

Native Trout in Alberta: North Saskatchewan

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Trout Unlimited Canada
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Trout Unlimited Canada

- Registered charity
- Volunteer-based chapters across Canada
- Professional staff in Calgary and Guelph
- Broad base of members, supporters, and partners



Our Priorities

- Water Quality
- Water Quantity
- Fish Communities
- Fish Habitat

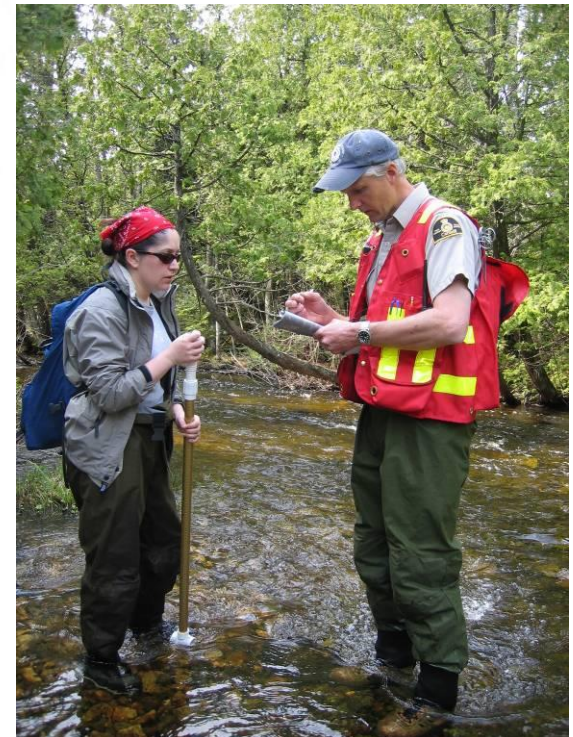


Our Work

- Conservation and Restoration
- Science
- Education

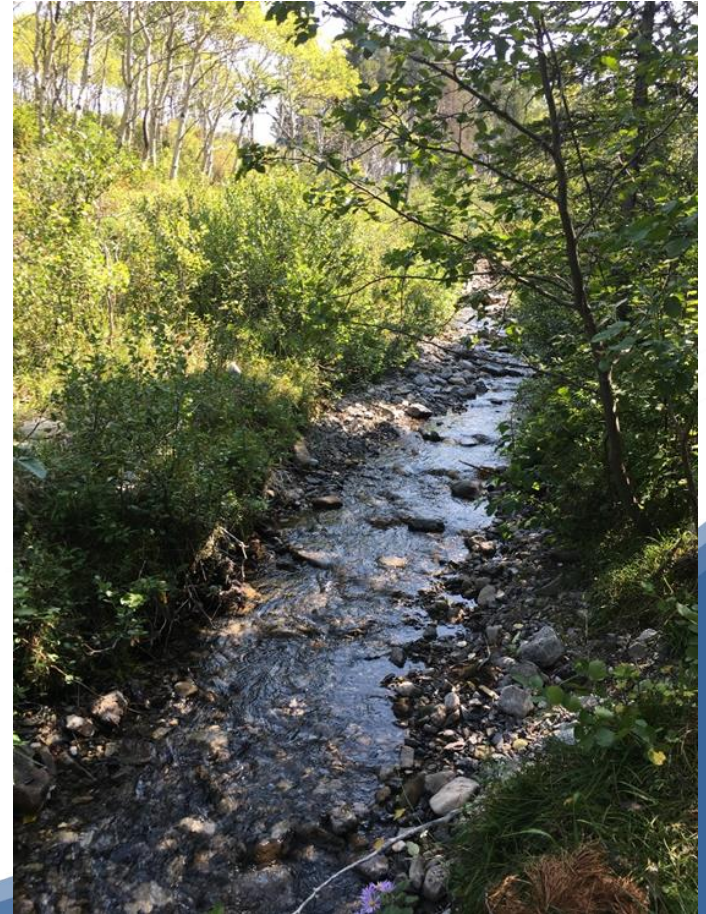


Photo Credit - Sam Hoffe



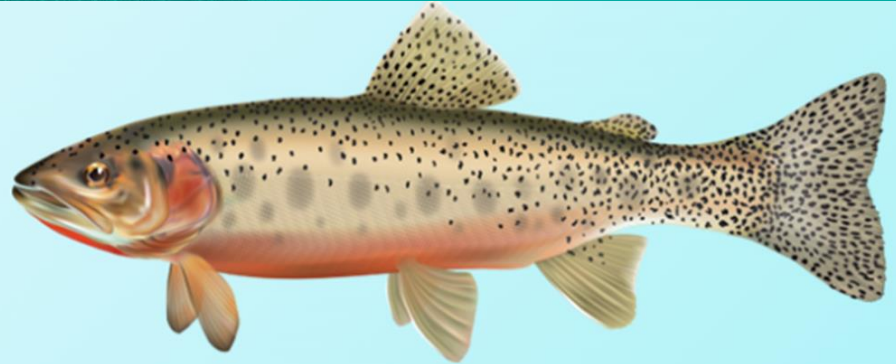
Conservation

- Reduce water temperature
- Improve water quality
- Improve connections
- Recover species at risk
- Restore rivers, riverbanks
- Reduce pollution
- Protect habitats

