

Part C Objectives & Policies



Prince George has the largest population and employment base amongst all communities in the region and serves as the service and supply hub for industry activities across Northern BC. The City has a relatively young population with access to exceptional education and training opportunities, and a high rate of participation in the labour force. Growth in the education and health care sectors over past decades complements the existing resource base and has helped to diversify the local economy. Prince George is a highly rated investment jurisdiction with competitive taxes, development fees and land costs, and is uniquely positioned with growing transportation links to the world. The community has an abundant supply of land to accommodate business expansion in a variety of sectors and advocates for regional growth in forestry, mining, energy, tourism and other sectors that meet standards for environmental, social, and economic returns.

The Prince George economy has traditionally been reliant on forest sector activities, with a large proportion of employment attributed to the forestry and wood products manufacturing sectors. Diversification of the economy over the past two decades, however, has helped to provide stability in the economy. Growth in education, health and other services has occurred alongside new opportunities in the resource sector, including forest-based bioenergy innovation and mining and oil & gas development throughout Northern BC.



(Photograph courtesy Abstractions Studio)

A multitude of economic opportunities exist for Prince George in the forestry, mining and transportation sectors. The BC Labour Market Outlook for 2009-2019 predicts more than 40,000 job openings over the decade in the Cariboo Development Region due to both expansion and replacement needs in a variety of industry occupations including trades, sales & service, business & finance, health and education. The biggest issue impacting the community's ability to embrace new opportunities will be having an adequate supply of labour with the appropriate skills to meet employment demands. The findings of the Prince George Labour Market Research Report (2008) demonstrate a gap in certain skilled and professional labour sectors and qualify a need for further research and strategic planning for effective recruitment and retention programs in Prince George. This labour gap in certain sectors can be equated to an aging workforce, shifting industry trends, changes in educational requirements and competition for labour with other regions.

Statistics illustrating population and labour force characteristics provide insight into the current state of the Prince George labour market:

- Estimates for 2010 indicate Prince George saw a slight increase in population of 0.8%, while B.C.'s population increased by 1.6%. Averaged over the five

years between 2005 and 2010, the Prince George population grew by 0.6% per year while employment increased at a rate of 1.7% per year.

- Prince George has a higher birth rate than the provincial average.
- 11.4% of Prince George residents have aboriginal identity compared to a considerable lower 4.8% provincial average.
- Prince George's population is slightly younger compared with the provincial average, with a median age of 36.5, compared to B.C. where the median age is 40.8.
- Prince George has a considerably lower rate of immigration compared to the province. Only 9.7% of Prince George residents were born in another country. This is in sharp contrast to the 27.5% of B.C. residents who were born abroad.
- Compared to the province as a whole, Prince George has a similar percentage of the population having achieved at least a high school diploma (68.4% in PG and 68.1% in BC). 40.9% of the population has post-secondary credentials, with a slightly higher proportion of individuals having trades education, which reflects the industry structure of the economy. The population's level of educational attainment has increased steadily over the past decade, in line with the creation of the University of Northern BC and other new educational opportunities.

Opportunities exist to integrate underutilized segments of the population into the local work force, including women, First Nations, mature workers, students, immigrants, and people with disabilities. Immigration and migration also present options for growing the labour force, given the attractiveness of the community in terms of affordable cost of living and amenities that contribute to a high quality of life. (Source: Initiatives Prince George)

The unemployment rate in the Prince George area was 7.9% in 2010; in four of the five years between 2006 and 2010, the unemployment rate fell well below the average over the previous decade, and employment reached a higher level than at any time over the past two decades in 2010. The building permit value in 2010 (\$126.1M) remained well above the 10 year average of \$90.9M; the annual average growth in permits between 2000 and 2010 was 21.3%. Housing starts were relatively stable in the city over the decade, with 213 in 2010, slightly higher than the previous 10 year annual average (209). (Source: BC Stats)

Objectives

- Objective 5.1.1 Support land use and planning that enhances Prince George as a sustainable, resilient, knowledge based, resource economy which is connected to the world.
- Objective 5.1.2 Focus on downtown development with the implementation of the policies, plans, programs and projects outlined in the Smart Growth on the Ground Downtown Prince George Concept Plan and Downtown Partnership report.
- Objective 5.1.3 Support connectivity of our businesses to the world by improving our transportation (road, rail, and air) and data networks.
- Objective 5.1.4 Encourage the infill and redevelopment of existing employment centres while accommodating the phased development of designated commercial and industrial lands.
- Objective 5.1.5 Support institutions that enhance our knowledge-based economy such as University of Northern British Columbia (UNBC), College of New Caledonia (CNC), and commercial and trades training opportunities.
- Objective 5.1.6 Support the Growth Management strategy by matching employment growth with population growth.
- Objective 5.1.7 Work collaboratively with the Government of Canada, Province of BC, Lheidli T'enneh First Nation, Regional District of Fraser-Fort George and other partner agencies to advance collective economic priorities.

Policies

General

- Policy 5.1.1 Protect and enhance transportation networks, transit, service corridors and Utilities (water, sanitary, storm, and other public and private utilities) for the efficient movement of people and materials, as well as the transmission of energy, and communications.
- Policy 5.1.2 Promote revitalization with incentives that stimulate development consistent with the objectives of this Plan.
- Policy 5.1.3 Encourage business competitiveness through the efficient use of resources and energy (e.g., water conservation and GHG emission reductions).

Commercial

- Policy 5.1.4 Limit the expansion of Service and Regional Commercial development to designated areas.
- Policy 5.1.5 Incorporate commercial and community facility institutional uses into each neighbourhood to provide a mix of employment opportunities, subject to compatible scale and intensity.
- Policy 5.1.6 Encourage a range of tourist opportunities that promote our arts, culture, and heritage including tourist accommodation facilities such as hotels/motels, campgrounds, and bed & breakfasts.

Downtown

- Policy 5.1.7 Promote a high-density core with mixed use commercial services. Encourage high-density residential, commercial, entertainment, government and administrative uses.
- Policy 5.1.8 Protect and enhance active transportation links to the broader community.
- Policy 5.1.9 Re-capture the essence of 'City Beautiful' design by enhancing public spaces downtown.
- Policy 5.1.10 Support the development of a performing arts theatre, wood innovation & design centre, expansion of the fibre optic network, a range of housing options, integrated health centre, downtown education campus, expansion of the district energy system, as well as local, neighbourhood and regional commercial uses while providing an attractive pedestrian-oriented built environment.

Industry [See also Section 8.3 E. Business Districts]

- Policy 5.1.11 Protect the environment (air, water and soil quality) through the strategic location of industry and the application of prudent regulations to reduce harm from industrial discharges and emissions.
- Policy 5.1.12 Encourage eco-industrial projects that link processes, sectors, and buildings to share efficiencies in material, waste and energy production and distribution.

Farmland

- Policy 5.1.13 Protect farmland as an economic generator and increase awareness of the importance of local food for our health and well-being.

- Policy 5.1.14 Buffer farmland from urban development to protect farmland capacity and mitigate land use impacts.
- Policy 5.1.15 Protect farmers' access to local and regional markets
- Policy 5.1.16 Protect farmers' access to a healthy water supply.

Airport

- Policy 5.1.17 Develop and maintain adequate transportation links to support passenger and freight movement.
- Policy 5.1.18 Encourage compatible land uses on lands adjacent to the airport within the Airport Logistics Park.
- Policy 5.1.19 Support the development vision of the Airport Master Plan by coordinating land use and services. [*See also Section 0 Built Environment*].



Business Improvement Associations

- Policy 5.1.20 The City recognizes and supports the role of Business Improvement Associations to support the development, maintenance, and redevelopment of commercial areas.

Education

- Policy 5.1.21 Collaborate with UNBC, CNC and School District No. 57 to ensure educational programs meet changing labour force needs and advocate for the role of these institutions as research centres for the development of technology, health care, environmental, business and other disciplines.

Our quality of life is closely linked to our physical environment and natural areas in and around the City. Residents continue to express the great value of the natural environment throughout the myPG Sustainability Plan and OCP review process. This strong sense of stewardship and desire to protect the environment has been identified.

Since everyone uses, benefits and affects our local environment in which we live, work and play, the City of Prince George is committed to a community approach to maintaining a healthy environment. A community approach acknowledges there are a broad range of actions, strategies and commitments that can be made by individuals, community and interest groups, education sector, public health organizations, businesses, and all forms of government.

The community has provided its top goals within the myPG Sustainability Plan, also identified with the myPG Environment Strategy which include Clean Air, Clean Water, Green City Green Practices, Green Energy, Reduce Carbon Emissions and Adapt to Climate Change, and Reduced Waste. These goal areas are utilized to provide policy direction outlined within this Plan.

As part of developing this Plan, considerable work was completed to identify and map the key physical characteristics of the city such as significant slopes over 20% grade, various watercourses, energy and greenhouse gas emissions, etc. See also Part D for Implementation.

Designation of Areas

Natural Environment

Schedule B-1: Natural Environment provides context for policies and development permit area guidelines, which can both refer directly to areas on this map. This Schedule includes: Agricultural Land Reserve (ALR), Parks, Significant Slopes over 20% grade, Watercourses, Bodies of Water, Groundwater Protection Development Permit Areas, and Riparian Protection Development Permit Areas. Please note that properties identified as *ALR exclusion subject to ALC Resolutions* west of the airport lands have been approved for exclusion from the ALR by resolutions of the Agricultural Land Commission (ALC). The purpose is to facilitate light industrial development, with the ALR exclusion subject to conditions to be met at the time of rezoning, subdivision and servicing as outlined within ALC resolutions.

6.1 Clean Air

Improving air quality is a key goal that has been expressed through past OCPs and again emphasized through the myPG Sustainability Plan process. There are many factors that contribute to our air quality issue and we cannot point to one single emission source as our primary issue. Recent research shows there are multiple pollution sources from tail pipes, to road dust, to natural background dust levels, to our transportation industries and to a number of our other industries and even some of our commercial businesses. Our geography and weather conditions also play key roles, sometimes causing air and pollutants to be trapped in the bowl and occasionally triggering air quality advisories. In recent years, significant work by major industries and others has helped to reduce particulate matter levels and odour (the smell from pulp mills caused by “total reduced sulfur”). Making significant reductions in pollutants such as particulate matter should require reductions in all sectors including residential, transportation, commercial and industrial and every individual has a role and responsibility to play.



Objectives

Objective 6.1.1 Improve air quality by reducing fine particulate matter levels, odour and other harmful pollutants.

Policies

- Policy 6.1.1 Encourage all sectors (residential, community facilities, commercial, industrial and agricultural) to investigate and implement new technologies to reduce air pollutants.
- Policy 6.1.2 The City shall continue to work with the Regional District of Fraser-Fort George to identify new heavy industrial lands outside of the Bowl area
- Policy 6.1.3 The City should continue to promote the use of best available technology in all new and existing industry.
- Policy 6.1.4 The City should continue to play an active role in and support voluntary airshed research, education and planning initiatives such as the Prince George Air Improvement Roundtable (PGAIR) and the implementation of their airshed plans.
- Policy 6.1.5 The City should continue to review and update the Clean Air Bylaw as information, technology and standards change and improve.
- Policy 6.1.6 The City should continue to promote programs that achieve net benefits to air quality and climate change.

Policy 6.1.7 The City should encourage new and existing development to use hard surfacing of parking or storage areas while managing stormwater on-site (where appropriate), to reduce negative impacts to water quality and quantity.

6.2 Clean Water

The community would like to ensure its waterways and the water supply are protected and consumption is reduced. The City and its partners should continue to protect water supplies from overuse and potential contamination, to treat wastewater adequately, to improve management of storm runoff and its impacts on waterways, and to identify and implement methods to reduce leaching and runoff from snowdumps and waste management areas.

The City of Prince George relies on groundwater for all of its water supply. Over 80% of the City's water wells tap into aquifers that are recharged by the Nechako River. City drinking water comes from 6 municipal wells that draw 17.8 billion liters of water each year from underground aquifers. By utilizing underground aquifers, residents are protected against bacteria and other pollutants often found in surface sources such as lakes or rivers. Treated water is pumped to and stored in 14 service reservoirs throughout the City. Water is supplied to homes either directly from water supply well pumps or from one of these reservoirs.



Although there appears to be an abundant supply, our groundwater is vulnerable to contamination due to limited protective covering to prevent contaminants from entering the aquifer. There are many potential sources of contamination located near to this valuable groundwater source. A reduction in water demand slows the movement of any potential contaminants into and through the aquifer, making it easier to treat, and easier to avoid potential contamination (City of Prince George 2005).

The quantity of water supply should be altered by climate change. Rising temperatures are expected to diminish snowpacks and increase evaporation. This should affect the seasonal availability of water, and may result in more frequent periods of water scarcity (IPCC 2007a). Also, although precipitation in central BC is projected to increase, studies predict a widespread increase in extreme precipitation events. Although there should be more precipitation, there should be an increase in periods of drought (Christensen et al., 2007). Groundwater recharge rates and surface water interactions should also be influenced with climate change. (Picketts et al, 2009)

In addition, groundwater supports river flows and supplies wetlands, lakes and other important natural features. Groundwater protection and management is an often overlooked but vital part of work that the City of Prince George carries out. [See also Section 6.2.A Groundwater].

Objectives

- Objective 6.2.1 Preserve, protect and enhance the quality of water resources and reduce consumption of the water supply.
- Objective 6.2.2 Preserve, protect and restore riparian and wetland areas to maintain and enhance water quality and quantity, and the ecological functions of watercourses so they continue to support healthy fish and wildlife populations.
- Objective 6.2.3 The City should continue to facilitate learning opportunities, build capacity in the community, and develop measures to preserve, protect, enhance, and conserve our water resources quality and quantity

6.2 A. Groundwater

Objectives

- Objective 6.2.4 To protect well heads and aquifers from incompatible development that may lead to contamination of the City's potable water supply. By regulating development within capture zones the City may reduce the potential risk of contamination.

Policies

- Policy 6.2.1 Where development plans are considered for aquifer recharge areas all uses and interests in the watershed should be considered, particularly related to the water supply.
- Policy 6.2.2 In groundwater protection areas the City should not permit proposals for new development of:
- incinerators;
 - transfer stations;
 - vehicle dismantlers and metal recyclers (scrap yards);
 - waste management or treatment facilities;
 - manufacture, processing, sale, storage, or distribution of wood waste;
 - manufacture, processing, sale, storage, or distribution of agricultural waste;
 - manufacture, processing, sale, storage, or distribution of petroleum products or allied petroleum products;
 - manufacture, processing, sale, storage, or distribution of waste or effluent as defined under the Environmental Management Act;
 - snow storage;

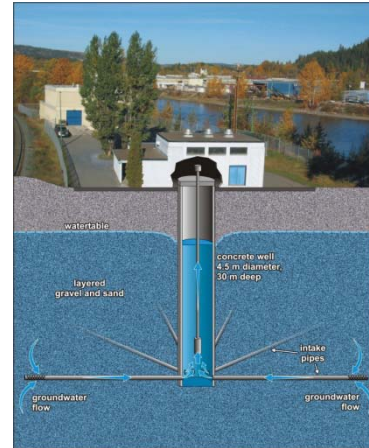
- composting or burial of livestock, poultry or aquaculture products;
- sewage effluent discharges to ground; nor,
- any other development which may pose a risk to groundwater.

Policy 6.2.3 In groundwater protection areas the City should not allow any new effluent, stormwater runoff, or other contaminated discharges to ground. Where such discharges already exist the City may, if necessary, control the activity by enforcement of a bylaw.

Policy 6.2.4 The City should consider refinement and additional groundwater protection areas for the catchment area of the City's water supply wells, including but not limited to protecting areas immediately adjacent to the Nechako and Fraser Rivers upstream from the wells.

Policy 6.2.5 The City may require developers/property owners to investigate, monitor and control (and where necessary remediate) land and groundwater contamination.

Policy 6.2.6 The City should contemplate prohibiting all pesticide use within groundwater protection areas.



6.2 B. Integrated Stormwater Management

Integrated, or watershed-based, stormwater management recognizes the relationships between the natural environment and the built environment, and manages them as integrated components of the same watershed. It includes attention to both stormwater quality and quantity in a proactive approach.

Objectives

Objective 6.2.5 The City promotes a watershed and cumulative effects approach to riparian area protection with the aim of preserving the health of the entire watershed when considering impacts on watercourses and riparian areas.

Objective 6.2.6 The City strives to preserve drinking water quality by controlling the quality of storm and creek waters impacting water supply sources and wastewater treatment under the City's direct control.

Policies

- Policy 6.2.7 The City encourages the use of approved pervious surfaces for roads, driveways and parking lots, ensuring their application are not to the detriment of other policies identified in this bylaw (i.e., air quality).
- Policy 6.2.8 The City should ensure erosion and sediment control for development are considered on a watershed scale and identify areas of high risk sediment movement and erosion potential.
- Policy 6.2.9 The City should continue to develop watershed drainage plans and implement priority areas identified within those plans.
- Policy 6.2.10 Storm water management planning shall consider protecting development from erosion, sedimentation and flooding.
- Policy 6.2.11 To adapt to climate change, storm water management in Prince George should be designed to account for future temperature and precipitation changes. The City should undertake further study to determine the local impacts of climate change on existing storm water infrastructure, and consider any required changes to promote resiliency.
- Policy 6.2.12 To adapt to climate change, stormwater in Prince George should be designed with maximum onsite retention to minimize related flooding, improve water quality and save on infrastructure costs.
- Policy 6.2.13 To adapt for climate change, water supply (both quantity and quality) should be protected and conserved to the greatest extent possible by: protecting aquifers and recharge zones; concentrating development near existing sources; and encouraging household and industry water conservation.
- Policy 6.2.14 The City should continue to promote community outreach and education that addresses water quality and quantity protection, and promotion of integrated storm water planning.

6.2 C. Water Conservation

In 2005, the City of Prince George initiated a Water Conservation Plan that provided an overview of the City's water system and identified actions to conserve water. The goal of water conservation planning is to achieve more efficient water-use by residential, industrial, commercial and institutional consumers in the City of Prince George. The impetus for moving toward water conservation is both economic and environmental. Economic concerns include a desire to alleviate capacity constraints, defer infrastructure renewal and replacement costs, and reduce operational costs.

Environmental considerations involve minimizing the impact of both extracting and subsequently releasing treated city water to the natural environment.

Water conservation is often perceived to be restrictive and associated with personal inconvenience and rationing. Water conservation is however, not only a matter of using less water through use-limits such as sprinkling regulations, but involves careful management of water resources using a wide variety of methods. Mechanisms to assure and maintain water quality, repair leaks, use water saving technology (such as low-flow-toilets), and xeriscape (low water-use landscaping) all reduce excessive demand and contribute to water conservation.



Objectives

- Objective 6.2.7 Use all feasible water-use efficiency tools to reduce residential water consumption.
- Objective 6.2.8 Operate sustainably to reduce water demand which should reduce operational costs and should help defer future capital investments for additional storage, pumping and distribution capacity.
- Objective 6.2.9 Increase public awareness on the value of aquifers and reduce their vulnerability.
- Objective 6.2.10 Protect groundwater resources and the Nechako River and Fraser River as the receiving environment for the City's wastewater.

Policies

- Policy 6.2.15 Support existing conservation efforts and pursue implementation of new strategies identified within the City of Prince George Water Conservation Plan, 2005 for: water metering, volumetric pricing, information & education, and municipal leadership in advancing water use efficiency.
- Policy 6.2.16 Encourage developers and landscapers to incorporate xeriscaping (drought resistant, low water requirement) concepts into development of landscape projects.
- Policy 6.2.17 The City should work with all government forms and agencies to demonstrate leadership in advancing water use efficiency.
- Policy 6.2.18 Develop water efficient landscaping through a partnership between the City and community members/organizations.
- Policy 6.2.19 The City should consider integrating rain collection and reuse in all City and private developments and renovations.

Policy 6.2.20 The City and Regional District of Fraser-Fort George should continue to exchange information regarding Foothills Landfill groundwater monitoring results and the Nechako Aquifer water quality.

6.2 D. Watercourses and Wetlands

The City is fortunate to have a number of streams, lakes and wetlands within our community in addition to the Nechako and Fraser rivers. These watercourses provide important spawning, rearing and overwintering habitat for a variety of salmon, trout, the critically endangered Nechako white sturgeon and numerous other fish and wildlife species. Fish are sensitive to land use changes from tree removal (loss of cover, shade, food and bank stability), changes to water quality (introduction of sediment, contaminants and chemicals), and damage to habitat (sediment infilling spawning beds, garbage entering the water). The streams are linked to our groundwater resources beneath our feet which our residents rely on for clean, safe drinking water.

The land we live in is very diverse with the low lying Bowl area of the river valleys, the cutbanks to the north, Nechako Plateau towards the west and rugged mountains towards the east and north. The different geography provides a diverse opportunity to live, work, and play in our city and the region around us.

Objectives

- Objective 6.2.11 Preserve sensitive ecosystem areas, their living resources and connections between them in a natural condition and free of development to the maximum extent.
- Objective 6.2.12 The City encourages the rehabilitation, restoration and enhancement of negatively impacted riparian features and functions.
- Objective 6.2.13 The City promotes a watershed and cumulative effects approach to riparian area protection with the aim of preserving the health of the entire watershed when considering impacts on watercourses and riparian areas.

Policies

- Policy 6.2.21 The City should work with all forms of government to promote public awareness and advise proponents of development and infrastructure projects to employ best practices in development planning to achieve no net loss of fish habitat.

Policy 6.2.22 To achieve no net loss of fish habitat, require that all City infrastructure projects and private development proposals follow this sequence of management actions:

- Avoid impacts to habitat through appropriate siting and design;
- Mitigate minor or temporary impacts by reducing the level of impact, and repairing and restoring damaged habitat to their former state or better; and,
- Compensate only when loss of habitat is unavoidable. Compensation proposals should not be accepted where effective mitigation measures are feasible. Applicants are responsible for proving that all measures to avoid or mitigate habitat loss have been exhausted before proposing compensation.



Policy 6.2.23 When using fill material to raise the natural ground elevation, the toe of the fill slope shall be outside the riparian leavestrip area. The fill must be adequately protected against erosion that could carry sediment to a watercourse.

Policy 6.2.24 The City recognizes the importance of wetlands and the need for their protection and/or rehabilitation in land use planning and should work to identify and develop recommendations to protect wetlands.

Policy 6.2.25 Where appropriate, watercourses are to be maintained in an open state (not enclosed in a culvert, or other engineered material). The City should explore reviewing the establishment of a program to identify and remove obstacles impeding fish movement such as inappropriately designed or installed culverts or other stream crossings.

Policy 6.2.26 Other than inside designated groundwater protection areas, the City should support the use of sustainable drainage systems for new discharges to ground of surface run-off from roads, vehicle parking and public/amenity areas, provided that an appropriate level of risk assessment demonstrates the groundwater conditions to be suitable. There should be adequate protective measures for groundwater and arrangements for effective management and maintenance of the system.

Policy 6.2.27 The City should prohibit the discharge of unmanaged rainwater into watercourses and to reduce instances of point and non-point pollution sources that negatively affect water quality within watercourses.

- Policy 6.2.28 The City should continue to work with stakeholders and support programs for the critically endangered Nechako White Sturgeon.
- Policy 6.2.29 The City should work with developers to plan discrete access points to watercourses that do not degrade or destroy riparian habitat.
- Policy 6.2.30 Maintain intergovernmental partnerships to facilitate a “one-window” approach to planning and approvals.
- Policy 6.2.31 Implement stewardship awareness programs, in cooperation with other forms of governments, local environment organizations and schools to increase public awareness and support protecting sensitive and important ecosystems.

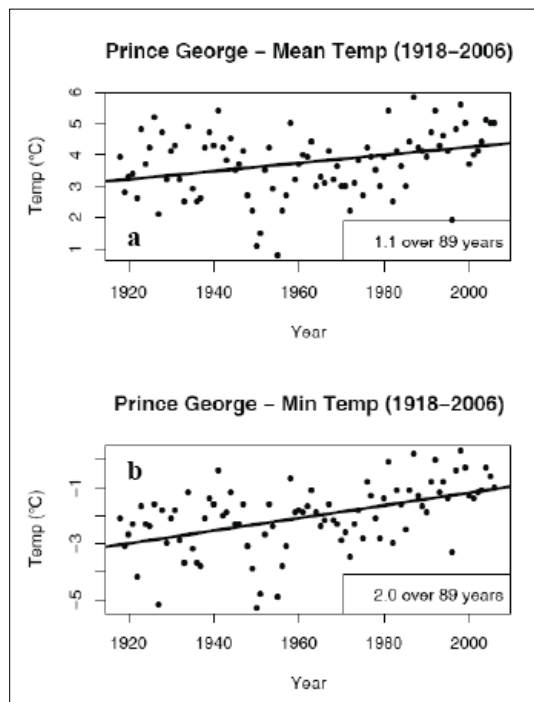
6.3 Climate Change Adaptation

Climate change adaptation is preparing for the impacts a community is expecting to experience, and making it more resilient to unexpected changes. The city has made adjustments in response to many climate related impacts, and these impacts are expected to intensify over at least the next 50 years even if extensive mitigation occurs. It is important for a community to proactively plan for changes in order to avoid costly consequences such as infrastructure damage and risks to safety, and to capitalize on any potential positive benefits such as longer growing seasons. The purpose of this section is to communicate the concept of climate change adaptation, identify the priority impacts for Prince George, and set out policies and objectives to reduce risks and maximize potential benefits associated with climate change.

Since 2007, the City has been working with many partners to examine future temperature and precipitation projections, and to determine how they should affect the City. Over the past 90 years average temperatures in Prince George have risen by 1.1 °C, and night time minimum temperatures have risen by 2.0 °C (see Figure 1). In the 2050s, temperatures are projected to increase by 1.6 to 2.5 °C (compared to baseline temperatures), and precipitation levels are expected to rise by 3 to 10% with most of the precipitation increase should occurring in winter. Given the range of future projections and the uncertainty of predictions, it is important to plan for resiliency to account for the unexpected changes and events.



Figure 2: (a) Mean and (b) Minimum Temperature Trends in Prince George: 1918-2006, Courtesy of the Pacific Climate Impacts Consortium.



Community adaptation requires input from local stakeholders that understand the region and the municipality. The results of several exercises with experts and community members in Prince George indicate that the priority local climate impacts are:

1. Forests;
2. Flooding;
3. Transportation;
4. Severe weather/emergency response;
5. Water supply;
6. Slope stability;
7. Storm water; and,
8. Buildings and utilities.

Other important priorities that need to be considered include: health; agriculture; and, new residents and businesses. The adaptation priorities should be quite similar across north-central BC.

This section has close relationships with many other components of this Plan. Adaptation actions should be coordinated with mitigation actions, and the City should search for strategies that address both concurrently (such as local agriculture and compact urban form). Furthermore, a community that proactively pursues adaptation and makes it more resilient should ultimately experience significant social and economic benefits.

Objectives

- Objective 6.3.1 Promote climate change adaptation in order to minimize negative climate related impacts on human safety, health and well being.
- Objective 6.3.2 Consider climate change adaptation in all aspects of future decision making related to the priorities identified in the Adapting to Climate Change in Prince George document.
- Objective 6.3.3 Adapt to climate change by encouraging infrastructure development that minimizes the risk of negative climate related impacts.
- Objective 6.3.4 Adapt to climate change by promoting resiliency to unexpected climate related changes.
- Objective 6.3.5 Adapt to climate change by planning to capitalize on positive impacts that may arise as a result of climate related changes in the region.
- Objective 6.3.6 Improve public awareness of climate change, and work to concurrently adapt to and mitigate climate change impacts.

Policies

General

- Policy 6.3.1 Future climate conditions and their expected impacts should always be considered in the planning, design and construction of any new development. This consideration should be explicitly stated in designs.
- Policy 6.3.2 Developments should be resilient to a wide range of future conditions (such as instances of severe and unusual weather).
- Policy 6.3.3 All climate change mitigation efforts should examine their climate change adaptation implications (and vice versa) to ensure that adaptation and mitigation efforts are complementary.
- Policy 6.3.4 The climate change impact priorities outlined in the Adapting to Climate Change in Prince George document should be considered in new development proposals. Consideration of these priorities should minimize the risks of potential negative impacts, and maximize potential opportunities.
- Policy 6.3.5 The City should take a leadership role in promoting adaptation to climate change by: educating local stakeholders and developers about climate change; assisting developers and stakeholders as they consider climate impacts; and providing resources and conducting research to enable adaptation.

