

NEXWLÉLEXWM (BOWEN ISLAND)

# Coastal Western Hemlock Forests

## What are Coastal Western Hemlock Ecosystems?

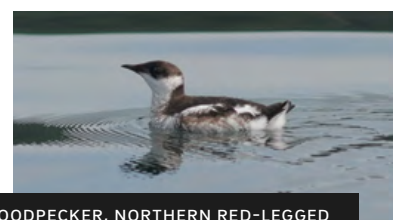
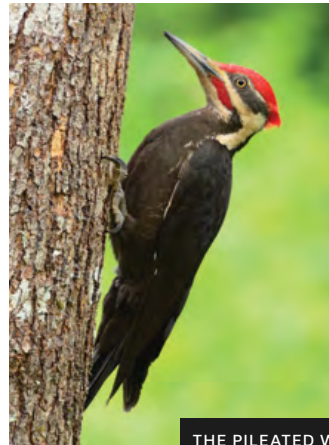
The Coastal Western Hemlock (CWH) zone describes a unique set of ecosystems that stretch along the north Pacific coast of North America, encompassing most of coastal BC. The wet, temperate rainforests that characterize the CWH zone are still widespread in BC; however, a number of rare CWH ecosystems adapted to the dry, Mediterranean conditions found in and around the Salish Sea are under threat and under-protected.

## Why are CWH Forests Important?

Extending from sea level to 1000 metres, the CWH zone may support the greatest diversity and abundance of wildlife habitat in BC. Large, old-growth trees provide critical habitat for species-at-risk like the Marbled Murrelet and Northern Goshawk. Snags provide nesting and foraging habitat for birds and small mammals. Fallen trees support amphibians, fungi and mosses, and act as nurse logs for seedlings. Root systems control and filter rainwater runoff into streams, protecting salmon habitat.





In addition to supporting biodiversity, CWH forests benefit our communities by:

- Providing cultural and spiritual places for First Nations that have lived in the region since time immemorial
- Mitigating climate change by capturing and storing carbon from the atmosphere
- Capturing rainwater and controlling and filtering runoff into lakes and streams, protecting drinking water and mitigating risk of flooding and drought
- Reducing pollution by removing dust, pollen, and smoke from the air
- Increasing property values
- Providing recreational opportunities and spaces for relaxation



THE PILEATED WOODPECKER, NORTHERN RED-LEGGED FROG, AND MARBLED MURRELET ARE AMONG THE MANY SPECIES THAT DEPEND ON CWH FORESTS

### CWH Forest Ecosystems

-  Young forest (40–80 yrs)
-  Mature forest (80–250 yrs)
-  Old forest (over 250 yrs)
-  Other land cover (incl. younger forests)



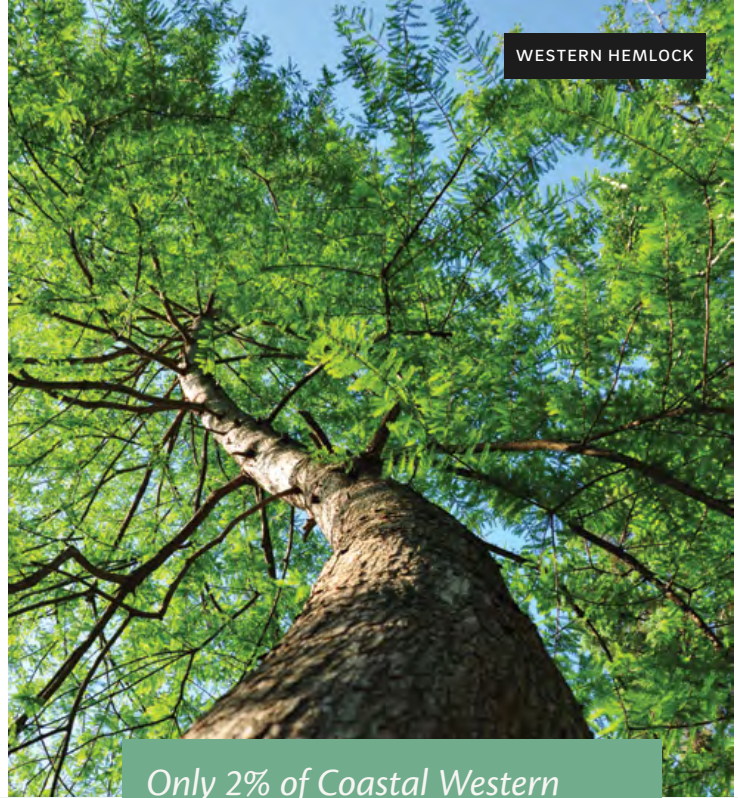
Learn more at [islandstrustconservancy.ca](https://islandstrustconservancy.ca)

