



Islands Trust

# **DENMAN ISLAND VACANT CROWN LAND PROFILES**

**July 15, 2004  
Trust Area Services  
Islands Trust**

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**DRAFT – July 15, 2004**  
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## **APPENDICES**

**Denman Island Crown Land Context Map: Other Significant Crown Land Parcels**

**MAP 1 Location** Parcels A to F

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# **INTRODUCTION**

## **Background**

The Public Lands Strategy was initiated in 1999 to provide comprehensive information about vacant Crown upland in the Trust Area for the use of agencies and the public during land use decisions. The process was co-ordinated through the Vancouver Island Interagency Management Committee. Provincial agencies participated in the study of the parcels and in community meetings on each island.

Only unencumbered upland Crown land parcels were included in the process. The Crown Land Registry Service of the Ministry of Environment, Lands, and Parks provided the initial information on the status of the parcels. The Interagency Management Committee clarified and confirmed the work, using individual agency databases, selected title searches, and local on-island knowledge. From this confirmed status, the Committee excluded from the analysis any Crown land parcels that contained the following interests:

- Land Act leases and licenses;
- Ministry of Transportation and Highways gravel reserves;
- Properties owned by Crown Corporations (BCBC., BC Ferries);
- Provincial, Regional, Municipal Parks;
- Parcels included in existing treaty offers;
- Active mineral claims, Crown granted mineral claims;
- Woodlot licenses; and
- Pacific Marine Heritage Legacy acquisitions.

The process produced an inventory and maps of vacant Crown land in the Trust Area, a collation of existing data for each parcel and a technical analysis of future land use potential. Following community meetings, the Islands Trust made a commitment to return to island communities with more detailed profiles that incorporated agency information, additional information from published reports and local knowledge presented during the consultation process. This document includes the results of that consultation process.

## **Crown Land Process**

Trust Council initiated a process regarding island Crown lands in 2001. The process included the following:

- Development of the Islands Trust's Principles for Decision Making about Crown Land;
- Development of a framework for a Protocol Agreement between the Islands Trust and the Province; and
- Development of revised Vacant Crown Land Profiles for each major island.

It was decided that Trust Council would receive community input regarding the proposed Principles and the Profiles from each island community. The initial focus was to prepare Profiles for Crown lands on Hornby, Denman, Lasqueti and Galiano Islands, with subsequent island profiles being prepared as resources were available.

## **Purpose of Crown Land Profiles**

The Crown land profiles represent the most complete collation of current knowledge regarding vacant Crown land parcels in the Islands Trust Area. Islands Trust will use the profiles as a starting point for the compilation of more detailed information as it becomes available through further studies.

The information in the profiles, including the maps or referenced material, may not be complete. It identifies features that may require further investigation. In many cases, more detailed inventories and mapping will be required to provide an accurate understanding of the ecological values of a parcel. Islands Trust will update this information when more accurate mapping based on recent air photos is complete.

## **Denman Island Crown Land Context**

The Crown Land of Denman Island now supports nearly all of the larger stands of older conifers on the island. These stands are critical to maintenance of ecological integrity — the species and communities that make up the native Denman ecosystems. As undeveloped green space accessible to the public, they are also important to the human community for recreation and restoration.

Since the retreat of the most recent glaciers, older coniferous forests have dominated the Denman landscape and most of the native species of plants and animals have evolved in that ecological context. Successive waves of human activity (Aboriginal burning, agricultural clearing, industrial logging, and residential development) have reduced the once extensive forest stands to smaller, isolated fragments. Core areas of mature forest are now one of the rarest habitat types on the island.<sup>15</sup>

There are no longer any extensive stands of "Old Growth Forest" on Denman. Most of the stands on Crown Land are classed as either "Older Forest" (>100 yr) or even "Older Second Growth" (60 – 100 yr). Nonetheless, these stands support much of what remains of the mature Coastal Douglas Fir community on the island and their preservation intact is critical to the maintenance of these communities, which are threatened throughout their range.

The Denman Island Crown Land Context Map identifies other Crown land parcels on Denman Island that are significant due to their important contribution to the preservation of Denman Island habitats and ecosystems. The Crown Land Context Map identifies the following Crown land parcels that are not included in the profiles inventory based on the existing interest in the land: the Forestry Look Out, Chickadee Place, the remainder of Morrison Marsh, the Gravel Reserve, Boyle Point Park, Fillongley Park, the Lindsay Dickson Nature Reserve, and the Inner Island Nature Reserve. The Islands Trust Fund holds the Inner Island Nature Reserve and Lindsay Dickson Nature Reserve, both of which are managed by the Denman Conservancy Association. (Denman Island Crown Land Context Map: Other Significant Crown Land Parcels)

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<sup>15</sup> Assessing the Effectiveness of Local Government in Environmental Conservation: The Case of the Islands Trust. MSc. Thesis, Department of Geography, University of Victoria, B.C., by T. C. Guthrie, 2001.



# **PARCEL A - PICKLES MARSH/BEAVER POND CATCHMENT**

## **Note:**

- *The information provided is based on the Public Lands Strategy Review Process Report, 2000, unless specifically referenced.*

## **Location and Setting**

- Parcel A consists of Parcel A-1 and Parcel A-2, located in the northern part of Denman Island, in the Pickles Marsh complex. It is adjacent to a property known as the Inner Island Nature Reserve. (Map No.1)
- The major part of Beaver Pond falls within Parcel A.<sup>9</sup>

## **Legal Descriptions and Parcel Sizes**

- The legal description of Parcel A-1 is Lot 1, Section 21, Plan 35639, Denman Island, Nanaimo District. The legal description of Parcel A-2 is the SW ¼ of Section 22 Denman Island, Nanaimo District.
- The size of Parcel A-1 is 22.14 ha and the size of Parcel A-2 is 65.45 ha. The total parcel size is 87.59 ha.

## **Geographic Relationship to Other Public Land**

- Parcel A is adjacent to the Islands Trust Fund's Inner Island Nature Reserve, which is in two parcels in the eastern SE ¼ of section 21.<sup>12</sup>

## **Biophysical Description**

### **Physiography**

- The dominant slope of Parcel A is less than 20% (Map No. 2).
- The dominant elevation of Parcel A-1 is 50 - 62 m (150 - 187 ft). Parcel A-2 elevation ranges from 33 to 75 m (113 to 224 ft) with the most dominant elevation of 50 - 62 m (150 -187 ft). (Map No. 2)

### **Geology**

- Parcel A-1 is underlain by De Courcy Formations and Parcel A-2 is underlain by Northumberland De Courcy Formations. (Map No. 3)
- Geologically important sites have not been recorded on Parcel A.

### **Surface Drainage**

- Parcel A-1 is a wetland donated to the Crown in 1977.<sup>6</sup>
- Parcel A includes a network of small streams and marshes and has been identified as part of the largest marsh complex in the Strait of Georgia.<sup>12</sup> (Map No. 4)
- The marsh on Parcel A is classified as wetland in the Sensitive Ecosystem Inventory for East Vancouver Island and the Gulf Islands.<sup>9</sup>
- The portion of Parcel A that is the open water area of Beaver Pond has increased dramatically recently.<sup>22</sup>

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<sup>6</sup> Environmental Information Management System (EIMS) Site Information, Islands Trust Fund Board, July 2000.

<sup>9</sup> Public Lands Strategy – Community Submissions, Trustee Comments, 2001.

<sup>12</sup> Public Lands Strategy – Technical Report Provincial/Islands Trust Working Group Public Lands Strategy, 2000

<sup>22</sup> Community Comments, 2003

## Groundwater

- Parcel A is a potential recharge area according to provincial data.
- Parcel A represents important watersheds and groundwater recharge areas.<sup>6</sup>

## Soils

- The dominant soils on Parcel A-1 are classified by provincial data as Peat, Rough Stony Land/ Brown Podzolic and Brown Podzolic/ Dark Grey Gleisolic soils. (Map No. 5)
- The dominant soils on Parcel A-2 are classified by provincial data as Rendzina and Rough Stony Land soils. (Map No. 5)
- Parcel A-1 has poor to non-existent drainage due to soil saturation and bedrock with less than 30 cm soil cover, and Parcel A-2 is imperfectly drained.

## Native Vegetation

- The Sensitive Ecosystem Inventory of East Vancouver Island and the Gulf Islands has identified wetland and second growth forest within this parcel (Map No. 6).<sup>16</sup>
- No threshold plant communities were recorded for Parcel A at the time of the Public Lands Strategy Report, 2000. However, a number of "site-specific series" (plant species communities) on Parcel A have been classified by the BC Conservation Data Centre as "red listed" indicating the presence of provincially endangered species.
- More recently, there has been correspondence from the Conservation Data Centre documenting the presence of red and blue listed species.<sup>10</sup>
- The Conservation Data Centre has recognized the high conservation value of the entire wetland complex on Denman Island, of which Chickadee Lake is a major part. A Site Record entitled "Denman Island Marsh Complex" gives it a very high biodiversity significance rating. The rating justification comments state that this is the largest marsh complex in the Strait of Georgia. Wetlands are uncommon in the Gulf Islands, and there is no other system of this size, type or excellent condition. Wetlands comprise 0.8% of the Islands sub-unit of the SEI study area, the lowest percentage of all the SEI sub-units.<sup>3</sup>
- Parcel A-1 is part of a large complex wetland with deep pools and large central shallow open water area. The surrounding band often contains a small area of Sphagnum bog with a rich assemblage of bog species.<sup>17</sup>
- Parcel A is high in plant diversity.
- Parcel A includes an extensive tract of older forest that provides bank stabilization, large woody debris, and shade and water filtration, which are important for the health of the wetland.<sup>12</sup>

## Terrestrial Wildlife and Habitat

- The wetlands on Parcel A and smaller creeks that feed and drain these wetlands sustain important wildlife values.
- The parcel is recognized in the CDC 1996 data as having high conservation value for the entire wetland complex with very high biological diversity significance ratings.<sup>12</sup>

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<sup>3</sup> British Columbia Conservation Data Centre correspondence to the Denman Conservancy Association, September 11, 2000.

