

**CITY OF YELLOWKNIFE  
BY-LAW NO. 4315**

A BY-LAW of the Council of the Municipal Corporation of the City of Yellowknife in the Northwest Territories, authorizing the Municipal Corporation of the City of Yellowknife to adopt a General Plan for the City of Yellowknife,

PURSUANT TO:

- a) Section 25 to 29 inclusive of the *Planning Act*, R.S.N.W.T., 1988, c. P-7;
- b) Due notice to the public, provision for inspection of this by-law and due opportunity for objections thereto to be heard, considered and determined; and
- c) The approval of the Minister of Municipal and Community Affairs, certified hereunder.

WHEREAS the Municipal Corporation of the City of Yellowknife deems it desirable to adopt a General Plan by by-law,

NOW THEREFORE, THE COUNCIL OF THE MUNICIPAL CORPORATION OF THE CITY OF YELLOWKNIFE, in a regular session duly assembled, hereby enacts as follows:

**SHORT TITLE**

- 1. This By-law may be cited as the General Plan By-law (2004).

**APPLICATION**

- 2. The General Plan for the City of Yellowknife comprised of Schedule "A," attached hereto and forming part of this by-law, is hereby adopted.

**REPEALS**

- 3. By-law No. 3898, as amended, is hereby repealed.

**EFFECT**

- 4. That this by-law shall come into effect upon receiving Third Reading and otherwise meets the requirements of Section 75 of the *Cities, Towns and Villages Act*.

READ a First Time this 13 day of September, A.D. 2004.

  
MAYOR

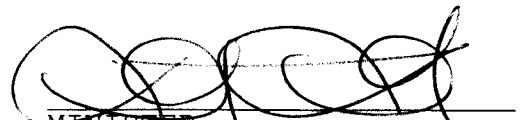
  
CITY ADMINISTRATOR

READ a Second Time this 22<sup>ND</sup> day of NOVEMBER, A.D. 2004.

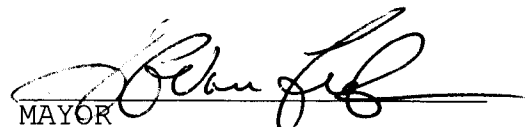
  
MAYOR

  
A/CITY ADMINISTRATOR

APPROVED by the Minister of Municipal and Community Affairs of the Northwest Territories this 10<sup>th</sup> day of January, A.D. 2005.

  
MINISTER  
MUNICIPAL AND COMMUNITY  
AFFAIRS

READ a Third Time and Finally Passed this 24<sup>TH</sup> day of JANUARY, A.D. 2005

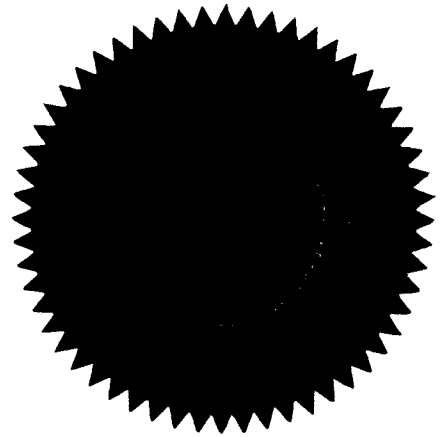
  
MAYOR

  
CITY ADMINISTRATOR

I hereby certify that this by-law has been made in accordance with the requirements of the *Cities, Towns and Villages Act* and the by-laws of the Municipal Corporation of the City of Yellowknife.

  
\_\_\_\_\_  
CITY ADMINISTRATOR

Docs #89836-v1





# City of Yellowknife 2004 General Plan

Schedule A – By-law No. 4315

November 2004

## Table of Contents

<b>Section 1.....</b>	<b>4</b>
<b>1.0 General Plan Strategy .....</b>	<b>4</b>
1.1 Direction Setting.....	4
1.1.1 Planning Rationale.....	4
1.1.2 Strategic Emphasis .....	6
1.2 Strategic Direction .....	10
1.2.1 Residential.....	13
1.2.2 Commercial.....	20
1.2.3 Institutional/ Community Use .....	25
1.2.4 Industrial.....	29
1.2.5 Open Space/ Recreation.....	34
1.2.6 Environmental Responsibility .....	36
1.2.7 Infrastructure.....	38
1.2.8 Transportation .....	41
1.2.9 Heritage/ Tourism/ Culture.....	44
1.2.10 Regional Development and Co-existence .....	45
<b>Section 2.....</b>	<b>48</b>
<b>2.0 Implementation Strategy.....</b>	<b>48</b>
2.1 Priorities and Timing .....	48
2.2 Performance Measurement, Monitoring and Accountability .....	49



## List of Maps

Map 1 Balanced Strategic Direction.....	12
Map 2 Growth Strategy and Phasing, Residential.....	19
Map 3 Growth Strategy and Phasing, Commercial – Office and Retail.....	24
Map 4 Growth Strategy and Phasing, Institutional/ Community Use .....	28
Map 5 Growth Strategy and Phasing, Industrial/ Commercial .....	33

# Section 1

## 1.0 General Plan Strategy

### 1.1 Direction Setting

The 2004 General Plan will shape and direct growth over the next decade by providing a clear, relevant and evidence-based approach to planning and development responding to current and emerging issues and opportunities. Moreover, it will facilitate taking stronger control of the development agenda to achieve long-range public interests. Fundamentally, the 2004 General Plan direction and approach will facilitate community sustainability.

The plan identifies, assesses and evaluates current and emerging issues that affect or may affect the growth pattern and sustainability of the community; and

- Considers regional impacts and opportunities. While recognizing the legislative framework for general plans, the process has incorporated regional issues and development perspective;
- Develops a strategic emphasis and orientation that provides an overall direction for the Plan's objectives, policies, and specific proposals;
- Develops operational and advocacy principles and policies that respond to the current and emerging needs and opportunities;
- Develops specific proposals that will accomplish and bring about the purpose of the policies; and
- Identifies areas of interest that require more technical information and analysis.

#### 1.1.1 Planning Rationale

The planning process and rationale encompasses four distinct but interrelated components: Fact Component; Values Component; Policy Component and Action Component. Together they form the basis for direction setting and planning decisions that are innovative, practical, sustainable and environmentally responsible.

##### **Fact Component**

The fact component describes existing and projected conditions indicating the challenges and opportunities respecting the physical, social and economic operating environment. Sections 2 to 7 of the Background Report along with the Technical Appendices, present the 'fact' component of the 2004 General Plan. During the study, a comprehensive range of technical, demographic, statistical and financial information was analyzed and updated, including:

- Historical, social and economic context (i.e. population, land use, and the social and economic environment);
- Existing land use and infrastructure;
- Economic outlook indicators for Yellowknife and the region with particular emphasis on investment and employment;

- Fiscal context for Yellowknife and the region with a focus on capacity and sustainability;
- Population forecasts based on demographic trends and analysis;
- Land supply and demand forecast;
- Infrastructure needs based on growth; and
- Growth opportunities and constraints based on land capacity and existing development.

### **Values Component**

The values component outlines goals, issues, expectations and priorities identified by stakeholders and residents during the consultation phase of the study. Section 6.5 of the Background Report documents the values expressed by the consultation process. These values contribute to the shaping of the strategic emphasis and direction of the plan. In the Yellowknife context, residents expressed a ‘vision’ for Yellowknife as a city with a community plan that reflects, advocates and commits to:

- The importance of Yellowknife as a capital city and regional centre that takes a stronger leadership role with respect to municipal and regional issues;
- A strong economy that facilitates investment and creates and sustains stable and diverse employment opportunities by building on our natural and comparative advantages;
- Meaningful public and stakeholder communication and engagement in planning and development;
- A vibrant downtown with a strong commercial and residential base that is an attractive and safe place for businesses, residents and tourists;
- A recognition of our strategic location on the north shore of Great Slave Lake, the second largest lake in Canada and the 10<sup>th</sup> largest in the world. This natural advantage includes access to water, recreation options, views and heritage resources;
- A comprehensive system of linked natural spaces and green corridors that are accessible;
- Promote active and leisure activities as well as alternate transportation modes and routes throughout the City;
- Wellness through healthy living and lifestyle choices;
- A fundamental respect for our diverse cultures and history as a foundation that moves beyond basic regional co-existence and moves to partnership in making future land use and growth management decisions;
- Affordable housing choices that meet the needs of everyone throughout their life;
- A standard of urban design that is sustainable for the north, including the building envelope, siting and landscape materials that are suited and can survive in Yellowknife’s climate, topography and soil conditions;
- Interesting, well planned and constructed neighbourhoods; and
- The maintenance of clean air, land and water through responsible environmental management practices.

### **Policy Component**

The 2004 General Plan strategic direction is expressed through objectives and policies structured around key issues and opportunities as identified through the fact and values components. Objectives are specific and achievable community ideals. The policy component guides planning, problem solving, development management, and acts as a mechanism to set priorities. These policies reflect the priority issues, needs and potential of the community. The policies, when considered together, represent a commitment to follow a course of action in order to achieve the desired community



objectives. Additionally, the policies provide a framework within which resource allocation and conflict resolution can occur.

### **Action Component**

---

The action component identifies specific proposals and initiatives to give practical effect to implementing the policies component. These actions should ensure appropriate and sustainable development for the community. The 2004 General Plan policies and actions are presented in Section 8.2.

#### **1.1.2 Strategic Emphasis**

There are several driving forces, patterns and trends that will continue to affect development and land use in the City of Yellowknife in the next five to ten years. These key forces and factors include:

- Continued strong levels of economic investment, \$980 million annually, in the NWT and Yellowknife driven by natural resource development will be among the most significant factors shaping the City and the region. Additionally, government expenditures will exceed \$1 billion and consumer spending is projected at some \$970 million. The NWT Gross Domestic Product in 2003, some \$3.3 billion, led the country in growth at 10.6% compared to 2002;
- Moderate but steady population growth, averaging 1.6% annually, and resulting demand for residential, commercial, industrial and institutional land. The foundation of the approach is a recognition of the relationship between economic outlook and the corresponding impact on investment, employment and population change over the 2004 to 2009 growth management period. Yellowknife will see a population increase of some 2,100 persons and a demand for 740 dwellings over the next five years. Yellowknife population is projected to be some 20,700 by the year 2009;
- Yellowknife is expected to continue in a low inflationary cycle, under 2.0%. Inflation has averaged 1.3% per year over the 1996 to 2003 period. The corresponding value for Canada was 2.1%;
- Historic low interest rates are projected to remain low for the next two years, with some expectation that there will be some relative upward pressure but generally continue to remain low. This will encourage further investment by business and consumers, particularly with respect to the residential market and contribute to strong housing demand in both the private ownership and rental market;
- The continued emergence of Yellowknife as a capital city, regional centre and the Diamond Capital of North America that takes a strong leadership role with respect to co-existence and partnerships with First Nations, the private sector and other levels of government to identify and manage regional development opportunities and facilitate a shared responsibility for addressing municipal and regional issues;

- Demand for industrial land will remain moderately strong (25 ha) through to 2009. Transportation and infrastructure needs related to surface, aviation and water movement will be key drivers in demand for industrial and directly related commercial land demand. In particular, the proposed airport plan and its impact will shape the industrial strategy. There is a need to establish focal points of industrial and related commercial development in order to respond to the land demand, including the need for a broader range of lots with suitable location, size, configuration and infrastructure, as well as the need to address land use compatibility issues;
- There will be comparatively lower overall demand for commercial land (7 ha) through to 2009, although office space requirements are expected to increase moderately. There will be limited demand for commercial land for retail space in the Central Business District, although the levels of expenditures by households, government, and the tourism and business travel are projected to remain strong and ensure that the retail and service sector will experience relative market stability;
- Protection of the viability, and promotion of the vitality, of the Central Business District. The need to maintain a stable minimum population base (10% of the City's total population) in the CBD will contribute to addressing the decline of the assessed value and taxation generated, where in 1996 the core area contribution was \$5.1 million (23.7% of the total taxation) but which had declined to \$4.8 million (22.1%) by 1999. Comparatively, the assessed value in commercial service areas outside the CBD (notably the Old Airport Road, and Frame Lake and Range Lake areas increased. This is in contrast to the overall trend in Yellowknife where total taxation increased each year between 1996 and 2003. From a growth management perspective the development within the City outside of the CBD has outpaced that within the existing built up areas;
- Continued strong employment rates that lead the nation, where unemployment is expected to remain at below 3.5 to 4.0%. The NWT labour market dynamics will see labour demand exceeding supply. Migration rates are expected to remain at Yellowknife will continue to see the benefits of a highly educated labour force where only 5% have less than grade 9 education while some 22% have a university degree. These levels are significantly above the territorial and national levels;
- Sustained high levels of overall household income in Yellowknife, which enjoyed the highest median total income of families in any census metropolitan area in Canada. In 2001, the average couple family household income was \$102,000, compared to \$59,000 for Canada. Total couple and lone parent family income was \$91,000, compared to Canada at \$54,000. The high income levels are market signals that influence the cost of certain goods and services, most notably the cost of shelter;
- While the overall household income profile in Yellowknife is strong, there are certain challenges for single parent households with respect to total income and affordability of an adequate standard of living;

- There are a number of existing land use and environmental management issues that have constrained development and will impact physical development and growth. The lease areas and contaminated sites on the Giant Mine, Con Mine, and other landfill sites will require resolution. The Abandonment & Restoration Plans, and particularly the site remediation standards that will be established for the mine sites by regulatory agencies, are integral to the growth management strategy in the 2004 General Plan, particularly in light of the high cost of development due to terrain constraints and environmental sensitivity;
- The strong call, most recently reaffirmed through the *2004 Citizens' Survey*, for a City Council and Administration commitment to growth management, fiscal and environmental responsibility and accountability are key public policy issues that emerged through the 2004 General Plan process. The need to contain premature expansion and urban sprawl through a more compact built form and compatibility of land uses has emerged as key public policy issues. There is a strong public expectation of community growth that balances growth management, green space, recreation and alternate transportation routes/ trails that are non-vehicular. There is a strong expectation of an increased and substantive engagement of the public throughout the planning process, including partnerships and collaborative working groups and planning/ design charettes; and
- There is a corresponding expectation that the City will ensure that the rights and interests of all citizens in the region are recognized, respected and protected.

