

## THREAT LEVEL

### IDAHO FISH & GAME

#### Apparently Secure (S4):

Moderate risk of extinction, restricted range, few populations



### WDFW PRIORITY HABITAT AND SPECIES PROGRAM

Species of Great Conservation Need



### U.S. ENDANGERED SPECIES ACT

Threatened



### CANADIAN SPECIES AT RISK ACT

Special Concern

## CALL TO ACTION

- ▶ Support fisheries that specialize in repopulation
- ▶ Invest in fish passage infrastructure
- ▶ Research threats to tributaries and natal streams



# Bull Trout

*Salvelinus confluentus*

Photo Credit: wdfw.wa.gov

## OVERVIEW

Bull trout in northern Idaho face challenges from dams and other forms of water diversion. These obstructions impact the rivers where they mature, their natal streams, and migration routes. Non-native fish species outcompete and prey on bull trout, posing long-term threats to the population. Impacts from climate change, such as rising water temperatures and altered spring melt, put the species at additional risk.

## CONSERVATION CONSIDERATIONS

### VULNERABILITY RANKING

CLIMATE

HIGH

NON-CLIMATE

HIGH

CONFIDENCE

HIGH

Physiological, phenological, or ecological factors to consider when planning conservation projects:

- ▶ Bull trout are dependent on the availability of cold-water habitat
- ▶ Bull trout are widespread, and populations may experience threats differently from one location to another

## Vulnerability Rankings Methodology

*These priority species have been assessed for climate and non-climate vulnerability using a process adapted from the Washington Department of Fish & Wildlife's Methodology for ranking the Climate Change Vulnerability of Species. WDFW's approach includes rating each species' climate sensitivity and exposure. These two rankings are then averaged for a climate vulnerability ranking. The Tribe developed a non-climate vulnerability ranking to capture species' relative risk and adaptability to factors such as human-caused development, predator/prey relationships, or low population numbers. Confidence rankings were assessed based on the availability of scientific research.*

# KEY THREATS

## Habitat Degradation & Loss

Alterations to aquatic ecosystems caused by dams, development, and agriculture have reduced viable habitat. Changes in streamflow and sedimentation can impact spawning and reduce habitat. Runoff from development and agriculture impacts water quality, introducing chemicals and toxins that can increase mortality rates.

## Climate Change

- ▶ Bull trout rely on cold water for spawning and survival. Increasing water temperatures due to climate change impact habitat suitability, causing the fish to seek colder waters.
- ▶ Rising temperatures are altering snowpack and, combined with shifting precipitation patterns, are changing the timing of peak streamflow.

## Non-native Fish Species

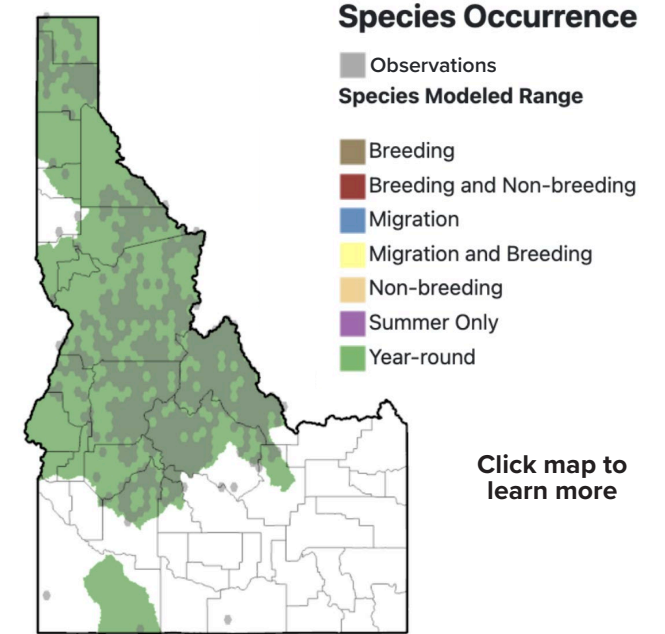
Non-native species are outcompeting bull trout for resources and preying on juvenile bull trout, which contributes to population decline.