<sup>6</sup> Environmental Information Management System (EIMS) Site information, Islands Trust Fund Board, July 2000.

<sup>9</sup> Public Lands Strategy – Community Submissions, Trustee Comments, 2001.

<sup>10</sup> Public Lands Strategy – Denman Island Session Notes, November 16, 2000.

<sup>12</sup> Public Lands Strategy – Technical Report Provincial/Islands Trust Working Group Public Lands Strategy, 2000.

<sup>16</sup> Sensitive Ecosystems Inventory Mapping, Islands Trust, data from the Conservation Data Centre, 1998.

<sup>17</sup> The Denman Island Official Community Plan (OCP), Bylaw No. 60, 2002 Schedule C Land Use and Appendix G: Wetlands Report by Harvey Janzsen, March 2001.

- The parcel is on the Master Site List and in the Catalogue of Site Records of the Georgia Basin Ecosystem Conservation Partnership.<sup>12</sup>
- The parcel comprises many terrestrial and wildlife habitats including a feeding and nesting area for trumpeter swans, great horned owls, marsh wren, American bittern, sharp shinned hawk, bald eagles, great blue heron, belted kingfisher, and Cooper's hawk. In addition, the parcel is home for pacific tree frogs, red-legged frogs, beavers and river otter.<sup>6</sup>

### **Aquatic Habitat and Fish**

- Parcel A is the headwater storage for the Pickles Fork of Beadnell Creek. The lower reaches of Pickles Fork are documented as spawning area for the remnant coho population of Beadnell Creek. Moderate flow of the creeks allows for coho rearing.<sup>10, 12</sup>
- Parcel A is also home to rainbow and cutthroat trout.<sup>6</sup>
- Parcel A-2 contains a large pond that is a storage area for freshwater as well as habitat for a number of species including rainbow trout and cutthroat trout.<sup>9</sup>

## **Land Use**

### **Official Community Plan Designation:**

- The Denman Island Official Community Plan (OCP) designates Parcel A-1 as Conservation/Recreation (C/R) and Parcel A-2 as Crown Land (CL). Part of Parcel A is within the Development Permit Area No 4: Streams, Lakes and Wetlands. (Map No. 7)

### **Zoning and Permitted Land Uses:**

- The Denman Island Land Use Bylaw (LUB) zones Parcel A-1 as Conservation (CN) and Parcel A-2 as Resource (RE). (Map No. 8)
- In 2001, the Denman Island community proposed changes to the Official Community Plan land use designations for the vacant Crown lands on Denman, so they could subsequently be zoned Conservation (CN). The proposal failed, however, due to resistance from a provincial agency in its official review of the proposed changes, thus preventing any change to the zoning of this and similar parcels.<sup>18</sup>

### **Existing Land Uses**

- Parcel A is vacant and contains no structures or developments.
- Conservation and recreation are the existing land uses of Parcel A-2.<sup>6</sup>

### **Surrounding Land Use Zoning Designations:**

- Parcel A-1 borders land that is zoned as Forestry (F) and Rural Residential (R2) and Parcel A-2 borders land that is zoned as Agriculture (A).

### **Land Use Interests**

- In 1971, Crown Lands placed a UREP (Use, Recreation and Enjoyment of the Public) map reserve over Parcel A-2. The Province cancelled the UREP in 1988. At some point in the

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<sup>6</sup> Environmental Information Management System (EIMS) Site Information, Islands Trust Fund Board, July 2000.

<sup>8</sup>Public Lands Strategy – Community Submissions, 2001.

<sup>9</sup> Public Lands Strategy – Community Submissions, Trustee Comments, 2001.

<sup>10</sup> Public Lands Strategy – Denman Island Session Notes, November 16, 2000

<sup>12</sup> Public Lands Strategy – Technical Report Provincial/Islands Trust Working Group Public Lands Strategy, 2000.

<sup>18</sup> Local Trustee Comments, 2003

1990's, Parcel A-2 had a map reserve established for conservation purposes, which is still in effect.

- In 1977, Parcel A-1 was transferred to the Crown and in 1989, a 2-year map reserve was placed on this land for land use planning and Conservation and Fish and Wildlife Management purposes.<sup>8</sup>
- At one time, Parcel A-1 and the adjoining Inner Island Nature Reserve were one parcel. The Filberg Timber Company, which donated the land to the Vancouver Foundation, held the land. The Vancouver Foundation cut the timber on much of the remainder of the whole property, but not the area subsequently donated to the Crown. The Vancouver Foundation initiated the donation of the land to the Crown and Raven Forest Products completed the donation. The purpose of this donation was to maintain the land in perpetuity as a nature reserve with the understanding that it would be transferred to Islands Trust Fund once it was authorized to hold land. That authorization was implemented in 1990 and the Trust Fund Board immediately requested the transfer of this land, plus the A-2 parcel immediately to the east, to the Islands Trust Fund.<sup>9</sup>
- In 1992, the Denman Conservancy purchased parts of the land from the Crown, specifically 9.4 ha of upland on the sides of Beaver Pond, and these two pieces were donated to the Islands Trust Fund to become the Inner Island Nature Reserve. Subdivision of the land required the approval of the Agricultural Land Commission, which it gave on the condition that the donated land eventually be re-consolidated with the Crown land. The Trust Fund Board later requested transfer to the Islands Trust Fund of the Crown land (A-1) and the adjoining UREP parcel (A-2), first in 1994 and again in 1997.<sup>9</sup>
- Islands Trust Fund has expressed interest in Parcel A. It has been the intention of the Trust Fund Board and the Denman Conservancy Association, since the Inner Island Nature Reserve was established, to have the adjacent Crown lands protected as part of the nature reserve.
- There is long standing community interest in seeing Parcel A set aside for conservation purposes.<sup>6</sup>
- In the mid-1990s the Denman Conservancy Association developed a proposed Protected Area Network (PAN) of which Parcel A is a component. Silva Ecosystem Consultants Ltd. validated this proposal by also proposing a PAN which encompasses this area, in its report entitled, "An Ecosystem Based Assessment of Denman Island."<sup>22</sup>

## **Resource Use**

### **Agriculture Resources and Potential**

- All of Parcel A-2 and most of Parcel A-1 is located within the Agricultural Land Reserve (ALR). (Map No. 9)

### **Forestry Resources and Potential**

- This parcel, exclusive of wetlands, contains older second growth forest with remnants of old growth scattered throughout the parcel.<sup>22</sup>
- The trees on both sides of the wetlands in Parcel A-1 are older forest, with patches of remnant old-growth particularly on the western fringe.
- Parcel A is not located within the Forest Land Reserve (FLR).
- The Ministry of Forests has identified the following information as part of the Public Lands Strategy Technical Report, 2000:

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<sup>6</sup> Environmental Information Management System (EIMS) Site information, Islands Trust Fund, July 2000

<sup>8</sup> Public Lands Strategy – Community Submissions, 2001.

<sup>9</sup> Public Lands Strategy – Community Submissions, Trustee Comments, 2001.

<sup>22</sup> Community Comments, 2003

- Parcel A-1 has a size of proposed management unit of less than 50 ha and Parcel A-2 has proposed management unit larger than 50 ha but smaller than 100 ha.
- The age of the larger dominant trees in Parcel A-1 is under 60 years and of the forest in Parcel A-2 is 60-100 years.
- The forest cover database indicates that the lead species over the entire parcel is Douglas Fir/ Cedar.
- The forest cover data base also provides a rating for site productivity, which reflects the capability of the land for growing timber. According to this inventory, Parcel A-1 is rated as having medium site productivity and Parcel A-2 is rated as having low site productivity.
- Parcel A-2 is considered physically operable and Parcel A-1 is considered inoperable, using established timber harvesting technology.
- Parcel A has moderate harvesting constraints. Constraints include factors that would limit the economic viability of timber harvesting (such as access), or non-forestry values that would have to be taken into account (such as the presence of environmentally sensitive areas, public recreation use and visual quality concerns).
- Parcel A has good legal access.
- Parcel A has no existing forestry investment and there has been no expression of interest for the parcel regarding forestry.

### **Fisheries Resources and Potential**

- Information provided from the community states that Parcel A contains water-ways with moderate flow for coho spawning and rearing even though no fisheries resources have been identified by provincial data.<sup>12</sup>
- Parcel A, as a component of the Chickadee Lake watershed, has a primary role in rearing fish stocks and supplies water to downstream creek systems that are essential for both rearing and spawning.<sup>22, 23</sup>

### **Mineral and Granular Resources and Potential**

- The Ministry of Energy and Mines has identified the following information as part of the Public Lands Strategy process in 2000.
  - Parcel A has no existing development.
  - There are no known mineral resources identified for Parcel A.
  - Parcel has low potential for metallic minerals.
  - There is a high potential for industrial minerals.
  - Parcel A is underlain by sedimentary formations and is identified as having the potential for oil and gas resources.
  - Parcel A has an exploration interest present. (ARIS >\$100K, Tenure)

### **Water Supply**

- Parcel A is not within a formally recognized community water supply area.
- Parcel A has no water works present.
- Parcel A has been identified as having the potential for water supply in a serviced water district.
- The Denman Island Fire Department has a fixed suction line for fire fighting water supply on the bridge of Parcel A.<sup>22</sup>

### **Community Infrastructure and Settlement Potential**

- There is no existing or potential for septic field or sewer services on Parcel A-1, but there is potential for such services on Parcel A-2.

