential properties can create disturbances and detract from neighborhood character. This is a commercial use of land and tends to be incompatible with residential land uses. The Land Use Bylaw will therefore set limitations on the parking and storage of commercial motor vehicles in these areas.

It shall be a Policy of Council to:

GC-10 Establish parking and design standards in the Land Use Bylaw for various land use types and encourage communal parking and access where appropriate.

GC-11 Require commercial, industrial, and certain institutional uses to provide sufficient area for the loading and unloading of delivery vehicles.

GC-12 Establish increased setbacks and screening requirements in the Land Use Bylaw for parking lots that adjoin low density residential uses and public streets.

GC-13 Limit the parking and storage of commercial motor vehicles on lots within "Residential" designations identified on the Future Land use Map.

GC-14 In accordance with the Municipal Government Act, enable the Development Officer to consider variances with respect to the number of parking and loading spaces required under the Land Use Bylaw.

4.3.4 Temporary Uses

Temporary uses commonly occur throughout each of the growth centres. While zoning may preclude such uses from establishing on a permanent basis, occasional events are not likely to seriously impact on surrounding land uses. Council intends to allow these sorts of activities to continue and will set standards in the Land use Bylaw with respect to the length of time such uses may be permitted to operate.

It shall be a Policy of Council to:

GC-15 Enable temporary uses to occur within the Growth Centres and regulate the length of time these may be permitted to operate.

4.3.5 Signs

Signs are an essential component to business activity, they help identify the personality of the community in which we live, and obviously exist to be seen. Because of this, signage has always presented the dilemma of fairly balancing the rights of a business owner to communicate their presence in a community with the right of a community to exercise some control over the visual environment.

Signs serve two primary functions; first they provide marketing and directional information, and; second, they can cast a positive image or enhance architecture, the street scape and / or the natural environment. Couple with this is that signs serve a number of public and private interests which may be defined in many ways. For businesses, signs combine a number of essential functions such as identification, communication, advertising and architectural decoration. In order to accomplish these tasks, signs must be relatively conspicuous in their placement and design. This can, however, risk existing community qualities and the residents' ability to enjoy the place in which they live.

Typically, sign requirements in a land use bylaw are intended to allow for a variety of signage types while at the same time respect the form and appearance that the residents wish their community to assume. Scale is perhaps one of the most important elements of signs to the extent that they should be proportionate to the environment they represent in order to achieve a pleasing result. To this end, requirements set out in the Land Use Bylaw will provide business owners with flexible signage choices to advertise their business in a range of creative but unobtrusive ways.

It shall be a Policy of Council to:

GC-16 Provide public and private interests with a variety of sign choices that are in scale with and complement the environment they represent.

GC-17 Limit the size, number, location, height, and lighting of signs in the Land Use Bylaw as a means of addressing scale and associated visual impacts.

GC-18 In accordance with the Municipal Government Act, enable the Development Officer to consider variances with respect to the area and height of signs required under the Land Use Bylaw.

4.3.6 Subdivision of Land

The subdivision of land is governed by the Municipality's Subdivision Bylaw which has been in effect, in one form or another, for approximately forty years. The Bylaw sets out precise standards and procedures for the creation of new lots, lot consolidations, and any modification to property boundaries. The need for subdivision regulations has evolved over time and is largely a response to issues relating to legal processes, improved property definition, access, as well as municipal servicing and growth management considerations. Obviously, the division of land has been occurring much longer than subdivision controls have been in place which has, in some circumstances, produced unusual and difficult situations.

Large lots exist in each of Growth Centres that have limited development potential due to existing structures on the lot, limited road frontages, and odd lot line configurations. Many times, future subdivision of such land is not possible since current standards aim to accomplish other development pattern objectives. This can be further complicated for areas of land that have only recently come under some type of community planning direction, particularly in situations that have resulted in multiple buildings on a single lot. Council recognizes the importance of comprehensive subdivision requirements but at the same time, understands the hardships of applying new development standards to old situations. It is therefore intended that where such conditions exist, limited subdivision of land should be permitted if separation distances, adequate access, and lot area can be achieved.

It shall be a Policy of Council to:

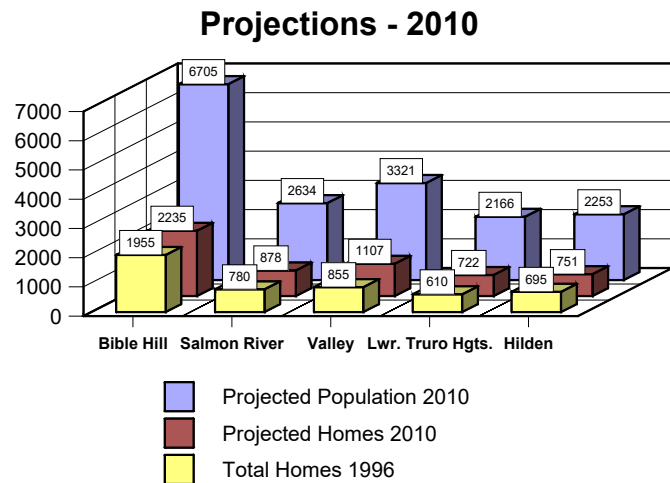
GC-19 Permit the subdivision of a lot, existing prior to November 17, 1994, in a "Residential" designation into two lots, one of which may have reduced road frontage.

GC-20 Permit the subdivision of a lot containing more than one dwelling unit, lawfully in existence, for the purposes of providing each structure its own lot. Each lot created must contain adequate frontage on a public road and sufficient area and separation distance from other structures.

4.4 Residential Land Use Policy

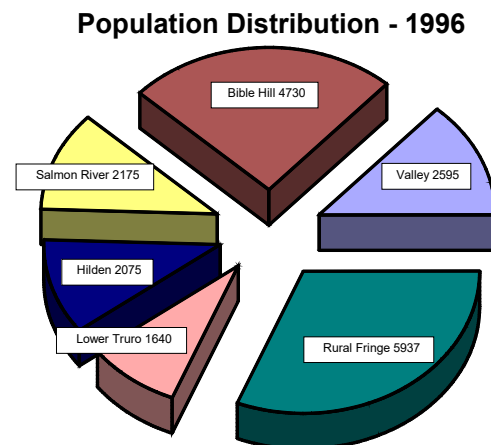
4.4.1 General

Significant growth in the sewer serviced areas of Colchester began during the early 1970's. Prior to this time, most new development occurred within the Town of Truro. The 1970's marked significant changes in the population profile of Central Colchester. The average number of people per household has decreased significantly from 4.1 in 1971 to 2.7 in 1996. This is the result of an overall reduction in family size combined with accelerated growth in new housing unit construction. The creation of new households has risen at an impressive rate 2.4% annually between the 1991 and 1996 census period.



The predominant land use within the Growth Centers of Central Colchester is residential which is indicative of their role in the broader regional context. Other types of land uses are evident throughout each of the Growth Centers and with a few exceptions, provide for immediate needs on a localized scale. Historically, development in Central Colchester has been concentrated along key roadways that lead into Truro. This sprawl type development has tended to produce a more diverse land use mix and many of these areas are in a period of transition. The Robie Street area, for instance, was once dominated by farming activity and a few residential uses. Twinning of Highway #102 in the early 1970's vastly improved access and visibility, making the area prime for commercial development. While businesses predominate, there is still evidence of a residential component that once solely existed. Continuation of this trend is likely to result in Robie Street becoming a homogeneous mix of commercial land uses. Other examples of this evolution is common along Main Street and Pictou Road in Bible Hill.

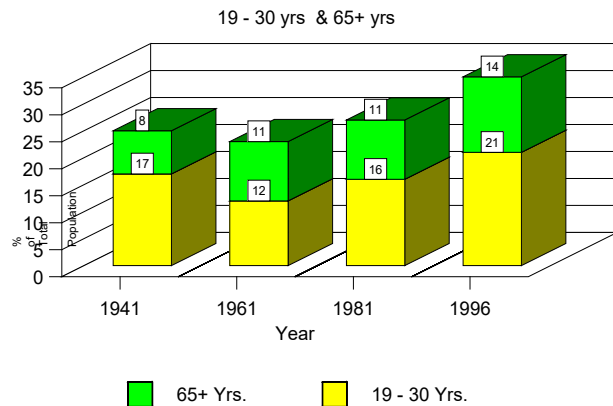
Changing population and lifestyle characteristics coupled with a limited land supply within the Town of Truro has resulted in new development pressures in areas immediately around Truro. Much of the new development in these areas has been within subdivisions created during the last three decades. It was also during this time that Council recognized the potential issues of rapid urbanization and accordingly adopted Municipal Planning Strategies for each sewer district. As a result, most of the development in Colchester is recent and fits within typical planning regulations. Older residential neighborhoods that developed prior to planning controls have not been so fortunate, and sometimes experience difficulties in trying to meet current standards.



Approximately 96% of the residential development in the Growth Centers is made up of single detached

units. It is the intent of this Strategy to protect high quality residential neighborhoods from incompatible development while at the same time provide new opportunities for existing development. The area has been well served with a variety of housing choices that fulfills a broad range of needs. Council will continue to monitor and consider new housing initiatives that may better respond to trends and changes in housing markets.

Age Bracket Comparison - Colchester



The remainder of the residential sector is made up of multiple unit dwellings such as apartment buildings, town houses and semidetached structures. These are usually rental units and form a necessary part of the housing stock by providing transitional and/or permanent shelter to a segment of the area's population. This form of housing tends to be dispersed throughout each of Growth Center in varying amounts and sizes. Bible Hill and Truro Heights have attracted a greater share of rental accommodations compared to other Growth Centers which is perhaps due to the Agricultural College, property ownership patterns, and other locational features.

Specialized housing is becoming an evident and needed component of a community's housing stock, particularly in view of the population's changing socio-economic profile. Residential land use mixes must strive to accommodate affordable and special needs housing that provide a complete range of choices and alternatives. The trend to de-institutionalize seniors housing, integrate special needs people into existing neighborhoods and other social housing programs are important components of any community. Council recognizes the benefit of a "fully serviced" residential sector and intends to promote such housing in a manner that is consistent with the principles in which it was created. The Provincial Statements of Interest amplify this and expect municipalities to support such housing initiatives.

The housing market is comprised of several categories where modest and more affordable housing represents one end and the better quality -more expensive at the high end. Generally, households move along this path and typically trade lower value housing for higher value and move from renter to homeowner status. Research by the Joint Centre for Housing Studies of Harvard University shows that movement along this path often corresponds with household life cycles; as households form, mature, dissolve, or reform, they tend to move between housing types. In many housing markets "starter homes" are an important first step for many owners who will eventually trade to bigger or better units later. As these households mature and reach senior status, some will trade larger housing for smaller more manageable retirement units.

Manufactured housing and other innovative housing concepts serve several distinct market segments but most importantly are among the few housing types that has the ability to reach the affordable housing sector. This is significant in that other affordable housing choices are limited yet there is an increasing need for low cost housing within our communities. To illustrate this point manufactured housing has been historically characterized by large shares of both the very young and elderly households. 1996 Statistics Canada information indicates that 21% (10,015) of Colchester's total population fall within the 19 to 30 year old age category and 14 % (6725) is above the age of 65. Combined, this represents 35% of the total population. In comparison,

these percentages were 12% and 11% respectively in 1961 and 16% and 11% in 1981. If there is a correlation between age and demand for affordable housing, the change in statistics would suggest that affordable housing demands are increasing in Colchester, a trend that should continue into the future. This trend will be even more prominent in the future as earlier retirement becomes more popular and life expectancy increases. Council understands the broader social need for affordable housing and intends to encourage development that will enable residents home ownership choices.

It shall be a Policy of Council to:

- RP-1 Designate areas for residential development on the Future Land Use Map.***
- RP-2 Encourage the continued development of a diverse and high quality housing stock that offers a range of residential choices targeting a variety of needs.***
- RP-3 Monitor changes in housing markets and consider amendments to this Strategy that would expand residential development opportunities.***
- RP-4 Permit residential uses to be established in certain commercial zones, subject to specific standards and requirements, appropriate to that zone.***
- RP-5 Encourage housing development initiatives that can specifically provide affordable home ownership choices and meet special residential needs.***
- RP-6 Not permit residential uses that are specifically oriented to special needs groups, such as homes for special care, and senior citizen housing to be established in any area exposed to flood risk as identified in the Environmental Section of this Strategy.***
- RP-7 Set out development standards in the Land Use Bylaw for residential land uses including height restrictions, requirements for buffering and screening, setbacks, parking areas, amenity space and architectural considerations.***
- RP-8 Require that each residential structure be situated on its own lot that abuts a public road unless otherwise permitted under this Strategy.***

4.4.2 Low Density Residential

Low density residential land uses comprise two zones in the Growth Centers that result in a net development density not exceeding 37 units per hectare (15 units / acre). The R-1 Residential Single Unit Zone, the R-2 Residential Double Unit Zone, and R-2C Residential Double Unit Conversion Zones comprise the areas designated “Low Density Residential” on the Future Land Use Map.

i) R-1 - Residential Single Unit Zone

The R-1 zone has, under previous planning documents, been a zoning option available to developers who wish to provide a higher level of assurance to land owners within a subdivision. The zone is the most narrow in terms of permitted land uses; consisting of single unit residential structures and certain accessory uses / structures. For some developers, it has been a preferable approach towards creating homogeneous residential neighborhoods.

To date, Council has approved two R-1 rezoning applications for subdivisions in Bible Hill. Many other subdivisions have covenants that restrict the lot development to single detached units. Covenants can, however, be awkward and expensive for land owners to administer. In such circumstances, zoning can provide a more effective mechanism towards fulfilling specific development objectives. This Strategy will enable zoning map amendments subject to the implementation considerations contained within this document.