Existing land use and tenure affects where the City can grow, complicating the consideration of certain lands for development or redevelopment. Long leaseholds and incompatible uses and activities often necessitate a longer-term approach to realizing development and redevelopment potential.

The primary land use that has driven the growth strategy is the residential land demand, which at 72 ha by the year 2009, represents 40% of total land demand and exceeds all other individual land uses. However, there also exists a demand for, and a need to integrate with other land uses: open space/ recreation, industrial, commercial, institutional/ community use, transportation and infrastructure lands as outlined in Section 7. The strategy for each land use category follows consistent planning and engineering practices, namely;

- Complete development where it is most compatible with adjacent land uses and growth issues;
- Complete development in the most appropriate and cost effective means reflecting environmental considerations and overall reasonable cost for both developers and the public, not just one land use or investment; and
- Complete development in a manner that does not compromise future growth opportunities and choices but rather recognizes and accommodates natural cycles of growth, demand and investment as well as periods of decline.

The following principles have shaped the direction for the 2004 General Plan:

- Plan policies and objectives will be developed in consultation with the residents of Yellowknife and fully supported by the City Council and Administration. The Council will use the 2004 General Plan to guide planning and development decisions;
- Planning decisions and design will respect legislation and regulations to ensure the protection of the air, land and water within the municipal boundaries;
- The existing land uses, land tenure and other physical constraints as well as the commitment to growth management requires the City to take a more comprehensive approach to planning and development to ensure a livable community that balances well designed spaces with natural areas;
- Through the perspective of a more compact city and responsible infill and redevelopment, within the existing built-up area of the City, there may be a need to rezone some parcels of land, through a public process, in order to accommodate residential infill;
- Future land development must consider adjacent land uses and corridors to minimize impact and provide viable connections (pedestrian and vehicular) between areas;
- Preparation for and development of sufficient land supply for residential, commercial, industrial and institutional/ community land uses that meet the development needs for a period of not less than 2 years in the future; and
- Decision-making must be inclusive of various partners and the public in the development of Yellowknife – opportunities exist to strengthen partnerships with developers, all levels of government, interest groups and residents to facilitate coordination. This includes a commitment to regional co-existence, partnerships and shared development opportunities and benefits.

### **Broad Community Objectives**

There are several inter-related themes that have emerged from the research, engineering and planning work, all of which was informed through a strong public and stakeholder dialogue and contribution throughout the 2004 General Plan process. Many divergent views have been expressed regarding nature preservation, residential development, industrial and commercial expansion, the preservation of a northern lifestyle and the recognition and protection of heritage and cultural values. The challenge of the 2004 General Plan is in recognizing these values in the formation of a comprehensive, balanced and sustainable approach to the management of growth, development, and change.

The themes and community values that have emerged from the planning process are expressed in the following community objectives

### **Balanced Community Growth**

Balanced community growth will reflect the many uses and range of expectations for land within the consideration of growth management. Land use should be viewed as functional space dedicated to various uses or activities as well as an aesthetic resource. Strong leadership, meaningful public participation and dialogue will inform decision-making leading to sustainable northern design and a balanced approach.

### **Neighbourhood Design**

The terrain in and around Yellowknife makes the development of residential subdivisions particularly challenging not only physically but economically in providing for affordable, well designed

neighbourhoods that maintain a pleasing balance of open space and residential development. There is a need to comprehensively plan the streets, parks, open spaces, linkages, viewpoints, shoreline, transit routes, schools and other community facilities that enhance a healthy city.

### **Balanced Economic Development and Environmental Responsibility**

Yellowknife growth should be built on an economically diverse and vibrant local economy that is based on the transportation, resources, public service and tourism sectors. Yellowknife will strive to be a leader in balancing economic and social development with a strong environmental ethic and commitment.

### **A Vibrant Downtown**

Yellowknife's downtown will be vibrant with a strong commercial and residential base that is attractive to residents and visitors alike.

### **Efficient Transportation and Infrastructure Facilities**

Yellowknife will develop a well-planned transportation system comprising of public and private vehicular and non-vehicular modes and infrastructure growth pattern that will protect the City's investment in infrastructure and facilities while recognizing the need to enhance accessibility to natural areas.

### **Enhanced Natural Awareness**

The beauty and diversity of the natural environment of the Canadian Shield in and around Yellowknife – the rock, water and vegetation – offer many opportunities and challenges in accommodating the growth needs while at the same time preserving and enhancing convenient accessibility, both physically and visually, to rock outcrops, unique stands of vegetation and the water's edge.

### **A Culturally Sensitive and Heritage Resource Ethic**

There will be a recognition of place, building, works and bodies of water as public heritage resources because of their prehistoric, historic, cultural, natural or aesthetic value. This recognition and respect for these resources will impact land use decisions at the city and regional levels.

### **Regional Inter-relationships, Co-existence and Partnerships**

As the capital and an important regional centre on Great Slave Lake, Yellowknife will contribute towards a healthy co-existence and where appropriate partnerships with neighbouring governments.

## **1.2 Strategic Direction**

City Council, in partnership with Administration and the community at large, has developed the 2004 General Plan. The 2004 General Plan articulates the desired course of action by outlining both an overall direction and specific actions that, in conjunction with other by-laws, policies and guidance instruments, will contribute to increased clarity and certainty regarding physical development, growth management and environmental responsibility.

The shared values and expectations expressed by residents during the consultation phase for the 2004 General Plan, provide the basis for the strategic direction for the plan and can be summarized as:

*The 2004 General Plan is a comprehensive community plan built on growth management that is fully endorsed by Council and supported by enforcement by-laws that guide the implementation of policies that respond to residents' values and market forces toward responsible and balanced growth.*

The development and administration of the 2004 General Plan entails a commitment by the Council and Administration to guide and facilitate growth management through regular monitoring and public accountability for decisions and actions that are both consistent with and make progress towards the 2004 General Plan objectives. More specifically the overall development of the 2004 General Plan:

- Reflects the shared values and aspirations of the residents and promotes the development of the City's given natural and manmade assets;
- Incorporates long-range growth management considerations when making decisions of a more immediate nature;
- Prepares for development through a progressively more detailed level of planning by utilizing the designation and adoption of development schemes based on meaningful dialogue and consultation with the public;
- Considers all reasonable options for future expansion, and assess the suitability and cost effectiveness of each; and
- Implements the land use decisions within the 2004 to 2009 timeframe of the 2004 General Plan.

The 2004 General Plan strategic direction is expressed through objectives, policies and proposals that address current and emerging issues. Objectives are specific and achievable community goals. Policies are a series of guides that promote and facilitate consistent and rational public and private decisions in the use and development of land and resources. Proposals are specific actions that accomplish and bring about the purpose of the policies.

*Map 1*, "Balanced Strategic Growth" outlines the potential growth scenarios of the Strategic Directions. The map is only conceptual and is formed from the information provided from Section 2 – 7 of the Background Report. Future growth, land use and development throughout the City will be subject to the objectives, policies and specific proposals of the General Plan and also further study and evaluation of community needs and expectations as outlined in the following Strategic Directions.

Presented in the following sections are the elements of the 2004 General Plan's strategic direction organized by issue. Each issue is introduced by highlighting selected key considerations from the 'fact' and 'values' components of the planning process (as detailed in Section 2 to 7 and in the Technical Appendices). Next, an evaluation and response based on the analysis, findings and key considerations, is presented. The direction set out by the evaluation and response is conveyed by key objectives, policies and specific proposals, providing the focus of the 2004 General Plan.



## Legend

Residential

For policies and specific

Commercial

For policies and specific

Industrial

For policies and specific  
proposals see section 1.2.4

Open Space

For policies and specific

Recreation

For policies and specific

Scale = NTS



Future Growth Area

Existing built up area of the  
City subject to Strategic

Urban Area

This area is subject to the  
needs of the community,  
further study and  
Areas of Interest

Water

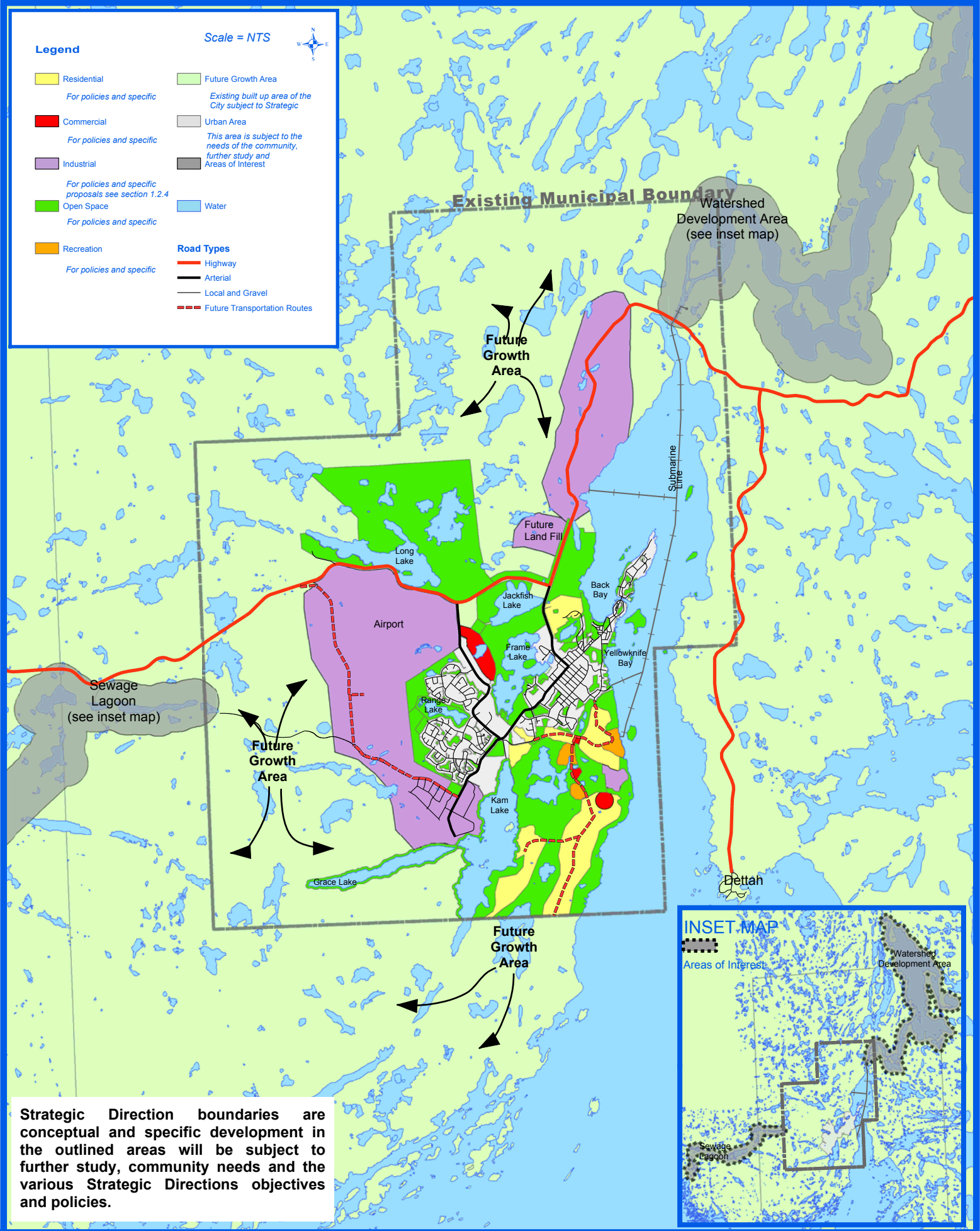
### Road Types

Highway

Arterial

Local and Gravel

Future Transportation Routes

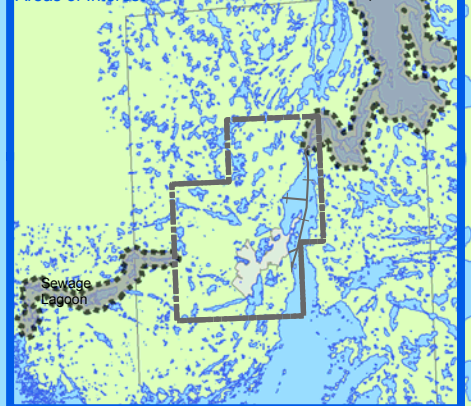


## INSET MAP



Areas of Interest

Watershed  
Development Area



Strategic Direction boundaries are conceptual. Direction boundaries are conceptual and specific development in the outlined areas will be subject to further study, community needs and the various Strategic Directions objectives and policies.

