

# MOUNT TZUHALEM ECOLOGICAL RESERVE

## PURPOSE STATEMENT

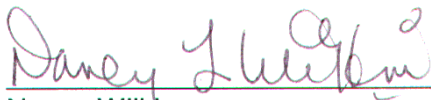
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Approved by:



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Dick Heath  
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Date: August 8/03



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Nancy Wilkin  
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Environmental Stewardship Division

Date: Jan. 21/04

## MOUNT TZUHALEM 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. Research and educational activities may be carried out but only under permit.

### Primary Role

The **primary** role of Mount Tzuhalem Ecological Reserve is to preserve one of the best examples of Garry oak woodland and spring wildflower meadows in Canada. This 18-hectare ecological reserve is located on the south facing slopes of Mount Tzuhalem, and it encompasses groves of Garry oak separated by wildflower meadows and mossy outcrops, together with scattered and gnarled Douglas-fir and arbutus trees, giving the site a parkland appearance. The ecological reserve protects habitat for seven plant communities and many individual plants, invertebrates and birds identified as endangered, threatened or vulnerable. At least 150 species of vascular plants have been recorded at this site and over 30 species of birds have been observed in the area, several of which use the ecological reserve to forage, roost and raise their young. These include California quail, northern flicker, pileated woodpecker, western bluebird, hermit thrush, and warblers.

The Garry oak ecosystem is an extremely under-represented and endangered ecosystem in the Coastal Douglas-fir (CDF) biogeoclimatic zone. In Canada this ecosystem occurs only on the southeastern coast of Vancouver Island south of Comox, the Gulf Islands, and in a few scattered stands on the Lower Mainland. This area is under intense pressure from urban and agricultural development, resulting in less than 5% of the original habitat remaining in a near-natural condition. The preservation and management of this site is important for the Garry Oak Ecosystem Recovery Strategy.

### Management Issues

Known Management Issue	Response
Health of Garry oaks trees	<ul style="list-style-type: none"> <li>➤ Work with Ministry of Forests, Pacific Forestry Center, Garry Oak Meadow Preservation Society and others to determine the health of the Garry Oaks and monitor for insects harmful to Garry oaks.</li> </ul>
Impacts of invasive plants on ecological reserve values	<ul style="list-style-type: none"> <li>➤ Continue invasive species removal with help of volunteers such as Cowichan Valley Naturalists. Continue to document dates, areas, amounts removed.</li> <li>➤ Continue working with adjacent land owners to encourage naturesscaping.</li> <li>➤ Initiate a comprehensive inventory of the ecological reserve's plants and animals including the identification and mapping of plant.</li> </ul>

<p>Impacts of increased visitation and recreation uses (hiking, camping, mountain biking) on ecological values</p>	<ul style="list-style-type: none"> <li>➤ Work with volunteer warden to collect data about visitor numbers and their effects on vegetation using a trail counter and photo monitoring.</li> <li>➤ Work with Cowichan Valley Regional District and mountain biking community to determine alternative sites where mountain biking can be accommodated.</li> <li>➤ Monitor the changing conditions as result of 2001 access modifications.</li> <li>➤ Work with local community to reduce the profile of area as destination and develop alternative destinations. In the interim, ensure marketing material properly reflects appropriate uses of the ecological reserve and its special features.</li> </ul>
<p>Impact of adjacent land use - extensive residential development</p>	<ul style="list-style-type: none"> <li>➤ Continue educating and working with adjacent land owners to develop a sense of stewardship and respect for the ecological reserve.</li> </ul>
<p>Risk of fire and potential impacts on ecological reserve and adjacent community.</p>	<ul style="list-style-type: none"> <li>➤ Provide public education and signage regarding risks of accidental fire and work with the volunteer warden to undertake patrols.</li> <li>➤ Ensure the ecological reserve is “fire-ready” by securing access to fire control equipment and developing an ecological friendly fire suppression policy, and maintaining a good relationship with local government.</li> <li>➤ Investigate use of prescribed fire to maintain the Garry oak ecosystem.</li> </ul>
<p>Lack of knowledge of cultural values and traditional use</p>	<ul style="list-style-type: none"> <li>➤ Consult with First Nations to determine cultural values and traditional use associated with this ecological reserve.</li> </ul>