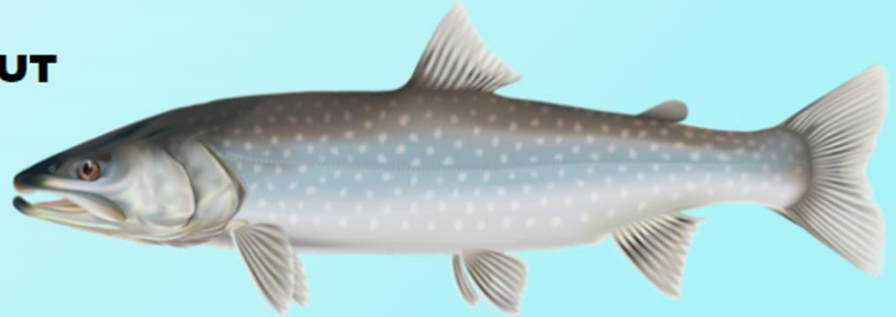




ATHABASCA RAINBOW TROUT

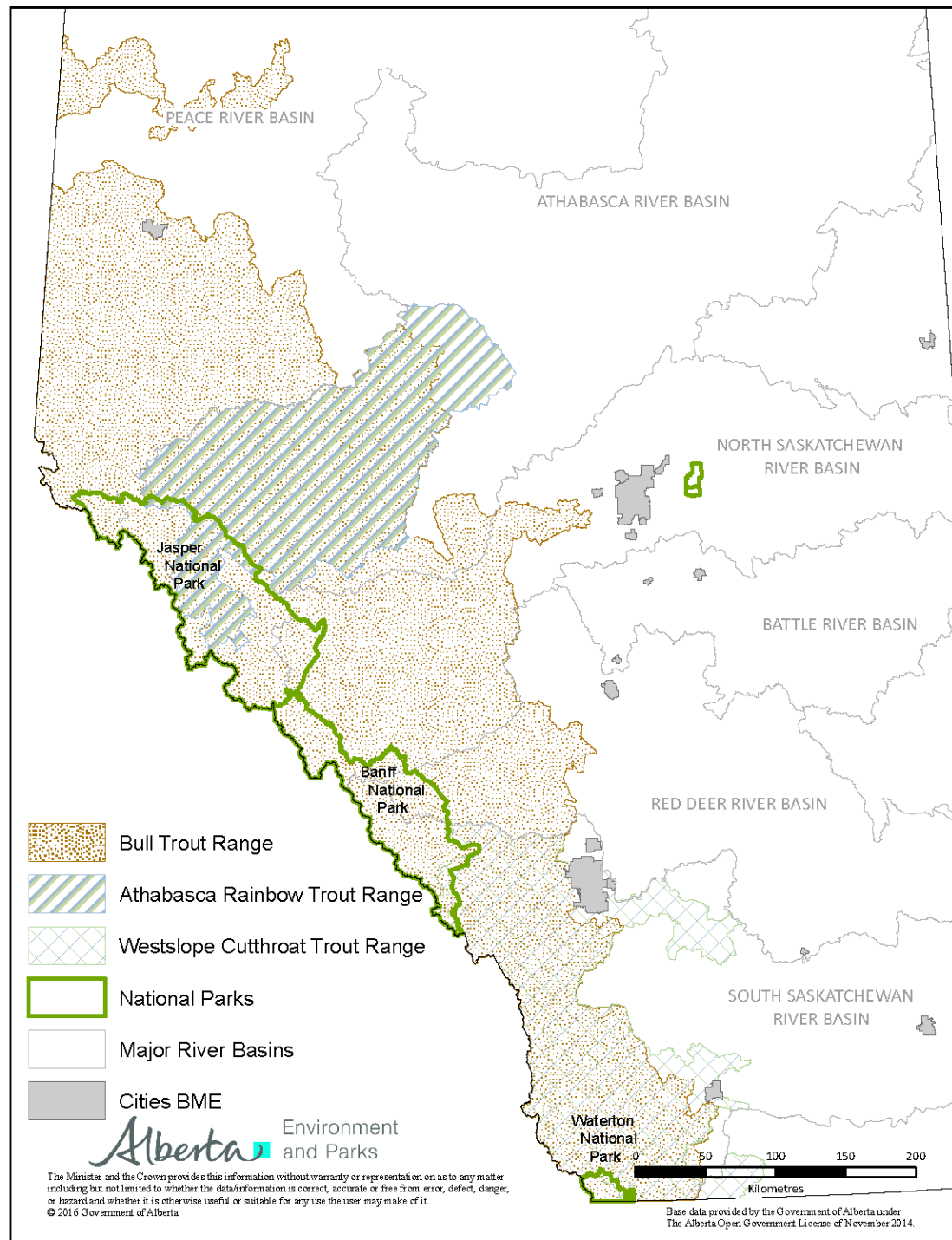


WESTSLOPE CUTTHROAT TROUT



BULL TROUT





Bull Trout - Threatened

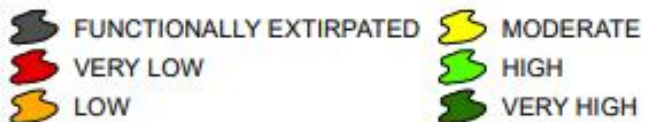


- Range-wide declines during the last century
 - Overfishing and persecution
 - Habitat fragmentation
 - Habitat degradation and loss
 - Competition/hybridization with non-native salmonids – Brook Trout, Brown Trout
 - Climate change
 - Angling pressure