## 1.2.1 Residential

### Considerations

- The growth management strategy has emerged from the convergence of a number of key factors, which shape and drive the social, economic and environmental fabric of Yellowknife;
- The cost of housing is to be minimized. The cost of providing servicing to lots in Yellowknife is significant (\$50,000 to \$100,000/ lot), while the land values are comparatively low. One of the main costs of housing development is servicing, more specifically the off-site and lead-in sewer and water mains. These are costs incurred to “attach” a new area to the existing service system;
- Development costs within the Niven Lake development were initially calculated at the \$60,000 to \$95,000 per lot price (RCPL/Dillon, 1995) depending on lot size and location. Actual lot development costs have and will vary from phase to phase;
- Based on the above assessment of the existing infrastructure, there is limited or no cost to develop within an area that is already serviced, other than the cost to tie the development into the system. Costs for servicing “new lots” range from \$50,000 to \$100,000 per lot depending on the location (*Tin Can Hill and Negus Point Residential Development Feasibility Study*, UMA, 1985 and 1989; *Airport West Development Options and Cost Estimates*, RCPL, 1998);
- The market for trucked water and sewage serviced residential lots appears to be limited, e.g. recent attempt to develop a portion of Niven Lake with trucked services;
- Smaller lot sizes, and medium and high density development and redevelopment (infill) will increase densities and reduce development costs, thereby contributing to more affordable housing;
- The *Residential Growth Study*, prepared by the City of Yellowknife, 2004 identifies short and long term strategies for residential infill development;
- Using an annual average growth rate of 1.6% (see *Section 6.2* for details), the projected population will increase by about 2,073 persons during the planning period (2004-2009) and will grow by another 1,995 to the year 2014;
- Other values expressed during the consultation process include:
  - Recognition of the natural environment and more sustainable planning practices will improve the environmental and social health of the City;
  - There must be a balance between the built environment and the natural environment. While there were contradictory views on the development of specific areas in the City, there is a need to protect significant traditional uses, landscapes and vegetation throughout the City;
  - Make the planning process more collaborative and community-based;
  - Infill and increasing density is desirable within the context of good quality design and the impact on the existing adjacent neighbourhoods;

### Evaluation and Response

Continued strong levels of economic investment, \$980 million annually, in the NWT and Yellowknife driven by natural resource development will be among the most significant factors shaping the City and the region. Additionally, government expenditures will exceed \$1 billion and consumer spending is projected at some \$970 million.



Moderate but steady population growth is projected to average 1.6% annually. This will affect the resulting demand for residential, commercial, industrial and institutional land. The foundation of the approach is a recognition of the relationship between economic outlook and the corresponding impact on investment, employment and population change over the 2004 to 2009 growth management period. Yellowknife will see a population increase of some 2,100 persons and a demand for 740 dwellings over the next five years. Yellowknife population is projected to be some 20,700 by the year 2009.

Yellowknife enjoys the highest median total income of families in any census metropolitan area in Canada due to the sustained high levels of overall household income. In 2001, the average couple family household income was \$102,000, compared to \$59,000 for Canada. Total couple and lone parent family income was \$91,000, compared to Canada at \$54,000. The high income levels are market signals that influence the cost of certain goods and services, most notably the cost of shelter.

Yellowknife is expected to continue in a low inflationary cycle, under 2.0%. Inflation has averaged 1.3% per year over the 1996 to 2003 period. The corresponding value for Canada was 2.1%.

Historic low interest rates are projected to remain low for the next two years, with some expectation that there will be some relative upward pressure but generally continue to remain low. This will encourage further investment by business and consumers, particularly with respect to the residential market and contribute to strong housing demand in both the private ownership and rental market.

The need for cost effective residential units is a key driver to the development strategy of the City. It is clear from the research, public consultation and through the discussions with City Administration that the long-term cost factors related to housing in Yellowknife is a concern. The incremental cost to continue development at Niven Lake and the DeMelt Crescent/ Bourque Drive subdivision is the lowest cost option available at this time. The costs of the lead-in mains and off-site upgrades are already a 'sunk' cost. Therefore, the completion of subdivisions currently being developed and continued infill development is the most cost effective approach to meeting the need for housing during the planning period.

During the 2004-2009 planning period it is projected that 740 residential units will be required to meet the increase in population. It is proposed that infill should make up approximately 25% (185 units) of the development. The remaining 555 units will be new area development. Niven Lake and DeMelt Crescent areas, as well as the infill opportunities identified in the *Residential Growth Study*, will meet the needs for the this period and beyond.

The next areas for development that can be completed within a similar cost range as Niven Lake are the Tin Can Hill and Yellowknife Bay South areas. These areas have a similar development profile to that of Niven. There are some lead-in costs associated with the access to the existing infrastructure network (either off School Draw/ 54 Street area or from the Taylor Road/ Forrest Drive/ Con Area).

Recognizing that areas targeted for residential development possess varied natural characteristics, design guidelines will be incorporated into development schemes for each targeted area. The balance of the natural characteristics, pedestrian trails, transit needs, street patterns and residential densities and the mix of housing types will vary based on the proximity of infrastructure and water bodies plus

the geotechnical aspects of the area. Another factor that needs to be incorporated into residential design guidelines for any area is the area's interrelationship with the adopted plans and studies such as the *Waterfront Management Plan*, the *Downtown Plan*, the *Capital Area Development Scheme*, etc.

The Tin Can Hill and Negus Point development strategy options are described by UMA in the *Tin Can Hill and Negus Residential Development Feasibility Study* in 1985 and the *Re-Design* in 1989 reports. These reports indicate that the existing infrastructure (water and sewer mains) off School Draw & 52 Avenue have surplus capacity and can service the Tin Can Hill area. As development proceeds south in this area to the Con Camp and Negus Point, additional capacity for water demand and sewer collection will be required. The UMA reports indicate that an additional population of 1,600 people can be serviced by the existing School Draw infrastructure.

Beyond the 1,600-population number, additional capacity will be needed. There are options available to address the capacity demand issues. Additional service mains can be brought into the area from Taylor Road/ Forrest Drive area. A sewer trunk main can be developed to Lift Station No. 4. Another option is to develop a water intake, treatment plant and reservoir within the development to service the long-term (20 to 50 year) growth in this area. The City is currently reviewing the operation of the main water supply system (Pumphouse No. 1 and 2). The potential to use direct intakes into Great Slave Lake is one of the options being reviewed, and could be investigated at for the Yellowknife Bay South (Con and Negus Point) development area.

According to the public input, what is missing in the marketplace is "low cost" housing. Clearly, with the lot development cost in the new areas averaging in the \$70,000 to \$75,000 range, there is limited potential for low cost housing in a new subdivision with single-family units. The greatest opportunity for the development of more modest priced lots and units is in the development of medium and high-density multi-family (walk-ups or multi-storey) development in serviced areas. These opportunities exist either through the development (or redevelopment) of privately held lands in the service core area, and on the release (sale) of City-owned lands for development in the service core area.

Future development would consider smaller lot sizes with well designed single-family or row housing with shared common spaces that create a tighter design standard. As well, affordable housing in the downtown could include medium-high density units in a rental/ own market. As expressed in the Downtown Study, the goal of having 10% of the total population living in the downtown, should be maintained. As well, opportunities for mixed residential and commercial developments need to be explored. In the future, as the population ages, more senior's housing will be required.

With the objective of a more compact city through responsible infill and redevelopment within the existing built-up area of the City, there is a need for further study and public participation. Following this public consultation process and Council's review of a residential growth study and a study of the City's green spaces and trail systems, it may be necessary to rezone selected parcels of land. Some of these parcels may be currently zoned Parks and Recreation (PR) and Nature Preserve (NP).

The 2004 General Plan strategy is to target 25% of the total housing development as infill for the next five years. This target may be perceived as ambitious but when considering the supply and actual medium-high densities of the downtown and the infill opportunities identified through the *Residential Growth Study*, 2004, this target is responsive in terms of supply and demand for the next ten years. It

also provides significant cost advantages to the City, taxpayers, developers and ultimately consumers. Incentives for residential development in the downtown as outlined in the *Downtown Plan and Development Scheme*, 2001, are already effective in facilitating redevelopment and density intensification of properties.

In the long-term, the Yellowknife Bay South area south of Tin Can Hill should be investigated for optimum residential development that is compatible with public health and environmental standards. The development of this area would be integrated with the proposed public reserve and access zone (see Map 2) along the west shore of Great Slave Lake as well as the continued implementation of the *Waterfront Management Plan*.

Other areas that provide potential for residential development do exist and were included in the 1996 General Plan. These areas are not excluded from future residential development, and may be part of the community's growth areas beyond the near-term planning horizon. However, given the current scenario, these areas do not provide for the best options for growth. The alternative areas that have been previously considered for long-term growth, and some of the reasons that they are not part of the current growth management strategy are as follows:

- Area west of the Airport. Several studies (*Review of the Geotechnical Constraints to Urban Expansion*, EBA, 1997 and *Airport West Development Options and Cost Estimates*, RCPL, 1998) have been completed on the potential for residential development in this area. These studies indicate that this area would be geotechnically suitable for the development of the piped service residential subdivision. The body of work completed by RCPL indicates that once the supply mains to the area are in place, the development of housing lots could be expected to be similar in development costs to that being experienced in Niven Lake. The base assumptions used in the RCPL report indicates that some 870 ha of land would be available for residential and industrial development, of which 590 ha would be residential. Since the tabling of the RCPL report other issues have arisen that would restrict the amount of available land for residential development. The result is an increase in the per unit costs of the lots. The emergent land restrictions and factors include:
  - The proposed Airport redevelopment which would see the air terminal building being relocated to the west side of the airport, and the area immediately adjacent to the Airport being developed for industrial/ commercial use,
  - The Yellowknife Gun Club lease and the issues related to the relocation and reclamation of this parcel of land;
  - The continued use of the Seismic Array;
  - The potential extension of Deh Cho Boulevard in this area;
  - Airport noise impacts from the extension of the runway and revised NEF contours; and
  - The clearance for the navigational equipment installed at the airport (NDB).
- The resultant land available for residential development decreases to 275 ha, or about 50% of that assumed at the earlier stages. In the EBA study, it was assumed that the area would provide for a population of some 18,540 people. The identified constraints decrease the population in this area to 8,250.
- The area north of Fred Henne Park and west of Highway No. 4. This area would require a significant investment in infrastructure to access the proposed location. While the 1996

General Plan indicates that this area would be suitable for long-term growth in the near-term this area presents significant financial investment to develop this area. While other development areas exist, moving to the northwestern area is not a viable strategy alternative.

- The area south of the Kam Lake industrial subdivision (Grace Lake) had been identified as future industrial sites development in earlier studies. This area should be left with the designation for potential future development (either industrial or residential) and once there are known drivers to cause development in this area, the decision as to the future development can be better determined.

The strong call for a City Council and Administration commitment to growth management, fiscal and environmental responsibility and accountability are key public policy issues that emerged through the 2004 General Plan process. The need to contain premature expansion and urban sprawl through a more compact built form and compatibility of land uses has emerged as key public policy issues. There is a strong public expectation of community growth that balances growth management, green space, recreation and alternate transportation routes/ trails that are non-vehicular. There is a strong expectation of an increased and substantive engagement of the public throughout the planning process.

### Objectives

To meet the demand for affordable housing and to minimize sprawl, decisions regarding the development of housing will be guided by the most efficient use of services including infrastructure, social and commercial services. A range of housing choices that meet the needs of all residents throughout their life will be considered in all areas to encourage a mix of densities. Neighbourhoods will be well designed and incorporate a high quality of architectural design that improves the built environment. There is a need to balance the built environment and natural spaces to achieve reasonable densities and integration of the green spaces in neighbourhoods. Sufficient access to open/ green space throughout the City is necessary to connect areas of the built environment.

### Policies

1. Compact, balanced residential growth will be encouraged by evaluating opportunities for infill development and redevelopment in the context of design that enhances accessibility and incorporates trails, viewpoints, water bodies and protects significant natural areas as well as minimize neighbourhood disruption. A target of 25% of the total housing development will be through infill.
2. Residential uses will be integrated into the CBD in order to strengthen the viability and vitality of the downtown. A threshold of 10% of the City's total population in the CBD will be maintained.
3. Areas suitable for future residential development of larger tracts of land will be targeted.
4. The neighbourhood unit will be used as a building block for the community.
5. Residential development that is fiscally, socially and environmentally responsible will be encouraged.
6. The City will direct the phasing of development as outlined in the 2004 General Plan. Development will be subject to and activated by market demand.

## Specific Proposals

---

### **Residential Development Phasing**

Residential development phasing will be as follows (see Map 2, Growth Strategy and Phasing, Residential):

1. Promote the completion of residential projects in areas presently under development (e.g. Niven Lake, DeMelt Crescent/ Bourque Drive and infill areas) (2004 General Plan Phase 1);
2. Develop new residential areas (e.g. Tin Can Hill) (2004 General Plan Phase 2); and
3. Conduct a detailed assessment of areas for future expansion to Yellowknife Bay South, toward Negus Point area south of Tin Can Hill and extending to the west shore of Great Slave Lake (2004 General Plan Phase 3).

### **Residential Growth Study**

Complete and adopt the strategies identified in the City's 2004 *Residential Growth Study* that provide a framework for compact, efficient and sustainable residential growth. An important aspect is the preparation of design guidelines for infill development, redevelopment to achieve quality urban planning and design.

### **Residential Design Guidelines in New Development Area**

The City will investigate opportunities for residential design guidelines that will facilitate improved design with the aim of enhancing vehicular and pedestrian circulation both on and off site: enhancing landscaping requirements and site planning requirements in all areas of the City.

### **Residential Market Demand Study**

The City will conduct a residential market demand study to facilitate the undertaking of various development schemes by providing a basis for detailed planning and design of residential areas with respect to consumer demand and preferences concerning lot and dwelling size, servicing type and cost. This will address the potential mix of residential densities and character, including smaller lots, larger lots (including 'estate' type) and consumer preference with respect to water and sewage servicing options and public investment impacts.

### **Tin Can Hill Development Scheme**

Review the *Tin Can Hill Residential Development and Feasibility Study Redesign* prepared by UMA in 1989 to update the plan for development and consider community concerns and current issues including open space/ trail development, increased traffic impacts and servicing. The development scheme should also consider the Con Trailer Park and proposed residential expansion as well as the recreational and heritage potential south of this area. There needs to be full consideration of the potential by-pass road (Taylor Road extension). This should be undertaken with full public and interest group participation but building on the work already completed.

