

# Environment

# 10



## GOALS

- › 10 (A) Victoria's urban forests and public and private green spaces support healthy and diverse ecosystems that are prepared for the impacts of climate change.
- › 10 (B) Victoria's Harbour, coastline, ponds and streams support healthy populations of fish and other aquatic life.

## OVERVIEW

Human well-being and nearly all economic activity depend on a healthy natural environment, both locally and globally. Even in a modified urban environment such as Victoria's, the natural environment provides essential ecosystem services, the fundamental life supports upon which human settlements and a wide variety of plants and animals depend. These services include clean air and water, waste decomposition, nutrient cycling and carbon sequestration. Victoria's spectacular setting and unique ecosystems are part of the community's identity, and support sectors such as recreation and tourism. Victoria, like other urban centres, is challenged with protecting global and local ecosystems, while meeting the land, energy, water and material needs of a growing population.

Victoria is located in one of the most biologically rich and diverse bioregions in North America, with an extensive marine shoreline. As a dense urban community, Victoria's ecosystems and natural processes have been significantly modified

by human activity and urbanization. In 1800, much of Victoria's land base was covered in Garry Oak ecosystem. Less than 2% of this historic sensitive ecosystem remains, primarily in Beacon Hill Park and Summit Park. Habitat fragmentation and invasive species are key threats to the remaining ecosystem fragments. Overall, the urban forest – both native and introduced – has declined over time, and only 18% of Victoria was considered currently well or heavily treed when this plan was originally adopted. The marine environment has also been significantly modified by commercial, residential and industrial development, resulting in contamination and alteration to the natural shoreline. Many of the historically polluting uses have ceased to exist, and contaminated sites are gradually being remediated. Given the city's commitment to accommodating a significant amount of regional population growth, Victoria will continually be challenged with developing in a way that meets development goals, maintains ecological health and fosters an appreciation of local ecosystems and processes.

In an effort to optimize the protection and restoration of the natural environment, the plan takes a comprehensive approach and integrates the environment into land use and other planning initiatives at a variety of scales. A range of approaches, such as regulations, practices, partnerships and other tools, support the protection and restoration of ecologically sensitive areas and other habitat. Particular emphasis is given to shoreline and freshwater areas, and opportunities to restore habitat and mimic natural hydrology. The plan policies support the enhancement of the urban forest, with a view to optimizing its many ecological and community benefits, such as green infrastructure, [climate change adaptation](#) and placemaking. The plan also aims to mitigate air, noise and [light pollution](#) where possible and within the City's capacity to act.