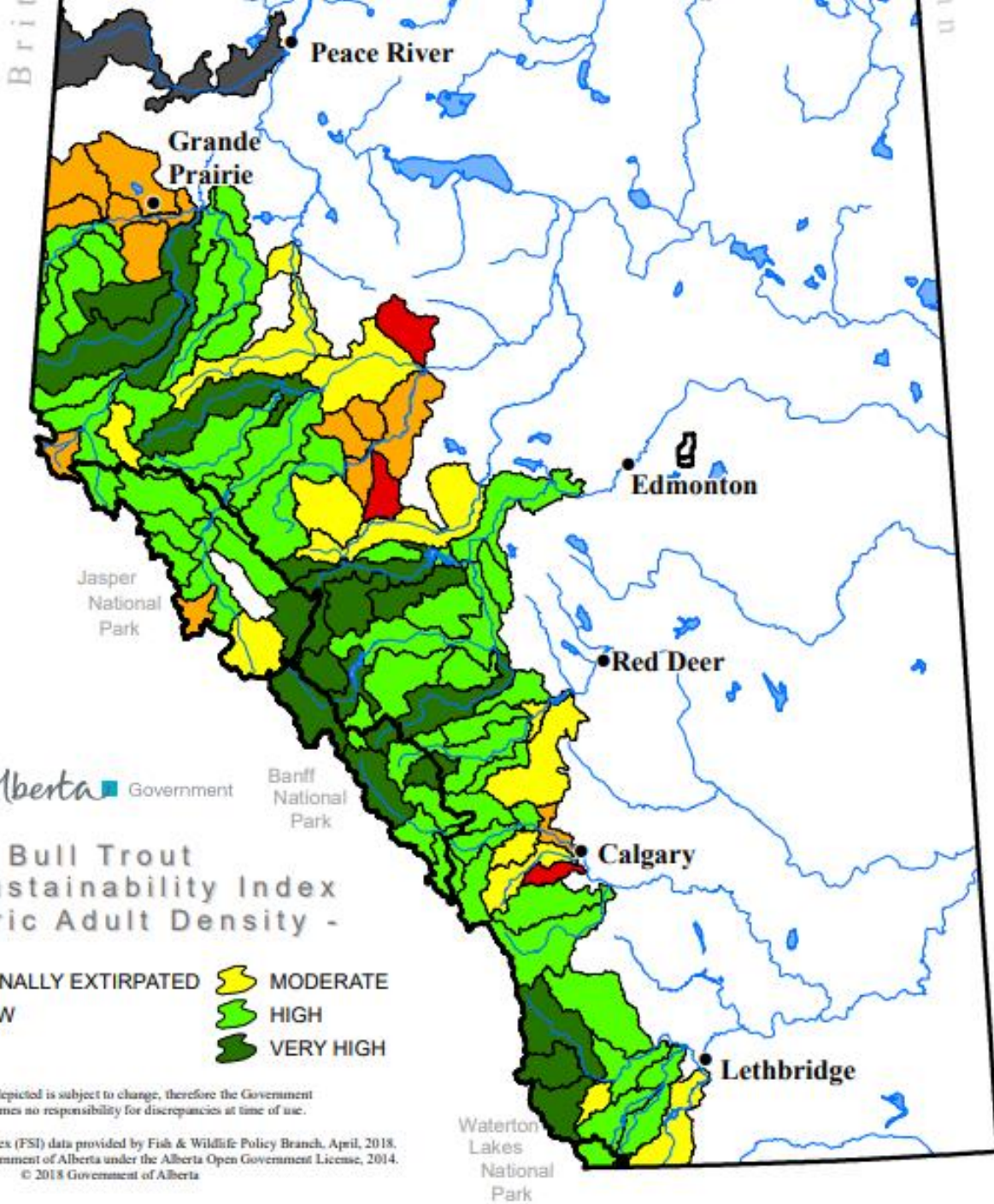
Alberta Government

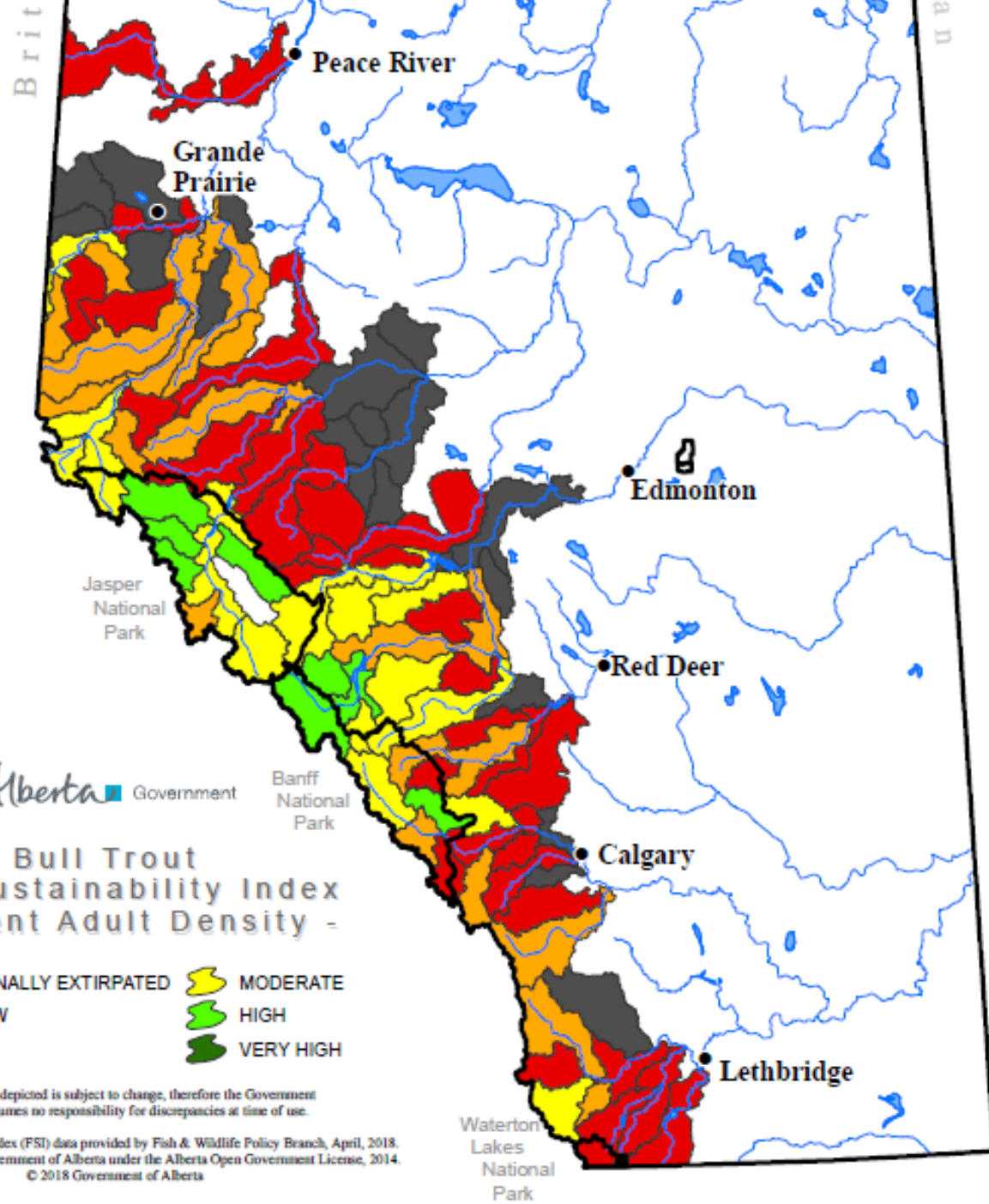
Bull Trout Fish Sustainability Index - Historic Adult Density -



Information as depicted is subject to change, therefore the Government of Alberta assumes no responsibility for discrepancies at time of use.

Alberta Fish Sustainability Index (FSI) data provided by Fish & Wildlife Policy Branch, April, 2018.
Base data provided by the Government of Alberta under the Alberta Open Government License, 2014.
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Alberta Government

