

Alberta Conservation Association 2019/20 Project Summary Report

Project Name: Central Region Angler Survey

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Partnerships

Alberta Environment and Parks

Key Findings

- Between June 1 and September 30, 2019, we counted 94 anglers on the Clearwater River, 14 on Elk Creek, and 56 on the North Raven River.
- Anglers fished for estimated 7,214 hours on the Clearwater River, 1,162 on Elk Creek, and 4,283 on the North Raven River.
- Angling activity on the Clearwater River was more frequent in the second half of our survey (August and September), with only 6 of the 94 total anglers counted in June and July, and was likely influenced by prolonged high water and spring flood conditions.

Abstract

The Clearwater River, Elk Creek (a main tributary to the Clearwater River), and the North Raven River are popular fishing destinations in west central Alberta. Alberta Environment and Parks (AEP) identifies fishing effort and fishing mortality as a key threat to fish populations, yet despite their popularity with anglers, the current level of angler use of these streams is unknown. From June 1 to September 30, 2019, we conducted an aerial angler survey to estimate fishing

effort (hours) on the Clearwater River, Elk Creek, and the North Raven River, providing information that will aid AEP in managing these fisheries. We completed 26 instantaneous counts and observed 94 anglers on the Clearwater River, 14 on Elk Creek, and 56 on the North Raven River. Anglers fished for an estimated 7,214 hours on the Clearwater River, 1,162 hours on Elk Creek, and 4,283 hours on the North Raven River. Angling activity on the Clearwater River was more frequent in the second half of our survey (August and September), with only 6 of the 94 total anglers counted in June and July. The low use of the Clearwater River in June and July is very likely due to prolonged high water and spring flood conditions on the Clearwater River in the first half of the survey.

Introduction

The Clearwater River, Elk Creek (a main tributary to the Clearwater River), and the North Raven River are popular fishing destinations in west central Alberta. Alberta Environment and Parks (AEP) identifies fishing effort and fishing mortality as a key threat to fish populations (Government of Alberta. 2017), yet despite their popularity with anglers, the current level of angler use of these streams is unknown. In 2019, we conducted an angler survey to estimate fishing effort and aid AEP in managing the fisheries on these waterbodies. The Clearwater River has been chosen as a study stream as it is identified as a focal watershed in the Native Trout Recovery Program, and the North Raven River was chosen because Alberta Conservation Association (ACA) has significant investment in riparian conservation programming in the watershed that has led to improved water quality, increased fish production, and a potential for increased angler use.

Methods

The Clearwater and North Raven river watersheds are in west central Alberta. Surveys were conducted on the 125 km of the Clearwater River downstream of the confluence of Elk Creek to Rocky Mountain House, the entire 35 km of Elk Creek, and the entire 36 km of the North Raven River (Figure 1).

From June 1 to September 30, 2019, we conducted an aerial angler survey on our study streams following Malvestuto (1983) and Pollock et al. (1994). We completed 26 angler counts using a

Robinson R44 helicopter based out of Springbank Airport. Overflights were randomly assigned to weekday or weekend day types and time of day. Angler counts were conducted with two observers on each flight, both observers were on the left side of the aircraft. Angler counts were assisted with the use of image stabilizing binoculars. Angler hours and associated confidence intervals were estimated from instantaneous angler counts using bootstrap techniques.

Results

We counted a total of 94 anglers on the Clearwater River, 14 on Elk Creek, and 56 on the North Raven River (Figure 1) between June 1 and September 30. Angling activity on the Clearwater River was more frequent in the second half of our survey (August and September) than the first half, with only 6 of the 94 total anglers counted in June and July. The low use of the Clearwater River in June and July is very likely due to prolonged high water and spring flood conditions on the Clearwater River in the first half of the survey. From June 1 to September 30, anglers fished for an estimated 7,214 hours (95% CI = 4,177–10,717) on the 125 km surveyed of the Clearwater River, 1,162 hours (95% CI = 388–2,027) on the 35 km of the Elk Creek, and 4,283 hours (95% CI = 2,190–7,041) on the 36 km of the North Raven River.

