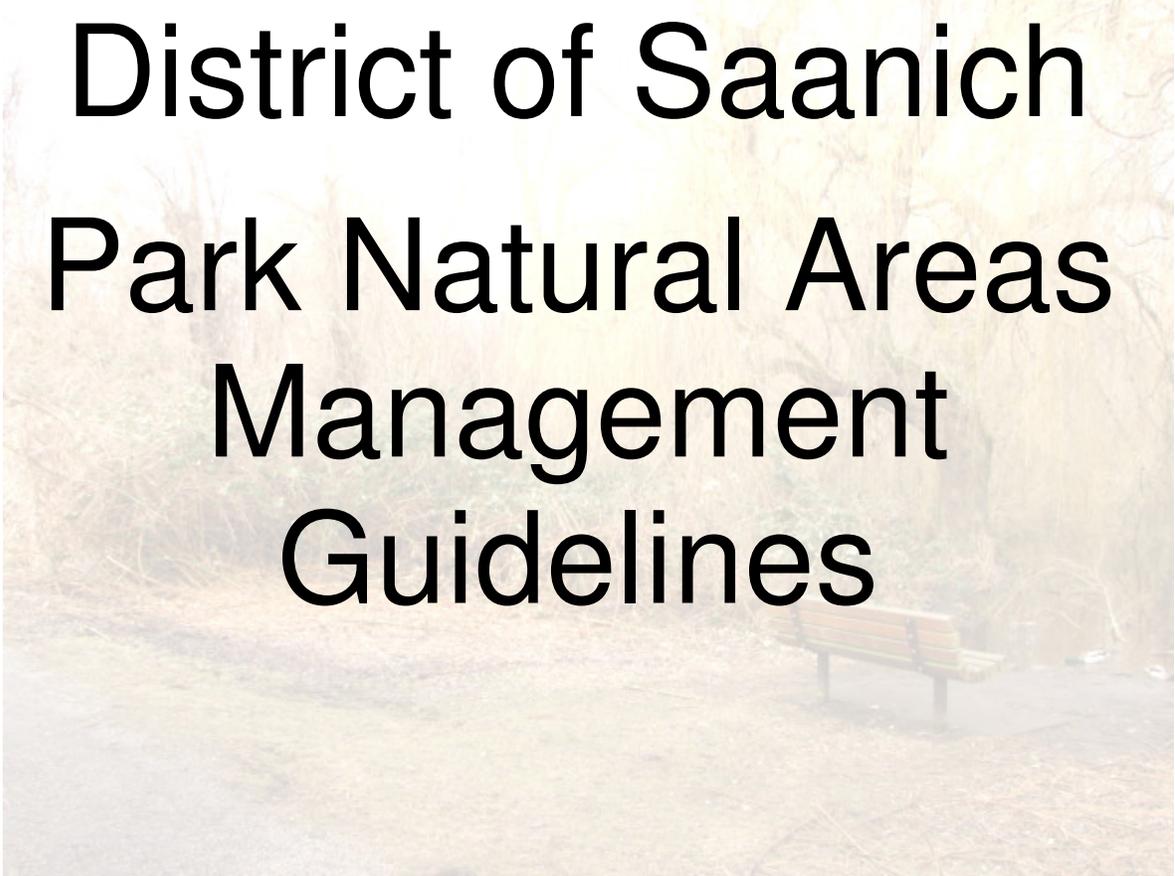




PARKS AND RECREATION  
Parks

A background image of a park path leading through trees and bushes. A wooden bench is visible on the right side of the path. The image is slightly faded to allow the text to be read clearly.

# District of Saanich Park Natural Areas Management Guidelines

June 2011

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# 1.0 Purpose

The District of Saanich Park Natural Areas Management Guidelines document defines the framework within which park natural areas are managed to provide the best possible benefit to residents living within Saanich and the Capital Regional District. They have been developed to help us make appropriate decisions as we undertake new development in park natural areas or to guide the Parks Divisions operations, and maintenance activities within park natural areas. Urbanization, recreational use and development expose park natural areas to activities that can degrade their quality and integrity. Managing park natural areas and urban development means finding a balance between ecology and human activity. This brings challenges as we steer our way through often conflicting needs and demands.

