

Alberta Conservation Association (ACA)

Date: 2014-2015

Project Name: Clearwater River Core Area Bull Trout Status

Fisheries Program Manager: Peter Aku

Project Leader: Mike Rodtka

Primary ACA staff on project:

Peter Aku, Kevin Fitzsimmons, Chad Judd and Mike Rodtka

Partnerships

- Alberta Environment and Sustainable Resource Development

Key Findings

N/A

Introduction

Peer review and the communication of study results are crucial components of the scientific process, which is why we chose to seek publication of the Clearwater River Core Area Bull Trout Status study results in a scientific journal. Alberta Conservation Association has a long history of documenting sport fish distributions at a watershed scale in support of species status assessments. When describing species distribution based on presence-absence surveys, identification of presence based on species detection is straightforward, but it becomes much more difficult to assert absence based on a failure to detect the species at a site. In these cases, the question remains: Is the species truly absent from the site or did we just fail to detect it? Bull trout, a *Threatened* species in Alberta, may be particularly hard to detect because it is secretive, patchily distributed across watersheds, and often occurs in low numbers. During the Clearwater River study, we assessed our ability to detect bull trout and the stream habitat factors that impacted detection. We found that the current sampling standard under typical environmental conditions gave us a very high probability (>90%) of detecting bull trout and that, depending on the goals of the study, sampling effort could be reduced substantially (by at least 30%) without jeopardizing our results. These findings have important implications for the efficient design and delivery of future watershed-scale fish distribution assessments. Our paper, "Estimating Occupancy and Detection Probability of Juvenile Bull Trout Using Backpack Electrofishing Gear in a West-central Alberta Watershed," will be published in the *Canadian Journal of Fisheries and Aquatic Sciences* in spring 2015.

Communications

- Study results presented at the annual meeting of the *Salvelinus confluentus* Curiosity Society, an international gathering of bull trout researchers; Canal Flats, British Columbia.
- Journal article, “Estimating Occupancy and Detection Probability of Juvenile Bull Trout Using Backpack Electrofishing Gear in a West-central Alberta Watershed,” to be published in the *Canadian Journal of Fisheries and Aquatic Sciences* in spring 2015.