

Environmental Management

10



RELATED GOALS

- › 10 (A). Biodiversity thrives in Victoria's urban environment, including urban forests, and public and private green spaces.
- › 10 (B). Victoria's Harbour, coastline, ponds and streams support healthy populations of fish and other marine life.

OVERVIEW

Environmental Management addresses all elements of the biophysical environment with a focus on human settlements and their impacts on the natural environment. Maintenance of the natural environment and the ecosystem services it provides is essential to the sustained health of natural systems. Ecosystem services provide the fundamental life supports upon which human settlements depend and include clean air and water, waste decomposition, nutrient cycling, carbon sequestration, and recreational and spiritual benefits. Developing urban settlements that respect the integrity of terrestrial, aquatic, and marine ecosystems and plan for local energy, water and land needs is a key urban challenge.

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 natural systems and ecosystems have been significantly modified by human activity. In 1800, approximately 1,460 hectares of Victoria's area was covered in Garry Oak ecosystem. Less than 2% of this historic

sensitive ecosystem remains primarily in Beacon Hill Park and Summit Park. Overall, the urban forest has gradually declined over time, with only 18% of Victoria remaining well or heavily treed. The marine environment has also been significantly modified by commercial, residential and industrial development, resulting in contamination and alteration to the natural shoreline. As Victoria grows, it will be challenged to develop in a way that maintains ecosystem health and fosters an appreciation of natural areas and processes.

The plan includes policies to increase the protection, restoration and enhancement of marine, terrestrial and aquatic ecosystems, and proposes greater levels of protection and stewardship for sensitive ecosystems, shoreline and marine areas. The plan includes policies to manage the urban forest in a comprehensive way, and to reduce noise, air and light pollution. The plan highlights the role of the environment in placemaking, climate change mitigation and adaptation, and the delivery of infrastructure services.