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<sup>12</sup> Public Lands Strategy – Technical Report Provincial/Islands Trust Working Group Public Lands Strategy, 2000.

<sup>22</sup> Island Nature Reserve – Denman Island, 1994

<sup>23</sup> Health Impacts of Alternative Futures for Chickadee Lake, Denman Island, by Patrick Fawkes, April 2000.

- Pickles and Central roads are the existing road accesses to Parcel A.
- Parcel A has good potential for utilities.
- Parcel A has no potential for a communication site.

### **Recreational Resources and Potential**

- There is low impact recreational use of the forest trails on Parcel A-2.<sup>11</sup>
- Parcel A used for nature appreciation and study including bird watching, wildlife viewing and photography, and for mushroom collecting.
- The provincial government has rated Parcel A based on a variety of criteria related to recreational use potential as follows:
  - The absence of cliffs or rock outcrops means that there is no potential for rock climbing or hang gliding.
  - There is no potential for ocean kayaking, as the parcel is not on the ocean.
  - The parcel is small, steep, and not suitable for survival games /orienteering.
  - A portion of the parcel that has a slope 40-80% that is not suitable for trail riding and the other portion has existing trails, logging roads or utility corridors that are suitable for trail riding.
  - There is no sport fishing potential.

### **Aesthetic Resources**

- Parcel A is transected by Pickles Road and Central Road, both of which are designated as Scenic/Heritage Roads and accordingly are attractive narrow, winding gravel roads. Pickles Road crosses Beaver Pond within Parcel A-1 by means of a low bridge that provides a picturesque view of the waterway and of the wildlife visible at the time.<sup>18</sup>

### **Heritage Resources**

- There are no known archaeological resources or sites on Parcel A.

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<sup>9</sup> Public Lands Strategy – Community Submissions, Trustee Comments, 2001.

<sup>11</sup> Public Lands Strategy – Summary of Conservation Information for PLS 2000.

<sup>18</sup> Local Trustee Comments, 2003

## **PARCEL B - CHICKADEE LAKE CATCHMENT**

Note:

- *The information provided is based on the Public Lands Strategy Review Process Report, 2000, unless specifically referenced.*

### **Location and Setting**

- Parcel B is located immediately south of Chickadee Lake on the northwest portion of Denman Island (Map No. 1).
- Parcel B includes an area of wetland that drains northwest to Chickadee Lake and is an important catchment area within the Lake's watershed, which dominates the northern portion of the parcel. The southeast portion of the parcel is a catchment area for Beaver Pond, and the southwest rises to and drops over Denman Ridge.<sup>9</sup>

### **Legal Description and Parcel Size**

- The legal description is NW1/4 of Section 21, Denman Island, Nanaimo District.<sup>12</sup>
- The size of Parcel B is 65.08 ha.<sup>12</sup>
- There is an annexed easement (EM17990) on Parcel B to part of the E ½ of the NE ¼ of Section 20 to provide access to the old Forestry Look Out.

### **Relationship to Island and Other Public Lands**

- Parcel B is located near Parcel A and the Inner Island Nature Reserve (which comprises two parcels held by the Trust Fund Board) in the centre of the island.

### **Biophysical Description**

#### **Physiography**

- Parcel B contains various elevations with the northern portion sloping towards Chickadee Lake, the southeast portion being low catchment area and the southwest corner touches upon the Denman ridge.<sup>9</sup>
- The dominant slope of Parcel B is less than 20%. (Map No. 2)
- The dominant elevation range for Parcel B is 50 – 100 m (150 - 299 ft). (Map No. 2)

#### **Geology**

- The western portion of Parcel B is underlain by De Courcy Formation. (Map No. 3)
- Geologically important sites have not been recorded on Parcel B.

#### **Surface Drainage**

- Parcel B contain two drainage systems. One affects Chickadee Lake and the other affects the wetlands in Parcel A (Map No. 4).<sup>9</sup>
- Parcel B is near Chickadee Lake, the largest freshwater body on the island and is part of the land connector between Pickles Marsh complex and the Chickadee Lake System.<sup>2, 11</sup> (Map No. 4)

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<sup>2</sup> An Ecosystem-Based Assessment of Denman Island by Silva Ecosystems Consultants Ltd., May 1998.

<sup>9</sup> Public Lands Strategy – Community Submissions, Trustee Comments, 2001.

<sup>11</sup> Public Lands Strategy – Summary of Conservation Information for PLS 2000.

<sup>12</sup> Public Lands Strategy – Technical Report Provincial/Islands Trust Working Group Public Lands Strategy, 2000.

- Drainage and water supply are rated highly for Parcel B because of the importance of the creeks that feed into Chickadee Lake and which drain into the Beadnell (Fillongley) Creek system.<sup>12, 22</sup>
- There is a creek in Parcel B that runs through part of the major depression that bisects the parcel.<sup>20, 22</sup>

### Groundwater

- According to provincial data, Parcel B is a potential recharge area.
- Most of Parcel B is a recharge area.<sup>9</sup>

### Soils

- The dominant soils on Parcel B are classified by provincial data as Rough Stony Land/ Brown Podzolic and Peat. (Map No. 5).
- The soils on Parcel B are well drained.

### Native Vegetation

- The Sensitive Ecosystem Inventory of East Vancouver Island and the Gulf Islands has identified older forest and second growth forest within this parcel.<sup>15, 16</sup> (Map No. 6)
- No threshold plant communities have been identified for Parcel B and no comprehensive studies have been undertaken.
- Parcel B has sites with high diversity of native vegetation.
- Parcel B contains sedge-grass marsh areas.<sup>12</sup>
- No individual red listed plants have been recorded on Parcel B and no comprehensive studies have been undertaken. However, the British Columbia Conservation Data Centre reports that there are likely red listed species at Chickadee Lake which is near Parcel B as follows:<sup>4</sup>
  - Preliminary analysis of plant communities that may be represented at Chickadee Lake are Cusicks's sedge/ Sitka sedge (Provincial Rank S1 - red-listed) and Labrador tea/ Western bog-laurel/ Sphagnum (Provincial Rank S4). These plant community types were added to the CDC tracking list in 2001 and have been provincially ranked as part of an ecological planning project for the Georgia Basin. Field work is needed to accurately determine the extent and distribution of the Cusicks's sedge/ Sitka sedge community at Chickadee Lake before it can be mapped by the CDC.<sup>4</sup>
  - The Conservation Data Centre has recognized the high conservation value of the entire wetland complex on Denman Island, of which Chickadee Lake is a major part. A Site Record entitled "Denman Island Marsh Complex" was given a very high biodiversity significance rating. The rating justification comments state that this is the largest marsh complex in the Strait of Georgia. Wetlands are uncommon in the Gulf Islands, and there is

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<sup>3</sup> British Columbia Conservation Data Centre correspondence to the Denman Island Conservancy, September 11, 2000.

<sup>4</sup> British Columbia Conservation Data Centre correspondence to the Denman Island Conservancy, October 18, 2000.

<sup>9</sup> Public Lands Strategy – Community Submissions, Trustee Comments, 2001.

<sup>12</sup> Public Lands Strategy – Technical Report Provincial/Islands Trust Working Group Public Lands Strategy, 2000.

<sup>15</sup> Sensitive Ecosystems Inventory: East Vancouver Island and Gulf Islands 1993-1997 – Volume 2 – Conservation Manual, Technical Report Series No. 345, Canadian Wildlife Service, Pacific and Yukon Region, 2000.

<sup>16</sup> Sensitive Ecosystems Inventory Mapping, Islands Trust, data from the Conservation Data Centre, 1998.

<sup>20</sup> The Management Plan for the Inner Island Nature Reserve – Denman Island, 1994

<sup>22</sup> Community Comments, 2003



no other system of this size, type or excellent condition. Wetlands comprise 0.8% of the Islands sub-unit of the SEI study area, the lowest percentage of all the SEI sub-units.<sup>3</sup>

### **Terrestrial Wildlife and Habitat**

- Specific wildlife habitat features have not been provincially recorded; however, Parcel B has possibility of red-legged frog (blue listed).<sup>11</sup>

### **Aquatic Habitat and Fish**

- Parcel B is important to the wetland complex on Denman Island, providing protection to the island water supply and various habitats, including fish bearing streams.<sup>9, 12</sup>
- Parcel B contains sedge-grass marsh areas and is a headwater for creeks draining into Chickadee Lake and eventually Beadnell Creek, which is an important salmon stream.<sup>12</sup>

## **Land Use**

### **Official Community Plan Designation:**

- The Denman Island Official Community Plan (OCP) designates Parcel B as Crown Land (CL) (Map No. 7) and is partly in Development Permit Area No. 2: Steep Slopes and partly in Development Permit Area No. 4: Streams, Lakes, and Wetlands.

### **Zoning and Permitted Land Uses:**

- The Denman Island Land Use Bylaw (LUB) zones Parcel B as Rural Residential (R2). (Map No. 8)
- In 2001, the Denman Island community proposed changes to the Official Community Plan land use designations for the vacant Crown lands on Denman, so they could subsequently be zoned Conservation (CN). The proposal failed, however, due to resistance from a provincial agency in its official review of the proposed changes, thus preventing any change to the zoning of this and similar parcels.<sup>18</sup>

### **Existing Land Uses**

- Parcel B is vacant and contains no structures or developments.