### **Old Town Development Scheme**

Review the *Old Town Development Scheme* prepared by UMA in 1991 to consider infill and redevelopment opportunities (residential, commercial and community use) in the Old Town area, including Bartam, the School Draw/ Franklin intersection and redevelopment opportunities that may exist through the sale of property or by other means, to strengthen the *Waterfront Management Plan* policies and objectives. This should be undertaken with full public and interest group participation.

See Map 2, Growth Strategy and Phasing, Residential.



## Infill is an important component of growth and phasing

### Residential Growth Management

Period	Projected Population Increase	Number of Units	Phasing (Units)		Phasing Location
			25% Infill	75% New	
2004-2009	2,073	740	185	555	-Infill -Niven Lake -DeMelt Crescent
2010-2014	1,995	712	178	534	-Infill -Niven Lake -Tin Can Hill
2015-2019	1,611	575	144	431	-Infill -Niven Lake/Taylor Road -Yellowknife Bay South

## City of Yellowknife 2004 General Plan Growth Strategy & Phasing Residential

TECHNICAL  
CONSULTANTS

April 2004

2



### Legend:



Land  
Water



Public Reserve  
& Access Zone

Phase 1  
DeMelt Crescent

Phase 1  
Niven Lake

Phase 2  
Tin Can Hill

Proposed Taylor  
Road Extension

Phase 3  
Yellowknife Bay South

Public Reserve  
& Access Zone

Negus Point

Great Slave Lake

Jackfish Lake

Niven Lake

Frame Lake

Range Lake

Kam Lake

## **1.2.2 Commercial**

### **Considerations**

- Maintain a viable downtown as the focus of office and small retail commercial while recognizing the importance of service commercial in and around Old Airport Road;
- As the population increases, the community desires mixed-use adjacent to neighbourhoods (i.e. small neighbourhood commercial/ local retail nodes on arterial and collector roads associated with residential development);
- Servicing requirements vary by type of development. For instance, hotels, restaurants, etc. typically require piped sewage and water, though some are operating without this level of service (e.g. Old Town);
- Household, tourism and business travel expenditures are essential components of retail and service sector viability;
- Other service types have low water and sewage demands (e.g. electrical supply store, automotive repair);
- Limited data is available on the gross leasable areas and land demand based on the detailed commercial types. Based on existing information, there will be modest demand for retail space;
- The Capital Site has had an impact on development as expressed by stakeholders, particularly in the Capital Area zone that includes Old Airport Road through planning, design and development restrictions;
- Stakeholders desire local improvements for the Old Airport Road commercial district;
- There is a need for increased clarity and delineation between commercial and light industrial uses and activities;
- Continued strong employment rates that lead the nation, where unemployment is expected to remain at below 3.5 to 4.0%. The NWT labour market dynamics will see labour demand exceeding supply. Migration rates are expected to remain at historical levels. Yellowknife will continue to see the benefits of a highly educated labour force where only 5% have less than grade 9 education while some 22% have a university degree. These levels are significantly above the territorial and national levels; and
- Using an aggregate commercial demand projection of 3.5 ha/ 1,000 population, the commercial land demand for the planning period (2004-2009) is 7.3 ha and an additional 7.0 ha to the year 2014.

### **Evaluation and Response**

Continued strong levels of economic investment, \$980 million annually, in the NWT and Yellowknife driven by natural resource development will be among the most significant factors shaping the City and the region. Additionally, government expenditures will exceed \$1 billion and consumer spending is projected at some \$970 million.

There will be comparatively lower overall demand for commercial land (7 ha) through to 2009, although office space requirements are expected to increase moderately. There will be limited demand for commercial land for retail space in the Central Business District, although the levels of expenditures by households, government, and the tourism and business travel are projected to remain strong and ensure that the retail and service sector will experience relative market stability.

The viability and vitality of the CBD will continue to be enhanced and promoted through the implementation of the *Downtown Plan*. The need to maintain a stable minimum population base (10% of the City's total population) in the CBD will contribute to addressing the decline of the assessed value and taxation generated, where in 1996 the core area contribution was \$5.1 million (23.7% of the total taxation) but which had declined to \$4.8 million (22.1%) by 1999.

Comparatively, the assessed value in commercial service areas outside the CBD, notably the Old Airport Road, Frame Lake and Range Lake areas has increased. This is in contrast to the overall trend in Yellowknife where total taxation increased each year between 1996 and 2003. From a growth management perspective the development within the City outside of the CBD has outpaced that within the existing built up areas.

Commercial services would support the residential development in the downtown. Mixed-use developments with street level commercial associated with residential developments are one approach. The *Downtown Plan and Development Scheme* (MHBC, 2001) identifies a number of ways to strengthen commercial improvements in the downtown.

The Old Airport Road bypass road and development has been under consideration since the mid 1980s. In the 1990s, with the development and implementation of the Capital Site, development constraints in this area were imposed. However, there is now the opportunity to revisit this area for development. In 1998, UMA completed the *Frame Lake North Road Subdivision Cost Estimates and Appraisals for Development Options*. This report and previous work indicates that this area is suited to industrial, commercial and institutional needs. The 1998 report indicates some 29 industrial lots are possible in this area. The area can be developed as a piped or trucked service model. Several development schemes for this area exist and are on file with the City. These schemes have investigated a variety of lot development size and use, along with a number of service models. These have included the implementation of full water and sewer and land drainage piping with an urban road cross section through to a rural road cross section and trucked services. The costs per lot range from \$270,000 to \$545,000 depending on service type selected.

### Objectives

The City will continue to support commercial activity primarily in the downtown and secondarily along Old Airport Road. The character, functionality and compatibility of commercial areas will be enhanced to encourage a vital and expanding commercial retail and service sector. The City will discourage strip commercial development elsewhere in the City and encourage small neighbourhood commercial nodes adjacent to residential areas. The Old Town and downtown will continue to be the primary focus for tourism development.

### Policies

1. Mixed-use development in the CBD will be encouraged to enhance a downtown where people want to live, work, shop and recreate.
2. Land use compatibility will be promoted by more clearly delineating commercial and light industrial uses in the City.
3. Appropriate siting of uses requiring outdoor storage facilities, and large storage and warehouse areas will be investigated.
4. The character of the existing commercial areas will be enhanced.



5. Appropriate commercial development along primary and secondary roads in designated areas will be encouraged.
6. The City will support neighbourhood commercial uses in conjunction with new residential developments to improve cost variables and traffic flow.
7. The City will direct the phasing of development as outlined in the 2004 General Plan. Development will be subject to and activated by market demand.

### **Specific Proposals**

---

#### **Commercial Development Phasing**

Commercial development phasing will be as follows (see Map 3, Growth Strategy and Phasing, Commercial):

1. Encourage redevelopment and infill of commercial in the downtown and Old Town (2004 General Plan Phase 1);
2. Assess the development of the Frame Lake North Road and Old Airport Road commercial redevelopment (2004 General Plan Phase 2); and
3. Limited commercial development to be linked to future residential areas based on the neighbourhood concept (2004 General Plan Phase 3).

#### **Design Guidelines**

Review section 3.0 Development Principles of the Zoning By-law No. 4024 with the aim of enhancing vehicular and pedestrian circulation both on and off site; enhancing landscaping requirements and site planning requirements in all areas of the City.

#### **Downtown Plan**

The City will continue the implementation of activities and programs that facilitate the enhancement of the downtown. As part of the comprehensive review of the Zoning By-law, implement the zoning amendments identified in the *Downtown Plan*.

#### **Commercial Development Strategy**

To develop a commercial strategy, that includes the determination of potential commercial and related industrial demand and response strategy for Highway No. 3 (Airport West) and Highway No. 4 (Giant Mine) corridors.

#### **Airport West Development Scheme**

The City to continue dialogue with major stakeholders in the assessment and potential development of the area west of the Yellowknife Airport, including the potential realignment of the FOL Road and connection with Deh Cho Boulevard.

#### **Old Airport Road Development Scheme**

Undertake a study of the Old Airport Road to address the needs and concerns of businesses in this area, assess the impact of the Frame Lake North road development on existing businesses and the potential feasibility of relocating some existing uses to more appropriate and accessible areas, particularly to the Airport West area.



### **Capital Area Development Scheme**

Complete the Capital Area review in parallel with a study of the Old Airport Road development scheme to in part, consider the Frame Lake North road extension development (outside the current Capital Area boundary) and potential institutional development north of Frame Lake.

### **Old Town Development Scheme**

Review the *Old Town Development Scheme* prepared by UMA in 1991 to consider infill and redevelopment opportunities (residential, commercial and community use) in the Old Town area, including Bartam, the School Draw/ Franklin intersection and redevelopment opportunities that may exist through the sale of property or by other means, including the consideration of incentives for property owners and developers by providing ways and means of assessing increased flexibility in achieving density goals, and land exchanges and taxation relief/ flexibility for a period of time, to strengthen the *Waterfront Management Plan* policies and objectives.

See *Map 3, Growth Strategy and Phasing, Commercial – Office and Retail*.

# Commercial Demand Projection (3.5 ha / 1,000 population)

Period	Projected Population Increase	Number of Hectares
2004-2009	2,073	7.3
2010-2014	1,995	7.0
2015-2019	1,611	5.6
<b>Total</b>	<b>5,678</b>	<b>19.9</b>

Phase 2  
Frame Lake North Road / Old  
Airport Road Redevelopment

Potential Frame Lake  
North Road Extension

Phase 1  
Redevelopment and Infill

Linked to  
Phase 3  
Residential

## City of Yellowknife 2004 General Plan Growth Strategy & Phasing Commercial - Office and Retail

TERRACON CONSULTANTS



April 2004

3



### Legend:



Land  
Water

### 1.2.3 Institutional/ Community Use

#### Considerations

- Assumed institutional development in the next 10 years includes: at least one new school; territorial college site; and a potential Court House/ Justice Building;
- While the need for the potential facilities have been recognized, no specific siting commitments have been identified to date;
- In this *10 Year Financial Plan (2004-2013)*, the City is considering a number of capital projects. The community services projects identified include:
  - Implementation of the waterfront/ trail development over an 8-10 year implementation schedule. The concept of the waterfront trail development is to link the Yellowknife Ski Club to Negus Point and beyond in an effort to enhance the quality of life for Yellowknife citizens and support tourism. Within five years, the Joliffe Island Park is to be completed. This plan is in addition to the future Twin Pine Hill trails and viewpoints;
  - When funding permits, complete the second ice surface at the Multi-Plex;
  - Within five years, construct a community sport field house, which would include an indoor soccer pitch and running track, as identified in the *Recreation Facilities Needs Assessment* of 2000. This facility would be sited next to the Multi-Plex and is impacted by the decommissioning of the Yellowknife Correctional Centre. A new fastball diamond is proposed adjacent to the field house;
  - Within ten years, construct a 4-diamond softball park. The proposed site for this facility is in the vicinity of the CBC tower site in Kam Lake. The construction of the park is impacted by the decommissioning of the towers;
  - The library is in the initial stages of a 16-year plan. This plan includes expansion of the space in its present location. The relocation of the library is not currently being considered, in part due to the significant investment in the existing facility;
- The Gerry Murphy Arena is slated for demolition. The City is currently assessing the potential future use of the site. The consultation process identified that residents consider this an important public site with development geared toward community use that is commensurate with a major focal point of activity and access;
- The arts community has identified the need for a community arts centre that includes rented studio space, small scale retail and complimentary low cost rental housing. The centre is viewed as both a functional space and an important contribution to the tourism infrastructure and compatible with the current draw of the Old Town character and walking tour;
- As the population grows, additional recreational facilities will be planned and developed (i.e. an additional arena/ community complex at a population threshold of about 24,000);
- The need for a college campus was identified throughout the consultation process although no specific proposal has been developed at this time. This could be a landmark site and facility in the City and should incorporate many of the planning and design values expressed by the community;
- The *Frame Lake North Road Subdivision* study prepared by UMA in 1998 included the potential for two institutional lots of significant size;
- On a servicing level, institutional sites would require access to piped services due to the level of service and flow demand requirements;

- The incremental growth of residential development in the vicinity of the built-up areas (i.e. Niven Lake, Tin Can Hill, etc.) ensures that fire and ambulance servicing will be met through the existing infrastructure. The need and location of additional facilities will be assessed as the community approaches the appropriate emergency response time criteria; and
- Using an aggregate institutional/ community use demand projection of 3.5 ha/ 1,000 population, the institutional/ community use land demand for the planning period (2004-2009) is 7.3 ha and an additional 7.0 ha required to the year 2014.

### **Evaluation and Response**

---

There is an obligation by the City and other levels of government to identify long-term land requirements to accommodate the necessary institutional/ community use and infrastructure needs, to meet population driven demand.

The City will continue to work with the GNWT to find acceptable sites for institutional facilities that are needed in the future. Future schools will be developed in new residential areas to meet the projected population growth. Within the next 5 years, a new school may be required although the demographic and school enrolment data are not definitive with respect to the timing and type (grade levels) of future demand. The GNWT 2004-05 Main Estimates – Infrastructure Acquisition Plan indicates a capital budget of \$16.4 million in 2006-08, for a school. The type of school and for which school board is not specified. Technical Appendix 6 – Yellowknife School Enrolment data for the period 1996/97 to 2003/04 provides the statistical context. It is proposed that the City of Yellowknife and the GNWT determine the feasibility of two potential school sites: the Yellowknife Correctional Centre site (once this facility is decommissioned); and, potentially within the Niven Lake subdivision.

The Capital site should continue to be promoted as an ideal location for GNWT-related institutional facilities, e.g. college site. The Frame Lake North Road concept includes the potential development of institutional lots adjacent to the Capital Area. The potential use is compatible with the Capital Area concept.

The Gerry Murphy Arena site should remain a community use site and form an important urban park/ civic plaza node that takes full advantage of its location relative to the downtown, the Capital site and the Frame Lake trail and park setting. This approach is an important dimension of the broader strategy of a compact urban structure that balances a range of land use and activity demands.