These guidelines are intended to provide administrative direction in our decision-making so that we can support and enhance the benefits that accrue from healthy park natural areas, and avoid or mitigate the threats.

# 2.0 Policy and Context

These guidelines reflect the 2008 Sustainable Saanich Official Community Plan vision and the three community themes of environmental integrity, social well-being, and economic vibrancy, described in the OCP as follows:

## **Environmental integrity**

Saanich is a model steward working diligently to improve and balance the natural and built environment. Saanich restores and protects air, land and water quality, the biodiversity of existing natural areas and ecosystems, the network of natural areas and open spaces and urban forests.

## **Social well-being**

Saanich offers opportunities for balanced, active lifestyles. The community's heritage is valued and promoted. Residents take advantage of a diverse range of recreational, educational, civic, social, arts and cultural services. Citizen awareness, education and collaborative involvement promote a shared responsibility and ownership of community development.

## **Economic vibrancy**

Saanich's clean, appealing environment, skilled workforce, responsive public services and excellent community infrastructure make it an ideal place to live work and conduct business. Saanich ensures sustainability through the provision of efficient, affordable, accessible and reliable public services, programs and utilities that meet community expectations and are achieved through careful management, fiscal responsibility, innovation, progress monitoring, community involvement and meaningful consultation.

Managing parks is a responsibility of the Parks and Recreation Department. The Department's mission statement affirms Saanich's commitment to environmental integrity, social well being and economic vibrancy. "We create opportunities to enrich the community, sustain quality environments, and support healthy lifestyles." Under the Parks and Recreation Department, the Parks Division carries the primary environmental leadership role. Managing park natural areas is a core service provided by the Parks Division.

## **3.0 Park Natural Areas**

### **3.1 Definition**

There are as many ways to define natural areas as there are natural areas. For the purpose of these guidelines, the definition acknowledges the three OCP community themes while focusing specifically on parks.

Park natural areas are defined as park spaces that are relatively undisturbed and contain a high percentage of native species, providing habitats for a diversity of vegetation and wildlife. They are natural or near natural in character, or are in the process of recovery from human disturbance. These natural areas may represent or contain fragments of regionally typical ecosystems; they may contain habitat for endangered plant and animal species. They help maintain a diversity of living organisms through the conservation of wild genetic resources (after Dunster & Dunster 1996).

Compared with cultured or manicured areas, park natural areas generally require less routine and intensive management to ensure their sustainability; however, because they are situated within urban areas and are usually degraded, they require active management.

Zoning alone does not necessarily identify park natural areas, which can occur within parks zoned other than P4N. Likewise, Saanich has many small land parcels that are zoned P4N but are often infested with invasive plants and may be too small or isolated to warrant restoration effort. Although these spaces can offer some wildlife values and may contain some native plants, they are not managed as park natural areas.

Similarly, although spaces such as rain gardens, oldfields, seasonally flooded farm fields and un-mowed road rights-of-way do offer valuable ecological services, they are not park natural areas under these guidelines.

### **3.2 Benefits**

Maintaining human health and well being in Saanich is dependant on healthy, functioning ecosystems and the goods and services they provide. Healthy ecosystems in turn provide benefits that accrue to all living organisms. These benefits are also important to society through the ecological goods and services they provide. Examples of ecological goods include clean air and abundant fresh water.

Examples of ecological services include purification of air and water, maintenance of biodiversity, decomposition of wastes, soil and vegetation generation and renewal, pollination of crops and natural vegetation, groundwater recharge through wetlands, seed dispersal, greenhouse gas mitigation, and aesthetically pleasing landscapes. The processes of ecological goods and services are complex and occur over long periods of time.