6.4 Green City, Green Practices

6.4 A. Brownfield Redevelopment

A brownfield can be identified as an abandoned, vacant, derelict or underutilized site with active potential for redevelopment that may have contamination or the perception of contamination from a previous use. These sites are often former commercial or industrial properties. Examples of Brownfield Sites can include:

- Abandoned gasoline/service stations;
- Former waste disposal facilities;
- Former commercial sites (eg. junkyards, auto repair shops);
- Former industrial sites (eg. drycleaners, mills); and,
- Vacant derelict buildings.

Brownfields may be contaminated sites but not always. Some experts suggest that up to 30% of brownfield sites, once investigated, are found to be uncontaminated or marginally contaminated. Further, not all contaminated sites are brownfields. The difference lies in the redevelopment potential of the site. Reinvestment into brownfield sites shifts development pressure away from undeveloped land and uses existing infrastructure investment. Benefits include returning non-productive real estate assets to a higher and better use, strengthening the social fabric by increasing community pride and safety, and protecting the environment at various levels including groundwater that we drink and the ecosystems our watercourses sustain. The need for a Brownfield Redevelopment Strategy is established and supported through various City plans, policies, and documents. The goal of brownfield redevelopment is to bring brownfield sites back into productive use by the removal of perceived and real threats of contamination.

Objectives

- Objective 6.4.1 To promote and facilitate the remediation and redevelopment or reuse of brownfield sites to strengthen established and readily serviced growth areas within the City through stimulation of private sector initiatives and strategic municipal action by:
- a) Increasing community awareness of the economic, social and environmental benefits of brownfield redevelopment;
 - b) Improving the health and safety of established neighbourhoods, in which brownfield properties are located;
 - c) Improving environmental conditions of the City through the remediation or removal of contaminated soils;
 - d) Improving the municipal tax base by encouraging reinvestment on brownfield sites; and,
 - e) Working cooperatively with our partners in the community to integrate site contamination mitigation and prevention measures to ensure public health and safety with emphasis on protecting our City's groundwater aquifers.

Policies

- Policy 6.4.1 City endorsed revitalization areas should be prioritized for key brownfield development and redevelopment initiatives.
- Policy 6.4.2 The City should enter into partnerships with other governments and the private sector to undertake brownfield remediation and redevelopment projects, and increase awareness.
- Policy 6.4.3 Ensure development or redevelopment of Brownfield or other levels of contaminated sites incorporate environmentally sensitive remediation plans and consider the wide range of environmental impacts (energy, and waste, air, water, and land impacts) that an end-use may have.
- Policy 6.4.4 The City should use sustainable methods of demolition and cleanup, including natural and ecological forms of remediation and the reuse of building materials where possible.

6.4 B. Caring for our Natural Environment & Forests

Prince George's natural environment dominates the landscape, bringing the natural areas into close proximity with urban and residential developed areas. In addition to having all of the urban amenities, residents are surrounded by the natural environment including ample open spaces, community parks, streams and the forested landscapes. Natural areas take into account not only the wildlife and natural features of the landscape, but they are also important to residents and have a direct impact on the quality of life cherished by many. For some people it is the local park they walk in, and others it is a patch of natural forest that provides for wildlife viewing.



(Photograph courtesy Andrew Johnson)

Prince George is a city within the forests. Extensive natural and managed forested landscapes surround the city and an abundance of forested lands weave throughout the urban and rural landscapes of Prince George. We have a mix of large parcels of natural forests, forests that are abutting a neighborhood (interface forests), and managed forests in our parks and greenbelts. While the benefits of this close relationship with our forests are many, this situation also poses certain challenges and hazards. This Plan identifies management issues for urban/natural interface environments and sets out objectives and policies for maximizing benefits and reducing human-wildlife conflicts, and other undesirable events or conditions affecting or derived from interface areas. [See also Section 6.4 C Wildfire Hazard regarding the risks of interface fire].

Although the proximity of residential and urban areas to natural areas is very desirable, it also means there is little buffer between the two. We face a large ratio of natural to developed area, and must manage multiple factors in order to maintain the integrity of each. Managing development, encouraging stewardship, and supporting initiatives that protect and promote our interface areas are important in ensuring a positive legacy for future generations of Prince George citizens.

Prince George is emerging from a major shift in the landscape due to the mountain pine beetle. The majority of pine stands have been removed, leaving a more open landscape in many areas. Long term planning is required to balance new threats to our landscape from forest pests, forest fire risk and wildfire interface, as well as climate change and how that should affect future growing regimes in our region.

Objectives

- Objective 6.4.2 Protect environmentally significant and sensitive areas, and the unique land features in our community.
- Objective 6.4.3 Require environmentally responsible development practices and the integration of development design into the natural features.
- Objective 6.4.4 Maintain and promote awareness of the social, cultural, environmental, and economic values of Prince George's urban forest.
- Objective 6.4.5 Reduce the potential for human-animal interactions before they occur.
- Objective 6.4.6 Minimize or reduce the negative impacts of invasive species on the natural environment, ecological integrity and biological diversity, and consider the effects of climate change on future invasive species propagation.

Policies

General

- Policy 6.4.5 Encourage the incorporation of preventative measures in new development plans that consider the natural environment. This can include, but is not limited to, the prevention of soil contamination, urban interface planning, hazardous conditions analysis, energy efficiency, etc.
- Policy 6.4.6 Enhance awareness of the importance and benefits of maintaining a healthy environment and environmentally sensitive areas through a variety of approaches including opportunities for public participation in protection and restoration activities that create enjoyment and respect for the natural environment and sensitive areas

- Policy 6.4.7 The City should maintain the habitat, landscape connectivity, and ecosystem diversity needs of wildlife within the greater landscape context, where appropriate within municipal boundaries.
- Policy 6.4.8 The City should continue to seek ways to balance interface values such as visual quality, recreation, wildlife habitat, erosion potential, and development priorities.
- Policy 6.4.9 The City should continue to manage the forests in the Prince George Community Forest according to the objectives laid out in the Probationary Community Forest Agreement and the Prince George Community Forest Management Plan (2006-2011) and subsequent agreements and plans as may be created. The City should support the Prince George Community Forest Advisory Committee in its role as community advisors in the management of the Prince George Community Forest as long as is appropriate.
- Policy 6.4.10 To adapt to climate change, forest and natural areas related planning and study should include the consideration of climate change and its effects on environmental, economic and social conditions in Prince George. Forest impacts related to climate change include: fires; infestations; changing growth rates; and changing composition.
- Policy 6.4.11 Integrated land use approaches should be implemented wherever possible to improve opportunities for biodiversity, ecosystem connectivity, recreation, agriculture, and local food production, while reducing conflicts.

Multiple Urban Forest Values

- Policy 6.4.12 The City recognizes that it is important to have a mosaic of urban forest types to meet the needs of the public.
- Policy 6.4.13 The value of the urban forest in mitigating climate change, improving air quality, providing ecosystem services, and achieving social objectives should be considered when weighing development options.
- Policy 6.4.14 Safety should always be considered within the design and implementation of forest management activities.
- Policy 6.4.15 The City should monitor and respond as appropriate to forest and ecosystem health trends influenced by climate change, pest or pathogen infestations, wildfire suppression, urban development, and other factors.



Policy 6.4.16 Visual quality, recreation, noise buffering, water quality, flood mitigation, erosion mitigation, climate change mitigation, slope stability, wildlife habitat, provision of privacy, shading, spiritual and cultural values, and other identified values should be considered when choosing forest management options for interface sites.

Policy 6.4.17 The City should consider supporting community tree and shrub planting initiatives, where the locations, densities, and species selection are consistent with:

- Fire hazard mitigation concepts;
- Future development plans;
- Climate change adaptation principles and future climate projections;
- Safety management;
- Drainage management;
- Site or ecosystem restoration objectives;
- Visual quality and viewscape management;
- Wildlife management and human-animal conflict avoidance;
- Soil erosion management;
- Minimized impacts on utilities like water, sewer, hydro, telecommunications, and road infrastructure;
- Recreation objectives; and,
- Other plans, principles, and values pertinent to the site.

Wildlife

Policy 6.4.18 The City should dissuade bear-human conflicts before they occur. This could include active management and/or development of bylaws governing the following:

- garbage storage and collection;
- fruit trees;
- composts;
- community gardens;
- greenbelt dumping;
- connectivity and design of parks and open spaces; and,
- other attractants and habitat considerations.

Policy 6.4.19 In addition to concerns about the creation of “problem” bears, the City’s management of fruit trees should take into consideration the importance of birds, bees, butterflies, and other pollinators in the maintenance of biodiversity and ecosystem integrity, especially as a tool in climate change adaptation.

Policy 6.4.20 The City supports continued community education efforts about human-bear conflict mitigation.

Policy 6.4.21 The City should continue to support initiatives like the Fruit Exchange Program and work with the Northern Bear Awareness Society, local Conservation Officers, and other organizations to develop strategies for monitoring and reducing human-bear conflicts.

Policy 6.4.22 Efforts to increase landscape connectivity for biodiversity and sensitive habitat needs should be balanced with measures to reduce the introduction of bears into urban neighbourhoods.



(Photograph courtesy Northern Bear Awareness Society)

Policy 6.4.23 New public green spaces, trails and development areas are to take into consideration the potential disturbance of wildlife habitats and travel corridors.

Policy 6.4.24 When designing fuel management treatments, the City could consider the potential impacts on bear habitat and attractants that may be created due to a short-term increase in shrub layers, herb layers, and berry production.

Policy 6.4.25 The City should manage human-ungulate interactions through consideration of important ungulate winter range habitat, high-use corridors, and high conflict areas.

Policy 6.4.26 Greenfield development should consider impacts to rare and endangered species and their habitat including amphibians, ungulate winter range and other sensitive species.

Invasive Species

Policy 6.4.27 New development should include strategies to reduce or prevent the introduction and colonization of disturbed sites by invasive species.

Policy 6.4.28 Continue to participate with appropriate agencies in the management of local invasive species.

Policy 6.4.29 The potential introduction of invasive species should be considered when designing new trails and access into interface areas.

Policy 6.4.30 The City should actively reduce invasive species on City-owned land and along transportation corridors. This includes road development and maintenance that results in gravel/dirt shoulders and side-banks (prime habitat for invasive species), that should be managed for invasive species, particularly near agricultural areas (ALR).

Safety

- Policy 6.4.31 Any new development should maintain adequate access to interface areas for maintenance by City and utility personnel/equipment as well as for fuel treatments and fire suppression activities.
- Policy 6.4.32 Bylaws should not preclude the removal of hazardous trees or treatment of hazardous conditions within interface areas, where necessary for the protection of life or property.

Planning

- Policy 6.4.33 The City should encourage retention of native plants and trees (with protection of root systems) during land clearing, development, and infrastructure construction activities. Any replanting plans are to consider using native vegetation similar to the surrounding environment.
- Policy 6.4.34 The City should work toward conserving or protecting areas having significant natural habitat value and/or important wildlife corridors.
- Policy 6.4.35 Ensure that City infrastructure and private development projects identify and respect applicable low risk timing windows such as nesting, spawning, hibernating and migrating when scheduling projects. The vegetation clearing window to avoid breeding birds is August 1 to April 15. Raptor nests may not be removed at any time without prior approval from the appropriate Provincial and/or Federal agencies.
- Policy 6.4.36 Ensure that the management of City activities considers the following:
- Identify all aspects of operations that may have a significant impact on the environment;
 - Manage and control operations and processes to minimize impacts on the environment;
 - All materials deposited on City property should be identified and recorded. Any materials that may be contaminated shall be placed in designated areas;
 - Achieve compliance with environmental legislation and regulations; and,
 - Continuously improve the City's environmental performance.
- Policy 6.4.37 Implement road planning, design and operations to reduce wildlife-vehicle collisions and minimize fragmentation of wildlife habitat.

Policy 6.4.38 Use Naturescape principles wherever possible. The goal of Naturescape is to create a biodiverse habitat for wildlife as well as to create a visually attractive, low maintenance landscape. Promote backyard habitat that attracts birds and other appropriate wildlife.



Policy 6.4.39 The city should implement more naturalized boulevards and some park areas.

Policy 6.4.40 For areas that have the potential for high wildlife densities and value identified within a Sensitive Ecosystem Inventory, planning and development shall be required to include seasonal wildlife utilization assessments.

Policy 6.4.41 The City should require information to determine if there is any special wildlife or species at risk (including their habitat) prior to development and infrastructure planning. Projects are to be directed away from these areas.

Policy 6.4.42 Where the results of environmental and utilization assessments indicate areas of significant utilization for wildlife, the following strategies should be implemented:

- Landscaping guidelines
- Fencing opportunities
- Planning greenbelt location, size, and configuration
- Road layout design

6.4 C. Hazardous Conditions

Some hazards can dramatically affect the residents, institutions and businesses of Prince George and lead to a major emergency or disaster. The purpose of this section is to identify those hazards with high probability and consequence that are related to planning and land use management, and set out objectives and policies that should reduce risk by imposing restrictions on the use of land subject to hazardous conditions.

Prince George is susceptible to a variety of hazardous conditions and this section focuses on six (6) key hazards: flooding (including ice jams), erosion and sedimentation, landslides, wildfires, atmospheric hazards and hazardous materials.

This Plan includes statements and map designations (schedules) for restrictions on the use of land that are subject to hazardous conditions, and promotes settlement patterns that minimize the risk associated with hazardous conditions. However, the City does not represent to any person that activities, uses and



development undertaken in accordance with the objectives and policies of this Plan will not result in injury, suffering, loss of life, loss of use, or property damage due to hazardous conditions. Furthermore, this Plan is not a “local emergency plan” prepared under the *Emergency Program Act* and regulations.

Objectives

- Objective 6.4.7 Promote settlement patterns that minimize the risk associated with hazardous conditions to:
- a) protect against injury, suffering and the loss of life, and minimize loss of use, and property damage by prohibiting or regulating development on lands subject to hazardous conditions, and,
 - b) identifying and alleviating hazardous conditions which restrict the use of land or pose a risk of injury or damage.
- Objective 6.4.8 Protect public infrastructure from hazardous conditions.
- Objective 6.4.9 Reduce or prevent negative impacts to air, soil, and water quality, the natural environment, its ecosystems and biological diversity that may result from hazardous conditions.
- Objective 6.4.10 Inform hazard mitigation and emergency preparedness efforts.
- Objective 6.4.11 Improve public awareness of hazardous conditions.

Designation of Areas

Hazardous Conditions

Land identified in *Schedule B-2: Hazardous Condition Areas* may be subject to hazardous conditions including: flooding, significant slopes over 20% grade, wildfire, and hazardous material areas (e.g. dangerous goods routes and rail lines). In addition to those flood hazard areas shown on *Schedule B-2: Hazardous Condition Areas* the following areas may be subject to hazardous flood conditions:

- a) land within 30 metres measured horizontally from the natural boundary of a watercourse not identified on the attached *Schedule B-2: Hazardous Condition Areas*;
- b) notwithstanding sub-section a) above, land within 15 metres of the top of a steep bluff where the toe of the bluff is subject to erosion and/or closer than 15 metres from the natural boundary of a watercourse, or a horizontal distance equal to 3 times the height of the bluff as measured vertically from the toe of the bluff, whichever is greater; and
- c) land within 15 metres from the natural boundary of a water body, including a lake, pond, swamp or marsh.

Policies

General

- Policy 6.4.43 The possibility of hazardous conditions should always be considered with the design and construction of any development.
- Policy 6.4.44 It is best to avoid developing in areas subject to hazardous conditions.
- Policy 6.4.45 Vulnerable development should be prohibited from hazardous condition areas, unless the applicable hazard can be practically alleviated, and until adequate risk reduction measures are in place.
- Policy 6.4.46 Any hazard assessment for land designated as a hazardous condition area should include the consideration of climate change and its impacts before approval is granted for a zoning or land use contract amendment bylaw.
- Policy 6.4.47 Unless mitigative measures are in place, concentrations of development density, whether or not the development is classified as vulnerable development, should be limited in hazardous condition areas to reduce overall long term risk.
- Policy 6.4.48 Development on lands within the hazardous condition areas may likely encounter hazardous conditions. A development approval applicant should be notified if the subject property overlaps with one of these areas. Notification should include a determination whether a hazard assessment is necessary.
- Policy 6.4.49 It is recommended that when land is subject to, or could reasonably be expected to be subject to a hazardous condition, the landowner provide a report prepared by a qualified professional in accordance with the *Land Title Act, Community Charter, Local Government Act*, or other applicable enactment. A relaxation to any hazardous condition provision of this Plan, or any other applicable City Bylaw, should only occur where a proven serious hardship exists and no other reasonable alternative is available to the landowner. Before consideration is given other options such as alternative sites, construction techniques and designs should be prepared by the landowner or their agent and provided to the City.
- Policy 6.4.50 It is recommended that when land is subject to, or could reasonably be expected to be subject to a hazardous condition, the landowner provide a covenant that applies to the property for as long as the risk exists for the development and includes:

- A statement that the land is subject to a hazardous condition;
- Restrictions on use, buildings, subdivision and alienation;
- Obligations that land, hazard protection works, or a specified amenity in relation to it be protected, preserved, conserved, maintained, enhanced, restored or kept to the extent provided in the covenant. Amenity may include any natural, historical, heritage, cultural, scientific, architectural, environmental, wildlife or plant value relating to the land that is subject to the covenant;
- Conditions respecting reimbursement by the land owner for any expenses that may be incurred by the City as a result of a breach of the terms of the covenant;
- A waiver of claims against the City coupled with an indemnification against third party claims; and,
- Engineer's certificate confirming that the land can be used safely for the use intended.



Policy 6.4.51 Where a development has the possibility of exacerbating a risk to an adjacent parcel or development, a higher level of diligence on the development should apply. Thus risk reduction measures may be required to proceed or coincide with the construction and use of the development. However, where it is determined that the development does not have the possibility of exacerbating a risk to an adjacent parcel or development, security to guarantee the construction of risk reduction measures within a reasonable period may be acceptable.

Flood Hazard Area

Policy 6.4.52 Agricultural, park and open-land recreation uses are considered appropriate for designated flood hazard areas as the threat to life and property is low. Other uses may be considered within a designated flood hazard area subject to Provincial Regulations and Guidelines, Flood Plain Regulation Bylaw, any plan or program the City has developed, and any hazard assessment undertaken for that development.

Policy 6.4.53 Where development is presently located in a flood hazardous condition area, or current zoning permits new development in a designated flood hazardous condition areas the future construction

of, addition to, or alteration of a building or structure to be used for habitation, business, or the storage of goods damageable by floodwaters should be flood-proofed in accordance with the applicable Provincial Guidelines defined within Section 910 of the *Local Government Act*.

Erosion and Sedimentation Hazard Area

- Policy 6.4.54 The land identified as significant slopes on *Schedule B-3: Significant Slopes* and land designated Flood Hazard development permit areas in Section 9.3 of this Bylaw may be subject to erosion and sedimentation hazards.
- Policy 6.4.55 Park and open-land recreation uses are considered appropriate for lands subject to erosion and sedimentation hazards as the threat to life and property is low. All other development should be located a safe distance from the watercourse, water body, and significant slopes to avoid areas prone to erosion based on geotechnical analysis prepared by a qualified professional.
- Policy 6.4.56 Erosion control should be provided on all construction sites including minimizing the amount of land disturbed and limiting damage caused by changes to water flow on the land. This may include:
- Sediment and erosion control plans;
 - preserving existing grass and trees to the extent possible;
 - replanting as soon as possible;
 - using best management practices to prevent erosion and control sediment;
 - locating soil piles away from waterways and roads;
 - constructing an access drive for all vehicles including a dry apron, or tire wash station, to avoid tracking of mud onto streets;
 - immediately clean-up sediment carried off-site by rain water or vehicles; and,
 - control the runoff from roof, driveway and other hard-surfaces to reduce erosion.

Landslide Hazard Area

- Policy 6.4.57 The land shown on *Schedule B-3: Significant Slopes* are slopes greater than 20% grade and may be subject to landslide hazards.
- Policy 6.4.58 Park and open-land recreation uses are considered appropriate within hazard areas as the threat to life and property is low. All other development should be located a safe distance from landslide hazards based on geotechnical analysis prepared by a qualified professional.

Policy 6.4.59 To adapt to climate change, projected temperature and precipitation changes should be considered when designating landslide hazards. The City should undertake further study to determine the local impacts of climate change on slope stability.

Policy 6.4.60 The following activities should be avoided on significant slopes:

- excavation of slope or its toe;
- use of unstable earth fills for construction;
- loading of slope or its crest, such as placing earth fill at the top of a slope;
- deforestation – cutting down trees/logging and clearing land for crops; unstable logging roads;
- irrigation and lawn watering;
- mining/mine waste containment;
- artificial vibration such as pile driving, explosions, or other strong ground vibrations;
- water leakage from utilities, such as water or sewer lines; and,
- alteration of the natural drainage.



Wildfire Hazard Area

Policy 6.4.61 The land shown on *Schedule D-3: Wildfire Hazard Development Permit Areas* is designated as a wildfire hazard development permit area for the protection of development from wildfire hazards.

Policy 6.4.62 Resource extraction (including agriculture), park and open-land recreation uses are considered appropriate for designated wildfire hazardous condition areas as the threat to life and property is low. Other uses may be considered within a designated wildfire hazard area subject to Provincial Regulations and Guidelines, Tree Protection Bylaw, any plan or program the City has developed, and any hazard assessment undertaken for that development.

Policy 6.4.63 New developments proposed in the Wildfire Interface Development Permit Areas must address the interface wildfire risk through the removal of forest fuel and the use of appropriate building materials as defined in the *Home Owners FireSmart Manual* (British Columbia Edition).

Policy 6.4.64 Fire Smart practices should be encouraged and the following potential ignition sources and wildfire fuels should be avoided in the wildfire hazard area:

- standing dead trees;
- dense mature forests with abundance of brush layers;
- campfires;
- heavy industry;
- vehicle traffic;
- railways;
- homes and other residential structures;
- power lines; and,
- unmonitored park and open spaces where historical or current nuisance activity occurs.

Policy 6.4.65 In order to mitigate wildfire risk, development in the wildfire hazard area should:

- While considering overall forest values, change as appropriate, the characteristics of the forest that elevate wildfire hazards by reducing the natural fuels (dead trees, lower branches, brush layers), by thinning the forest (selectively removing trees) and moving towards less fire-prone species (e.g., deciduous);
- Without unduly causing inappropriate motorized access uses, improve access through the development of road and recreation trail system for fuel breaks and control lines for suppression efforts;
- increase water availability by ensuring adequate location and number hydrants with sufficient flow in urban settings, and identifying suitable natural water bodies in rural areas;
- reduce the number of ignition sources;
- Follow Fire Smart practices; and,
- Consider the future effects of climate change on hazard risk.

Policy 6.4.66 The City should maintain emergency services and facilities that should be able to safely and quickly address interface fires where appropriate or until provincial services can be deployed.

Policy 6.4.67 The City should continue to work with the appropriate agencies and personnel to develop strategies and partnerships to reduce the risk of wildfire entering the city's boundaries from areas outside municipal boundaries.

Atmospheric Hazards

Policy 6.4.68 New power utilities should be installed underground to reduce the potential for service interruption due to atmospheric hazards.

Policy 6.4.69 New neighbourhoods should be planned with multiple access points to ensure that emergency responders can attend to all areas of the City even if certain roads become impassable due to an atmospheric event.

Hazardous Material Area

Policy 6.4.70 When deciding where to locate vulnerable development land owners should consider a minimum of 150 m from Dangerous Goods Routes as identified on *Schedule B-2: Hazardous Conditions* and a minimum of 300 m from hazardous material manufacturing, processing, and disposal sites. A hazard assessment may recommend greater or lesser setbacks.

Policy 6.4.71 The City should require a hazard assessment for new land use applications for any hazardous material manufacturing, processing, storage and disposal sites and may recommend greater or lesser setbacks from vulnerable development.

6.5 Green Energy and Reduce Carbon Emissions

Prince George residents, businesses, industries, and services depend on grid-supplied electricity, natural gas and other energy sources. Much of the energy sources currently used in Prince George are derived from fossil fuels, particularly petroleum and natural gas products. The consumption of these fuels contributes to greenhouse gas (GHG) emissions¹. There are often correlations, synergies and co-benefits in strategies that support alternative energy resources, reduce energy, reduce GHG emissions and adapt to climate change. As such, the discussion on energy often has a link to GHGs and vice versa. There are two key strategies to address Prince George's long-term energy needs. The first is to focus on "demand side management" (DSM) in order to use energy wisely and reduce our consumption. The second is to develop alternative energy sources, particularly low-carbon sources. Locally supplied renewable energy sources have the ability to lower emissions while supporting the regional economy. Our natural areas also play a role in mitigating climate change, and land use decisions should consider these carbon sinks and ecosystems such that their natural processes (decomposition, evapotranspiration, combustion, etc) should have an effect on carbon emissions.

The City of Prince George in 2007, established a voluntary community target of 2% less GHG emissions from 2002 levels by 2012 and a corporate target of 10% less GHGs from 2002 levels by 2012. This target is also related to energy efficiency strategies due to the correlation between energy use (particularly fossil fuel consumption) and GHG emissions. According to the most recent Community Energy and Emissions Inventory (CEEI), supplied by the Provincial Government, Prince George's 2007 energy use was 12.7 million GJ. Excluding the contributions of large industry, about 31% of the energy use occurs in residential buildings, 48% in road transportation, and 21% in the commercial and small industrial sector. The total GHG emissions for Prince George in 2007 (excluding heavy industry) is estimated at 659,000 tonnes of carbon dioxide equivalents (t CO₂e), with 63% coming from on-road transportation, 33% from buildings, and 4% from solid waste.

To assist in assessing energy use in the residential sector in order to reduce consumption, the City has collaborated with Natural Resources Canada's CanmetENERGY division and Vive Le Monde Mapping. This work resulted in the Spatial Community Energy Carbon and Cost Characterization (SCEC³) model, a map based model that can calculate the energy and GHG emissions and the reductions achievable from energy efficiency retrofits and solar domestic hot water for single family dwellings, duplexes, row houses, apartments and mobile homes. The City is working with NRCan to ensure the model continues to be used both in City planning as well as by the community. See Figure 3 and Figure 4.

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(Source: SCEC³ model http://www.env.gov.bc.ca/cas/mitigation/ceei/pdf/GHGModelingTool_PG.pdf)

¹ *Electricity in BC is low-carbon (the 1990-2009 National GHG Inventory states that emissions are 32 g of carbon dioxide equivalent (CO₂e) per kWh, although some electricity is imported from Alberta, which has a much higher carbon intensity (880 g CO₂e/kWh).*

The purpose of this section is to set out objectives and policies related to planning and land use management that support opportunities for reducing GHG emissions through DSM and the promotion of energy alternatives.

