

# WOODLEY RANGE ECOLOGICAL RESERVE

## PURPOSE STATEMENT

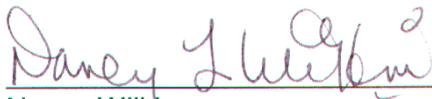
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Approved by:



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Date: August 8/03



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Date: Jan. 21/04

## **WOODLEY RANGE ECOLOGICAL RESERVE Purpose Statement**

Ecological reserves are areas selected to preserve representative and special natural ecosystems, plant and animal species, features and phenomena. The key goal of ecological reserves is to contribute to the maintenance of biological diversity and the protection of genetic materials. All consumptive resource uses and the use of motorized vehicles are prohibited. Access to the ecological reserves for research and education activities is by permit only.

### **Primary Role**

The **primary** role of Woodley Range Ecological Reserve is to protect unique and species-rich meadow and woodland ecosystems. A well-known landmark in the Nanaimo-Ladysmith area, Woodley Range has an exceptionally high number of vascular plant species, as well as a number of rare elements and sensitive ecosystems. The ecological reserve protects 15 sensitive ecosystems (as catalogued by the Sensitive Ecosystem Inventory Program) that support approximately 200 or more species of vascular plants, 27 of which may be considered rare. Rich with wildflowers, the meadows contain concentrated stands of common camas.

Due to the geological phenomenon of the sandstone cuesta-like formation and shallow ridge soils, there are several rare plant communities and species, including the endangered whitetop aster and bog birdsfoot trefoil, the threatened slimleaf onion, dune bentgrass, greensheathed sedge and Nuttall's quillwort. The endangered plant community of red alder / slough sedge is in this reserve.

Turkey vulture nest sites, vulnerable big-eared bats, and possibly endangered Keen's long-eared myotis habitat are protected in Woodley Range Ecological Reserve. Cougar, bear and elk also use the area. It is probable that the uncommon vegetation supports unusual insect and invertebrate communities that have not been fully documented yet.

### **Secondary Role**

The **secondary** role is to represent the natural environment typical of Southern Vancouver Island. The ecological reserve is located in the Nanaimo Lowlands Ecoregion (NAL) and protects the Coastal Douglas-fir (CDFmm) biogeoclimatic subzone. Both of these are greatly under represented in the protected areas system at 1.4% and 2.5% respectively and are under extreme pressures from agricultural and urban development. Thus, any protected area that contributes to the protection of these ecosystems may be considered important. In total, there are 22 small protected areas contributing to the protection of NAL and 73 small protected areas that contribute to the protection of CDFmm.

## Management Issues

Known Management Issue	Response
Lack of knowledge of plant, insect and invertebrate communities	<ul style="list-style-type: none"> <li>➤ Encourage scientific study of the ecological reserve through naturalist and academic institutions, controlled by permits.</li> </ul>
Impacts of recreation use (hiking, horse-back riding, motorcycles) on vegetation and increasing the spread of invasive and introduced species.	<ul style="list-style-type: none"> <li>➤ Work with local residents to redirect recreation use to a less sensitive site and to develop an understanding of the ecological reserve and its values.</li> <li>➤ Rehabilitate disturbed sites</li> <li>➤ Identify and close sensitive areas.</li> <li>➤ Work with ecological reserve warden to remove invasive species.</li> <li>➤ Monitor levels of visitation and impacts on vegetation.</li> </ul>
Impacts of adjacent land use (subdivision) on ecological reserve and its values	<ul style="list-style-type: none"> <li>➤ Work with developer, regional district and the Ministry of Transportation to ensure boundaries are identified with signs and fenced.</li> </ul>
Collection and sale of seeds from ecological reserve	<ul style="list-style-type: none"> <li>➤ Implement a monitoring program to stop illegal plant collection in the ecological reserve.</li> </ul>
Encroachment of meadows by trees	<ul style="list-style-type: none"> <li>➤ Develop a plan considering a prescribed burn or a tree thinning program to address encroachment. Consider the implication and potential impact to rare and endangered plants during the development of the plan</li> </ul>
First Nations interest in area and lack of knowledge of cultural values	<ul style="list-style-type: none"> <li>➤ Continue to consult with First Nations on protection of cultural values associated with this area.</li> <li>➤ Undertake cultural inventory including traditional use study in conjunction with First Nations.</li> </ul>