It shall be a Policy of Council to:

RP-9 Create a R-1 Residential Single Unit Zone that permits single dwelling units and limited forms of home occupations.

RP-10 Consider new R-1 Single Unit Zones by amendment to the zoning map in any area designated “Residential” on the Future Land Use Map.

ii) R-2C Residential Double Unit Conversion Zone

Many new subdivisions exist in Central Colchester that are characteristically single unit residential developments. In order to promote a particular theme, several developers have placed covenants on lots to restrict other forms of residential and accessory development that may compromise this objective. As noted above, covenants are usually administered by landowners and are not always able to provide the high level of control expected in such areas. In other areas, long established residential neighborhoods have grown in a similar style but without any type of development rules. Often, property owners want to preserve the aesthetic qualities of residential subdivisions but in some cases be afforded the ability to create a second unit in some part of the dwelling to convenience a family member or otherwise. Converted dwellings in this instance can accomplish both objectives provided the Land Use Bylaw sets out specific requirements for the conversion of existing dwelling units. Council will also consider zoning map amendments to the R-2C Zone in any area designated for future low density residential land uses.

It shall be a Policy of Council to:

RP-11 Create a R-2C Residential Double Unit Conversion Zone that permits the conversion of an existing single unit dwelling into two units provided such conversions are sensitive to architectural characteristics in the area.

RP-12 Zone known existing subdivisions affected by covenants intended to restrict residential building styles to that of a traditional single unit architectural design to the R-2C Residential Double Unit Conversion Zone.

RP-13 Consider new R-2C Residential Double Unit Conversion Zones by amendment to the zoning map in any area designated “Low Density Residential” on the Future Land Use Map.

ii) R-2 Residential Double Unit Zone

The R-2 - Residential Double Unit Zone is intended to provide flexibility and other development options within residential areas. Often times, the R-1 zone provisions are too restrictive for developments and areas that have traditionally enjoyed a broader residential land use composition. In fact, a significant part of the residential land use that has occurred in the Growth Centers is characteristic of R-2 development. It affords options such as the establishment of two dwelling units on a lot, broader categories of home occupations, certain non-intensive agricultural uses, guest homes, day cares, and boarding homes. This is often viewed as a traditional and perfectly acceptable land use mix and will become the base zone for much of the vacant land in the Growth Centers.

Mini or manufactured homes have not been permitted “as of right” in the Growth Centers of Central Colchester since 1994. This has been largely due to concern over its distinctive linear shape compared to the more traditional architecture of site built housing. The Municipality participated in a steering committee for preparation of the *Manufactured Housing Study 2000 - Best Practices Policy and Regulatory Model* completed by Corbett

Consulting. Among the topics addressed in this document included criteria associated with development infill using mini or manufactured housing. Each Growth Centre contains several areas where this housing type has been established and resulted in a varied but respectable streetscape. Council



believes that a continuation of this development form is suited to certain areas

provided some basic siting criteria can be addressed through Land Use Bylaw standards. Developers of new subdivisions should also be afforded a choice of housing styles that may be located on lots.

The *Manufactured Housing Study 2000* recognized that mobile homes are architecturally different than their updated mini-home replacement. This era of factory built housing ended about twenty five years ago which produced homes that were characterized by flat roofs, metal siding, a long slender shape, protruding hitch and usually smaller louvered or sliding windows. One key recommendation from the Study suggested that relocated structures are best suited to mobile home parks amongst similar buildings since many of their attributes do not always fit well with conventional housing styles. Mobile homes that presently exist on individual lots within each Growth Centre can continue to exist and are offered limited replacement protection under the non-conforming provisions of the Municipal Government Act.

While Council intends to preclude the establishment of mobile homes on individual lots generally, they do acknowledge that Guest Drive in Bible Hill, which has been developed as a conventional subdivision, is predominantly comprised of mobile homes. Council feels that this area should be treated in much the same manner as mobile home parks and intends to permit the relocation of mobile homes on lots within this subdivision only. The Land Use Bylaw will identify the lots to which this provision applies.

It shall be a Policy of Council to:

RP-14 Create a R-2 Residential Double Unit Zone that permits two dwelling units within a single structure to be established on a lot.

RP-15 Zone existing such residential areas to the R-2 Zone as well as vacant land designated "Low and High Density Residential" on the Future Land Use Map.

RP-16 Permit the placement of mini or manufactured homes on lots zoned R-2 Residential Double Unit subject to requirements under the Land Use Bylaw.

RP-17 Establish specific requirements in the Land Use Bylaw for mini or manufactured housing on existing lots. Items that should be addressed include:

- i) roof style and pitch***
- ii) exterior siding and finish***
- iii) appearance and height of foundation***
- iv) orientation to street***

RP-18 Permit the establishment of mini or manufactured housing in subdivisions involving new public roads created subsequent to the approval of this Strategy.

RP-18.1 Permit the relocation of mobile homes to licensed mobile home parks only except in situations where a legally non-conforming mobile home exists

on an individual lot which may be replaced in accordance with applicable provisions of the Municipal Government Act.

RP-18.2 Notwithstanding Policy 18.1, permit the establishment of mobile homes on lots within the Guest Drive subdivision in Bible Hill and identify such qualifying lots in the Land Use Bylaw.

4.4.3 Medium to High Density Residential

Medium to high density residential land uses include, for the purposes of this Strategy, residential developments that exceed 37 units per hectare (15 units / acre). Most often, residential uses within this classification are multi-unit rental buildings that tend to generate more activity. Because of this, elements relating to their location and integration with other residential uses is important to ensure compatibility issues are properly addressed.

i) *R-3 Multi-Unit Residential - Medium Density*

Multi-Unit Low / Medium Density residential development includes all structures containing three to four dwelling units. These types of buildings can take many forms such as converted dwellings, apartment buildings and townhouses. Usually these structures are of a scale that is compatible with other types of low density residential uses provided sufficient amenity area and buffering exists. It is not Council's preference to pre-zone land for this purpose but rather permit such uses through amendments to the zoning map.

The establishment of three to four unit residential buildings in commercial districts is not apt to interfere with the function or form of these areas and in some cases will enhance development diversity in downtown environments. As a result, this type of residential development should be allowed in commercial areas "as of right".

It shall be a Policy of Council to:

RP-19 Create a Multi-Unit Residential - Medium Density (R-3) Zone and zone existing such uses accordingly except in the C-1 General Commercial and C-3 Community Commercial Zones where this shall be a permitted use.

RP-20 Consider the establishment of new Multi-Unit Residential - Medium Density uses by amendment to the zoning map in areas designated "Low and High Density Residential" areas on the Future Land Use Map subject to Policy RP-27 and criteria contained in the Implementation section of this Strategy.

ii) *R-4 Multi-Unit Residential - High Density*

For the purposes of this Strategy, high density residential structures are considered to be those in exceeding 5 units or more and usually take the form of either apartment buildings or townhouses. Central Colchester has not experienced a tremendous amount of growth in this particular housing segment but a few examples exist in each Growth Center. At the present time, Bible Hill and Truro Heights contain the most significant number of rental accommodations. Due to the suburban character that exists in most growth centers, apartment buildings with more than twelve units tend to be too intensive in terms of scale and bulk. Bible Hill is a little different and can tolerate larger structures without compromising aesthetic qualities.

High density apartment buildings are generally larger and consequently are more visible within a community. The increase in density is likely to create a higher activity level as well as a greater potential for disruption of quieter single unit neighborhoods. It is often preferable for these types of uses to be located in close proximity to designated collector roads, however, direct access is not always necessary or desirable. Collector roads are intended to move large volumes of traffic through a community efficiently. Linear development that result through numerous driveways on to collector roads can interfere with the function of collector roads and it may be better to utilize existing streets and intersections to access such roads. It is important in these cases that such uses have fairly direct access to the collector roads so that the traffic generated does not travel large distances through local subdivision roads.

The size and scale of multi-unit residential buildings can be a stark contrast with adjacent low density residential uses. For this reason, Council wishes to ensure that multi-unit buildings remain at a reasonable scale, particularly in those Growth Centers that are predominantly low density. Also, large buildings such as these need to be carefully integrated with their surroundings and consideration must be given to site conditions and features as well as ongoing property maintenance and upkeep.

Commercial areas, on the other hand, are much less sensitive to the land use impacts that result from high density residential development. The activity level associated with this use is often times more subdued than that associated with a majority of commercial uses and therefore such structures of varying sizes should be permitted in the C-1 General Commercial and C-3 Community Commercial zones subject to specific development standards. In other areas, Council intends to enable multiple unit residential - high density structures to be established in "High Density Residential" designations by development agreement subject to the considerations identified in the following Section and the Implementation Section of this Strategy.

It shall be a Policy of Council to:

RP-21 Establish a Multi-Unit Residential - High Density (R-4) Zone and zone all such existing uses accordingly.

RP-22 Permit the establishment of certain Multi-Unit Residential - High Density (R-4) uses in the C-1 General Commercial and C-3 Community Commercial Zones.

RP-23 Consider the establishment of new Multi-Unit Residential - High Density (R-4) uses in areas designated “High Density Residential” on the Future Land Use Map subject to a development agreement process. In considering a development agreement, Council shall have regard for the criteria outlined in Policy RP-27 and in the Implementation Section of this Strategy.

RP-24 Limit the size of multi-unit residential - high density buildings to twelve units in all Growth Centers except Bible Hill and Truro Heights where such structures may exceed this size.

4.4.4 Residential Development Options

i) Grouped Dwelling Units

In recent times there has been some interest expressed by land owners and developers to provide more options in the development of land for apartment buildings. Grouped dwellings or two or more residential buildings on a lot can be a means of enabling developers to build “communities” that offer an ambiance of security, closeness, and aesthetic value. Development densities should not exceed the density associated with an appropriate Multiple Unit Zone (ie. R-3 or R-4) for which the lot may qualify.

The concept of permitting one residential building on a lot originated decades ago under traditional zoning practices. Its purpose was essentially to avoid future problems with the financing and sale of properties containing more than one structure. Changing circumstances combined with new planning techniques enable Council and developers to adequately address associated issues.

It shall be a policy of Council to:

RP-25 Consider the establishment of more than one multiple unit residential building on a lot in any area designated “Residential”, “General Commercial “ or “Community Commercial “ on the Future Land Use Map by development agreement. In addition to the criteria outlined in the Implementation Section of this Strategy, Council shall consider the following:

- i) development densities;***
- ii) provision for amenity space and landscaping of the development;***
- iii) adequacy and location of roads, driveways and parking areas;***
- iv) future subdivision potential;***
- v) the compatibility of the proposed buildings with adjacent uses in terms of architecture, height, and size;***
- vi) buffering, screening, and separation from adjacent uses;***

- vii) ***the placement of buildings on the lot in terms of orientation, setbacks and separation distances from one another;***
- viii) ***impacts of exterior lighting.***

RP-26 ***Require that any parcel of land for which an application is made pursuant to Policy RP-25 have a minimum area of 0.4 hectares (1 acre).***

ii) Zoning Map Amendments & Development Agreements

Previous policies and text relating to the rezoning of land in the “Low Density Residential” designation to establish medium density residential land uses noted that a land use bylaw amendment approach is preferable. Also, high density residential uses are permitted through a development agreement process. Both approaches enables Council, staff, and area residents an opportunity to review and comment on specific development proposals not otherwise possible through “as of right” zoning. There has been some discussion with respect to the range of potential impacts and issues associated with these more intensive development forms. Traffic generation, buffering and screening, architectural and landscaping details, parking areas and amenity space will influence how well a proposal fits with its surroundings. Council intends to address these through specific policy criteria listed below and in addition to other considerations in the Implementation Section of this Strategy.

It shall be a Policy of Council to:

RP-27 ***In addition to the criteria listed in the Implementation Section of this Strategy, Council shall consider the following matters for applications concerning multiple unit residential zoning map amendments and high density residential development agreements:***

- i) ***adequacy and location of driveways and parking areas;***
- ii) ***the compatibility of the proposed building with adjacent uses in terms of architecture, height, and size;***
- iii) ***provision for buffering, screening, and separation from adjacent dissimilar uses;***
- iv) ***the placement of buildings on the lot in terms of orientation, setbacks and separation distances from one another;***
- v) ***impacts of exterior lighting as well as any accessory buildings, structures and uses.***
- vi) ***provisions for amenity space.***
- vii) ***access to the proposed development in terms of its location to a designated collector road.***
- viii) ***consideration of the impacts on existing local street capacities, functionality, and access management practices.***

iii) Land Lease Developments

Once referred to as mobile home parks, the term “land leased development” is simply a new name for an old concept. This type of development is usually characterized by two or more dwelling units located on a single lot, occupying a leased area of land known as a “home site”. Another feature unique to land leased developments is that all services, roads and amenities are constructed and maintained by the land owner. This higher level of control is sometimes preferred by developers who may be able to provide a broader and better level of service to its tenants than the Municipality.

Issues associated with land lease developments normally relate to densities, architecture, access and the delivery of adequate services, such as water and sewer. From the Municipality’s point of view, there is a broader public interest that such developments remain sustainable, that health issues are properly managed, and that affordable residential development options exist. From a community perspective, these developments must fit both in terms of form and function with their surroundings.

The recently adopted Statements of Provincial Interest obligate Council to provide affordable housing choices. Land lease developments have historically filled this void since other affordable options are few or not appropriate to this region. Land tenure can have a significant impact on monthly housing costs. An analysis of the cost differences between rental lots compared to conventional owned lots prepared by Municipal staff in 1998 illustrated that the former alternative could be as much as 40% cheaper when all land development costs are factored. This combined with the generally lower construction costs of manufactured housing opens new possibilities for households wanting to move towards home ownership. From another perspective, retirement communities, popularized in the States, is a housing concept that is being developed in other parts of the province. Lifestyle changes are presenting new housing dilemmas and opportunities for quaint, fully serviced, and secure living environments that allow residents to pursue a variety of interests.