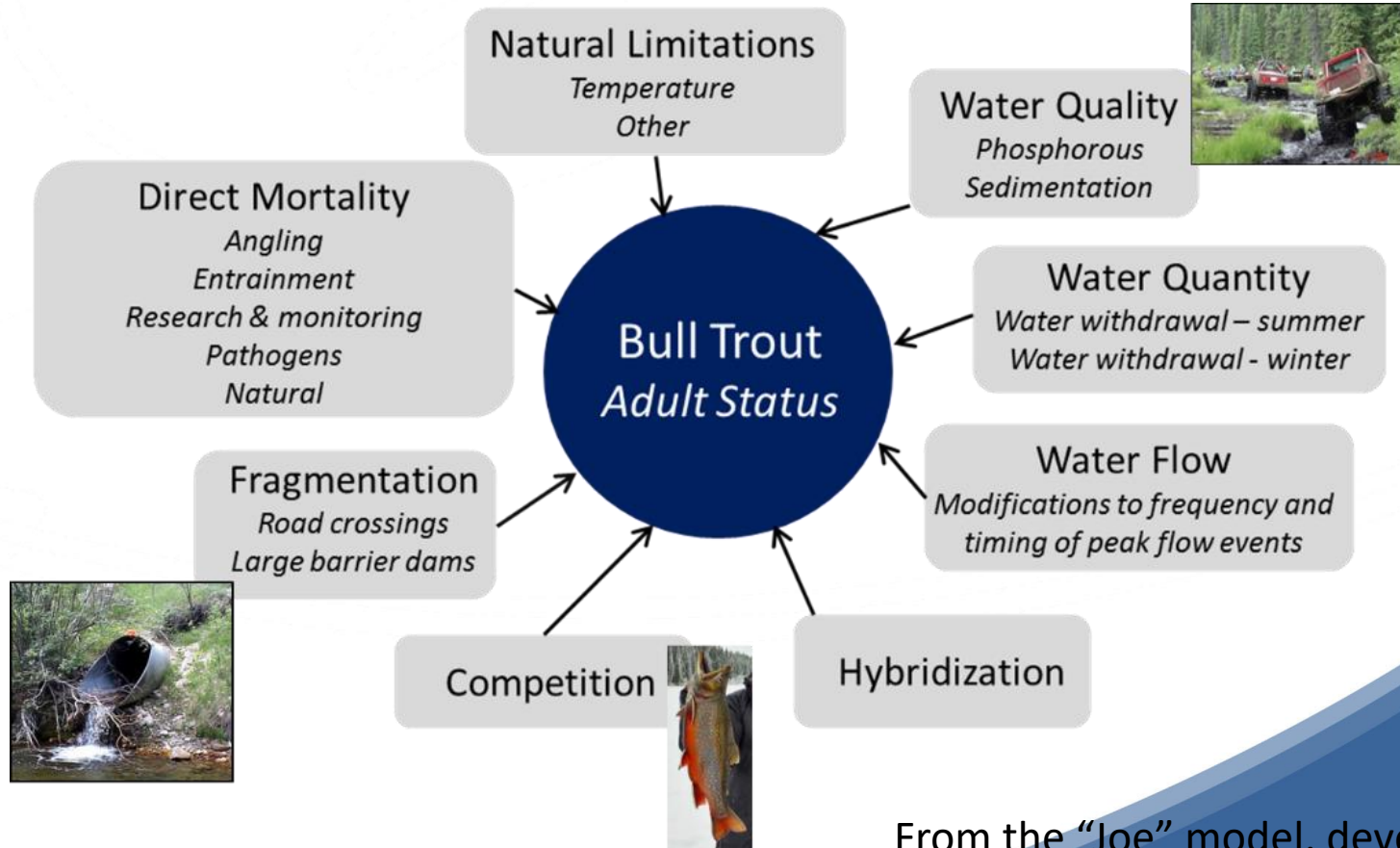
Bull Trout Fish Sustainability Index - Current Adult Density -

- FUNCTIONALLY EXTIRPATED
- VERY LOW
- LOW
- MODERATE
- HIGH
- VERY HIGH

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Cumulative Effects



From the “Joe” model, developed by Alberta Environment and Parks (AEP)



OK, so what is TUC doing about it?

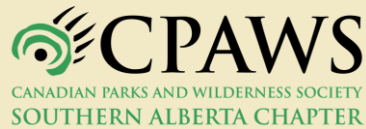
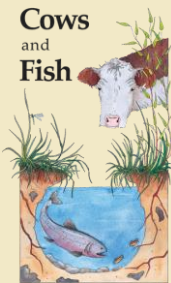


We are not a regulator, but we are a facilitator and doer.

- Threats we can address directly right now are:
 - Habitat fragmentation
 - Habitat degradation
- We can help make Bull Trout habitat more connected, more complex, and a lot “cleaner”
- We can also build support and create native trout allies through communications efforts