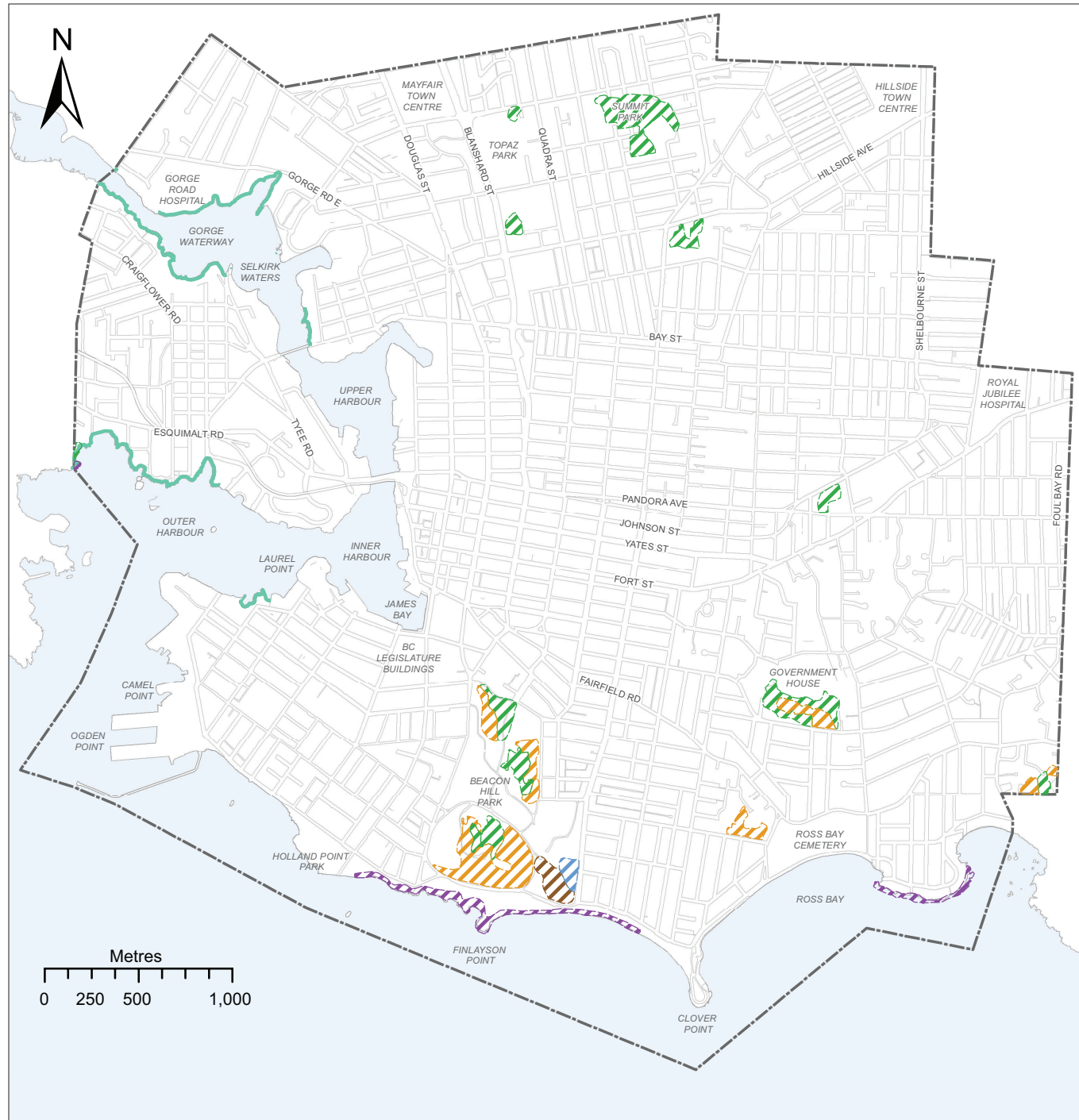
## BROAD OBJECTIVES

The environment policies of this plan collectively address six broad objectives:

- 10 (a) That environmental considerations are integrated into planning and design at a variety of scales.
- 10 (b) That a range of tools and partnerships support the connection, protection, restoration and resilience of ecologically sensitive areas and other habitat.
- 10 (c) That freshwater and shoreline areas are protected and managed to best maintain hydrological functions.
- 10 (d) That the urban forest is enhanced to support a wide range of ecological and community benefits.
- 10 (e) That citizens develop an ethic of environmental stewardship and responsibility.
- 10 (f) That air, noise and light pollution are mitigated where possible.

## ECOSYSTEM MANAGEMENT

- 10.1 Work with the Capital Regional District, senior levels of government and other partners to implement regional plans and initiatives that manage Victoria's sensitive ecosystems, urban forest, species at risk and watersheds as parts of a greater regional ecosystem.
- 10.2 Develop and maintain policies that strategically connect, protect and restore the ecological function of sensitive and remnant ecosystems on public and private lands, as identified, but not limited to, areas on Map 12, by:
  - 10.2.1 Identifying additional priority areas for environmental protection and restoration in parks and urban forest master planning;
  - 10.2.2 Developing appropriate ecosystem management strategies and practices on City lands;
  - 10.2.3 Supporting the conservation and restoration efforts of senior governments, public agencies, organizations, landowners and other partners;
- 10.2.4 Consider designating Development Permit Areas for the purpose of environmental protection; and,
- 10.2.5 Where appropriate, entering into conservation covenants or providing incentives to protect riparian, marine shoreline and terrestrial environmentally sensitive areas.
- 10.3 Work collaboratively with senior levels of government, community organizations, educational institutions, the private sector and individuals to protect and restore habitat and ecosystems that support migratory species, and rare and endangered species.
- 10.4 Work with senior levels of government, community organizations and the broader community to enhance the control of invasive species and management of urban wildlife.
- 10.5 Enhance the **adaptive capacity** of ecosystems and the urban forest to withstand climate change impacts through increasing the use and diversity of native and climate change adapted species on both public and private lands [SEE ALSO SECTION 12 – CLIMATE CHANGE AND ENERGY].
- 10.6 Seek opportunities to enhance and restore terrestrial and aquatic habitat, enhance the urban forest, and showcase green infrastructure along greenways designated on Map 7 [SEE ALSO SECTION 7 – TRANSPORTATION AND MOBILITY AND SECTION 9 – PARKS AND RECREATION].
- 10.7 Develop and maintain a comprehensive Natural Assets Inventory in partnership with other agencies and institutions to:
  - 10.7.1 Monitor ecological function, status and trends;
  - 10.7.2 Provide a basis for the valuation of **natural capital** and ecosystem services; and,
  - 10.7.3 Provide information to support broader planning, management and conservation initiatives.
- 10.8 Explore the development of a bylaw to regulate, prohibit, and impose requirements, as appropriate, in relation to the removal and deposition of soil within the city.




## MAP 12

### Ecological Assets

#### Sensitive Ecosystems

-  Coastal Bluff
-  Terrestrial Herbaceous
-  Older Forest
-  Woodland
-  Wetland

#### Harbour Ecological Rating

-  High to Very High

**Sources:**

Sensitive Ecosystems – Sensitive Ecosystems Inventory for East Vancouver Island and Gulf Islands, Province of British Columbia.

Harbour Ecological Rating – Intertidal and Backshore Inventory, Capital Regional District and the Victoria and Esquimalt Harbours Environmental Action Program.

