

# Species at Risk

## Western Painted Turtle

*Chrysemys picta bellii*



### STATUS

The Western Painted Turtle is protected as Endangered under the federal *Species at Risk Act* and is red-listed provincially.

### HABITAT DESCRIPTION

Western Painted Turtles are highly aquatic and are found in shallow waters of ponds, lakes, oxbows, and marshes, in slow-moving stream reaches, and in quiet backwater sloughs of rivers. They also require land adjacent to aquatic foraging habitat for nesting habitat, usually within 200 m of the watercourse. These are often on gentle, well-drained south-facing slopes with soil, sand or gravel substrates that have minimal or no plant cover. They require habitat that provides a variety of dietary needs for all life stages: aquatic vegetation, carrion, and small live prey in shallow waters, such as invertebrates and tadpoles. Suitable habitat in agricultural areas is decreasing due to activities that drain or infill water bodies, and free-ranging cattle that degrade water quality.

### HABITAT FEATURES (BIOPHYSICAL ATTRIBUTES)

Western Painted Turtles require habitat with the following biophysical attributes:

- An area of slow-moving or stagnant freshwater (particularly shallow ponds, lakes, marshes, and slow-moving streams) with open banks, muddy substrates, and emergent aquatic vegetation to support foraging and provide a moist microenvironment;
- Floating logs, branches, rocks or other emergent objects for basking; and
- Loose, warm, well-drained, exposed soils with little to no vegetation up to ~150 m from the watercourse featuring flat or gently sloping ground and sand, gravel or silt substrates.

### CRITICAL HABITAT RANGE

The Western Painted Turtle Pacific Coast Population occurs in the lower Fraser Valley from about Chilliwack to Greater Vancouver, Sunshine Coast north to Powell River, Texada Island, and parts of Vancouver Island including the Capital Regional District, Nanaimo area, and Alberni Valley. A map of habitat range is currently unavailable.



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## CRITICAL HABITAT FEATURE LINK TO BC AGRICULTURAL BMPs

This table identifies which Environmental Farm Plan (EFP) Beneficial Management Practices (BMPs) may be applicable; other stewardship actions may also be possible.