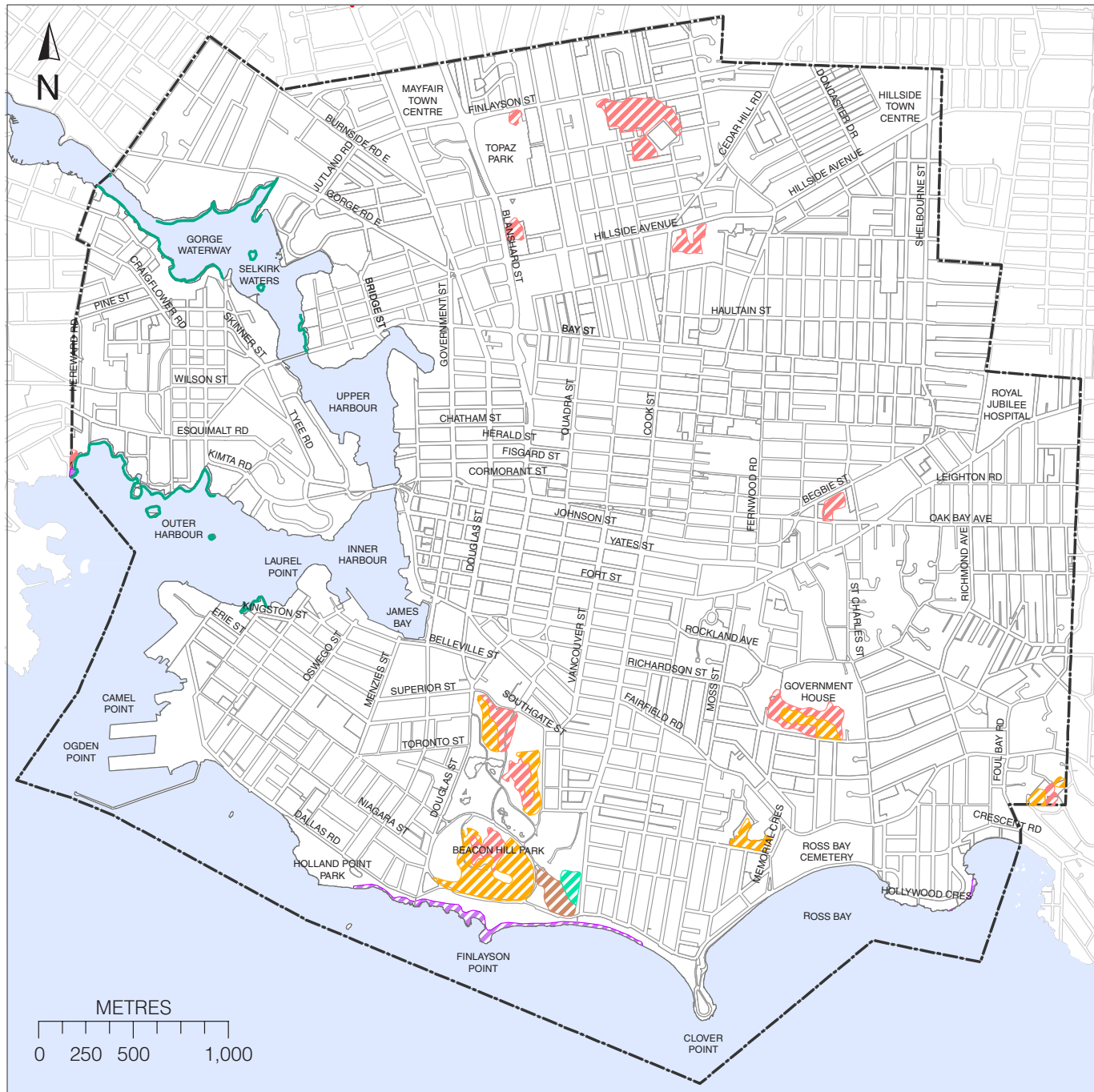
BROAD OBJECTIVES

The environmental management policies of this plan collectively address four broad objectives:

- 10 (a) That the **ecological function** of terrestrial, fresh water and marine ecosystems is preserved and enhanced.
- 10 (b) That the urban forest is enhanced and expanded.
- 10 (c) That citizens have an increased awareness and understanding of ecological principles.
- 10 (d) That air, noise and light pollution are mitigated.






ECOSYSTEM MANAGEMENT

- 10.1 Continue to connect, protect and restore the ecological function of sensitive and remnant ecosystems on public and private lands, as identified in Map 9, by:
 - 10.1.1 Identifying additional priority areas for environmental protection and restoration in parks and urban forest master planning;
 - 10.1.2 Developing appropriate ecosystem management strategies and practices on City lands;
 - 10.1.3 Including environmental conservation and related purposes in the objectives and criteria for existing and new development permit areas, where appropriate [SEE APPENDIX A – DEVELOPMENT PERMIT AREAS – UNDER DEVELOPMENT];
 - 10.1.4 Supporting the efforts of senior government, public agencies, organizations, landowners and other partners to foster long-term community stewardship of private and public lands and water bodies that protects, restores and enhances natural systems and species [SEE ALSO SECTION 11 – INFRASTRUCTURE]; and,
 - 10.1.5 Where appropriate, entering into conservation covenants or providing incentives to protect riparian or environmentally sensitive areas.
- 10.2 Enhance the adaptive capacity of ecosystems and the urban forest to withstand climate change impacts through increasing biodiversity.
- 10.3 Develop and maintain a comprehensive Natural Assets Inventory to:
 - 10.3.1 Monitor the ecological function and changing conditions of land, water, air, biodiversity, habitat quality and other ecological features;
 - 10.3.2 Provide a basis for the valuation of natural capital and ecosystem services; and,
 - 10.3.3 Support broader planning initiatives such as land use, local area planning, environmental conservation and management, infrastructure and parks.



MAP 9
Sensitive Ecosystems

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 Society.

City of Victoria
Official Community Plan 2011 (DRAFT)

TERRESTRIAL ECOSYSTEMS

- 10.4 Develop and maintain policies through the development of a Parks Master Plan and an Urban Forest Master Plan that strategically connect, protect and restore the ecological function of remnant terrestrial ecosystems on park and other City lands by:
 - 10.4.1 Expanding existing natural parkland through parkland acquisition and designation;
 - 10.4.2 Establishing management practices that restore and enhance existing parkland; and,
 - 10.4.3 Enhancing the urban forest in parks and public right of ways.
- 10.5 Work with the Capital Regional District, organizations and the broader community to enhance control of invasive species and management of urban wildlife, through activities such as education, outreach, and guidance on management techniques [SEE ALSO SECTION 8 – PLACEMAKING, SECTION 11 – INFRASTRUCTURE, AND SECTION 12 – CLIMATE CHANGE AND ENERGY].
- 10.6 Develop a bylaw to regulate, prohibit, and impose requirements, as appropriate, in relation to the removal and deposition of soil within the City.

