

**Alberta Conservation Association
2009/10 Project Summary Report**

Project Name: *Beaverlodge Riparian Conservation*

Fisheries Program Manager: Peter Aku

Project Leader: John Hallett

Primary ACA staff on project:

John Hallett and Cam Stevens

Partnerships

Alberta Agriculture and Rural Development
ConocoPhillips
County of Grande Prairie
Penn West Energy
Royal Bank of Canada

Key Findings

- Completed two riparian fencing projects that totaled 1.7 km and protected 37.8 ha (93.5 acres).
- Provided one off-site watering system to the Hill fencing project.
- Overall, 61% of riparian zone in the Beaverlodge watershed assessed using aerial videography was rated as good, 21% as fair and 18% as poor.
- Planted a total of 20,430 seedlings on 26.2 ha and established six 20-year Habitat Enhancement agreements with landowners.

Introduction

In a 2002 survey, riparian habitat degradation was documented for the Beaverlodge River and two of its tributaries, Beavertail and Steeprock creeks (Hallett 2003). Bank-side livestock feeding and watering, vehicle fording, and in-stream alterations have degraded the riparian zones of these watercourses. Since 2004, ACA, in partnership with landowners, provincial and municipal government and other conservation organizations, has embarked on riparian restoration and conservation projects along these water courses. To date, several projects including stream-bank fencing, alternative livestock watering systems, and tree planting have been completed; several new projects are in negotiations with landowners. In 2009/10, we continued to develop riparian protection and enhancement projects with landowners, monitor riparian health conditions, and conduct public outreach activities.

Methods

We assisted the County of Grande Prairie and Alberta Agriculture and Rural Development to identify potential project sites for riparian tree plantings. In partnership with the County, we contracted Cows and Fish to conduct riparian health assessments at existing and new project sites. We conducted water quality sampling as part of a long-term monitoring protocol.

We used low-level aerial videography to assess riparian health throughout the watershed, including the Beaverlodge River, Steeprock, Beavertail and Windsor creeks. We captured videos during a 2.5-hr flight on August 11, 2009 and processed them using ACA's Aerial Videography – Lotic Riparian Assessment Scorecard, adapted from Cows and Fish (Fitch et al. 2001, Ambrose et al. 2004). We produced a DVD and a colour-coded riparian health map to be used as public education tools.

Results

In 2009, we completed two riparian fencing projects that totaled 1,666 m of fencing and protected 37.8 ha (93.5 ac). We also provided one off-site watering system to the Hill fencing project.

We supported conservation of riparian areas at five new sites by assisting the County of Grande Prairie and Alberta Agriculture and Rural Development in their tree planting project; specifically, we visited potential landowners and discussed the program. We planted a total of 20,430 seedlings on 26.2 ha and established 20-year Habitat Enhancement agreements with six landowners who received trees and or riparian fencing supplies, which last 20 years.

In general, reaches assessed on the Beaverlodge drainage were in good condition; overall, 61% of reaches were rated as good, 21% as fair and 18% as poor (Figure 1). Note that we combined data from Windsor and Beavertail creeks because their health scores were almost identical. We found that health scores were usually similar when comparing left and right banks on stretches of river. We recorded the lowest health scores on Beavertail and Windsor creeks, and near Hythe on the Beaverlodge River. We will present the results of this project and the video to landowners to help promote discussion on riparian restoration and protection.

