

## Alberta Conservation Association 2013/14 Project Summary Report

**Project Name:** Clearwater River Core Area Bull Trout Status

**Fisheries Program Manager:** Peter Aku

**Project Leader:** Mike Rodtka

**Primary ACA staff on project:**

Kevin Fitzsimmons, Chad Judd and Mike Rodtka

### Partnerships

Alberta Environment and Sustainable Resource Development

### Key Findings

- We captured 22 bull trout ranging in size from 426 to 603 mm fork length in two reaches of the Clearwater River sampled in 2013.
- Estimated adult bull trout abundance ranged from 1.5 to 3.2 fish/km.
- Adult bull trout abundance in the Clearwater River is low and appears to have been low for the past 35 years.
- Despite unprecedented conservation measures, the Clearwater bull trout population appears to still be at *High Risk* of extirpation.

### Introduction

Bull trout (*Salvelinus confluentus*) is a sport fish native to the eastern slopes of Alberta. In response to alarming declines in abundance and distribution, a province-wide zero bag limit for the species was imposed by the provincial government in 1995. In review of their bull trout management plan, Alberta Environment and Sustainable Resource Development (ESRD) used a modification of the Natural Heritage Network ranking system to rank bull trout population trends in the province (Alberta Sustainable Resource Development and Alberta Conservation Association 2009). This ranking system divides watersheds into core areas that provide habitat and the necessary requirements for long-term survival of bull trout. Core areas are ranked according to adult population size, area of occupancy, short-term trends and threats to the core area (Fredenberg et al. 2005; United States Fish and Wildlife Service 2008). The majority of core areas in Alberta have bull trout populations that are considered *At Risk* or at *High Risk* of extirpation. In 2013/14, we continued work that we started in 2011/12 to determine the distribution and abundance of bull trout in the Clearwater River core area, which is ranked as *High Risk*.

## Methods

We used angling gear to capture bull trout for mark-recapture abundance estimates at two reaches (12 river kilometres total) on the Clearwater River from April 17 to April 26, 2013. These reaches were established in the 1970s for monitoring bull trout abundance (Figure 1). We fin-clipped and implanted adult bull trout (i.e.,  $\geq 250$  mm fork length) with a passive integrated transponder (PIT) tag (for future identification) before returning them to the reach.

