



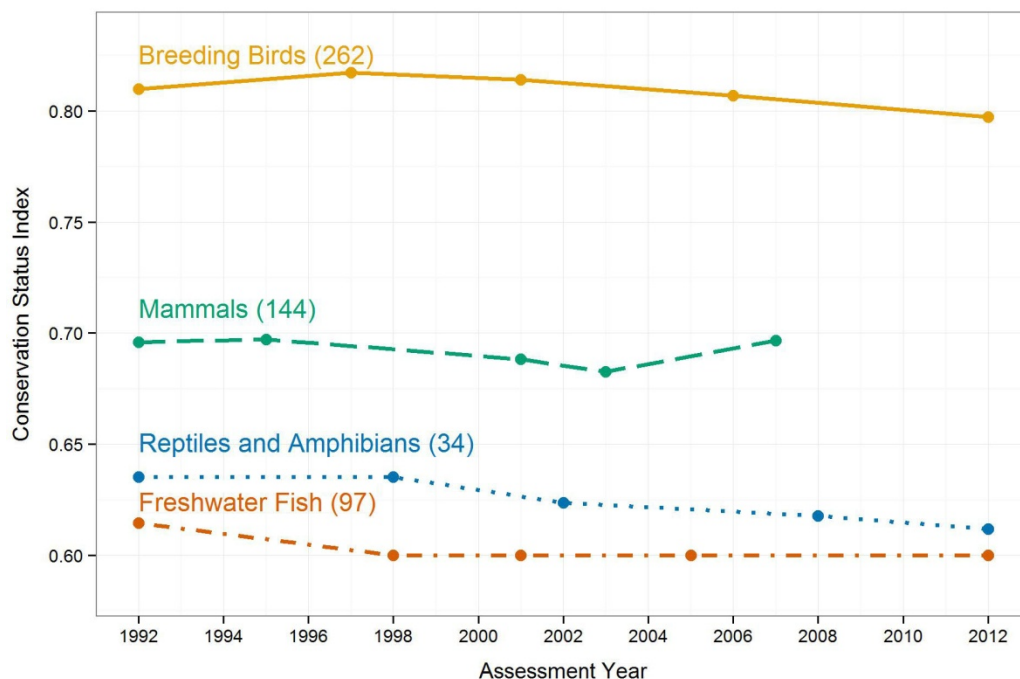
## Plants and Animals

### Trends in the Status of Native Vertebrate Species in B.C. (1992-2012)

The Conservation Status Index (CSI), shown in the graph below, reflects the overall conservation status of a group of species at a given time, and the trend in the CSI over time is an indication of how the overall status of a group of species is changing.

- The status of most vertebrate groups in British Columbia has declined since 1992 (the year the B.C. [Conservation Data Centre](#) began assessing the status of species in B.C.).
- Marine mammals are on the rebound! Several species which were heavily hunted in the 1800s and early 1900s have recovering populations.
- The overall decline in the status of birds was masked in the early 1990s by dramatic increases of several species that expanded their natural range into B.C.
- B.C. vertebrate groups have different levels of natural rarity. For example, most of B.C.'s reptiles and amphibians are much rarer than the majority of B.C.'s birds, and thus the Conservation Status Index for the group is lower overall.

Conservation Status Index for four vertebrate species groups in British Columbia, 1992-2012



**Note:** Mammals do not have a value for 2012 because not all species within the group have completed rank assessments for that year. The data will be updated once all the species within a group have been assessed.

If all species in a group were ranked as secure (S5) by the Conservation Data Centre (CDC), the index value would be 1. If all species in a group were extirpated from B.C. (SX), the index value would be 0. It is important to note that an index value of 1 is not the baseline. There are many species in B.C. that are naturally rare, and therefore would not be considered secure (S5) even in the absence of human impacts.

The Conservation Status Index is based on the [Red List Index](#), developed by the International Union for the Conservation of Nature (IUCN) and [Bird Life International](#). It has been modified to be used with [NatureServe](#)-style status [ranks](#) as assigned by the B.C. CDC, instead of IUCN Red List Assessment categories. [Read more about the CDC's assessment methods](#).

