Alberta Conservation Association
2007/08 Project Summary Report

Project name: *Red Deer River Basin Riparian Conservation*

Project leader: Diana Rung

Primary ACA staff on this project:

Diana Rung

Partnerships:

Alberta Agriculture and Rural Development
Alberta Environment
Alberta Stewardship Network
Alberta Sustainable Resource Development
Fisheries and Oceans Canada
Grey Wooded Forage Association
Red Deer Count

Key Findings

- Impacted riparian areas were protected and improved using tools such as exclusion fencing and off-site watering systems.
- Riparian aerial videography was a useful tool for collecting riparian data in a time-efficient manner and for communicating results to the public; the public and municipalities were very interested in viewing the videos and brochures to identify areas that required improvement.
- Provision of guidance and resources to stewardship groups helped them complete their 'on-the-ground' projects to improve riparian areas.

Introduction

The Red Deer Riparian Conservation Project focuses on enhancing fish and wildlife habitat along riparian areas by working with individual land managers and watershed stewardship groups within the Red Deer River and Battle River watersheds. Our past observations, based on riparian data collected by on-the-ground riparian assessments, as well as aerial videography demonstrate 1) that many of the riparian areas in these two watersheds have been negatively affected by the impacts of human activities including agriculture, residential development and numerous types of industrial activity and 2) that these impacted riparian areas respond favourably to the implementation of best management practices. The primary objective of this project was to use various riparian conservation tools to implement best management practices in

priority riparian areas in the Red Deer River and Battle River watersheds through partnerships with landowners and other conservation groups.

Methods

Previous riparian enhancement projects in the watersheds include two sites on the Battle River and one each at Gull Lake, Buffalo Lake, the Red Deer River, and a tributary of the Blindman River. We continued monitoring vegetative photo points and cattle movement at watering sites at these six pre-existing sites during 2007-08.

In 2007-08, we used fencing to exclude livestock (exclusion fencing) and off-stream watering to enhance one new site each at Buffalo Lake and on the Red Deer River. At each of these sites, we completed riparian assessments and vegetative photo points to be used for comparison in future monitoring. We also collected riparian aerial videography data at Gull and Sylvan lakes by filming the shoreline from a helicopter. We selected these two lakes because we were aware that both of these lakes have been highly impacted by residential and industrial development. Data was analysed using the Alberta Conservation Association (ACA) riparian management area health and integrity scorecard.

We worked with stewardship groups, including the Alberta Stewardship Network, Red Deer River Watershed Alliance, Battle River Watershed Alliance, Iron Creek Watershed Improvement Society, and Rosebud River Watershed Partners and provided resources and information to implement riparian improvement projects. For example, we assisted the Red Deer River Watershed Alliance to identify riparian 'hotspots' and recommended improvements to various sites.

Results

The six pre-existing sites showed gradual improvements in plant density and riparian condition. We implemented two new riparian enhancement projects on privately-owned land, one on Buffalo Lake and the other on the Red Deer River. Results from our aerial videography at Gull Lake indicated that 29% of the shoreline was highly impaired, 35% moderately impaired and 36% was healthy. At Sylvan Lake, 42% of the shoreline was highly impaired, 7% moderately impaired, and 51% was healthy. The public and municipalities were very interested in viewing the videos and brochures to identify areas that required improvement. We received positive feedback and interest in ACA's riparian program after we distributed the 2008 Environmental Stewardship Calendar throughout the province.

Conclusion

Tools such as exclusion fencing and off-site watering systems helped to protect and improve impacted riparian areas in the Battle River and Red Deer River Watersheds; the six pre-existing

sites showed improvements in plant density and condition. Riparian aerial videography was a useful tool for collecting riparian data in a time-efficient manner and for communicating results to the public. The public and municipalities were very interested in viewing the videos and brochures to identify areas that required improvement.

Communications

- We created and distributed information booklets on our findings to watershed groups and municipalities.
- A description of this project was posted on the ACA website.
- ACA's contribution to this work was recognized on numerous publications and partner websites (i.e., ACA's logo and website were presented).
- ACA partnered with numerous agencies to create the 2008 Environmental Stewardship Calendar containing photographs and environmental stewardship facts that were distributed to agricultural producers, landowners, and other conservation agencies.

Healthy riparian area at one of the Battle River Riparian Enhancement sites that has been protected for over twenty years. (Photo: Diana Rung)

Off-site watering system used at a Riparian Enhancement Site at Buffalo Lake. This site is 500 m away from the lake. (Photo: Diana Rung)

Trail camera that was used to monitor cattle movement at a Riparian Enhancement Site at Buffalo Lake. (Photo: Diana Rung)

Unhealthy or disturbed riparian site on the Battle River. (Photo: Diana Rung)