Alberta Native Trout Collaborative



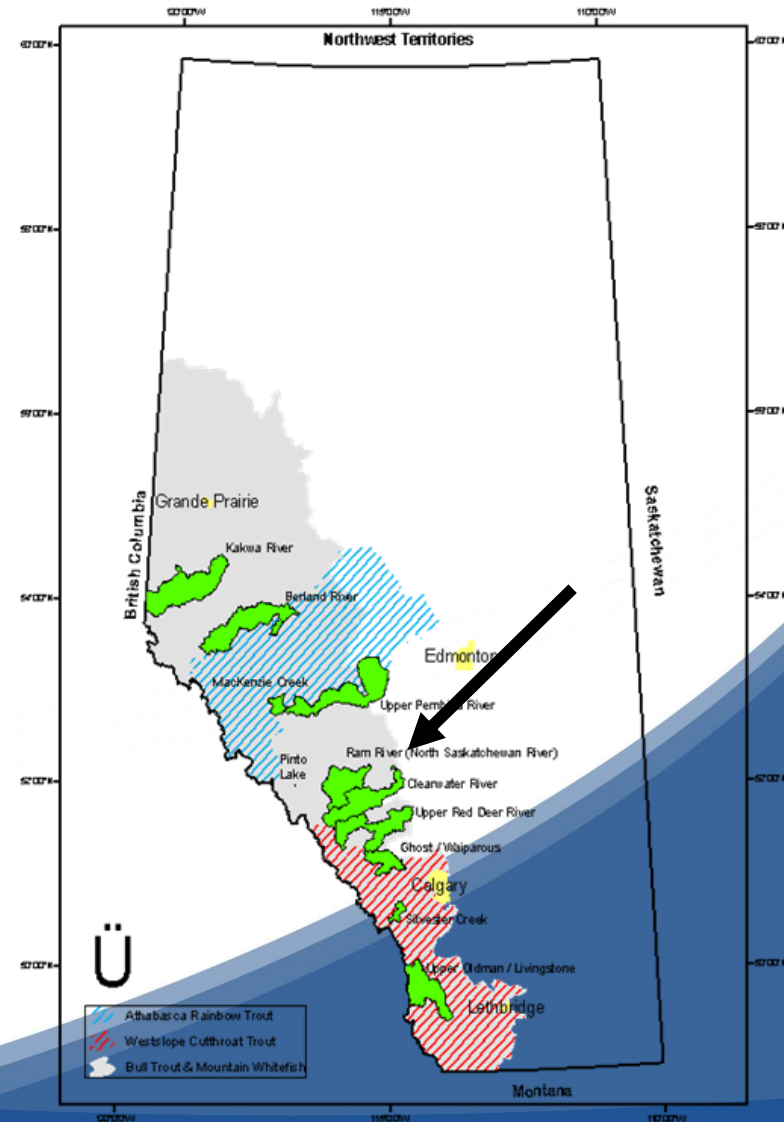
Fisheries and Oceans
Canada

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Canada

Bull Trout Recovery in the North Sask Basin

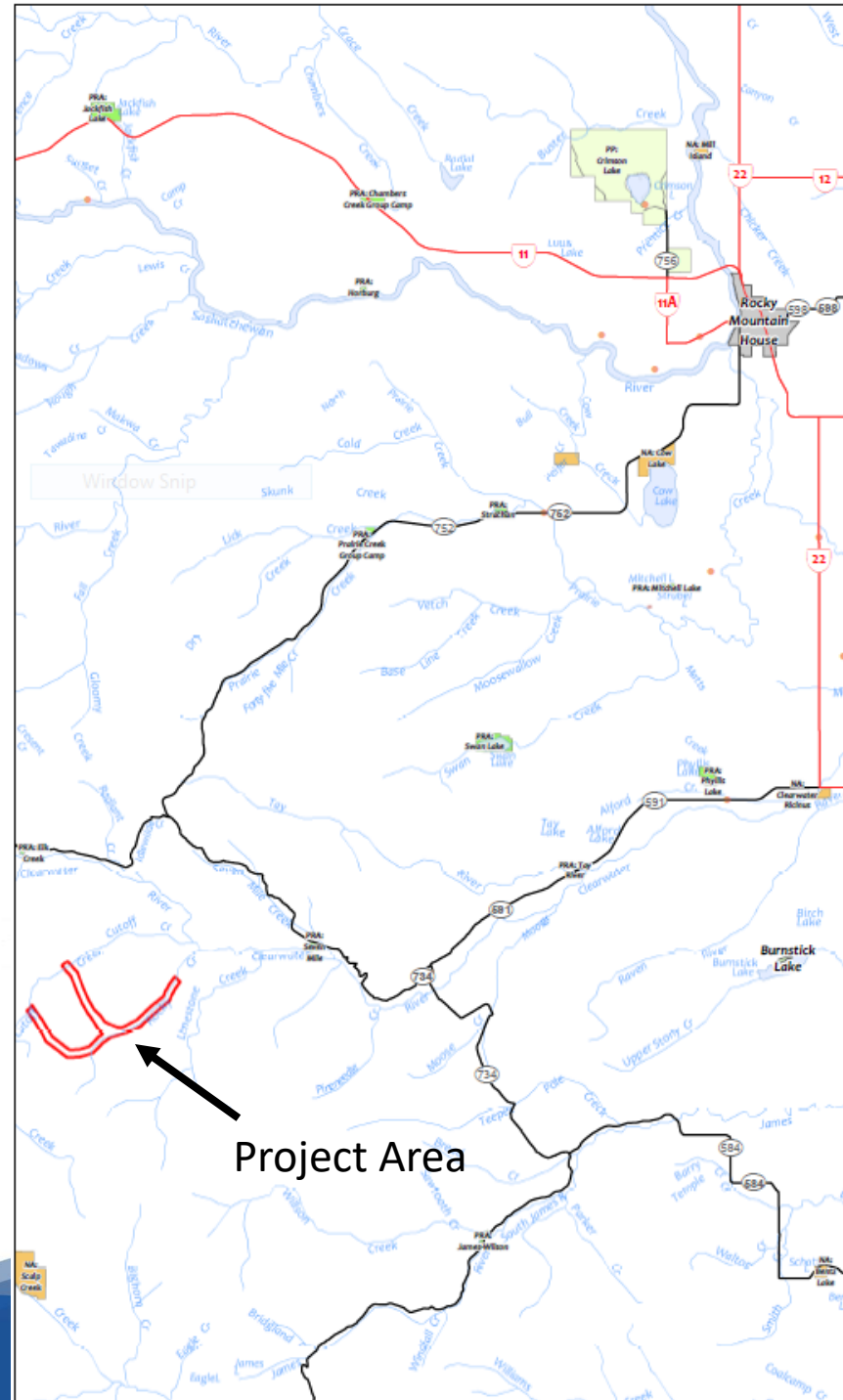
TUC working with partners (AEP, DFO, Cows and Fish, Clearwater County, U of C, West Fraser...)

