

Alberta Conservation Association 2010/11 Project Summary Report

Project Name: *Edson River Riparian Conservation*

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Primary ACA staff on project:

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Partnerships

Fisheries and Oceans Canada

Penn West Energy

Royal Bank of Canada

Key Findings

- Aerial videography indicated that nearly half of the riparian areas within the mainstem were degraded.
- Identified 10 key potential sites for remediation activities.
- Solicited project support from local agencies including Alberta Sustainable Resource Development, Yellowhead County, West Central Conservation Group, and the Athabasca River Watershed Planning and Advisory Council.

Introduction

The ecological integrity of Alberta's rivers, streams and surrounding landscapes is threatened by ongoing human development. Degraded areas require considerable rehabilitation efforts to recover their health and function. In 2010, Alberta Conservation Association (ACA) identified the Edson River watershed as a priority for riparian conservation. Located in the north-western foothills region of Alberta, degradation of riparian habitats due to land conversion, agricultural practices, resource extraction and urban development has contributed to reduced river health. Native sport fish populations have suffered; historical populations of Arctic grayling (*Thymallus arcticus*) have been reduced or eliminated, while Athabasca rainbow trout (*Oncorhynchus mykiss*) populations seem to be limited to only the uppermost reaches of the drainage. Through rehabilitation and enhancement of riparian areas, the Edson River Riparian Conservation project aims to improve in-stream conditions to a point that allows for the re-colonization and maintenance of sport fish populations. In 2010/11, we assessed the current state of the drainage, identified degraded areas for rehabilitation, and began engaging individual landowners and partner organizations to foster creation of a locally-driven watershed stewardship group.

Methods

We used low-level aerial videography to assess the health and integrity of riparian areas along the Edson River and six tributaries. We characterized riparian areas using the ACA Lotic Riparian Assessment Scorecard, adapted from Cows and Fish (Fitch et al. 2001, Ambrose et al. 2004). We assigned scores to both left and right banks and converted these scores into colour-coded maps that characterized riparian conditions as poor, fair and good.

In addition to aerial videography, we reviewed existing literature and anecdotal information to determine general priority areas for rehabilitation. With this information, we conducted three field reconnaissance trips to identify potential locations for riparian enhancement sites.

We initiated communication with several organizations and agencies, including Yellowhead County, Alberta Sustainable Resource Development, West Central Conservation Group, and the Athabasca River Watershed Planning and Advisory Council to solicit support and discuss possible collaboration opportunities.

Results

Almost half (49%) of the riparian areas associated with the mainstem Edson River were degraded, and the majority of the impacted sites were classified as having poor riparian health and integrity. The riparian health of the tributaries was considerably better than the mainstem, with only 21% of areas being noticeably degraded (Figure 1).

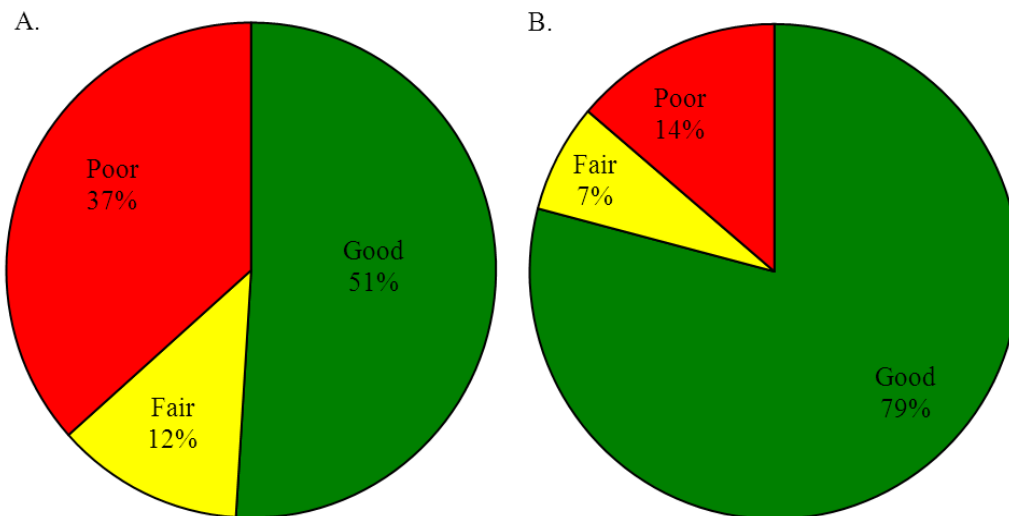


Figure 1. Edson River riparian health and integrity scores, 2010. Edson River mainstem is illustrated in “A”, six combined tributaries are illustrated in “B”.

We identified 10 impacted sites for potential remediation. In 2011/12, we will meet on-site with landowners to solicit their participation in riparian enhancement projects.

Conclusions

In this first season of the project, we laid the groundwork for more comprehensive, on-the-ground restoration activities in subsequent years. Results of the aerial videography will be an effective tool in communicating the extent of riparian degradation in the watershed and will help generate local support for our conservation efforts. The identification of key impacted sites will allow us to actively solicit landowner participation in addition to traditional ‘passive’ methods of newspaper ads and townhall meetings. Support from other local organizations is high, and we identified several opportunities to collaborate with partner organizations.

Communications

N/A

Literature Cited

- Ambrose, N., G. Ehlert, and K. Spicer-Rowe. 2004. Riparian health assessment for lakes, sloughs, and wetlands – field workbook. Alberta Habitat Management Society, Lethbridge, Alberta. 90 pp.
- Fitch, L., B.W. Adams, and G. Hale, eds. 2001. Riparian health assessment for streams and small rivers - field workbook. Alberta Habitat Management Society, Lethbridge, Alberta. 86 pp.



An abandoned barn indicating the long history of development and use of riparian areas along the Edson River. (Photo: Brendan Ganton)



Sample image from videography showing severe degradation of streambanks related to intense grazing and watering of cattle in the river. (Photo: Walker Environmental)



A potential riparian enhancement project site showing river bank instability and slumping caused by grazing, cultivation and removal of trees. (Photo: Brendan Ganton)