FRESH WATER ECOSYSTEMS

- 10.7 Support an integrated watershed planning approach for the comprehensive management of surface water, rainwater and drainage, and groundwater resources [SEE ALSO SECTION 11 – INFRASTRUCTURE].
- 10.8 Support the efforts of the Capital Regional District, community organizations, public and private landowners, and others to prevent measurable harm to natural aquatic systems by promoting low impact development strategies such as bio-swales, erosion control and pervious surfaces.
- 10.9 Collaborate with the Capital Regional District, neighbouring municipalities, community organizations, property owners and other partners to work towards the enhancement of streams and watercourses, including the potential day-lighting of streams and improvement of riparian habitat, including implementing management plans for the Bowker Creek and Cecelia Creek watersheds.

MARINE ECOSYSTEMS AND SHORELINE MANAGEMENT

- 10.10 Protect and enhance marine and shoreline habitat by:
 - 10.10.1 Establishing Zoning regulations and applying Development Permit Area guidelines in consideration of best practices such as Green Shores, that include appropriate building setbacks, guidance for enhancing habitat values and integration of climate change adaptation planning;
 - 10.10.2 Investigating the acquisition and designation of shoreline ecosystems through a parks acquisition strategy;
 - 10.10.3 Working with partners to assess the projected impacts of sea level rise on the shoreline environment and respond to changing conditions through management strategies [SEE ALSO SECTION 12 – CLIMATE CHANGE AND ENERGY];
 - 10.10.4 Developing management strategies and initiatives for shoreline parklands that maintain coastal sediment processes and conserve and enhance sediment values;
 - 10.10.5 Integrating restoration of natural shoreline features into the development of the Harbour Pathway, where appropriate; and,
 - 10.10.6 Enhancing the Dallas Road Bluffs through the development of management zones and restoration targets.
- 10.11 Work with the Greater Victoria Harbour Authority, senior government, other municipalities, and business and community partners to implement and maintain the Harbour Plan, including a focus on shoreline protection and enhancement.
- 10.12 Work in partnership with the Capital Regional District, Esquimalt, View Royal, and Saanich to increase coordination in the protection and restoration of Victoria Harbour and the Gorge Waters.
- 10.13 Assess and mitigate climate change impacts on marine and shoreline ecosystems where possible through the development and regular update of a Community Climate Change and Energy Resiliency Plan [SEE ALSO SECTION 12 – CLIMATE CHANGE AND ENERGY]

URBAN FOREST MANAGEMENT

- 10.14 Develop and maintain an Urban Forest Master Plan to expand and enhance the urban forest on public and private land that:
 - 10.14.1 Manages the urban forest as a green infrastructure to enhance ecological services such as rainwater treatment, carbon sequestration, air purification, biodiversity and watershed health;
 - 10.14.2 Seeks opportunities to integrate urban forest management with broader planning and management objectives, such as infrastructure, parks, recreation facilities, transportation, community well-being, tourism and food systems;
 - 10.14.3 Develops detailed targets and mechanisms for increasing urban forest on park lands, other City lands, public lands and private lands; and,
 - 10.14.4 Provides direction for enhancements to the tree canopy consistent with the place character guidelines in Figure 7 and the walkable urban thoroughfare guidelines in Figure 10.

ECOLOGICAL EDUCATION

- 10.15 Support the educational efforts of senior government , organizations and others to increase awareness and understanding of ecological features and processes including:
 - 10.15.5 Promoting and interpreting local ecosystems through public works and development; and,
 - 10.15.6 Promoting stewardship programs that preserve, enhance and restore natural systems [SEE ALSO SECTION 15 – COMMUNITY WELL-BEING].

POLLUTION

- 10.16 Work with regional partners, public agencies, businesses, community organizations and residents to address air, noise and light pollution concerns.
- 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 cover, and coordinating land use and transportation planning.
- 10.18 Use all tools available to address noise impacts in development proposals adjacent to the Working Harbour.