Healthy park natural areas contribute the following benefits:

- improved air quality, water quality, storm-water management, and climate change resiliency
- support biodiversity and provide habitat for vegetation and wildlife, including critical habitat for rare and endangered species
- provide connectivity of fragmented habitat and ecosystems
- increase overall regional and global ecosystem health
- provide leisure and learning opportunities
- provide areas for research and education
- improved individual and community wellness
- increased economic value of adjacent properties
- preserved natural and cultural heritage

### **3.3 Threats**

Urbanization and a growing population translate into increased pressure on and exposure of park natural areas to human activities. More people of all ages want access to park natural areas for themselves, their children, and their pets. The carrying capacity of the park natural areas will be challenged as use increases. Urbanization also means increasing conversion of properties adjacent to park natural areas. Protective buffers provided by fallow fields and woodlots are being replaced by industrial, commercial and residential developments.

These activities can disrupt ecological processes directly through mechanical and physical disturbance, and indirectly through introduction of invasive species. These activities have repeatedly emerged as management challenges and pose several threats to park natural areas, including:

- increased loss of biodiversity through spread of invasive plant species
- increased impacts to ecosystems due to encroachment and illegal dumping of yard waste

- increased loss and degradation of habitat and organisms through exposure, trampling, and mechanical disturbance
- decrease of effective habitat size by the increase of edge effect caused by developments in close proximity to park natural areas
- increase in the numbers of nuisance/invasive animals such as cats, rabbits, bullfrogs and dogs
- increased impacts of climate change on vegetation composition
- increased wildlife stress and mortality
- risk to people and property from hazard trees and park interface fires

## 4.0 Management themes

Managing park natural areas for benefits and threats needs to be done in ways that strike a balance between environmental integrity, social well-being, and economic vibrancy. These guidelines have been designed to help strike that balance.

For ease of reference, the guidelines have been grouped into four themes that reflect commonly recurring management challenges. In reality, these themes do not stand alone; they are interdependent and Parks activities must be designed accordingly. The management themes are:

- Ecosystem
- Use & access
- Risk management
- Community collaboration

### 4.1 Ecosystem

Ecosystem Based Management provides a conceptual and strategic basis for the protection of park natural area ecosystems. It involves taking a more holistic view of the natural environment and ensures that land use decisions consider the complex interactions and dynamic nature of park ecosystems and their finite capacity to withstand and recover from stress induced by human activities. The shared nature of ecosystems also implies that park management will have effects on surrounding lands and their management.

The Ecosystem Based Management approach requires adaptive management to deal with the complex, dynamic and frequently unpredictable nature of ecosystems within the context of incomplete knowledge and understanding of their functioning.

Ecosystem management embraces the concept of looking for opportunities to restore, connect and enhance areas throughout the system.

Citizens have become increasingly aware of the damage development, increased use and access and the increase spread of invasive species have been to the integrity of the park natural areas.

While Saanich's diversity of landscapes provides habitat for many wildlife species, fragmentation through development has led to reduced access to food, water, and shelter that animals need to survive. Park natural areas can provide many important elements that support wildlife and which should be protected.

It is important that we gain sufficient knowledge of the vegetation and wildlife makeup with our park natural areas. This will include inventory, mapping and monitoring of the ecosystems. As we move forward, we will integrate more active management in dealing with degraded sites and in protecting native plant communities and habitat. Ecosystem restoration, enhancement, biodiversity, and adapting to climate change will be included in the decision-making process.

Our ecosystem management goal is to preserve, restore, and enhance ecological integrity while providing for appropriate use and access.

In undertaking management activities, our guidelines are to:

- protect the areas of highest ecological integrity
- minimize disruption of conditions and features required by a given plant community or habitat necessary for the survival or recovery of species at risk
- mitigate for any damages occurring during park natural area development
- plan for biodiversity under climate change
- manage invasive species that displace native species, impair ecosystem processes, reduce biodiversity and/or threaten human health
- support and encourage appropriate stewardship efforts such as Saanich Pulling Together Volunteer Program and other community activities regarding invasive species removal and habitat restoration
- support and encourage partnerships which provide appropriate research, monitoring, and inventory efforts
- incorporate appropriate recreational opportunities in ways that do not compromise ecological integrity

## 4.2 Use & Access

Parks are acquired and managed to protect regionally significant natural environments and to provide opportunities for outdoor recreation. The provision of recreational opportunities must be conducted in such a manner that the environment in which it occurs is not unduly impacted in the process. While use of the parks will undoubtedly increase as the region grows, the rare and valuable natural resources within the park natural areas must be protected.