### Conservation Status Index (CSI) Values and Explanation of Changes by Vertebrate Group 1992 - 2012.

#### Breeding Birds (262 species)

Year	CSI	Explanation
1992	0.810	Initial assessment
1997	0.817	<p>Several species that were historically rare or not present in BC have shifted their ranges into the province, resulting in improved statuses; this is driving the increase in the index.</p> <p>Declines: Dusky Grouse, Horned Lark <i>strigata</i> subspecies, Killdeer, Northern Goshawk <i>laingi</i> subspecies, Purple Finch, Ruffed Grouse, Sooty Grouse, Western Wood-Pewee</p> <p>Improvements: Anna's Hummingbird, Baltimore Oriole, Black-chinned Hummingbird, Blue Jay, Broad-winged Hawk, Bullock's Oriole, Canvasback, Gray Catbird, Gray Flycatcher, Hutton's Vireo, Peregrine Falcon <i>anatum</i> subspecies, Rose-breasted Grosbeak, Say's Phoebe, Trumpeter Swan</p>
2001	0.814	<p>Declines: American Kestrel, Band-tailed Pigeon, Barn Swallow, Calliope Hummingbird, Cliff Swallow, Evening Grosbeak, Lark Sparrow, Western Kingbird, Western Screech-Owl <i>kennicottii</i> subspecies</p> <p>Improvements: Caspian Tern, Ring-billed Gull, Trumpeter Swan, Turkey Vulture, Yellow-bellied Flycatcher</p>
2006	0.807	<p>Many widespread and relatively common bird species, particularly aerial insectivores, have been exhibiting major population declines.</p> <p>Declines: Barn Swallow, Black Swift, Chestnut-backed Chickadee, Dusky Flycatcher, Horned Grebe, Horned Lark <i>strigata</i> subspecies, Lesser Scaup, Lewis's Woodpecker, Northern Rough-winged Swallow, Northern Saw-whet Owl <i>brooksi</i> subspecies, Pacific-slope Flycatcher, Pied-billed Grebe, Pigeon Guillemot, Red Crossbill, Rusty Blackbird, Swainson's Thrush, Tree Swallow, Wilson's Warbler, Yellow Warbler</p> <p>Improvements: Bald Eagle, Black-headed Grosbeak, Broad-winged Hawk, Common Loon, Gray Catbird, Merlin, Nashville Warbler, Osprey, White-throated Swift</p>
2012	0.797	<p>Declines of many widespread and relatively common bird species continue.</p> <p>Declines: Bank Swallow, Belted Kingfisher, Blue-winged Teal, Brandt's Cormorant, Eastern Kingbird, Grasshopper Sparrow, Great Blue Heron <i>fannini</i> subspecies, Herring Gull, Horned Lark, MacGillivray's Warbler, Magnolia Warbler, Northern Pintail, Olive-sided Flycatcher, Pine Siskin, Prairie Falcon, Red-throated Loon, Savannah Sparrow, Sora, Townsend's Solitaire, Violet-green Swallow, Wilson's Snipe</p> <p>Improvements: Calliope Hummingbird, Dusky Flycatcher, Evening Grosbeak, Gray Flycatcher, Lazuli Bunting, Pileated Woodpecker, Sandhill Crane, White-breasted Nuthatch</p>

### Reptiles and Amphibians (34 species)

Year	CSI	Explanation
1992	0.635	Initial assessment
1998	0.635	No changes
		Threats to Western Skink and Northern Red-Legged Frog have increased. Declines: Northern Red-legged Frog, Western Skink
2002	0.624	Improvements: None
		All of the known occurrences of Rocky Mountain Tailed frog have been protected in Wildlife Habitat Areas, thus reducing the major threat of logging. Threats to the interior population of Western Painted Turtle have increased. Declines: Western Painted Turtle - Intermountain - Rocky Mountain Population, Wood Frog
2008	0.618	Improvements: Rocky Mountain Tailed Frog
		Threats to Western Toad have increased, including habitat loss and Chytrid fungus. Declines: Western Toad
2012	0.612	Improvements: None