Figure 3: Average Annual Residential Emissions Per Dwelling Unit (tonnes CO₂e)

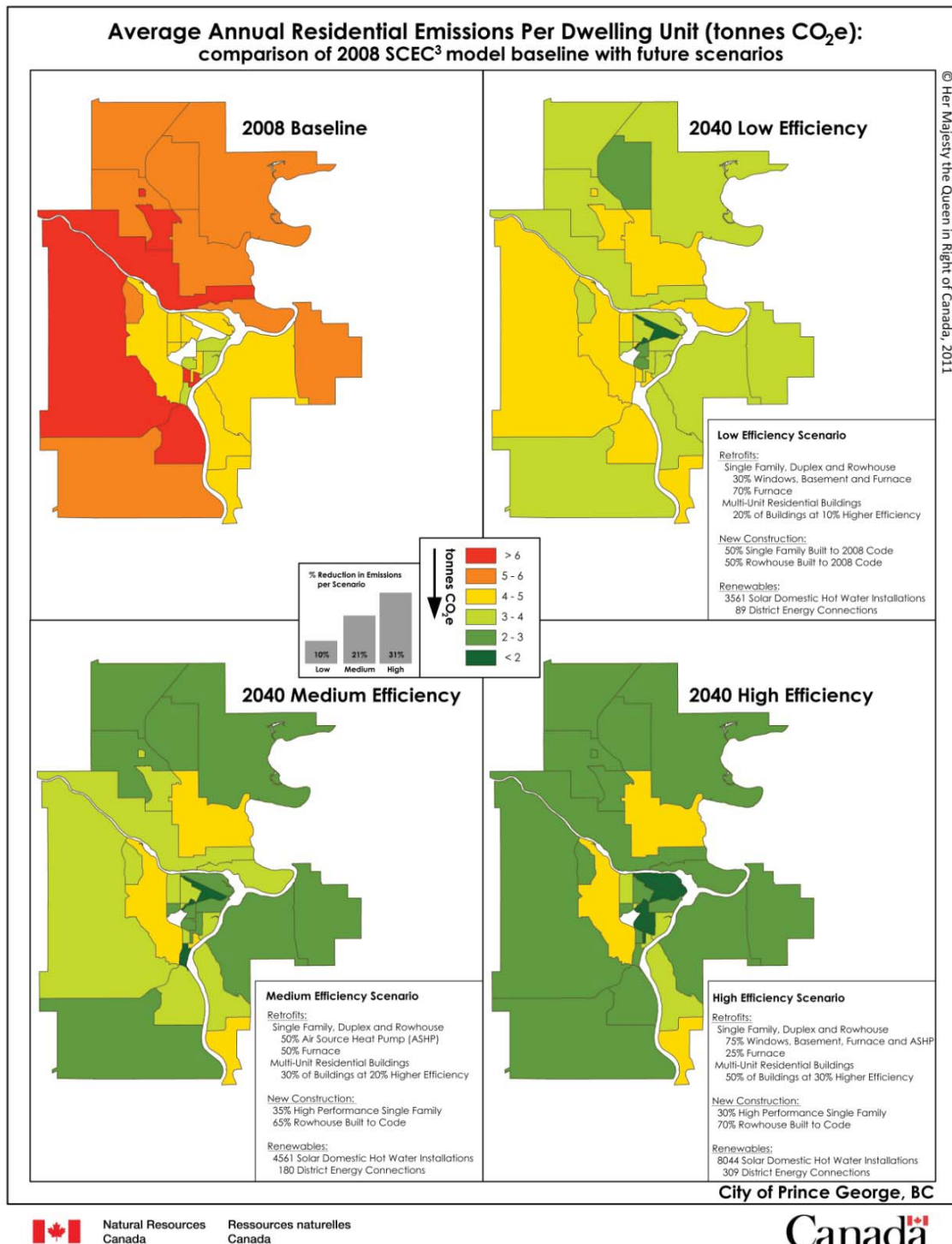
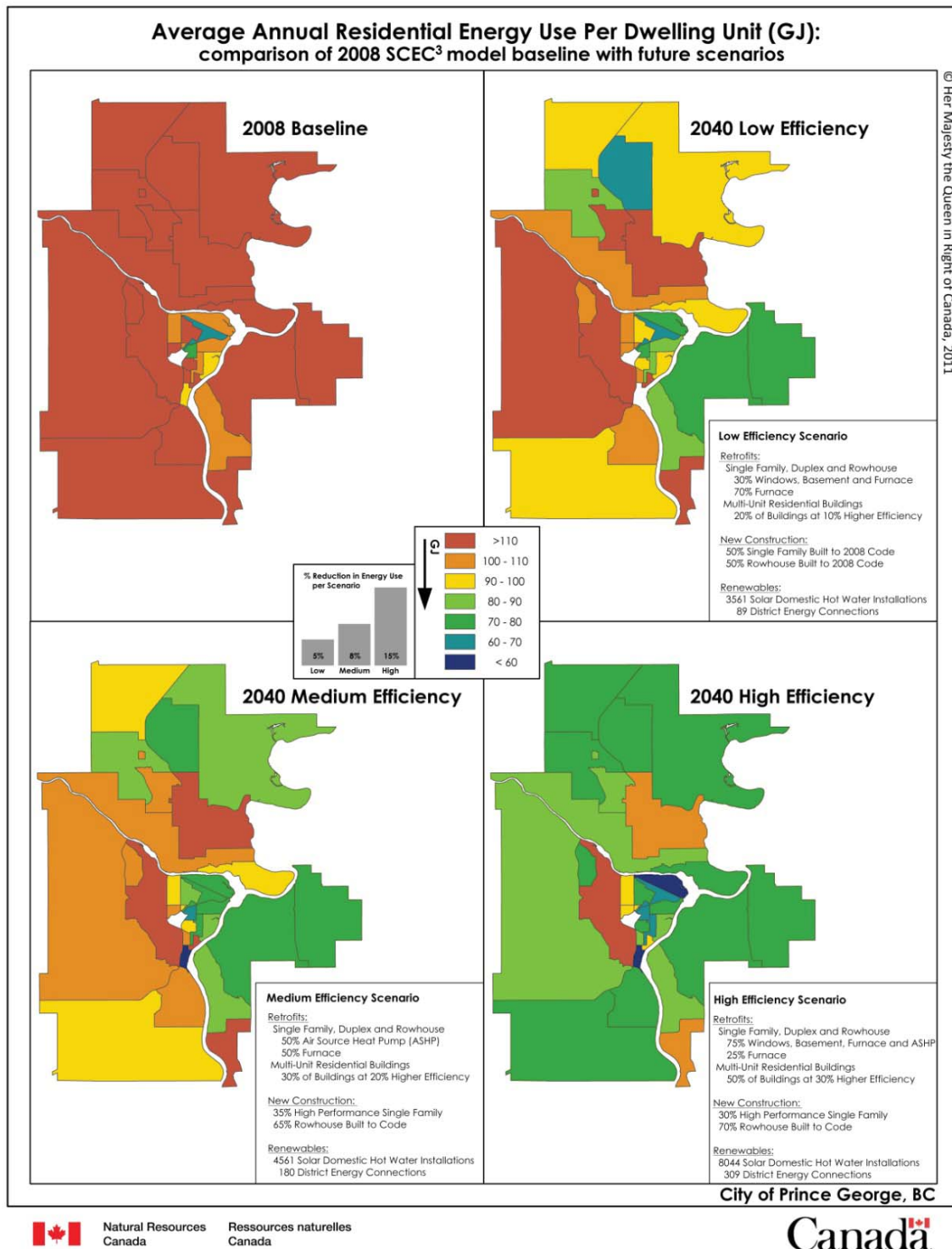


Figure 4: Average Annual Residential Energy Use Per Dwelling Unit (GJ)



Objectives

- Objective 6.5.1 Reduce energy use and GHG emissions generated by existing buildings through retrofits or redevelopment and the introduction of renewable energy technologies.
- Objective 6.5.2 Improve energy efficiency, use of renewable energy, and reduce GHG emissions for new buildings.
- Objective 6.5.3 Improve energy efficiency, use of renewable energy, and reduce GHG emissions for City owned buildings and facilities.
- Objective 6.5.4 Recognize the role of our natural environment in climate change mitigation and greenhouse gas emission reduction in land use decisions.

Policies

General

- Policy 6.5.1 The City dedicates its support to the British Columbia Climate Action Charter by achieving carbon neutrality in City corporate operations by 2012.
- Policy 6.5.2 By 2012, the City shall reduce corporate greenhouse gas emissions by 10%, and the City targets reducing community greenhouse gas emissions (GHG) by 2%, compared with 2002 levels.
- Policy 6.5.3 The City shall adopt longer term corporate and community energy targets and should implement strategies to achieve energy and GHG reductions, based on the Greenhouse gas and Land Use planning report completed for the myPG project. The City should explore further options for achieving medium- and long-term Provincial targets.
- Policy 6.5.4 The City should work with partners and guiding policies identified in energy and GHG management plans to achieve significant measurable reductions in grid-supplied and fossil-fuel based energy and greenhouse gas emissions.
- Policy 6.5.5 The City should act as a resource to the community by promoting energy efficiency and awareness and work with partners establish means to demonstrate and explain energy efficiency and GHG reduction building techniques, appliances, renewable energy technology and methods.
- Policy 6.5.6 The City should work to expand the customer base connected to the Downtown District Energy System (DDES) and look for opportunities

to expand the DDES infrastructure (underground piping) in conjunction with other works.

- Policy 6.5.7 Consider the role of forests in climate change mitigation and greenhouse gas emission reduction in our land use decisions. [See also Section 6.4 Green City, Green Practices]
- Policy 6.5.8 Endeavour to link mitigation and adaptation objectives wherever possible, and identify creative solutions to lower GHGs and become more resilient to climate impacts.

Existing Buildings

- Policy 6.5.9 The City should continue to work with other forms of governments to actively promote grant and incentive programs through the means available to the City.
- Policy 6.5.10 At the time of rezoning the City should negotiate energy efficiency and renewable energy targets.
- Policy 6.5.11 Through collaborative efforts with organizations, business groups, utilities and community groups, the City should develop strategies to enable energy efficiency upgrades or retrofits and drive the demand for energy efficient appliances and equipment.
- Policy 6.5.12 The City should engage with the commercial (small & medium size business) and light-industry sectors, and support processes that facilitate engagement with these sectors (e.g., workshops conducted by Climate Smart Business, the Prince George Chamber of Commerce's Business Energy Advisor, and their equivalents), to develop energy efficiency targets, strategies and action plans and to encourage participation in third party programs (e.g., BOMA Go Green program, incentive programs from utilities).
- Policy 6.5.13 The City should work with local building organizations to promote and encourage builders to become Built Green™ certified and use means available to the City to promote the Built Green™ program, or an equivalent green building program.
- Policy 6.5.14 The City should promote and support the use of renewable energy technology that has been sanctioned by other forms of government or certification and standards associations.
- Policy 6.5.15 The City should continue to utilize energy mapping tools (e.g., SCEC³ model) as part of the City's routine energy and emissions programming and planning. The model can be used to inform targets



and policies related to retrofits of the existing housing stock and the introduction of renewable energy technologies (e.g., solar hot water) and district energy; in particular, to target low cost, highly effective retrofit measures; and as an integrating information resource, to provide neighbourhood level and city level findings to the public in combination with relevant incentive packages.

New Buildings

- Policy 6.5.16 The City encourages energy efficiency for new residential development throughout the city. Examples of this include:
- high efficiency housing (e.g., 70 kWh/m²/year for space and water heating) and/or housing that uses at least 10% renewable energy resources; and,
 - housing to connect and utilize a shared heating and/or power plant (e.g., neighbourhood sized district heating or geo-exchange heating systems).
- Policy 6.5.17 The City should amend infrastructure policies and standards to encourage the development of energy efficient and green buildings that enable the use of renewable energy (e.g. alignment for passive solar gain, solar hot water readiness, district heating readiness, and minimum renewable energy standards for new buildings exceeding a minimum size (e.g., 1000 m²)).
- Policy 6.5.18 The City should support and promote education and awareness and the use of recognized programs that train local builders on energy efficiency, renewable energy alternatives and green building techniques.
- Policy 6.5.19 To encourage energy efficiency, the City should consider facilitating the use of innovative financial tools for the capital costs for new buildings within the City that will achieve high levels of energy efficiency or use of renewable energy.
- Policy 6.5.20 The City should develop and implement demonstration projects (City owned or other private/other public entity owned) through partnerships and incentive or grant programs that demonstrate green building techniques.

Municipal Buildings and Facilities

Policy 6.5.21 The City should update, where needed, and implement the City of Prince George Sustainable Energy Management Plan in order to achieve energy and greenhouse gas reductions through such initiatives as:

- capital equipment retrofit and replacement;
- energy awareness programs;
- operational and maintenance improvements; and,
- construction of district energy systems.

Policy 6.5.22 New City buildings and facilities should achieve high energy efficiency and, where practical, use renewable energy sources.

6.6 Reduced Solid Waste

The Foothills Boulevard Regional Landfill is a municipal solid waste landfill located on an 87 hectare parcel of land located in the northwest sector of the city. The lifespan of the current fill area is estimated to be 17 years with a final utilization date of 2027. The site is large enough to accommodate future expansion and should accommodate projected future population growth based on current solid waste projection trends. The sanitary landfill site is situated above the Nechako aquifer and employs a regular environmental monitoring program to monitor landfill leachate with an objective to mitigate any potential risk associated with landfill leachate impacting groundwater. In addition, the Quinn Street and Vanway Recycle Depot and Transfer Stations within the city include multi-material recycling bins, household garbage disposal, and composting & yard waste drop off area



Objectives

Objective 6.6.1 The City is committed to the Regional District of Fraser Fort George Solid Waste Management Plan and its efforts to reduce the amount of waste coming to the landfill each year and to educate the public around the idea of reducing, reusing, and recycling waste products.

Policies

- Policy 6.6.1** The capacity of the current solid waste landfill site boundaries are deemed adequate for the projected growth of the city. Measures to monitor and manage any offsite impacts should continue.
- Policy 6.6.2** Given the sensitivity of this overall area as an important component to the city's water supply, expansion of the landfill site, or development of any new sites should give particular regard to the impact on groundwater.
- Policy 6.6.3** For aesthetic and safety reasons, only open land buffer or recreation uses are permitted within 300 m of the landfill site.
- Policy 6.6.4** Examine the feasibility of a curb-side compost pick-up system as well as composting systems for municipal facilities as part of an overall waste management strategy.

Social sustainability is one of three dimensions of overall sustainability – the others being environmental and economic. Since the three are inextricably connected and supported by a healthy built environment, this section of the OCP articulates how the City of Prince George can influence social development through the thoughtful application of policies and objectives. By using a range of levers within the jurisdiction of local government and working in partnership with other organizations and forms of government, the City can act on matters of social welfare and demonstrate its commitment to improving quality of life for all citizens. The *Local Government Act* states that OCPs may address social needs, social well-being and social development. Accordingly, this Plan provides context and direction in seven inter-related social development goal areas including: affordable and accessible housing, community identity and pride, cultural richness, equity and inclusion, health and wellness, safety and civic engagement (through the development of a supportive community and strong neighbourhoods). See also Part D for Implementation.

7.1 Cultural Richness

Arts and culture is an important aspect of social, environmental and economic sustainability. The Arts refer to a wide variety of artistic endeavors including but not limited to: performing arts, visual arts, media arts, literary arts, and heritage arts. Culture embodies the values, ideas, and other symbolic meaningful systems that are transmitted and created by a group of people.

Our community's culture is apparent in a variety of ways such as literary, visual and performing arts, recreation throughout the seasons, ethnic cuisine and events, and language and traditions for a few examples. Prince George has a thriving Arts community where citizens can enjoy a rich cultural life through events, facilities, education and community involvement in the Arts. Emerging trends and issues include an aging and more educated population who desire increased Arts opportunities as well as higher quality experiences; increased demand on facilities to accommodate more events; declining volunteerism and funding sources. Inclusion and celebration of the community's range of diversity of interest and practice in Arts is paramount to developing a life-long learning, appreciation and participation in the Arts, in the community. Conserving heritage resources also creates exciting community spaces and acts as a catalyst for compatible development [See also Section 7.4 *Heritage, Identity and Pride*].



(Photograph courtesy Shawn Haines)

Objectives

- Objective 7.1.1 Encourage inclusive community participation in arts and culture that should ensure the social, environmental and economic sustainability of the community.
- Objective 7.1.2 Support and facilitate the development of events, programs and spaces that celebrate culture, place and season.

Policies

- Policy 7.1.1 Support and promote learning, appreciation and participation in the arts and various cultural aspects and events.
- Policy 7.1.2 Continue to partner and work with arts and cultural organizations.
- Policy 7.1.3 Provide leadership in public art planning, endeavor to make space available for public art and encourage private development to incorporate public art.
- Policy 7.1.4 Ensure arts facilities are available to meet the needs of the community.
- Policy 7.1.5 Support and encourage accessibility to arts and cultural services for all citizens and visitors.
- Policy 7.1.6 Support and encourage efforts by community organizations to partner in the maintenance or management of public owned spaces.
- Policy 7.1.7 Encourage partners and organizations to celebrate Prince George's Arts and Culture through festivals and events and encourage the delivery of these events in the downtown.

7.2 Equity and Inclusion

An inclusive community values all its members and helps them to meet their basic needs so they can live with dignity, engage actively, and contribute to their community. Policies and objectives focused on equity and inclusion help ensure the city is affordable, accessible, and welcoming of all cultures, identities and abilities. In an inclusive community, all members have equal opportunities for participation in decisions that affect their lives, allowing all to improve their living standards and overall well-being. Community inclusion is founded on principles of economic and social security as well as justice. It fosters full participation in work, education and society by those who face economic and social barriers.



In 2010, no benchmark data sets regarding measures of social inclusion were available. However, Inclusive Cities Canada (a collaborative venture of five social planning organizations and the Federation of Canadian Municipalities) identified five dimensions of social inclusion that are relevant for the City of Prince George. The dimensions, which provide potential direction for inclusion in the social development component of an OCP include: institutional recognition of diversity; opportunities for human development; quality of civic engagement; cohesiveness of living conditions (provisions for personal and family security that minimize disparities); and adequacy of community services.

Objectives

- Objective 7.2.1 Support measures to ensure all citizens experience equal access to the unique experiences of urban places.
- Objective 7.2.2 In collaboration with partners, support and facilitate a wide variety of social development opportunities for individuals and families with economic and social barriers to enable their active engagement in the community.
- Objective 7.2.3 Provide opportunities for relationship building between First Nations and local governments, such as through annual Community to Community Forums, which allow dialogue between community leaders on areas of common interest.

Policies

- Policy 7.2.1 Facilitate and support collaborative measures to reduce poverty in Prince George.
- Policy 7.2.2 Ensure a delivery system that supports public participation, respects partnerships and values relationships.

- Policy 7.2.3 Manage community expectations by focusing on the greatest needs while improving opportunities for children, youth, seniors and families.
- Policy 7.2.4 Support measures to ensure all children from birth to age five have access to comprehensive early childhood development and care.
- Policy 7.2.5 Support measures to increase high school graduation rates for Aboriginal students.
- Policy 7.2.6 Recognize that Prince George is a racially and culturally diverse community and that diversity is a source of enrichment and vitality.
- Policy 7.2.7 Affirm the equal rights of all persons to access municipal services and employment opportunities and to be treated with respect.
- Policy 7.2.8 Promote the participation of all citizens in the development of non-discriminatory Municipal bylaws, policies, programs, and services.
- Policy 7.2.9 Contribute to harmonious relations by promoting understanding of, and positive attitudes towards, people of all backgrounds and levels of ability.
- Policy 7.2.10 Support measures to challenge racism and discrimination and promote diversity and equal opportunity in all sectors.
- Policy 7.2.11 The City shall continue to work together with the Lheidli T'enneh Band to promote cooperative relationship building as identified within the Memorandum of Understanding on Cooperation and Communication.

7.3 Health and Wellness

Health can be defined as a state of complete physical, mental and social well-being: it is not just the absence of disease or infirmity. Wellness is an active process of becoming aware of and making choices toward a more successful existence. Important components of health and wellness include: active living and healthy eating; recreation and leisure; community food security; health promotion and support services; disease prevention; injury prevention; cultural health and safety; and spiritual health. Investing in health and wellness is important to the economic, environmental and social prosperity and livelihood of our families and community.

Active Living & Healthy Eating: Healthy communities create opportunities for its residents to stay active and eat healthy. Active living is the inclusion of physical activity in daily activities throughout a lifetime. Technology, urbanization, increasingly sedentary work environments and automobile-focused community design have engineered much physical activity out of daily life. Active living relies on the built environment to provide opportunity for active and safe routes to work places, schools, stores, parks and trails. Busy lifestyles, competing priorities, changing family structures and lack of social connectedness may also be contributing to unhealthy eating as well as inactivity. Schools, public buildings and recreation facilities are recognizing the importance of providing environments that promote opportunity for healthy eating as well as physical activity. Access to local and healthy food at the neighbourhood level supports residents in making the healthy choice the easy choice while supporting the local food systems.



(Photograph courtesy the Prince George Citizen).

Recreation & Leisure: Recreation engages people and builds social cohesion, generating healthy and inclusive communities. The public recreation and leisure delivery system plays a key role in the provision of services as well as connecting, supporting and coordinating community organizations and individuals in the provision of quality life activities. Recreation and Leisure is essential to our well-being, encouraging physical activity, fostering social connections and providing enjoyment for all ages and abilities. Emerging trends and issues in recreation and leisure include aging infrastructure; changes in demographics; changes to sport standards and regulations; new standards for health, safety and the environment; increased need for accessibility; and changing trends in recreation choices. The 2015 Canada Winter Games is a large multi-sport event providing Prince George with a unique opportunity to create a number of lasting legacies to remain in the community long after the event. Our physical legacies will be about building opportunities for new and enhanced infrastructure that meet Canada Games Standards and have a positive impact for our community users and for our ability to attract and host future events.

Food Security: Food and agriculture play an important role in a sustainable community by improving the environment, the economy, the health of our population and our community's well being. Access to quality, local food is increasing in demand throughout much of North America due to high cost of food, limited availability and a growing awareness in sustainable agriculture. The increasing costs associated with the production and shipping of food can result in limitations for community access to quality food. The production and supply of local food can help provide food security but requires support to establish systems for community food production at all levels.

OCP objectives and policies in this section articulate a municipal role in the retention and creation of health and wellness opportunities.

Objectives

Objective 7.3.1 Encourage and support a healthy and active community.

Objective 7.3.2 Support partnerships with groups and organizations to ensure residents have access to active living opportunities and healthy food in the community.

Objective 7.3.3 Focus recreation and leisure resources on achieving the goal of fostering a sense of community as well as the growth of the individual.

Objective 7.3.4 Encourage a culture of local, healthy food.



(Photograph courtesy the Prince George Citizen).

Policies

7.3 A. Active Living and Healthy Eating

Policy 7.3.1 Support and promote active living and healthy eating.

Policy 7.3.2 Support the implementation of the Healthy Food and Beverage Policy.

Policy 7.3.3 Encourage the social and physical environments where children live, learn and play to be more supportive of physical activity and healthy eating.

Policy 7.3.4 Support the development and implementation of an obesity prevention action plan.

- Policy 7.3.5 Support increased consumer access to local and healthy food through local food institutions and retail markets throughout the community.
- Policy 7.3.6 Encourage fast food outlets to locate a minimum distance from youth-oriented facilities such as schools and playgrounds.

7.3 B. Food Security

[See also Section 8.2 Urban Form & Structure]

- Policy 7.3.7 Support agricultural and food systems planning to improve the current state of food systems and to encourage local food self-reliance.
- Policy 7.3.8 Ensure that food and agricultural spaces are accessible to all people.
- Policy 7.3.9 Ensure existing policies and bylaws help eliminate barriers to sustainable food and agriculture systems.
- Policy 7.3.10 Support improvements to public transportation to make grocery stores and farmer's markets accessible to all residents.
- Policy 7.3.11 Support food and agricultural opportunities in education and community facilities, parks and open spaces.
- Policy 7.3.12 Support the development of community gardens and community kitchens.
- Policy 7.3.13 Promote attractive agricultural and community gardens in highly visible public or semi-private spaces, ensuring balance with wildlife considerations. [See also Section 6.4 B Caring for our Natural Environment & Forests]
- Policy 7.3.14 Encourage collaboration among industries, such as forestry and agriculture, to foster innovation in local food production.
- Policy 7.3.15 Encourage research and education on local food production and self-reliance.



7.3 C. Recreation and Leisure

- Policy 7.3.16 Manage community expectations by focusing on the greatest needs while supporting and facilitating a wide variety of recreation and leisure options that provide opportunities for all residents to

participate regardless of demographics, economic or cultural background.

- Policy 7.3.17 The City should pursue opportunities to enhance and link recreational opportunities within naturalized spaces, where appropriate.
- Policy 7.3.18 The City should promote and support indoor and outdoor activities during winter months for children, adults and seniors.
- Policy 7.3.19 Recognize the value of using publicly sponsored recreation and leisure services to foster a sense of community and identity.
- Policy 7.3.20 Support recreation programming and infrastructure development that meet the emerging recreation trends.

7.4 Heritage, Identity and Pride

Citizens of Prince George want to share a clear identity that the community can be proud of with a strong downtown, a connection to its rivers and natural surroundings, and a tangible link to the City's historical development. Civic pride initiatives fuel a sense of place characterized by events and initiatives that celebrate culture, place and season that connect and engage people and contribute to the vitality and livability of northern BC's capital.

Our built heritage is in danger of slowly being eroded through redevelopment or lack of maintenance. Therefore, it is important we identify and protect properties with significant heritage value and heritage character. Heritage planning and resource management is necessary to ensure the unique traits and features that give our community a distinctive quality and appearance are not lost.

Heritage: The community of Prince George has a responsibility to integrate its diverse and interesting heritage into its community planning processes. Conserving Prince George's historic places and educating people about the historic significance of buildings, events and sites helps to build a legacy for future generations. While heritage conservation has not been a priority in community planning and development in the past, it is seen as an opportunity for building a sense of community identity. It is important that the people who come after us understand what makes this community unique, and a significant part of British Columbia. It is an understanding of the past which guides community development in the future. (See "Built Environment" for additional information on Heritage).

Part of our heritage includes archaeological sites – the physical evidence of how and where people lived in the past. For the vast majority of the time people have lived in this area, no written records were made. Archaeological sites and oral tradition are the only vestiges of this rich history. The Plan area contains 16 recorded archaeological sites and has the potential to contain more. The Province of British Columbia is primarily responsible for protecting and managing archaeological sites, and aboriginal traditional use sites through the *Heritage Conservation Act*. This protection applies to both private and Crown land. However, the City has an interest in protecting these valuable cultural resources by being aware of sensitive, or potentially sensitive, archaeological and aboriginal traditional use sites within the Plan area.

Connection to Nature and Rivers: The proximity to nature and the fact that two major rivers flow through the city's core has provided a unique sense of identity and pride for many Prince George residents. This connection to nature is often the reason that keeps people in the region and is viewed as unique and provides a certain quality of life that is hard to find in other urban centres. Residents' pride in being a "winter city" is another reflection of this connection to nature.



Civic Pride: The ability, opportunity and desire to actively participate in the civic life of Prince George have built connections and relationships resulting in an engaged and proud community. Prince George identifies itself as a four season community with a strong “can do” attitude and high volunteerism rates.

Objectives

- Objective 7.4.1 Protect and foster the preservation of representative samples of natural and built heritage as well as key landscapes and neighbourhoods, and work to preserve, conserve, restore and promote awareness of this resource. Ensure that these are incorporated into long-term planning in a way that should balance preservation with growth and renewal through the prudent application of incentives and regulation.
- Objective 7.4.2 Protect heritage property that is under threat of damage or loss due to demolition, redevelopment, or lack of maintenance and upkeep.
- Objective 7.4.3 Protect heritage property that is unique because of its heritage character or heritage value.
- Objective 7.4.4 Avoid and mitigate impacts to archaeological sites.
- Objective 7.4.5 Improve general understanding of the extent, importance, and sensitivity of archaeological sites and aboriginal traditional use sites through consultation with the aboriginal community, a review of ethnographic reports, and possible inspections and investigations.
- Objective 7.4.6 Demonstrate leadership in heritage conservation, protection and interpretation by managing City owned protected heritage property and archaeological sites appropriately.
- Objective 7.4.7 Enhance quality of life by providing opportunities for cost-effective programs and facilities for culture and heritage throughout the community.
- Objective 7.4.8 Build on the pride within the community to encourage strong relationships, encourage volunteerism and to motivate participation.

Designation of Areas

Heritage Conservation Area

Heritage designation is intended to give long-term protection to heritage property. It is used to identify the features or characteristics that contribute to heritage value or heritage character. The lands shown on the attached *Schedule C-1: Heritage*

Conservation Areas are designated as heritage conservation areas pursuant to s. 970.1(1) of the *Local Government Act*.

Archaeological Resource Potential Areas

Archaeological resource potential designation is intended to identify areas of high probability where archaeological sites are likely to occur based on Archaeological Overview Assessments. The areas shown on the attached *Schedule C-2: Archaeological Overview Assessment: High Potential Areas* is designated as archaeological resource potential areas.

Schedule of Protected Heritage Property

This following is a list of buildings, structures, land or features within the heritage conservation area that are protected heritage property pursuant to Section 970.1(3)(b) of the *Local Government Act*, including features and characteristics that contribute to the heritage value or character pursuant to Section 970.1(3)(c) of the *Local Government Act*:

- a) Federal Government building (post office) at 1294-3rd Avenue (legally described as lots 19 and 20, Block 44, District Lot 343, Cariboo District, Plan 1268, and Parcel A (11170M) of Lot 18, Block 44, District Lot 343, Cariboo District, Plan 1268). This building has significant heritage value as the first Federal Government building constructed in Prince George (1939). As the interior of the building has been modified over time the remaining value is in the preservation and possible restoration of the building's original façade and exterior elements including: 4-inch red brick facing, two 8-foot iron lamp posts flanking the entrance steps, front entrance of cut stone, plate glass doors, electric clock over the entrance, coat of arms, concrete sidewalk and grassed area surrounded by an iron picket fence on three sides (Trelle Morrow and Kent Sedgwick, Heritage Advisory Committee, 1989).
- b) Two facades (13 linear metres along 6th Avenue and 10 linear metres along Dominion Street) of the building (old Government Liquor Store) at 1188-6th Avenue (legally described as Parcel B (PS14290), Block 165, District Lot 343, Cariboo District, Plan 1268). This building was designed by Lord Wilfrid Hargreaves in the art deco style. It is one of the few remaining examples of this standardized plan for government liquor stores in British Columbia. The building was constructed in 1949 and a sympathetic conversion and addition was initiated in 2001. The heritage façade walls now form an open-roofed courtyard for the residents. The original façade was conserved and the following heritage characteristics were maintained: curvilinear glass block walls, black tile facing, and steel trim, on a symmetrical and geometric facade.
- c) The building (old Ewart/King home) at 1627-7th Avenue (legally described as Parcel A (W13946), Block 175, District Lot 343, Cariboo District, Plan 1268). The building was originally constructed in 1921, and a sympathetic conversion of the



home to a restaurant occurred in 1985, with an addition in 1991. The conversion and expansion complemented the heritage characteristics of the original California bungalow-style home and maintain the unique upturned tips on the roof edges. Other interesting features include the stone fireplace with locally sources river cobbles, the narrow clapboard siding, and half-timber features on the roof line.