The development agreement approach to new and expanded land leased communities has the ability to address the issues identified above. The process lends itself to this form of development by enabling the creation of a set of development guidelines unique to specific site conditions. The agreement can also provide for ongoing maintenance and operating. In considering an application for a development agreement for land lease communities, Council will have regard for certain criteria it considers important for this type of development.

It shall be a Policy of Council to:

RP-28 Consider the establishment of land lease developments by development agreement in areas designated “Low and High Density Residential” on the Future Land Use Map.

RP-29 Require that any parcel of land for which an application is made pursuant to Policy RP-28 have a minimum area of two hectares with

access and frontage on a “Designated Collector Road” listed in the Land Use Bylaw.

RP-30 Consider the expansion of existing land lease developments by development agreement in any area designated “Residential” on the Future Land Use Map which shall apply to the entire property.

RP-31 Upon application for a development agreement for a land lease development and in addition to all other relevant Policies of this Strategy, Council shall consider applicable standards and requirements contained in the Municipality’s Mobile Home Park Bylaw.

RP-32 In addition to the criteria listed in the Implementation Section of this Strategy, Council shall consider the following matters for any development agreement application for a land lease development:

- i) development densities;**
- ii) provision for amenity space and landscaping of the development;**
- iii) buffering, screening, and separation from adjacent uses;**
- iv) lease lot configurations and building placement in terms of orientation, setbacks and separation distances from one another;**
- v) adequacy of existing municipal services and roads.**
- vi) internal road and servicing designs.**
- vii) location and types of any secondary uses.**

iv) Site Plan Approval - Medium Density Multi-Unit Residential Uses

Properties designated “Low and High Density Residential” on the Future Land Use Map that front and have access to a designated collector road are naturally exposed to higher activity levels such as traffic, noise, and a diversity of land uses. This Strategy also recognizes that land will be developed for more intense residential uses and provides for several amendment alternatives that have been described above. Considering the nature of these areas and the low impact potential of low to medium density multi-unit buildings, it is reasonable that these be permitted in all Residential designations by site plan approval provided some basic locational conditions exist.

It shall be a Policy of Council to:

RP-33 Consider the establishment of low / medium density multi-unit structures (up to four units) by site plan approval in areas designated “Low Density Residential” and “High Density Residential” on the Future Land Use Map.

RP-34 Pursuant to Policy RP-27, properties that have frontage and access to a “Designated Collector Street” listed in the Land Use Bylaw shall qualify for site plan approval consideration.

RP-35 Set specific terms and conditions outlined in the Land Use Bylaw that address matters of compatibility with adjacent land uses.

v) Cluster Developments

Over the last number of decades, a considerable amount of attention has been drawn to urban sprawl, the preservation of open space and rural character, environmental protection, and the loss of quality farmland. These community development issues have been influenced greatly by improved transportation systems and a growing dependency on automobiles, a shift in social values, increased land values and an unchallenged acceptance of traditional development forms

Since the 1990's, cluster development models have emerged as a partial response which can influence the quality of life that many property owners have come to desire. The cluster development concept allows for the establishment of residential development in higher concentrations while preserving remaining open space for farmland, recreation, maintenance of rural character, protection of environmental features, or generally improve amenities and aesthetics. While net development densities usually resemble those of traditional subdivisions, buildings are typically constructed in a series of higher density nodes separated by generous amounts of open space. Most common of these are developments that have been carefully integrated with recreational amenities like golf courses that wind through pockets of compactly sited detached and multi unit housing. This development form has the ability to reduce costs, restore areas of ecological sensitivity, meet a market need for low maintenance housing, and significantly reduce the impacts of development on watersheds. The cluster development model has not been widely used in Canada to date but is growing in popularity as many excellent examples have withstood the test of time in the United States.

Cluster developments generally do not respond well to traditional zoning practices due to the fact that the resulting built form can be varied and give rise to issues associated with higher density development. Storm water, traffic management, utilities and infrastructure, land ownership arrangements, building design and densities, landscaping and road maintenance are among the important elements that require consideration as the design process proceeds. For these reasons, Council feels that proposed cluster developments need to be carefully reviewed in the context of land use planning and other community development objectives. Development agreements is the preferred approach since these offer a high level of assurance that such site design and ongoing maintenance issues are properly addressed. Cluster developments are typically comprised of residential land uses however, when these are associated with recreation amenities like golf courses, equestrian facilities, ski hills, etc. a certain amount of accessory commercial activity is likely. Council recognizes that these types of uses are integral to such recreational based businesses and intends to allow them in an accessory capacity.

It shall be a policy of Council to:

RP-36 Allow for the establishment of cluster developments by development agreement in areas designated for Low Density Residential Use in Growth Centres as well as areas designated as Rural General. All applications for a cluster development shall:

- i) retain a minimum of 50% of the total land area as open space or developed for recreational purposes such as a golf course;***
- ii) housing clusters shall comprise no less than ten (10) residential units and no less than five (5) independent residential structures.***
- iii) commercial uses may be permitted provided they are accessory to the open space use.***

RP-37 In addition to all other applicable criteria in the Implementation Chapter of this Strategy, Council shall be satisfied that any application for a cluster development address the following matters:

- i) availability and adequacy of existing and proposed services, including but not limited to roads, sanitary sewers, storm water management systems, water supply, and utilities;***
- ii) subject to approval by the Municipal Engineer, the appropriateness of standards for the design and construction of roads and pedestrian walkways not owned by the Municipality to meet an acceptable level of functionality and serviceability;***
- iii) provisions to accommodate emergency access and services;***
- iv) adequacy and location of proposed parking areas;***
- v) plans to address solid waste management and snow removal, as well as the maintenance of infrastructure (ie. roads, sewer and water systems, private sewage treatment facilities, utilities, etc.) and common space;***
- vi) building locations, design, and development densities;***
- vii) proposed buffering, screening, spacial separation, and landscaping of the development;***
- viii) plans and timing for the phasing of the development;***
- ix) ecological conservation practices;***

- x) integration of the proposed development with areas reserved for open space, recreational amenities such as golf courses, trails, equestrian and ski facilities, water based activities, farmland, and environmentally sensitive areas or features;***
- xi) plans for the use, ownership, maintenance, and improvement of open space and amenities associated with the development.***

4.5 COMMERCIAL LAND USE POLICY

4.5.1 General

The commercial components of each Growth Center form part of Truro's larger regional market, encompassing most of Colchester County as well as small parts of West Hants and Cumberland Counties. There are four principle commercial areas serving this trade area: the central business district in downtown Truro, Robie Street, Pictou Road, and Exit 13 / Willow Street. Each of these are distinct in their own right and collectively offer an extensive range of retail and service oriented establishments.

The development of commercial land uses has always been influenced by four main characteristics; access, visibility, available land mass, and population servicing needs. Downtown Truro has been historically the center of business activity since it is centrally located to most of the population and major transportation links including the railway. Changes in population, lifestyles, and physical community growth created new development pressures beyond the traditional core area and lead the emergence of other commercial areas such as Robie Street, Pictou Road and Exit 13. Today these serve an important function in the regional commerce activity of Central Colchester.

Future commercial development in Bible Hill has had a long and much debated history. On one hand, a component of the community believes that new commercial development must be promoted extensively and encouraged while the other believe that this would seriously compromise the village's character as a predominantly residential community. In 1992, the Municipality commissioned a study intended to provide expert opinion on future commercial development potential. Temporal - Spatial Research Inc. concluded that "...Bible Hill should be classified as a neighborhood shopping center in view of its heavy orientation to general shopping and lack of specialty goods..." The Study also went on to say that "... there is potential for an additional 37,092 square feet of DSTM space..." presently constituting approximately 10 percent of the Truro area total DSTM. At that time, the consultant suggested that the demand for DSTM space will be relatively small and Bible Hill would best serve its market by providing a mix of neighborhood goods and services. Since the 1992 study, there has been significant commercial development in the Truro area with the recent construction of Sobey's in the east end, Walmart at Exit 13, and expansion to the Superstore. These have the potential of creating a shift in local shopping patterns and new development opportunities that will likely impact on the future commercial sector of Bible Hill.

In the other Growth Centers of Salmon River, Hilden and Valley, commercial land uses have been irregularly established, mostly along collector roads. These are generally characterized as convenience types of businesses that serve the immediate needs of the local residents. Gas bars, convenience stores, personal service shops, offices, and other small scale businesses are typical commercial uses that have been established in these areas. Some more intense commercial uses randomly exist, particularly in the older parts of these Growth Centres, including, small automotive repair outlets, building supplies dealers, trade shops, warehousing, etc.

Many commercial land uses have an inherent incompatibility with low density residential uses that can often result in a variety of disruptions and nuisances. Activity levels associated with each are different and need to be separated so that they can both exist and function according to their purpose. Ultimately, there needs to be a transition from one to the other and the

challenge will be to create standards in the Land Use Bylaw that help ease such changes. Buffers, landscaping techniques, spacial separations, as well as other land uses are possible ways to achieve this. Medium to high density residential land uses however, are commonly located in commercial areas where access to amenities and services is readily available. This combined with their increased intensity, corresponds with the character of commercial areas. It is often desirable for certain commercial districts to have a “living” component to help maintain a varied purpose, offer stability, and add life and activity outside traditional business hours. The presence of people can also promote a higher degree of security for businesses that are typically not always open.

The random establishment of commercial land uses is not a good practice for the reasons discussed above. Usually, clustering commercial uses in well located areas better serves both businesses and residents alike while minimizing many of the land use impacts. This Strategy intends to identify suitable areas within each Growth Center for a range of commercial activities while at the same time protect the limited supply of available land from less demanding land uses.

Other parts of this Strategy have touched on the elements necessary for commercial land uses. Parking, signage as well as residential and accessory uses are an integral part of the development form that characterizes commercial districts. The Land Use Bylaw will set out appropriate development standards in this regard. Another important consideration is access to commercial development that is typically located along collector roads. Too many driveways can not only interfere with the function of collector roads but may also create safety hazards for both motorists and pedestrians. To address this, standards should be developed in the Land Use Bylaw that encourage managed access and allow for communal parking areas that serve more than one commercial development.

There are circumstances where the transfer of property ownership creates challenges to potential buyers due to inflexible lending practices. In particular, permitted residential and institutional uses can be impacted by this, therefore, Council can consider rezoning these properties to the corresponding zone. This, however, can create hardships on adjoining commercial uses, so abutting yard requirements will be waived in such instances.

It shall be a Policy of Council to:

- CP-1 Designate areas for a variety of commercial development on the Future Land Use Map.***
- CP-2 Encourage the development of commercial land uses that fully serves the requirements of residents in the regional Colchester market.***
- CP-3 Monitor changes in commercial land use trends as well as the supply and demand for certain types of commercial space within each Growth Center.***
- CP-4 Permit suitable residential uses to be established in certain commercial zones, subject to specific standards and requirements, appropriate to that zone.***

- CP-4.1** *A property containing a permitted Residential or Institutional use, existing on the effective date of this Strategy, may be rezoned to a corresponding residential or institutional zone. Abutting yard requirements contained in the Land Use Bylaw shall not, however, apply to adjoining properties.*
- CP-5** *Set out development standards in the Land Use Bylaw for all commercial land uses including height restrictions, requirements for buffering and screening, setbacks, parking areas, signs, and architectural considerations.*

4.5.2 General Commercial (C-1) Zone

The Strategy identifies several areas for general commercial development which usually correspond with areas designated under previous planning strategies. These are the primary commercial districts that have evolved over time in each Growth Centre and generally include areas along Highway #2 in Hilden, Main Street and Pictou Road in Bible Hill and Valley, Robie Street, Truro Heights Road and the Highway #102 Connector Road in Lower Truro / Truro Heights, East Queen Street and East Prince Street in Salmon River.

With a few exceptions, the establishment and distribution of general commercial land uses has not created serious concerns to date. Many of these existed prior to community planning and much of the recent development has grown around these. Organic growth is, however, prone to land use conflict and this Strategy intends to encourage future commercial growth by concentrating such land uses at appropriate and strategic locations in each community. The approach and rationale is discussed for each Growth Center below.

i) Bible Hill

The historic area for commercial activity in Bible Hill was along Main Street, containing many long established businesses. As housing growth expanded east, new commercial development followed mostly along the north side of Pictou Road beginning at Jennifer Drive and ending in the vicinity of Village Court. The Bible Hill Commercial Development Potential Study of 1992 undertook to examine future development trends in this regard and in consideration of the modest growth potential expected in the Bible Hill market, the supply of commercially zoned land was increased. Land on the south side of Pictou Road, extending from Wright Avenue to Armstrong Avenue, mirrors the existing commercial designation on the north side from Jennifer Drive to Innovation Drive. This creates a commercial node that would be well positioned in relation to the proposed Farnham Road arterial extension in the future.

An area of land in the vicinity of Main Street, including the lower portions of Pictou Road, College Road, Ryland Avenue, and Farnham Road, has also been designated general commercial. This has been the traditional core of Bible Hill and many of the properties have been developed for a variety of purposes. In recent years, there has been a considerable amount of new development in this area and this trend is expected to continue.

Two remaining areas along Pictou Road have also been designated General Commercial. First an area of land encompassed primarily by two commercial garden nurseries located between Oak Drive and the intersection of Village Court. Finally it is the intention of Council to designate General Commercial lands located at the intersection of Vimy and Pictou Roads, two collector streets. This intersection has historically supported three businesses and further commercial expansion in this area is desirable.

ii) Lower Truro / Truro Heights

The Growth Center of Lower Truro / Truro Heights contains two principle commercial nodes; one along the Robie Street at Exit 14 and the other along the Truro Heights Connector at Exit 13. Due to location, these areas are important components of the larger Colchester regional market.