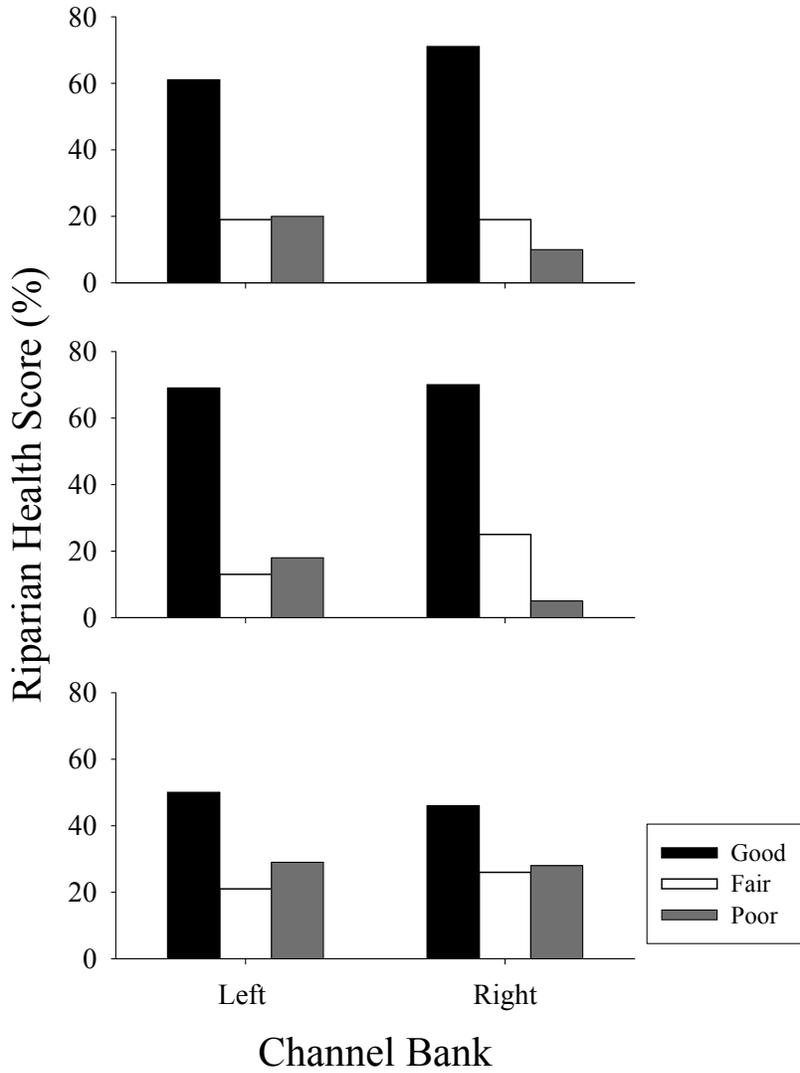


Figure 1. Riparian health scores for the Beaverlodge River drainage determined from aerial videography surveys.

Conclusions

Our riparian conservation efforts are resulting in incremental changes in the watershed. Pace of change has been slow. In 2010, we will focus on finding a local ‘champion’ to be the driving force in the local community for finding additional landowner partners.

Communications

We participated in three events that highlighted Beaverlodge riparian issues and the Beaverlodge Riparian Conservation project:

- Hosted Canadian Association of Petroleum Producers (CAPP) officials (VPs and other executives) and 100 elementary school children at a riparian project site. May 12, 2009.
- Public meeting at Goodfare. Approximately 20 local landowners attended. We outlined the local riparian issues and the Beaverlodge Riparian project. One landowner approached us after the presentation and asked for funding for riparian fencing, which was provided. October 29, 2009.
- Public presentation in the town of Beaverlodge on the aerial videography project. March 18, 2010.

Literature Cited

- Ambrose, N., G. Ehlert, and K. Spicer-Rawe. 2004. Riparian health assessment for lakes, sloughs, and wetlands – field workbook. Modified from Fitch, L., B.W. Adams and G. Hale, 2001. Riparian health assessment for streams and small rivers – field workbook. Lethbridge, Alberta. Cows and Fish Program. 90 pp.
- Fitch, L., B.W. Adams, and G. Hale, editors. 2001. Riparian health assessment for streams and small rivers – field workbook. Lethbridge, Alberta. Cows and Fish Program. 86 pages, adapted from Riparian and Wetland Research Program, School of Forestry. 2001.
- Fontana, M., and C. Stevens. 2009. Guiding document for Alberta Conservation Association's Riparian Conservation program: DRAFT. Alberta Conservation Association, Sherwood Park, Alberta.
- Hallett, J. 2003. Summary of the 2002 – 2003 Beaverlodge land use riparian assessment. Activity Report, Alberta Conservation Association, Peace River, Alberta.

Appendix A



Looking upstream from the Beavertail Creek water quality sampling site. (Photo: J. Hallett)



Looking upstream from the Beaverlodge River water quality sampling site. (Photo: J. Hallett)



Looking upstream (from bridge) from the Redwillow River water sampling site. (Photo: J. Hallett)



Degraded riparian area on the Hill site, with new riparian fencing. (Photo: J. Hallett)



Local landowner Mr. Ammann erecting a riparian fence beside Steeprock Creek on his property with fencing materials supplied by ACA . (Photo: J. Hallett)



The 2009 Canadian Association of Petroleum Producers 'Energy in Action' event on the Hill riparian area. (Photo: CAPP)



Canadian Association of Petroleum Producers participant and local schoolchild planting trees during the 'Energy in Action' event. (Photo: CAPP)