Background

NATURAL HISTORY

Mature Coastal Douglas fir forest

Parksville Wetlands 2017 spring

Vegetation

- Parksville Wetlands in Coastal Douglas-fir moist maritime biogeoclimatic zone
- Western redcedar, Western hemlock, Grand fir, Bigleaf maple, Red alder, Balsam poplar, Pacific crab apple, and Pacific dogwood are common tree species in moister areas
- Garry oak ecosystems are found in drier areas such as such as in clearings, meadows, rocky bluffs
- Prior to deforestation and development, Parksville Wetlands was most likely old growth Douglas fir forest interspersed with wetlands in lower-lying areas
- Invasive plants such as Himalayan blackberry entered the disturbed site and today are found throughout the park

Wetlands and Watercourses

- Parksville Wetlands is made up of areas of marsh, open water, and moist ground
- Wetlands was largely seasonal in nature with shallow water drying out in summer
- Two watercourses, Carey Creek and Romney Creek, flow through the site
- Prior to site disturbance, creeks freely flowed to Parkville Bay and were likely fish-bearing
- Carey Creek and Romney Creek have been channelized through culverts under neighbouring subdivisions
- Carey Creek watercourse has been redirected and channelized on site

DEVELOPMENT HISTORY

1998 aerial photo showing land clearing prior to planned residential development

- Parkville Wetlands site has a history of human disturbance, including logging, farming, and land clearing, topographical alteration, and introduction of invasive vegetation
- In 1998, the north portion of the site was cleared for a planned residential development (which was never built)
- The site naturalized following the disturbance forming distinct plant community ecosites that are in the park today

PARK ACQUISITION AND DEVELOPMENT

- In 2017, the City of Parkville acquired the 97-acre Parksville Wetlands site from the Erminskin First Nation for the purpose of developing a public park
- The City developed trails at the park and added signage, benches, and other site furnishings
- In 2021, new wider trails that double as fire access routes were introduced to the park

PARKSVILLE WETLANDS TODAY

- Today the Parksville Wetlands is an evolving landscape, an ecosystem in the process of both recovery and regeneration
- Early succession forest is developing in some areas, grasslands have formed in others, while the wetlands and watercourses are seasonal to ephemeral features, challenged by altered water movements and drying climatic conditions
- The wetlands provide important migratory bird habitat, neighbourhood flood mitigation, and groundwater recharge services for a City water supply aquifer that sits under the park site
- Visitors use the park for passive recreation, enjoying both its scenic nature and wildlife viewing opportunities
- The City is now seeking a Parksville Wetlands Management Plan to provide guidance for future park development initiatives and management strategies, to protect and enhance both the park's ecological assets as well as public access to and enjoyment of the park and its many features

Environmental Assessment

ECO-SITES

The Parksville Wetlands site is comprised of a number of distinct ecosites, each characterized by dominant vegetation, moisture, slope and soil condition.

ZONE 1 SWAMPY FOREST
Forest mosaic of upland areas intermixed with swamp. Second and third growth deciduous trees (Red Alder, Black Cottonwood, Big Leaf Maple) with skunk cabbage, water parsley, swordfern, and stinging nettle in moist areas. Abundant coarse woody debris.
Issues: Presence of invasive hog-weed.

ZONE 2 FIRST SUCCESSION FOREST
First succession forest dominated by Red Alder and Trembling Aspen, the result of 1998 site disturbance.
Issues: Forest complex lacks structure and tree species diversity.

ZONE 3 MATURE DRY FOREST
More mature mixed deciduous, evergreen species forest with drier soil condition.
Issues: Western Red Cedar show signs of heat stress (dead tops)

ZONE 4 BRUSH TRANSITIONAL
Transitional area between young Alder/ Popular/ Maple forest and grassland. Shrub layer dominated by invasive Himalayan blackberry.
Issues: Invasive Himalayan blackberry, low plant species diversity.

ZONE 5 GRASSLANDS
Upland, drier soils predominantly vegetated with grasses.
Issues: Prone to fire; invasive Canary reed grass and Canada thistle

ZONE 6 WETLANDS
Wetland water bodies and water courses are a mix of open water, marshes, moist terrain, channels, and off-channels. Vegetation characterized by Hardhack, rushes, and sedges. Shore pine, Grand fir and Douglas fir in drier, more elevated areas. The wetlands are the most environmentally sensitive and threathened ecosystem in the park
Issues: Wetlands threatened by climate change and drainage due to constructed drainage channel; die back of tree stand to north of major pathway; invasive Reed Canary Grass choking out indigenous wetland vegetation.

ZONE 7 MATURE FOREST
Mixed mature forest with shrub layer dominated by Timbleberry and Sword fern
Issues: Western Red Cedar show signs of heat stress (dead tops)

ECO-FEATURES

(A) COMPACTED GROUND
Ground compacted from construction in adjacent development
Issue: Dry compacted soil limits grassland restoration in this area.

(B) MOUND
Earthen mound created from excavation materials from adjacent subdivision development
Issue: Dry compacted soil with poor fertility limits vegetation restoration in this area.