## Conservation

- Representation  
- ecosection
- Mount Tzuhalem Ecological Reserve contributes minimally (0.21%) to the representation of the Nanaimo Lowland Ecosection which has only 1.41% protected provincially.
- biogeoclimatic subzone/variant
- Mount Tzuhalem Ecological Reserve contributes minimally (0.16%) to the representation of the CDFmm variant which has only 2.43% protected provincially. However, any protected area that contributes to the protection of this ecosystem may be considered important given the fragmented nature of this ecosystem and the limited opportunities available for its protection.
- This ER protects a site of endangered Garry oak ecosystem, which occupy a small portion of the CDF zone, which itself represents only 0.3 percent of the land in the province. Garry oak ecosystems do not occur elsewhere in Canada.
- Special Features
- One of the finest examples of Garry oak woodlands and associated spring wildflowers in BC, high biodiversity and rarity values
- Rare/Endangered Values
- Red-listed*, deltoid balsamroot (listed as endangered by COSEWIC -- presently verified at five sites all on Vancouver Island and this site is the only one where the population has not declined in the last 15 years), purple sanicle (Threatened by COSEWIC), yellow montane violet (Threatened by COSEWIC), white-top aster (Threatened by COSEWIC), Scouler's catchfly (Endangered by COSEWIC – one specimen only in ER), twiggy godetia (sole record for BC and Canada, only discovered in 1997), white meconella (not observed in recent years – possibly extirpated).  
*Blue-listed*: Nuttall's quillwort (vernal pool species – only one restricted habitat in the ER), California-tea, farewell-to-spring.  
7 plant communities identified and classified as endangered/threatened by the CDC. Numerous threatened bird species frequent this site.
- Scientific/Research Opportunities
- Post-grad research opportunities

## Recreation

- Representation  
backcountry
- Not Applicable

destination	<input type="checkbox"/>	High use ER due to outstanding views, wildflower viewing; however this level of use is not appropriate for the ecological reserve
travel corridor	<input type="checkbox"/>	Not Applicable
local recreation	<input type="checkbox"/>	Not Applicable
Special Opportunities	<input type="checkbox"/>	Not Applicable
Education/Interpretation Opportunities	<input checked="" type="checkbox"/>	Education about importance of Garry oak and associated ecosystems and of the special natural values at this site

### Cultural Heritage

Representation	<input checked="" type="checkbox"/>	Vancouver Island Coast Salish First Nations have historically collected natural products for food and medicine from the Tzuhalem area. Camas gathering site – meadows were traditionally burned to increase yields.
Special Feature	<input type="checkbox"/>	None known at this time

### Other Management Considerations

Other Designations	<input type="checkbox"/>	Not Applicable
Relationship to other PAs	<input checked="" type="checkbox"/>	Part of a system of protected areas on Vancouver Island.
Co-operative Management Arrangements	<input type="checkbox"/>	Not Applicable
Partnerships	<input checked="" type="checkbox"/>	The Cowichan Valley Naturalists were instrumental in getting this ecological reserve established; the North Cowichan Municipality donated the land now included in the reserve. Cowichan Valley Naturalists are current ER wardens.
Vulnerability	<input checked="" type="checkbox"/>	Invasive species such as scotch broom and orchard grass, ongoing threats to Garry oaks from pests – jumping gall wasp, oak leaf phylloxeran and root fungus, grazing by eastern cottontail rabbits. Dry area subject to fire, increasing non-conforming use patterns, public visitation, adjacent urban development
Relationship to other Strategies	<input checked="" type="checkbox"/>	Garry Oak Ecosystem Recovery Strategy

**Area:** 18 hectares

**Date of establishment:** May 16, 1984