A future community complex will be needed in the longer-term residential area and should be associated with a school or small commercial centre. Recreational facilities will be planned to meet the growing demand of a larger population.

### **Objectives**

---

The City will support the Capital Area as the primary site for future public institutional development in the City. The development and management of the Capital Area will be a shared responsibility with the territorial government. Other institutional and community use facilities such as education, health and safety services will be located to meet the growth needs of the City. Significant public buildings will incorporate well-designed indoor and outdoor spaces for the enjoyment of the public.

## Policies

---

1. The Capital Area and its role as a significant institutional/ community use site will be supported as a means to enhance the City's role as the Capital of the NWT.
2. Institutional and community uses in other appropriate areas of the City will be considered through partnerships with agencies, stakeholders and the business community based on specific locational and site impact assessment criteria and conformity with the overall direction of the 2004 General Plan.
3. Institutional and community uses that reflect the character and aspirations of the community and the region through appropriate design and construction techniques will be encouraged.
4. The creation of usable outdoor and indoor public spaces in new developments and other institutional uses will be encouraged.
5. Strategic acquisition of lands for institutional/community uses will be considered.

## Specific Proposals

---

### **Institutional Development Strategy**

The City will establish and adopt guidelines with respect to the use of locational and site impact assessment criteria for developers and partners. The City will use these guidelines as part of its planning and development review process.

### **Gerry Murphy Arena**

The City will consult with the community and stakeholders on the development options for the Gerry Murphy Arena site.

### **Community Services Master Plan**

The City to review and update the *Community Services Master Plan* that includes an inventory of and future proposals for open space, formal and informal trail network, and neighbourhood accessible recreation (active and passive) opportunities.

### **Arts Centre**

The City will participate in the assessment of a suitable location for the proposed Arts Centre. This facility and associated lower cost rental housing would be appropriately sited in Old Town due to its mixed use and contribution to tourism infrastructure. The centre is viewed as both a functional space and a public facility.

### **Capital Area Development Scheme**

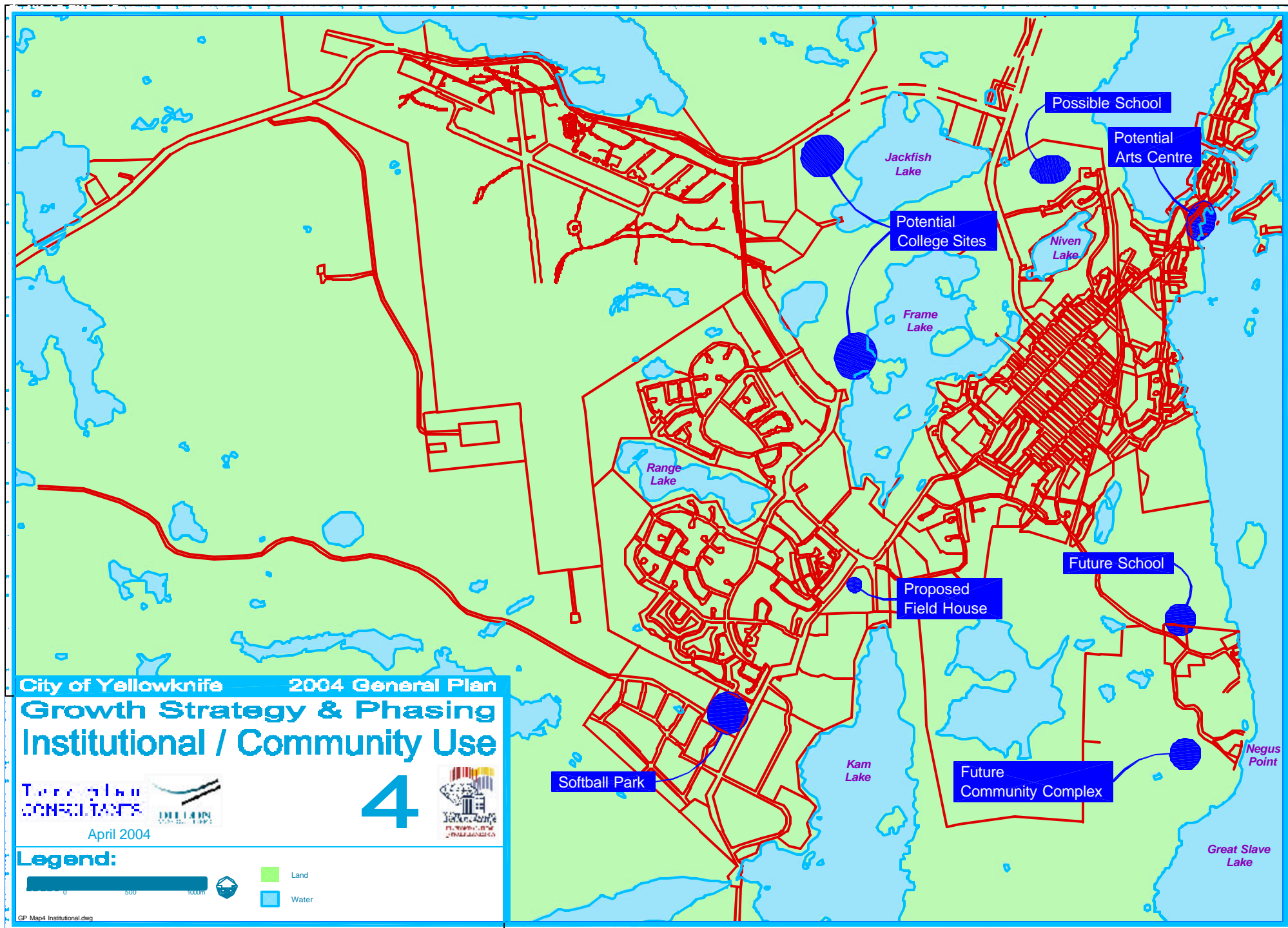
Complete the Capital Area review in parallel with a study of the Old Airport Road development scheme to in part, consider the Frame Lake North road extension development (outside the current Capital Area boundary) and potential institutional development north of Frame Lake.

### **Old Town Development Scheme**

Review the *Old Town Development Scheme* prepared by UMA in 1991 to consider infill and redevelopment opportunities (residential, commercial and community use) in the Old Town area, including Bartam, the School Draw/ Franklin intersection and redevelopment opportunities that may exist through the sale of property or by other means, to strengthen the *Waterfront Management Plan* policies and objectives.

*See Map 4, Growth Strategy and Phasing, Institutional/ Community Use.*





## 1.2.4 Industrial

### Considerations

- The GNWT Department of Transportation has conducted an internal review of their land needs and has proposed a land use plan for the Airport West area. This plan proposes the realignment of the FOL Road with connection to Deh Cho Boulevard. It also includes the relocation of the Airport Terminal Building and the expansion of commercial and industrial properties within and outside of an expanded airport property. The City has been consulted on this proposal;
- The economic outlook and resulting demand for light industrial land and physical plan in Yellowknife are significant growth considerations;
- Continued strong employment rates that lead the nation, where unemployment is expected to remain at below 3.5 to 4.0%. The NWT labour market dynamics will see labour demand exceeding supply. Migration rates are expected to remain at Yellowknife will continue to see the benefits of a highly educated labour force where only 5% have less than grade 9 education while some 22% have a university degree. These levels are significantly above the territorial and national levels;
- There is evidence to indicate a growing need for larger industrial sites that can accommodate marshalling and outdoor storage. Efficient access to Highway No. 3 and No. 4 are key location criteria;
- There is a need for increased clarity and delineation of industrial areas from incompatible uses and activities. Recreation activities, including bike routes, should not be encouraged for safety and efficiency reasons;
- Demand for heavy industry is not projected to be significant in Yellowknife for the foreseeable future;
- Typically, industry in Yellowknife is not a large water volume consumer;
- The industry developed in Yellowknife, and those expected to be developed can be serviced either by trucked water and sewage services or by piped services;
- During the *Yellowknife Airport Water and Sewer Servicing Strategies Needs and Preference Survey*, prepared by Terriplan Consultants in 2002, businesses from Old Airport Road and the Yellowknife Airport were surveyed to determine interest in piped services. Most business owners indicated a preference for piped service in the future. Almost a third of the respondents suggested that they would potentially redevelop their property if piped service was available, but would likely proceed with redevelopment irrespective of piped services. The location of the business is the primary concern regardless of the availability of piped service and a business case would need to be made for the cost of changing to piped service. A key recommendation from the *Yellowknife Airport Development Plan* prepared by InterVISTAS is the eventual connection of the airport site to the municipal water and sewage system to provide “appropriate service levels” to the tenants;
- The early phases of the consultation process indicated that consideration be given to relocating the existing airport. Based on the level of public and private investment associated with the airport, it was generally felt that it was not a feasible option to pursue;
- The main findings of the report on *Industrial Land Use and Demand Analysis*, Terra Firma Consultants, January 2004, were:
  - The desirability of a second arterial access into the City through the Kam Lake area;



- The Kam Lake area is currently a mix of industrial, commercial and limited residential uses. There exist a number of issues related to the use and activity mix that can largely only be addressed by removing and/or separating incompatible land uses and associated activities;
  - Future industrial development should be concentrated in the Kam Lake area along the Deh Cho Boulevard. Appropriate design, buffering and screening from adjacent land uses should be required;
  - Mixed commercial-industrial development, which requires higher visibility and public access should be located along Old Airport Road or other routes (i.e. Deh Cho Boulevard) with similar traffic and visibility characteristics;
  - Future industrial development near the diamond plants should be assessed with respect to potential impacts on the concept of the ‘gateway to Yellowknife’; and
  - The City of Yellowknife could anticipate sales from 6 to 14 industrial lots per year based on historical sales data.
- Using an industrial demand projection of 12.0 ha/ 1,000 population, the industrial land demand for the planning period (2004-2009) is 24.7 ha and an additional 23.9 ha to the year 2014.

### **Evaluation and Response**

Continued strong levels of economic investment, \$980 million annually, in the NWT and Yellowknife driven by natural resource development will be among the most significant factors shaping the City and the region. Additionally, government expenditures are projected to exceed \$1 billion and consumer spending is estimated at some \$970 million.

Demand for industrial land will remain moderately strong (25 ha) through to 2009. Transportation and infrastructure needs related to surface, aviation and water movement will be key drivers in demand for industrial and directly related commercial land demand. In particular, the proposed airport plan and its impact will shape the industrial strategy. There is a need to establish designated areas for industrial and related commercial development in order to respond to the land demand, including the need for a broader range of lots with suitable location, size, configuration and infrastructure, as well as the need to address land use compatibility issues.

One of the emerging commercial/ industrial development issues is the Airport West area as part of the *Yellowknife Airport Development Plan* and the potential for the Deh Cho Boulevard by-pass. The City is part of this process, however, the timing of others will drive the actual form of this area development. It is important to have a long-term plan that can take advantage of the potential development of this area, but one that does not rely solely on the City’s own land development strategy. Maintaining the industrial development within the Kam Lake industrial subdivision for the near term, and extending towards the proposed Airport West area along Deh Cho Boulevard provides for a good balance of the objectives. At some point, should the Airport Development Plan as it is currently outlined not proceed; the City may need to look to other options. The area south of the Kam Lake industrial subdivision provides for future growth opportunities should the optimal scenario not proceed.

## Objectives

---

The City will support industrial development as it relates to the resource service and transportation sectors while recognizing the need for compatible land use designation and safe transportation access by directing development to the most suitable areas and developing reasonable road infrastructure. The detrimental effects of industrial development on the surrounding areas and natural environment will be minimized.

## Policies

---

1. The provision of industrial growth will be directed by implementing the Industrial Growth Strategy.
2. A range of industrial sites commensurate with market demand that promotes compatible land uses and activities and minimizes impacts on transportation, infrastructure and residential areas will be provided.
3. Suitable alternative choices for the location of compatible land uses requiring large outdoor storage areas will be provided.
4. The City will examine, and where feasible encourage and facilitate relocation of existing industrial uses that benefit the particular activity and advance the direction of the 2004 General Plan.
5. The City will direct the phasing of development as outlined in the 2004 General Plan.
6. Industrial performance standards will be maintained to ensure compatibility with adjacent land uses.

## Specific Proposals

---

### Industrial Development Phasing

Industrial development phasing will be as follows (see Map 5, Growth Strategy and Phasing, Industrial/ Commercial):

1. Complete the extension of the Kam Lake Industrial Area (2004 General Plan Phase 1);
2. Plan for a new industrial area west of Kam Lake Industrial area (2004 General Plan Phase 2);
3. Assess areas for future expansion and appropriate timing of the Airport West area (2004 General Plan Phase 3);

### Industrial Growth Strategy

Implement the actions identified as part of the *Industrial Land Use and Demand Analysis* study and the City's *Industrial Growth Strategy*. This will include an assessment of the Giant Mine property and the quarry sites north of the landfill, as suitable permanent truck staging areas.

### Con and Giant Abandonment and Restoration Plans

The City to continue to have an active and vigilant role in the Con and Giant A&R planning process mechanisms to ensure the City and public interest is represented.