For more than 30 years, and particularly after the construction of Highway #102, Robie Street has undergone extensive development and evolved into one of Truro's busiest shopping areas. Much of the available frontage and area has been developed since this time and only a few vacant lots remain. Future development along Robie Street is constrained by the Salmon River and McClure's Brook flood plains which are periodically inundated with water, however, most of the development is relatively new and elevated above the 1 in 100 year flood elevation. The Environmental Section of this Strategy envisions new development and redevelopment opportunities in such flood risk areas which is an important consideration for these established commercial areas. This is indeed necessary to ensure Robie Street continues to evolve, improve and remain competitive in the regional markets.

Traffic along Robie Street has been an ongoing issue and a topic of the *Robie Street / Highway #102 Transportation Study* completed in 2000. This examined the possibility of extending Marshland Drive from its present terminus to Highway #102 as a means of separating local from commuter traffic. With effective limited access controls, additional land to the south could be exposed to new development opportunities; land to the north has been identified as an important flow way for flood water and must remain undeveloped. The "cut and fill" concept discussed in the "Environmental Section" of this Strategy may be used in this area to allow for further development in a manner consistent with flood plain management objectives.

iii) Hilden

Commercial development in Hilden is almost exclusively located along Highway #2, particularly where it intersects with the Irwin Lake Road. A few businesses have established on the Truro Road in the years predating the former Hilden MPS but the area is generally not suited to general commercial development given the residential nature of the surrounding area and the nearby elementary school. Other pockets of commercial development exist along west side of Highway #2 near the Millbrook Native Community which have again, been established for some time.

Future commercial development in Hilden is likely to be convenience orientated, serving the needs of local residents. Land will be designated for this purpose along Highway #2 and it is intended to concentrate commercial uses in areas that have already been developed for this purpose.

iv) Salmon River

Like many of the other Growth Centres, commercial development in Salmon River has tended to be established along collector roads such as East Queen Street and East Prince Street. Businesses along East Queen Street have existed for some time and tend to be interspersed with residential uses. Commercial land uses along East Prince Street consist mostly of local convenience businesses and extend from the Town boundary to Harmony Road. This particular area is isolated from the majority of residential land uses well suited to the types of commercial uses that have established here.

v) Valley

Commercial land uses in Valley are limited and is perhaps due to the availability of shopping choices in Bible Hill. Those that do exist, have been established several years ago and are mainly located along Pictou Road. Exit 17 at the intersection of Highway #104 with Pictou Road has prominent exposure to large traffic volumes and a reasonably large undeveloped land mass. One drawback is that this is a split interchange making access a little more difficult, particularly for east bound traffic. The general area has features that would be attractive to certain types of commercial development and this Strategy intends to accommodate future growth here.

It shall be a Policy of Council to:

CP-6 Designate General Commercial areas on the Future Land Use Map.

CP-7 Create a General Commercial (C-1) Zone that permits a wide range of commercial uses and zone areas designated Commercial to that zone.

CP-8 Provide areas for future commercial development in each Growth Center by concentrating such land uses to a few specific nodes that are strategically located near highway interchanges and/or designated collector roads.

CP-9 Zone commercial uses not identified as a non-conforming use pursuant to Policy GC-6, existing on the effective date of this Strategy, C-1 General Commercial, even if the area of land has been designated for another purpose.

CP-10 Permit commercial buildings and structures including mini malls that do not exceed 4645 sq. m (49,999 sq. ft.) and any expansion of such use cumulatively resulting in more than 30 sq. m (323 square feet) to be established in the General Commercial C-1 zone subject to the site plan approval process.

- CP-11** *Establish standards in the Land Use Bylaw for location of parking areas, structures and accessory uses as well as height limitations, access, architectural details, signage and buffering / screening.*
- CP-12** *Consider the establishment of new commercial uses and shopping centers exceeding 4645 sq. m (49,999 sq. ft.) as well as any expansions thereto by development agreement in the C-1 General Commercial and C-2 Highway Commercial Zones*

4.5.3 Highway Commercial / Light Industrial (C-2) Zone

The land use classification of Highway Commercial / Light Industrial generally describes uses that are highway dependent, land intensive, and moderate traffic generators. Traditionally, these types of uses do not include independent specialized retail uses which tend to favor downtown locations. The emergence of shopping centers, strip malls and “box store” developments serving larger regional market created new community development issues since they share similar locational requirements and the high activity associated with these uses is generally not conducive with other types of land uses. As a result, highway commercial uses are commonly found near major transportation arteries and can provide a good transition between these busy traffic corridors and less intensive land uses.

Small scale light industrial uses are often found in close proximity to highway commercial uses since their basic location requirements are similar to highway commercial businesses and they tend not to conflict with one another. Generally, the nature and activity levels associated with highway commercial / light industrial establishments are not conducive to residential land uses, however, there sometimes will exist a desire to establish a dwelling in conjunction with a business to provide additional security. Under such circumstances, any such residential land use will be considered accessory to the main commercial use and may only exist as long as the business operates from the property. While the Industrial Section of this Strategy indicates generally that new industrial uses should be encouraged to locate in existing industrial parks in Truro and Debert, previous planning reports suggest that these may not provide a suitable location (ie. Debert) for some businesses and available land is limited in the Truro Park. A combined Highway Commercial / Light Industrial zone could enable these types of uses to be established in areas demonstrating the necessary characteristics. Presently, three areas exist in two Growth Centres, each of which is discussed below.

i) **Truro Heights:**

Two areas exist in Truro Heights that has attracted highway commercial / light industrial uses. The south east quadrant of Exit 13 has a large trucking business, a gas station / truck stop, and a courier business has been established in recent years. Land is also being developed privately in the vicinity to make lots available for similar types of uses. To the north, several properties along the Lower Truro Road have been developed for farm machinery sales and service, wholesale and warehousing, a plastics injection firm, courier depots and trucking businesses. Other uses that exist here like the asphalt plant, the rendering facility and concrete batching are truly

industrial in nature and not in keeping with typical highway commercial land uses. Access to this particular area has improved vastly with the completion of Wade Road.

ii) **Valley:**

The intersection of the Trans Canada Highway with Pictou Road in Valley also provides favorable conditions for highway commercial types of development. Specifically, the area north of the Trans Canada Highway has excellent visibility and reasonably good access with a split interchange. In the past, this area has been zoned for general commercial uses even though only a few have been established to date. While it is intended to continue the C-1 General Commercial Zone in this area, provision should be made to allow for a rezoning to the C-2 Highway Commercial Zone when circumstances warrant.

It shall be a policy of Council to:

CP-13 Designate Highway Commercial areas on the Future Land Use Map.

CP-14 Create a Highway Commercial (C-2) Zone that permits a wide range of commercial and light industrial uses and zone areas designated Highway Commercial to that zone.

CP-15 Consider the rezoning of land north of Highway #104 and Pictou Rd. designated as Highway Commercial on the Future Land Use Map to the C-2 Highway Commercial Zone provided that all relevant policies and criteria of the Implementation Chapter are met.

CP-16 Permit and set out standards in the Land Use Bylaw for the establishment of a single residential use in the C-2 Highway Commercial Zone provided the dwelling unit is clearly accessory and necessary to the main use of the property.

iii) **Onslow – Upper Onslow:**

Since 2012, Upper Onslow has witnessed new commercial growth in the vicinity of the Highway #102 overpass. A large farming operation that existed in the area for many years relocated, enabling a significant amount of land to be transitioned to highway commercial land uses that typically prefer easy access, high visibility, and larger land masses. The establishment of Hub Centre Drive on the east side of Highway #102 and subsequent development of automobile, heavy equipment and manufactured home dealerships is evidence of commercial interests in the area for which Council supports continued growth in this regard.

Some commercial development interests have also been expressed for land between Board Landing Road and Highway #102. Presently, lots have been created along the frontage of Board Landing Road for residential purposes while there remains approximately 10 – 12 acres of vacant land behind these lots and the highway. This area however presents some challenges in regards to access, land use compatibility as well as the present condition of the intersection of Board Landing Road with the Onslow Road. While the area may be suitable for certain types of commercial uses that do not generate high traffic volumes and are of a scale and nature that is more compatible with adjacent residential uses, Council will consider proposals for

commercial land uses in the future that addresses these issues under IMP-9 of this Strategy.

4.5.4 Community Commercial (C-3) Zone

During the preparation of previous Planning Strategies, concern was expressed relating the effects of new commercial development along the south side of Pictou Road with nearby residential subdivisions. Clearly, Pictou Road functions as a collector street and considering the amount and nature of commercial development that exists on the north side, the area is generally less attractive for low density housing particularly where better alternatives exist for this purpose. There was interest in earlier years to expand the amount of commercial space and to accommodate the concerns of neighboring property owners. The Community Commercial Zone was created that permits limited forms of commercial and accessory uses that are sensitive to adjacent residential areas. To reduce the risk of land use conflict, the Land Use Bylaw will contain increased requirements in regards to setbacks for structures and parking, the location of signage, as well as buffering and screening.

The Community Commercial Zone is a transitional zone limited to certain areas of Bible Hill. Properties between Armstrong and Fielding Avenue will be designated and zoned for this purpose. The site plan approval process will be used to achieve the desired integration of new community commercial uses with adjacent residential uses. The purpose of using this approach is to assist in the retention of existing vegetation, enabling alternate methods of buffering and screening as well as the preferable location of structures, parking areas, signs and exterior lighting to minimize impacts on dissimilar uses.

It shall be a policy of Council to:

CP-17 Designate Community Commercial areas on the Future Land Use Map.

CP-18 Create a Community Commercial (C-3) Zone that permits limited forms of commercial, residential and accessory uses and zone the areas designated Commercial between Armstrong and Fielding Avenues to that zone.

CP-19 Require that all new community commercial uses and any expansion of the use cumulatively resulting in more than 30 square metres (323 square feet) be permitted subject to the site plan approval process except for an application to establish grouped dwelling units pursuant to Policy RP-25 which shall be considered by development agreement.

CP-20 Limit the size of commercial buildings, structures and uses in the C-3 Community Commercial Zone to a maximum of 4645 sq. metres (49,999 sq. ft.)

CP-21 Establish standards in the Land Use Bylaw for location of parking areas, structures and accessory uses as well as height limitations, architectural details, and buffering / screening.

CP-22 *Site plan approval shall not be required for any expansion of a building or use that results in less than 30 square metres (323 square feet) or for any use permitted in the R-1, R-2, and R-2C Zones.*

4.5.5 Local Commercial (C-4) Zone

Local commercial generally comprise a category of land uses that are aimed at serving local areas with convenience types of goods and services. These often represent the least intense form of commercial land uses as they are generally situated in predominantly residential areas. They include convenience stores, daycare centers, personal service shops, laundromats together with accessory uses serving immediate neighborhoods with amenity items.

Notwithstanding their necessity, the establishment of local commercial uses in any residential area has the potential of creating disruption and nuisances to adjoining properties. Traffic, architectural details, buffering / screening, as well as the location of buildings and parking areas are matters that must be carefully considered in order to effectively integrate these uses into such areas. For this reason, and due to the fact that it is impossible to determine where local commercial uses will be desired, Council will consider proposals for their establishment by amendment to the zoning map. Equally as important will be the development of a comprehensive set of requirements in the Land Use Bylaw that adequately address associated issues. These may also involve performance standards aimed at ensuring ongoing maintenance and operational items meet compatibility concerns.

It shall be a policy of Council to:

CP-23 *Consider the establishment of local commercial uses by zoning map amendment in areas designated Low and High Density Residential on the Future Land Use Map for any property that frontage and access to a designated collector road listed in the Land Use Bylaw.*

CP-24 *Create a Local Commercial (C-4) Zone that permits specific types of convenience oriented uses and zone existing such uses to that zone.*

CP-25 *Develop requirements in the Land Use Bylaw that address parking, architectural details, building sizes, setbacks, signage, buffering / screening as well as performance standards for maintenance and operations.*

CP-26 *Require that any application for a zoning amendment satisfy the criteria outlined in the Implementation chapter of this Strategy in addition to the following:*

- i)** *the impacts of exterior lighting;*
- ii)** *the type, location and size of signage;*
- iii)** *adequacy and location of roads, driveways and parking areas;*
- iv)** *the compatibility of the proposed building with adjacent uses in terms of architecture, height, and size;*
- v)** *buffering, screening, and separation from adjacent uses;*

- vii) ***the placement of the building on the lot in terms of orientation, setbacks.***

4.6 INSTITUTIONAL LAND USE POLICY

4.6.1 General

Institutional land uses traditionally have been categorized as developments, either publically or quasi-publically owned and operated, that are intended to provide services to the community and region in which they are located. Private clubs, community groups, religious organizations, and certain businesses also provide public services and are usually included in this land use classification.

Each Growth Centre contains a number of institutional uses, most commonly in the form of a fire department, schools, churches, public works projects, and community centres or facilities. In Bible Hill, institutional land uses are a dominant feature of the community composition and in addition to those identified above include the NSAC, a regional detachment of the RCMP, the Agri-tech Business Park and other government offices.

Institutional land uses generally need to be located close to the population they serve and have historically been established throughout communities. Fortunately, many of these uses are desirable and do not create nuisances or disruptions to neighbourhoods if they are properly integrated with existing conditions. Certain institutions such as schools and churches are commonly located in residential areas but can create occasional periods of high traffic. These could be established in Residential designations with little risk of land use conflict if the property is situated on a designated collector road. Additionally, institutional uses should be permitted in any Commercial designation where they are generally considered a complementary use. It is appropriate that standards be developed in the bylaw for visual and acoustic buffering of structures and parking areas where such uses adjoin low density residential uses.

