

SECTION VII: ENVIRONMENT

The City of Kamloops has a total land area of approximately 29,000 ha. Less than 20% of that space (5,500 ha) is considered to be urban. Despite the large amounts of undeveloped area, concern about the environment has increased in proportion to population growth and as more is known about the importance of environmental protection. Previous environmental status reports and input into the KAMPLAN process highlighted the need to balance continued urban growth with environmental sustainability.

Through Municipal Attitude Surveys conducted between 1988 and 2003, at the KamTalk: Vision 2020 Community Workshop held in November 2001, and at the OCP open houses held during the spring of 2002, residents of Kamloops identified a number of environmental issues including:

- promote/preserve major waterways and watersheds,
- promote the compact community concept,
- streamside protection,
- take a proactive role in acquiring riverfront lands,
- focus on natural open space/passive areas,
- protect the grasslands,
- extension of trails systems (pedestrian and bicycle) and the promotion of alternate modes of transportation, and
- establish/continue waste management education, techniques, and programs.

One aspect of the environment that received particular attention was the river and streamside protection. The City of Kamloops is situated at the confluence of the North and South Thompson Rivers. People are drawn to the water's edge, and the City has provided many opportunities to enjoy the river. The Rivers Trail provides an alternative transportation corridor along the river. The City also has the responsibility to protect people, infrastructure, and property from flooding and is required by senior levels of government to conserve riparian habitat.

Since there are many opportunities, requirements, and regulations impacting the river, it is crucial that a well thought out and coordinated effort be implemented under a Greenways Plan. Issues that need to be considered through the Greenways planning exercise include:

- formal developed parklands,
- City-owned and private property,
- fisheries habitat enhancement and protection,
- access trails for recreation and alternative transportation,
- City infrastructure and private utility protection and maintenance,
- flood protection,
- riverbank stabilization,
- railway corridor protection,
- storm water discharge, and
- emergency preparedness and response.

Each of these issues has a specific focus, and at times, there can also be conflict between priorities. It is therefore imperative that a multi-faceted plan be developed so that these issues may be dealt with in a comprehensive manner.

It is also important that there be an overall riverbank plan throughout the City to ensure that an integrated program is established that is not continually constrained by one priority over another. Ideally, the riverbank would be modified or enhanced through different treatments, depending on the major influencing factors. However, over the course of time, the overall plan would achieve improved habitat values over existing conditions while providing the necessary amenities and protective structures to maintain community health and safety.

Another area of concern is air quality. The City of Kamloops is one of 110 communities participating in the national Partners for Climate Protection (PCP) program. PCP is a group of municipal and regional governments across Canada working together to reduce locally produced greenhouse gas emissions in an effort to meet Canada's commitments under the Kyoto accord. The primary objective of the program is to encourage municipalities and their citizens to undertake a sustained effort to reduce emissions. The ultimate goal is to reduce greenhouse gas emissions from municipal operations 20% below 1994 levels and to reduce community-wide greenhouse gas emissions at least 6% below 1994 levels.

The PCP program is based on five Milestones:

- Milestone 1 - greenhouse gas emissions inventory and forecast;
- Milestone 2 - establish a reduction target;
- Milestone 3 - develop a local action plan;
- Milestone 4 - implement plan; and
- Milestone 5 - monitor progress and report on results.

Kamloops has completed Milestone 2 and is currently working on Milestone 3.

1.0 NATURAL ENVIRONMENT

GOALS

- To protect and enhance the quality of the natural environment.
- To protect and enhance fish and wildlife habitats in balance with flood protection and recreational access to riverbank and open space areas.

Natural Environment Policies

- 1.1 The City will continue its efforts to improve air quality through such means as:
 - controlling and restricting open burning;
 - reviewing solid fuel burning appliances;
 - investigating alternatives to open burning (recycling, composting);
 - supporting additional monitoring, research and enforcement by the province; and
 - encouraging public transit usage, alternative transportation (walking/bicycling), and travel demand management (reducing reliance on automobiles).
- 1.2 The City will continue to participate in the Partners for Climate Protection program to reduce greenhouse gas produced locally.
- 1.3 The City will encourage the development of a compact, ecologically friendly and efficient land use and transportation system that emphasizes energy conservation, air pollution reduction, land stewardship, sustainability, and growth management.
- 1.4 The City will take a proactive role in preserving and acquiring riverfront lands, particularly focusing on:
 - extending the Rivers Trail system outwards from the City Centre by taking advantage of vacant properties and redevelopment opportunities as they arise;
 - maintaining natural vegetation, but controlling erosion where necessary; and