### **Surrounding Land Use Zoning Designations:**

- Parcel B borders land that is zoned as Rural Residential (R2), Conservation (CN), Agriculture (A) and Forestry (F).

### **Land Use Interests**

- When the Islands Trust Fund was authorized to hold land, it applied for this parcel as part of the inner island wetland in 1990 and again in 1994 after approving a management plan, and again in 1997.<sup>12</sup>
- Parcel B had a map reserve on it that was canceled in 1988.<sup>12</sup>

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<sup>3</sup> British Columbia Conservation Data Centre correspondence to the Denman Island Conservancy, September 11, 2000

<sup>9</sup> Public Lands Strategy – Community Submissions, Trustee Comments, 2001.

<sup>11</sup> Public Lands Strategy – Summary of Conservation Information for PLS 2000.

<sup>12</sup> Public Lands Strategy – Technical Report Provincial/Islands Trust Working Group Public Lands Strategy, 2000.

<sup>18</sup> Local Trustee Comments, 2003

- This parcel was identified in 1988 by the Denman Island Ratepayers and Residents Association as having high conservation, recreation, education and watershed protection values. The Denman Conservancy Association recently purchased a 2.5 ha parcel which joins Chickadee Lake and this parcel, thus contributing to a protected network of wetlands.<sup>9,12</sup>
- Islands Trust Fund has had a long-standing interest in including Parcel B in the Inner Island Nature Reserve and in 1997 submitted an application to BC Lands for transfer of this parcel to the Islands Trust Fund for conservation purposes.
- The Denman Island Marsh complex was included on the Master Site List and in the Catalogue of Site Records of the Georgia Basin Ecosystem Conservation Partnership (GBECP), a multi agency group formed as part of the Georgia Basin Ecosystem Initiative to identify sites with high conservation value within the Georgia Basin. Chickadee Lake is on the GBECP Master Site List and has been discussed within the group as a site of conservation concern. The original site record in 1996 gave the site a P2 for Protection Urgency (urgency for protection action) meaning that “threat expected within 5 years.” Since that time, a portion of the wetland in an adjoining parcel (NE ¼ of Section 21) has been degraded by intensive logging.<sup>3</sup>
- The desire to protect this parcel is part of the larger interest in protecting the freshwater resources of the island.<sup>9</sup>
- In the mid-1990’s the Denman Conservancy Association developed a proposed Protected Area Network (PAN) of which Parcel A is a component. Silva Ecosystem Consultants Ltd. validated this proposal by also proposing a PAN, which encompasses this area in its report, entitled, “An Ecosystem Based Assessment of Denman Island.”<sup>2, 22</sup>

## **Resource Use**

### **Agriculture Resources and Potential**

- No portion of Parcel B is located within the Agricultural Land Reserve (ALR) (Map No. 9).

### **Forestry Resources and Potential**

- Parcel B is not located within the Forest Land Reserve (FLR).
- This parcel contains an extensive tract of ‘older forest’.<sup>10, 11</sup>
- Large portions of the upland of Parcel A are stony, dry and covered with small, suppressed trees.<sup>18</sup>
- The Ministry of Forests has identified the following information as part of the Public Lands Strategy Technical Report, 2000:
  - Parcel B has a size of proposed management unit of larger than 50 ha but smaller than 100 ha.
  - The age of the larger dominant trees Parcel B is forest 60-100 years old.
  - The forest cover database (FC1) indicates that the lead species over the entire parcel is Douglas Fir/ Cedar.

<sup>2</sup> An Ecosystem-Based Assessment of Denman Island by Silva Ecosystems Consultants Ltd., May 1998.

<sup>3</sup> British Columbia Conservation Data Centre correspondence to the Denman Island Conservancy, September 11, 2000

<sup>9</sup> Public Lands Strategy – Community Submissions, Trustee Comments, 2001.

<sup>10</sup> Public Lands Strategy – Denman Island Session Notes, November 16, 2000.

<sup>11</sup> Public Lands Strategy – Summary of Conservation Information for PLS 2000.

<sup>12</sup> Public Lands Strategy – Technical Report Provincial/Islands Trust Working Group Public Lands Strategy, 2000.

<sup>18</sup> Local Trustee Comments, 2003

<sup>22</sup> Community Comments, 2003

- The FC1 also provides a rating for site productivity, which reflects the capability of the land for growing timber. According to this inventory Parcel B has high site productivity.
- Parcel B is considered physically operable, using established timber harvesting technology.
- Parcel B has moderate harvesting constraints.
- Parcel B has good legal access.
- Parcel B has no existing forestry investment and there has been no expression of interest for the parcel regarding forestry.

### **Fisheries Resources and Potential**

- No fisheries resources have been identified by provincial data and none are expected on Parcel B.
- Parcel B, as a component of the Chickadee Lake watershed, has a primary role in rearing fish stocks and provides water supplies to down stream creek systems that are essential for both rearing and spawning.<sup>22, 23</sup>

### **Mineral and Granular Resources and Potential**

- The Ministry of Energy and Mines has identified the following information as part of the Public Lands Strategy process in 2000:
  - Parcel B has no existing development.
  - There are no known mineral resources identified for Parcel B.
  - Parcel B has low potential for metallic minerals.
  - There is a high potential for industrial minerals.
  - Parcel B is underlain by sedimentary formations and is identified as having the potential for oil and gas resources.
  - Parcel B has an exploration interest present. (ARIS >\$100K, Tenure)

### **Water Supply**

Parcel B is not within a formally recognized community water supply area; however, it does provide the watershed for Chickadee Lake, on which there are a number of domestic and agricultural water licenses.<sup>22</sup>

- There are no water works present on Parcel B.
- Parcel B is in a serviced water district.

### **Community Infrastructure and Settlement Potential**

- There is potential for sewage services on parcel B.
- There are existing road accesses to Parcel B.
- Parcel B has good potential for utilities.
- Parcel B has no potential for a communication site.
- Parcel B has the potential to be subdivided into a maximum of sixteen lots under current zoning.

### **Recreational Resources and Potential**

- The provincial government has rated Parcel B based on a variety of criteria related to recreational use as follows.
  - The absence of cliffs or rock outcrops means that there is no potential for rock climbing or hang gliding.
  - There is no potential for ocean kayaking, as the parcel is not on the ocean.
  - Parcel B has a large relatively flat area that is suitable for survival games/orienteering use.
  - There are existing trails, logging roads or utility corridors for trial riding.
  - There is no sport fishing potential.

<sup>22</sup> Community Comments, 2003

<sup>23</sup>Health Impacts of Alternative Futures for Chickadee Lake, Denman Island, by Patrick Fawkes, April 2000.  
Denman Island Vacant Crown Land Profiles July 15, 2004 13

**Aesthetic Resources**

- A picturesque trail, once an roadway accessing the forestry lookout, winds through the forested part of this parcel providing the chance of seeing a variety of birds and other wildlife but skirting the wet, low lying areas in the northwest and southeast parts of the parcel, where the marshes are home to many invertebrates.<sup>18</sup>

**Heritage Resources**

- There are no known archaeological resources or sites on Parcel B.

<sup>18</sup> Local Trustee Comments, 2003

## **PARCEL C – OLD QUARRY SITE**

Note:

- *The information provided is based on the Public Lands Strategy Review Process Report, 2000, unless specifically referenced.*

### **Location and Setting**

- Parcel C is an old sandstone quarry site located on the western side of the middle of the island. The northeast boundary is on Denman Road at the top of the “Big Hill”.<sup>9</sup> (Map No. 1)

### **Legal Description and Parcel Size**

- The legal description is a portion of Lot 1, Section 18, Plan 46827, Denman Island, Nanaimo District.
- The size of Parcel C is 0.98 ha.

### **Relationship to Island and Other Public Lands**

- The parcel is surrounded by agricultural and rural residential properties and is not adjacent to other public lands.

### **Biophysical Description**

#### **Physiography**

- The dominant slope of Parcel C is 30 - 45%. (Map No. 2)
- Parcel C is an old quarry with very steep sides.<sup>12</sup>
- The dominant elevation range for Parcel C is 87 – 100 m (262 -299 ft). (Map No. 2)

#### **Geology**

- A portion of Parcel C is underlain by the Cedar District Formation and the other portion by the De Courcy Formation. (Map No. 3)
- The northwest trending Upper Cretaceous De Courcy Formation of the Nanaimo Group consists of 20 m of sandstone underlain by minor siltstone and shale. The sandstone is light to medium grey in colour, medium grained (0.6 to 2 mm) and displays a uniform texture although thin (4 to 5 cm) beds of coarse (greater than 2 mm) sandy/pebble are present. Commonly, white to black cherty fragments (up to 3 mm) give the rock a coarse appearance. (D. Jakobsen Mineral Plant Geologist, Mines Branch Nanaimo, B.C.)

#### **Surface Drainage**

- There are no water courses creating surface drainage on Parcel C.<sup>2</sup> (Map No. 4)

#### **Groundwater**

- Parcel C is identified as having no potential recharge area according to provincial data.

#### **Soils**

- The dominant soils on Parcel C are classified by provincial data as Rough Mountainous Land. (Map No. 5)
- The soils on Parcel C are well drained.

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<sup>2</sup> An Ecosystem-Based Assessment of Denman Island by Silva Ecosystems Consultants Ltd., May 1998.

<sup>9</sup> Public Lands Strategy – Community Submissions, Trustee Comments, 2001.

<sup>12</sup> Public Lands Strategy – Technical Report Provincial/Islands Trust Working Group Public Lands Strategy, 2000.