It is difficult to predetermine where institutional land uses are intended to occur in a community. The scale and intensity of these can vary dramatically and therefore their appropriateness for any particular area depends on the type of use and design elements of the proposed development. Council will therefore consider new institutional land uses by zoning map amendment in any area designated Commercial or Residential on the Future Land Use Map.

It shall be a policy of Council to:

- IP-1 Designate land for institutional development on the Future Land Use Map.***
- IP-2 Create an Institutional (I) Zone that permits a variety of institutional land uses and zone existing uses to that zone.***
- IP-3 Set requirements in the Land Use Bylaw that address parking, setbacks, buffering / screening, and signage where applicable.***
- IP-4 Consider the establishment of new institutional uses by zoning map amendment in areas designated “Residential” or “Commercial” on the Future Land Use Map.***

IP-5 In addition to criteria outlined in the Implementation chapter of this Strategy, Council shall consider the following items for an application to rezone land to Institutional:

- i. the compatibility of the proposed land use activity with adjacent uses particularly as it relates to environmental impacts associated with the application of pesticides, herbicides and fertilizers;**
- ii. proposed location, storage and management of manure;**
- iii. soil conservation and storm water management practices;**
- iv. the location of machinery including but not limited to hay driers, feed mills, and ventilation systems;**
- v. the location and size of silos, barns, stables, garages, and accessory buildings;**
- vi. provision for spacial separation and buffers / screening from incompatible land uses.**

4.6.2 Nova Scotia Agricultural College

The Nova Scotia Agricultural College (NSAC) is a provincially owned and operated post secondary education facility that has existed for nearly a century. It is the single largest land use in Bible Hill comprising almost 190 hectares or 20% of the available land mass and employs more than 450 people. The College was originally established as the Nova Scotia Experimental Farm intended to develop and provide the agricultural sector with improved farming practices. While today it principally serves an educational role for almost 800 students, it is also a significant center for agricultural research and development. Over the last decade the College has undergone considerable growth and change



with respect to both its academic programs and scope of research. This will result in the College needing in the vicinity of 80 hectares of space to accommodate future development that is in reasonably close to existing facilities.

Educational institutions such as the N.S.A.C. has a predisposition to attract related research and development types of agri-food based industries as there is often a mutual benefit to both by cooperating in a variety of ways. N.S.A.C. administration and Council understand the economic and educational advantages that may result and will encourage this type of complementary development. To this end, the Province of Nova Scotia has undertaken plans to develop the former Nova Scotia Youth Training Centre Facility into an Agritech Park that is specifically aimed at technology and research industries serving the agricultural sector. This

facility is presently being used by the N.S.A.C., the Municipality, Agritech Park administration, and hosts seven research businesses. At this time, the Agritech Park aims to attract small scale agriculture, science and environmental research businesses to fill vacant space within existing buildings. Its purpose is to provide incubator facilities for early growth research activities that may evolve into larger business or industrial ventures. Lands ownership is likely to remain public and accordingly, be designated and zoned for institutional purposes, in spite of the fact that private businesses are likely to locate here.

The prospect of new agri-food industries locating in the area could lead to a diverse and more stable economic base. Local economic development interests, the N.S.A.C., and the Agritech Park should work collectively towards promoting the area as a center for agricultural research and development. Council intends to support such initiatives and where possible, assist these groups in their endeavors.

It shall be a policy of Council to:

IP-6 Encourage the Nova Scotia Agricultural College to prepare a long term development plan that clearly identifies the future role, function and needs so that Council may be in a better position to respond to these in a timely and organized manner.

IP-7 Continue to support the Nova Scotia Agricultural College initiatives and promote its continued growth in a manner that is compatible and balanced with its surroundings.

IP-8 Encourage local economic development interests, the N.S.A.C., and the Agritech Park to develop a promotional plan aimed at attracting related research and development industries to the area.

IP-9 Designate and zone land associated with the Agritech Park as "Institutional"

4.6.3 Nova Scotia Provincial Exhibition Grounds

Since 1946 the Nova Scotia Provincial Exhibition Grounds in Bible Hill has been the focus of agricultural displays and harness racing. Both the exhibition ground buildings and the harness racing facilities are used frequently for a variety of community and sporting events.

The future of harness racing throughout the region has been somewhat uncertain in recent years. A 1991 Study, *Nova Scotia Provincial Exhibition and Raceway: Five Year Business and Development Plan* prepared for the Exhibition Commission attempted to identify deficiencies and new opportunities with the existing operation. A partial result of this exercise was the adoption of a mission statement intended to guide the implementation of the proposed action plan:

"Through the operation of a complex which includes a raceway, exhibition grounds, community recreation facilities and agricultural education facilities; foster the development of THE NS EX as the primary provincial agricultural exhibition grounds and the primary harness racing track for Nova Scotia."

While the buildings and structures associated with the exhibition grounds are permanent, most of these are only used on an occasional basis. Consequently, activities that occur on the site may create some temporary nuisances of higher traffic volumes, noise, and pedestrian movement but few if any complaints have been received by the Municipality. The horse stables are occupied continually and gives rise to proper manure storage and disposal, particularly as it relates to adjacent residential properties. The Land Use Bylaw should set requirements with respect to these uses.

It shall be a policy of Council to:

IP-10 Support initiatives of the Exhibition Commission that are aimed at maintaining and improving the Nova Scotia Provincial Exhibition complex as a focus for agricultural events and harness racing in the province.

IP-11 Zone lands associated with the Nova Scotia Provincial Exhibition Grounds as “Institutional” on the Zoning Map.

IP-12 Set standards in the Land Use Bylaw for separation distances between barns, stables, other animal shelters as well as related uses and adjacent residential uses.

4.6.4 Institutional Uses in Other Land Use Designations

Institutional uses are generally compatible with other forms of development in a community. Traditionally, it is desirable for these types of land uses, such as schools, churches and seniors housing, to be located close to the population that they serve. Others, such as government offices, libraries, museums, and auditoriums tend to be more characteristic of low intensity commercial development. Institutional land uses can be effectively integrated into other land use designations provided adequate standards exist in the Land Use Bylaw for buffering, landscaping, traffic control, and separation from adjacent dissimilar uses.

IP-13 Permit the establishment of churches and schools on any land designated “Low and High Density Residential” on the Future Land Use Map provided the lot has frontage and access to a designated collector road listed in the Land Use Bylaw.

***IP-14 Permit the establishment of certain institutional uses or lands designated
“Commercial” on the Future Land use Map.***

4.7 INDUSTRIAL LAND USE POLICY

4.7.1 General

Industrial development that exists in Central Colchester was, in most cases, created prior to any form of municipal planning. Industrial development is perhaps one of the most volatile given the range of possibilities and the potential for land use conflict with residential, institutional, and small scale commercial development. The Municipality has not made available the infrastructure that industrial development usually requires such as central water systems as well as high capacity sewer and transportation systems. Moreover, there has been little interest in creating new areas for industrial development which is perhaps due to a limited land supply with the locational characteristics preferred by such uses. The development patterns that exist in each of the Growth Centers would make the integration of new industrial development a challenge.

Three industrial parks serve the greater Truro region; one located in the Town of Truro, and the other two located just beyond the boundary of this Strategy in Debert and Kempton. The Truro Industrial Park was established in 1963 and is owned and managed by the Town through the Truro Industrial Development Society. Comprising a fully serviced area in excess of 250 acres, the park has been successful in attracting a diverse range of 64 industrial uses to the area. These have tended to be light to medium manufacturing, among other commercial, warehousing, and distribution uses. A steady rate of development in the Park is leading to a limited land supply, and in spite of a number of unsuccessful applications to expand, the Town intends to accommodate future industrial development at a new 400 acre site on the top of Young Street.

The Colchester Park at Debert is a provincially owned industrial park that was established nearly two decades ago. With nearly 3300 acres in land holdings and 550 of which is at least partially serviced, Colchester Park has ample room to handle future demands for industrial expansion. Presently there are 35 businesses located here including light to heavy manufacturing, warehousing and distribution. One key feature of the Park is the airport which was once forming part of the former CFB Debert facility. While this is presently not being used for commercial purposes, air service could be reactivated with relative ease and provide a full complement of transportation choices.

The Colchester Waste Management Park in Kempton was established in 1995 with the construction of the Colchester Balefill Facility. Shortly after, a composting facility and the Materials Recovery Facility were constructed as part of a program intended to remove and process organics and recyclables from mainstream household waste. Most recently, a privately operated tire recycling plant was constructed in the park that processes used rubber material from sources throughout eastern Nova Scotia. There still remains significant growth potential for private sector initiatives to remanufacture recycled materials. In this regard, the Waste Management Park can efficiently provide raw materials to companies interested in pursuing such projects.

This Strategy has described the form and function of the Growth Centres it encompasses and has expressed an interest in preserving their future as predominantly residential communities. To meet this objective, new industrial development will not be encouraged to locate in the Growth Centres but rather direct it to existing parks in the Town of Truro, Debert, or Kempton.

Many of the industrial uses that have established in the Growth Centers are randomly situated and in many instances inappropriately located relative to residential land use patterns. The abattoir on the Brookside Road as well as the salvage yards on Pictou and College Roads in Bible Hill and Valley respectively are not conducive to neighboring housing developments. Others located along the Lower Truro Road have generally not been disruptive and should be designated and zoned for this purpose provided the permitted uses are low impact and do not emit obnoxious noise, odors, or dust.

It shall be a policy of Council to:

- MP-1 Encourage new industrial development to locate in one of the regions existing industrial parks in Truro, Debert, or Kemptown where infrastructure and location choices are available.***
- MP-2 Designate land for industrial development on the Future Land Use Map which shall be limited to areas that have been previously developed for this purpose except those identified in Policy MP-4.***
- MP-3 Create an Industrial (M) Zone that permits a variety of low impact industrial land uses and zone and existing uses to that zone except those that have been intentionally been made non-conforming.***
- MP-4 Notwithstanding Policies MP-2 and MP-3, do not designate or zone lands associated with the existing salvage yards on College and Pictou Roads or the abattoir on Brookside Road for industrial purposes.***
- MP-5 Set requirements in the Land Use Bylaw that address parking, setbacks, buffering / screening, separation distances, and landscaping.***
- MP-6 Permit accessory commercial uses to be established in association with an industrial use.***
- MP-7 Jointly monitor the supply and demand for industrial land in the greater Truro region with the Town of Truro, CoRDA, and the Truro Industrial Development Society as a means of ensuring prospective businesses are afforded land and location choices.***
- MP-8 Periodically review the needs of industries and support initiatives aimed at attracting “clean” low impact industries to the area.***

4.7.2 Industrial Development Options

The Institutional Section of this Strategy identified future development of the Agritech Park in Bible Hill as an initiative aimed at attracting research and development based agricultural industries to the area. The fact that the N.S.A.C. is present in the community could provide reciprocal advantages and advance the region as a center serving the agricultural sector. Research and development companies are unlike traditional manufacturing and processing industries. While they may have similar land use requirements, the community impacts are more subtle and unintrusive. These are generally viewed as “clean” industries and do not generally produce obnoxious emissions nor generate a lot of traffic or noise.

Council wishes to encourage the future development of new research and development industries in the Agritech Park. Land and facilities associated with the Agritech Park serve a variety of purposes and is presently being used by the N.S.A.C. the Municipality, and Transition House. Since no clear development plan has been prepared by any of these organizations, the land will remain designated and zoned for institutional purposes. Council will, however, consider non-institutional uses in the area provided they are consistent with the development objectives expressed by Agritech Park administration. To ensure a proper fit with existing uses and neighboring properties, proposals for new developments will be considered by development agreement.

It shall be a policy of Council to:

MP-9 Promote new agricultural / science research and development industries to locate in the Agritech Park in Bible Hill.

MP-10 Encourage the Agritech Park to prepare a development plan in conjunction with the Nova Scotia Agricultural College and other interest groups that clearly outlines future land requirements, servicing needs, site design, and allocation and use of existing facilities.

MP-11 Consider the establishment of new buildings for research and development industries to be established in the Agritech Park by development agreement. In addition to all other criteria outlined in the Implementation Chapter of this Strategy, Council shall have regard for the following:

- i) type, scale, bulk and height of the proposed use and the possible impacts on adjacent dissimilar land uses;***
- ii) potential impacts on ground water supply and contamination;***
- iii) adequacy of transportation and sanitary sewer systems;***
- iv) proposed landscaping as well as buffering and screening from adjacent uses;***

4.8 PARKS AND OPEN SPACE

4.8.1 Introduction

Parks and open space amenities in Central Colchester are abundant and provide for a variety of recreational opportunities. These can be grouped into two categories; publically owned land and facilities managed by government or agency thereof and; privately owned facilities that generally operate as a business. For the purposes of this Strategy, parks and open space are considered to be recreational uses that are principally comprised of land based amenities. These may or may not involve accessory and secondary uses such as club houses, maintenance and storage facilities, washrooms, offices and similar types of structures.

Recreation open space uses are generally desirable in a community. In addition to providing amenity space, these areas create effective buffers, visual relief, and are often an ecological resource. For these reasons, parks and open space will be a permitted use in all zones.

Therefore it shall be a Policy of Council to:

OP-1 Permit recreation open space land uses in all zones in Central Colchester.

4.8.2 Public Open Space

The Municipal Parkland Strategy was created to provide guidance to the Municipality with respect to the provision of recreational amenities throughout Colchester. Two guiding principles of the Strategy is to retain 3% of the developable land in each Growth Centre as neighborhood park space and provide an appropriate amount of parkland within a reasonable distance of the neighborhoods it serves. A significant residential component exists in the peripheral areas of Truro which, in turn, emphasizes a need to address this topic. The Municipal Parkland Strategy indicates that the Hilden, Truro Heights, Valley and Salmon River Growth Centers contain a combined area of approximately 31 hectares over 28 sites devoted to public open space purposes. Many of these sites remain undeveloped and are not maintained, however the Municipality has recently taken measures to address these deficiencies. Bible Hill has been excluded since the Village own and manage recreation land within.