(C) WATERCOURSES
Carey Creek and Romney Creek flow through the park
Issues: Carey Creek watercourse significantly altered through neighbourhood development, fish bearing capacity of both creeks eroded by historic site development

(D) ENDANGERED VEGETATION
Dense spike primrose (Epilobuim densiflorum) found on site
Issue: Vegetation requires protection during park development

GENERAL ISSUES

CLIMATE CHANGE
Increased frequency and extent of fires in the park; damage to heat/ drought-sensitive vegetation; warming and drying trend threatens long-term extent, seasonality, and nature of wetlands.

WILDLIFE HABITAT
Human encroachment into wildlife habitat areas; dog activity disrupts wildlife; unsanctioned paths intrude into wildlife habitats; encampments disturb wildlife habitat.

Public Amenity Assessment

PUBLIC AMENITY FEATURES

(A) VIEWS TO ADJACENT RESIDENTIAL PROPERTIES

Issue: Lack of privacy screening along residential properties

(B) WETLAND VIEWS/ VISITOR EXPERIENCE

Issues: Park visitors have limited visibility of and engagement with wetlands.

(C) THE MOUND

Issues: No accessible path to mound top; construction debris hazard; park viewing opportunities from top

(D) MAJOR PATHWAY

Issue: Unengaging park visitor experience along major pathways

(E) MINOR TRAIL

Issue: Confusing path network of paths; lacks wayfinding signage

(F) UNSANCTIONED PATH

Issue: Confusing path network of paths; encourages public access to environmentally sensitive areas

GENERAL PUBLIC AMENITY ISSUES

SIGNAGE

Issues: Lack of wayfinding signage at park entries and at key junctions throughout park challenges orientation of new park visitors; lack of interpretive signage limits park visitor experience of park environmental features, processes, history, and restoration initiatives.

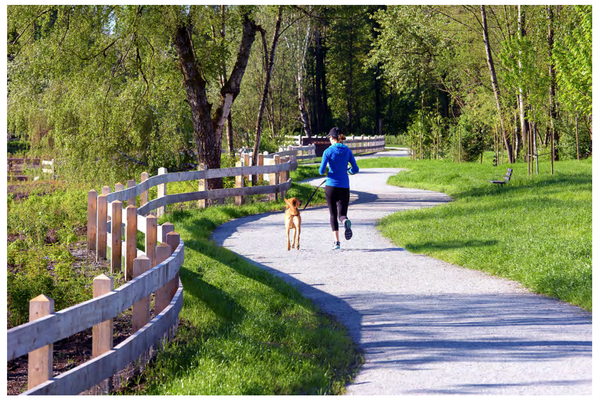
SITE FURNISHINGS

Issues: Lack of seating opportunities, particularly along major paths.
Lack of garbage cans, doggy bag stations, bike racks and other site furnishings.

PUBLIC ACCESS AND CIRCULATION

Issues: Lack public access to all areas of the park and through all eco-sites; only one trail connection between north and south park areas

Vision and Goals



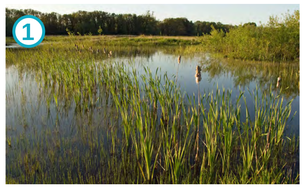
PARK MANAGEMENT PLAN VISION

“To protect, restore, and strengthen Parksville Wetlands’ natural features and systems while improving public access to, engagement with, and enjoyment of the park.”

PARK MANAGEMENT PLAN GOALS

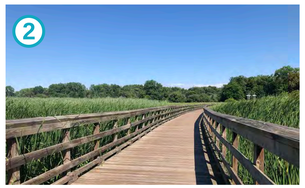
- **Develop a 15-year park management plan outlining short-, medium- and long-term planning initiatives that will guide park management, development, and maintenance**
- **Enhance climate change resiliency of wetlands through an in-depth hydrological study that can support opportunities to expand wetland diversity and creek channel restoration**
- **Facilitate forest succession to expand area of pre-development Coastal Douglas fir forest in the park**
- **Introduce areas of vegetation resilient to anticipated future drier and hotter climates**
- **Introduce public amenities to improve public access to and engagement with the park’s natural features and areas**
- **Engage in community outreach for public participation in park invasive plant removal, revegetation, and wildlife monitoring activities**

Concept Plan



1 New deep open water wetland

» diversified wildlife habitat and year-round wetland presence

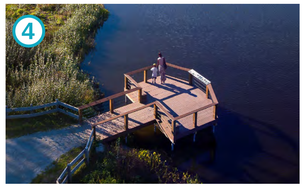


2 New boardwalk

» park visitor access through wetland, interpretative signage

3 Garry oak meadow demonstration area

» new Garry oak tree and meadow grass planting among areas of retained endangered plants, interpretive signage



4 New viewing platform

» overlooking wetland area, with interpretative sign

5 New lookout tower

» offering panoramic views to park, with accessible ramp and interpretive signage

