

Freshwater and Wet Forest Ecosystems Gabriola Island

General Map Description

Wet areas are the veins of the landscape and are collection and transportation areas for nutrients. For this reason, they contain a high diversity of life, are an integral component to the lifecycle of most animal species and support many rare plants. Wetlands, estuaries and streams are also key breeding and rearing grounds for birds, amphibians and insects like butterflies and dragonflies.

Areas of wet soils are highly vulnerable to disturbance, particularly when water levels are changed or soils are compacted or removed. Construction in these areas is costly and can result in moisture and flooding problems in buildings. This map contains the areas most affected by high water level including wetlands, streams and wet forests. For the purposes of this map, freshwater and wet forest ecosystems are represented by:

1. Three sensitive ecosystems: Cliff, Herbaceous and Woodland
2. Six Site Series: CDFmm05 (Western redcedar- Douglas-fir - Oregon beaked moss), CDFmm06 (Western redcedar- Grand fir - Foamflower), CDFmm10 (Shorepine- Sphagnum), CDFmm11 (Western redcedar - Skunk cabbage), CDFmm12 (Western redcedar - Vanilla-leaf), CDFmm13 (Western redcedar- Indian-plum) and CDFmm14 (Western redcedar- Slough sedge)
3. Stream mapping

Public and Protected Areas

- Parks and Protected Areas
- Crown Land

Sensitive Ecosystems

Freshwater (FW):
Definition: Freshwater ecosystem includes bodies of water such as lakes and ponds that usually lack floating vegetation.
Importance: Freshwater ecosystems are home to numerous organisms such as fish, amphibians, aquatic plants, and invertebrates. Lakes and ponds play a vital role in the lifecycle of many species.

Wetland (WN):
Definition: Areas that are saturated or inundated with water for long enough periods of time to develop vegetation and biological activity adapted to wet environments. This may result from flooding, fluctuating water tables, tidal influences or poor drainage conditions.
Importance: Wetland ecosystems are sensitive and important because they exhibit rarity, high biodiversity, fragility, specialized habitat, specialized functions and connectivity.

Wet Forest Ecosystems

Fluctuating Water Table Forest (Site Series 12, 13 & 14)
Definition: These forests are found on lower slopes and are composed of plants that can handle variations in water tables. Some are dominated by Red Alder, others are dominated by Western redcedar with Ground hemlock or Slough sedge in the understorey. Berry producing plants, like Salal and Salmonberry, are common and tree canopy is dense with gaps from blowdown because tree rooting depths are limited. Lack of understorey light limits the herb layer.
Importance: These sites are typically found adjacent to stream riparian areas and seepages and provide important buffer zones for these areas. They are also highly susceptible to soil compaction which can limit their ability to hold water and affect their ability to support plants and wildlife.

Wet Forest (Site Series 10 & 11)
Definition: These forests are found in level sites to basin depressions where there is a high water table and often standing water. They may have a sparse tree cover with a dense understorey of Labrador tea and sedge or they may be dominated by Western redcedar with a dense understorey of Skunk cabbage, Salal and Salmonberry.
Importance: These forests are often found at the edges of wetlands and form important transition areas between wetlands and drier forests. Species like Salmonberry and Salal provide food and cover for the mammals and birds using the wetlands. They are also highly susceptible to soil compaction which can limit their ability to hold water and affect their ability to support plants and wildlife.

Moisture Receiving Forest (Site Series 05 & 06)
Definition: Typically these forests are found on lower slopes and have deeper soils that retain more moisture. These areas are characterized by Western redcedar, Douglas-fir, Bigleaf maple, Grand fir, red alder and hemlock and have sword fern in the understorey.
Importance: These forests are important as conveyance zones for water, absorbing, filtering and storing it on the landscape. Lack of moisture receiving forests can result in increased surface runoff which decreases the amount of water retained in aquifers and increases stream flows during winter storms.

Water Courses

- Year Round Stream
- Intermittent Stream
- Ditch

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