Most of the Municipality's recreation land (including Bible Hill) has been acquired through the subdivision process. The Subdivision Bylaw requires that an area equal to 5% of newly developed lots be deeded to the Municipality for recreation purposes. Alternatively, a subdivider may pay an equivalent amount of money in lieu of providing recreation land or a combination of both. This money must in turn be used to acquire additional land or improve existing recreation sites. The Bylaw also contains specific criteria and circumstances under which the Municipality will accept such land. Unfortunately, the present Subdivision Bylaw post dates much of the subdivision activity in the Growth Centers and consequently a number of the sites dedicated for this purpose are not suitable, by reason of size and/or character, for many recreation purposes.

The recreational requirements of a community are a derivative of the population they serve. Tot lots, sports fields and playgrounds are more useful to younger families while walking trails, gardens, and natural parks may be more attractive to older residents. It is important that recreational amenities are both plentiful and varied to ensure that they respond to demographic

profiles. Adaptability is also a feature which can enable the redevelopment of recreation land to more useful purposes in this regard. New recreation initiatives resulting from the subdivision process should be assessed in relation to the Parkland Strategy and in consultation with the Village of Bible Hill and the Municipality's Leisure Services Department. Often times, recreation land is deeded to the Municipality before a subdivision is completed. This could mean that the lot may not contain actual road frontage or have measurements that are less than Bylaw requirements. In either case, the Development Officer may accept such land on behalf of the Municipality to fulfill this requirement.

Therefore it shall be a Policy of Council to:

- OP-2 Work towards the implementation of the Municipal Parkland Strategy, as a means of enabling a framework for future decision making in this regard.***
- OP-3 Periodically review the recreation open space criteria contained in the Subdivision Bylaw to ensure that the Municipality acquires quality and useable land through the subdivision process.***
- OP-4 Encourage the provision of recreational land through the subdivision process that is suited to a variety of active and passive development opportunities that meet the needs of residents.***
- OP-5 Designate publically owned recreation land as "Open Space" on the Future Land Use Map***
- OP-6 Create a Parkland - Open Space (P-1) Zone that permits a variety of recreational uses and zone areas designated Open Space to that zone.***
- OP-7 Consult with the Village of Bible Hill to ensure recreation objectives are being met in terms of land acquisition through the subdivision process.***

4.8.3 Private Open Space

Privately owned open space can also be an amenity resource to a community. The principle difference is ownership; private open space uses generally operate as a business and provide recreational activities for a profit. Golf courses, driving ranges, sports fields & courts, and similar types of uses are largely land based except for accessory structures that may include clubhouses, maintenance facilities, and washrooms that may be located in conjunction with the main use. While there is a commercial element to such recreational activities, larger expanses of open space is a benefit to a community for many of the same reasons as public amenities.

Private recreational facilities can be seasonal depending on the type of activity. The peak season for golf courses and sports fields, for instance, is during the summer months. This can result in a dramatic increase in activity on the site and land use issues can become more pronounced. Lighting, parking areas, access, buildings and servicing requirements are potential sources of nuisances that must be considered prior to establishing such uses on the site. Certain privately held recreation facilities can be established in any zone with minimal impact, but the Land Use Bylaw must set out specific requirements that address the potential issues noted above. Other types of recreation uses such as campgrounds, miniature golf, driving

ranges, tennis and lawn bowling greens, etc. may be established through a rezoning process where compatibility and suitability issues may be properly addressed.

Other private recreational activities like bowling alleys, amusement parks, arenas, and similar uses are usually contained within a building or confined spaces. These tend to be more intensive than the land based activities described above and, as such, will be treated as commercial land uses.

Therefore it shall be a policy of Council to:

OP-8 Permit privately owned land based recreational activities, such as golf courses and sports fields, in all zones and set out specific requirements in the Land Use Bylaw for access, building location, parking, and servicing.

OP-9 Consider a rezoning in all land use designations shown on the Future Land Use Map to Parkland - Open Space (P-1) subject to the criteria outlined in the Implementation Section of this Strategy.

OP-10 Not permit recreational activities in the Parkland - Open Space (P-1) Zone that depend entirely on enclosed buildings, confined spaces and are typically commercial in nature. Such uses shall be permitted in certain commercial zones.

PART 5: RURAL FRINGE AREA

5.1 Introduction

Land use planning was first introduced to the area referred as the “Rural Fringe” in 1994 with adoption of the Central Colchester Municipal Planning Strategy and Land Use Bylaw. Until that time development occurred randomly with little regard for the land use patterns beginning to emerge. Preparation of the Municipality’s Service Delivery Strategy at this time motivated Council to seriously consider the sprawl or ribbon development becoming evident in most peripheral rural areas and the added public costs that this represented. Since this area was under pressure to develop and there had been a tendency to “leap frog” into areas with lower tax rates it became necessary to utilize a basic form of land use planning as a means of guiding development with the future in mind.

Changes in provincial legislation and regulations also made the expansion of land use planning a timely exercise. Service exchange, prospective interests concerning environmental issues such as flood plains and onsite sewage disposal, construction of regional capital projects (ie. Kempton Waste Management Park, the Lower Truro Sewage Treatment Facility and trunk sewer project) gave rise to growth management issues that could, in part, be addressed through municipal land use planning.

5.2 The Rural Fringe Area

The Rural Fringe Area boundary is intended to correspond with the Central Colchester Service Delivery boundary established in the Service Delivery Strategy and the Municipality’s Subdivision Bylaw. Collectively these documents provide the means necessary for Council to achieve its community growth objectives and therefore, it is essential that any boundary changes be considered in the context of those documents similarly described.

The previous Section of this Strategy emphasizes Council’s desire to encourage high density urban development in the five Growth Centers of Central Colchester. From a servicing point of view, there is ample land available for this purpose for many years into the future. Recognizing that the implications of growth management are likely to extend beyond the Growth Centers, it was necessary to examine an area of sufficient size that incorporating land likely to be under some degree of development pressure now and into the future. In delineating this boundary, Council gave consideration to areas supporting a diverse range of land use activities, influences of transportation systems, lifestyle trends, servicing limitations, and existing development patterns.

Improved transportation networks has perhaps been the most influential factor affecting development trends in recent years. The fact that more people commute than ever before has created problems particularly in the rural fringe area where “ribbon” or “leapfrog” development has become characteristic of such areas. The Service Delivery Strategy is premised on the economical and functional provision of municipal services, for which linear development forms are not akin. It aims to accomplish this by, in part, including the rural fringe area in a statutory planning exercise, such as this.

It shall be a policy of Council to:

RFP-1 Designate a Rural Fringe Area on the Future Land Use Map that corresponds with the boundary established under the Service Delivery Strategy, Subdivision Bylaw and excluding the Growth Centers previously described and environmental designations under Part 3 of this Strategy.

RFP-2 Not to alter the boundaries of the Rural Fringe Area in the Service Delivery Strategy, the Subdivision Bylaw or this Strategy without full consideration of the implications on growth management objectives expressed by each.

RFP-3 Consider the development of a Growth Management Strategy that provides clear direction on matters that impact on Council's ability to promote economical and sustainable development patterns.

5.3 Rural General (RG) Zone

Issues associated with the Rural General zone are different than those in urban areas. The fact that many urban types of services are not available such as central sewer has produced low density development characteristic of most other rural parts of Nova Scotia. Larger lot sizes combined with traditional values has resulted in a seemingly tolerant mix of land uses. Public consultation events carried out in conjunction with the preparation of this Strategy suggests that there are very few land use issues, at least from those who live and work in rural areas. The occurrence of commercial and resource activities interspersed with residential uses is a natural expectation in these areas and to date all have coexisted with little difficulty. Accordingly, this Strategy will reflect a more simplistic approach to land use planning in the rural fringe area.

The Rural Fringe Area includes three communities that are serviced by public sewer. North River, East Mountain, and Mingo's Corner each have small central sewer systems built between the late 1960's and mid 1970's to deal with failing septic systems, well water contamination and rapid community growth. In spite of the fact that public sewer is available, these are small rural communities that have characteristics more common with the rural fringe than the urban environment immediately adjacent to Truro. The sewer serviced areas do, however, have the capability of supporting higher development densities and a diverse residential building types. These areas do have many of the features of a small community and new development should be allowed at densities that are consistent with those in the Growth Centers. The specific types of development are further described in subsections that follow.

It shall be a policy of Council to:

RFP-4 Create a Rural General (RG) Zone that permits a variety of land uses and zone areas designate Rural Fringe to that zone.

RFP-5 Set standards in the Land Use Bylaw for land uses permitted under the Rural General Zone including setbacks, lot requirements, accessory uses and structures, and signs.

RFP-6 Establish standards and conditions for the expansion of non-conforming uses and structures in the Land Use Bylaw.

RFP-7 Enable higher density development forms to be established in the sewer serviced portions of the Rural Fringe Area.

5.3.1 Resource Based Land Uses

The physiographic characteristics of the rural fringe area has enabled a diversity of land use activities. Land comprising the eastern and southern parts of Central Colchester are mostly forested while the western and northern areas have been cleared and put into agricultural production. Farming activity in Lower Truro, Old Barns, North River, and Onslow have formed a significant component of the County's economic base not to mention its importance to the province's agricultural industry. The *Municipal Government Act* underscores the need to protect agricultural land from encroaching dissimilar land uses. A growing recognition of potential land use conflict coupled with a limited supply of suitable farmland in the province has caused senior levels of government to address this issue. Often times, farmland is regarded as the most desirable for other types of land uses due to soil conditions for on-site sewage disposal, access, and site work. It is, however, important to view high quality agricultural land as a limited resource and one that needs to be protected in order for farming to remain a viable and sustainable industry. In areas where past urbanization has encroached on farming activities, it may not be practical to encourage this since land has become fragmented and productive agriculture is not possible, there exists a high risk of land use conflict, and/or farming operations are competing or are under pressure of artificially inflated land values.

Forestry and gravel extraction are the two other main resource based industries present in Central Colchester. Wood harvesting and processing operations are abundant, particularly in the northern and eastern areas. The scale of these operations vary from portable or temporary sawmills to large permanent facilities, such as the Irving Mill in Valley. Forest management practices that reduce runoff, erosion and sedimentation as well as product storage, noise, odor and commercial traffic are among the primary issues associated with this land use activity. The Nova Scotia Department of Natural Resources is however, in the midst of developing new forest management regulations intended to improve upon environmental quality.

Gravel extraction is most evident in the North River area where massive deposits are situated in low lying areas east of the river. This type of mining activity is regulated under the *Pits and Quarries Act* and consequently, the *Municipal Government Act* only enables municipalities to deal with processing matters. Generally, local gravel extraction has been a temporary and intermittent use and not created many problems with adjacent properties. The Land Use Bylaw should however address separation distances, bulk storage and the location of machinery used to process aggregate.

Agriculture, forestry, and other resource type activities are primarily land dependent and their infrastructure requirements and associated land use impacts are unlike other forms of development. It is impractical and unnecessary to impose similar criteria for resource type land activities that do not involve any permanent structures as lots intended to be used for other forms of development. Subdivision of land that is accessed by a right of way of suitable width should allow these uses to be established economically provided that the use of such lots is limited.

Council understands the significance of agriculture and other resource based industries to Colchester County and wishes to ensure that they remain a dominant and prosperous land use activity. To this end, the Land Use Bylaw will contain standards that protect agricultural uses from encroaching residential development through separation distances, subdivision controls, and setbacks.

In the past there has been some community interest in carrying out planning exercises that aim to protect valuable agricultural land. The Clifton and Old Barns areas are two such examples and are located just beyond the boundaries of this Strategy. Should interest persist, Council may consider amending the boundaries and including such areas within the planning framework that exists in Central Colchester. The scope and extent of land use control would however reflect the needs and desires of the community it is intended to serve.

It shall be a policy of Council to:

RFP-8 Encourage the continued and sustainable development of resource based land use activities such as agriculture and forestry in the Rural General (RG) Zone.

RFP-9 Establish specific standards for agricultural, forestry, and other land dependent activities not involving permanent structures and allow for the subdivision of such lots on a right of way to accommodate the needs and characteristics of such uses.

RFP-10 Establish separation distances in the Land Use Bylaw between existing non-agricultural uses and new intensive agricultural activities.

RFP-11 Promote resource conservation practices that are sensitive to environmental conditions including but not limited to soil conservation, storm water management, land reclamation, and sustainable forest management.

RFP-12 Consider amendments to this Strategy, when appropriate, that address the long term needs of community's interested in protecting resource based land uses, such as agriculture and forestry, in areas that are located beyond the boundaries of this Strategy.

5.3.2 Low Density Residential Land Uses - Rural Areas

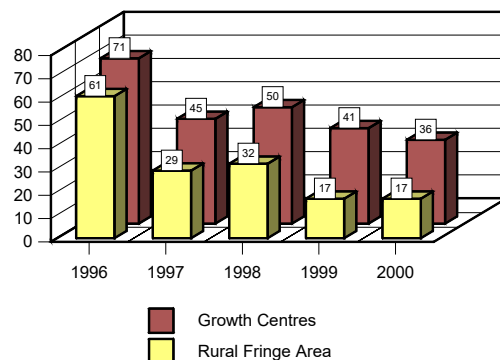
Approximately one third of the new housing starts in Central Colchester has occurred in the rural fringe area during the last 5 years which does not include multi unit residential units that have mostly located in sewer serviced areas of the Municipality. This represents a proportionate share of new housing stock and is consistent with growth management objectives expressed in the Municipality's Service Delivery Strategy. During the same time period the Municipality accepted six new roads totaling 1.3 kilometers in length but only a handful of the new housing starts have been established along these while the remaining have been located in existing subdivisions or infilled along existing roadways. The comparatively larger land mass of the Rural Fringe has resulted in very small development densities than in the Growth Centers.