- Tay River watershed
- Upper Clearwater River (Cutoff Creek, Rocky Creek, Radiant Creek)
- Fall Creek (Ram River watershed)



Rocky Creek

- Tributary to the Clearwater River
- Spawning, rearing, overwintering habitat for Bull Trout
- High density of unbridged OHV stream crossings (>6 crossings per kilometer)



Rocky Creek – Site Visit Oct 2017



Bull Trout stranded in ruts...
emergency triggered



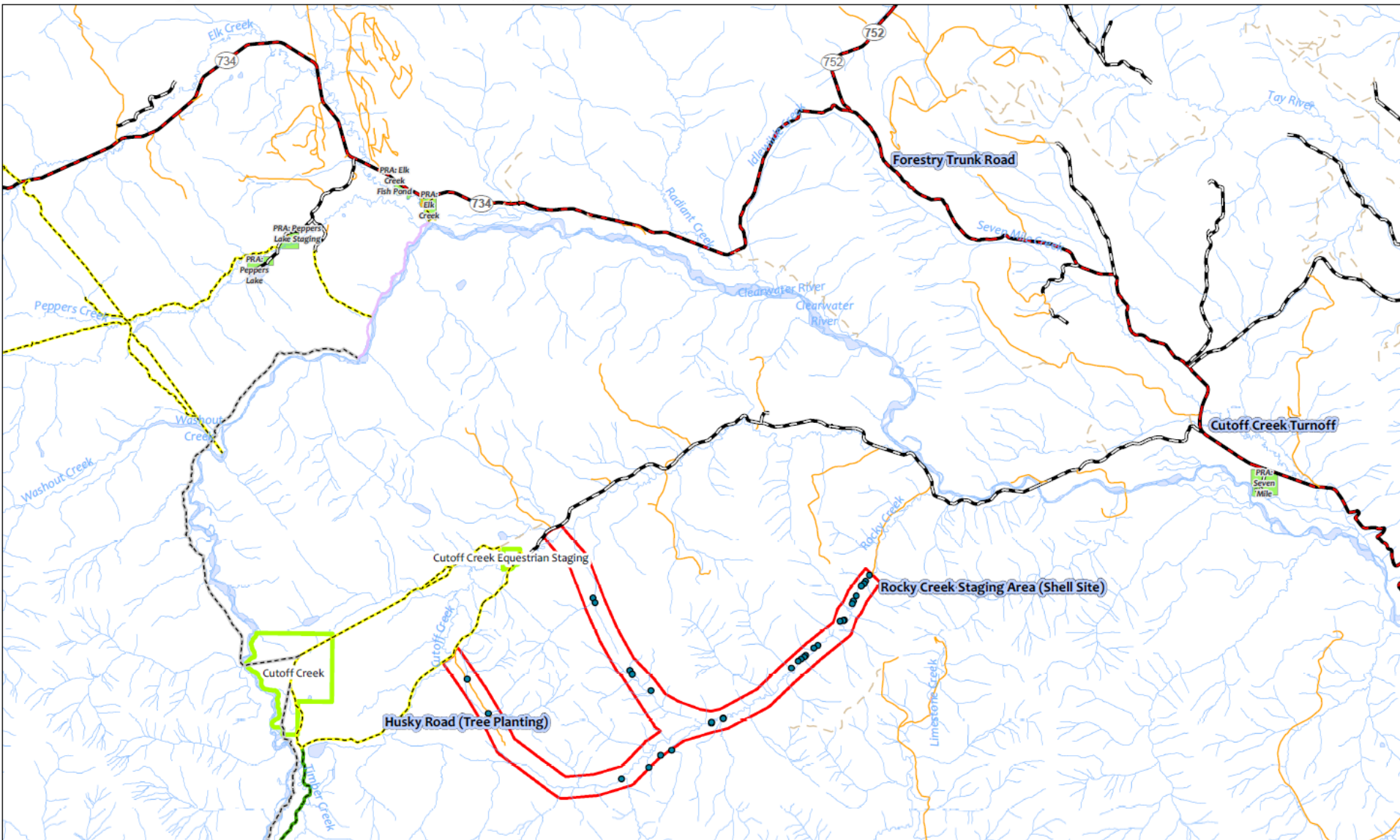
Rocky Creek – Emergency Fish Rescue Oct 2017