- d) Prince George's (South Fort George) first school house in Fort George Park at 755-20th Avenue (legally described as Parcel Z, District Lot 417, Cariboo District, Plan 1409). This building is one of the best examples of a school having simple, efficient, and economical building construction common to the period (1910). The structure was originally located on the corner of 4th Avenue and Thapage, which is today between Jasper and LaSalle Streets. It has been moved from its original location in 1976, but always kept in the vicinity of the South Fort George Neighbourhood. It was substantially restored in the 1970's and 1980's. Its present location next to the museum allows for its continued use as a place of education for teaching children about schools from the past.



Exemption Conditions

If a building, structure, land or feature within the heritage conservation area is not listed within the Schedule of Protected Heritage Property as described above then Section 971(1) of the *Local Government Act* does not apply. Furthermore, the following specific types of alterations to protected heritage property are allowed without a heritage alteration permit:

- a) tenant improvements that do not change the heritage character defining elements of the building;
- b) Basic repairs and maintenance to a building or other structure that do not change the heritage character defining elements;
- c) Repair or maintenance to a building or structure required by an order from the City of Prince George, Province of British Columbia or its agencies, and,
- d) Replacing "like with like" building materials.

Policies

7.4 A. Civic Pride

- Policy 7.4.1 Participate in local and regional initiatives that positively promote the city and region as a year-round travel destination.
- Policy 7.4.2 Support and participate in winter city celebrations.
- Policy 7.4.3 Continue to recognize the achievements of Prince George residents in a range of endeavours including sport, arts and culture, education,

and voluntary services as they represent our city and region as unofficial ambassadors.

- Policy 7.4.4 Encourage, support and celebrate community successes made possible through volunteer efforts.

7.4 B. Connection to Nature and the Rivers

- Policy 7.4.5 Improving public access to the Fraser River, Nechako River, and smaller watercourses lakes and wetlands is a high priority, and any new developments should be required to incorporate nature and water features into design and provide suitable public access and viewpoints.
- Policy 7.4.6 Support improvements to trails and green space to enhance and increase connectivity to nature and our rivers throughout the city for all seasons.
- Policy 7.4.7 Encourage various public uses close to the rivers to draw people to the riverfronts.

7.4 C. Heritage

- Policy 7.4.8 The City should utilize the Prince George Heritage Context Study to work towards implementing the Prince George Heritage Strategic Plan (2006) including the promotion of community heritage partnerships, achieving better conservation, and improving heritage awareness and communication.
- Policy 7.4.9 The City should work with the community to establish a heritage conservation program that should strive to protect, through a balance of incentives and regulations, significant examples of our heritage. This program should recognize the public benefits of preserving tangible links to our historical development and raise awareness of the value of heritage to our community.
- Policy 7.4.10 The protected heritage property listed in the Schedule of Protected Heritage Property that contribute to heritage value or heritage character should be conserved and maintained.
- Policy 7.4.11 Development on lands within the high archaeological resource potential area shown on *Schedule C-2: Archaeological Overview Assessment: High Potential Areas* may likely encounter protected archaeological sites. A development approval applicant should be notified if the subject property overlaps with one of these areas.

Notification should include direction to engage a professional consulting archaeologist. The archaeologist should assist the City to determine if an archaeological impact assessment is necessary to manage development related impacts to an archaeological site. Altering a protected archaeological site will require a Provincial Heritage Alteration Permit prior to land altering activities.

- Policy 7.4.12 If an overlap is found between an identified archaeological site and a proposed development site the proponent should be notified using the standard Provincial notification letter. Notification should include direction to engage a professional consulting archaeologist. The archaeologist should determine if an archaeological impact assessment is necessary to manage development related impacts to an archaeological site. Altering a protected archaeological site will require a Provincial Heritage Alteration Permit prior to land altering activities.
- Policy 7.4.13 If, during the course of construction, an archaeological resource is discovered, the development should cease and the City should direct the developer to contact the Archaeological Branch of the Province of British Columbia for further guidance.
- Policy 7.4.14 The City should consider the potential impact of any development to heritage values, heritage character, archaeological sites and aboriginal traditional use sites.
- Policy 7.4.15 Negative impacts to heritage values, heritage character, archaeological sites and aboriginal traditional use sites should be avoided and mitigated, while conservation, preservation, and sensitive adaptation are encouraged.
- Policy 7.4.16 Development on lands within the heritage conservation areas should likely encounter protected heritage property. A development approval applicant should be notified if the subject property overlaps with one of these areas. Notification should include a determination whether a heritage impact assessment is necessary to manage development related impacts to the protected heritage property. Altering protected heritage property may require a heritage alteration permit.
- Policy 7.4.17 Proposed development in heritage conservation areas should occur in accordance with the provisions of this Plan, and any applicable heritage alteration permit, heritage conservation covenant, heritage revitalization agreement, and heritage site maintenance standards. Where heritage site maintenance standards do not exist for the subject property the Federal Standards and Guidelines for the Conservation of Historic Places in Canada should be consulted.

- Policy 7.4.18 A relaxation to any heritage conservation provision of this Plan, or any other applicable City bylaw, should only occur where a proven serious hardship exists and no other reasonable alternative is available to the landowner. Before consideration is given other options such as alternative sites, construction techniques and designs should be prepared by the landowner or their agent and provided to the City.
- Policy 7.4.19 If an overlap is found between a property identified on the community heritage register and a proposed development site the proponent should be notified. At that time the approval authority should determine whether it should withhold an approval, (s. 960 LGA), withhold a demolition permit, or require a heritage impact assessment. (s. 961 LGA).

7.5 Housing

Housing is an integral part of a socially sustainable community. The World Health Organization calls it a key social determinant of health. A range of housing types that can accommodate people of different ages, life stages, incomes and abilities is one of the fundamental elements of a healthy and inclusive community. The housing continuum (below) depicts this graphically, showing different housing forms, varying tenures and affordability levels. As Prince George grows and its residents age, the city's role should be to ensure that housing supply matches those needs.



In 2010, most households were meeting their housing requirements in the private market, which consists of predominantly single-family homes on large lots. However, there are few options suitable for seniors, and households with lower incomes struggle to find affordable, adequate and suitable housing. Additionally, consideration is to be given to the issues of homelessness, the age and condition of affordable rental housing, housing diversity and accessibility. It is recognized that other forms of government have the primary role in creating affordable and accessible housing and that the City should continue to play a facilitative role, using the measures at its disposal.

Objectives

OCP objectives and policies in this section articulate a municipal role in the retention and creation of a diverse housing stock in considering affordable, rental and special needs housing.

- Objective 7.5.1 Develop and enhance partnerships with all forms of government and forge new relationships across sectors to further affordable housing objectives.
- Objective 7.5.2 Support development of a full range of housing types and tenures so that people of all ages, income levels and abilities have housing choices throughout the community.
- Objective 7.5.3 Support development of new affordable housing along the housing continuum.

- Objective 7.5.4 Support preservation of existing affordable housing in good condition.
- Objective 7.5.5 Support a Housing First approach to the elimination of homelessness.
- Objective 7.5.6 Incorporate visitable or adaptable features to ensure accessibility in new and existing housing to accommodate people with mobility challenges and to enable seniors to age in place.



(Photograph courtesy Tony Einfeldt).

Policies

7.5 A. Accessibility

Foster mobility, focusing on the existing housing stock, new single and two-unit housing, and other housing options as permitted.

- Policy 7.5.1 Visitable housing has at least one no-step ground floor entrance, wider passage doors and a ground floor bathroom. Incorporate voluntary or mandatory policy and guidelines for visitable housing in new single family and two-unit housing.
- Policy 7.5.2 Through incentives and other means, encourage visitable and adaptable housing in locations downtown, in neighbourhood centres and corridors, particularly near public transportation.
- Policy 7.5.3 Support a pilot project to promote rehabilitation of existing housing to improve accessibility or visitability.

7.5 B. Affordable, rental and special needs housing

The City can foster creation of new affordable, rental and special needs housing using a variety of measures. The following describes City policies for affordable, rental and special needs housing both generally and related to the city's objectives above. The city provides direction, information, coordination, education and advocacy around affordable, rental and special needs housing.

- Policy 7.5.4 Continue to work in partnership with others to plan and coordinate affordable housing activities in the community.
- Policy 7.5.5 Educate the public about the need for a range of housing types and tenures to accommodate households with differing needs and resources.
- Policy 7.5.6 Advocate for improvements to provincial and federal government funding of affordable housing.

Policy 7.5.7 Promote green building for all affordable housing projects and promote benefits of resulting reductions in operating costs.

Policy 7.5.8 Consider utilizing Housing Agreements to secure long-term commitments for affordable housing in projects receiving municipal incentives or relaxations.

Policy 7.5.9 Permit affordable housing and/or special needs housing, at densities Council considers appropriate, in all the residential areas, including rural areas.

Bylaw 8474

- a. Without limiting Policy 7.5.9, permit a Therapeutic Community Care Facility on Lot C, District Lot 1597, Cariboo District, Plan 20539 for the supportive residential care of up to 30 persons who receive care or support primarily related to substance dependence, mental health issues or both.

Bylaw 8474



Policy 7.5.10 Support a range of seniors housing options in all residential areas, and encourage seniors housing in growth priority areas where medical facilities, cultural activities, social services, shopping and transit are available nearby.

Policy 7.5.11 Secondary suites are supported as a means of creating affordable housing for both homeowners and renters within all single-family areas. The City should encourage all new single-family construction to be secondary suite-ready to ensure code conformity.

Policy 7.5.12 Encourage provision of affordable food sources such as on site growing spaces in new affordable housing developments.

7.5 C. Diverse housing stock

A diverse housing stock that includes more multiple residential dwelling units provides a range of affordable options for households of different income and at different life stages.

Policy 7.5.13 Encourage ground oriented medium density housing options such as townhouses, secondary suites, cluster housing, and carriage or laneway houses that contribute to the City's target for 80% new multifamily units over 30 years in ways that integrate existing neighbourhoods.

Policy 7.5.14 Support initiatives that showcase new housing forms or tenures.

Policy 7.5.15 Encourage projects incorporating affordable family housing and/or a mix of market and non-market housing with a focus downtown, in

neighbourhood centres and along major corridors that are close to transit and services, and that align with growth management directions.

7.5 D. Existing rental housing

The existing rental housing stock is typically the most affordable housing, but it should be preserved and in good condition.

Policy 7.5.16 Consider pursuing a Standards of Maintenance bylaw which allows the City to enforce basic levels of maintenance for rental accommodation.

Policy 7.5.17 Encourage energy efficiency and improved safe and healthy building upgrades of the existing rental housing stock.

7.5 E. Homelessness

Homelessness deserves a continued special focus alongside efforts to increase the supply of affordable, rental and special needs housing.

Policy 7.5.18 The City should support regular homeless counts and other efforts to understand the size and nature of the homeless population. These provide important baseline information for planning for homelessness.

Policy 7.5.19 Continue to work with community stakeholders to end homelessness.

7.6 Safe Community

There are essential emergency responder services such as Ambulance, Fire, Police, and emergency response programs that contribute to the community's goal of a safe environment. The Emergency Response and Recovery Plan outlines the City of Prince George's authority to act in emergencies. Its purpose is to help the City of Prince George and community representatives save lives, reduce suffering, protect property, mitigate damage to the environment, and control the economic consequences of emergencies and disasters. The City should continue to work closely with emergency services providers to ensure capital investments and infrastructure are planned in accordance with project population growth and appropriate land use siting criteria, and to ensure those with limited mobility and older people are included within these processes. This section of the OCP focuses on two additional elements of public safety: crime prevention through environmental design and crime prevention through social development.



The City of Prince George is committed to creating a high-quality urban environment. The inclusion of Crime Prevention Through Environmental Design (CPTED) in the design and maintenance of the urban environment is an important step towards achieving this goal. The implementation of CPTED principles can reduce crime, the fear of crime and nuisance behavior through a proactive approach.

Crime Prevention through Social Development focuses on objectives and policies founded on a Crime Prevention through Social Development approach which was adopted by City Council in 2008. Crime Prevention through Social Development (CPSD) is an approach to preventing crime and victimization that recognizes the complex social, economic, and cultural processes that contribute to crime and victimization. CPSD seeks to strengthen the “bridge” between criminal justice policies and programs and the safe, secure, and pro-social development of individuals, families, and communities. It is important to note that CPSD does not function in isolation from traditional crime prevention and crime control measures. A comprehensive crime prevention approach for a safer community usually includes measures to address the immediate objective of protecting the public through the efforts of the police, courts, and corrections. At the same time, it may also direct resources to reduce the availability and attractiveness of opportunities for criminal activity through initiatives such as Block Watch and Rural Crime Watch, Speed Watch, and Citizens on Patrol (COPS).

Crime is primarily the result of multiple adverse economic, social, cultural and family conditions. The complex and inter-related root cause of crime in Prince George can be summarized in three main categories: poverty and economic factors, family environment and social inequities.

Objectives

- Objective 7.6.1 Foster the development of a community where safety and security are actively promoted and supported.
- Objective 7.6.2 Implement CPTED principles in the development and maintenance of both the private and public realm.
- Objective 7.6.3 Enhance public safety and well being by supporting emergency service providers with existing services, planning for expanded services and through crime prevention.
- Objective 7.6.4 Reduce crime and nuisance behavior.
- Objective 7.6.5 Expand crime prevention measures throughout the community.
- Objective 7.6.6 Address crime prevention on an equal level with other issues in the planning and development of the built environment.
- Objective 7.6.7 Support and facilitate the efforts of community partners to address the root causes of crime to ensure Prince George is a community where all citizens feel safe.

7.6 A. Crime Prevention through Environmental Design

CPTED is based upon five (5) interconnected principles that relate to territoriality and defensible space, the hierarchy of space, natural surveillance, access control, as well as image and maintenance. The implementation of CPTED at the design and development stage has long-term financial benefits for the developer or owner and the community, as it can reduce emergency service calls and maintenance costs.

Policies

- Policy 7.6.1 Support the implementation of Crime Prevention through Environmental Design (CPTED) principles of territoriality and defensible space; hierarchy of space; natural surveillance; access control; and image and maintenance throughout the public realm.
- Policy 7.6.2 Proactively apply the CPTED principles at the design and development approval process stage.
- Policy 7.6.3 Encourage all existing developments to apply CPTED principles and the use of CPTED safety audits.

7.6 B. Crime Prevention through Social Development

Crime Prevention through Social Development strategies can be characterized as: proactive; long-term; guided by social and economic factors that give rise to crime; targeted at those who are at high risk for future offending; coordinated with other crime prevention initiatives and programs that are already available in the community (particularly in the areas of education, health, housing, etc.,) and accessible to individuals and families.

Policies

- Policy 7.6.4 Support the creation of safe spaces in the community to encourage social connections where community members have easy access and are able to experience a sense of place, space, and belonging.
- Policy 7.6.5 Improve access to improved social networks by supporting efforts to enhance participation in arts, culture, sports and recreation for all residents.
- Policy 7.6.6 Promote, support, and facilitate positive youth development opportunities that promote social inclusion.
- Policy 7.6.7 Support and facilitate school and community efforts to provide anti-bullying and harassment programs.
- Policy 7.6.8 Support and facilitate community efforts to implement alternative and restorative justice models.
- Policy 7.6.9 Support and facilitate a collaborative approach to violence prevention.
- Policy 7.6.10 Support measures to ensure all children from birth to age five have access to comprehensive early childhood development and care.

7.7 Supportive Community with Strong Neighbourhoods

Supportive, engaged communities result from the bonds and connections that start at an individual level, extend to neighborhoods, and eventually to the community as a whole. These bonds refer to the linkages that residents have with each other and the wider community. Engaged neighbourhoods and communities provide a voice on issues, deliver responsive and accessible services, create a sense of belonging, and provide for basic engagement opportunities. Research points to strong correlations between vibrant social networks and childhood development, safety, education, income, economy and public health. Social capital is an integral part of strong, healthy communities and public policies which support the creation of social capital contribute to overall community sustainability. Open space also provides opportunities for the development of strong neighbourhoods and communities. While open space directives with respect to the built environment are included in Section 0 of the OCP, open space as it relates to social development is included in this section.

Prince George has a strong level of social capital and community connectedness. This extends beyond the city itself to the entire northern region, because Prince George is the central hub for northern BC. The creation of the University of Northern BC is an example of local and regional community connectedness in action. The rate of volunteerism is often an indicator of supportive and engaged communities and Prince George has one of the highest rates of volunteerism in B.C. In 2004, the BC average rate of community volunteerism for those aged 15 and older was 45%, while 62% of Prince George residents aged 15 and older volunteered. Volunteer Prince George reports an increasing percentage of young people (including college and university students) are choosing to volunteer.

Objectives

- Objective 7.7.1 Support the building of Community Association capacity to champion initiatives that provide opportunities for the engagement of all neighbourhood members.
- Objective 7.7.2 Facilitate and support neighbourhood efforts to identify and implement projects aligned with sustainability goals.

Policies

- Policy 7.7.1 Encourage the streamlining of permit and approval processes to enable the fast-tracking of initiatives undertaken by community associations or neighbourhood groups.
- Policy 7.7.2 Work in partnership with School District No. 57 to expand community use of existing space in schools.
- Policy 7.7.3 Consider creating smaller neighbourhood based centres as service and meeting hubs.

- Policy 7.7.4 Encourage neighbourhood building activities and other events through grants and other supportive measures.
- Policy 7.7.5 Help to attract people to neighbourhood gathering places with art, music and events.
- Policy 7.7.6 Support and promote activities that foster neighbourhood dialogue and engagement.

The built environment includes all the physical, constructed elements of the city: buildings, streets, parks, the utility infrastructure under the ground, and the uses and activities that take place within it. The Plan begins with a discussion of the city's evolution through time: managing growth to the community's benefit. Specific policies for land use, housing, transportation, infrastructure, parks, and agriculture follow. See also Part D for Implementation.

8.1 Growth Management

Growth management describes tools used to direct growth in ways that support community goals. To support economic development, housing, and provision of services, growth management policies maintain adequate inventories of land given growth projections. In the bigger picture, growth is managed in order to secure an economy that is resilient in the long-term; a community that has a strong, coherent identity, and to protect the environment on which we depend.

As noted in Chapter 2, population projections suggest modest annual growth of about 0.4% - 1.2% to 2025, translating into some 3,600 to 7,500 more housing units and a demand for 19 ha of commercial land. As with any prediction, these forecasts are uncertain, and real growth may be higher or lower. Past trends have seen growth concentrated on the outskirts of the urban area, drawing energy away from downtown and towards new centres, and increasing reliance on automobile transport and causing problems like high infrastructure maintenance costs, high accident-related costs, and obesity. The key issue for growth management is to focus growth closer to downtown and existing neighbourhood centres, within the context of what the market can deliver.

Objectives

- Objective 8.1.1 Contribute to downtown revitalization.
- Objective 8.1.2 Reduce development pressure on valuable resource lands and protect environmentally sensitive areas, hazardous areas, green corridors, and significant slopes.
- Objective 8.1.3 Create land-use patterns that are supportive of convenient walking, cycling, and transit – to improve health, air quality, and climate change mitigation efforts.
- Objective 8.1.4 Strengthen neighbourhoods and neighbourhood centres throughout the City.
- Objective 8.1.5 Minimize ongoing operating, maintenance and replacement costs of infrastructure.
- Objective 8.1.6 Facilitate redevelopment and infill by removing barriers to this kind of growth.

- Objective 8.1.7 Enhance neighbourhood centres and downtown, making them better “people places” that are aesthetically pleasing and more pedestrian-oriented, attracting residents, businesses, and encouraging economic development.
- Objective 8.1.8 Encourage development and growth in the short and long term.
- Objective 8.1.9 Maintain school-age populations in existing catchments.
- Objective 8.1.10 Support adaptive management in case of growth rates higher or lower than forecast.
- Objective 8.1.11 Provide for limited rural residential living.
- Objective 8.1.12 Preserve forests, agricultural lands, soils, and environmental resources.
- Objective 8.1.13 Support a sustainable resource economy by maintaining access to non-renewable or sensitive natural resources within the City.
- Objective 8.1.14 To adapt to climate change, support rural uses of rural areas and encourage infill and compact development whenever possible to minimize new infrastructure construction.

Designation of Areas

Growth Management

The City’s urban structure is described in Chapter 4.0 Concept and Strategies. *Schedule B-4: Growth Management* focuses on areas having different growth management policies and designates the following areas:

- Urban designations:
 - Growth Priority Areas
 - Infill
 - Phase 1
 - Phase 2
- Future Urban
- Rural designations:
 - Rural Resource
 - Rural

These designations are described in subsequent sections of this chapter and are referenced in objectives and policy.

Policies

General

- Policy 8.1.1 Through a combination of incentives, City investment, and regulations, the City should encourage growth within the Infill and Growth Priority areas.
- Policy 8.1.2 The City should affirm and strengthen the role Growth Priority Areas play in creating identity in the city by encouraging growth within them over growth elsewhere.
- Policy 8.1.3 The City should allow and encourage mixed use development downtown, within Neighbourhood Centres and along major streets.
- Policy 8.1.4 The City recognizes that Lheidli T'enneh lands within City of Prince George may be excluded from City jurisdiction following ratification of a Treaty. At that time, the City should work with the Lheidli T'enneh to harmonize and agree on growth management policy through a Comprehensive Master Agreement between the parties.
- Policy 8.1.5 The City supports a strong urban/rural edge, following landmarks and topographical features. Generally, these include Parkridge Creek, the prominent cutbanks and significant slopes west of Foothills Boulevard, the Fraser River on the east, and the wetlands and watershed of McMillan Creek to the north. In the Blackburn area, support agriculture through integration of urban and rural areas.
- Policy 8.1.6 The City should plan on the basis of a forecast growth rate of 0.4% – 1.2%/year to 2025.
- Policy 8.1.7 The City supports collaborative growth management with the Regional District of Fraser Fort George to manage the cumulative impacts of growth in and near the city on costs of utilities, roads, and other services and amenities.
- Policy 8.1.8 The City does not support farmland subdivisions in the ALR or agriculturally valuable lands that produce any parcels smaller than 15 ha parcels.
- Policy 8.1.9 The City may identify agriculturally valuable lands outside the ALR and encourage their inclusion into the ALR.

Infill Areas and Growth Priority Areas

- Policy 8.1.10 The City should prioritize public investments to Growth Priority Areas, including capital investments in transit, biking/walking infrastructure, streetscape improvements, parks and other public open spaces, utility upgrades, communications and energy infrastructure (including district energy). Repairs and maintenance should also be prioritized in these areas, recognizing the need for adequate maintenance throughout the Urban Area.
- Policy 8.1.11 To establish clear community preferences, increase certainty for redevelopment and infill projects, and establish detailed priorities for capital investments, the City should prioritize neighbourhood planning in and around Growth Priority areas. These plans should take a “complete community” approach, including situating the plan area in the context of the surrounding urban structure [*See also Map 1 - Community Identity*], and relating residential development and densities to the urban structure and to design principles for walkable communities.
- Policy 8.1.12 The City should support utilities and drainage infrastructure extensions, upgrades and oversizing in Growth Priority Areas and the Infill Area by means of funding mechanisms available under the *Local Government Act*, including:
- the collection of development cost charges to fund projects necessary under the growth management objectives and policies;
 - latecomer agreements with developers;
 - development works agreements with developers;
 - local area service projects to serve re-development and new development in existing developed areas (where supported by local land owners);
 - opportunities for funding, when available, under applicable government grant programs or other grant funding organizations; and,
 - opportunities for funding agreements, when applicable, under public-private partnerships.

Phase 1, Phase 2 and Future Urban

- Policy 8.1.13 To provide for gradual expansion of the Urban Area, the City shall phase and guide growth within these areas based on required servicing and with preference to locations adjacent to existing urban areas and close to identified Neighbourhood Centres.
- Policy 8.1.14 The City should consider updating existing neighbourhood plans in Phase 1, Phase 2 and Future Urban areas to identify a pattern of

walkable neighbourhood commercial centres and support these with residential densities high enough to ensure viability.

Policy 8.1.15 The City should finance development in these areas in keeping with the principle that new development must pay its own way. Based on this principle, all infrastructure required to support development in Phase 1, Phase 2 and Future Urban areas should be funded in full by the developer.

Policy 8.1.16 The City should consider rezoning lands in the Future Urban area to limit urban development and promote continued rural use.

Rural

Policy 8.1.17 This area functions as a transition between rural resource lands and urban areas, providing for rural residential and more active small-scale agriculture. It recognizes and affirms existing rural areas and activities. The City should support rural development as more fully described in the Land Use Section 8.3 F of this bylaw.

Policy 8.1.18 The City should not extend or provide new City water, sanitary or storm services to rural areas, except where Northern Health considers there would be substantial benefits to local water quality and water security.

Rural Resource

This designation includes areas used for agriculture, forestry, and resource extraction activities that are important in the long-term health of the regional economy. It also encompasses natural open spaces, environmentally sensitive areas, and natural hazard areas in which development is restricted or prohibited.

Policy 8.1.19 The City should restrict residential, commercial, and industrial (except resource extraction) growth in the rural resource area, as more fully described in the Land Use Section 8.3 F of this bylaw.

Policy 8.1.20 The City should permit a minimum parcel size of 15 ha in Rural Resource areas.



(Photograph courtesy the Prince George Citizen).

8.2 Urban Form and Structure

Urban form and structure describes the physical elements that give meaning to a place – making it special or unique, and that influence our emotions. For a community, a strong, healthy, visible form and structure contributes to pride of place, allowing people to talk about their city in terms like love, beauty, comfort, attraction, safety. Usually meaning is derived from a combination of natural, built, and cultural features. Public surveys conducted as part of developing this Plan suggest that people identify with and highly value good shopping, natural beauty, and access to recreation. Peoples’ homes and neighbourhoods are well-regarded, as were recreational facilities; by contrast, some neighbourhoods were felt to be unsafe and/or unattractive, and industrial areas, congested roads, and poorly maintained roads show where dissatisfaction is focused.

A supporting analysis of urban form and structure suggests that:

- Natural features are the primary shapers of the city;
- Downtown is a key part of the community’s identity, both positively and negatively;
- Pulp mills are a key landmark and driver of identity;
- Because it is spread out, a challenge is to support a common identity while allowing distinct areas to flourish;
- Because there are few east-west streets, their design and health is critical to strengthening urban fabric;
- A pattern of strong landmarks exists from UNBC to the pulp mills;
- Intersections of major streets, coupled with retail districts (i.e., neighbourhood centres) are key opportunities to encourage more attractive spaces and to focus activity;
- With few exceptions (e.g., 4th Avenue and George St downtown), main streets are wide with few intersections, so they act as barriers to safe, comfortable pedestrian and cyclist movement, creating edges that divide the city rather than helping neighbourhoods integrate; and,
- Outside of downtown, pedestrian-friendly streets and public spaces are few.

In addition, the City’s identity is defined by a pronounced seasonal cycle including a potent winter. Residents see Prince George as a “winter city” with enticing recreational and cultural attributes, and specific needs for shelter, transportation, and therefore built form. Given that much of the existing built environment is recently built and in good condition, it should be a challenge for the City to improve its urban design. Strong priorities for investment linked with growth management should be critical to success. The myPG Sustainability Plan identifies Identity and Pride as one of the most important goals of the community. Investment in urban form and structure should directly influence this goal. A more attractive city contributes to a sense of safety and is more attractive to business, especially sectors whose employees value great urban places.