Most of the new residential uses in the rural fringe has been low density single detached including a significant component of manufactured dwellings. Several residential subdivisions have been developed in this area over the last two decades, most notably in Onslow Mountain, Greenfield, Crowes Mills, and East Mountain. Fortunately, many of these have been situated in areas with little agricultural or forestry potential and provide an environment for large lot estate type development with limited consequences on natural resources. Such areas have become a popular choice due to their close proximity to Truro combined with the scale and rural qualities residents desire. Council recognizes that rural development provides residential choices and a balanced development pattern continues in manner that is sensitive to land capability and best use principles.

Low density residential uses, namely single and double units, occurring in sewer serviced areas should be permitted at a density that is somewhat consistent with similar uses in the Growth Centers. In these situations, it is Council's intention to utilize relevant development criteria relating to building lot sizes, setbacks, accessory structures and uses, etc. established in the Land Use Bylaw for the Residential Double Unit (R-2) Zone.

In recent times, there has been a growing interest in allowing a second residence on a property to accommodate another family member. This allows the person to reside close to a relative while retaining a sense of independence. In many cases, the second home will be a temporary structure such as a manufactured home or a building that will be converted to another use (a garage for example) when no longer required. Land use planning legislation does not allow municipalities to create policy and regulations for "inlaw suites", "granny flats", or other dwelling units that are intended for specific occupants. Consequently, this Strategy will allow a second residential structure to be established on a lot whether for a relative or as an income property.

New Single Unit Housing Starts



While lot sizes in sewer serviced areas make it difficult to place two residential structures on one lot, rural lot sizes offer greater flexibility. The Land Use Bylaw will establish conditions to permit an accessory residential structure on a lot. There are, however, environmental considerations to be evaluated prior to the issuance of a development permit for the second residential structure. The ability for the lot to support onsite sewage disposal for two structures is necessary considering the permanence of some structures and future subdivision potential. The Development Officer shall be satisfied that the lot can meet Department of Environment's criteria for onsite sewage disposal for two structures prior to issuing a development permit.

It shall be a policy of Council to:

RFP-13 Encourage the continued development of low density residential uses in the Rural Fringe Area, particularly in areas that do not encroach on land that has future resource potential.

RFP-14 Establish standards in the Land Use Bylaw for new low density residential uses in terms of lot sizes, set backs, and similar items aimed at maintaining the rural character that exists in such areas.

RFP-15 Use the development criteria for the Residential Double Unit (R-2) Zone for permitted residential and accessory uses and structures connected to a public sewer system in the Rural Fringe Area.

RFP-16 Permit a second detached dwelling unit as an accessory dwelling on a lot within the Rural General Zone;

RFP-17 Establish requirements in the Land Use Bylaw for lot sizes, frontage, and separation distances between dwellings, for the development of a second detached dwelling unit in consideration of future subdivision of the land into lots for each dwelling;

RFP-18 Require an on-site sewage disposal assessment from the Nova Scotia Department of the Environment that demonstrates sufficient area, width and separation distances exists for two separate on-site sewage systems capable of serving each independent dwelling.

5.3.3 High Density Residential Land Uses - Rural Areas

Few apartments or mobile home parks have been constructed in the Rural Fringe Area. Higher density residential, with more than four units creates greater demand for services not available in rural areas, such as sewer, water, and other types of municipal services. It also creates greater demand on existing facilities including public schools, community amenities, and emergency services. This type of development is not in keeping with the growth management objectives expressed in the Service Delivery Strategy and will therefore be directed to Growth Centres or portions of the Rural Fringe Area serviced with public sewer.

It shall be a policy of Council to:

RFP-19 Direct new high density residential development to the appropriate zones as provided in the Growth Centres or portions of the Rural Fringe Area serviced with public sewer.

The sewer serviced portions of the Rural Fringe Area have greater ability to adequately service a high density residential use, new and expansion of existing mobile home parks will be permitted subject to provisions of this Strategy and requirements of the Mobile Home Park By-law. Two mobile home parks exist within the Rural Fringe Area; First is the Croft Mobile Home Park, off Brookside Road, was created prior to the Mobile Home Park By-law and is not serviced with public sewer. The second, Cobequid Trailer Park, is also a long established park, but was created under the Mobile Home Park By-law and is connected to the Mingo's Corner sewer system. While Council recognizes Croft Mobile Home Park, and encourages its continued operation, expansion should not be considered until the site has access to municipal sewer.

It shall be a policy of Council to:

RFP-20 Permit new and the expansion of existing mobile home parks in the Rural General Zone in areas serviced with public sewer. Mobile home park development will occur by development permit subject to conditions in the Land Use Bylaw and the Mobile Home Park By-law;

RFP-21 Recognize existing mobile home parks, located beyond the limits of public sewer services, as a permitted use in the Rural General Zone, and notwithstanding Policy RFP-6, limit further expansion until central sewer becomes available.

Apartments are another form of higher density residential that can be adequately served by the sewerred portion of the Rural Fringe Area. The zone hierarchy established for

Growth Centers will be similarly applied to the sewer districts of the Rural General Zone. Sewered portions of Mingo's Corner, North River, and East Mountain will be considered by Council for higher density residential development by amendment to the zoning map of the Land Use By-law using the following criteria: (1) 3 and 4 unit structures will be permitted by rezoning to R-3 (Multiple Unit Residential - Low / Medium Density Zone) a lot within the sewer portion of the Rural Fringe Area; and (2) 5 to 12 unit structures will be permitted by rezoning to R-4 (Multiple Unit Residential - Medium Density Zone) a lot fronting on a collector road within the sewer portion of the Rural Fringe Area.

It shall be a policy of Council to:

RFP-22 Permit existing high density residential uses located in the Rural Fringe Area Designation in the Rural General Zone, subject to corresponding zone requirements in Section 4.4 of this Strategy.

RFP-23 Require new higher density residential uses in the "Rural Fringe Area" designation have access to public sewer.

RFP-24 Consider the establishment of new Multi-Unit Residential - Medium Density (R-3) uses in the "Rural Fringe Area" designation by zoning map amendment subject to Policy RFP-25 and the criteria and considerations outlined in the Implementation Section of this Strategy.

RFP-25 Subject to Policies RFP-26 and RFP-27, consider the establishment of new Multi-Unit Residential - High Density (R-4) uses in "Rural Fringe Area" designation subject to the criteria and considerations outlined in and the Implementation Section of this Strategy.

RFP-26 Require all multiple unit - medium and high density residential land uses to be located on a lot that has frontage and access to a "Designated Collector Road" listed in the Land Use Bylaw.

RFP-26.1 Allow for the establishment of cluster developments in areas designated "Rural Fringe Area" on the Future Land Use Map subject to the criteria contained in Policies RP-36 and RP-37 of this Strategy.

RFP-27 In addition to the criteria listed in the Implementation Section of this Strategy, Council shall consider the following matters for all multiple unit residential rezoning applications:

- i) adequacy and location of driveways and parking areas;***
- ii) the compatibility of the proposed building with adjacent uses in terms of architecture, height, and size;***
- iii) provision for buffering, screening, and separation from adjacent dissimilar uses;***
- iv) the placement of buildings on the lot in terms of orientation, setbacks and separation distances from one another;***

- v) ***impacts of exterior lighting as well as any accessory buildings, structures and uses.***
- vi) ***provisions for amenity space.***

5.3.4 Commercial Land Uses - Rural Areas

Commercial land uses are typically interspersed throughout the Rural Fringe Area and are commonly associated with residential uses. In many instances these originated as small home based businesses which have grown to become a principle or peer land use. These are however distinct from traditional home occupations found in the urban residential areas in terms of the type of uses, scale, and intensity. It is quite common for certain types of businesses to be established this way since start up costs can be significantly reduced and, for some, it provides a convenient location to operate. Council also recognizes the importance of small business to the health of the local economy and encourages its continued growth in the rural fringe area.

One of the most obvious differences between rural home based businesses and those in urban areas is the broad range of commercial uses these usually include. Auto body shops, convenience stores, heavy equipment depots, transport businesses, are common but contrast with the office and personal service shops normally found scattered in urban subdivisions. Fortunately, there is a greater tolerance to more intense commercial uses in rural areas which may be attributed to more traditional values, lower development densities, and an expectation that such activities are part of the rural landscape. Consequently, the potential for land use conflicts are sharply reduced and Council presently sees little need to interfere with the future development of mixed land uses in this regard.

Council expects that businesses will continue to be established in the Rural Fringe Area in much the same manner as it has in the past. Given that such uses set up under different circumstances than commercial uses occurring in an urban setting, it is impossible to predict suitable areas for these. In consideration of the fact that few land use issues have resulted from the development patterns that now exist, it is Council's intention to permit future commercial uses throughout the Rural Fringe Area. The Land Use Bylaw will, however, set out requirements with respect to parking, signage and accessory structures and uses as a means of addressing aesthetic and safety concerns.

It shall be a Policy of Council to:

RFP-28 Permit all commercial uses in the Rural General (RG) Zone.

RFP-29 Establish standards in the Land Use Bylaw for commercial land uses, including but not limited to signage, parking, accessory uses and structures, setbacks, and lot sizes.

5.3.5 Institutional Land Uses - Rural Areas

Institutional land uses in the Rural Fringe Area tend to be community based facilities and infrastructure that are small in scale and serve a specific function. Typically these are churches, fire halls, community centers, parks, schools, and public works facilities around which communities have been built. They often serve as a focal point, offer a place where residents can congregate and provide basic services necessary for a community to exist like emergency and educational facilities. From this point of view, institutional uses are a fundamental component of many rural communities and their continued existence must be protected and encouraged.

Most institutional land uses in the Rural Fringe Area have been established along major roadways where they are both visible and easily accessed. Similar to the urban areas, institutional uses are generally viewed as “community friendly” and can be easily integrated with other land use classifications. To date, these have not created serious impacts on neighboring residential properties and in fact, development trends show that in many instances, residential areas have grown up around institutions. Council intends to permit new institutional land uses throughout the Rural Fringe Area and encourages a broader diversity of such uses such as seniors housing, health care clinics, recreation facilities, etc. that assist in better meeting the needs of residents.

It shall be a Policy of Council to:

RFP-30 Permit all institutional land uses in the Rural General (RG) Zone.

RFP-31 Support and encourage the development of new institutional land uses that assist in meeting the social and demographic needs of all rural communities.

RFP-32 Establish standards in the Land Use Bylaw for institutional land uses, including but not limited to signage, parking, accessory uses and structures, setbacks, and lot sizes.

5.3.6 Industrial Land Uses - Rural Areas

Several industrial land uses have been randomly established throughout the rural fringe area. With a few exceptions, these are primarily resource based industries that have been located close to raw material sources or are strategically located in relation to transportation networks or markets. Lumber mills of various sizes, gravel pits, food processing and storage, a spring water bottling plant, are a few of the resource dependant industries found in the area. Others like a

fertilizer blending facility, concrete and asphalt plants have been centrally located to the markets they serve. An earlier Section of this Strategy commented on Councils intent to permit such activities since they need to be close to the resource however, the processing of raw materials has greater impact potential. Lumber mills or rock crushing operations for instance, usually have heavy machinery that produce dust, fumes, and noise which can create adverse effects on neighbouring properties. To minimize these, the Land Use Bylaw will set standards with respect to buffering, setbacks, and location of open storage for all industrial uses.

The previous Industrial Section of this Strategy clearly indicated that new industrial uses should be directed to existing parks in Truro, Debert, Bible Hill and Kemptown. Both of these facilities have the infrastructure and provide a setting that enables industrial uses to exist and grow without concern from other incompatible land uses. Non-resource related industries are viewed in much the same manner in the rural fringe area and are accordingly encouraged to locate in industrial parks. Should circumstances dictate, Council will consider new non-resource industries in the rural fringe area by zoning map amendment.

It shall be a Policy of Council to:

RFP-33 Encourage new non-resource related industrial development to locate in either the Truro, Debert, or Kemptown Industrial Parks.

RFP-34 Permit resource dependant industries associated with agriculture, forestry, and mineral extraction activities in the Rural General (RG) Zone subject requirements of the Land Use Bylaw.

RFP-35 Permit existing industrial uses in the Rural General (RG) Zone that have been established prior to August 25, 1994 provided any enlargement or reconstruction of the use occurs on the lot as it existed on that date.

RFP-36 Create a Rural Industrial (RM) Zone and establish standards for parking, buffering and screening, lot sizes, setbacks, and outdoor storage for new rural industrial uses.

RFP-37 Consider proposals for new permanent non- resource related industrial uses in the Rural Fringe Area by zoning map amendment. In addition to relevant criteria outlined in the Implementation Section of this Strategy, Council shall have regard for the following:

- a) impact of the proposed use on adjacent properties particularly by way of noise, odor, and dust;***
- b) adequacy of existing transportation systems to safely accommodate any increased traffic created by the proposed use;***
- c) buffering and screening from adjacent land uses;***
- d) potential impacts on ground water supply and contamination.***

RFP- 38 Permit and set out standards in the Land Use Bylaw for the establishment of a single residential use in the RM - Rural Industrial Zone provided the dwelling unit is clearly accessory and necessary to the main use of the property.