Photo Credit: idfg.idaho.gov

## PROJECTED AVG AUGUST STREAM TEMPERATURE (°C)

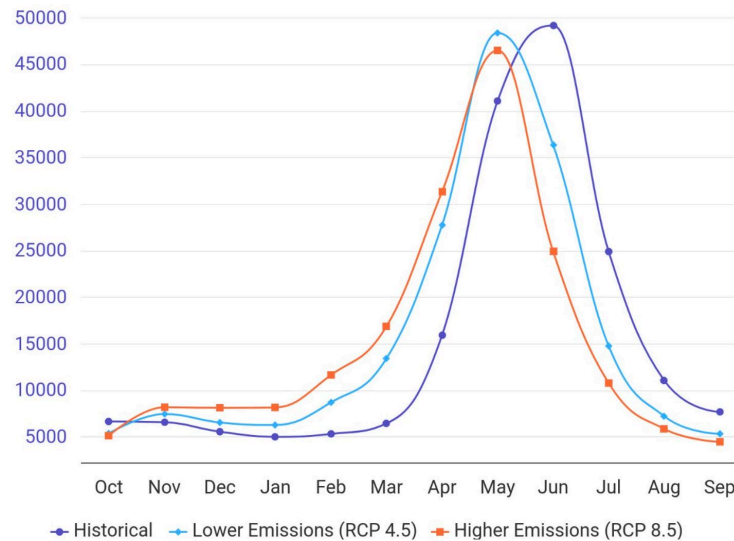
Stream location	Historical	Mid century (2040)	Late century (2080)
Boundary Creek, at Saddle creek	10.58	12.32	13.24
"Lower" Smith Creek	14.13	15.51	16.52
"Upper" Smith Creek	10.98	12.24	13.15
Kootenai River, Copeland Rd. crossing	16.20	17.67	18.74
Kootenai River, Nimz ranch	15.97	17.43	18.48
"Upper" Myrtle creek	10.25	11.48	12.37
"Lower" Myrtle creek	13.45	14.81	15.74
Deep Creek, where Pine Island Rd ends	15.22	16.65	17.69
Kootenai River, Leonia	17.03	18.53	19.62
Deep Creek, at Ruby creek	14.46	15.86	16.87



Click map to learn more

Source: Idaho Fish & Game

## PROJECTED NON-REGULATED STREAMFLOW (2070-2099) KOOTENAY RIVER AT BONNERS FERRY, ID



## REFERENCES

- "Bull Trout." Washington Department of Fish & Wildlife, 2025, [wdfw.wa.gov/species-habitats/species/salvelinus-confluentus](https://wdfw.wa.gov/species-habitats/species/salvelinus-confluentus). Accessed May 2025.
- "Idaho Fish and Game Species Catalog – Salvelinus confluentus (Bull Trout)". Idaho.gov, Idaho Official Government Website, <https://idfg.idaho.gov/species/taxa/19737>. Accessed 6 Oct. 2025.
- "NatureServe Explorer 2.0." Explorer.natureserve.org, [explorer.natureserve.org](https://explorer.natureserve.org). Accessed May 14 2025.
- Stream Temperatures chart: <https://www.fs.usda.gov/rm/boise/AWAE/projects/NorWeSt.html>.
- Streamflow chart: Hegewisch, K.C., Abatzoglou, J.T., ' Future Streamflows' web tool. Climate Toolbox (<https://climatologytoolbox.org/>) accessed Apr. 30 2025.
- "The Complexities of Idaho's Bull Trout." Idaho.gov, <https://idfg.idaho.gov/blog/2021/05/complexities-idahos-bull-trout>.

# PRIORITY AT-RISK SPECIES

## KOOTENAI TRIBE OF IDAHO