6 New swampy forest boardwalk

» public access through swampy forest eco-site and to Romney Creek restoration

7 New gravel path

» increased public access and path connectivity in park

8 Creek restoration

» to support fish habitat along portion of Romney Creek

Wayfinding signage

» at park entries and major path junction points throughout park

Coarse woody debris piles

» amphibian and reptile habitat in wetland area

9 Dechannelize existing constructed drain channel

» for naturalized water flow and increased water retention in wetland area

10 Vegetative screening

11 Grassland restoration

» scarify compacted ground and restore grassland; retain and protect endangered plants in this area

12 New connector trail

» enhanced connectivity between north and south park areas

13 New Parking

» 5-6 parking spaces on Despard Avenue

14 Forest management

» existing forest thinning with native planting for gradual transition to young Coastal Douglas fir forest

New fence

» around wetlands area to protect wildlife habitat and vegetation

Interpretative signage

» in each park eco-site and major environmental feature

Bird and bat boxes

Invasive plant removal, native/indigenous plant restoration

» work to occur throughout park

Trail removal

» with restoration planting and fences/log pile barriers at trail ends

Benches and other site furnishings

» throughout park at entry, rest and view points

Park Management Plan

The Parksville Wetlands Management Plan is a 15-year strategic guide for the management of the park. It outlines a long-term vision and planning goals and direction for the park. The Plan includes strategies for conservation and land protection, ecological and cultural management, facilities development, public accessibility, and educational and stewardship opportunities, and park maintenance.

CONSERVATION AND LAND PROTECTION STRATEGIES

- Removal of unsanctioned paths
- Invasive plant removal throughout park (on-going)
- Barrier fencing to protect environmentally sensitive areas
- Designate SE parcel of land to Parkland and incorporate into Parksville Wetlands

ECOLOGICAL MANAGEMENT STRATEGIES

- Invasive plant removal throughout park (on going)
- Native/ indigenous plant restoration
- Forest management in ecosite zone 2 (first succession forest) including thinning of existing forest stand and diversifying planting with gradual conversion to young Coastal Douglas fir forest
- Enhance water movements across site wetlands (dechannelize existing constructed watercourses at the wetlands)
- Introduce more open water wetlands for prolonged water retention in wetland area and expanded biodiversity
- If supported by hydrological study, introduce earthen water retention dams, channel restoration, and open water features to the park
- Romney Creek and Carey Creek channel restoration to support fish habitat
- Wildlife habitat enhancements (bird and bat boxes, coarse woody debris piles) throughout park
- Garry oak meadow demonstration area (possible future vegetation type with park's warming and drying condition)

CULTURAL MANAGEMENT STRATEGIES

- Consult with First Nations stakeholders regarding cultural management at the park
- Enhance ethnobotanical assets (indigenous planting)
- Consider enthobotanical plant harvesting opportunities
- Interpretive signage (cultural history, expression, and enthobotany)

FACILITIES DEVELOPMENT

- Barrier fencing
- Interpretive and wayfinding signage
- New trail connections
- Wetland boardwalks
- Viewing platform and lookout tower

PUBLIC ACCESSIBILITY ENHANCEMENT

- New trails to enhance connectivity and access throughout park
- Accessible paths to mound and viewing tower
- New trail surfacing for increased all-season access and accessibility
- Boardwalks for enhanced viewing access to constructed wetland areas
- Additional benches at rest points throughout park

EDUCATIONAL AND STEWARDSHIP OPPORTUNITIES

- Interpretive signage (environmental features and processes)
- Outdoor classroom
- Community outreach opportunities (invasive plant removal, native plant restoration, wildlife monitoring)

MAINTENANCE STRATEGIES

- Maintenance to improve park safety and increase sightlines throughout park (management of vegetation near trails)
- Forest management
- Invasive plant removal
- Maintenance level aligned with City of Parksville park maintenance budget
- Community outreach opportunities to carry out park maintenance activities such as invasive plant removal

PARK DEVELOPMENT PLAN

- Prioritization of proposed park ecological and public amenity enhancements for short, medium, and long-term implementation based on public feedback, Parksville Wetlands park planning goals, and City of Parkville capital and maintenance budgets

What We Heard

RESTORATION AND PRESERVATION OF WETLANDS

Groundwater protection (hydrology)

Control invasive plants

Promote native plantings

Wildlife habitat protection

PROTECT WETLANDS

Keep as natural as possible, do not overdevelop

Consider boardwalks to protect waterflow and wildlife movement

Consider fencing and education to prevent access to off-path areas for people and pets

EDUCATION

Interpretive education on the value of the wetlands

- Environment, biodiversity, plants and wildlife
- Water systems and connection to Parksville's water supply

Involve schools, teachers and community organizations

First Nations history, use and language

Additional signage (education, way finding)

CONSULTATION

Work with the community to develop the Park Management Plan for Parksville Wetlands. Concern from lack of consultation in the wetlands in the past.

Use local knowledge, involve First Nations and encourage involvement from local stewardship organizations

MAINTAIN

Complete trail work, fix bridge, and remove construction debris

Control drainage to prevent drying

Ensure trails are accessible in all seasons

Plant at appropriate times and remove invasive species

Additional garbage cans and doggy bags

Fire safety for the park and neighbouring properties including monitoring for encampments and parties

Parksville Wetlands Management Plan