### **Native Vegetation**

- The Sensitive Ecosystem Inventory of East Vancouver Island and the Gulf Islands has not identified any data for this parcel. (Map No. 6).
- No individual red listed plants have been recorded on Parcel C and no comprehensive inventory has taken place to date.
- Parcel C has low native vegetation diversity.
- No threshold plant communities have been recorded for Parcel C and no comprehensive inventory has taken place to date.

### **Terrestrial Wildlife and Habitat**

- Specific wildlife habitat features have not been recorded on Parcel C.

### **Aquatic Habitat and Fish**

- There are no records regarding aquatic habitat for Parcel C.

## **Land Use**

### **Official Community Plan Designation:**

- The Denman Island Official Community Plan (OCP) designates Parcel C as Conservation/Recreation (C/R) (Map No. 7) and a portion as in Development Permit Area No. 2: Steep Slopes.

### **Zoning and Permitted Land Uses:**

- The Denman Island Land Use Bylaw (LUB) zones Parcel C as Rural Residential (R2). (Map No. 8)
- In 2001, the Denman Island community proposed changes to the Official Community Plan land use designations for the vacant Crown lands on Denman, so they could subsequently be zoned Conservation (CN). The proposal failed, however, due to resistance from a provincial agency in its official review of the proposed changes, thus preventing any change to the zoning of this and similar parcels.<sup>18</sup>

### **Existing Land Uses**

- Parcel C is vacant and contains no structures or developments.

### **Surrounding Land Use Zoning Designations:**

- Parcel C borders land that is zoned as Agriculture (A) and Rural Residential (R2).

### **Land Use Interests**

- There are no interests expressed in Parcel C.
- The sandstone is commercially worthless and does not deserve a high mineral value. This parcel was returned to the Crown about 1976, left open as part of a lot-averaging plan, and referred to as "park."<sup>10</sup>

## **Resource Use**

### **Agriculture Resources and Potential**

- No portion of Parcel C is located within the Agricultural Land Reserve (ALR). (Map No. 9)

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<sup>10</sup> Public Lands Strategy – Denman Island Session Notes, November 16, 2000.

<sup>18</sup> Local Trustee Comments, 2003

### **Forestry Resources and Potential**

- Parcel C is not located within the Forest Land Reserve (FLR).
- The Ministry of Forests has identified the following information as part of the Public Lands Strategy Technical Report, 2000.
  - Parcel C has a size of proposed management unit of less than 50 ha.
  - The age of the larger dominant trees Parcel C is forest 60-100 years old.
  - The forest cover database (FC1) indicates that the lead species over the entire parcel is Douglas Fir/ Cedar.
  - The FC1 also provides a rating for site productivity, which reflects the capability of the land for growing timber. According to this inventory Parcel C as having medium site productivity.
  - Parcel C is considered physically operable, using established timber harvesting technology.
  - Parcel C has moderate harvesting constraints.
  - Parcel C has good legal access.
  - Parcel C has no existing forestry investment and there has been no expression of interest for the parcel regarding forestry.

### **Fisheries Resources and Potential**

- No fisheries resources have been identified by provincial data and are not expected on Parcel C.

### **Mineral and Granular Resources and Potential**

- Parcel C has no existing development.
- Parcel C is an abandoned quarry with an extremely steep cliff. The land no longer has resource value, and it has no settlement value as the top of the cliff is a mere five or so metres from Denman Road and the bottom is landlocked.<sup>9</sup>
- Parcel C is rated highly for mineral potential due to the rock formation, yet it is an old quarry site where the resource has been removed. It is not expected to hold mineral interest now.<sup>12</sup>
- The quarry is approximately 26 m long and 17 m wide. It was developed in three benches along prominent joints striking northwest and dipping steeply southwest. Other irregular northwest striking joints dip moderately northeast while well-developed northwest joints dip vertically. Spacing between joints and fractures ranges between 0.4 and 20.3 m with most spaced 1.5 m apart. (D. Jakobsen Mineral Plant Geologist, Mines Branch Nanaimo, B.C.)
- Potential reserves extend 100 m west of the quarry along a prominent ridge. (D. Jakobsen Mineral Plant Geologist, Mines Branch Nanaimo, B.C., Nov. 17, 2000)
- The Ministry of Energy and Mines has identified the following information as part of the Public Lands Strategy process in 2000.
  - Parcel C has no existing development.
  - There is a high level of known mineral resources identified for Parcel C.
  - Parcel C has low potential for metallic minerals.
  - There is a high potential for industrial minerals.
  - Parcel C is underlain by sedimentary formations and is identified as having the potential for oil and gas resources.
  - Parcel C has an exploration interest present. (ARIS >\$100K, Tenure)

### **Water Supply**

- Parcel C is not within a formally recognized community water supply area.
- There are no water works present on Parcel C.
- Parcel C has no proven or is an unlikely groundwater source.

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<sup>9</sup> Public Lands Strategy – Community Submissions, Trustee Comments, 2001.

<sup>12</sup> Public Lands Strategy – Technical Report Provincial/Islands Trust Working Group Public Lands Strategy, 2000.

### **Community Infrastructure and Settlement Potential**

- There is no potential for sewage services on Parcel C.
- There are existing road accesses to Parcel C. However, the road runs along the top rim of the quarry and the parcel is land locked at the bottom.<sup>12</sup>
- Parcel C has existing utilities.
- Parcel C has no potential for a communication site.

### **Recreational Resources and Potential**

- The recreation potential for this parcel is high. It is shady and has rock faces and recesses. It could be a botanical site.<sup>10</sup>
- The provincial government has rated Parcel C based on a variety of criteria related to recreation use as follows.
  - The absence of cliffs or rock outcrops means that there is no potential for rock climbing or hang gliding.
  - There is no potential for ocean kayaking, as the parcel is not on the ocean.
  - Parcel C is too small and steep for survival games/orienteering use.
  - Parcel C has no trails or opportunities for hiking.
  - The slope is 40-80% and not suitable for trail riding.
  - There is no sport fishing potential.

### **Aesthetic Resources**

- The parcel provides no view of the steep cliff that was once the quarry, as islanders have long maintained a wooden barrier across the cliff top, serving as both a barricade to the hazard beyond and a community 'graffiti fence'. The cliff face is not easily visible from below due to the vegetation between it and Lacon Road.<sup>18</sup>

### **Heritage Resources**

- There is a known provincial historical feature on Parcel C.
- Locally, there may be some cultural value, as sandstone taken from Parcel C was used to build at least one government building in Victoria.<sup>9, 12</sup>
- In addition, sandstone from the quarry on Parcel C was used to construct the Normal School and Drill Hall (in 1911) in Victoria (now the Lansdowne Campus of Camosun College) and the Metropolitan Building and Dawson School in Vancouver. (D. Jakobsen Mineral Plant Geologist, Mines Branch, Nanaimo, B.C.)

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<sup>9</sup> Public Lands Strategy – Community Submissions, Trustee Comments, 2001.

<sup>10</sup> Public Lands Strategy – Denman Islands Session Notes, November 16, 2000.

<sup>12</sup> Public Lands Strategy – Technical Report Provincial/Islands Trust Working Group Public Lands Strategy, 2000.

<sup>18</sup> Local Trustee Comments, 2003



## **PARCEL D – MCFARLANE**

Note:

- **The information provided is based on the Public Lands Strategy Review Process Report, 2000, unless specifically referenced.**

### **Location and Setting**

- Parcel D is located near the southern end of the island. (Map No. 1)

### **Legal Description and Parcel Size**

- The legal description is the NW ¼ of the NW ¼ of Section 6, Denman Island, Nanaimo District.
- The size of Parcel D is 15.05 ha.

### **Relationship to Island and Other Public Lands**

- The parcel is surrounded by residential and rural residential properties and is not adjacent to other public lands.

### **Biophysical Description**

#### **Physiography**

- The dominant slope of Parcel D is less than 20%, however, there are portions of the parcel with steep slopes. (Map No. 2)
- The dominant elevation range for Parcel D is 25 – 62 m (75- 187 ft). (Map No. 2)

#### **Geology**

- Parcel D is underlain by the Cedar District Formation. (Map No. 3)
- Parcel D has no geologically important site recorded.

#### **Surface Drainage**

- Parcel D contains Valens Brook, which is a salmon bearing stream that flows year-round through the southwest part of the parcel.<sup>2</sup> (Map No. 4)

#### **Groundwater**

- Parcel D is identified as having no potential recharge area according to provincial data.
- Parcel D provides natural discharge for the Valens Brook drainage system.<sup>9</sup>

#### **Soils**

- The dominant soils on Parcel D are classified by provincial data as Rough Mountainous Land, Brown/ Podzolic and Peat. (Map No. 5)
- The soil drainage of Parcel D is bedrock with less than 30 cm soil cover or poor to non existent drainage through soil saturation.

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<sup>2</sup> An Ecosystem-Based Assessment of Denman Island by Silva Ecosystems Consultants Ltd., May 1998.

<sup>9</sup> Public Lands Strategy – Community Submissions, Trustee Comments, 2001.

### **Native Vegetation**

- The Sensitive Ecosystem Inventory of East Vancouver Island and the Gulf Islands has not identified any rankings for this parcel.(Map No. 6)
- No individual red listed plants have been recorded on Parcel D and no comprehensive inventory has taken place to date.
- Parcel D has low native vegetation diversity.
- No threshold plant communities have been recorded for Parcel D and no comprehensive inventory has taken place to date.
- This parcel contains a moderately large tract of 'older forest' now rare on Denman.<sup>8</sup>

### **Terrestrial Wildlife and Habitat**

- Specific wildlife habitat features have not been identified on Parcel D and no comprehensive inventory has taken place to date.