### Brownfield Redevelopment

The City to explore and engage redevelopment opportunities as part of territorial and federal strategies, such as the *National Brownfield Redevelopment Strategy* and the recent commitment by the federal government towards the clean up of contaminated sites. Specific actions would include:

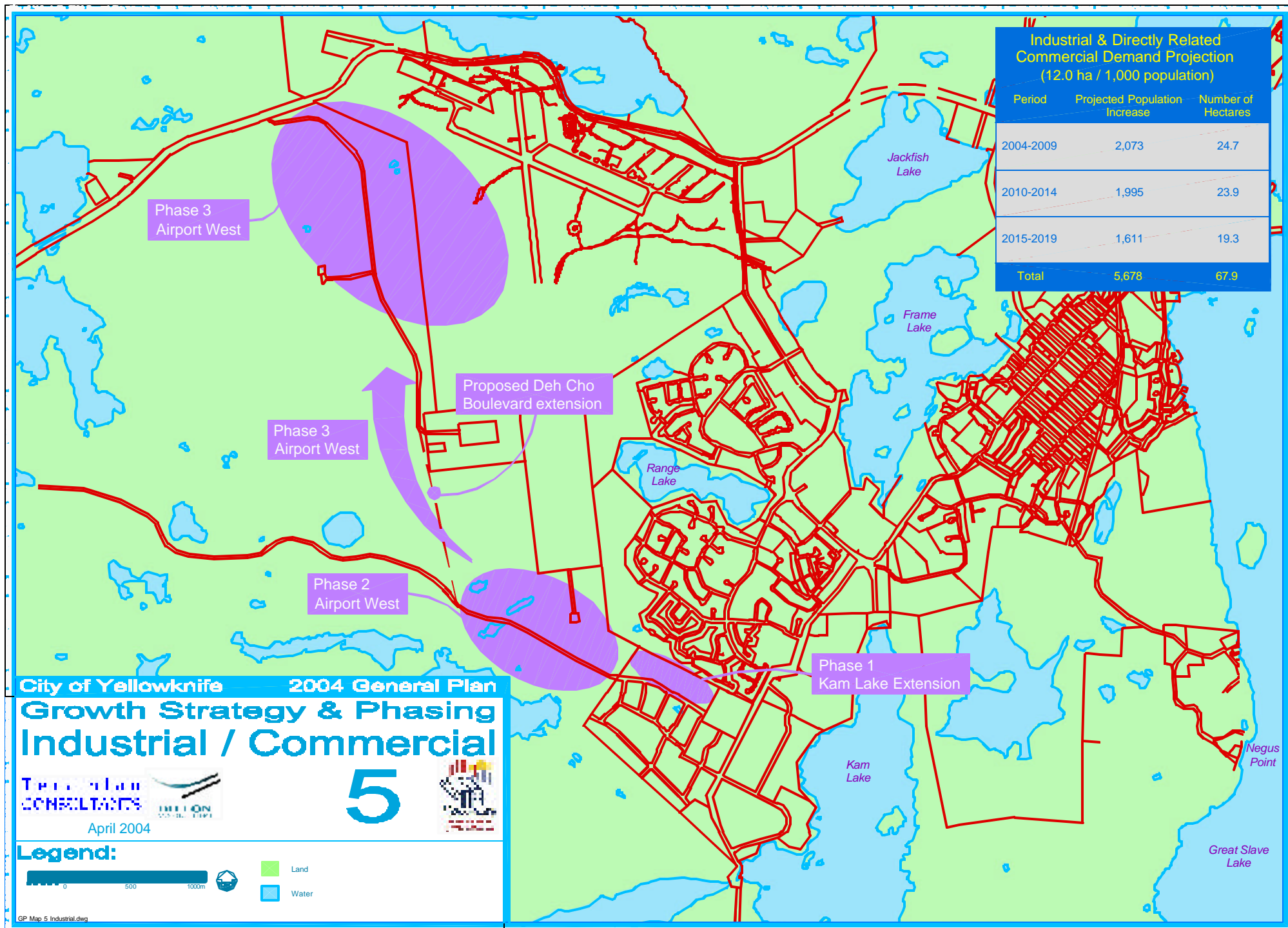
- Update contaminated sites mapping within the municipal boundaries and monitor the progress of remediation on the identified sites;



### **Airport West Development Scheme**

The City to continue dialogue with major stakeholders in the assessment and potential industrial and directly related commercial development of the area west of the Yellowknife Airport, including the potential realignment of the FOL Road and connection with Deh Cho Boulevard.

See *Map 5*, Growth Strategy and Phasing, Industrial/ Commercial.



## 1.2.5 Open Space/ Recreation

### Considerations

---

- Natural green space within the City is highly valued by residents. While there is a need to balance development with green space, there exists some significant natural spaces that are valued for their proximity to water bodies, their recreation potential and as representative land and vegetation, typical of the Yellowknife area (e.g. Tin Can Hill, Capital Area);
- Beyond the existing inventory of formal parks and public spaces in the built-up area, there does not exist, a detailed current inventory of existing and potential supply beyond the community-based initiative that produced the *Yellowknife Green Map* (CPAWS, 2001). The need for a comprehensive inventory and ongoing monitoring and protection of functional and undeveloped open space (by establishing a baseline of supply and tracking changes) was identified during the consultation process in the strongest possible terms and indeed comprises a core element of the expressed community objectives;
- Given what limited existing information is available with respect to geotechnical, engineering, environmental and archaeological considerations, it is assumed that of the 5,556 ha (see General Plan Background Report section 7.1 Municipal Boundary and Land Quantum) potentially available land that is not currently occupied or developed, some 30%, or 1,667 ha will not effectively be suitable for development given economic and technological realities. This leaves a total of 3,889 ha for aggregate land use demand modeling purposes;
- Lands which may be ‘undeveloped’ at present are not necessarily available as open space. There is not a thorough understanding of land tenure in certain areas and the associated ownership/ tenure rights;
- Recent development in the City has included areas that were once open, natural spaces. While most of this land has been privately owned for significant periods, residents are concerned that open space is being lost at an accelerated pace;
- Stakeholders feel that open space and public access in development concepts is considered an afterthought and is not consistently monitored and enforced. Trails that take advantage of good views and interesting landscapes should be incorporated into the site design of any significant land in the City;
- Consultations indicated the need for qualified and competent design professionals to be involved in the planning, development and inspection process;
- The City has made a commitment to preserving and enhancing the waterfront character of Yellowknife through the *Waterfront Management Study and Plan*; and
- Using an aggregate open space/ recreation demand projection of 17.5 ha/ 1,000 population, the open space/ recreation land demand for the planning period (2004-2009) is 36.0 ha and an additional 33.2 ha to the year 2014.

### Evaluation and Response

---

The strong call for a City Council and Administration commitment to growth management, fiscal and environmental responsibility and accountability are key public policy issues that emerged through the 2004 General Plan process. The need to contain premature expansion and urban sprawl through a more compact built form and compatibility of land uses has emerged as key public policy issues. There is a strong public expectation of community growth that balances growth management, green

space, recreation and alternate transportation routes/trails that are non-vehicular. There is a strong expectation of an increased and substantive engagement of the public throughout the planning process.

The City will consider as part of residential design, the inclusion of natural area corridors, playgrounds and the protection of significant vegetation and landscapes as important components of the overall design. There should be a balance between open space preservation and development. A biophysical inventory of natural areas and an understanding of the current site use would provide the designers with the tools to consider the preservation of landscapes and accommodate citizen's concerns. Landscape requirements should be strengthened to offset the impact of development.

### Objectives

---

The City will create, protect and manage a parks and open space system throughout the City that enhances livability, protects environmental resources and creates alternate transportation options. Outdoor recreational pursuits and cultural activities will be supported through the provision of services and facilities. Public waterfront access will be preserved. Recreational infrastructure must be enhanced so as to provide leisure and recreational activities to improve quality of life and the health of residents.

### Policies

---

1. Create a network of linked open spaces that will provide residents with alternative transportation and recreational routes within the City and provide access to open spaces in proximity to the City.
2. Open space and trail connectivity will be incorporated as part of the evaluation of opportunities for development.
3. The importance of water bodies will be recognized and provide users with the appropriate level of access to this resource through the implementation of the *Waterfront Management Plan* which provides for improved and enhanced vehicular, pedestrian and water use access; establishes water/ land use, development and occupancy policies and controls for the water surface and shoreline of Great Slave Lake; and identifies nature and heritage preservation areas.
4. To provide a hierarchy of community parks which balance objectives for active sports facilities, passive recreation and environmental conservation.

### Specific Proposals

---

#### Community Services Master Plan

The City in partnership with community organizations and the public to review and update the *Community Services Master Plan* that includes an inventory of existing and future proposals for open space, formal and informal trail network, and neighbourhood accessible recreation (active and passive) opportunities. The *Yellowknife Green Map* will provide the basis for identifying significant sites. The review will also include consideration of design standards and consideration of future increased pedestrian, bicycle and/ or ski traffic.

#### Waterfront Management Plan

The City will continue to implement the *Waterfront Management Plan* which provides for improved and enhanced vehicular, pedestrian and water use access; establishes water/ land use, development and occupancy policies and controls for the water surface and shoreline of Great Slave Lake; and



identifies nature and heritage preservation areas. As part of the comprehensive review of the Zoning By-law and to support the implementation of the *Waterfront Management Plan*, assess opportunities for facilitating the achievement of the direction of the 2004 General Plan and growth management strategy.

## 1.2.6 Environmental Responsibility

### Considerations

---

- Stakeholders indicated a need for better building and design practices including consideration of energy demand and use that facilitates sustainable community development. An important first step is the preparation of a community energy plan that identifies ways and means of achieving issues related to design and implementation of the built environment;
- Stakeholders want the City to support the FCM Partners for Climate Protection Program through the development of policies and by-laws;
- The mine leases and their remediation proposals will have a significant impact on the development and growth management options for the City;
- The future land uses for the Con Mine lease area will be determined by the technical and regulatory process. The Department of Resources, Wildlife and Economic Development, Environmental Protection Service, released *Environmental Guideline for Contaminated Site Remediation* in November 2003. The Guidelines address the issue of land use considerations. *Section 2.2.2 (p. 9-10)* outline a framework for land use considerations. The remediation criteria are presented in the context of four types of land use: agricultural, residential/parkland, commercial and industrial (as defined below). The criteria are considered generally protective of human and environmental health for specified uses of soil at contaminated sites. It is important to note that it is the intended future land use that governs the decision on the level of remediation performed at a site. Identifying the type of land use allows an assessment of the extent of human and ecological exposure to contaminants in the soil, and is essential for planning practical remediation programs. The type of land found adjacent to the contaminated site may affect the remediation criteria levels that will have to be followed.
  - **Agricultural** – All uses of land where the activity is primarily related to the productive capability of the land or facility (e.g. greenhouse) and is agricultural in nature, or is related to the feeding and housing of animals such as livestock.
  - **Residential/Parkland** – All uses of land in which dwelling on a permanent, temporary or seasonal basis is the primary activity, institutions, hospitals, schools, daycare and playgrounds are also indicated under this land use. This includes activity that is recreational in nature, and requires the natural or human designed capability of the land to sustain that activity. Residential/ Parkland is often readily accessible to the public.
  - **Commercial** – All uses of land in which the primary activity is related to the buying, selling, or trading of merchandise or services.
  - **Industrial** – All land uses in which the primary activity is related to the production, manufacture or storage of materials. This does not include institutions (e.g. schools, hospitals, playgrounds). The public does not usually have uncontrolled access to this type of land.

## **Evaluation and Response**

---

There are a number of existing land use and environmental management issues that have constrained development and will impact physical development and growth. The lease areas and contaminated sites on the Giant Mine, Con Mine, and other landfill sites will require resolution. The A&R Plans, and particularly the site remediation standards that will be established for the mine sites by regulatory agencies, are integral to the growth management strategy in the 2004 General Plan, particularly in light of the high cost of development due to terrain constraints and environmental sensitivity. The A&R plans for Con Mine and Giant Mine need to be implemented and the site clean up completed to an appropriate standard to maximize the potential use of those lands, or portions thereof, and to ensure that adjacent land uses and economic values are not compromised.

Contaminated waste is accepted at the landfill. Prior to acceptance, the transporter must provide a Transportation of Dangerous Goods (TDG) manifest that indicates the origin and type of waste. The TDG process is regulated by RWED, GNWT. The TDG includes a report on the type of hazard (i.e. hydrocarbons, flash point, etc.) and the volume of waste transported. The City charges a tipping fee for the acceptance of the contaminated soil (currently \$20/ tonne). The soil is land farmed at the landfill site. Once the soil has been remediated through the land farm process and meets the designated criteria, the soil is then used in the landfill operation as waste cover material.

The City does not conduct specific testing on the contaminated material at the time of acceptance of that material at the landfill site. To provide the City with an increased level of due diligence with respect to the acceptance of hazardous wastes, each waste manifest provider should be required to demonstrate to the City the composition of the contaminated material. An independent laboratory test by a certified laboratory should be provided to the City, and reviewed prior to acceptance of the contaminated material.

The strong call for a City Council and Administration commitment to growth management, fiscal and environmental responsibility and accountability are key public policy issues that emerged through the 2004 General Plan process. The need to contain premature expansion and urban sprawl through a more compact built form and compatibility of land uses has emerged as key public policy issues. There is a strong public expectation of community growth that balances growth management, green space, recreation and alternate transportation routes/ trails that are non-vehicular. There is a strong expectation of an increased and substantive engagement of the public throughout the planning process.

## **Objectives**

---

The City will be environmentally responsible in its approach to land use planning. Municipal practices will ensure environmental stewardship in its decision-making and encourage the remediation of contaminated sites to a standard required to meet growth management objectives and the health and safety of all residents.

## **Policies**

---

1. The City will accommodate and manage growth to achieve an environmental, economic and social balance.
2. The City will contribute to a high standard of land, air and water quality through responsible municipal practices.



3. The City will minimize the disturbance of habitat, watershed and natural drainage areas and systems.
4. The City will protect spaces of significant aesthetic and environmental value including important views, vistas, landmarks, vegetation and topography.

### Specific Proposals

---

#### **Waterfront Management Plan**

The City will continue to implement the *Waterfront Management Plan* which provides for improved and enhanced waterfront protection; establishes water/ land use, development and occupancy policies and controls for the water surface and shoreline of Great Slave Lake; and identifies nature and heritage preservation areas. As part of the comprehensive review of the Zoning By-law and to support the implementation of the *Waterfront Management Plan*, assess opportunities for facilitating the achievement of the direction of the 2004 General Plan and growth management strategy.