PART 6 IMPLEMENTATION AND ADMINISTRATION

6.1 Introduction

The Municipal Government Act enables municipalities to create and administer land use policy and regulation, by way of Municipal Planning Strategies, Land Use Bylaws and Subdivision Bylaws. The Act provides for, among other things, a legal and administrative framework necessary for municipalities to rationalize land use, service delivery, economic development, growth management and subdivision issues.

The Central Colchester Municipal Planning Strategy is intended to set the direction for future community development. There are three processes through which changes may be made to either the policy document (ie. Planning Strategy), the regulatory document (ie. Land Use Bylaw), or the ability to allow special land uses in a zone by way of development agreement.

6.2 Clear Proposal Required

A clear proposal will be necessary prior to considering any application for zoning map amendments, development agreements, as well as municipal planning strategy and other land use bylaw amendments. The proposal, consisting of information in both graphic and written form, must accurately depict aspects of the proposed development or change. This will assist Council, staff, the Planning Advisory Committee, and the general public in developing a complete understanding of the project or change and its fit within the community. Naturally, the content and level of detail will vary depending on the site characteristics and the type of development proposed. To facilitate an efficient and timely process, applicants are encouraged to consult with planning staff during the early stages of the proposal as a means of identifying specific issues. The proponent will also benefit from the exercise of producing a comprehensive submission by understanding both the process and expectations that will evolve. Council views this as a mandatory requirement and all applications must be accompanied by sufficient information in this regard.

It shall be a policy of Council to:

- IMP-1 Require a clear proposal to be submitted before considering any application for a land use by-law amendment, zoning map amendment, or a development agreement;***
- IMP-2 Require a proposal under Policy IMP-1 to clearly show with graphics and text the following:***
- i) the locations of the subject property, to scale, showing lot dimensions, area, and street frontages;***
 - ii) the means by which the site is to be serviced by sanitary and storm sewers, water, electrical service, and telephone service;***
 - iii) the proposed location of all driveways and parking areas;***

- iv) ***areas that are to be landscaped and/or buffered; and***
- v) ***the proposed location of all buildings and structures on the site.***

6.3 Municipal Planning Strategy Amendments

Municipal Planning Strategy amendments involve a change to Councils land use policies including changes to the Future Land Use Map. The Strategy expresses Council's position on a variety of land use matters usually in a broader community context. Because these are statements of intent, they carry no regulatory authority but are more importantly act as a point of reference from which zoning standards are applied under the Land Use Bylaw. By nature, planning policies are long term; they help define the role of individual land uses in the context of an entire community. Policies in the Strategy can also define planning processes and basic criteria for Council to follow while others identify the circumstances by which a rezoning or development agreement is possible.

Amendments to planning policies are rare which is perhaps due to the fact that during a review, Council has focused a considerable amount of time on the community's development issues. There are times, however, that a policy change is necessary due to changing circumstances within the community, new information or studies suggest a revision is needed, or a Provincial Statement of Interest has been adopted and a strategy change is required for consistency. Council will only consider such policy changes when circumstances require or when sufficient reason and information is supplied by an applicant.

Therefore it shall be a Policy of Council to:

IMP-3 Consider amendments to the MPS when:

- i) there is an apparent need to change a policy;***
- ii) new information or studies suggest result in proposed amendments that should be incorporated into the Strategy; or***
- iii) a Provincial Statement of Interest has been adopted or amended requiring a change to policies in the Strategy;***

IMP-4 Require an applicant to supply sufficient information and reason in support of a proposed Strategy amendment.

6.4 Land Use Bylaw Amendments

Land Use Bylaw amendments are a common process that councils deal with and can involve either a change to the bylaw standards or the zoning map. Rezoning or zoning map amendments, must be specifically provided for through policies in the Strategy. It is difficult to determine where these uses may wish to establish and, for that reason, policies in the planning strategy will set out certain conditions and criteria for a rezoning application. Council's main interest in this process is to ensure that the development is suited to characteristics of the area and that land use impacts are tolerable to residents, the Municipality, and other interest groups. In making its decision, Council will be guided by specific criteria policies that serve to address

key development considerations. Since a rezoning is carried out under established planning policy, any decision of Council is appealable to the Nova Scotia Utility and Review Board.

Another type of land use bylaw amendment involves a change to the text itself such as permitting a new land use in a particular zone, adjusting setback distances, parking spaces, signage specifications, or any other provision provided the amendment is consistent with related planning policy. Many requirements under the bylaw are based on, industry standards, other regulations (ie. building code, fire code, etc.) accepted planning principles, scientific study, or simply local desires. These standards can easily become obsolete over time or not fully serve the purpose for which they were created. Council will consider text changes to the Land Use Bylaw, including amendments to permitted uses, revisions to existing requirements, and/or the inclusion of new provisions to more properly carry out the intent of existing land use policies as circumstances dictate.

It shall be a policy of Council to:

IMP-5 When considering amendments to the Land Use By-law and in addition to all other criteria as set out in the various policies of this Planning Strategy, Council shall be satisfied that:

- a) the proposal conforms to the intent of the Municipal Planning Strategy;***
- b) the proposal conforms to the applicable requirements of all other Municipal By-laws;***
- c) the proposal is not premature or inappropriate by reason of:***
 - i) the financial ability of the Municipality to absorb costs resulting from the development including both capital and maintenance costs;***
 - ii) adequacy and availability of Municipal services;***
 - iii) the creation of a "leapfrog", scattered or ribbon development pattern as opposed to orderly compact development;***
 - iv) environmental impacts such as air, water, soil and noise pollution;***
 - v) previous uses of the site which may have caused soil or groundwater contamination;***
 - vi) suitability of the site in terms of grades, soil and bedrock conditions, location of watercourses, marshes, swamps, or bogs;***
 - vii) adequacy of storm drainage systems and effects of alteration to drainage pattern including potential for creation of a flooding problem;***
 - viii) adequacy and proximity to schools, recreation facilities, emergency services, and other community facilities;***
 - ix) adequacy of street networks and site access regarding congestion, traffic hazards and emergency access.***
 - x) compatibility of the development in terms of height, scale, lot coverage and bulk with adjacent properties;***

- xj) provision for buffering, screening, spatial separation and access control to reduce the potential incompatibility with adjacent land uses and traffic arteries;*
- xii) consideration of the impact of other permitted uses in the proposed zone.*

IMP-6 Consider text amendments to the Land Use Bylaw that are otherwise reasonably consistent with this Strategy notwithstanding the absence of express provisions enabling or contemplating such amendment, and Council shall consider the criteria outlined in Policy IMP-5 to the extent to which they are applicable. Such changes may include but are not limited to amendments to permitted uses, revisions to existing requirements, and/or the inclusion of new provisions, all of which more accurately carry out the intent of Council's policies expressed herein.

6.5 Development Agreements

Certain policies under this Strategy direct that a development agreement be used in order to establish specific land uses. A development agreement is a legally binding contract between the municipality and a property owner and remain in effect regardless of land ownership. While a property under a development agreement remains zoned, the zoning provisions have no effect since these are replaced by other provisions and schedules that form the agreement contract.

A wide range of factors may be addressed in an agreement that are capable of going beyond what may be considered under traditional zoning practices. All the items that may be addressed under zoning may be included, as well as site specific requirements, hours of operation and maintenance requirements. The use of these agreements can more properly address the concerns of adjacent landowners as well as provide a greater degree of flexibility to ensure a development fits with its surroundings. Agreements may also provide for termination by either party, at which time the prevailing zoning on that property will usually come into effect. The following evaluation criteria is only intended to apply when specifically called for by the originating policy of this Strategy.

It shall be a policy of Council to:

IMP-7 Consider certain land uses, which would not otherwise be permitted by the Land Use By-law, by development agreement as directed by certain policies contained in this Strategy;

IMP-8 Include in any agreement to be entered into under this Strategy, terms and conditions to ensure that the development is consistent with the policies of this Strategy. Council shall consider, but shall not be limited to, some or all of the following issues:

- i) the specific use and size of the structure whether new, or an expansion, or renovation of an existing structure is proposed;***
- ii) the compatibility of the structure with adjacent uses in terms of architecture and appearance;***
- iii) the compatibility of the site, in terms of landscape design, with adjacent uses;***
- iv) provision for adequate buffering to screen the development from adjacent and dissimilar land uses which conform to this plan;***
- v) provision for adequate setbacks from adjacent land use;***
- vi) any matter which may be addressed in the Land Use By-law;***
- vii) time limits for the initiation and completion of construction (and may include phased construction);***
- viii) the provision of services and utilities;***
- ix) flood damage reduction controls with regards to possible flood plain development;***
- x) hours of operation;***
- xi) maintenance and upkeep of the property;***
- xii) any other matter which Councils feel is necessary to ensure the general compatibility of the use and structure with adjacent uses and structures;***
- xiii) the financial ability of the Councils to absorb any costs relating to the development;***
- xiv) the adequacy of sewer and water services and utilities;***
- xv) the adequacy of the road network in, adjacent to, or leading to the development;***
- xvi) suitability of the site in terms of grades, soil and bedrock conditions, location of watercourses, marshes, swamps, or bogs; and***
- xvii) the location of highway ramps and railway rights-of-way.***

6.6 Interpretation

The Future Land Use Map is a geographic reference that is intended to guide the application of policy decisions. Proposals involving a zoning map amendment or a development agreement application are authorized by the designation or zone in which the property is located and most of these do not require an amendment to the Strategy itself. Given the conceptual nature of Future Land Use Maps, Council should be able to interpret whether or not properties adjacent to the designation qualifies for such development options and may do this in consideration of existing property boundaries, land use patterns, and future subdivision. This will enable Council, within reason, to review development proposals without the need to amend this Strategy. Circumstances where amendments to this Strategy are not required shall include:

1. A zoning map amendment that agrees with the intent of this Strategy and the Future Land Use Map attached thereto;

2. A zoning map amendment that involving lands immediately adjacent to a land use designation depicted on the Future Land Use Map and which also agrees with the intent of one or the other designations as above; and
3. A zoning map amendment resulting from updating the Land Use Bylaw which does not conflict with the intent of this Strategy.

Therefore it shall be a Policy of Council to:

IMP-9 Consider an area of land immediately adjacent to a land use designation depicted on the Future Land Use Map for a zoning map amendment to include a use permitted in the adjacent land use designation without requiring an amendment to this Strategy and provided the policies of this Strategy are not violated.

6.7 Notice of Agreement or Amendment

The *Municipal Government Act* sets out minimum requirements for the advertisement of public hearings and mandatory adoption of a public participation program. These are aimed at promoting a public awareness of planning matters and offer an opportunity to participate in the community development process. In spite of these and other approaches, the Municipality uses to inform the public of proposed changes or developments, there still remains very limited and random participation, particularly in the early stages of the process. Council recognizes that in order for a community to take ownership of its Strategy, public involvement is essential to ensure a positive result. To this end Council will continue to explore new ways and means of increasing public participation throughout the planning process.

Over the last number of years, the Municipality has required signs to be posted on a property that was subject to a development agreement or a zoning change. This was supplemented by letters delivered to properties immediately adjacent to the land in question which outline the nature of the change and meeting dates. The purpose of such notices is to augment the required newspaper advertising with the hope of better informing residents through a variety of media. Council intends to continue this practice under this Strategy and will look for new ways to better deliver information.

Therefore it shall be a Policy of Council to:

IMP-10 Explore and utilize new methods that will ultimately enhance public awareness and participation in community planning processes. These may include but are not limited to computer and internet technology, County news letters, door hangers, radio, and local cable television.

- IMP-11*** ***Require a land owner to post a notice of a proposed zoning change or development agreement on the property, subject to guidelines established under the Land Use Bylaw.***
- IMP-12*** ***Notify adjacent property owners of a proposed zoning change or development agreement, by way of letter, flyer, or other suitable means.***

Bibliography

1. N.L. Sobey & Associates; Feasibility Study - Valley Municipal Water System Truro, Nova Scotia, 1989
2. Peter Klynstra, Collaborative Planning & Design Inc.; Village of Bible Hill Planning Concept; Dieppe, N.B.; January 2001
3. Environmental Design & Management; Truro Floodplain Study; Halifax, N.S.; September 1997.
4. Street Wise Traffic Engineering; Bible Hill Area Arterial Roadways Functional Alignment Study; Halifax, N.S.; December 1993
5. Streetwise Traffic Engineering; Municipality of Colchester Traffic Management Strategy; Halifax, N.S.; November 1992
6. Nova Scotia Department of Mines, Hennigar Terry; Hydrogeology of the Truro Area, Halifax, N.S.; 1972
7. Ontario Ministry of the Environment; Stormwater Quality Best Management Practices; Queens Printer; Ontario; 1992
8. Schueler, Thomas R; Controlling Urban Runoff - A Practical Manual For Planning and Designing Urban BMP's; Department of Environment Programs Metropolitan Washington Council of Governments; Washington, D.C.; July 1987
9. Vermeer, Kimberly & Louie, Josephine; The Future of Manufactured Housing; Joint Centre for Housing Studies of Harvard University; Massachusetts, January 1997.
10. Corbett, Ron; Manufactured Housing Study 2000 - Best Practice Policy and Regulatory Model; Corbett Consulting; Sackville, N.B.; March 2000
11. Harvey, Andrew S. & MacDonald, Stephen W.; Commercial Development Potential Bible Hill, N.S. Temporal - Spatial Research Inc; Halifax, N.S.; November 1992
12. Municipality of Colchester; Service Delivery Strategy; 1995.
13. Municipality of Colchester; Subdivision By-law; 1994.
14. Atlantic Road & Traffic Management; Final Report, Robie Street / Highway 102 Transportation Study; Halifax, N.S.; September 2000.
15. Nova Scotia Department of the Environment; Erosion & Sedimentation Control - Handbook for Construction Sites; Nova Scotia Department of Government Services; Halifax, N.S.; 1988.