### **Aquatic Habitat and Fish**

- Valens Brook runs through the south west portion of the parcel. This salmon bearing stream is part of the Lacon Marsh wetland area, which runs about a third of the length of the island. The area was studied extensively in the Salmon Habitat Assessment Program conducted by the Denman Conservancy Association in 1997-98, which concluded that the parcel is the major water catchment for lower reaches of Valens Brook and critical for salmon survival.<sup>8, 13</sup>
- The Department of Fisheries and Oceans and the Ministry of Water, Land and Air Protection, as well as others, have contributed to researching the conservation potential of this parcel.<sup>10</sup>

## **Land Use**

### **Official Community Plan Designation:**

- The Denman Island Official Community Plan (OCP) designates Parcel D as Crown Land (CL) (Map No. 7) and a portion is in Development Permit Area No. 4: Streams, Lakes and Wetlands.

### **Zoning and Permitted Land Uses:**

- The Denman Island Land Use Bylaw (LUB) zones Parcel D as Rural Residential (R2). (Map No. 8)
- In 2001, the Denman Island community proposed changes to the Official Community Plan land use designations for the vacant Crown lands on Denman, so they could subsequently be zoned Conservation (CN). The proposal failed, however, due to resistance from a provincial agency in its official review of the proposed changes, thus preventing any change to the zoning of this and similar parcels.<sup>18</sup>

### **Existing Land Uses**

- Parcel D is vacant and contains no structures or developments.

### **Surrounding Land Use Zoning Designations:**

- Parcel D borders land that is zoned as Rural Residential (R2), Agriculture (A) and Residential (R1).

### **Land Use Interests**

- Islands Trust Fund has expressed interest in Parcel D.

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<sup>8</sup> Public Lands Strategy – Community Submissions, 2001.

<sup>10</sup> Public Lands Strategy – Denman Islands Session Notes, November 16, 2000.

<sup>13</sup> Salmon Habitat Stewardship – Denman Island: Assessment and Mapping Report, Denman Conservancy, Association, by J. Balke, 1998.

<sup>16</sup> Sensitive Ecosystems Inventory Mapping, Islands Trust, data from the Conservation Data Centre, 1998

## **Resource Use**

### **Agriculture Resources and Potential**

- No portion of Parcel D is located within the Agricultural Land Reserve (ALR). (Map No. 9)

### **Forestry Resources and Potential**

- Parcel D is not located within the Forest Land Reserve (FLR).
- This parcel contains a moderately large tract of 'older forest' now rare on Denman.<sup>8</sup>
- The Ministry of Forests has identified the following information as part of the Public Lands Strategy Technical Report, 2000:
  - Parcel D has a size of proposed management unit of less than 50 ha.
  - The age of the larger dominant trees Parcel D is forest 60-100 years old.
  - The forest cover database (FC1) indicates that the lead species over the entire parcel is Douglas Fir/ Cedar.
  - The FC1 also provides a rating for site productivity, which reflects the capability of the land for growing timber. According to this inventory Parcel D as having medium site productivity.
  - Parcel D is considered physically operable, using established timber harvesting technology.
  - Parcel D has moderate harvesting constraints.
  - Parcel D has good legal access.
  - Parcel D has no existing forestry investment and there has been no expression of interest for the parcel regarding forestry.

### **Fisheries Resources and Potential**

- The Ministry of Water, Land and Air Protection and the Department of Fisheries and Oceans have reportedly been evaluating the conservation values for this parcel and its salmon stream.<sup>12</sup>
- In a project spearheaded by the Denman Conservancy Association, the culvert across McFarlane Road, immediately north of Parcel D, was reconstructed in 2002 to replace the old hanging culvert that blocked the passage of fish with a rectangular, concrete culvert with baffles that allows the creek to flow unimpeded at McFarlane Road and thus facilitates the access of anadromous salmonoids to the middle and upper reaches of Valens Brook.<sup>18</sup>
- Parcel D contains Valens Brook, which is a salmon bearing stream through the south west part of the parcel. Coho, chum salmon and cutthroat trout are known in the system.<sup>8, 12</sup>

### **Mineral and Granular Resources and Potential**

- The Ministry of Energy and Mines has identified the following information as part of the Public Lands Strategy process in 2000.
  - Parcel D has no existing development.
  - There is a high level of known mineral resources identified for Parcel D.
  - Parcel D has low potential for metallic minerals.
  - There is a high potential for industrial minerals.
  - Parcel D is underlain by sedimentary formations and is identified as having the potential for oil and gas resources.
  - Parcel D has an exploration interest present. (ARIS >\$100K, Tenure)

### **Water Supply**

- Parcel D is not within a formally recognized community water supply area.
- There are no water works on Parcel D.

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<sup>8</sup> Public Lands Strategy – Community Submissions, 2001.

<sup>12</sup> Public Lands Strategy – Technical Report Provincial/Islands Trust Working Group Public Lands Strategy, 2000.

<sup>18</sup> Local Trustee Comments, 2003

- Parcel D has been identified as having the potential for water supply in a serviced water district.

### **Community Infrastructure and Settlement Potential**

- There are no existing sewage services, but there is potential for sewage services on Parcel D.
- There is an existing road access to Parcel D.
- Parcel D has existing utilities.
- Parcel D has no potential for a communication site.
- Parcel D has subdivision potential for three lots based on the current zoning.

### **Recreational Resources and Potential**

- The provincial government has rated Parcel D based on a variety of criteria related to recreational use as follows:
  - The absence of cliffs or rock outcrops means that there is no potential for rock climbing or hang gliding.
  - There is no potential for ocean kayaking, as the parcel is not on the ocean.
  - Parcel D is too small and steep for survival games/orienteering use.
  - Parcel D has trails and opportunities for hiking.
  - The slope is 40-80% and not suitable for trail riding.
  - There is no sport fishing potential.

### **Aesthetic Resources**

- Although not easily visible as the land has no trails, many features combine to make this a particularly beautiful parcel. Mainly forest, it boasts mixed stands of red alder, Douglas fir, balsam, hemlock and western red cedar and includes a number of impressive old-growth Douglas firs as well as abundant mosses and ferns. Where visible, Valens Brook contributes to the aesthetic value.<sup>18</sup>

### **Heritage Resources**

- There is a known archeological/historical feature on Parcel D.

<sup>18</sup> Local Trustee Comments, 2003

## **PARCEL E – MORRISON MARSH**

Note:

- **The information provided is based on the Public Lands Strategy Review Process Report, 2000, unless specifically referenced.**

### **Location and Setting**

- Parcel E is located at the north end of Morrison Marsh, on the south side of McFarlane Road and on the southeast part of the island. The Parcel is entirely underwater.<sup>9</sup> (Map No. 1)
- Morrison Marsh is the largest marsh on Denman. It was once a potato farm, but was re-flooded to restore the former marsh. It stretches nearly to the crown land parcel called the gravel reserve (the SW ¼ of Section 2).<sup>10</sup>
- Parcel E is part of an important wetland system whose main value is for conservation. The marsh is maintained by Ducks Unlimited for the protection of wildfowl.<sup>9, 12</sup>

### **Legal Description and Parcel Size**

- The legal description is the unsurveyed Crown land, Section 9, Denman Island, Nanaimo District.
- The size of Parcel E is 2.25 ha.

### **Relationship to Island and Other Public Lands**

- With McFarlane Marsh, which extends north on the other side of McFarlane Road, this marsh system is the longest on any Gulf Island. It extends from Owl Crescent south almost to Boyle Point Park.<sup>9</sup>

### **Biophysical Description**

#### **Physiography**

- The dominant slope of Parcel E is less than 20% (Map No. 2).
- The dominant elevation range for Parcel E is 0.3 – 13 m (1 - 38 ft). (Map No. 2)

#### **Geology**

- Parcel E is underlain by the De Courcy Formation. (Map No. 3)
- Parcel E has no geologically important site recorded.

#### **Surface Drainage**

- Parcel E is part of a marsh that is the longest on any Gulf Island, extending from privately owned property on Owl Crescent south to the ¼ section Crown parcel adjacent to Boyle Point Park.<sup>2</sup> (Map No. 4)
- The entire system is classified as a wetland by the Canadian Wildlife Service in the Sensitive Ecosystems Inventory for East Vancouver Island and the Gulf Islands.<sup>9</sup>

#### **Groundwater**

- Parcel E is identified as having no potential recharge area according to provincial data.

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<sup>2</sup> An Ecosystem-Based Assessment of Denman Island by Silva Ecosystems Consultants Ltd., May 1998.

<sup>9</sup> Public Lands Strategy – Community Submissions, Trustee Comments, 2001.

<sup>10</sup> Public Lands Strategy – Denman Island Session Notes, November 16, 2000.

<sup>12</sup> Public Lands Strategy – Technical Report Provincial/Islands Trust Working Group Public Lands Strategy, 2000.

## **Soils**

- The dominant soils on Parcel E are classified by provincial data as Rough Stony Land. (Map No. 5)
- The soil drainage of Parcel E is bedrock with less than 30 cm soil cover or poor to non-existent drainage through soil saturation.

## **Native Vegetation**

- The entire marsh system is classified as a wetland by the Canadian Wildlife Service in the Sensitive Ecosystems Inventory for East Vancouver Island and the Gulf Islands.<sup>16</sup> (Map No. 6)
- The Sensitive Ecosystem Inventory (SEI) shows that wetlands comprise only 0.8% of the Islands sub-unit of the SEI study area, the lowest percentage of all the SEI sub-units.<sup>3,14</sup>
- Parcel E is a shallow wetland area that contains both dominant and associated shallow water species.<sup>17</sup>
- No individual red listed plants have been recorded on Parcel E and no comprehensive inventory has taken place to date.
- Parcel E is a site with low native vegetation diversity.
- No threshold plant communities have been recorded for Parcel E and no comprehensive inventory has taken place to date.