- ensuring public ownership and access along the waterfront.
- 1.5 The City will continue to work with senior levels of government to monitor and mitigate, where necessary, riverbank erosion, particularly in the Dairy Road and North Rayleigh bends. Development should be set back a minimum of 200 m from the top of bank in these two locations.
- 1.6 The City shall continue to pursue opportunities to reduce or mitigate the impact of development and activity on the Thompson drainage basin in an attempt to prevent any further degradation in the quality of the rivers. In particular:
- runoff and erosion from the Juniper, Stobbart, and Chase Creek tributaries will be monitored, and efforts will be undertaken in conjunction with the TNRD and provincial ministries to reduce the amount of silt entering the river; and
 - the City will undertake measures to prevent contaminants and untreated effluents from entering the river system.
- 1.7 The City supports the protection of riparian habitat along all environmentally sensitive watercourses including along the North and South Thompson and Thompson Rivers. Development should be set back a minimum of 15 m and, where possible, 30 m from the top of bank to ensure habitat preservation.
- 1.8 The City will work with senior levels of government and other stakeholders to develop community greenway concepts during development of lands or in a community planning process as per recommendations in the Stewardship Series "Community Greenways". Greenway concepts will seek to balance riparian habitat preservation, flood protection, riverbank stabilization, and recreational access, among other issues. Use of artists' renderings of the proposed riverbank treatments would allow all parties, including regulatory agencies, to understand the proposed works.
- 1.9 The City will focus its parkland and open space efforts, through such means as the annual budgetary process and/or its dedication/acquisition tools, on natural open space and passive areas. This includes such initiatives as ensuring natural linkages and connectors between neighbourhoods and pursuing large-scale natural areas.
- 1.10 The City will support the Environmental Performance Advisory Committee in its efforts to protect and improve the environment.

- 1.11 The City will identify important natural areas that require protection or preservation, including:
- environmentally sensitive areas,
 - hazard lands,
 - parks and open space,
 - greenways, and
 - grassland areas.

2.0 URBAN ENVIRONMENT

GOAL

- To develop and maintain an aesthetically appealing and environmentally sensitive urban environment to enhance the quality of life for residents and visitors alike.

Urban Environment Policies

- 2.1 The City will encourage the development of the compact community, which includes promoting higher density living and/or intensification and mixing of land use, as a viable, environmentally sound growth management tool.
- 2.2 The City will continue to balance the need for economic development and fiscal responsibility with the necessity to enhance the urban environment.
- 2.3 The City will encourage good urban and building design through the establishment of Development Permit Areas (e.g. City Centre, North Shore Towne Centre and Tranquille Commercial District), efficient servicing standards, and design and landscape guidelines.
- 2.4 The City will support the designation and preservation of the community's natural and cultural heritage.
- 2.5 The City will show leadership in maintaining and enhancing municipal property and encouraging other government agencies and the private sector to do their part.
- 2.6 The City will continue its involvement in tree protection/tree planting initiatives, paying particular attention to encouraging new development to provide a better balance by designing around trees, and to recognize the importance of street trees in an urban environment.
- 2.7 The City may require boulevard/median construction and landscaping as part of all new development.

3.0 HAZARD LANDS

GOAL

- To ensure public safety and protection from property damage from areas exhibiting hazardous conditions.

Hazard Lands Policies

3.1 The location and boundaries of known Hazard Lands shown on Map 3 are approximate and may be revised with additional study or as development proceeds. These include:

- flood plain,
- silt bluffs,
- areas of excessive slope (>25%), and
- fire hazard lands (urban/wildland interface).

The City will identify areas of hazard and establish appropriate guidelines for development including mitigation measures or restrictions.

3.2 The City will consider undertaking the development of a *Flood Plain Management Plan* within the term of this plan.

3.2.1 The City will work with the provincial Ministry of Water, Land and Air Protection on the review and updating of the flood plain mapping within the City's boundaries.

3.2.2 The City will continue its dialogue with senior levels of government regarding the maintenance, rehabilitation, and funding of orphan dykes within the City's boundaries in order to provide a consistent level of flood protection within the City.

3.2.3 The City will determine its new roles in managing flood plain development issues in light of changes to the *Local Government Act*.

3.2.4 The City will continue to permit development within the designated flood plain (200 year plus 0.6 m allowance) in accordance with the provincial Ministry of Water, Land and Air Protection regulations.