Pileated woodpecker, frog and tree photos by Kristine Mayes; header photo by Erika Rathje; Marbled Murrelet by U.S. Department of Agriculture, licensed under CC BY 2.0. Map produced by Islands Trust.

## Why are CWH Forests at Risk?

As a result of past logging and development, 13 unique CWH ecosystems are at risk. While unsustainable logging remains one of the greatest threats to forests, the rarest CWH ecosystems occur in the Lower Mainland, Sunshine Coast, Howe Sound islands, and eastern Vancouver Island, where they also face widespread urban and rural development and other pressures from a growing human population. Climate change is expected to add to impacts on CWH forests. Intensifying summer drought will stress trees (as already seen in western redcedar die-offs), which will have cascading effects throughout the forest ecosystem.

The CWH ecosystems of the Salish Sea are among the rarest and most threatened in BC. Two thirds of historic forests in this region have been logged in the last 120 years while another 25% have been permanently converted to other land uses. Only 2% of CWH ecosystems in the Salish Sea region are protected, highlighting the urgent need to conserve remaining mature and old-growth forests.



*Only 2% of Coastal Western Hemlock ecosystems in the Salish Sea region are protected*

## What You Can Do

Become a forest steward:

- Protect living trees and large patches of natural forest
- Leave standing dead trees (snags) and fallen trees to decay in place to provide shelter and food for wildlife
- Restrict vehicle and livestock access into forests
- Control invasive species, like ivy, holly, daphne, and broom
- Keep cats indoors as much as possible
- Garden with native species
- Keep forest health in mind while managing fire risk. Focus on fire-proofing your home and planting a buffer of fire-resistant native plants like salal and Oregon grape. Help protect your community by protecting older forests: their high moisture-holding capacity makes them a natural fire break.
- Become a citizen scientist—add your observations to a growing global database using the iNaturalist app, or keep a nature journal

Consider how your community can protect forests through Environmental Development Permit Areas and conservation guidelines in your Official Community Plan and Land Use Bylaw.

### **Permanently protect land with conservation covenant.**

A covenant is a voluntary, legal agreement between you and a conservancy that protects land from development—not just while you live on the land, but also for future caretakers of the land. Covenants registered through the Islands Trust's **Natural Areas Protection Tax Exemption Program (NAPTEP)** are eligible for a 65% reduction in property taxes on the portion of land protected.

**Create a nature reserve through a donation of land** to a conservancy or parks agency. If you donate land with significant ecological value, you may be eligible for additional tax benefits through the federal Ecological Gifts Program.

**Opportunity Fund grants** can help cover costs associated with protecting land. Contact Islands Trust Conservancy to learn more at 250-405-5186 or [itcmail@islandstrust.bc.ca](mailto:itcmail@islandstrust.bc.ca).

For information on conservation covenants, land donations, and stewardship programs, contact:

### **Islands Trust Conservancy**

[islandstrustconservancy.ca](http://islandstrustconservancy.ca)

[itcmail@islandstrust.bc.ca](mailto:itcmail@islandstrust.bc.ca)

250-405-5186

### **Bowen Island Conservancy**

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This resource is adapted from material developed by Islands Trust Conservancy in collaboration with the Coastal Douglas-fir and Associated Ecosystems Conservation Partnership and Raincoast Conservation Foundation.