

## **Alberta Conservation Association 2013/14 Project Summary Report**

**Project Name:** Owl River Riparian Conservation

**Land Management Program Manager:** Darren Dorge

**Project Leader:** Stefanie Fenson

**Primary ACA staff on project:**

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### **Partnerships**

Alberta Environment and Sustainable Resource Development  
Syncrude Canada Ltd.

### **Key Findings**

- Continued to correspond with Alberta Environment and Sustainable Resource Development to develop a protective notation application for the areas previously withdrawn from a large grazing lease.

### **Introduction**

Alberta Conservation Association (ACA) is working with landowners and leaseholders to protect riparian habitat along the Owl River to assist with the recovery of walleye in Lac La Biche. Since 2006, the provincial government has stocked nearly 200 million walleye fry and fingerlings in Lac La Biche as part of a management strategy to restore walleye populations in the lake. Many of these walleye were expected to reach sexual maturity by 2013, presumably resulting in larger spawning runs and greater natural recruitment for the lake. Alberta Environment and Sustainable Resource Development (ESRD) considers the Owl River to be a primary spawning river for Lac La Biche walleye. The identified walleye spawning habitat in the river is located approximately 30 km upstream from Lac La Biche. Portions of this section of the river run through leased and private land that support livestock grazing. Historical grazing in the area has reduced riparian vegetation, diminishing the river's quality as a walleye spawning tributary. Restoration of the riparian vegetation along the Owl River is expected to improve water quality by reducing siltation, stabilizing the banks and providing coarse woody debris as instream fish habitat structure. These changes should enhance habitat for spawning walleye and should facilitate the migration of fry from the river to the lake.

Our goal is to restore a 50 m buffer of riparian habitat along the 30 km stretch of the Owl River used by migrating walleye. To achieve this, we will use wildlife-friendly fencing, off-site livestock watering systems, withdrawal of leased grazing land with appropriate compensation, and possible purchase of private land. In 2011/12, prior to beginning riparian restoration

activities, we conducted baseline studies along the Owl River to characterize riparian health and the quality of aquatic habitats and to identify spawning habitat used by walleye. In 2012/13, we focused on working with landowners and leaseholders to conserve riparian habitat. Working with one leaseholder in particular, we installed over 7 km of wildlife-friendly fencing along the Owl River to prevent livestock from accessing riparian habitat. This includes portions of eight quarter sections, effectively protecting over 8 km of important riverbank and over 600 acres of wetland, riparian and upland habitat. We supplied the leaseholder with two off-site livestock watering systems to provide an adequate water supply to cattle now that the fence prevents direct access to the river. In 2013/14, ESRD requested that ACA and ESRD work together to develop a protective notation (PNT) application for areas previously withdrawn from the grazing lease in 2012. We continue to correspond with ESRD regarding the long-term protection of these habitat resources. Once ACA concludes the ongoing lease withdrawal negotiations, we hope the PNT application will be finalized and implemented in early 2014. In 2014/15, we will conduct aerial videography and riparian health assessments again as part of a long-term initiative (2015 to 2018) to monitor aquatic habitat quality and riparian health, and to assess the effectiveness of riparian enhancement activities. A walleye spawning run assessment was conducted by ACA in 2011 and 2012, and will be repeated again in 2014/15.

## **Methods**

We used aerial videography information collected in 2011 to classify and prioritize the sections of the Owl River with degraded riparian habitat (Figure 1). Using a geographic information system (GIS), we delineated a 50 m buffer along the river and mapped out flood levels to determine priority riparian and wetland habitat that could be conserved.