3.3 The Valleyview silt bluffs (hazard lands) are subject to Development Permit guidelines.

- 3.4 Slopes steeper than 25% (4 horizontal to 1 vertical) shall be considered unsuitable for development and shall be designated open space unless it can be shown by geotechnical or engineering studies that the steep slopes can accommodate the proposed development and that there will be no detrimental impact on adjacent lands or the proposed development. Where it is demonstrated that development may occur on steep slopes, the developer shall provide the City with a save harmless covenant, and development must proceed in strict compliance with the recommendations of the geotechnical report.
- 3.5 Hillside subdivision design shall recognize severe climatic conditions, the difficulty of road maintenance, movement of pedestrians, and other environmental factors.
- 3.6 Where problem soils are encountered during development, a geotechnical investigation shall be carried out to determine the extent of the expanse of soils and, if necessary, make recommendations for construction or development techniques which will eliminate or accommodate the potential hazard.
- 3.7 The City will, in co-operation with the appropriate agencies, continue to participate in fire prevention procedures as identified through the Urban/Wildland Interface program. As a condition of approval of all new development or the issuance of Building Permits for existing lots within the urban/wildland interface, as shown on Map 3 - Hazard Lands, the City may:
- 3.7.1 Require as a condition of development approval, subdivision, or the issuance of a Building Permit, the registration of restrictive covenants to ensure that:
- potential purchasers are made aware of urban/wildland interface issues and the ongoing role that property owners must assume to protect their investment;
 - all roofing material and installation requirements must meet the Class 'B' fire rating requirements contained within the current Building Code;
 - the City is saved harmless in the event of damage to individual properties as a result of the spread of fire through the urban/wildland interface areas;

- fuel reduced buffers around individual homes from the house to property boundary or 10 m in distance, whichever is the lesser, are maintained. In this respect, "fuel reduced" shall mean an area which may contain natural tree cover, but is maintained by the owner with no accumulation of combustible debris;
- All eaves, attics, decks, and openings under floors are screened to prevent the accumulation of flammable material; and
- All-wood burning appliances are installed with approved spark arresters.

3.7.2 Require an assessment of the geographical features of the lands intended for development, in consultation with the Ministry of Forests, to address the potential for urban/wildland hazards and to determine the suitability of the proposed development to the land.

4.0 ENVIRONMENTALLY SENSITIVE AREAS

GOALS

- To preserve and protect environmentally sensitive and unique natural areas.
- To protect and enhance fish and wildlife habitats in balance with urban development and human use and enjoyment of open space.

Environmentally Sensitive Area Policies

- 4.1 Identified Environmentally Sensitive Areas (ESAs) in the City of Kamloops are shown on Map 4. These ESAs are based on information provided by the *State of the Environment Report (1994)*, by the *Endangered Spaces Project: Land for Nature in the Kamloops Area (1991)*, by government agencies, and by community input. These areas include:
- watercourses, including ponds, lakes, rivers or streams, and natural drainage courses;
 - significant cliff features, benchlands, escarpments, bluffs, geological features and grasslands;
 - wildlife, aquatic, and riparian habitat; and
 - habitat known to be occupied by rare or endangered species.

The location and boundaries of the ESAs shown on Map 4 are approximate and may be revised with additional study or as development proceeds.

4.2 The City will endeavour to preserve and protect ESAs, particularly those that are under pressure for development within the term of this Plan. The City may use one or more of the following tools or mechanisms, depending on which is appropriate to a given situation:

- Development Permit Areas and guidelines;
- environment protection by-laws (Tree By-law, Earthwork Control By-law, and Natural Watercourse By-law);
- dedication/acquisition;
- leave strips or buffer areas;
- density bonusing provisions;
- conservation covenants; or
- co-operation with other agencies.

4.3 The City will work co-operatively with senior levels of government and the community to:

- identify new ESAs;
- review City by-laws and strategies to ensure appropriate protection and preservation of ESAs; and
- identify additional means of preserving and protecting ESAs, which may include:
 - ▶ implementing specific techniques, measures or guidelines for development as outlined in *Land Development Guidelines for the Protection of Aquatic Habitat and Stream Stewardship: A Guide for Planners and Developers*;
 - ▶ undertaking a Community Greenway pilot project;
 - ▶ through the development approval process, requiring the preparation of environmental assessments to assist the City in determining location, extent, and environmental characteristics of an area;

- ▶ specific measures to avoid, minimize and/or mitigate environmental impacts; and
- ▶ specific site rehabilitation measures.

4.4 The City will incorporate ESA planning in future neighbourhood planning exercises in order to identify:

- the extent and location of significant environmental features;
- new ESAs; and
- appropriate tools/mechanisms to preserve and protect identified ESAs.

Neighbourhood planning is the most appropriate level for the City to undertake detailed ESA planning as this is when land use, servicing, and park requirements are considered and when sufficient information is available.

4.5 The City will develop a Bear Aware Strategy to minimize the potential of bear/human interactions.