### Mammals (144 species)

Year	CSI	Explanation
1992	0.696	Initial assessment
		Sea Otter populations, re-introduced in the early 1970s, are increasing. Declines: None
1995	0.697	Improvements: Sea Otter
		Vancouver Island Wolverine is now considered historical, Vancouver Island Marmot populations continue to decline. There were concerning declines in Mule Deer populations. Declines: Wolverine <i>vancouverensis</i> subspecies, Canada Lynx, Vancouver Island Marmot, Fisher, Mule Deer, Douglas's Squirrel, American Badger
2001	0.688	Improvements: None
		Caribou are declining due to extensive habitat loss and human disturbance, Bighorn Sheep experienced localized, but severe, die-off from disease. Declines: Bighorn Sheep, Caribou (Southern Mountain Population), Caribou (Boreal Population), Caribou (Northern Mountain Population)
2003	0.683	Improvements: None
		Many marine mammals, which have been heavily hunted in the past, are recovering; this is the major driver behind the strong increase. Mule Deer populations are seen to be increasing again. Porcupines seem to be declining with no apparent cause, and Boreal Caribou continue to decline due to habitat loss and fragmentation. Declines: North American Porcupine, Caribou (Boreal Population)
2007	0.697	Improvements: Common Minke Whale, Fin Whale, Elk, Roosevelt Elk, Grey Whale, Steller Sea Lion, Humpback Whale, Mule Deer, Sperm Whale, California Sea Lion

### Freshwater Fish (97 species)

Year	CSI	Explanation
1992	0.614	Initial assessment Hadley Lake sticklebacks are declared extinct due to the introduction of non-native catfish, several salmon species are declining, and Eulachon populations have declined significantly since historic times.  Declines: Hadley Lake Limnetic Stickleback, Hadley Lake Benthic Stickleback, Pacific Lamprey, Coho Salmon, Sockeye Salmon, Eulachon
1998	0.600	Improvements: None
2001	0.600	No changes
2005	0.600	No changes
2012	0.600	No changes



The conservation status of Coastal Great Blue Heron (*fannini* subspecies) has declined.  
Photo credit: Ross Vennesland



Sea otters were reintroduced to British Columbia in the 1970's, and their populations have been increasing.  
Photo credit: US NPS/Jim Pfeiffenberger

## Methods

Download the detailed methods used to develop this indicator [here](#).

## References and other useful links

Butchart S.H., H. Resit Akçakaya, J. Chanson, J.E. Baillie, B. Collen, et al. 2007. Improvements to the Red List Index. PLoS ONE 2: e140. doi: [10.1371/journal.pone.0000140](https://doi.org/10.1371/journal.pone.0000140)

Quayle, J.F., L.R. Ramsay and D.F. Fraser. 2007. Trend in the Status of Breeding Bird Fauna in British Columbia, Canada, Based on the IUCN Red List Index Method. Conservation Biology 21: 1241-1247. doi: [10.1111/j.1523-1739.2007.00753.x](https://doi.org/10.1111/j.1523-1739.2007.00753.x)

B.C. Conservation Data Centre Home page: <http://www.env.gov.bc.ca/cdc/>

CDC Rank assessment methodology: <http://www.env.gov.bc.ca/cdc/methods.html>

BC Species and Ecosystems Explorer (current conservation status and related information for all of B.C.'s flora and fauna): <http://www.env.gov.bc.ca/atrisk/toolintro.html>

## Data

\*By accessing these datasets, you agree to the license associated with each file, as indicated in parentheses below.

[Chart data: Conservation Status Index values for vertebrates, 1992-2012](#) (License: [B.C. OGL](#)) [Dataset Details](#)

[B.C. Vertebrate Rank History, 1992-2012](#) (License: [B.C. OGL](#)) [Dataset Details](#)

Published and Available On-Line at Environmental Reporting BC (January 2014):  
<http://www.env.gov.bc.ca/soe/indicators/plants-and-animals/native-vertebrate-species.html>