Managing use and access is one of the greatest challenges faced by managers of suburban park natural areas, particularly if the goal is to balance environmental integrity with the recreational and safety demands of parks users. Recreational activities meet important social values and provide sensory experiences, solitude and exercise, but if not properly managed they can also be destructive to park natural areas. The carrying capacity of the park natural areas will need to be defined based on the sensitivity of the ecosystem.

Use and access is facilitated mainly through trail networks, so the guidelines address trail development and maintenance. Park natural areas are also used inappropriately as places to dump garbage and yard waste, or as extensions of residential gardens by park neighbours, so the guidelines address the need for education and stewardship about the benefits of healthy park natural areas.

Our use and access management goals are to meet the legitimate, appropriate and authorized recreational demands of park users while protecting areas of high or medium ecological integrity, and to educate park users regarding respect for park natural areas.

In undertaking management activities, our guidelines are to:

- carry out ecological inventories and impact assessments to determine specific classifications and management zones such as high, medium and low ecological integrity before developing within park natural areas.
- protect areas of highest ecological integrity. This may mean that use and access may need to be restricted in highly sensitive park natural areas or where species at risk occur.
- promote recreational activities such as walking and hiking and that are compatible with a given site and that do not negatively impact ecological integrity and native ecosystems
- ensure that providing access does not result in fragmentation or degradation of ecologically intact park natural areas
- mitigate for any damages occurring during park natural area development
- continue to protect and carry out good stewardship where critical habitat for species at risk are known or suspected to occur

- continue to manage trail use through an effective program of trail markers and signs
- continue to educate park users through interpretive signs, social media, and naturalist programs
- continue to educate the public regarding the importance of park natural areas, ecosystems and their important features

### 4.3 Risk management

In Saanich, most of our park natural areas are part of the urban forest complex. As these areas are exposed to more human activity (e.g., recreation, development, encroachment, volunteer stewardship), people and property are in turn exposed to risks. In Saanich, these risks mainly involve tree hazards and interface fires.

#### Tree hazards

The Urban Forest is a vital component of our community. They occur as street trees, park trees, private trees and in natural areas or remnant forest stands. Our goal, as described in the Urban Forestry Strategy, is to protect and enhance the urban forest, however, our obligation is also to provide a safe setting for staff and the public.

Because they decay and fall, trees in park natural areas can pose risks to people and property. Tree decay is a natural and important part of forest ecology. However, due to climate change, changes in hydrology due to development, the introduction of alien pathogens, and disruption of critical associations between trees and soil microbes, more trees are failing.

In Saanich's natural areas, exposure to this risk is highest along on trails, at the interface with private property, urban or rural roadways, parking lots and buildings. People can be injured and property damaged by failing trees or branches. Volunteer stewards working in forests have a higher exposure to this risk than people who are just passing through.

Saanich has a duty to maintain a standard of care in managing tree hazards. In order to meet this standard we have developed Saanich's Tree Risk Assessment and Abatement Procedures. The goal of this procedure is to manage tree failure risk, enhance forest ecology, facilitate resolution when human and environmental values conflict, and provide a good standard of tree care.

In managing tree hazards in park natural areas, our goal is to provide for safe use and access, while limiting risk of injury to park users and staff and increasing long term benefits to park natural area ecosystems.

To meet these goals, our guidelines are that:

- maintaining trees for ecological value should be balanced with the need to minimize the risk to people and property

- trees are part of natural ecosystems and provide leisure and learning opportunities for residents and visitors
- tree hazard management should be conducted using ecologically sound techniques
- wildlife trees provide habitat for animals and contribute to overall ecosystem health
- replace trees when one dies or requires removal

### **Interface fires**

The primary source of fire fuel in park natural areas is woody debris (WD). The accumulation of WD is an ecological process that is integral to healthy forest systems. Woody debris provides habitat and nutrients for plants, insects, and soil organisms. WD is made up of duff, fallen trees and branches, uprooted stumps, and roots in all stages of decomposition.