Objectives

- Objective 8.2.1 Strengthen residents' connection with natural elements and urban landmarks and structural elements.
- Objective 8.2.2 Improve safety and security of urban places.
- Objective 8.2.3 Make the urban environment more comfortable and attractive through improved visual interest, smooth transitions between uses, incorporation of natural elements, and other approaches.
- Objective 8.2.4 Provide a variety of housing forms to meet diverse needs.

Policies

Urban Structure

- Policy 8.2.1 Downtown, Highway 97, Highway 16, the rivers, prominent hills, cutbanks, and escarpments define the structure and shape of the city. The City should develop land use and design policies to respond to and celebrate these structural elements.
- Policy 8.2.2 The City should protect and strengthen key views to landmarks and defining natural features. Views may be strengthened by setting aside key viewpoints and by framing views with buildings. Landmarks include City Hall, UNBC, and the industrial stacks at pulp mills on the Fraser River. Defining natural features include rivers, cutbanks, and steep hills like Connaught Park.
- Policy 8.2.3 In city planning and implementation activities such as neighbourhood planning, street renewal, parks and open space planning, among others, the City should affirm and support the urban structure shown in the *Map 1 - Community Identity* by prioritizing projects and planning efforts within priority growth areas.
- Policy 8.2.4 Within neighbourhood centres, the City should establish maximum block sizes of 1.5 ha when considering subdivision applications, and encourage mid-block connections in existing blocks to achieve the equivalent block size for pedestrian and cyclist movement.
- Policy 8.2.5 Outside of neighbourhood centres, the City should set a maximum 1.5 ha block area except where it is impossible due to topography or other significant constraint. In such cases, the City should strongly encourage trail connections to provide the same level of pedestrian connectivity.

Streets

For the purposes of this discussion, “streets” refers to the space bounded by building frontages, including the public right-of-way and private open space.

Policy 8.2.6 The City supports “great streets” principles to guide street design and private realm design. While these apply throughout the city, they are particularly important for development downtown and in Neighbourhood Centres. These principles include:

- Good urban design is premised on the principle that “community takes place on foot”. As such, streets should be places for people to walk leisurely or with a purpose, and should have a pleasing experiential and social dimension;
- Building frontages along urban streets are the strongest determinants of the character and quality of a neighbourhood or district. Continuous frontages create interesting and attractive walking environments while providing friendly and animated streetscapes;
- Streets should provide physical comfort. A sense of physical comfort derives from both a perceived sense of security and the design elements of the street and sidewalk;
- Streets require definition. Streets should have clear boundaries, or “walls”, that define an outdoor room. These “walls” are typically buildings but trees may also provide a sense of enclosure;
- Streets require transparency. Windows at eye level are inviting, engaging, sociable, and provide for natural surveillance, helping to create safe, socially vibrant and active streets; and,
- Streets require qualities that engage the eye. Visual interest at the human scale adds to the experiential dimension and in particular, the identity of the street.



Policy 8.2.7 The City should strengthen Massey Drive as a key path between downtown and Pine Centre Mall by adding as many residents as possible along the corridor, and enhancing the street as a pedestrian- and cyclist- oriented space.

Policy 8.2.8 The City supports Universal Design principles and guidelines in street and intersection design.

Policy 8.2.9 The City should take winter city concerns into consideration in design and development of streets and related public spaces.

Built Form

Policy 8.2.10 Through development permit guidelines, the City should ensure that all new development is compatible with existing neighbourhoods, promotes community goals, reflects local identity, aligns with design guidelines and recommendations within Neighbourhood and Area Plans, and enhances the built environment. Development Permit Areas are adopted in Part D of this Plan for the following types of development and areas:

- Multiple Residential;
- Commercial (including mixed-use);
- Industrial;
- Intensive Residential; and,
- Downtown.

Policy 8.2.11 With regard for safe vehicular sight lines, the City should ensure that buildings at corners of major intersections (i.e., intersections between collectors and arterials) locate on both fronting property lines, in order to create comfortable spaces for pedestrians at these intersections.

Policy 8.2.12 Ensure that sensitive land uses adjacent to railway corridors consider rail proximity issues and utilize proximity guidelines and best practices developed by the Railway Association of Canada and the Federation of Canadian Municipalities.

Policy 8.2.13 The City should encourage retention of mature trees and shrubs in all infill and redevelopment projects.

Policy 8.2.14 The City should encourage clustering of lots to preserve views, recreational features, or special environmental features.

Policy 8.2.15 Where clustering is permitted in Urban Areas, the City may encourage a 10% increase in density; in Rural Areas, no increase in density with clustering may be permitted.

- To qualify as a cluster development, the area to be preserved must be protected by covenant or transfer of ownership.
- Areas not developable (e.g., significant slopes, identified Environmentally Sensitive Areas, Flood Hazard Areas) are excluded from all density calculations.

Policy 8.2.16 The City should discourage and to the extent possible, restrict gated communities.

- Policy 8.2.17 The City should consider potential pilot projects to add quality and variety in housing forms.
- Policy 8.2.18 Where development occurs near busy streets, the City should encourage design that minimizes exposure to noise and pollution.

Food Systems and Urban Agriculture

[See also Section 7.3 for Food Security related policies]

- Policy 8.2.19 The City should encourage development on the urban edge to consider integration of urban and agricultural uses and activities through design and layout.
- Policy 8.2.20 The City should encourage neighbourhood development projects with green space larger than 0.5 ha to integrate urban agriculture in their design and programming.
- Policy 8.2.21 The City should require new multiple residential development applications to consider a sustainable food system approach, for example providing growing space, providing community kitchen amenities and/or allocation of funds toward such community amenities.
- Policy 8.2.22 The City should facilitate community gardens in Growth Priority Areas. The City should consider providing land, working with organizers for community gardens based on community interest and initiative, and designating a staff liaison to facilitate this role. [See also related policy for the Downtown land use designation.]
- Policy 8.2.23 The City should ensure urban agriculture implementation does not conflict with Urban Interface Policies (human-bear conflict) and is consistent with Health and Safety regulations.
- Policy 8.2.24 The City should allocate space within City parks, open space, school yards, rights-of-way, City owned facilities, surplus properties, and redevelopment parcels for growing and distributing/selling food. Prioritize vacant, underutilized or derelict sites as identified within the SGOG, Public Works: Civic Improvements section.
- Policy 8.2.25 The City should encourage community greenhouses and gardens and ensure that small-scale food production and storage buildings and structures (e.g., root cellars) are permitted in residential areas.

8.3 Land Use

Land Use describes the activities that take place in different locations in the city. It is closely linked to urban form, because different uses require different spaces, buildings and structures. It is also linked to growth management, which works to maintain adequate supplies of land for various uses. In Prince George, the land use pattern may affect and be affected by the L'heidli Tenneh Treaty Settlement Lands when they are finalized.

The City updates its plans and regulations for different land uses regularly. More recently, the Industrial Lands Strategy, the Smart Growth on the Ground Downtown Prince George Concept Plan, a number of neighbourhood plans, and the zoning bylaw have been created or updated.

Prince George's land use patterns and urban form developed primarily between the 1960's and 1980's, and are consequently shaped by the separation of uses and the resulting need to drive from place to place. As the mix of commercial uses changed around the turn of the century, the City responded with regional and arterial (service) commercial designations which attempted to distinguish and locate uses like large format retail. Finally, the economy has transitioned from a single focus on industry to more diversity, and industrial activity has shifted.

These trends have created a need to re-orient land use policy for Prince George. The first aspect of this is a move to encourage mixed-use centres, including downtown. The second is a refinement of commercial land use designations to reduce competition between downtown and neighbourhoods on one hand, and regional and auto-oriented commercial on the other. Last, an expansion of industrial land to meet anticipated market demands is coupled with a refinement of policies to help improve air quality.

Land Use policies contribute to a number of myPG Sustainability Plan goals. Mixed use centres improve the access from housing to stores and services for seniors; and encourage more active transportation, improving health outcomes. In these centres, there is less need to drive, and it is easier to build feasible district energy systems in mixed use areas – helping reduce greenhouse gas emissions. Mixed-use centres are familiar to many immigrants, who find them attractive, so they help secure employees for the growing economy.

Objectives

- Objective 8.3.1 Strengthen downtown and neighbourhood centres with a compatible mix of uses and housing forms.
- Objective 8.3.2 Increase the efficiency of land use patterns and movement networks.
- Objective 8.3.3 Clarify distinctions between land uses, and focus land uses to the most appropriate locations.
- Objective 8.3.4 Increase the diversity of activities in Prince George, while managing critical impacts sensitively.

Designation of Areas

Future Land Use

The City's urban structure is described in Chapter 4.0 Concept and Strategies. *Schedule B-6: Future Land Use* focuses on areas having different land use policies and designates the following areas:

- Downtown
- Neighbourhood Centres
 - Neighbourhood Centre Corridors
 - Neighbourhood Centre Residential
- Neighbourhoods
 - Neighbourhood Corridors
 - Neighbourhood Residential
- Business Districts:
 - Regional Commercial
 - Service Commercial
 - Commercial Recreation
 - Community Facility
 - Light Industrial
 - Medium Industrial
 - Heavy Industrial
- Parks & Open Space
- Utilities
- Rural and Rural Resource:
 - Rural A
 - Rural B
 - Rural C
 - Rural D
 - Rural Resource

Bylaw 8495

These designations are referenced in objectives and policy in this chapter and elsewhere in this Plan [*See also Parks & Open Space Section 8.6 and Utilities and Drainage Section 8.8*]

Policies

8.3 A. General

- Policy 8.3.1 The City attaches a high priority to encouraging the development of downtown. As such, it should consider the effects on the downtown in the evaluation of all new commercial/retail policies or applications, resource allocation, and priorities.
- Policy 8.3.2 To expand the range of single-family housing options, facilitate redevelopment of areas close to downtown, and encourage attractive development, the City should permit narrow lot developments within areas identified in *Schedule D- 5: Intensive Residential Development Permit Area*. These developments require development permits for those lots with developed lane access and a maximum of 11 m in width.”
- Bylaw 8602
- Policy 8.3.3 The City should allow and encourage office uses downtown, and restrict them outside the downtown. Office uses outside the downtown should be limited to those professional services that are regularly used by individuals, for who nearby access is important, such as insurance, banks, medical and dental offices. Office development in Business Districts is not supported, except where the office use is ancillary to the primary use.
- Policy 8.3.4 The City should focus commercial growth within the urban area, with an emphasis on Downtown, Neighbourhood Centres, and Corridors to match residential growth directions.
- Policy 8.3.5 The City will encourage siting ground-oriented multiple residential developments in prime locations such as view areas, riverfronts, and near amenities with no large concentrations of this use in any single location.
- Policy 8.3.6 The City supports the redevelopment and/or adaptive re-use of surplus school sites. Uses compatible with surrounding uses, providing community services, or enabling later conversion back to school use are preferred. A sustainability assessment of redevelopment options is desirable, incorporating consideration of potential long-term need for flexibility and adaptation.
- Policy 8.3.7 For all development the City may consider the following criteria to determine proposed land use suitability:
- Lot location and size (may also require lot consolidation)
 - Access from road or lane
 - Volume of site usage and traffic
 - Parking

- Landscaping and screening
- Development size, massing and quality of design

Policy 8.3.8 The City should consider voluntary amenities and other commitments associated with development applications that advance the objectives of this Plan, and that provide public benefit to a local area or the broader community.

Policy 8.3.9 The City supports home-based businesses in rural and urban areas, subject to zoning conditions to manage negative impacts.

Policy 8.3.10 The City recognizes that Lheidli T'enneh lands within City of Prince George may be excluded from City jurisdiction following ratification of a Treaty. At that time, the City should work with the Lheidli T'enneh to harmonize and agree on land use policy through a Comprehensive Master Agreement between the parties.

Bylaw 8503 a. The City shall permit continued commercial use of properties whose current zoning as of the adoption of the Bylaw is commercial.

8.3 B. Downtown

The heart of the city, the downtown functions as the civic and cultural centre of Prince George, containing key cultural, civic, and recreational amenities, offices, shopping, and accommodating significant housing. Buildings may be larger in scale, with a mix of towers and lower forms.

Objectives

Objective 8.3.5 Revitalize downtown as the commercial, cultural, and civic heart of the community.

Objective 8.3.6 Strengthen the sense of place and identity downtown, incorporating natural and cultural elements.

Objective 8.3.7 Make the downtown more attractive to new residents and businesses.

Objective 8.3.8 Maintain downtown as the central business district and primary location for offices.

Objective 8.3.9 Support a diverse, socially integrated population.



(Photograph courtesy Abstractions Studio).

Policies

General

Policy 8.3.11 The City should connect downtown with the riverfront experience through strong park connections, incorporating a significant water feature if possible.

Policy 8.3.12 The City should provide public art and signage that connect viewers with unique elements of downtown's natural and cultural heritage, reflects diverse cultures, and enhances the sense of entry into the downtown.

Policy 8.3.13 The City should support expression of First Nations identity and culture through building styles, art, signage, street and public space names, and through other similar means.

Policy 8.3.14 The City should support the Downtown Business Improvement Association in its efforts to promote and strengthen downtown.

Policy 8.3.15 The City should increase the area of parks with a minimum target of 10% of downtown as public parks and plazas.



Policy 8.3.16 The City should support provision of accessible facilities for diverse needs. These include supportive non-market housing, affordable market housing, social services, community kitchens, seniors and family recreation, and similar services.

Built Form and Land Use

Policy 8.3.17 The City supports an intense mix of uses, including housing and a wide range of commercial, from business incubators through conventional office and retail, and related public and private services.

Policy 8.3.18 The City should maintain downtown as the primary entertainment and cultural centre of the city. All medium and large scale entertainment and cultural uses – including theatres, movie theatres, music venues, large meeting facilities, and gaming – should be located downtown.

Policy 8.3.19 The City should support large format retail outlets locating in the downtown, noting that these developments are subject to Development Permit requirements to ensure they fit and make a positive contribution to the street-level pedestrian experience.

Policy 8.3.20 The City should incorporate and advance food-related Projects and Plans in the Smart Growth on the Ground Downtown Prince George Concept Plan, which include a year-round Farmer's Market and associated public marketplace, as well as the development of a Food Security/Food Systems plan supported with food banks, community gardens, and community kitchen.

Policy 8.3.21 Through an adaptive learning process, the City should develop and implement supportive policies for street vendors, buskers, outdoor social spaces (e.g., chess/checkers tables), etc.

Policy 8.3.22 The City should prioritize the downtown as the preferred location for festivals and encourage regular use of both indoor and outdoor spaces downtown for public events of all kinds.

Policy 8.3.23 The City should encourage extensive greening of buildings, such as rooftop gardens, patios, planters, and public spaces.

Policy 8.3.24 The City should explore the opportunity for a cutting-edge catalyst building project incorporating leading green design, incorporating winter city design and shared facilities needed by residents and community organizations.

Policy 8.3.25 The City should encourage the visible use of local materials in construction, particularly wood.

Policy 8.3.26 The City should strongly encourage re-use, adaptation, and renovation of existing buildings, responding flexibly to creative proposals.

Policy 8.3.27 The City should work to inform any new residential development within a 300 m buffer area from the CN Rail Terminal located at 1st Avenue, to consider noise and vibration rail proximity issues and utilize proximity guidelines and best practices developed by the Railway Association of Canada and the Federation of Canadian Municipalities.

Policy 8.3.28 The City should allow for the following building forms and densities, where an appropriate fit with neighbouring areas is made, and as further described in the Smart Growth on the Ground Downtown Prince George Concept Plan:

- Laneway house infill (25-50 units/ha);
- Courtyard townhomes (40-60 units/ha);
- Stacked townhomes (50-150 units/ha);
- Townhouse lofts (40-60 units/ha);
- 3-4 storey mixed use commercial/residential and retail/office (75-135 units/ha); and,
- Mid-rise residential, mixed-use, terraces, and courtyard townhomes and podium/point tower buildings, having 2-4 storey podiums to define a street wall, and higher elements stepped back to maintain a human scale at street level (up to 280 units/ha).

Policy 8.3.29 The City should encourage the following building forms, with reference to the Smart Growth on the Ground Downtown Prince George Concept Plan, subsequent studies, plans and land use decisions:

- a. River Park/Quebec Corners: Residential towers with 2-4 storey podiums providing a continuous streetwall. Podiums may consist of townhouses, residential amenity spaces, and/or retail spaces;
- b. Market and Cultural Core: Infill and redevelopment in keeping with the scale of adjacent buildings, typically 2 storeys or less with retail frontage at grade, and apartments and/or offices above; and,
- c. Vancouver/Victoria Flex/Transition: Up to 6 storey buildings in the area between Vancouver and Victoria, and 5th avenue and 11th avenue, on condition that the considerations



identified in the Residential Wood Frame Innovation Comprehensive District Urban Design Study's Recommendation #9 are adequately addressed. Mixed-use buildings facing Victoria, with retail at grade and residential above. Residential buildings behind, transitioning in scale to buildings envisioned in the Crescents Neighbourhood Plan.

- d. Fourth Avenue Flex: In the area on the south side of 4th Avenue to mid-block between Vancouver and Winnipeg Streets, and on the north side of 4th Avenue to mid-block between Prince Rupert and Winnipeg Streets, 2-4 storey mixed-use buildings with commercial at grade and residential above, on condition that the considerations identified in the Residential Wood Frame Innovation Comprehensive District Urban Design Study's Recommendation #9 are adequately addressed. Parking/loading access shall not be from 4th Avenue.
- e. Commercial Conversion: Minor expansion of Commercial Conversion uses are supported permitting redevelopment with consolidation of lots fronting on the west side of Vancouver Street between 4th Avenue and 11th Avenue. This allows for the conversion and replacement of older dwellings to a limited range of non-retail commercial uses. Expansion westward from these sites west of Vancouver Street identified within the Downtown designation is not recommended, as most of the lots in this area are proposed for various housing densities.

8.3 C. Neighbourhood Centres

Unique focal points throughout the city, neighbourhood centres provide local shops, services and similar amenities with new housing in a mixed-use context. They have a town- or village-scale, with buildings up to 4 storeys high, and buildings up to 6 storeys high along Queensway. Within centres, corridors running along major arterials and collectors function as key structural elements and mixed-use shopping streets. Areas behind these shopping streets are primarily residential, although they may contain parks, schools, and similar uses. Within neighbourhood centres, residential areas are anticipated to infill and densify in comparison to the surrounding neighbourhoods.

Objectives

- Objective 8.3.10 Strengthen shopping areas as “people places” with strong pedestrian orientation, walkable amenities, and comfortable, safe open spaces.
- Objective 8.3.11 Increase the mix of uses, with an emphasis on adding residential uses and daily needs and amenities within easy walking distance of one another.
- Objective 8.3.12 Support multi-generational, mixed-income communities.
- Objective 8.3.13 Act as an anchor and draw for the local community.
- Objective 8.3.14 Support more efficient energy and transportation systems.

Policies

General

- Policy 8.3.30 The City should encourage infill and redevelopment of existing vacant and underused sites, with an emphasis on enhancing the pedestrian experience.
- Policy 8.3.31 The City should explore the potential to develop a central public open space in each neighbourhood centre. This space may be a redesigned street segment, a new space, or an adaptation of an existing open space such as a mall parking lot. The space should be supported by diverse uses and activities nearby, and should be located on one or more pedestrian, transit and cycling routes.
- Policy 8.3.32 The City should require buildings to be of a size and scale that is compatible with nearby (e.g., on the same street or block) buildings. The following restrictions apply to all development:
- Development at the edge of the Neighbourhood Centre must transition in scale and use to adjacent areas.

Transitions across lanes or mid-block are preferred to transitions across streets.

- The maximum building height is four storeys with the exception of areas designated Neighbourhood Centre Corridor along Queensway with a maximum building height of six storeys
- Such sites should not fragment neighbourhoods or lead to undue traffic within local neighbourhood streets.
- Proposed development should be subject to access and traffic analysis considerations.

Built Form and Land Use – Neighbourhood Centre Corridors

Policy 8.3.33 Within Corridors in Neighbourhood Centres, the City should:

- Encourage mixed use developments, incorporating retail and service commercial (this includes neighbourhood and local commercial uses) at grade with residential above;
- Permit parks, and schools and other community facility uses; and
- Encourage a diverse range of building types.

Policy 8.3.34 The City should target the following commercial characteristics of Neighbourhood Centres. Each centre should:

- Have a full range of retail and service commercial uses, including grocery or anchor stores and a diversified mixture of basic and specialty retail and personal services;
- Have up to 15,000 m² of commercial space;
- Have commercial street frontages no more than 2-3 city blocks in length (300-400 m); and
- Feature strong continuity of retail frontage.

Policy 8.3.35 The City should not permit development of new large format retail nor single retail stores larger than 5,000 m² in Neighbourhood Centres.

Policy 8.3.36 The City should permit the following housing types on collector and arterial streets in Neighbourhood Centres:

- Stacked townhomes (50-150 units/ha);
- Townhouse lofts (40-60 units/ha);
- 3-4 storey apartments (75-135 units/ha); and
- Others having densities up to 135 units/ha.

Policy 8.3.37 Housing in these locations should ensure the development can effectively buffer residents from traffic noise and visual impacts through appropriate building and site design; and, where the housing

form is adjacent to lower density uses, the bulk of the building be mitigated through appropriate setbacks, landscaping, and/or terracing of the building form.

Policy 8.3.38 The City should permit small-scale entertainment and cultural uses on Corridors in Neighbourhood Centres. These include for example community halls, and restaurants and small pubs that may support regular music or cultural performances, subject to the City of Prince George Liquor Licensing Policy.

Policy 8.3.39 The City should require all new retail space to be oriented to the street or a central public space, with parking on the street or at rear. 'Strip' plazas with parking in front should not be permitted.

Policy 8.3.40 The City should require all buildings on collectors and arterials in Neighbourhood Centres to be sited at or close to the front lot line, where feasible.

Built Form and Land Use – Neighbourhood Centre Residential

Policy 8.3.41 The City should permit the following housing types anywhere in Neighbourhood Centres:

- Single family homes, two-unit, triplexes and fourplexes (8-22 units/ha);
- Laneway house infill (25-50 units/ha)
- Courtyard townhomes (40-60 units/ha); and
- Others having densities up to 60 units/ha.

Policy 8.3.42 The City should not permit non-residential uses beyond arterial and collector streets except:

- Medical and dental offices may be considered adjacent the hospital on 13th Avenue between Winnipeg and Lethbridge streets. Built form should have a similar scale to adjacent single-family residential and minimize visual impacts of parking.
- Minimal and specialized medical/dental and ancillary professional offices may be accommodated within the existing hospital; and expansion of medical/dental and ancillary office facilities in conjunction with the Phoenix Medical Centre is supported.

Streets

Policy 8.3.43 In Neighbourhood Centres, the City should consider the potential for gathering places that make temporary use of major streets. Where such use is desirable, design streets to accommodate it easily.

8.3 D. Neighbourhoods

Neighbourhoods are primarily residential in nature, with associated schools and parks within them. They are typically small-scale, dominated by single-family and similar sized buildings. However, along collector and arterial streets, higher densities may be appropriate. These help to protect quiet residential areas from noise on main streets, and place more residents close to transit and nearby amenities.

Objectives

- Objective 8.3.15 Ensure change in existing neighbourhoods is in keeping with existing character and scale.
- Objective 8.3.16 Infill and redevelop vacant and underutilized sites to meet the anticipated needs of an aging population.
- Objective 8.3.17 Encourage pedestrian-oriented housing with a strong relationship to the street.

Policies

General

- Policy 8.3.44 The City should support infill and redevelopment in existing neighbourhoods.
- Policy 8.3.45 The City should develop a housing typology that meets the needs of the community's aging population and their general desire to age-in-place, and is compatible with the scale and character of existing neighbourhoods.
- Policy 8.3.46 The City should encourage and facilitate pilot housing projects to test and establish new housing types that fit within the Prince George context.
- Policy 8.3.47 The City should encourage incremental, small-scale redevelopment whose immediate impacts are relatively minor.
- Policy 8.3.48 The City should explore required upgrades and maintenance to lanes to make them safe primary access points for more intensive residential development.
- Policy 8.3.49 Proposed development along Corridors should be subject to access and traffic analysis considerations.



- Policy 8.3.50 The City should retain most existing green spaces to ensure that residents continue to have good access to local recreation as populations increase.
- Policy 8.3.51 Where development in a neighbourhood exceeds a rate of 5% conversion of existing lots per year, the City should assess the impacts of change on neighbourhood transportation, amenities and other matters of concern to the community, and identify any actions needed to improve management of such change.
- Policy 8.3.52 The City should permit community facility uses, including schools, and parks and places of worship in Neighbourhoods. The size of community facility uses should be similar to the predominant size of nearby buildings in order to ensure compatibility with their surroundings and to minimize off-site impacts.

Built Form and Land Use – Neighbourhood Corridors

- Policy 8.3.53 The City should permit local commercial nodes at intersections of collector and arterial streets. At these nodes:
- The City should permit retail, personal services, service-oriented office uses (insurance, real estate, medical/dental, travel), and food & beverage establishments intended to draw residents from surrounding neighbourhoods;
 - The scale and design of the building and site should suit the surrounding neighbourhoods, with total gross floor area of all retail developments in the node not to exceed 2000 m² and no single retail space exceeding 700 m²;
 - The City should support where feasible on-street parking in front of local commercial developments in lieu of off-street parking; if off-street parking is proposed, parking should not be in front of the businesses in 'strip mall' type layout;
 - The City should encourage buildings to be built on or near the front property line; and,
 - The City may consider expansion of local commercial uses within existing neighbourhoods where the proposed use meets criteria within this policy and does not contribute to intrusive vehicular traffic to local roads in the area.
- Policy 8.3.54 The City should require buildings to be of a size and scale that is compatible with nearby (e.g., on the same street or block) buildings. The following restrictions apply to all development:
- The maximum building height is four storeys

- Such sites should not fragment neighbourhoods or lead to undue traffic within local neighbourhood streets.
- Proposed development along Corridors should be subject to access and traffic analysis considerations.

Policy 8.3.55 *Repealed by Bylaw No. 8503*

Policy 8.3.56 The City should permit the following housing types on collector and arterial streets:

- Stacked townhomes (50-150 units/ha);
- Townhouse lofts (40-60 units/ha);
- 3-4 storey apartments (75-135 units/ha);
- Others having densities up to 135 units/ha;
- And where the development considers:
- effective buffering of residents from traffic noise and visual impacts through appropriate building and site design; and,
- where the housing form is adjacent to lower density uses, the bulk of the building be mitigated through appropriate setbacks, landscaping, and/or terracing of the building form.

Built Form and Land Use – Neighbourhood Residential

Policy 8.3.57 The City should maintain a similar scale of housing to that typical to existing neighbourhoods, by limiting the size of new buildings and encouraging ground-oriented multiple residential forms.

Policy 8.3.58 The City should permit a wide range of housing forms having density of less than 22 units/ha.



Policy 8.3.59 The City should support two-unit housing where the number of buildings is limited and in a dispersed manner or where it is comprehensively designed with the use of Development Permits. Two-unit housing is to be designed asymmetrically (i.e. non-mirror images).

Policy 8.3.60 Where two-unit housing is clustered together (6 units or more) as a single project, the comprehensive design and plan shall be subject to the Development Permit process. The maximum density of a two-unit housing project is 40 units/ha.

Policy 8.3.61 The City should maintain character typical of existing neighbourhoods by encouraging any multi-unit development to be asymmetrical, with varied and interesting facades, rooflines, entry points, balconies and porches.

- Policy 8.3.62 The City should not support large concentrations of townhouses in any single location; integration with the overall neighbourhood is preferred.
- Policy 8.3.63 In existing areas, the City may require consolidation of lots to create a site which allows for comprehensive design of units, open space and parking areas.

8.3 E. Business Districts

Areas designated exclusively for commercial, industrial, and community facility institutional uses are grouped into Business Districts, as distinct from Downtown and Neighbourhood Centres, which are mixed use areas, and Neighbourhoods which are primarily residential. These districts provide attractive, accessible areas for the uses within them. They include Commercial designations, Commercial Recreation, Community Facility and Industrial designations. [See also Section 8.3 D for Neighbourhood – Corridor policy for local commercial uses]

Objectives

- Objective 8.3.18 Clearly distinguish commercial and business areas by use, scale, and physical orientation.
- Objective 8.3.19 Support on-going commercial and industrial growth by ensuring a long-term supply of Employment Lands.
- Objective 8.3.20 Minimize impacts on adjacent areas.
- Objective 8.3.21 Encourage a high standard of development in order to enhance and protect the surrounding urban and natural environment.
- Objective 8.3.22 Encourage use of currently serviced land and existing amenities such as transit access, road networks, rail lines, and utilities.
- Objective 8.3.23 Locate new heavy industrial uses outside of the Prince George airshed, preferably into areas designated for heavy industrial use by the Prince George Area Industrial Lands Profile (May 2008).
- Objective 8.3.24 To encourage existing heavy industry to reduce environmental impacts, with an emphasis on air emissions.