- Stranded BLTR captured and relocated from trail
- Public travel closure issued
- Reclamation began



Rocky Creek – habitat rehabilitation



Rocky Creek – willow staking June 2018

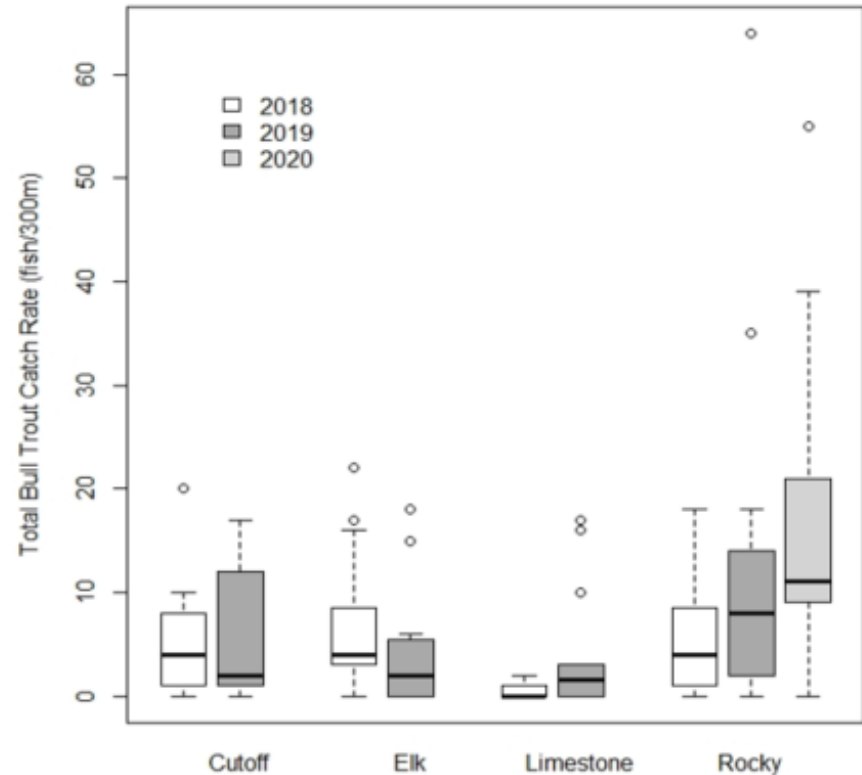


Rocky Creek Habitat Rehabilitation



Rocky Creek - Summary

- Bioengineering methods at 31 crossings over 20 km
- 4000 willow stakes and 4000 white spruce seedlings planted
- Restriction of motorized access by downing trees, rough/loose, tree planting, signage at key access points
- Population response in Bull Trout, monitoring ongoing as part of a before, after, control, impact (BACI) study by AEP.



AEP unpublished data



Communications

- Native Trout Communications Collaborative
- Stream crossing signage – building awareness and appreciation for Native Trout habitat
- Albertanativetrout.com



A Call to Action

- Fish are the “canaries in the coal mine”
- Threatened landscapes vs. threatened species
- There is a need for this work NOW
- There ARE solutions to the environmental issues on the landscape

Effects of human-driven water stress on river ecosystems: a meta-analysis

Sergi Sabater , Francesco Bregoli, Vicenç Acuña, Damià Barceló, Arturo Elosegi, Antoni Ginebreda, Rafael Marcé, Isabel Muñoz-Laja, Laia Sabater-Llisa & Verónica Ferreira

Scientific Reports


Anthropogenic stresses on the world's big rivers

Jim Best 

Nature Geoscience 12

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Bending the Curve of Global Freshwater Biodiversity Loss: An Emergency Recovery Plan


David Tickner , Jeffrey J Opperman, Robin Abell, Mike Acreman, Angela H Arthington, Stuart E Bunn, Steven J Cooke, James Dalton, Will Darwall, Gavin Edwards ... [Show more](#)

BioScience, Volume 70, Is

<https://doi.org/10.1093/>

Published: 19 February

Global threats to human water security and river biodiversity

C. J. Vörösmarty , P. B. McIntyre, M. O. Gessner, D. Dudgeon, A. Prusevich, P. Green, S. Glidden, S. E. Bunn, C. A. Sullivan, C. Reidy Liermann & P. M. Davies

Nature 467, 555–561(20

Bull Trout (*Salvelinus confluentus*), Saskatchewan-Nelson Rivers: recovery strategy, 2020 (proposed)

Official title: Recovery Strategy for the Bull Trout (*Salvelinus confluentus*), Saskatchewan-Nelson Rivers populations, in Canada

Species at Risk Act



Thank
you!!