In our region, fires were once common and frequent, helping to control WD accumulation while delivering nutrients to the soil and stimulating tree regeneration. Fire has been excluded from our region since the 1850s. As a result, WD has accumulated, posing undesirable changes in the forest fuel complex, particularly in close proximity to private property.

In Saanich, there is concern that fires might occur in park natural areas, not just because of WD accumulation but also because some park users engage in risky activities such as smoking or starting camp fires during drought periods.

Interface fires pose risks to private property and public safety; they can also threaten ecosystems. While fire was once important in maintaining ecosystems in our region, these ecosystems are now so fragmented and degraded by invasive species that a wildfire could have catastrophic results.

Our interface fire management goal is to protect people and reduce wildfire risk while conserving and supporting healthy levels of woody debris.

In undertaking management activities, our guidelines are to:

- Work cooperatively with Saanich Fire and the Coastal Fire Center and utilize Natural Area Fire Prevention - Best Management Practices to maintain a high level of prevention and preparedness for wildfire suppression
- review the park natural areas composition of woody debris in order to meet Saanich's Interface Fire Management Assessment objectives
- ensure all woody debris is lying flat in a safe manner prior to volunteer activities in park natural areas

- educate the public about the importance of woody debris to healthy ecosystems

#### 4.4 Community collaboration

Community members have become increasingly aware of the damage development, increased use and access and the increased spread of invasive plant species have been to the integrity of the park natural areas. There are increased expectations that the park natural areas will be managed to preserve their ecological integrity and to provide for authorized and appropriate access and recreation.

Saanich is an active member of the Capital Region Invasive Species Partnership and Coastal Invasive Plant Committee. These groups collaborate on invasive species management and ecological restoration within the region to ensure information is exchanged and communicated throughout the region.

Saanich has forged strong collaborative relationships with community associations and volunteer stewardship groups. Through the “Saanich Pulling Together Volunteer Program” we are committed to continuing to form partnerships with the community for the removal of invasive species and habitat restoration within park natural areas. Volunteerism is an important element of community life and social well-being. Without volunteer support, many worthwhile projects might never be undertaken.

<p>Our community collaboration goal is to continue to educate and provide stewardship opportunities that strengthen relationships and develop so that we can grow community stewardship and achieve our other park natural areas goals.</p>
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In undertaking management activities, our guidelines are to:

- Continue to collaborate with other municipal departments, senior government agencies, community associations and volunteer stewardship groups, environmental NGOs, and the general public
- continue to inform the community about our Pulling Together Volunteer Program
- continue to build support for park natural area volunteer activities
- continue to educate park users through interpretive signs, social media, and naturalist programs
- continue to work with schools, colleges and universities to provide more opportunities for education and research
- continue to work with regional colleges, universities, and NGO's to gain access to a broad range of expertise

## **5.0 Summary**

These guidelines provide direction for decision-making regarding development, operations, and maintenance of our park natural areas. They are intended to guide us as we deliver the initiatives described in the Park Natural Areas Action Plan and other park activities. The guidelines directly reflect Saanich's three community themes of environmental integrity, social well-being, and economic vibrancy and will be utilized as we develop individual Park Management Plans for our Natural Area Parks. These guidelines are included in the document review for the Parks and Recreation Master Plan currently underway. The recently adopted Urban Forest Strategy implementation will also include of review of these guidelines.

## **6.0 References and resources**

District of Saanich Planning Department in partnership with Urban Aspects Ltd. 2008. Saanich Official Community Plan 2008. Appendix A to Bylaw 8940. 94 pp.

District of Saanich Strategic Plan 2010 – 2014. 40 pp.

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District of Saanich Pulling Together Volunteer Program manual. [In prep]. Saanich Parks and Saanich Environmental Services departments.