#### **Environmental Management System**

The City will assess the feasibility of developing and implementing an Environmental Management System (EMS) to strengthen planning, design and management of municipal operations and activities with respect to impact on the natural environment, including maximizing energy efficiency. The EMS would integrate environmental responsibility into everyday operations and directly contribute to environmental stewardship obligations. To the greatest extent possible, the true cost of the delivery of public programs and services should be identified and allocated accordingly.

### **1.2.7 Infrastructure**

#### Considerations

---

- Need to maximize the existing public investment in infrastructure to support a cost effective and fiscally responsible growth direction;
- Stakeholders indicated a need to review the existing water and sewer systems for the purpose of upgrading energy efficiency;
- Stakeholders have also identified the need to continue the research into new energy efficiency technologies to achieve maximum lifecycle in the infrastructure;
- The existing City infrastructure including the sewer, water and road systems within the built-up area has reserve capacity. The recent *Fiddler's Lake Sewage System* report by Jacques Whitford in 2004 indicated that the City's program to remove bleeders and water main leaks from the system has reduced the demand on the system by some 25% over the past 10 years. This overall reduction included the increase in demand from the growth in population over that period;
- Using an aggregate transportation/ infrastructure demand projection of 15 ha/ 1,000 population, the transportation/ infrastructure land demand for the planning period (2004-2009) is 30.8 ha an additional 30.0 ha to the year 2014; and
- Over the next ten years there are several components of the City's infrastructure that will need to be addressed to service the functioning and growth of the community. Some of these components are currently nearing the end of their life cycle and will need replacement. Others will need to be upgraded to meet the projected future demands.

### **Water Supply**

- In the Niven Lake residential area there is a need for a water booster and water re-circulation station. With the continued development of the Niven Lake subdivision, this station will be required to provide fire flow protection to the development area. This work is expected to be undertaken within the next couple of years based on the current development rate in Niven;
- The City is currently reviewing technologies to provide water filtration as part of the City's water treatment process. This is in response to planned changes to the guidelines that govern drinking water quality in Canada. It is likely that a filtration system will be required to meet these guidelines within the next five years. The City needs to select the most applicable technology to treat the source water to the new standards; and
- The submarine line from Pumphouse No. 2 to Pumphouse No. 1 is reaching the end of its useful life. The replacement of this line is a significant cost (in excess of \$5 million). The water quality of Yellowknife Bay is of equivalent quality to that found in the Yellowknife River.

### **Sewage System**

- Lift Station 10 will require a set of upgrades to meet the future loads to the station. Within this set of upgrades will be increased capacity and provide better access for the completion of operations and maintenance functions; and
- The Lagoon system is currently under review. The results of the Jacques Whitford report are currently being assessed by the Department of Public Works. The long-term sewage disposal area will remain the Fiddler's Lake area, however improvements to the system will be required to meet future sewage flows.

### **Solid Waste**

- The current landfill area is nearing its' capacity. It is expected that by 2008 (possibly earlier) a new landfill site will be required. The existing Baling Facility will service the new landfill, and it does not need replacing. There are maintenance requirements to the Baling Facility over the next 5 years, however the facility will remain in operation for the foreseeable future.

### **Evaluation and Response**

There is an obligation by the City and other levels of government to identify long-term land requirements to accommodate the necessary infrastructure to meet population driven demand. The City needs to ensure that existing assets and infrastructure are protected and that longer-term need requirements are identified.

The development of residential subdivisions has been completed in all previous studies assuming the use of the City's Servicing Standards for piped sewage and water. This included the prior work by various engineering firms in Yellowknife. These servicing standards, published by the City's Public Works Department, have been developed over a number of years, and provide for an economic and long-term solution to utility delivery in a northern environment.

Alternatives to the standard piped services do exist, and have been implemented on a trial basis in Yellowknife and other northern communities. For example, the use of the "Healthy House" sewage treatment and water recycling system is under pilot scale testing in N'dilo and Dettah (funded under CMHC and the GNWT). In discussions with the Department of Health and Social Services, GNWT,

this system is only being used on a trial basis and a broader implementation of this system has not been granted by the Department. The Department continues to review the operation, and will provide future direction on the use of this system within the NWT.

Current federal and territorial regulations that govern the supply of potable water, fire protection and sewage treatment by a municipality preclude the use of many point of use and point of entry water and sewage systems. While the development of these water and sewage systems will continue, the base assumption that the near term residential development will follow the current servicing standards is valid. The City of Yellowknife will continue to participate and monitor alternative service delivery models and emerging technologies.

The City is obligated through public health and safety requirements to provide suitable infrastructure to meet the functioning and growth of the community over the next ten years. Some of these infrastructure components are currently nearing the end of their life cycle and will need replacement. Others will need to be upgraded to meet the projected future demands. As the opportunity arises, energy efficient design is to be incorporated.

### **Objectives**

The City will maintain and improve municipal services in existing developed areas. The provision of services in new development areas and in redevelopments will consider costs to the City. New development will consider the natural drainage patterns and innovative design. The City will maximize the existing public investment in infrastructure to support a cost effective and fiscally responsible growth direction.

### **Policies**

1. A suitable water supply (quality and quantity) to present and future users will be provided.
2. A sanitary sewage collection system, which meets health and safety standards to present and future users will be provided.
3. A solid waste management system, which meets the regulatory agency requirements and the present and future user demands will be provided.
4. Future development will incorporate suitable storm water runoff facilities with natural drainage patterns.
5. Innovation and best practices in infrastructure planning and design that reflects northern conditions will be promoted.

### **Specific Proposals**

#### **Water Supply**

The City to complete the analysis and selection of the long-term water supply location and if the selection is the Yellowknife River, then plan for the replacement of the submarine line and undertake upgrades to the filtration and system upgrades.

#### **Sewage System**

The City will undertake interim operational changes to defer the timing of potential sewage system upgrade that is anticipated within the next ten years. As the City population increases a major capital program will be required to implement future treatment requirements.

### **Solid Waste**

The City will continue discussions with the MVLWB on the siting of a new landfill site. The current indication is that the new area for landfill of waste will be located within the existing granular quarries located to the north of the existing landfill site. The City will undertake further consultation (public and regulatory) to move this initiative forward. A detailed capital investment plan will be developed to implement the landfill initiative.

### **Watershed and Natural Drainage**

The City will undertake a detailed mapping and assessment of existing watershed and natural drainage areas to strengthen the information base for planning and engineering works.

### **Light Pollution**

The City will endeavour to study the issue of light pollution and determine ways for resolving this issue.

## **1.2.8 Transportation**

### **Considerations**

---

- Residents perceive that the traffic levels throughout the City have increased dramatically in recent times. In particular, there are vehicular traffic concerns along Old Airport Road due to increased development in the last 1-2 years;
- Yellowknife households have a high rate of automobile and truck ownership. In 2001, 83% of households owned a vehicle, compared with the national rate of 79%. The Yellowknife rate increased from 75% in 1997;
- The current and historical public transportation ridership is low;
- Motor vehicle registration data indicates growth exceeding population increases overall. In 2001, there were a total of 15,383 registered vehicles in the Yellowknife-Dettah-Rae Edzo catchment area. This represents a ratio of 842 per 1,000 population. Based on current patterns and populations, the number of registered vehicles may increase to 16,928 and 19,841 in the year 2009 and 2019, respectively.
- The Yellowknife Airport is important to the economy of Yellowknife. Associated with the airport is the potential expansion of industrial and commercial development activity due to its proximity to Highway No. 3;
- Within the development of the City there are three major routing issues that have arisen. These routes would allow for improved traffic flows through major areas of the City. More importantly, in some areas, the additional routes would alleviate conflicts on residential and service roads with the use of these roads for truck routing. Specifically these areas are:
  - Airport West by-pass (also described as Deh Cho Boulevard) this road would take industrial truck traffic from Highway No. 3 directly to the Kam Lake area. The result would be reduced truck traffic on Old Airport Road. Old Airport Road has become a frontage road for a growing number of retail and wholesale outlets and the continued use of this road as a truck route will result in increased vehicular conflicts;
  - Frame Lake North (also described as Old Airport Road secondary development) provides for additional development of industrial/commercial and institutional lots in this area; and

- Taylor Road Extension would provide for a direct route to future land development in the Tin Can, Negus Point and Con Mine lease areas. The development of this route would alleviate traffic flow conflicts that will result from increased traffic volumes on residential streets. The traffic would originate within the future developed areas, and impact the residential streets such as School Draw, 54 and 52 Avenues, Forrest Drive and Con Road. Of particular concern would be the increased traffic flow on 51A near the existing schools.
- There are several factors that will determine the staging and timing of the development of the above traffic routes. These will include the timing of the development growth, vehicle use pattern changes, and the implementation of the Airport Development Plan. Many of these issues are beyond the City's direct control. The City needs to monitor the situation and then respond in a timely manner; and
- Using an aggregate transportation/ infrastructure demand projection of 15 ha/ 1,000 population, the transportation/ infrastructure land demand for the planning period (2004-2009) is 30.8 ha and an additional 30.0 ha to the year 2014;
- Other values expressed during the consultation process include:
  - Incorporate transportation infrastructure considerations into planning and zoning for new development areas;
  - Commercial nodes to be within walking distance of new residential areas;
  - Include safe pedestrian corridors adjacent to roadways in all areas; and
  - Include alternate forms of sustainable transportation that connect residential developments.

### **Evaluation and Response**

---

There is an obligation by the City and other levels of government to identify long-term land requirements to accommodate the necessary transportation infrastructure needs, to meet population driven demand. The City needs to ensure that existing assets and infrastructure are protected and that longer-term need requirements are identified.

The high rate of vehicle ownership and its convenience coupled with the impact of the harsh climate of Yellowknife as a winter city and the challenges associated with a cost effective public transit system contributes to the low ridership rates for public transportation. In response, better design of transportation systems that encourage greater flexibility and less reliance on vehicles is appropriate. The development of trails and bicycle lanes in new development areas to the downtown, will alleviate some problems associated with traffic and parking. Public transportation efforts should be incorporated into the planning of new development areas.

While the high rate of vehicle ownership and reliance on private forms of transportation is a reality in Yellowknife, the projected increase in vehicles over the next fifteen years presents a number of traffic, infrastructure and quality of urban environment challenges.

From a public policy perspective, there is a need to recognize and respect the role of public transit in the overall growth management strategy for Yellowknife. The importance of public transit is reflected in its three goals:

- Economic: to accommodate urban travel demand at reduced financial cost to both the individual and the taxpayer;
- Social: to provide transportation for those who cannot or choose not to transport themselves by private vehicles; and
- Environmental: to reduce the environmental impact of urban travel.

The key principles and best practices from other jurisdictions that contribute to the transit-friendly development and that form part of the overall growth management strategy for Yellowknife include:

- Provide appropriate community densities;
- Provide mixed land uses (to accommodate a range of travel options or trip purposes);
- Organize density, land use and buildings to benefit from transit;
- Minimize passenger walking distances (maximum of 400 m);
- Create a pedestrian-friendly environment;
- Reduce transit travel time; and
- Build quality, user-friendly transit facilities (i.e. shelters, designated stops).

The growth management strategy must contribute to the goal of increased transit ridership and reduced private vehicle dependency.

### **Objectives**

The City will consider a more comprehensive and sustainable approach to transportation infrastructure in the development of the City. Alternative transportation methods will be considered and improved design and development separation of vehicle traffic from bicycle and pedestrian use to alleviate congestion and improve safety. The City will endeavour to provide a sustainable public transit system.

### **Policies**

1. New developments will be designed with suitable road layouts and good neighbourhood planning that provides vehicular and pedestrian circulation; public transit access between neighbourhoods; and incorporates a convenient flow of traffic to arterial and secondary roads.
2. An efficient road system will be created that focuses on traffic origin and destination patterns in the City.
3. To recognize the critical role and contribution of air, surface and water based transportation systems for efficient, safe and economical movement of people and goods within the City and the region.
4. The development of separate trails for pedestrians, skiers, snowmobiles and all-terrain vehicles will encourage alternate modes of transportation.

### **Specific Proposals**

#### **Taylor Road Extension**

The City will undertake detailed planning and design for the Taylor Road extension as part of the residential development of Tin Can Hill.



### **Frame Lake North Extension**

The City will re-evaluate/ update the Frame Lake North Extension concept to expand commercial and institutional development and realign Old Airport Road in the vicinity of Frame Lake.

### **Airport West Development Scheme**

It is proposed that the City continue its dialogue with the GNWT Department of Transportation and with the involvement of major leaseholders in the area of Airport West in the consideration of the realignment of the FOL Road with an extension to Deh Cho Boulevard to improve vehicular circulation.

## **1.2.9 Heritage/ Tourism/ Culture**

### **Considerations**

---

- Capital City status, transportation routes, and infrastructure make Yellowknife the destination, gateway and distribution point for 75% of NWT tourism and business travel. Continued visitation growth will be related to highway upgrading, a Mackenzie River bridge, diamond and aurora tourism, resource development, business and government activity. More tourism products and enhanced visitor services facilities will be required to respond to this traffic;
- Tourism, including the business travel segment, is an important economic sector for Yellowknife as it is a major contributor to the Yellowknife economy particularly the retail and service sectors. These expenditures are an essential component of retail and service sector viability;
- The *Waterfront Management Plan* considers the recreational potential as well as the heritage and tourism value of the Great Slave Lake shoreline;
- The arts community has identified the need for a community arts centre that includes rented studio space and complimentary low cost rental housing. The centre is viewed as both a functional space and an important contribution to the tourism infrastructure;
- The City of Yellowknife has identified capital projects and are considering the potential uses for a number of sites, including an arts centre, the Gerry Murphy Arena site, and the Multi-Plex site; and
- The City and residents are concerned with the demolition of buildings considered to be of heritage value. While many of these buildings are privately owned, stakeholders and residents want to explore ways of partnering to ensure some of these resources are assessed for their importance to the history and tourism growth of the City.

