Alberta Conservation Association
2009/10 Project Summary Report

Project Name: *Lesser Slave Lake Riparian Conservation*

Fisheries Program Manager: Peter Aku

Project Leader: Tyler Johns

Primary ACA staff on project:

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Partnerships

High Prairie Riparian Action Team
Lesser Slave Lake Watershed Council
Penn West Energy
Royal Bank of Canada

Key Findings

- Completed riparian health assessments on existing projects. Site scores ranged from 'Healthy with problems' to 'Healthy'.
- Completed riparian fence on the Eula Creek riparian restoration project.
- Aerial videography assessment indicated that, in general, riparian reaches on the South Heart River were in good condition (62%) and reaches along the West Prairie River were 43% good, 27% fair and 30% poor condition.

Introduction

Riparian areas are a vital component to the health and integrity of watersheds. Healthy functioning riparian areas protect water quality, create wildlife habitat and control erosion. Unfortunately, riparian areas in the Lesser Slave Lake watershed continue to be under constant pressure due to urban, cottage, agricultural and industrial development. Since 2004, Alberta Conservation Association (ACA) has completed many successful riparian restoration projects in partnerships with landowners, governments and other conservation organizations within the watershed. Despite continued successes, more on-the -round riparian conservation projects and education are needed in this watershed to prevent further habitat destruction. Our objectives for 2009 were to continue working with the High Prairie Riparian Action Team (HPRAT), stakeholders, and private landowners to protect and restore riparian areas in the Lesser Slave Lake watershed and to complete analysis and mapping of the South Heart/West Prairie river aerial videography assessment initiated in 2006.

Methods

We worked in collaboration with landowners, HPRAT, Lesser Slave Lake Watershed Council and other partners to protect and restore riparian areas. We attended HPRAT meetings to update members on past projects and solicit partners for new projects. We completed annual riparian health assessment following the Cows and Fish short-form protocol at Schafer, Schafer-Barton, and Horse Lake Grazing Association project sites.

We used low-level aerial videography to assess the health and integrity of riparian areas along selected reaches of the South Heart and West Prairie rivers. Videos were captured during a 2 hour flight on July 20, 2006. The South Heart River was flown from the South Heart River Dam to its outlet into Lesser Slave Lake (approximately 90 km), and the West Prairie River from its confluence with the South Heart River upstream approximately 16 km.

We assessed riparian areas captured during the flights using ACA's Aerial Videography – Lotic Riparian Assessment Scorecard, adapted from Cows and Fish (Fitch et al. 2001 and Ambrose et al. 2004). For this analysis, we divided the riparian zone into polygons and defined polygon length as a change in the 'riparian management area' category. While viewing the video, a team of three individuals discussed and answered a suite of questions related to the 'riparian management area' integrity and function. Values were then added together to generate a score for that polygon. Scores were assigned to both left and right banks of each river and converted into colour-coded maps that characterized riparian conditions as poor, fair and good.

Results

Based on the Cows and Fish riparian health assessment scores, both the Schafer-Barton and Horse Lake Grazing Association projects scored 'Healthy', while the Schafer project site scored 'Healthy with problems'. We installed a sign on the Schafer property recognizing the landowner for the work he has done to protect the shoreline of Lesser Slave Lake. We continued to work on the Eula Creek restoration project and provided the landowner with three roles of barbed wire to complete the riparian fence.

In general, reaches assessed on the South Heart River were in good condition (62%). Scores were similar for both left and right banks. Riparian areas along the West Prairie were 43% good, 27% fair and 30% poor condition. The lowest health scores occurred along the channelized section of the river downstream of the town of High Prairie. Data collected as part of this project will be used to gain insight into the current state of the watershed. It will be available to landowners and land managers to raise awareness and discussion as to what steps should be taken to protect the 'healthy' areas and to restore the impaired areas.

Conclusions

We continued to be actively involved with riparian conservation in the Lesser Slave Lake watershed through partnerships with landowners. Riparian health assessments were completed on existing projects and site scores ranged from 'Healthy with problems' to 'Healthy', indicating a substantial improvement in riparian health since these projects were implemented. Our aerial videography assessment indicated that, in general, riparian reaches on the South Heart River were in good condition (62%), and reaches along the West Prairie River were 43% good, 27% fair and 30% poor condition.

Communications

- Aerial videography riparian health report presented to the Lesser Slave Lake Watershed Council.
- Attended bi-annual HPRAT meetings to discuss new and existing riparian projects.

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. Lotic health assessments: riparian health assessment for streams and small rivers (survey) user guide. University of Montana, Missoula, Montana, January 2001.

Photos

Aerial view of riparian areas along a reach of the West Prairie River. Arrows indicate riparian health condition: green = good, yellow = fair and red = poor. (Photo: George Walker, Walker Environmental)

Riparian restoration project sign installation. Left to right: Mr. Schafer – landowner, Tyler Johns – Alberta Conservation Association staff. (Photo: Ed Kolodychuk)

Willow growth along a riparian restoration project – Lesser Slave Lake. (Photo: Jon Van Dijk)