## **Terrestrial Wildlife and Habitat**

- According to provincial data a specific wildlife habitat feature has been recorded on Parcel E.
- As early as 1996, the CDC recognized the high conservation value of the large wetland complex on Denman Island, of which Chickadee Lake is a major part. A Site Record entitled "Denman Island Marsh Complex" was written and given a very high biodiversity significance rating. The rating justification comments state that this is the largest marsh complex in the Strait of Georgia. Wetlands are uncommon in the Gulf Islands, and there is no other system of this size, type or excellent condition.<sup>3</sup>
- The most southerly portion of Morrison Marsh (SE ¼ Section 7), which is the same marsh system as Parcel E, has several recorded Blue Listed bird species including the Great Blue Heron, Trumpeter Swan, Townsend's big-eared bat (probable) Hutton's Vireo and the Band-tailed pigeon, as well as the Red Listed Western Screech-owl. In addition, the Blue Listed Red-legged Frog has been recorded and the Blue Listed Coastal Cutthroat Trout is probable.<sup>22</sup>

## **Aquatic Habitat and Fish**

- There are no records regarding aquatic habitat for Parcel E.

## **Land Use**

### **Official Community Plan Designation:**

- The Denman Island Official Community Plan (OCP) designates Parcel E as Conservation/Recreation (C/R) (Map No. 7) and within Development Permit Area No. 4: Streams, Lakes and Wetlands.

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<sup>3</sup> British Columbia Conservation Data Centre correspondence to the Denman Island Conservancy, September 11, 2000.

<sup>9</sup> Public Lands Strategy – Community Submissions, Trustee Comments, 2001.

<sup>14</sup> Sensitive Ecosystems Inventory: East Vancouver Island and Gulf Islands 1993-1997 – Volume 1 Methodology, Ecological Descriptions and Results, Technical Report Series No. 320, Canadian Wildlife Service, Pacific and Yukon Region, 1998

<sup>17</sup> The Denman Island Official Community Plan (OCP), Bylaw No. 60, 2002 Schedule C Land Use and Appendix G: Wetlands Report by Harvey Janzsen, March 2001.

<sup>18</sup> Local Trustee Comments, 2003

<sup>22</sup> Community Comments, 2003

**Zoning and Permitted Land Uses:**

- The Denman Island Land Use Bylaw (LUB) zones Parcel E as Park (PK) (Map No. 8).

**Existing Land Uses**

- Parcel E is vacant and contains no structures or developments.

**Surrounding Land Use Zoning Designations:**

- Parcel E borders land that is zoned as Residential (R1), Rural Residential (R2) and Agriculture (A).

**Land Use Interests**

- Islands Trust Fund has expressed interest in Parcel E.
- “In 1985, as a result of its preliminary study of the Marsh, Ducks Unlimited undertook a project with the cooperation of the Ministry of the Environment and riparian owners to regulate and stabilize water levels to an average of 0.8 metres by the installation of a variable crest weir and the excavation of an outlet ditch to the road. Since that time, Ducks Unlimited, with the cooperation of the land owners, has conducted regular monitoring including yearly aerial waterfowl census, assessment of species activity in 24 duck boxes and vegetation analysis.”<sup>17</sup>
- Besides its conservation values, the marsh is a domestic water supply, as wells are adjacent to the edge and there are existing water licenses.

**Resource Use****Agriculture Resources and Potential**

- Parcel E is located within the Agricultural Land Reserve (ALR). (Map No. 9)

**Forestry Resources and Potential**

- Parcel E is not located within the Forest Land Reserve (FLR).
- There are no trees suitable for forestry on Parcel E as it is a marsh area.

**Fisheries Resources and Potential**

- No fisheries resources have been identified by provincial data on Parcel E.

**Mineral and Granular Resources and Potential**

- The Ministry of Energy and Mines has identified the following information as part of the Public Lands Strategy process in 2000.
  - Parcel E has no existing development.
  - There are no known mineral resources identified for Parcel E.
  - Parcel E has low potential for metallic minerals.
  - There is a low potential for industrial minerals.
  - Parcel E is underlain by sedimentary formations and is identified as having the potential for oil and gas resources.
  - Parcel E has an exploration interest present. (ARIS >\$100K, Tenure)

**Water Supply**

- Parcel E is not within a formally recognized community water supply area.
- There are no water works present on Parcel E.

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<sup>17</sup> Community Comments, 2003

- The marsh on Parcel E is a domestic water supply, as wells that are adjacent to the edge, and there are water licenses.<sup>12</sup>
- The parcel has no proven groundwater or is unlikely as a groundwater source.

#### **Community Infrastructure and Settlement Potential**

- There are no existing sewage services and there is no potential for sewage services on Parcel E.
- There are existing road accesses to Parcel E.
- Parcel E has existing utilities.
- Parcel E has no potential for a communication site.

#### **Recreational Resources and Potential**

- There are no provincial government ratings for Parcel E as it is a marsh area.

#### **Aesthetic Resources**

- McFarlane Road, which borders this parcel on the north, provides a lovely view of the parcel and a further stretch of Morrison Marsh, often including some of the various ducks, swans and other waterfowl that favour the wetland at different times of the year.<sup>18</sup>

#### **Heritage Resources**

- There is a known archeological/historical feature on Parcel E.

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<sup>12</sup> Public Lands Strategy – Technical Report Provincial/Islands Trust Working Group Public Lands Strategy, 2000.

<sup>18</sup> Local Trustee Comments, 2003



## **PARCEL F – EAGLE ROCK**

Note:

- **The information provided is based on the Public Lands Strategy Review Process Report, 2000, unless specifically referenced.**

### **Location and Setting**

- Parcel F is an islet located off Boyle Point Provincial Park. (Map No. 1)
- Parcel F has no land or sea access except at low tide.<sup>10</sup>

### **Legal Description and Parcel Size**

- The legal description is District Lot 127, Denman Island, Nanaimo District.
- The parcel size is 0.5 ha.

### **Relationship to Island and Other Public Lands**

- Parcel F is a very small parcel and has been used as a seal/sea lion haul-out. It is so rocky that it has no boat access.<sup>9</sup>

### **Biophysical Description**

#### **Physiography**

- The dominant slope of Parcel F is less than 20%. (Map No. 2)
- The dominant elevation range for Parcel F is 0.3 – 13 m (1 - 38 ft). (Map No. 2)

#### **Geology**

- Parcel F is underlain by the De Courcy Formation. (Map No. 3)
- Parcel F has no geologically important site recorded.

#### **Surface Drainage**

- There are no water courses creating surface drainage on Parcel F (Map No. 4).<sup>2</sup>

#### **Groundwater**

- Parcel F is identified as having no potential recharge area according to provincial data.

#### **Soils**

- The dominant soils on Parcel F are classified by provincial data as Rough Stony Land. (Map No. 5)
- The soil drainage of Parcel F is bedrock with less than 30 cm soil cover or poor to non existent drainage through soil saturation.

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<sup>2</sup> An Ecosystem-Based Assessment of Denman Island by Silva Ecosystem Consultants Ltd., May 1998.

<sup>9</sup> Public Lands Strategy – Community Submissions, Trustee Comments, 2001.

<sup>10</sup> Public Lands Strategy – Denman Island Session Notes, November 16, 2000.

### **Native Vegetation**

- Parcel F has a high value for conservation and is classified as “Coastal Bluff” by the Canadian Wildlife Service in the Sensitive Ecosystems Inventory for East Vancouver Island and the Gulf Islands.<sup>16</sup> (Map No. 6)
- No individual red listed plants have been recorded on Parcel F and no comprehensive inventory has taken place to date.
- Parcel F is a site with low native vegetation diversity.
- No threshold plant communities have been identified for Parcel F and no comprehensive inventory has taken place to date.

### **Terrestrial Wildlife and Habitat**

- A specific wildlife habitat feature has been recorded on Parcel F.
- Parcel F has been a well known seal/sea lion haul-out islet. It is so rocky it has no boat access.<sup>12</sup>
- Mink have been identified on Parcel F.<sup>22</sup>

### **Aquatic Habitat and Fish**

- There are no records regarding aquatic habitat for Parcel F.

## **Land Use**

### **Official Community Plan Designation:**

- The Denman Island Official Community Plan (OCP) designates Parcel F as Conservation/Recreation (C/R). (Map No. 7)

### **Zoning and Permitted Land Uses:**

- The Denman Island Land Use Bylaw (LUB) zones Parcel F as Park (PK). (Map No. 8)

### **Existing Land Uses**

- Parcel F is vacant and contains no structures or developments.

### **Surrounding Land Use Zoning Designations:**

- Parcel F is offshore from land that is zoned as Park (PK) and Marine Protection (W4).

### **Land Use Interests**

- The Ministry of Water, Land and Air Protection has expressed interest in Parcel F for park purposes.
- Islands Trust Fund expressed interest in 1990 on Parcel F. It is considered a critical marine heritage area because in the fall/winter/spring it is habitat for Northern and Stellar Sea Lions.
- In the Boyle Point Provincial Park Master Plan (1990), the Ministry of Parks identifies the acquisition of Eagle Rock and its incorporation into the park as a priority land management objective.<sup>19</sup>

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<sup>12</sup> Public Lands Strategy – Technical Report Provincial/Islands Trust Working Group Public Lands Strategy, 2000.