## SHORELINE ECOSYSTEMS

- 10.9 Protect and enhance shoreline and marine habitat by:
  - 10.9.1 Considering the establishment of Development Permit Area guidelines that consider best practices such as appropriate building setbacks, guidance for enhancing habitat values and the integration of climate change adaptation planning;
  - 10.9.2 Establishing a Development Permit Area for the east side of the Upper Selkirk Waters to protect the unique natural features of this area;
  - 10.9.3 Investigating the acquisition and designation of shoreline ecosystems through a Parks Acquisition Strategy;
  - 10.9.4 Integrating restoration of natural shoreline features into the development of the Harbour Pathway, where appropriate;
  - 10.9.5 Enhancing the Dallas Road Bluffs through the development of management zones and restoration targets; and,
  - 10.9.6 Developing management strategies and initiatives for shoreline parklands that maintain and enhance **coastal sediment processes**.
- 10.10 Work in partnership with the Capital Regional District, the Township of Esquimalt, the Town of View Royal, the District of Saanich and other partners to increase coordination in the protection and restoration of Victoria Harbour and the Gorge Waterway.
- 10.11 Work with partners to assess the projected impacts of sea level rise on marine and shoreline ecosystems and respond to changing conditions through management strategies and the development and regular review and update of climate related plans, policies and initiatives [SEE ALSO SECTION 12 – CLIMATE CHANGE AND ENERGY].

## FRESH WATER ECOSYSTEMS

- 10.12 Support an integrated watershed planning approach for the comprehensive management of surface water, rainwater, and groundwater resources that promotes healthy aquatic ecosystems, resilience to climate change and the maintenance of hydrological functions [SEE ALSO SECTION 11 – INFRASTRUCTURE].
- 10.13 Collaborate with the Capital Regional District, neighbouring municipalities, community organizations, property owners and other partners to protect and enhance streams and watercourses, including the potential day-lighting of streams and improvement of riparian habitat, by:
  - 10.13.1 Implementing management plans for the Bowker Creek watershed and Cecilia Ravine Park;
  - 10.13.2 Exploring the acquisition and designation of creek side ecosystems through a Parks Acquisition Strategy or major redevelopment proposals; and;
  - 10.13.3 Integrating the restoration of natural creek side features into the development of greenways, where appropriate [SEE ALSO SECTION 7 – TRANSPORTATION AND MOBILITY, SECTION 9 – PARKS AND RECREATION, SECTION 11 – INFRASTRUCTURE].

## URBAN FOREST MANAGEMENT

- 10.14 Develop and maintain an Urban Forest Master Plan to enhance the urban forest on public and private land, and that:
  - 10.14.1 Develops mechanisms to increase the urban forest on City lands, public open spaces and private lands, with consideration of the Land Management Section of this plan;
  - 10.14.2 Integrates urban forest management with broader planning and management objectives related to infrastructure, climate change, parks, recreation facilities, placemaking, transportation, community well-being, tourism and food systems;



- 10.14.3 Manages the urban forest as a green infrastructure to enhance ecological services such as rainwater treatment, carbon sequestration, climate adaptation, air purification and maintenance of biodiversity; and,
- 10.14.4 Provides direction for enhancements to the urban forest consistent with the Land Management and Transportation and Mobility Sections of this plan.

## AIR, NOISE AND LIGHT POLLUTION

- 10.15 Work with senior levels of government, regional partners, public agencies, businesses, community organizations and residents to address issues related to air, noise and light pollution and their impacts on public and ecological health, within the City's jurisdiction.
- 10.16 Consider opportunities for dark sky compliant lighting in appropriate locations, including near sensitive wildlife habitat.
- 10.17 Improve air quality by identifying and integrating actions into broader community planning initiatives, such as encouraging low emission transportation options, increasing urban forest, and coordinating land use and transportation planning.
- 10.18 Give consideration, where warranted, to public health and ecological health implications, including air quality and noise, in the evaluation of new developments and other planning activities adjacent to the Working Harbour [SEE ALSO SECTION 7 – TRANSPORTATION AND MOBILITY AND SECTION 11 – INFRASTRUCTURE].

## ENVIRONMENTAL STEWARDSHIP AND SUSTAINABILITY EDUCATION

- 10.19 Promote community stewardship programs that protect, enhance and restore ecological health.
- 10.20 Support the educational efforts of senior government, organizations and others to increase awareness and understanding of ecological features and processes.
- 10.21 Incorporate opportunities to interpret local ecosystems and ecological processes through urban design, infrastructure, development and public realm improvements.
- 10.22 Encourage the broad development of the knowledge and skills necessary for more sustainable behaviours and practices by working with a wide variety of partners to [SEE ALSO SECTION 12 – CLIMATE CHANGE AND ENERGY AND SECTION 17 – FOOD SYSTEMS]:
  - 10.22.1 Promote household practices and skills such as water conservation, food production, native landscaping, recycling and composting; and,
  - 10.22.2 Increase the critical understanding of sustainability issues and processes.