Policies

General

- Policy 8.3.64 The City should provide for efficient vehicular access and strong traffic management for business districts, to ensure public safety and efficient movement of goods.

Regional Commercial

Regional commercial areas are to be the focus of regional retail activity, with generally very large scale retail and auto-oriented shops.

- Policy 8.3.65 The City should allow for both enclosed (malls) and stand alone structures (e.g., a large format retailer).
- Policy 8.3.66 To encourage the regional focus of these designations, the City should require individual retail nodes to be anchored by an anchor store with a gross floor area greater than 5,500 m². Individual retail

nodes may accommodate up to 38,000 m² or more of commercial space total.

- Policy 8.3.67 The City should set regional nodes as the sole location for large-format retail stores greater than 5,500 m² in size, except in cases where such uses can be scaled and integrated within the Downtown.
- Policy 8.3.68 The City should permit a full range of retail and service commercial uses, including supermarkets, department stores, apparel, home furnishings, drug and cosmetics and other general merchandise stores, smaller scale retail, and personal services.
- Policy 8.3.69 The City should consider proposals for mixed-use development and intensification at Regional commercial nodes.
- Policy 8.3.70 The City should encourage regional nodes to be designed as transit friendly settings. They should be pedestrian-friendly, barrier-free and accessible.

Service Commercial

Service commercial areas are primarily traveling public-oriented commercial uses in highly accessible locations, including tourist-oriented uses and retailers that are accessed primarily by vehicle. Retail and service uses that can easily locate in a neighbourhood centre are not the focus of this designation.

- Policy 8.3.71 The City should not permit single commercial buildings larger than 2,500 m².
- Policy 8.3.72 The City should permit uses that include tourist accommodation and ancillary uses, and retailers that are accessed primarily by vehicle, such as lumber yards, service stations, smaller warehouse-style stores, and vehicle dealerships.
- Policy 8.3.73 Service Commercial designations are identified on Schedule B-6: Future Land Use. As these services are required within the city, it is preferable that they remain in these locations and not be further dispersed to outlying locations. The “Bypass” commercial area on Highway 97 is an established mixed use area, and will continue to be the primary area for highway-oriented uses in the city. Several other smaller sites are identified as Service Commercial including an area along Victoria, Highway 97 near the airport, a small area near the North Kelly Road/Hart Highway intersection, a site at the northeast intersection of Giscome Road and Old Cariboo Highway near Highway 16 East, and several sites along Highway 16 West such as the Gauthier Road/Park Drive intersection, and at Bear Road.

Bylaw 8405

Commercial Recreation

Commercial recreation areas accommodate large outdoor recreational uses that support community and tourist use, can generate traffic impacts, and may include both public and private uses. *[See also Section 7.3C. Recreation and Leisure]*

Policy 8.3.74 The City should support future commercial recreation uses throughout the city and in Rural designations provided other values identified throughout this Plan are not negatively impacted. These uses include outdoor recreation such as golf courses, driving ranges and campgrounds.

Policy 8.3.75 The City should not permit housing development in this designation.

Community Facility

Community Facility areas provide for major public and private institutional and associated community facilities. *[See also Community Facilities Section 8.5]*

Policy 8.3.76 The City encourages and should direct public investments for community facilities such as institutions, facilities, parks, public realm improvements to growth priority areas such as the downtown and neighbourhood centres as identified within this Plan.

Policy 8.3.77 The City should utilize the Smart Growth on the Ground Prince George Concept Plan to guide community facilities planning and development within the downtown.

Policy 8.3.78 The City supports the on-going health and vitality of UNBC and recognizes it as a key mixed-use centre in the community.

Policy 8.3.79 The City should encourage educational facilities to plan comprehensively for their needs and to consider broader community needs and linkages in doing so.

Policy 8.3.80 The City supports continued development and expansion of the Airport within the designated Airport area, but should discourage non Airport-related uses there.

Industrial – General

These policies apply to all industrial designations. *[See also Section 8.4 Aggregate Resources]*.

Policy 8.3.81 The City should encourage infill and the development of existing serviced industrial lands, including underutilized industrial land before considering expansion into designated areas with available un-serviced land.

Policy 8.3.82 The City should consider air-quality issues



critical to any land use decision relating to industrial development.

- Policy 8.3.83 The City should require new or expanding industries with fine particulate air emissions to follow the emission offsetting requirements established in the Provincial Guidance Document for Industrial Development in the Prince George Airshed.
- Policy 8.3.84 Where industrial uses are located adjacent to residential areas, the City should encourage integration with residential areas through pedestrian-oriented design and mitigation of off-site impacts. With proximity to the Downtown, the Queensway East Industrial area is envisioned to be more permissive of transitional industrial uses to provide for a business, mixed commercial industrial uses, and residential conversions.
- Policy 8.3.85 The City shall prohibit salvage and wrecking yards within 200 m of Boundary Road, on sites easily visible from Highway 97 and Highway 16, and within 300 m of a watercourse, water body, or environmentally sensitive area.
- Policy 8.3.86 The City should ensure that access to industrial development is designed so as to minimize conflict between industrial and nearby residential and retail traffic and uses.
- Policy 8.3.87 Despite other policies in this Plan, the City should amend the Zoning Bylaw to not permit asphalt plants, concrete batch plants, and similar uses except where they already exist.
- Policy 8.3.88 The City should provide for industrial growth and development by designating suitable lands in excess of anticipated needs to 2025, providing flexibility to adapt to changing market demands and conditions.
- Policy 8.3.89 The City should develop a set of criteria for locating new asphalt plants, concrete batch plants, and similar uses, and should review and revise policies and regulations in light of these criteria.
- Policy 8.3.90 The type and scale of the industrial uses considered within this Plan may be limited based on consideration of the following criteria:
- the physical capability and suitability of the site;
 - the potential effects of the industrial use on existing and anticipated surrounding uses with regard to the visual impact resulting from the scale of development and size of associated structures;
 - the impact of any noise, odour, smoke, glare or toxic matter which may be generated by a particular type of industrial use;
 - the accessibility of the site to major traffic routes;

- the ability of the site to be adequately serviced with water, waste disposal, roads, and other utilities; and
- the adequacy of proposed measures to mitigate potential negative environmental or social consequences as well as any associated fire or explosive hazards.

Light Industrial

Light Industrial areas are intended to accommodate light industrial uses which have low noise and air emissions based on Provincial Offsetting Guidelines. This may include, but is not limited to: manufacturing, processing, household repair, research, broadcasting studio, building & garden supply, minor truck or rail terminal, distribution, indoor minor recreation, warehousing, scientific & technical consulting, storage and distribution, and similar uses. These areas include for example the Carter, Queensway East, southern portion of First Avenue, Hartway industrial areas, and areas adjacent the airport within the Airport light Industrial Plan.

Policy 8.3.91 The City should focus light industrial growth within the urban area, encouraging intensification of all light industrial lands with existing services.

Policy 8.3.92 The City should permit Light Industrial uses in locations with adequate access to public transportation, ancillary services, and local road-networks to help facilitate the movement of people and goods.

Policy 8.3.93 Areas designated as Light Industrial are to be developed with full City water and sanitary sewer service.

Policy 8.3.94 The City should permit uses such as the processing, manufacturing, fabricating or assembling of semi-finished or finished goods, products or equipment; the storage and cleaning, servicing, repairing or testing of materials, goods and equipment associated with industrial or business use.

Policy 8.3.95 The City should permit offices or retail sales only when ancillary to the primary use and in a limiting manner.

Policy 8.3.96 The City should generally limit retail uses to:

- retail and food and beverage establishments serving the immediate industrial area and located on an arterial street; and,
- showrooms and sales areas in association with manufacturing, warehousing, and other permitted uses.

Policy 8.3.97 The City encourages the physical design of Light Industrial developments along arterial streets to be complementary to the existing urban fabric, and to contribute to existing neighbourhood character.

- Policy 8.3.98 The City should encourage industrial developments and businesses to strictly limit noise or air emissions that would be apparent from the outside of an enclosed building.
- Policy 8.3.99 The City supports new or expanded light industrial businesses with low air emissions located in lands with the appropriate zoning, provided air dispersion modeling does not indicate significant local impacts to sensitive receptors such as residential areas, daycares, schools or hospitals.

Medium Industrial

Medium Industrial areas are intended to accommodate medium to heavy industrial uses which have low to moderate noise and air emissions based on Provincial Offsetting Guidelines. Medium Industrial may have an impact beyond site boundaries and can include, but are not limited to: modern (low emission) sawmills, cement processing, manufacturing, major truck or rail terminals, wrecking yards. These areas include for example the lands between First Avenue and River Road, and some areas within the BCR and Danson Industrial subdivision.

- Policy 8.3.100 The City should restrict Medium Industrial uses to locations with adequate access to highways and rail lines to help facilitate the movement of people and goods.
- Policy 8.3.101 Areas designated as Medium Industrial are to be developed with full City water and sanitary sewer service.
- Policy 8.3.102 The City should permit a wide range of Medium Industry uses in designated areas of which these uses typically have an area, intensity and land use impacts with a greater magnitude and significance than light industry, but do not have significant air emissions. This may include the processing, manufacturing, fabricating or assembling of semi-finished or finished goods, products or equipment from raw materials; the storage and cleaning, servicing, repairing or testing of materials, goods and equipment associated with industrial or business use.
- Policy 8.3.103 The City should permit offices or retail sales only when ancillary to the primary use and in a limiting manner.
- Policy 8.3.104 The City should encourage new or expanded medium industries to locate outside of the CNR (1st Avenue and River Road) or northeast industrial areas (pulpmills) or be required to produce higher offsets to improve local air quality as per the Provincial Guidance Document for Industrial Development in the Prince George Airshed Provincial offsetting guidelines.

Heavy Industrial

Heavy Industrial designated areas are intended to accommodate high impact, large scale industrial uses with a high level of noise and air emissions based on Provincial Offsetting Guidelines. Heavy Industrial uses may include: mining and extraction uses, primary metal manufacturing, petroleum refineries, asphalt and roofing material production, pulp mills, and extensive manufacturing. Areas within the City include for example the pulp mill lands.

Policy 8.3.105 The City supports new Heavy Industry outside of the City of Prince George airshed and encourages these uses to locate in the Regional District of Fraser-Fort George in areas identified in the Industrial Land Use Study.

Policy 8.3.106 The City should not permit new industrial operations with significant noise and other impacts, such as pulp mills, large processing and manufacturing plants, and ancillary uses inside the Prince George airshed.

Policy 8.3.107 The City encourages collaboration between the City, the Regional District of Fraser-Fort George, and industry to reduce environmental impacts of heavy industries.

Policy 8.3.108 The City strongly encourages existing heavy industries undergoing expansions or upgrades to use best available pollution control technologies and other measures to reduce air emissions.

These areas provide for a transition from protected environmental and resource areas such as forests and farms to more intense rural uses like hobby farms and rural residential uses. The intended nature of these areas is described by policies here and in other sections [*See also Growth Management Section 8.1*].

Objectives

Objective 8.3.25 Protect resource lands that are valuable in the long term.

Objective 8.3.26 Provide for limited rural residential uses in and near areas that have already developed in more intense rural patterns but within limits in response to the cost of providing services over relatively low density areas.

Policies

Rural

This area functions as a transition between rural resource lands and urban areas, providing for rural residential and more active small-scale agriculture. It recognizes and affirms existing rural areas and activities.

Policy 8.3.109 The rural designation is further divided as follows:

- Rural A: low-intensity rural and hobby farm use, minimum lot size
1 lot per 4 ha;
- Rural B: moderate intensity rural residential use, minimum lot size 1 lot per 2 ha;
- Rural C: higher intensity rural residential use, minimum lot size 1 lot per 4000 m²; and,
- Rural D: intermediate level of intensity rural residential use, minimum lot size 1 lot per 1ha.

Policy 8.3.110 Through rural designations and policies, the City should provide for development that addresses a desire for a rural lifestyle. Encourage development that supports rural uses such as small farms, contracting, forestry and similar activities that make good use of the land and rural context. Provide for very limited development, including low-intensity residential use, hobby farms and similar uses.

Policy 8.3.111 The City should allow low-intensity recreational and parks uses, with consideration to protecting significant slopes and views. These may include seasonal camp and recreation sites, golf courses, and nature parks.

Policy 8.3.112 The City should permit development of commercial centres in Rural C areas to serve rural population. Total commercial space in any individual Rural C area should be less than 200 m².

Rural Resource

This designation includes areas used for agriculture, forestry, and resource extraction activities that are important in the long-term health of the regional economy. It also encompasses natural open spaces, environmentally sensitive areas, and natural hazard areas in which development is restricted or prohibited. [See also *Growth Management Section 8.1*].

Policy 8.3.113 The City should permit resource protection or resource use, such as agriculture, forestry, parks, and Utilities.

Policy 8.3.114 The City should permit single-family residential use, and limit the density to one unit per 15 ha.

Policy 8.3.115 The City should consider permitting agri-tourism uses ancillary to agricultural operations. These may include for example accommodations similar in scale to B&B's, food sales, farm tours, and farm-based recreation.

Policy 8.3.116 The City should support ALR designations within the City's boundaries. Changes to the designation should be supported only if land is shown by a qualified professional to have limited agricultural suitability and where land use changes work to support food and agriculture systems (e.g., farmland dedications of equal or greater value for community trust and/or upgrades to farming or farmland infrastructure).

Policy 8.3.117 The City should direct incompatible land uses away from land identified with high agricultural capability.



8.4 Aggregate Resources

Aggregate (e.g., sand and gravel) is an essential resource for our community. Aggregate is primarily used as a raw material for the construction of roads, sidewalks, buildings and other structures that are made of concrete, and for snow and ice control. However, aggregates are also essential components for many industrial and utility processes.

The value of aggregate is low and the weight is high, therefore transportation costs become the main driver of consumer cost. This means economic supplies of aggregate should be located in close proximity to the consumers of the resource. Unfortunately, aggregate removal and deposit operations are often associated with negative impacts including:

- noise and vibration (i.e., equipment, processing, and blasting);
- traffic (i.e., busyness and road safety);
- air quality (i.e., dust, and other emissions related to asphalt and concrete manufacturing);
- drainage (i.e., erosion, sedimentation, flow regime change);
- water quality (i.e., groundwater risks);
- ecosystem impacts (i.e., habitat loss, fragmentation, introduction of invasive species); and
- aesthetics (i.e., loss of vegetation, disturbed landscapes, associated industrial activity).



The proximity of aggregate removal and deposit to urban areas often leads to conflict between aggregate businesses and local residents. Thus, aggregate removal and deposit needs to be regulated to mitigate the above-noted impacts, while aggregate resources require protection from sterilization due to encroachment by incompatible land uses and activities.

Prince George was built over a thick layer of sand, gravel, silt and glacial till which were deposited by melt waters from the last Ice Age. Plentiful aggregate in close proximity to the City has helped with the development and maintenance of our community's buildings and infrastructure. However, urban uses have expanded over and in close proximity to many of our key aggregate sources, while existing pits continue to be depleted.

Map 2- Aggregate Potential indicates areas of primary, secondary, or tertiary potential for aggregate resources for reference purposes. It provides guidelines for testing, evaluating and managing aggregate resources within Prince George. This map provides approximation estimates of broad, regional aggregate distribution based on soil and landform units within the Prince George area. The potential was assessed by compiling data pertaining to landform type, soil type, area, presence of pits, overburden thickness, gravel thickness and volume. Each factor was subdivided into several classes and ranked. The rankings were used to eliminate unfavourable

areas, and to subdivide the remainder into areas of primary, secondary or tertiary significance. (P.T. Bobrowsky, P.Geo, N.W.D. Massey, P.Geo., and A. Matheson, P.Geo. (1996); Aggregate Resource Potential of the Prince George Area, B.C. Ministry of Employment and Investment, Open File 1996-24).

Objectives

- Objective 8.4.1 Encourage responsible aggregate removal and deposit.
- Objective 8.4.2 Ensure an affordable and sustainable aggregate supply by protecting existing aggregate removal operations and areas of primary aggregate potential from encroachment by incompatible land uses.
- Objective 8.4.3 Actively encourage progressive reclamation of closed, abandoned and depleted aggregate removal or deposit sites or portions thereof.
- Objective 8.4.4 Continue to improve our knowledge of aggregate resources by updating inventories of aggregate quantity, quality, operational status, and location.
- Objective 8.4.5 Work toward a coordinated approach to aggregate removal and deposit regulation and permitting.
- Objective 8.4.6 Work collaboratively with the Province, residents, and the aggregate industry to manage aggregate resources in the long term.

Designation of Areas

Aggregate Resource Areas

Schedule B-7: Aggregate Resources indicates the approximate location and area of aggregate deposits that are suitable for removal. The areas indicated are intended to provide clear direction for private developers, local residents, and Provincial & local governments regarding planning and development of aggregate resources in Prince George. This schedule also includes the Aggregate reserves held by the Ministry of Transportation and Infrastructure.

Policies

General

- Policy 8.4.1 Aggregate removal and deposit should only occur in accordance with the provisions of the Soil Removal and Deposit Bylaw including terms and conditions respecting:
- Hours of operation;
 - Processing;
 - Stockpiling;
 - Traffic and Access;
 - Stormwater and erosion control;
 - Aquifer protection;
 - By-product and waste management;
 - Setbacks from residential uses;
 - Screening
 - Phasing;
 - Co-location of aggregate extraction with aggregate processing and manufacturing; and,
 - Site layout to mitigate impacts such as noise, dust and visual quality.
- Policy 8.4.2 Future urban land uses should not be permitted on lands indicated on the *Map 2 - Aggregate Potential* as having primary potential for aggregate resources, until the subject lands have been depleted of their aggregate resources provided that the finished topography continues to facilitate cost effective urban development.
- Policy 8.4.3 Future urban land uses should be setback a minimum of 500 m from lands shown in green on the Aggregate Resources Map.
- Policy 8.4.4 Future aggregate removal and deposit should be prohibited from lands shown in red on the *Schedule B-7: Aggregate Resources* because aggregate operations are considered incompatible within: 1) 500 m of existing and future urban land uses, 2) groundwater protection areas, 3) environmentally sensitive areas, 4) parks, and 5) heritage conservation areas, except:
- aggregate removal or deposit allowed without a permit or short term permit under the Soil Removal and Deposit Bylaw, and,
 - aggregate removal or deposit allowed with a short term permit issued under the Soil Removal and Deposit Bylaw within the future urban settlement area.
- Policy 8.4.5 Future aggregate removal and deposit should be restricted on lands shown in yellow on the *Schedule B-7: Aggregate Resources* because aggregate operations are generally considered inappropriate, except:

- aggregate removal or deposit allowed without a permit under the Soil Removal and Deposit Bylaw;
- where an aggregate removal or deposit impact assessment has been provided to the City demonstrating that the impacts can be practically alleviated and until adequate mitigation measures are in place, and,
- aggregate removal or deposit allowed with a permit or short term permit issued under the Soil Removal and Deposit Bylaw within a future urban settlement area.

Policy 8.4.6 Future aggregate removal and deposit may be permitted on the lands shown in green on the *Schedule B-7: Aggregate Resources* with a permit or short term permit issued under the Soil Removal and Deposit Bylaw.

Policy 8.4.7 For clarity, the policies of this section regarding “future” aggregate removal and deposit operations do not apply to aggregate removal and deposit operations that are operating in accordance with the Soil Removal and Deposit Bylaw at the time of this bylaw’s adoption. These existing aggregate removal and deposit operations may continue in accordance with the Soil Removal and Deposit Bylaw. However, any expansion to these existing aggregate removal or deposit operations should be in accordance with the “future” aggregate removal and deposit policies of this Plan.

Policy 8.4.8 Once reclaimed, the aggregate resource sites may be used for the purposes defined by *Schedule B-6: Future Land Use*.

Policy 8.4.9 Public consultation shall be part of any review of soil removal or deposit designation under the Soil Removal and Deposit Bylaw.

8.5 Community Facilities

There are a number of Community Facilities within the City offering a wide range of uses, and this designation is intended for a variety of public and private institutional-type uses. Examples within this designation include municipal facilities and buildings, educational facilities, religious assemblies, clubs, cemeteries, community care facilities, health services, emergency services, airport, correctional services, transportation depot, and library & exhibits. [See also *Parks and Open Space Section 8.6*].

The myPG Sustainability Plan identifies the importance of existing and proposed Community Facilities, institutions and their related services and amenities such as a Cancer Centre, neighbourhood centres, community gardens, etc., It further identifies our community-wide need to find new and innovative ways to provide and maintain facilities for these purposes which include an increasing role for citizens and business owners to become more involved through partnerships and coordinated activities.

Education

A number of educational opportunities exist within the Plan area. This section is specific to the Community Facility use; whereas, commercial policies should also be referred to when considering commercial education [See also *Land Use Section 8.3*]. The types of educational land use that may be located within the City are to be controlled through Zoning Bylaw regulations, or other designated legislation. Existing schools and some proposed schools, such as those identified in Neighbourhood Plans, are designated as Community Facilities.



(Photograph courtesy the Prince George Citizen).

Post-Secondary

The City accommodates two major post-secondary institutions – University of Northern British Columbia (UNBC) and the College of New Caledonia (CNC). These institutions offer a range of programs within the City and throughout the region. They have significant linkages to our community and are particularly accessible to local and region residents but also draw nationally and abroad. This Plan encourages some post secondary uses to be housed in the Downtown area, including administrative offices and various supporting amenities there.

Elementary & Secondary

In 2011 School District No. 57, Prince George (SD57) has 25 elementary schools and 5 secondary schools within the City and also provide Learning Alternatives programs and Choice School programs. SD57 in partnership with School District # 93 (Conseil Scolaire Francophone), offer Francophone courses and programs to students at Duchess Park Secondary and at Ecole Elementaire Franco-Nord. Ecole Lac de Bois, College Heights Elementary and Heather Park Elementary provide French Immersion opportunities for elementary aged children. The SD57 District Sustainability Report 2010 identified a decline in student enrollment within the district by 12 % from 2005/06 to 2009/10. This decline in student enrollment, along

with a number of factors, led to the SD57 to close, and in some cases, amalgamate some schools.

In addition, seven private schools are located in the City and are primarily used for educational and religious assembly opportunities.

These school sites provide the surrounding residential areas with amenity opportunities for residential neighbourhoods due to the large recreational fields and open space it provides, as well as the shared after hours uses of the buildings. This should be factored into consideration when establishing uses within existing open or closed school sites, or when considering new sites. This Plan identifies the shared responsibility for planning for community facilities, for example the City with its long-term plan knowledge can provide useful information to the school district. Similarly there is an opportunity for the schools to plan their sites in accordance with potential residential design goals, transportation and walkway links, and with respect to shared open space and neighbourhood facilities.

Hospital

The City's hospital site is located in close proximity to the Downtown; it not only serves the City's immediate population, but provides a regional referral serving to a population of approximately 200,000 in the North Central B.C. region. A number of changes and development has occurred at this location over the years, including upgrades and expansion of the main hospital, becoming a clinical education and training site, Regional Cancer Care Centre, Cancer Lodge, development of a parkade to accommodate the increased use of this site.



The Crescents Neighbourhood Plan identifies the need to further examine long term expansion of this site by way of a Hospital Master Plan which should consider site and building design and the connections throughout. Intermediate or extended care facilities for seniors or residents with varied abilities are to be directed to the area designated Community Facilities and are encouraged to be located near the hospital site. Any expansion beyond existing designation should need to be evaluated in relation to neighbourhood impact in relation to the Crescents Neighbourhood Plan.

Airport

The airport was exchanged from a federally operated airport to a locally operated airport in 2003, and the City of Prince George and the Prince George Airport Authority (PGAA) entered into an Accord on June 29, 2004 with the common objective for the well being of the region. The Prince George Airport 2005-2030 Final Report (Airport Master Plan), dated November 2007 was developed for future development of the airport regarding land use, facilities and services required to ensure it meets its strategic objectives and to accommodate the expected levels of traffic to the year 2030. The expanded main runway can accommodate all types of air traffic. Aviation, in Canada is regulated through the authority of the federal

government. The *Aeronautics Act* gives the Minister of Transport the power to enact regulations affecting noise from aircraft and airports.

It is important to note that restrictions on heights of buildings, structures and objects (including natural growth) on regulated lands, and to protect aircraft from potential hazards such as bird strikes and electronic signal interference are regulated under federal authority, nevertheless should be considered in land use planning decisions in and around the airport in consultation with the Prince George Airport Authority.

Emergency Service Providers

There are essential services within the City that contribute to the goal of a safe community which can include Ambulance, Fire, Police, emergency response programs , and other forms of rescue services including related communications. The City should continue to work closely with emergency service providers to ensure capital investments (i.e., locate emergency service facilities and infrastructure) are planned in accordance with projected population growth and appropriate land use siting criteria. [See also Section 7.6 Safe Community]

Other Community Facilities Uses

There are a variety of other community facilities throughout the city that serve various purposes, such as cultural facilities, community centres, religious assembly, and correctional services.

Objectives

- Objective 8.5.2 Direct public investments such as institutions, facilities, parks, public realm improvements to existing Neighbourhood Centres, with an emphasis on Downtown locations.
- Objective 8.5.3 Cooperate in fostering growth of current and new community facilities where such uses are accessible to the broader community and scaled appropriately to ensure compatibility with neighbourhood character.
- Objective 8.5.4 Community Facilities should strive for efficiency and include sustainable alternatives and technologies.
- Objective 8.5.5 Plan for multi-use activities at school sites and integrate these into the neighbourhood fabric.
- Objective 8.5.6 Support emergency service providers in the provision of their services and assist in planning for expansion of those services as necessary.

Designation of Areas

Community Facilities

Most institutional and associated facilities are identified on *Schedule B-8: Community Facilities* and highlight education, community centre or clubs, religious assembly, health, landfill and transfer stations, and emergency service uses. Community Facilities are also identified on the *Schedule B-6: Future Land Use* by the classification Community Facilities.

Policies

General

- Policy 8.5.2 Encourage government services and civic facilities to remain and/or locate within the downtown, in close proximity to public transit, and to incorporate site design that complements street level activity, accessibility and safety.
- Policy 8.5.3 Ensure development or redevelopment of community facility sites consider the wide-range of environmental impacts (energy, waste, air, water, and land impacts) the end-use may have.
- Policy 8.5.4 Encourage community facilities to develop their spaces to include a pleasing experiential and social dimension with visual interest and a sense of place and community.
- Policy 8.5.5 Situate public recreational facilities, including neighbourhood halls, in close proximity to other community services and facilities, commercial nodes and public transit routes.
- Policy 8.5.6 The City should utilize the framing principles, process and concepts within the Smart Growth on the Ground Downtown Prince George Concept Plan to guide institutional and public facility planning and development within the downtown. These include, but are not limited to:
- Support an Arts Centre and other educational and cultural facilities to be located within the downtown;
 - Demonstrate Municipal Energy leadership;
 - Catalyze Major Projects for Civic and Cultural Amenities;
 - Facilitate Public Realm Improvements; and,
 - Incorporate Winter City Design.
- Policy 8.5.7 Other government facility uses such as hospital facilities, administrative buildings, cultural facilities including performing arts centres are preferably located in the downtown. No specific designation is required.



(Photograph courtesy Dollie Morgan).

- Policy 8.5.8 Religious Assembly use can be located in any Plan designation; however, should be sited generally in Neighbourhood Centres and along Corridor designations.
- Policy 8.5.9 Established correction services are illustrated as Community Facilities “Other” on *Schedule B-8: Community Facilities*. Minor expansion or redevelopment in these locations is compatible with this Plan.
- Policy 8.5.10 To encourage alternative and active modes of transportation, provisions should be made in new and existing Community Facility developments to accommodate visitors such as bicycle racks, end-of trip facilities (such as showers) and secure storage.
- Policy 8.5.11 The City should continue to work towards enhancing the physical linkages throughout the community between Community Facilities.
- Policy 8.5.12 Where possible, encourage partnerships between community facility uses and the surrounding neighbourhood for the preservation and provision of community uses including park or public open space and indoor facilities.
- Policy 8.5.13 Encourage joint use or multi-function facilities, when possible to increase public use and enhance facility programming. Compatible uses might include the continuing education programs, community health services and community recreational programs.
- Policy 8.5.14 Rezoning of existing community facilities, such as public school sites, to allow for non-community facility uses should be supported where the proposed use would result in setting aside sufficient publicly-accessible open space, or the provision of other significant neighbourhood public amenities as per Section 904 or 905.1 of the Local Government Act.
- Policy 8.5.15 The City should enter into partnerships with Federal and/or Provincial agencies and/or the private sector to incorporate required public facility development or redevelopment projects.