## Conservation

Representation - ecosection	☒ Woodley Range Ecological Reserve contributes 3.2% to the representation of the Nanaimo Lowland Ecosection which has only 1.41% protected provincially. Woodley Range's contribution ranks 8 <sup>th</sup> out of 35 protected areas representing this ecosection.
- biogeoclimatic subzone/variant	☒ Woodley Range Ecological Reserve contributes 2.39% to the representation of the CDFmm variant which has less than 2.5% protected provincially and is the smallest forest subzone in British Columbia with intensive urban and agricultural pressures. The contribution of Woodley Range Ecological Reserve to CDFmm is important given the fragmented nature of this ecosystem and the limited opportunities available for its protection.
Special Features	☒ Open glades and meadows on very shallow soils, seeps and wetland areas. High biodiversity and rarity values and floral diversity equal to Ladysmith Bog and one of the highest of all ecological reserves in the provincial system. Turkey vulture nest sites, vulnerable big-eared bats, and endangered Keen's long-eared myotis habitat (possible) are protected.
Rare/Endangered Values	☒ Rated by the Conservation Data Centre as High for rarity, scarcity and uniqueness. <i>Red-listed species</i> : whitetop aster (listed as Threatened by COSEWIC), bog birds-foot trefoil, red alder/slough sedge plant community. <i>Blue-listed species</i> : dune bentgrass, greensheathed sedge, slimleaf onion, Nuttall's quillwort, western St. John's wort, and Townsend's big-eared bat. <i>Possible occurrence of Red-listed Keen's long-eared myotis</i> .
Scientific/Research Opportunities	☒ Having this number of rare plants, unique communities and sensitive ecosystems in one small area offers unique opportunities for research and education. Ethnobotany, biodiversity, introduced species impacts and landscape dynamics (fire history). The underlying causes of the very high vascular plant diversity could be studied in conjunction with Ladysmith Bog ER located approximately 6 km away.

## Recreation

- Representation
- backcountry Not Applicable
  - destination Not Applicable
  - travel corridor Not Applicable
  - local recreation Traditional walking, hiking, and horse-back riding along informal trails and old logging roads which pass through the most sensitive sites of the ecological reserve. Ecological reserves are not meant for outdoor recreation and management will work with local residents to monitor levels of use and impacts and redirect use away from sensitive areas.
- Special Opportunities  None known at this time
- Education/Interpretation Opportunities  Suitable for offsite education on biodiversity, botany, ethnobotany, plant ecology and conservation management. However, groups of visitors cannot be accommodated onsite due to the sensitivity of the thin soils that prevail in the meadow openings.

## Cultural Heritage

- Representation  Woodley Range is a traditional use area for plant gathering (for herbal medicines and food) and hunting of the Nanaimo and Chemainus First Nations
- Special Feature  None known at this time

## Other Management Considerations

- Other Designations  Not Applicable
- Relationship to other PAs  Part of a system of protected areas on Vancouver Island. Conservation values are complemented by nearby Ladysmith Bog Ecological Reserve. Nearby coastal recreation opportunities are available in Roberts Memorial Provincial Park, Yellow Point Community Park, Blue Heron Community Park, Transfer Beach Park, and Raven Community Park.
- Co-operative Management Arrangements  Not Applicable
- Partnerships  Ecological Reserve warden

Vulnerability



Has plant communities that are very sensitive to recreational human and animal disturbance. Red-listed species occur in close proximity to trails and ER border, and are susceptible to being lost to Scotch Broom invasion. Vegetation loss and disturbance from surrounding subdivisions' increased use and use from unauthorized uses such as four-wheel drive vehicles, motorcycles and mountain bikes.

Relationship to other Strategies



Created as a result of the Goal 2 recommendations of the Vancouver Island Land Use Plan.

**Area:** 166 hectares

**Date of establishment:** April 30, 1996