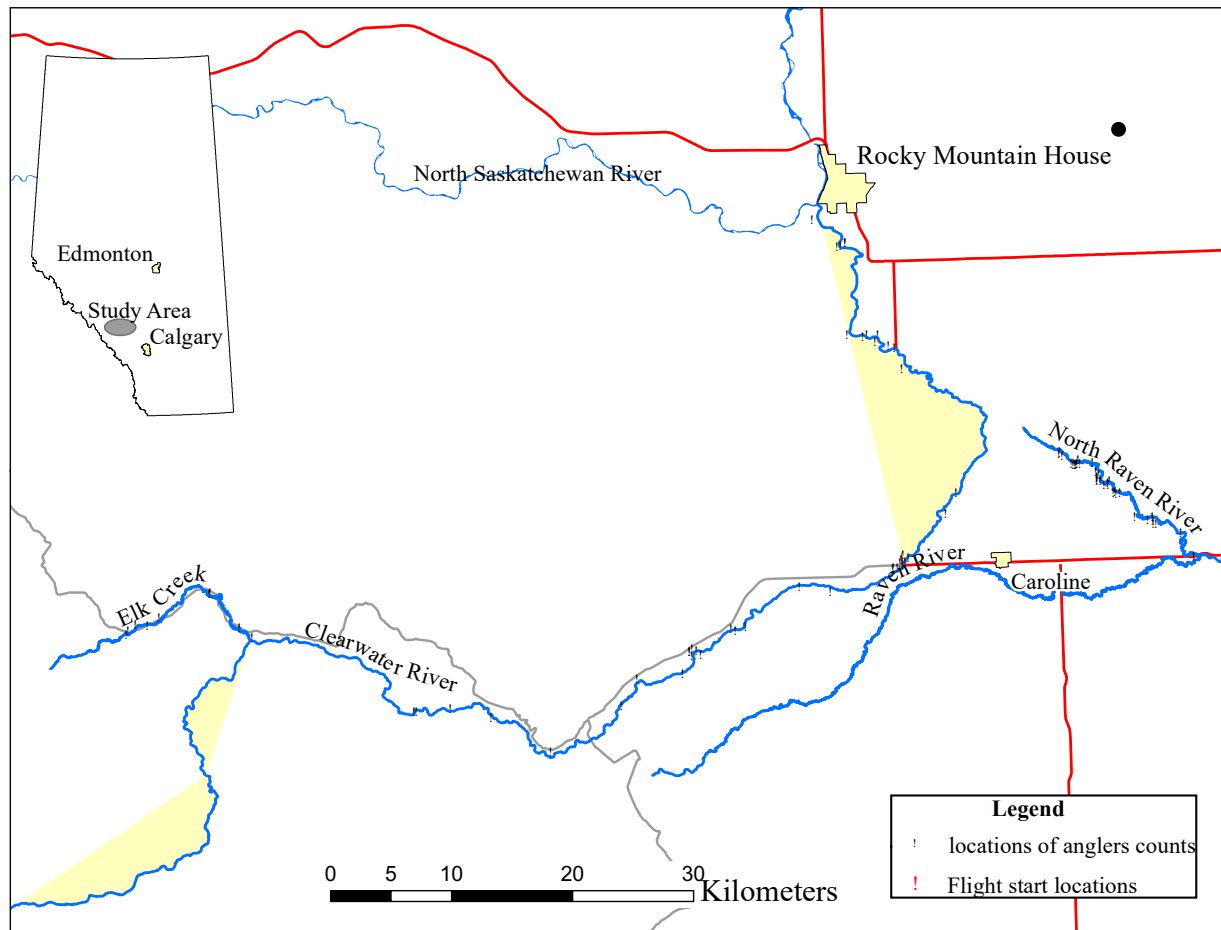


Figure 1. Clearwater and North Raven river study area including locations of angler counts. Inset map shows the location of the study area within the province of Alberta.

Conclusions

Our survey provides quantitative estimates of fishing effort on the Clearwater River, Elk Creek, and the North Raven River in the summer of 2019, aiding AEP in managing the fisheries on these important waterbodies. The low use of the Clearwater River in June and July is very likely due to prolonged high water and spring flood conditions on the Clearwater River in the first half of the survey.

Communications

N/A

Literature Cited

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Photos



ACA employee, Erin VanderMarel, recording angler count data during an aerial survey flight (2019). Photo: Kevin Fitzsimmons



View of the Clearwater River during aerial angler count on June 26, 2019. Photo: Kevin Fitzsimmons



View of the Clearwater River during aerial angler count on September 23, 2019. Photo: Erin VanderMarel



View of the North Raven on July 3, 2019 angler count. Photo: Kevin Fitzsimmons