Airport Development

The City recognizes the Airport as a major transportation facility in our community that plays an important role for the Region.

- Policy 8.5.16 Airport expansion and aircraft and airport associated facilities are to be confined primarily to the airport area identified as “Other” within *Schedule B-8: Community Facilities*. Non-airport related uses are to be discouraged in this area.
- Policy 8.5.17 Supporting light industrial uses can be situated within the Airport Light Industrial Plan area immediately west of the airport. [See also *Section 8.3 E Business Districts for industrial policies*]

Policy 8.5.18 Planning in and around the airport area should occur in partnership with the City and the Prince George Airport Authority as identified within the Accord and the Airport Master Plan.

Policy 8.5.19 The City recognizes the importance of the *Aeronautics Act* and should endeavor to advise land use applicants of the Airport Master Plan recommendations. This includes consideration to no new residential development and other sensitive land uses in areas near the airport above 30 Noise Exposure Forecast (NEF) as set out on the 2023 NEF maps (and as revised from time to time) within the Airport Master Plan's Figure 12-3.



Civic Facilities

Policy 8.5.20 Civic buildings represent a major contribution to the overall fabric of the city. Buildings should preferably be situated on the frontages of public squares, major streets, or similar public access locations, where visibility is enhanced and buildings can be designed to offer an anchor to related and support uses (including commercial and office facilities).

Policy 8.5.21 The City should continue to support the ongoing development of its wood culture by integrating the City's Wood First Resolution in civic building and construction projects.

Policy 8.5.22 The City should assure that any construction or major renovation of all civic buildings is undertaken with initial and ongoing participation by the City's Accessibility Advisory Committee to assure accessible design and full compliance through the planning, engineering, architectural, and construction phases.

Policy 8.5.23 The City should explore opportunities for new library branch development to align with the growth management strategy.

Policy 8.5.24 The City should include the promotion and development of public art in its own facilities and grounds and encourage the development of public art in other community facilities.

Policy 8.5.25 The City should utilize the Energy Efficiency and Greenhouse Gas Reduction Policy as a framework to develop and implement programs and procedures to meet ongoing and new energy conservation and greenhouse gas reduction and efficiency challenges within its existing and proposed civic facilities.

Policy 8.5.26 Encourage green building strategies for all new development to reduce the use and waste of water and energy resources and to reduce greenhouse gas (GHG) emissions.

Emergency Services

- Policy 8.5.27 The City should continue to include Police and Fire Services within development application review to ensure emergency service considerations are made at the development planning stage.

Health

- Policy 8.5.28 The City should coordinate with community partners and citizens for the development of a community and social health centre as a sustainability facility within the downtown.
- Policy 8.5.29 The City should continue to encourage Northern Health to consider a Master Plan for the University Hospital of Northern British Columbia as identified within the Crescents Neighbourhood Plan. Acquisition of large parcels of land to accommodate future expansion should be considered and should consider pedestrian connectivity in and around the site, parking & loading areas, and the maintenance of landscaping and screening from adjacent residential type uses.

Post-Secondary Institutions

- Policy 8.5.30 The City recognizes the importance of our post-secondary institutions and should continue to foster a close relationship amongst them, the City, and the community.
- Policy 8.5.31 Council is supportive of initiatives by UNBC to expand its campus as included within UNBC's Master Plan, and to allow for university associated economic development objectives (e.g. research institutions and businesses) which have a direct link to the research capacity at the university, such as its academic and learning infrastructure.



- Policy 8.5.32 Where new development occurs within the UNBC lands as illustrated on *Schedule B-6: Future Land Use*, such uses must include provision for major road links, associated utility infrastructure, and for significant green space to preserve an attractive overall campus environment. Planning should be undertaken in collaboration with the City, and consider the University Heights Neighbourhood Plan.
- Policy 8.5.33 The University and the College are strongly encouraged to locate off-campus in the downtown, including administrative offices and various supporting amenities.

Schools

- Policy 8.5.34 Promote existing and proposed schools as multi-purpose centres for local neighbourhood activities in addition to serving as schools.

- Policy 8.5.35 Coordinate the planning and development of park land and adjacent existing and proposed school sites that share open space and facilities to ensure these sites are safe, accessible, efficiently used and maintained, and provide a focus for neighbourhoods and communities.
- Policy 8.5.36 The City should coordinate with Community Partners (public sector, private sector and non-profit groups) to support the provision of neighbourhood appropriate facilities and services within closed school sites while maintaining the opportunity to return them to school use. Consideration should be given to their use as a municipal agricultural reserve system or to meet neighbourhood recreational needs.
- Policy 8.5.37 Council recognizes the role School District 57 plays in planning for future school sites. Prior to developing new residential areas, the City and School District should continue to work together to determine the need for and location of future school lands, addressing trends in school enrolments, and integrating the use of school lands and facilities into the recreational and cultural fabric of the community.

8.6 Parks and Open Space

City parks and open space offer refuge and direct access to nature in an otherwise built environment. The provision of quality open space areas within a neighbourhood also creates an environment for residents to gather and strengthen their community ties. As a result they are popular with all levels of the community for the various recreation, leisure or social opportunities they provide. A key attribute to the quality of life is the significant extent of parks and open space in the community and the linkages offered by trails to connect various parts of the City.

The Prince George Parks and Open Space System contains a variety of provisional standards resulting from varying periods of growth and expansion in the City. Parks and open space areas presently encompass 7.5% of the City's incorporated area. The City Natural Park classification contains the greatest proportion of parkland, which combined with the open space areas characterizes the community as a 'City in Nature'. Many of the beloved parks or open space areas such as Fort George Park, Cottonwood Island Park and the Heritage River Trail provide residents with direct access or views of the major rivers and cut banks. Other parks provide venues for passive leisure or for recreational use by the various sporting groups.

A number of emerging trends and issues are providing further direction for parkland provision in the community. The growing trend of sedentary or unhealthy lifestyle choices has placed a greater importance upon parks and the built environment to provide opportunities for the community to lead active lifestyles. The realities of aging recreation and leisure facilities, along with the evolution of specialized leisure interests and the growth of an aging population is requiring new infrastructure to meet these needs. The reduction of funding sources coupled with increased operational and capital costs is requiring the City to seek partnerships wherever possible in order to meet community needs for parks and open spaces. Environmental considerations, such as the role of parks and open spaces as both sources and sinks of greenhouse gases are playing a greater role in land use decisions.

Parks and Open Space policy is supported by such documents as the Prince George Parks and Open Space Master Plan (2008) (POSMP), The Prince George Centennial Trails Project (2008), Carrie Jane Gray Master Plan (2006), Exhibition Park Master Plan (1998), the City Wide Trail System Master Plan (1998) and the Parkland Acquisition Strategy (1994).

Table 1: Parks and Open Space Classifications (Source: Parks & Open Space Master Plan)

Park Classification	Ha	% of City Land (Inc. Area 32900 Ha)	Parkland Provisional Standard (ha/1,000)	Surplus/ Deficit (Ha)
City Aesthetic	6.45	0.0%	N/A	N/A
City Athletic	79.57	0.2%	N/A	N/A
City Natural	907.92	2.8%	1.50	801.45
City Passive	45.73	0.1%	0.80	(11.05)
TOTAL CITY PARKS	1034.83	3.15%		
District	29.48	0.09%	1.00	(41.50)
TOTAL DISTRICT PARKS	29.48	0.09%		
Neighbourhood <2ha	79.15	0.24%	N/A	N/A
Neighbourhood >2ha	31.22	0.09%	N/A	N/A
Tot Lot	6.84	0.02%	N/A	N/A
TOTAL NEIGH/ TOT LOT PARKS	117.21	0.36%	1.20	32.03
TOTAL PARKLAND	1181.52	3.59%	5.30	721.29
Green Space	608.37	1.85%	N/A	N/A
Public (not City-owned)	60.09	0.18%	N/A	N/A
Schools	479.46	1.46%	N/A	N/A
Special Purpose	87.62	0.27%	N/A	N/A
TOTAL OPEN SPACE	1278.49	3.89%	N/A	N/A
TOTAL PUBLIC PARK & OPEN SPACE	2460.01	7.48%	N/A	N/A

Objectives

- Objective 8.6.1 Provide quality open space areas within neighbourhoods to accommodate community gathering and the development of a sense of place.
- Objective 8.6.2 Acquire and develop parks and open space in locations which enhance the overall liveability and build upon the valued environmental and cultural resources of the community.
- Objective 8.6.3 Link parks and open space through greenway corridors and trail development, and provide public access to the riverfront and major creek systems.
- Objective 8.6.4 Acquire and develop lands for parks and open spaces that provide a balanced distribution of active and passive recreation throughout the community.
- Objective 8.6.5 Develop and maintain parks and open space in a manner to create a 'beautiful' and pleasing urban environment.

- Objective 8.6.6 Recognize the value of our heritage, both built and natural, and work to preserve, conserve and promote awareness of this resource.
- Objective 8.6.7 Embrace the environmental context by respecting existing ecosystems, biodiversity, natural features and views.
- Objective 8.6.8 Ensure that parks and open space are safe and secure.
- Objective 8.6.9 Manage existing natural resources and ecosystems for existing and future generations.
- Objective 8.6.10 Ensure that the Park and Open Space System, infrastructure, and features are accessible to all ages and ability levels.



Designation of Areas

Parks and Trails

The existing and proposed parks, open space and trails are illustrated in *Schedule B-9: Parks and Trails* at a broad, conceptual level. For existing designations, the park classifications follow the Parks and Open Space System of City, District and Neighbourhood Parks. Open space designations include Green Space, Public and Special Purpose areas. The proposed parks and open space locations are approximate and are subject to available opportunities and resources for acquisition and development.

Policies

General

- Policy 8.6.1 The most recent edition of the Parks and Open Space Master Plan (2008) and Parkland Acquisition Strategy (1994) should serve as the general guide for future parkland acquisition, disbursement and facility development. [See also Section 11 *City Land Disposition and Acquisition*].
- Policy 8.6.2 Parks and Open Space should be classified under the Parks and Open Space System that identifies three (3) broad levels of parkland provision that include City, District and Neighbourhood Parks. Open Space areas should be classified as Green Space, Schools & Public Parks, Special Purpose Areas and Trails.
- Policy 8.6.3 Parks and open spaces should be maintained in a naturalized state where possible to support natural habitat values and reduce operational budgets.



Policy 8.6.4 Future parks and open space areas should be acquired and developed in locations generally indicated in *Schedule B-9: Parks and Trails* as parks and trails, with an understanding that detailed locations should be determined at the planning or subdivision stage as appropriate.

City Parks

Policy 8.6.5 City Parks are meant to serve the community as a whole and may include passive and active leisure opportunities. These parks may have developed recreation facilities or exist to protect natural or aesthetically pleasing features. There are four (4) sub-classifications of City Park:

- City Aesthetic parks are intended to provide a pleasing visual attraction and are typically located in the Downtown or at major city entrances. Parks within this classification are not size dependent;
- City Athletic parks accommodate major tournament level play with high quality sports facilities in a large, central location within the community. The optimum size of 30Ha for this level of park classification has been achieved within the community, however the quality of facilities should require improvement with an increase in population;
- City Natural parks preserve areas of significant natural beauty while preserving habitat and ecosystem functions. The parkland provisional standard for City Natural Park is 1.5Ha/1,000 residents; and,
- City Passive parks are a showpiece and provide a visually pleasing impact within a passive park environment. The preferred size of City Passive Park is 12 to 20ha and the parkland provisional standard is 0.8Ha/1,000 residents.

District Parks

Policy 8.6.6 District Parks are developed to accommodate recreational league play and provide passive leisure opportunities within a district that is defined as an area of over 8,000 residents. Ideally District Parks are located adjacent to secondary schools. The parkland provisional standard for District Park is 1.0Ha/1,000.

Neighbourhood Park and Tot Lots

Policy 8.6.7 Neighbourhood Parks are meant to provide passive leisure opportunities and serve a neighbourhood bounded by major roadways or other physical barriers. A size of 2ha is preferred for

Neighbourhood Park and the parkland provisional standard is 1.2Ha/1,000 residents.

Policy 8.6.8 Tot Lot Parks serve residents within a 400m radius of a medium or high density residential area with minimal open space. A size of 0.5ha is preferred for Tot Lot Park.

Policy 8.6.9 All new residential neighbourhoods should aim to meet the Neighbourhood Park standard where possible, as the Tot Lot Park standard provides limited opportunities to meet various leisure needs.

Policy 8.6.10 Provide quality play experiences and open green space within neighbourhoods to support community building through social cohesion.

Policy 8.6.11 Support the use of neighbourhood open spaces for community events and gathering.



(Photograph courtesy the Prince George Citizen)

Open Space

Policy 8.6.12 Open Space encompasses a broad range of areas that include all the publically owned spaces such as those held for special use, protected environmental areas, buffer strips, boulevard landscapes, utility corridors school grounds, trails and other non-park classified areas. The Open Space category includes various sub-classifications:

- Green Space includes city-owned Greenbelt, buffer strips, undeveloped lands and natural areas;
- Special Purpose Areas are typically developed for a single purpose use and are often sponsored by a community group or club;
- Schools and Public Parks include public schools and regional district parkland within the City incorporated areas; and,
- Trails are linear conduits providing direct access to park and open space areas.

Parkland Development [*See also Section 11 City Land and Acquisition*]

Policy 8.6.13 Overall development of park and open space areas should follow park and open space standards and policies, incorporate CPTED principles, explore multiple use opportunities, aim to meet various age or mobility levels and consider the availability of ongoing operational funding.

- Policy 8.6.14 The City should develop strategic management plans for major parks, pursue park development standards, and develop a policy for the naming of park and open space areas.
- Policy 8.6.15 The development of park and recreational amenities should meet the needs of areas with an identified high need and seek partnerships to achieve these goals.
- Policy 8.6.16 Special interest facilities such as Fenced Dog Parks, Mountain Bike/Trick Bike Parks, Seniors Parks, Accessible Playgrounds, Water Parks and Skate Parks amongst others, should be pursued to meet the emerging trends for recreation and leisure facilities within parks and open spaces.
- Policy 8.6.17 The development or upgrade of recreational facilities should be pursued within existing parks or open spaces in the Bowl area to alleviate the District Park need, given the limited inventory of available large tracts of land for District Park acquisition. Neighbourhood Park development should occur in areas with a high need for a Neighbourhood Park.

Trails

- Policy 8.6.18 The most recent edition of the Trail Master Plan (1998) should serve as the general guide for acquiring lands and developing trails as proposed in the master plan. Additional trail networks and strategies would be considered as outlined in the Centennial Trails Project (2008) or other trail sources with the goal of:
- Serving as many people as possible with a priority on ease of access;
 - Providing continuous trail linkages to existing public open spaces and major destinations, and,
 - Directing trails through particular areas of historical or bio-physical interest.
- Policy 8.6.19 The Trail hierarchy responds to the level of trail use, needs of user groups and physical characteristics of the trail. There are three (3) standards of trail classifications:
- Multi-Use Trail is a wide, hard-surfaced granular or asphalt surface connecting to or through parks and open space;
 - Boulevard Trail is a Multi-Use Trail located along road right-of-way and incorporated in lieu of sidewalks where posted speeds generally exceed 60km/hr;
 - Minor Trail provides access to natural areas with minimal maintenance and some limited



accessibility for the general public. There are four (4) sub-types that include:

- Local Trails: 2m granular surface, maintained seasonally;
- Rustic Trails: 1m natural surface, maintained seasonally;
- Equestrian Trails: 1m granular/earthen surface; and,
- Mountain Biking Trails: <1m natural surface, maintained to the International Mountain Biking Association.

Policy 8.6.20 Planning and development for new trails should be located outside of leave strips from top of bank of identified watercourses where possible.

8.7 Transportation

A safe, accessible and efficient transportation system is critical to the health and vitality of a community. People need the ability to move around the City to access employment and services, whether by walking, cycling, driving, riding the bus, or using mobility aids. Furthermore, the economy depends on the efficient movement of goods to, from, and within the City. This section identifies the objectives and policies required to develop an effective transportation system.

The history of Prince George has been closely linked to the development of its transportation system. Until the early twentieth century, the only transportation to the area was via trails, wagon roads, and the rivers. River travel was especially attractive, since Prince George is located at the confluence of the Nechako and Fraser Rivers. For this reason, riverboats effectively served Prince George between 1909 and 1921.



The Grand Trunk Pacific Railway connected to Prince George in 1914. This was followed by the completion of the Cariboo Highway in 1922, and the opening of the first Prince George Airport in 1928. In the 1940s, the Yellowhead Trans Canada Highway 16 connected to Prince George, and the City's first public transit was introduced. A second railway, the Pacific Great Eastern (later BC Rail), connected Prince George to Vancouver in the 1950s. With rapid expansion of the road network in the 1960s and 1970s, Prince George developed a robust transportation system that could easily move people and goods to, from and within the region.

Prince George remains an important transportation hub for northern British Columbia. The recent development of the Inland Port and construction of Boundary Road (Highway 97 to Highway 16) underscore the City's regional significance on the Asia-Pacific Corridor. However, a growing concern is the lack of effective infrastructure for pedestrians and cyclists. Both the myPG Sustainability Plan and the Active Transportation Plan have identified these deficiencies, and include plans to improve the sustainability of transportation in Prince George.

The *Map 3 - 100 Year Major Road Network* outlines the master plan for the arterial and major collector road network for Prince George, based on discussions with the Ministry of Transportation and Infrastructure (MoTI). Many of these links are planned for implementation well beyond the 15 year horizon.

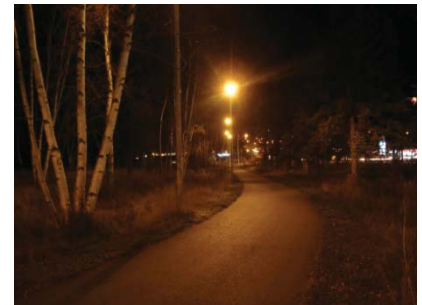
Objectives

Objective 8.7.1 Identify the scope, location and phasing of planned future improvements to the transportation system that:

- Enables the safe and efficient movement of people and goods;
- Attracts and facilitate new and diverse industry;
- Facilitates city growth and development in a sustainable, environmentally- and fiscally-responsible fashion;
- Reduces reliance on the personal automobile, while encouraging walking, cycling, and the efficient use of public transit; and,
- Creates an accessible and equitable transportation system for users of all levels of ability and income.

Objective 8.7.2 Protect and promote the health and safety of the traveling public, and the safety and integrity of public infrastructure by:

- Identifying and addressing transportation safety and operational issues;
- Facilitating the use of active transportation modes and transit; and,
- Routing the movement of Dangerous Goods away from densely populated and other sensitive areas.



Objective 8.7.3 Reduce and/or effectively manage the impacts to the environment by:

- Addressing issues with traffic congestion and delays, and employing Transportation Demand Management tools;
- Improving the attractiveness of more sustainable transportation modes, with little or no Greenhouse Gas emissions; and,
- Routing the movement of Dangerous Goods around environmentally-sensitive areas.

Objective 8.7.4 Improve public awareness and understanding of:

- Available transportation infrastructure and services; and,
- Issues, opportunities, and priorities with the transportation system.

Designation of Areas

15 Year Road Network

Schedule B-10: 15 Year Road Network reflects both the existing and planned future road links expected to be required to accommodate the city growth and development within the next 15 years. The Map is based on EMME/3 transportation modeling and the Transportation Network Planning Study (AECOM, 2009). Therefore, the actual road network improvements will depend on how closely city growth matches the projections used in the model. The links are classified into:

- Provincial Highways (MoTI jurisdiction): intended to connect Prince George to other regions of the province and beyond.
- Arterial Roads: intended for the movement of large volumes of people and goods between different areas of the city;
- Major and Minor Collector Roads: intended for the movement of people and goods between local roads and the arterial road network, while providing some degree of access to adjacent properties; and
- Local Roads: intended primarily to provide access to adjacent properties.

Dangerous Goods Routes

Schedule B-2: Hazardous Conditions identifies which routes are designated for the movement of dangerous goods through the City. These routes are developed from the Dangerous Goods Route Study (Opus Hamilton, 2008), and the subsequent Transportation of Dangerous Goods Bylaw No. 8192 (2009). Trips beginning or ending outside the designated network must be via the closest and most direct route available.

Transit Routes

Schedule B-11: Transit Routes identifies the existing transit coverage, as well as planned future service expansions. The Schedule also shows how much of the city is within 400 metres of the conventional transit system, which is considered to be a reasonable walking distance to the bus stop for single residential housing.

Cycle Network

Schedule B-12: Cycle Network identifies existing and planned future facilities (both on and off-road) officially designated for cycle use, including shared lanes, bicycle lanes, and trails. This network is taken from the Active Transportation Plan (CPG, 2011), which in turn was based on the Cycle Network Plan (UMA, 2001).

Pedestrian Network

Schedule B-13: Pedestrian Network identifies the existing and planned future pedestrian facilities, including sidewalks, walkways, and trails. This network is taken from the Active Transportation Plan (CPG, 2010), which in turn was based on the Pedestrian Network Study (Hamilton Associates, 2004).

Policies

General

- Policy 8.7.1 The City should develop and maintain a safe and efficient transportation system that effectively accommodates the full range of transportation modes, including trucks, vehicles, transit, bicycles, pedestrians, and the disabled.
- Policy 8.7.2 The City should encourage the use of more sustainable modes of transportation by providing safe cycling and walking routes, public transit, and opportunities for car pooling.
- Policy 8.7.3 The City shall conduct condition assessments of City-owned transportation facilities to determine remaining service life and sufficiency to accommodate the growth management objectives and policies within this Plan.
- Policy 8.7.4 The City should collaborate with other transportation agencies and private companies to develop and manage the transportation system to meet the needs of residents, institutions, businesses, and industry.

Provincial Highways

- Policy 8.7.5 The two provincial highways (Highway 16 and Highway 97) are critical corridors in the Prince George road network. Despite the large volume of local traffic using these corridors, the City recognizes that the Ministry intends these highways to be used for inter-regional and inter-provincial transportation.
- Policy 8.7.6 The City recognizes that the development and maintenance of a strong parallel transportation network is necessary to support the viability of the provincial highways.
- Policy 8.7.7 Direct property access to provincial highways should be discouraged wherever possible to help preserve the safety and integrity of the highways. Property access should instead be encouraged via the internal road network.
- Policy 8.7.8 In Neighbourhood Centres, the City should work with the MoTI to investigate ways to facilitate pedestrian and cycle movement across Highway 97 and Highway 16, and to use landscaping and development patterns to create an inviting environment for active transportation modes.



(Photograph courtesy Tony Einfeldt).

Road Network

Policy 8.7.9 The existing and planned road network should be functionally classified for purposes of planning, design, construction, maintenance, and accommodating new development. The City will also consider the context of current and planned future adjacent land uses in these decisions. The following generally describes the functional classification:

- Arterial Roads are intended for the efficient movement of large volumes of people and goods within and through the city. Arterials should be designed to safely accommodate heavy truck traffic, motor vehicles, and transit service, in addition to cyclists and pedestrians. Direct property access should be discouraged on arterial roads wherever possible.
- Collector Roads are intended to connect between the arterial network and the adjacent neighbourhoods and districts. Collectors should be designed to safely accommodate motor vehicles, transit, cyclists, and pedestrians, and, to a lesser extent, heavy truck traffic. Direct property access may be provided, but in a planned and controlled fashion. Collectors may be considered “Minor” or “Major”, depending on their size, laning, and use by traffic in the network.
- Local Roads are intended to provide direct access to adjacent properties, and to connect to the arterial and collector road networks. Local roads should be designed to accommodate vehicles, cyclists, and pedestrians, with little if any heavy truck traffic or transit service.
- Lanes are intended to provide secondary access to adjacent properties. While not often used in new development, lanes in existing neighbourhoods may be used to facilitate development densification objectives.

Policy 8.7.10 In the Downtown and Neighbourhood Centres, road designs should prioritize pedestrian and bicycle travel and transit use over car use wherever possible. This includes consideration of reducing road and lane widths, reducing turning radii at intersections, providing on-street parking, and inviting frequent intersections and safe pedestrian and bicycle crossing points.

Policy 8.7.11 To control the speed and volume of vehicular traffic, improve safety for vulnerable transportation modes, and/or to achieve neighbourhood planning goals, Minor Collector and Local Roads may be considered candidates for traffic calming or other alternative design measures. However, these measures should not be installed in such a way as to impede snow clearing or other street

maintenance activities. Traffic calming is not generally considered appropriate on Arterial Roads.

Policy 8.7.12 The conversion of Second and Fourth Avenues to two-way traffic in Downtown Prince George is a priority. Both roads should be converted at the same time.

Policy 8.7.13 Downtown streets should be designed for multiple functions, including transportation corridors, inviting cycling and pedestrian spaces, stormwater management, and energy conservation. Changes may include, but not be limited to, the installation of widened sidewalks, sidewalk bulbs, median islands, traffic circles, bicycle lanes, boulevard trails, and landscaping, particularly as envisioned in the Smart Growth on the Ground (SGOG) Downtown Prince George Concept Plan.

Policy 8.7.14 New city roads shall be planned, designed, prioritized and constructed to accommodate future needs as defined in the Growth Management Plan. The approximate location and classification of future major road links expected to be required within the next 15 years are shown in *Schedule B-10: 15 Year Road Network*, and include:



- Boundary Road, Highway 16 East to Highway 97 South;
- Boundary Road, Highway 97 South to Highway 16 West;
- Foothills Boulevard southern extension, 18th Avenue to Ferry Avenue;
- University Way extension, Tyner to Highway 16;
- Ospika Boulevard extension, Tyner to Highway 16; and,
- The following principal links for road continuity and service to future development sectors:
 - Airport Industrial Lands Connector, Highway 97 to Boundary Road;
 - Willow Cate extension north to Highway 97;
 - Malaspina extension north to Cowart Road;
 - Lansdowne extension south to Cowart Road;
 - Glen Lyon Road extension east to Domano and west to Highway 16;
 - St Lawrence extension to Henry Road;
 - Westgate Avenue extension north to Tyner Blvd, and south to Glen Lyon Way;
 - The extension of Ospika Boulevard from Highway 16 West to Boundary Road (Parkridge Parkway);
 - Extension of Domano south to Boundary Road (Parkridge Parkway);

- Extension of Massey Drive from Foothills to Tyner Boulevard (desirable from a traffic perspective, but deserves further geotechnical review, given possible issues related to slope stability);
- Extension of Wiebe Road, Range to Rec Place; and,
- Extension of Rec Place to Westwood.

Policy 8.7.15 Major road links which are expected to be required beyond the 15 year horizon are shown in the *Map 3 – 100 Year Major Road Network*, which is generally taken from the Major Street Network Plan for Prince George.

Truck and Dangerous Goods Routes

Policy 8.7.16 Safety, mobility, and transportation infrastructure along designated routes should be maintained at a suitable level of service to minimize the risk and severity of incidents involving dangerous goods.

Policy 8.7.17 City emergency preparedness planning should be undertaken in consideration of the designated Dangerous Goods Routes and known truck routes.

Policy 8.7.18 The City should continue to consult and communicate with trucking industry representatives, dangerous goods carriers, and the public as required to provide education about the Bylaw, and identify and resolve issues as they arise.

Policy 8.7.19 A truck route study should be undertaken for Prince George, which should provide guidance on the designation and management of local truck routes to protect the safe and efficient movement of goods through and within the city. The study should also develop regulations for the movement and parking of heavy trucks and trailers on city roads.

Policy 8.7.20 When the new Boundary Road Connector (Highway 97 to Highway 16) is designated as a dangerous goods route, the Ministry of Transportation and Infrastructure should be requested to instate restrictions on the movement of dangerous goods on Highway 16, between Highway 97 and First Avenue, to reduce the risk of incidents involving dangerous goods through Downtown and the Gateway neighbourhood.