<sup>19</sup> The Boyle Point Provincial Park Master Plan, Ministry of Parks, 1990

<sup>22</sup> Community Comments, 2003

## **Resource Use**

### **Agriculture Resources and Potential**

- No portion of Parcel F is located within the Agricultural Land Reserve (ALR). (Map No. 9)

### **Forestry Resources and Potential**

- Parcel F is not located within the Forest Land Reserve (FLR).
  - There are no trees suitable for forestry on Parcel F.

### **Fisheries Resources and Potential**

- No fisheries resources have been identified by provincial data on Parcel F.

### **Mineral and Granular Resources and Potential**

- The Ministry of Energy and Mines has identified the following information as part of the Public Lands Strategy process in 2000.
  - Parcel F has no existing development.
  - There are no known mineral resources identified for Parcel F.
  - Parcel F has low potential for metallic minerals.
  - There is a high potential for industrial minerals.
  - Parcel F is underlain by sedimentary formations and is identified as having the potential for oil and gas resources.
  - Parcel F has an exploration interest present. (ARIS >\$100K, Tenure)

### **Water Resources**

- There are no available data for Parcel F as is an unlikely as a groundwater source.

### **Community Infrastructure and Settlement Potential**

- There is no potential for sewage services on Parcel F.
- There is no existing road or water access identified for Parcel F. This islet is only accessible by trail and is so rocky that it has no boat access.<sup>12</sup>
- Parcel F has no existing utilities.
- Parcel F has potential for a communication site.

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<sup>12</sup> Public Lands Strategy – Technical Report Provincial/Islands Trust Working Group Public Lands Strategy, 2000.

<sup>19</sup> The Boyle Point Provincial Park Master Plan, Ministry of Parks, 1990

**Recreational Resources and Potential**

- There are no provincial government ratings available for Parcel F as the land is too small.
- There is no potential for ocean kayaking as it is too rocky and has no boat access.

**Aesthetic Resources**

- This scenic rock is part of the viewscape from one of the look-outs in Boyle Point Park. Facing east from a promontory in the Park, one looks out over Eagle Rock to see Norris Rocks off Hornby, the Strait of Georgia, Lasqueti Island and finally the Sunshine Coast mountains in the background.<sup>18</sup>

**Heritage Resources**

- There is no known archeological/historical feature on Parcel F.

<sup>18</sup>Local Trustee Comments, 2003

## GLOSSARY

**ARIS** – ARIS is the term used to identify mineral exploration assessment reports filed by the exploration and mining industry since 1947. These reports provide information on geological, geophysical, geochemical, drilling and other exploration-related investment activities.<sup>12</sup>

**Blue Listed** – Blue listed species are those indigenous species or subspecies considered provincially vulnerable.<sup>15</sup>

**Constraints** – Constraints include factors that would limit the economic viability of timber harvesting (such as access), or non-forestry values that would have to be taken into account (such as the presence of environmentally sensitive areas, public recreation use and visual quality concerns).<sup>12</sup>

**Coastal Bluff** – A coastal bluff is an ecosystem type containing grasses and herbaceous vegetation associated with the shoreline and may include rocky islets and herbaceous communities forming in vernal pools and seepage areas.<sup>14</sup>

**Community Water Supply** – Community water supply areas are areas where there is some formal recognition of the use of the land for community water supply purposes. Normally these areas include portions of watersheds associated with communities of water users formed under the provincial legislation (*Local Government Act, Water Act, Water Utilities Act, Forest Practices Code Act*).<sup>12</sup>

**Drainage** – Drainage is a measure of the permeability of the dominant soils on the parcel, and may be described as well drained or imperfectly drained or bed rock with less than 30 cm soil cover or poor to non-existent drainage through soil saturation.<sup>12</sup>

**Industrial Minerals** – Industrial minerals, including stone and rocks, are defined as those naturally occurring materials used to build structures or supply products that are useful to society. Industrial minerals exclude the ores of metals, gems, and art objects. Industrial minerals also include abrasives such as corundum and garnet.<sup>12</sup>

**Metallic Minerals** – Metallic minerals are types of minerals represented by gold, silver, copper, iron, lead and tin. (Oxford Concise Dictionary)

**Old Growth Forest** – The age and structure of old-growth forest vary considerably by forest type. On the Pacific coast of North America, old growth characteristics begin to appear in unmanaged forests at 175-250 years of age.<sup>14</sup>

**Older Forest** – Older forest ecosystems are conifer dominated forests with an average tree age of 100 years or greater.<sup>15</sup> A forested ecosystem with dominant age class greater than 100 years.<sup>14</sup>

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<sup>12</sup> Public Lands Strategy – Technical Report Provincial/Islands Trust Working Group Public Lands Strategy, 2000.

<sup>14</sup> Sensitive Ecosystems Inventory: East Vancouver Island and Gulf Islands 1993-1997 – Volume 1 Methodology, Ecological Descriptions and Results, Technical Report Series No. 320, Canadian Wildlife Service, Pacific and Yukon Region, 1998

<sup>15</sup> Sensitive Ecosystems Inventory: East Vancouver Island and Gulf Islands 1993-1997- Volume 2 – Conservation Manual, Technical Report Series No. 345, Canadian Wildlife Service, Pacific and Yukon Region, 2000.

**Older Second Growth Forest** – Older second growth forests are coniferous dominated stands with an average tree age of 60-00 years.<sup>14</sup>

**Provincially Vulnerable** – Provincially vulnerable species are indigenous species that are not threatened but are particularly at risk because of low or declining numbers. These species are considered “blue listed” by the B.C. Conservation Data Centre.<sup>15</sup>

**Recharge Areas** – Potential recharge areas are areas where a combination of slope, aspect, soils and surficial material makes the area suitable for the storage and collection of groundwater.<sup>12</sup>

**Recreation Use** – Recreation uses can be low, medium or high impact as follows:

- **Low Impact** – Low impact recreation uses are activities with minimal disturbance to the land or activities where the participant has a low degree of tolerance to disturbance of land, such as hang gliding or kayaking.<sup>12</sup>
- **Medium Impact** – Medium impact recreation uses are activities that may cause temporary disturbance or higher than minimal physical impact to the land. These uses may include facilities that have a low/moderate and/or temporary impact on the land such as hiking.<sup>12</sup>
- **High Impact** – High impact recreation uses are high use recreation, such as survival games/ orienteering, rock climbing or trail riding, with permanent and/or severe disturbance to land and/or possible major facilities (parking, toilets, pavement, buildings) and recreational activity where participants have high tolerance to disturbed land.<sup>12</sup>

**Red Listed** – Red listed species are those indigenous species or subspecies considered provincially rare. Threatened and endangered species are considered “red listed” by the B.C. Conservation Data Centre. The Conservation Data Centre defines as “red listed” indicating the presence of provincially endangered species on a parcel.<sup>15</sup>

**Sewerage** – Sewerage is a rating of the potential or presence of septic field or sewerage services on the parcel. It is determined through analysis of soil depth and technical information regarding the sewerage services present on or nearby the parcel.<sup>12</sup>

**Threatened and Endangered Species** – Threatened and endangered species are indigenous species of flora or fauna that are likely to become endangered if the factors affecting their vulnerability are not reversed. Threatened and endangered species are referred to as “red listed” by the B.C. Conservation Data Centre.<sup>15</sup>

**Threshold Community** – Threshold communities are characterized by the presence of one or more plant communities considered rare on a national or international basis and red listed provincially within a bioclimatic subzone.<sup>12</sup>

**Trial Riding** – Trail riding is defined as a high impact recreation use that requires existing trails, logging roads or utility corridors.<sup>12</sup>

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<sup>12</sup> Public Lands Strategy – Technical Report Provincial/Islands Trust Working Group Public Lands Strategy, 2000.

<sup>14</sup> Sensitive Ecosystems Inventory: East Vancouver Island and Gulf Islands 1993-1997 – Volume 1 – Methodology, Ecological Descriptions and Results, Technical Report Series No. 320, Canadian Wildlife Service, Pacific and Yukon Region, 1998

<sup>15</sup> Sensitive Ecosystems Inventory: East Vancouver Island and Gulf Islands 1993-1997 – Volume 2 – Conservation Manual, Technical Report Series No. 345, Canadian Wildlife Service, Pacific and Yukon Region, 1998

**Vernal Pool** – A vernal pool is a temporary body of freshwater that is filled by spring rains and snow melt, only to dry up during the hot summer months. Many vernal pools are filled again by autumn rains, and may persist throughout the winter. Vernal pools are typically small and shallow.<sup>14</sup>

**Vulnerable/Sensitive Species** – Vulnerable/sensitive species are indigenous species that are not threatened but are particularly at risk because of low or declining numbers. These species are identified as “blue listed” by the B.C. Conservation Data Centre.<sup>15</sup>

**Waterworks** – Waterworks are licensed physical structures for the storage or movement of water.<sup>12</sup>

**Water Supply** – Water supply is a measure of the potential for a potable groundwater source and/or the presence of a community water system. Water supply is characterized as in a serviced water district, as having a proven source or very likely groundwater source, or as having no proven groundwater or unlikely as a groundwater source.<sup>12</sup>

**Wetland** – A wetland is an area of land inundated by surface water and groundwater, frequently enough to support a prevalence of vegetation and aquatic life that require saturated or seasonally saturated soil conditions for growth and reproduction.<sup>14</sup>

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<sup>12</sup> Public Lands Strategy – Technical Report Provincial/Islands Trust Working Group Public Lands Strategy, 2000.

<sup>14</sup> Sensitive Ecosystems Inventory: East Vancouver Island and Gulf Islands 1993-1997 – Volume 1 Methodology, Ecological Descriptions and Results, Technical Report Series No. 320, Canadian Wildlife Service, Pacific and Yukon Region, 1998

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