



## The Bull Trout (Western Arctic populations)... a Species at Risk in Canada

COSEWIC Status - Special Concern, November 2012

SARA Status - Under consideration



*Salvelinus confluentus*  
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The Bull Trout (Western Arctic populations) has been assessed as a species of Special Concern by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). It is currently

being considered for listing under the federal *Species at Risk Act*. If listed under the *Species at Risk Act*, a management plan must be developed for this species.

### General description

The Bull Trout (*Salvelinus confluentus*) belongs to the salmon and trout family (*Salmonidae*) and is part of the char subgroup that also includes Dolly Varden (*S. malma*), Lake Trout (*S. namaycush*), Brook Trout (*S. fontinalis*) and Arctic Char (*S. alpinus*). Bull Trout has the following characteristics:

- A long and slender body;
- A large broad head and prominent upper jaw;
- Tail fin is slightly forked;
- Its back is olive-green to blue-grey;
- Its sides are silvery with small pink, lilac, yellow-orange or red spots;
- Its belly is pale in colour, and may become yellow, orange or red in males during spawning;
- The pelvic and anal fins have white leading edges with no black line; and
- Size at maturity is dependent upon life history. Individuals from resident populations have an average length of 250 mm (maximum 410 mm); fluvial populations are greater than 400 mm (maximum 730 mm); and adfluvial populations are also greater than 400 mm (maximum 900 mm). Individuals from anadromous populations may be larger still.

## Distribution

Bull Trout are found in western North America from northern Nevada through Oregon, Idaho, Montana, and Washington. The Canadian distribution extends throughout British Columbia and western Alberta, with a northern limit into the southern Yukon and the central portion of the Northwest Territories. Based on genetic analysis, range disjunction and distribution, Bull Trout have been divided into five designated units: Southcoast BC populations (DU1); Western Arctic (DU2); Yukon (DU3); Saskatchewan-Nelson (DU4); and Pacific populations (DU5). The Western Arctic populations (DU2) include those populations in the Mackenzie River system and major tributaries, such as the Liard, Peace and Athabasca rivers.

## Habitat and life history

The Bull Trout is a coldwater species found in lakes, streams and rivers from sea level to mountainous areas. Its habitat has been described by the U.S. Fish and Wildlife Service as “cold, clean, complex and connected.” There are four types of life history strategies used by Bull Trout, including: 1) resident; 2) fluvial; 3) adfluvial; and 4) anadromous. A resident form spends its life in small rivers or streams, isolated by physical, chemical or other forms of barriers. The fluvial form completes its life cycle in small rivers and streams, migrating between natal streams and larger streams. The adfluvial form is similar, but matures in lakes rather than streams and rivers. The anadromous form, which is found only in southwestern British Columbia and northwestern Washington, migrates from natal freshwater streams to feeding habitat at sea. Sexual maturity occurs between five and seven

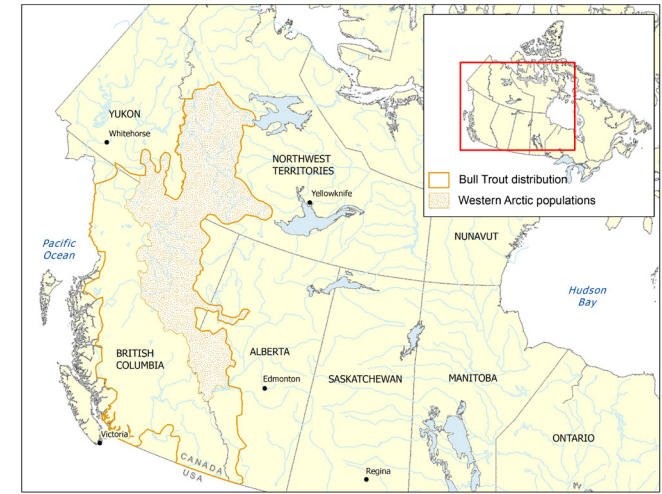
years of age. Spawning occurs in the fall, when water temperatures fall below 10°C. Preferred spawning areas are cold, unpolluted moving streams with cobble or loose gravel substrates and are associated with groundwater sources. The female digs a redd (or nest) in the center of the channel, and is accompanied by a dominant male, who defends her from other males competing for fertilization. Some males, termed “sneakers” are able to mimic females, allowing them to approach close enough to fertilize some of the eggs. Eggs hatch in the spring. Typical maximum age of Bull Trout is unknown, but specimens have been recorded up to 24 years old.

## Diet

Bull Trout are opportunistic foragers with a wide diversity of prey sources. While adults continue to eat a wide variety of invertebrates, they are voracious predators and prey upon other fish species as opportunities present.

## Threats

The greatest threats to Bull Trout include degraded and fragmented habitat resulting from development and the introduction of non-native species. Bull Trout are vulnerable to hybridization with introduced Brook Trout in areas where both species now occur. Impacts from oil and gas development, forestry, mining, transportation infrastructure and hydroelectric projects affect habitat by increasing siltation and water temperatures or decreasing stream flow volumes. In turn, these changes reduce reproductive success. As well, barriers to fish movement, such as dams, weirs, and elevated stream temperatures, fragment migratory corridors required for spawning. Overfishing may also remain a threat. As Bull Trout are



difficult to distinguish from other char and trout being recreationally fished, the misidentification by fishers also poses a risk.

## Similar species

Bull Trout were once considered the same species as Dolly Varden.

**Text Sources:** COSEWIC Status Report on the Bull Trout in Canada, 2012. *In press.*

For more information, visit the SARA Registry at [www.SARAreistry.gc.ca](http://www.SARAreistry.gc.ca) or the website below.

*Cette publication est également disponible en français.*

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[www.aquaticspeciesatrisk.gc.ca](http://www.aquaticspeciesatrisk.gc.ca)

*Section 32 (1) of the Species at Risk Act (SARA) states that “no person shall kill, harm or harass, capture or take an individual of a wildlife species that is listed as an extirpated species, an endangered species or a threatened species.”*