Transit System

- Policy 8.7.21 Transit service should offer an attractive alternative to driving, with routes and schedules that are frequent, direct, safe, and convenient. However, transit service should continue to provide a basic level of mobility for seniors, youth, the disabled and others who may be dependent on transit.
- Policy 8.7.22 Transit service should be focused on major activity centres and residential areas within the urban areas. Appropriate levels of transit service may be provided to other key destinations as and when required to serve known transit users in a cost-effective fashion.
- Policy 8.7.23 The target transit coverage should be within:
- 400 m walking distance of 90 percent of the residences,
 - 250 m of all future medium and high-density residential developments, and
 - 150 m walking distance of all designated senior's residences and major institutional facilities.
- Policy 8.7.24 Transit stops should be located in accordance with these distance objectives.
- Policy 8.7.25 The City should improve on-street passenger facilities, including the provision of bus benches, shelters, lighting, waste receptacles, and route/schedule information.
- Policy 8.7.26 Persons with mobility difficulties should be provided with a range of transit options, including handyDART service, taxi programs, and fully accessible conventional transit vehicles and bus-stop infrastructure.
- Policy 8.7.27 The City should improve fare options for passengers to encourage prepaid fares. These include, but are not limited to, such agreements as the "U-Pass" for post-secondary students, and "Pro-pass" for local businesses and industry.
- Policy 8.7.28 Transit should be a key consideration in all city infrastructure projects and land development processes.
- Policy 8.7.29 Transit service should connect to other transportation systems to allow passengers to conveniently connect to other modes, including custom transit services, intercity busing, rail passenger services, and the cycling and pedestrian networks.



- Policy 8.7.30 The City should continue to analyze ridership patterns and use key performance indicators to measure the operation of the transit service over time, and compare with benchmarks.
- Policy 8.7.31 The City should ensure efficient use is made of transit resources in order to maximize customer service and community benefits at an affordable cost to the public.
- Policy 8.7.32 The City should continue to provide targeted educational and promotional initiatives to attract new ridership.
- Policy 8.7.33 The City should work with BC Transit and the bus operator to fund enhancements to the transit exchange Downtown, and to explore the potential to enhance other key transit exchanges to better integrate them with the adjacent or nearby public realm.

Active Transportation

- Policy 8.7.34 The mobility and safety needs of cyclists and pedestrians of all abilities are important considerations in the City's policies, budget, planning, engineering, maintenance, and development decisions.



(Photograph courtesy Chris Leboe).

- Policy 8.7.35 Sidewalks shall be provided on both sides of Arterial Roads, and on at least one side of all other roads.
- Policy 8.7.36 Excess road capacity on arterial and collector roads may be re-allocated to the active transportation network through the removal of parking and traffic lanes, where volumes permit.
- Policy 8.7.37 The City should revisit the policies for inspection and maintenance of the active transportation networks to improve safety and functionality.
- Policy 8.7.38 Designated cycle routes should be signed and marked as they develop.
- Policy 8.7.39 New development and redevelopment should be designed to accommodate cycling through the provision of convenient and secure bicycle racks for visitors, and secure storage facilities for employees/residents.
- Policy 8.7.40 The Pedestrian Network should be developed so as to be accessible to persons of all abilities through the provision of such devices as ramps, audible signals, and textured surfaces in the sidewalks.

- Policy 8.7.41 Every building to which the public is invited should have a safe, accessible and convenient connection to the public pedestrian network. Building entrances should also have a safe buffer for pedestrians, physically separated from the areas designated for vehicles.
- Policy 8.7.42 The City should include volumes of active transportation modes with all traffic counts to develop a database of active transportation demand.
- Policy 8.7.43 The City should use educational and social marketing initiatives to (a) encourage the use of active transportation modes; (b) improve attitudes, understanding, and awareness of active transportation; and (c) teach people how to use and interact with cyclists and pedestrians in order to improve safety and reduce frustration.

Other Transportation Modes

- Policy 8.7.44 The City should encourage long-term development of rail, inland port, and air travel opportunities by accommodating sufficient infrastructure for future needs.
- Policy 8.7.45 The City should work cooperatively with the Regional District of Fraser-Fort George and the rail industry on any improvements and realignment being considered for the rail crossings along the Otway Road to Miworth.
- Policy 8.7.46 The City should continue to support improvements to both air passenger and freight service, including terminal improvements and the provision of complementary air support services at the Prince George Airport.
- Policy 8.7.47 Given the importance of rail service to industrial customers, provision for rail access to some of the principal industrial sites should be encouraged.

Management of Traffic Demand and Safety

- Policy 8.7.48 The City should encourage reduction of reliance on the private automobile through:
- Land development policies;
 - The development and promotion of the Active Transportation Network; and,
 - Transportation Demand Management.
- Policy 8.7.49 The City should periodically review the timing and phasing of traffic signals in an effort to reduce vehicle emissions due to congestion and delay.

- Policy 8.7.50 When traffic signals are warranted or requiring substantial rehabilitation or redesign, roundabouts should be considered as an alternative due to their advantages in user safety, delay-reduction, emission reduction, and lower operational costs.
- Policy 8.7.51 The City should continue to investigate the impacts of climate change on road operations and traffic safety.

Parking

- Policy 8.7.52 On-street parking should generally be discouraged on Arterial Roads to reduce parking conflicts, and create space for transit and cycle traffic. On-street parking should be controlled as required on Collector Roads.
- Policy 8.7.53 In commercial areas, and particularly the Downtown, parking requirements should be reviewed with respect to:
- The extent to which on and off-street parking is required, especially where alternative transportation modes are available, such as public transit and cycling;
 - Shared parking between uses, with the intent of reducing the overall requirement for parking; and
 - If, what, and where parking fees may be instated (both on and off-street) so as to increase parking turnover in areas of heavy demand, and to help shift commuters to more sustainable transportation modes like transit and cycling.

8.8 Utilities and Drainage

The quality of life City of Prince George residents enjoy can be attributed in part to having safe and reliable water supply, sewage disposal and storm water drainage systems.

As the community grows, more demand is placed on existing systems to serve new development. In many cases a growth component has been provided in the servicing infrastructure when first installed. However, depending on age and location of the infrastructure, growth demands may exceed the available capacity and upgrades may be required.

As the provision of utility and drainage servicing is both a significant component of development costs and the ongoing cost to maintain and to replace or renew the systems in the years that follow. With more awareness of and attention to the need to consider social and environmental aspects of serving community needs, economic realities are not the only component to be considered in the provision of utility and drainage infrastructure systems.

The policies derived in this section are reflective of these three aspects of sustainability in providing the community with water, sewer and drainage servicing.

Water Supply and Distribution

The source of the City of Prince George's water supply is provided entirely from groundwater wells. Of the wells in continuous operation, three are large radial collector wells along the south bank of the Nechako River supplying 95% of the City's water demand through a water distribution system that has expanded over the last decade.

The City's water system provides for both domestic water demand and fire flow required for the land use served. Generally, the water system is a network of source wells, water mains, booster pump stations, reservoirs and pressure reducing valves. Transmission water supply mains convey water from the source wells to reservoirs and booster stations as water is distributed to customers within pressure zones. The boundaries of pressure zones are determined by elevation; pressure zones are interconnected by booster stations and pressure reducing valves.

Water storage reservoirs are sized to accommodate domestic and fire demand, with the construction of six new reservoirs in the last 2 decades, the provision of water storage has improved considerably.

Development activity in new greenfield areas is generally situated in higher elevations where new booster pump stations, pressure reducing valves and sometimes reservoirs are needed. These infrastructure demands add significant cost to development and increased operation, maintenance, and future renewal and replacement costs to the City.

Sewage Collection and Wastewater Treatment

The City's sewage collection system consists of a network of gravity sewer mains, force (pressure) mains and over thirty lift pump stations. The City operates five wastewater treatment facilities, the largest being the Lansdowne Wastewater Treatment Facility that serves the Bowl, College Heights, University Heights and Nechako/Hart areas of the City. Areas east of the Fraser River are served by the Blackburn, BCR and Danson wastewater facilities and a small system serves Western Acres, the semi-rural residential area at the extreme southwest corner of the City.

The Lansdowne facility is operating at 75% capacity, which should provide for the expected growth of the next 15 years. The Blackburn facility has had concerns with high spring discharges due to inflow and infiltration from snowmelt runoff and needs storage expansion to mitigate this condition. The BCR system has sufficient capacity to accommodate growth within the BCR and some of the Airport Light Industrial development; there is room to expand the treatment facility in future, but should not likely be required within the next 15 years. To accommodate build-out development in their respective catchment areas, the Danson facility needs to be upgraded within the 15 year horizon as does the Western Acres facility.

Storm Water Drainage

The City provides drainage for its road infrastructure using open ditches or storm sewers, usually depending on the adjacent land use and proximity of development. Curbing is usually provided, where storm sewers exist in roads. This provides for surface water to collect and channelize storm water runoff toward drains (catchbasins) that help to mitigate flooding of the road surface and adjacent properties.

Storm sewers are installed at sufficient depth in new residential development to accommodate the connection of perimeter foundation sub-drains in fine-grained soils such as silts and clays. In new multiple-family, commercial, institutional and light industrial developments, storm sewers are provided for the connection of roof drains and parking lot drainage systems.

Storm sewers, storm drainage management facilities and open channel systems are designed using conventional urban hydrology practices from rainfall intensity-duration-frequency (IDF) data derived from Environment Canada records and design storm events. Storm sewer infrastructure historically was designed using 2-year and later 5-year return periods. The current practice is to use a 10-year return period to adapt to more severe events that appear to be more frequent, possibly due to climate change.

Since introducing design guidelines in 2001 for storm water management facilities, storm water detention ponds, dams, receiving open water channels, and road networks are now designed to accommodate a 100-year return.

Storm sewers with curbing are installed throughout the Bowl, College Heights and new residential developments in the Nechako and Hart areas north of the Nechako

River. A few commercial and light industrial areas in the BCR and Danson areas have storm sewers. There are, however, large areas in the Nechako and Hart where storm drainage is provided by ditches and swales (minor depressions between the edge of pavement and property line).

Two watershed drainage plans were completed in the past decade:

- Gladstone, Varsity and Trent Watershed Drainage Plans, December 2002 for three drainage basins in the College Heights and future Ospika South Neighbourhood Plan areas; and,
- Hudson's Bay Slough Watershed Drainage Plan, January 2007 for the Cranbrook Hill, University of Northern British Columbia, west Bowl, central Bowl, Crescents, a portion of the Downtown, Gateway, and Hudson Bay Slough areas.

Within the last two decades, storm sewer infrastructure and drainage management facilities have received more attention from regulatory agencies administering the provincial Water Act and the federal Fisheries Act in the quality and volume of discharge conveyed by these facilities into receiving water courses. This has led to more demands on storm drainage facilities by introducing quality control features into manholes (sumps), and the design and installation of sediment removal and oil separator systems.

Currently, the industry practice is moving toward storm water management techniques that employ "volume-based" methods rather than "rate-based methods". The objective is to use a low-impact development strategy. This strategy emphasizes conservation and use of on-site natural features, integrated with engineered, small-scale hydrologic controls to more closely mimic pre-development hydrology. The goal of low impact development is to prevent measurable harm to streams, lakes, wetlands and other natural aquatic systems from commercial, residential or industrial development sites.

Objectives

- Objective 8.8.2 Identify the location and extent of planned future water, sewer and drainage systems improvements required to support development consistent with the growth management objectives and policies within this Plan. The availability and capacity of existing water, sewer and storm drainage infrastructure that should connect to the improvements must be considered.
- Objective 8.8.3 Protect and promote the health and safety of the public, and the safety and integrity of public infrastructure.
- Objective 8.8.4 Reduce and/or effectively manage the impacts to the environment and the impacts of climate change.

Designation of Areas

Water and Sanitary Sewer Service Infrastructure

The existing major water and sanitary sewer infrastructure facilities indicated on *Schedule B-14: Water Network Improvements* and *Schedule B-15: Sewer and Wastewater Treatment Improvements* show approximately the servicing areas for each facility.

Waste Water Treatment Facilities

Lands are required for the expansion of existing wastewater treatment facilities and for the future development of new wastewater facilities at locations indicated on *Schedule B-15: Sewer and Wastewater Treatment Improvements*.

Storm Water Runoff and Drainage

Lands are required for storm water detention ponds, wetlands, and snow management facilities at locations indicated on *Schedule B-16: Storm Network Improvements*. Opportunities for sub-surface recharge or infiltration systems are also indicated.



Policies

General

- Policy 8.8.2 The City should develop and maintain safe and efficient water, sanitary and storm sewer utilities that should accommodate the growth management objectives and policies within this Plan.
- Policy 8.8.3 The City should develop storm water drainage facilities, consistent with the growth management objectives and policies within this Plan, that in new development or redevelopment areas provide for:
- the drainage of storm water and snow melt runoff from roadways to provide safe vehicle movement during summer and winter;
 - the relief of groundwater from residential, commercial, institutional and light industrial building foundations where soils are not free-draining in new development areas;
 - the safe management of storm water during heavy rainfall events to mitigate flooding;
 - the abatement of sediments and deleterious substances from storm water and snow melt runoff; and
 - opportunities for the reduction of storm water runoff volumes conveyed through piping systems to the natural watercourses.

- Policy 8.8.4 To adapt to climate change, future development of infrastructure should be designed to: account for projected precipitation and temperature changes; withstand freeze-thaw cycles; and be more resilient to unexpected changes and extreme events. The City should undertake further study to determine the local impacts of climate change on infrastructure.

Water and Sanitary Sewer Utilities, Drainage and Growth Management

- Policy 8.8.5 Water and sanitary sewer utilities and drainage servicing required for all development, whether or not consistent with the growth management objectives and policies within this Plan, shall:

- a. be determined from:
 - neighbourhood plans approved by Council resolution;
 - water and sewer infrastructure servicing studies prepared by a qualified professional engineer; and,
 - storm water management plan(s) prepared by a qualified team consisting of a professional engineer, environmental professional, and other professionals as required;
- b. based on City design guidelines, standards, and other requirements adopted by bylaw, provide capacity sufficient for the proposed development and for future lands to be served beyond the proposed development; and,
- c. meet all applicable servicing requirements regulated by the provincial and federal governments.



Water Supply and Distribution

- Policy 8.8.6 The City should continue to expand the pumping capacity at wells PW 660, PW 605 and PW 601 and extend transmission capacity from these collector wells to accommodate the growth management strategy. It is recommended that:

- No new City-owned water supply wells be developed at other locations in the City to serve new development; and,
- Existing City-owned wells within the urban boundary should not be expanded, or should be de-commissioned from regular use, where provision can be made to extend transmission water mains from the water network supplied by the Nechako collector wells.

Policy 8.8.7 As there is a moderate to high risk of contamination from industrial or commercial activity on lands above the groundwater capture zones, it is recommended that the City:

- Restrict the expansion of industrial and commercial development within the capture zones of the Nechako collector wells;
- Consider reducing or restricting industrial development expansion in capture zones for active City wells located in other areas of the City; and,
- Conduct condition assessments of City-owned water supply, storage and distribution facilities to determine remaining service life and sufficiency to accommodate the growth management objectives and policies within this Plan.

Policy 8.8.8 Where water infrastructure renewal is planned for the replacement of sub-standard or old infrastructure, new infrastructure shall be sized to accommodate new development or re-development in accordance with the growth management objectives and policies within this Plan.

Policy 8.8.9 New water supply and distribution main network improvements, pump station upgrades, pressure reducing valve installations, and water reservoirs should be planned, designed, prioritized and constructed to accommodate future needs as defined in the growth management objectives and policies within this Plan. The approximate location of significant water service improvements expected within the next 15 years are shown on *Schedule B-14: Water Network Improvements* and include:

Bylaw 8584

- Boundary Road Water Main (under construction at time of this bylaw);
- Extension of water supply main from Boundary Road/ Highway 97 intersection to Danson Reservoir (PW827);
- Extension of water main along Northwood Pulpmill Road from Aberdeen Road to Clubhouse Drive;
- Extension of water main from Bear Road to Bunce Road;
- Looping of water main from Heyer Road to Leland Road;
- Extension of water main west on Chief Lake Road from near Sabayam Road to Foothills Boulevard;
- Airport/Boundary Road water reservoir;
- Upgrade of booster station at west end of Yellowhead (Hwy 16) Bridge (PW623);
- Extension of water main along Malaspina/Cowart Road to connect
- New water well source for Western Acres; and,

- The following water service projects as required for future development when demand warrants:
 - Extension of water main from Rec Place Road to Westwood Drive
 - Extension of water main along River Road from Foley Crescent to booster station PW623;
 - Pressure reducing valve with tie-in to transmission main from Hart water booster station (PW650) to Vellencher reservoir (PW817);
 - Installation of pressure reducing valves in Ospika South area between Pressure Zone 6 and 4 to serve areas below 700m elevation;
 - Water main extension along North Nechako Road west of Foothills Boulevard;
 - Extension of water main eastward on Chief Lake Road from near Sabayam Road to Hwy 97; and,
 - Water main extension and upgrade from Blackburn Road south to Midland Road, to facilitate the servicing of South East ¼ of District Lot 630, Cariboo District, Except Plan 18283, subject to a phased development agreement.

Sewage Collection and Wastewater Treatment

Policy 8.8.10 Consider the impact of the proposed new regulations under the Fisheries Act endorsed by the Canadian Council of the Ministers of the Environment (CCME) to City wastewater treatment facilities and prepare a review report that outlines measures necessary to implement the regulations as part of future facility upgrades.



Policy 8.8.11 New sanitary sewer and wastewater treatment, shall be planned, designed, prioritized and constructed to accommodate future needs as defined in the growth management objectives and policies within this Plan. The approximate location of future sewer main extensions and upgrades, and wastewater treatment facility upgrades expected to be required within the next 15 years are shown on *Schedule B-15: Sewer and Wastewater Treatment Improvements* and include:

Bylaw 8584

- Boundary Road Sanitary Trunk Main (under construction at time of this bylaw);
- Extension of sewer trunk main from Boundary Road/ Highway 97 intersection to Pacific Street and lift station PW123;

- Upgrade of Blackburn Wastewater Treatment facility;
- Upgrade of Mackus Road lift station (PW115);
- Twinning of trunk sanitary sewer influent main on Vance/Cowart Road from Weibe Road to the Lansdowne Wastewater Treatment Facility;
- Expansion of effluent storage lagoon at Western Acres;
- Upgrade to Danson Wastewater Treatment facility;
- The following sewer main extensions, lift station upgrades and wastewater treatment facility upgrades as required for future development when demand warrants:
 - Extension of sewer trunk main parallel to Tyner Boulevard north of University Heights;
 - Extension of sewer trunk main from Southridge Ave to Park Drive;
 - Sewer extension along Sintich Road from Hwy 97S to Boundary Road and Penn Road;
 - Upgrade to lift station on Weisbrod Road (PW120);
 - Extension of sewer trunk main on North Nechako Road west of Foothills Boulevard; and
 - Sewer servicing extension and upgrade for the South East ¼ of District Lot 630, Cariboo District, Except Plan 18283, in the south Blackburn Neighbourhood, subject to a phased development agreement.

Drainage and Storm Water

Policy 8.8.12 Any planning for stormwater drainage should take into consideration an ecosystem approach and prioritize watercourses for protection.

Policy 8.8.13 Consider and, where opportunities exist, implement low impact development and other storm runoff volume-based discharge reduction strategies for new development and re-development to reduce the requirement to increase existing storm sewer and drainage facilities.

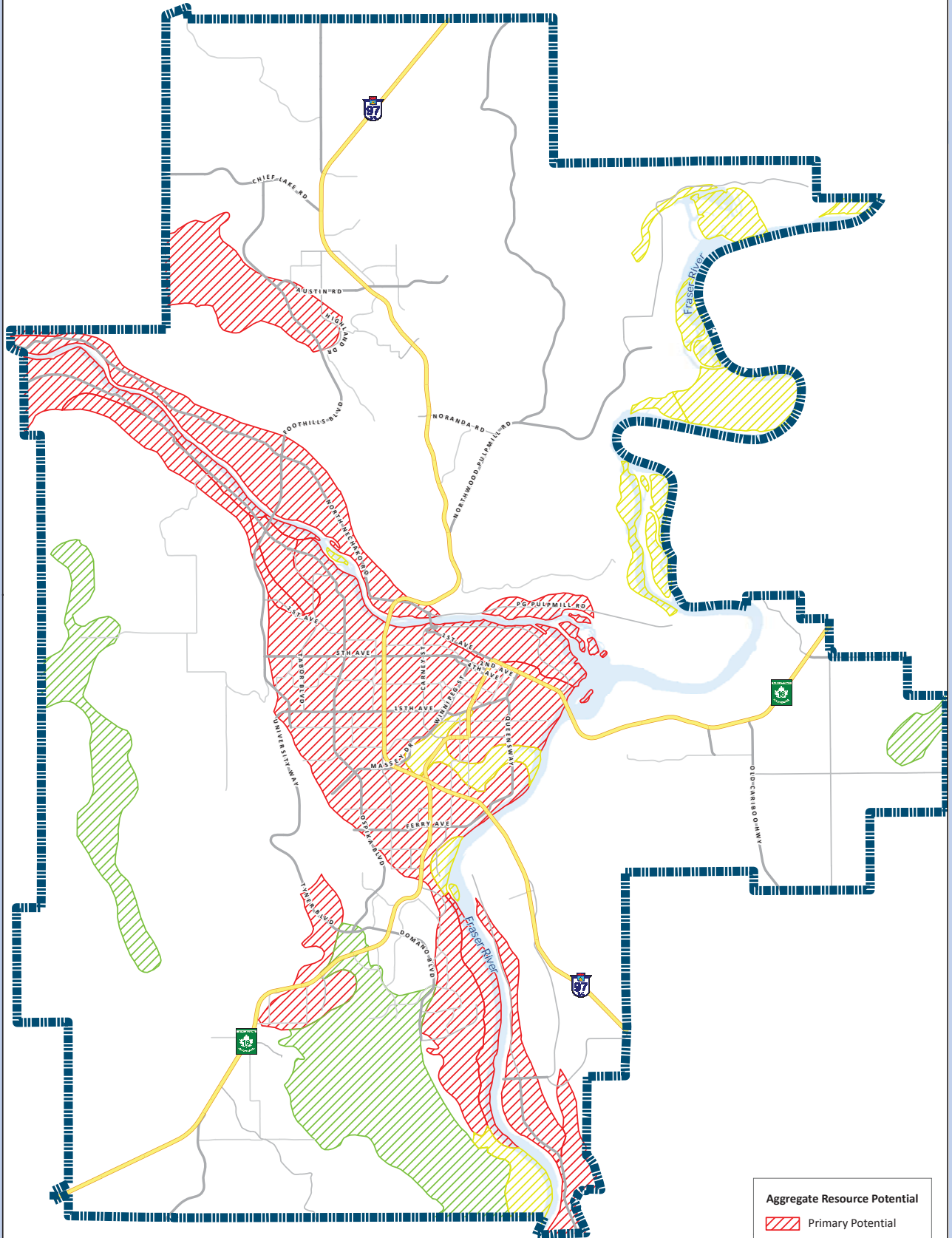


Policy 8.8.14 Utilize available techniques, such as sensitivity analyses, to consider climate change impact on storm drainage facilities.

Policy 8.8.15 New storm drainage facilities, shall be planned, designed, prioritized and constructed to accommodate future needs as defined in the growth management objectives and policies within this Plan. The approximate location future storm sewer main extensions and upgrades, storm detention facilities and groundwater recharge

facilities expected to be required within the next 15 years are shown on *Schedule B-16: Storm Network Improvements*, and include:

- Storm water detention ponds/wetland facilities for Gladstone Watershed, Fraser Bench Lands, University Heights and Airport Light Industrial Lands;
- Fraser Bench storm water outfall to Fraser River;
- Storm water recharge system upstream of Lansdowne Creek Discharge;
- Upgrade storm sewer to 1500mm diameter (dia.) on Winnipeg Street/Massey Boulevard from 15th Avenue to 17th Avenue; and,
- The following storm water drainage facilities improvements or upgrades as required for future development when demand warrants:
 - Varsity Watershed storm water detention ponds and new storm sewers;
 - University Heights storm sewer trunk mains down escarpment;
 - Snow management facility(s) for new development;
 - Expansion of Shane Creek detention pond and downstream storm sewer mains;
 - Installation of 525mm dia. storm sewer diversion main on 10th Ave between Laurier Crescent and Burden Street;
 - Storm water detention facilities at Airport Hill Subdivision; and,
 - Outfall and storm sewer to Nechako River between Rustad Road and Stevens Drive.

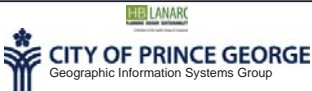


Aggregate Resource Potential

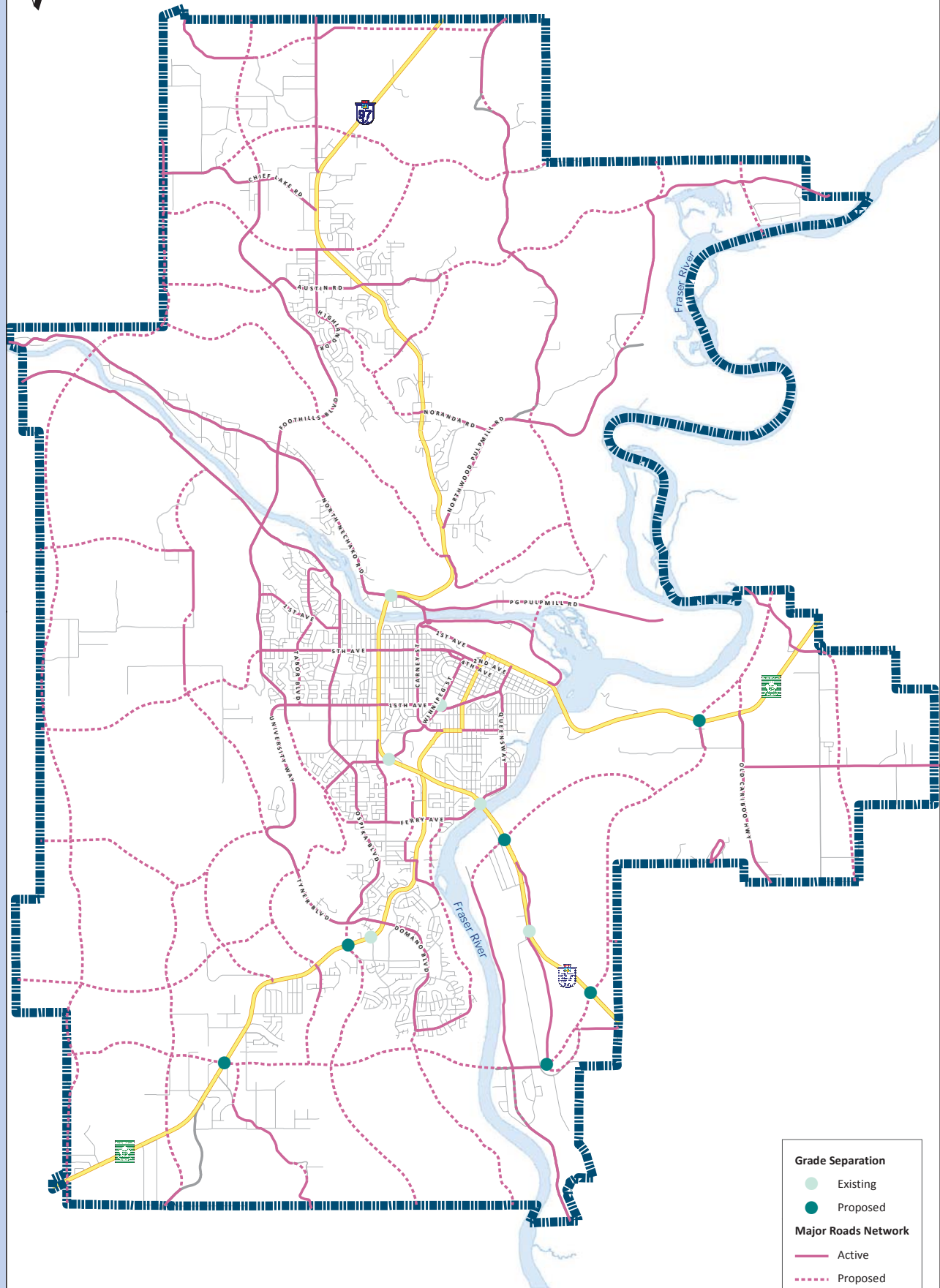
- Primary Potential
- Secondary Potential
- Tertiary Potential



Aggregate Potential
OCP Map 2, Bylaw No. 8383



Back of Map 2



Agricultural Land Commission approval is required for proposed roads within the Agricultural Land Reserve.

0 500 1,000 1,500 2,000
Meters

100 Year Major Road Network

OCP Map 3, Bylaw No. 8383

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