### **Evaluation and Response**

---

There will be a recognition of place, building, works and bodies of water as public heritage resources because of their prehistoric, historic, cultural, natural or aesthetic value. This recognition and respect for these resources will impact land use decisions at the city and regional levels in partnership with First Nations through the Akaitcho Process and developers. The identification of culturally significant sites and buildings will be a key consideration in the planning processes.

### **Objectives**

---

Tourism investments will complement the maintenance and enhancement of the City's cultural diversity and heritage as well as the natural environment commensurate with its role as a capital city

and regional service centre. Significant heritage structures should be inventoried and considered as part of a comprehensive system of sites.

## **Policies**

---

1. Yellowknife will be promoted as the ‘Diamond Capital of North America™’ and reflects the prosperity of the City and its people, and to encourage planning and design commensurate with that role.
2. Facilities and spaces of significant cultural value that contribute to heritage preservation, tourism development and economic development will be protected.
3. Methods of facilitating and funding the preservation of heritage resources in the community will be investigated.
4. The City will encourage development of tourism infrastructure by responsible investment and strengthened accessibility and connectivity to an open space, trail and recreation system that capitalizes on natural areas and water bodies.
5. The City will recognize and respect the importance of place, building, works and bodies of water as public heritage resources due to their cultural, natural and aesthetic value.

## **Specific Proposals**

---

### **Design Guidelines**

The City will investigate opportunities for heritage design guidelines for developers that will facilitate improved design. These guidelines will complement the zoning by-law. The development of the guidelines should involve the public to the greatest extent possible and include the work of the Heritage Committee and Downtown Committee.

### **Waterfront Management Plan**

The City will continue to implement the *Waterfront Management Plan* which provides for improved and enhanced vehicular, pedestrian and water use access; establishes water/ land use, development and occupancy policies and controls for the water surface and shoreline of Great Slave Lake; and identifies nature and heritage preservation areas.

### **Heritage Resource Inventory and Plan**

The City in partnership with First Nations and stakeholders will complete an inventory of significant heritage structures and sites and examine ways and means of assisting developers and the City in the recognition and protection of these resources. The Heritage Resource Plan should also address partnership options for various levels of recognition, protection and management.

## **1.2.10 Regional Development and Co-existence**

### **Considerations**

---

- The total area within the municipal boundary is 13,660 ha, of which 10,297 ha is land;
- Some 4,741 ha (representing 46%) is developed or committed (e.g. leased);
- A total of 5,556 ha (representing 54%) remain potentially available, but clearly not necessarily developable;
- Given what limited existing information is available with respect to geotechnical, engineering, environmental and archaeological considerations, it is assumed that of the 5,556 ha potentially available, some 30%, or 1,667 ha will not effectively be suitable given

- economic and technological realities. This leaves a total of 3,889 ha for land use demand modeling purposes;
- It is important to consider not only the land quantum but also the logical growth directions and how the configuration of the municipal boundaries impact expansion, investment decision and environmental stewardship;
  - Yellowknife is the largest Aboriginal community in the NWT; and
  - The growth of the Akaitcho community will place demands on land needs within and adjacent to the municipal boundaries and the infrastructure and services that the City provides.

### **Evaluation and Response**

Based on the population projections for a city of 50,000, an additional 31,400 persons will need to be accommodated within the municipal boundaries. The total corresponding land requirement to accommodate all land uses is some 2,670 ha. Based on recognized planning standards and practices regarding land allocation needs, the existing information regarding potentially available land and suitability for various land uses, some 3,889 ha, and the identified assumptions regarding economic activity and associated demand for various land uses, there appears to be an adequate gross land area to accommodate growth. The configuration of the municipal boundaries will need to be reviewed in greater detail. The growth patterns of residential land use will be affected once the areas south of the Con Mine are fully developed.

In 2002, a Memorandum of Understanding (MOU) between the YKDFN and the City of Yellowknife was signed. This MOU establishes a commitment by both parties for enhanced communication over a five-year period.

The MOU is intended to facilitate a renewed dialogue between the YKDFN and the City as a result of the City having interest in lands outside its current municipal boundary, including Fiddlers Lake sewage lagoon and the watershed area and the Yellowknives negotiation of treaty entitlement and self-government arrangements through the Akaitcho Process which includes the Government of Canada and the Government of the NWT. The Akaitcho Process, in the context of the 2004 General Plan, is discussed in further detail in Section 6.3.

In conjunction with the signing of the Framework Agreement, an Interim Measures Agreement (IMA) was signed by the Parties on June 28, 2001. The IMA is intended to guide the negotiations of the formal Akaitcho Agreement, and seeks to balance and protect Aboriginal and government interests in lands and resources until a final Agreement is concluded. In addition, the Akaitcho IMA establishes principles for a pre-screening process that will enable Akaitcho Dene First Nation representatives to participate in the assessment of various activities within their asserted territory.

There are tremendous opportunities for partnerships that are founded upon mutual respect and trust. The future relationships among all the regional partners must foster cooperation and acceptance. There is a tremendous opportunity to build upon the overall high level of satisfaction and optimism among the residents of Yellowknife. Nearly one-quarter of Yellowknife's population is Aboriginal.

## Objectives

---

Yellowknife will strengthen its role as a capital city, regional centre and the ‘Diamond Capital of North America’™ by taking a leadership role with respect to co-existence and partnerships with First Nations, the private sector and other levels of government to identify and manage regional development opportunities and facilitate a shared responsibility for addressing municipal and regional issues. The City will prepare itself to ensure the health, safety and interests of all residents are assured through the responsible assessment of current and future land and infrastructure needs and services.

## Policies

---

1. The City will ensure a suitable supply of land within the municipal boundaries is available for future development.
2. The City will actively participate in the Akaitcho land review and selection process through the Interim Measures Agreement. The rights and interests of all citizens will be respected and represented.

## Specific Proposals

---

### **Municipal Boundaries**

Within the context of the growth management strategy of the 2004 General Plan, the City will undertake a comprehensive review of the municipal boundaries, in light of growth pressures and opportunities, natural and manmade constraints, environmental remediation initiatives and the Akaitcho process, including the growth needs of N’dilo and Dettah and the potential implications for the City. It is important to consider not only the land quantum but also the logical growth directions and how the configuration of the municipal boundaries impact expansion, investment decision and environmental stewardship.

### **Land Transfer and Management**

The City will undertake the necessary consultation and processes with the various governments to ensure that the forecasted supply and demand for land is accommodated through land transfer, exchanges or other means as may be considered necessary or advisable.

### **Akaitcho Interim Measures Agreement: Schedule C – Commissioner’s Land**

The City will complete the documentation of the existing assets and infrastructure as well as the projected longer-term requirements pursuant to Schedule C, Appendix II of the Akaitcho IMA. This inventory will be guided by the following principles:

- Ensuring that there is a reasonable area for the City to grow to meet population and land use demands;
- Protection of public infrastructure and associated access, rights-of-way, and easements;
- Ensuring that the actual built-up area and municipal boundaries are not encircled or otherwise unreasonably constrained;
- Recognition of existing third party interests; and
- Ensure that the rights and interests of all citizens is recognized and represented.

## Section 2

### 2.0 Implementation Strategy

#### 2.1 Priorities and Timing

Based on consideration of the 2004 General Plan strategy components, including facts, values, policies and actions and further influenced by the results of the April 2004 public comments and submissions respecting the draft 2004 General Plan, the following initiatives are recommended following the formal adoption of the 2004 General Plan. These initiatives will be finalized and prioritized in the annual work plans and budgeting process. The monitoring, review and update of the identified initiatives will be detailed in the City's Annual Report and Council will conduct an annual review of the detailed initiatives.

##### On Going Initiatives

- Downtown Plan
- Mapping and Lands Information System
- Waterfront Management Plan
- Zoning By-law Review
- Con Mine A&R Plan Implementation Initiatives
- Akaitcho Interim Measures Agreement
- Residential Growth Study

##### Primary Initiatives

- Communications Plan (Public and Stakeholders)
- Community Services Master Plan and Open Space Inventory
- Land Transfer and Management
- Tin Can Hill Development Scheme
- Airport West Development Scheme
- Frame Lake North Extension
- Old Airport Road Development Scheme
- Old Town Development Scheme
- Commercial Development Strategy
- Gerry Murphy Arena
- Residential Market Demand Study
- Taylor Road Extension

##### Secondary Initiatives

- Arts Centre
- Brownfield Redevelopment
- Review Capital Area Development Scheme
- Design Guidelines
- Environmental Management System

- Heritage Resource inventory and Plan
- Industrial Growth Strategy
- Institutional Development Strategy
- Municipal Boundaries
- Sewage System
- Solid Waste
- Water Supply
- Preserve Watershed and Natural Drainage
- General Plan Review

### **Zoning By-law Review**

As part of the comprehensive review of the Zoning By-law and to support the implementation of the direction and specific proposals contained in the 2004 General Plan, the following supplementary specific considerations should be addressed:

- Review Section 3.0 Development Principles of the Zoning By-law No. 4024 with the aim of enhancing vehicular and pedestrian circulation both on and off site; enhancing landscaping requirements and site planning requirements in all areas of the City.
- Evaluate the opportunity for including the services of a qualified landscape architect to approve site development and landscaping plans;
- Site development should maximize the use of plant materials suited to the Yellowknife environment;
- Assess the development review process to achieve improved understanding, clarity and increased certainty for the public and developers;
- Review the existing requirements for public involvement that consider when, how and to what extent the public is engaged, including the notification of adjacent landowners and land claims interests. Opportunities for collaboration through working groups and planning/design charettes should be identified on projects of sufficient scale and scope;
- Consider the establishment of zoning categories for potential infill and redevelopment areas in accordance with the *Residential Growth Study*;
- Consideration of incentives for property owners and developers by providing ways and means of assessing increased flexibility in achieving density goals, and land exchanges and taxation relief/flexibility for a period of time;
- Review of site planning and design standards that will facilitate improved vehicular and pedestrian circulation, streetscape design and parking buffering; and
- Incorporate transit planning and design guidelines as part of the overall approach to planning and growth management. The intent is to make a stronger link between community design and transit service by recognizing and incorporating the goals and principles of public transit (as discussed in Section 8.2.8).

## **2.2 Performance Measurement, Monitoring and Accountability**

The 2004 General Plan sets out a strategic direction, framework and specifications to achieve physical development and growth management goals. A key aspect of the implementation of the 2004 General



Plan is the commitment to design and implement a pragmatic mechanism for performance measurement, monitoring and accountability.

Performance measurement entails data collection, monitoring (observing, recording and reporting), and public reporting and accountability with the view to assess progress, results and identify areas for improvement within clearly defined goals. An effective performance measurement system can:

- Provide information for communication regarding the success or lack of success of initiatives.
- Support continuous improvement by facilitating comparison of actual performance over time against stated expectations and objectives.
- Support budget development and financial management by illustrating the costs incurred to achieve desired results relative to benefits. This contributes to inform decision-making regarding the cost-effectiveness of achieving specific results.
- Improve management and operational practices by providing additional tools to public servants to operate programs in ways to achieve specified results.

The key steps in the design and implementation of an effective performance measurement system include:

- Determine what is to be measured.
- Select appropriate and valid measures (including specific standards or targets)
- Monitor, collect and analyze data.
- Communicate the results.
- Apply the results to support continuous improvement.

Among the key tasks that the City needs to complete in the design of a 2004 General Plan performance measurement system is the determination of appropriate and valid measures that will track progress towards the strategic direction and specific actions set out for the community.

Experience from numerous municipalities who have undertaken the development and reporting of performance measures indicates that the following principles would guide the measures selection process:

- Be directly relevant to the defined desired results and reflect the broad community objectives;
- Measure aspects around which the City of Yellowknife can be meaningfully undertaken;
- Be recognized as accurate, objective and reliable; and
- Be regularly available, in a cost-effective manner, from credible sources.

The City should design and implement a highly focused physical development and growth management performance measurement system. The system should be based on the approved 2004 General Plan Objectives and Policies (see Section 8) and focus on the establishment of clear and evidence-based indicators that are to the greatest degree possible, quantitative in nature.

The performance measurements should stem from the approved objectives and policies and be prioritized. Without limiting the scope of the approved objectives and policies, the performance indicators should take into consideration the emergent areas of interest to the community at large:

- Achievement in directing residential growth to the targeted development zones.
- Achievement of the 25% residential infill (population and dwellings) policy over the next five-year period.
- Contribution through the infill and redevelopment strategy to the stability and viability of the downtown by maintaining a minimum total population target of 10% (1996 census baseline) of total population within the core areas as defined by the *Downtown Plan* and specifically the CBD.
- The degree to which cost-effective municipal infrastructure, facilities and services are being achieved. This should be in the context of assessment and taxation as well as the development charges that are commensurate with private benefits and public cost associated with development.
- Achievement in directing industrial, commercial and open space institutional/community use growth to the targeted development zones and nodes.
- Progress towards the completion of the specific and sequenced development schemes.
- Transportation performance indicators that include: vehicle ownership and registration; public transit usage and passenger levels.
- The manner and extent to which public dialogue and engagement in the planning and development processes have been incorporated and facilitated.
- Progress towards the completion of a comprehensive inventory, mapping and information on system, and land use designation that: facilitates protection of designated open spaces to ensure a linked system; maximizes access to a continuous public shoreline right-of-way; promotes alternative transportation and recreation routes.
- Achievement of greater clarity, detail and specificity in design guidelines and development regulations.

::ODMA\PCDOCS\DOCS\94946\2