Habitat biophysical attributes	Activity that would destroy critical habitat	Agricultural BMP for protection or enhancement of habitat
<ul style="list-style-type: none"> <li>An area of slow-moving or stagnant freshwater with open banks, muddy substrates, and emergent aquatic vegetation to support foraging and provide a moist microenvironment</li> </ul>	<p>Alteration of water courses/wetted areas (e.g., draining and filling in wetlands, water diversion due to irrigation and ditching, dredging, water management, damming, removal of log-jams, clearing of culverts, artificial channelization, reduction of sandbars, or shoreline alteration).</p> <p><i>How activity would destroy critical habitat:</i></p> <ul style="list-style-type: none"> <li>Alteration of water courses leads to habitat loss or degradation of aquatic and/or shoreline terrestrial habitat required for all life history functions</li> <li>Changes to hydrology can fragment or isolate patches of suitable habitat, destroying areas required for dispersal</li> </ul>	<ul style="list-style-type: none"> <li>Protect watercourses; avoid any alteration that will affect water quantity or flow, create an impassable barrier or alter the channel or shore</li> <li>Protect and enhance riparian vegetation</li> <li>Locate roads away from sensitive habitat</li> <li>Ensure there is safe passage for turtles through the use of culverts or fencing</li> <li>Avoid intentional introductions of invasive species</li> </ul> <p><b>BMPs</b>                  2006-0601                  2006-0602                  2006-1003                  2006-1005                  2006-1006                  2006-1101                  2006-1802                  2006-2001                  2006-2103                  2006-2105                  2006-2107                  2006-2202                  2018/2019-0601                  2018/2019-0704                  2018/2019-3001                  2018/2019-1002                  2018/2019-1003                  2018/2019-1004                  2018/2019-1005                  2018/2019-1006                  2018/2019-1101                  2018/2019-0601                  2018/2019-0704                  2018/2019-2201                  2018/2019-2202                  2018/2019-2203                  2018/2019-2204                  2018/2019-2205                  2018/2019-3501</p>
	<p>Installation of impassable barriers to turtle movement (e.g., multi-lane roads with no culverts).</p> <p><i>How activity would destroy critical habitat:</i></p> <ul style="list-style-type: none"> <li>Installation of impassable barriers leads to road mortality (particularly of females), elimination of access between foraging, dispersal, and breeding habitats, which results in loss of habitat function and reduced gene flow</li> </ul>	
	<p>Introduction of invasive plant species (i.e. yellow flag iris (<i>Iris pseudacorus</i>), Eurasian water milfoil (<i>Myriophyllum spicatum</i>), reed canarygrass (<i>Phalaris arundinacea</i>), Himalayan blackberry (<i>Rubus armeniacus</i>), knotweed (<i>Fallopia spp.</i>) or Himalayan balsam (<i>Impatiens glandulifera</i>)).</p> <p><i>How activity would destroy critical habitat:</i></p> <ul style="list-style-type: none"> <li>Non-native plants outcompete native plants used by the turtles for foraging and can destroy basking or nesting areas by encroachment</li> </ul>	
	<p>Mechanical removal of vegetation (e.g. clearing, brushing or mowing).</p> <p><i>How activity would destroy critical habitat:</i></p> <ul style="list-style-type: none"> <li>Vegetation removal can destroy habitat structure and/or attributes used for refuge or basking</li> <li>Warming/drying of the microclimate, debris deposition, and bank erosion (causing sedimentation of the water course) lead to loss of water quantity/quality required to support foraging on aquatic invertebrates</li> </ul>	
	<p>Introduction of American Bullfrogs (<i>Lithobates catesbeianus</i>), Red-Eared Sliders (<i>Trachemys scripta elegans</i>), other subspecies of Painted Turtle or other turtle species.</p> <p><i>How activity would destroy critical habitat:</i></p> <ul style="list-style-type: none"> <li>Non-native invasive species or other species of turtle lead to predatory and/or competitive influences that degrade suitable aquatic habitat</li> <li>Hybridization with other subspecies alter the genetic makeup of Painted Turtle</li> </ul>	
<ul style="list-style-type: none"> <li>Downed woody debris, rocks or other emergent objects in watercourses</li> </ul>	<p>Removal of woody debris or other emergent objects in watercourses.</p> <p><i>How activity would destroy critical habitat:</i></p> <ul style="list-style-type: none"> <li>Removal results in loss of habitat features for refuge and basking</li> </ul>	<ul style="list-style-type: none"> <li>Protect or create woody debris/emergent objects in watercourses</li> </ul> <p><b>BMPs</b>                  2006-2107                  2018/2019-1002                  2018/2019-1101                  2018/2019-3501</p>
<ul style="list-style-type: none"> <li>Loose, warm, well-drained soils up to ~150 m from the watercourse</li> </ul>	<p>Repeatedly driving or walking over riparian areas can lead to compaction of soils.</p> <p><i>How activity would destroy critical habitat:</i></p> <ul style="list-style-type: none"> <li>Loose soils are required for laying eggs; compaction can make it too difficult to dig</li> </ul>	<ul style="list-style-type: none"> <li>Ensure there are loose non-compacted soils where farm vehicles do not go near riparian areas; when unavoidable, concentrate vehicle movement to designated routes to minimize generalized compaction.</li> </ul> <p><b>BMPs</b>                  2006-0601                  2006-0602                  2006-2107                  2006-2204                  2018/2019-0601                  2018/2019-0704                  2018/2019-3501</p>



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**OR EMAIL:** [sarpal@ardcorp.ca](mailto:sarpal@ardcorp.ca)

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