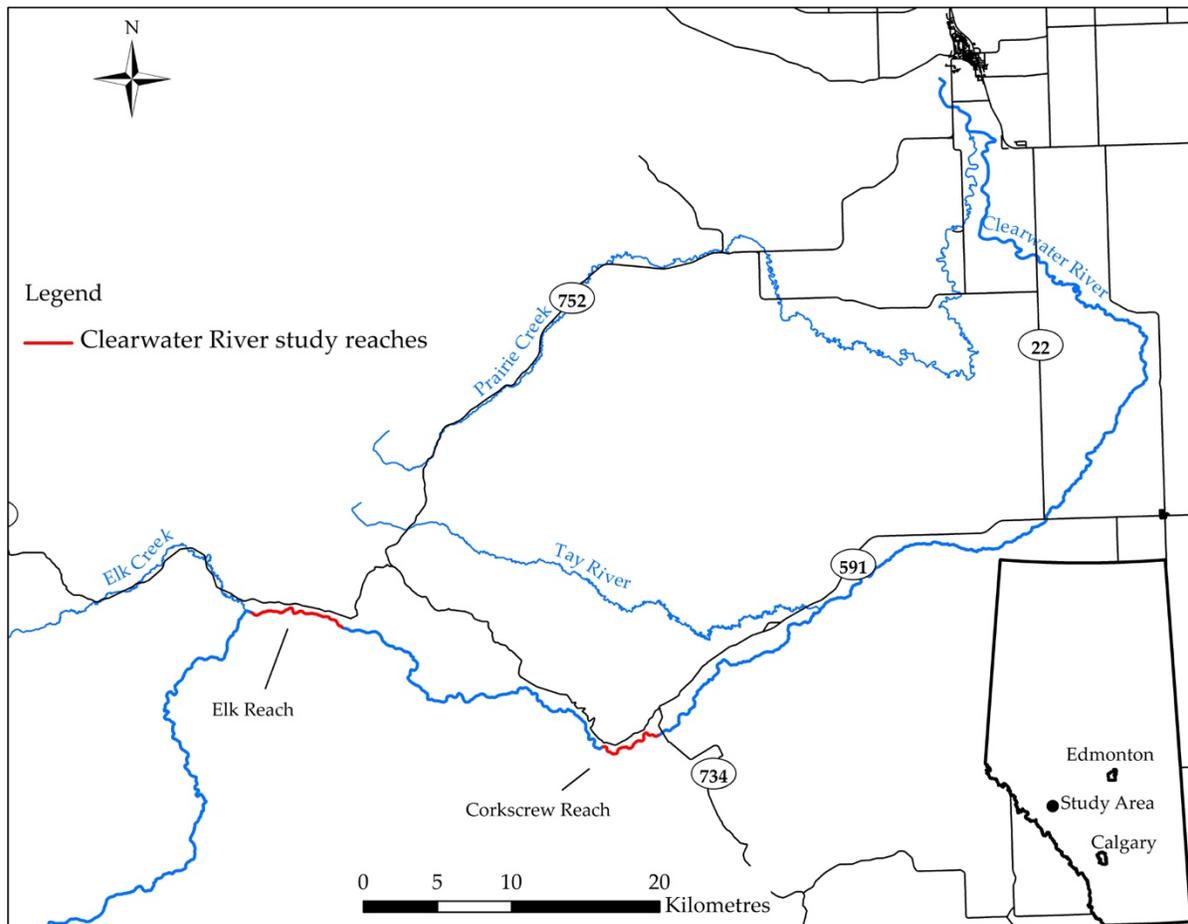


Figure 1. Location of sample reaches in the Clearwater River core area, April 17 to 26, 2013.

## Results

In over 24 hours of angling (over six days), we captured a total of 33 bull trout, including 22 individuals and 11 recaptures. Our catch ranged in size from 426 to 603 mm fork length. Estimated abundance of adult bull trout was 1.5 fish/km (95% confidence limits [CL] = 1.5 – 3.2) and 3.2 fish/km (95% CL = 2.3 – 6.8) in the Elk and Corkscrew reaches, respectively.

## Conclusions

We captured 22 bull trout in two sample reaches of the Clearwater River. Estimated abundance of adult bull trout ranged between 1.5 and 3.2 fish/km. Our results indicate adult bull trout abundance in the Clearwater River is relatively low and based on past assessments appears to have been low for the past 35 years. Despite unprecedented conservation measures, risk of extirpation of the Clearwater bull trout population still appears high.

### **Communications**

- Delivered presentation to Alberta Environment and Sustainable Resource Development on project delivery and results.

### **Literature Cited**

Alberta Sustainable Resource Development and Alberta Conservation Association. 2009. Status of the bull trout (*Salvelinus confluentus*) in Alberta: update 2009. Alberta Sustainable Resource Development, Wildlife Status Report No. 39 (Update 2009), Edmonton, Alberta, Canada. 48 pp.

Fredenberg, W., J. Chan, and J. Young. 2005. Bull trout core area conservation status assessment. U.S. Fish and Wildlife Service, Portland, Oregon, USA. 94 pp + App.

United States Fish and Wildlife Service. 2008. Bull trout recovery: monitoring and evaluation guidance. Report prepared for the U.S. Fish and Wildlife Service by the Bull Trout Recovery and Monitoring Technical Group, Portland, Oregon, USA. Version 1. 74 pp.

## Photo Captions



Alberta Conservation Association biologists Chad Judd and Kevin Fitzsimmons angling for bull trout in the Clearwater River. Photo: Mike Rodtka  
[filename: Photo1\_Clearwater BLTR\_2013-14\_Mike Rodtka.jpg]



Alberta Conservation Association biologist Chad Judd holding a Clearwater River bull trout.

Photo: Mike Rodtka

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Alberta Conservation Association biologist Kevin Fitzsimmons floating the Clearwater River.

Photo: Mike Rodtka

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