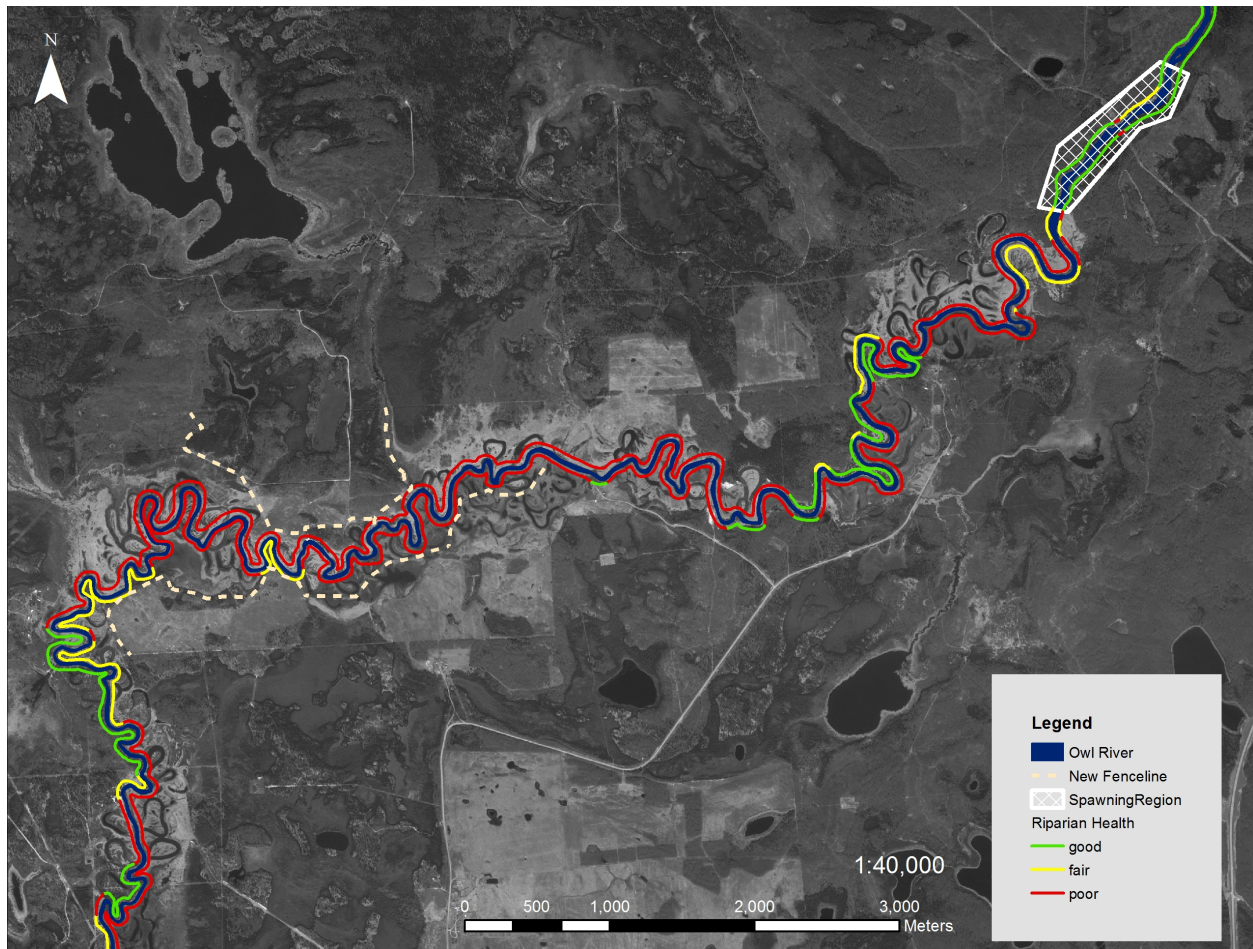


Figure 1. Central portion of the Owl River study area showing the classification of riparian habitat along the river where grazing lease boundaries were adjusted and where livestock exclusion fencing was installed in 2012. Riparian health in these areas was initially assessed as poor.

We contacted priority landowners and leaseholders along the 30 km stretch of the Owl River used by migrating walleye. We communicated our concerns about a declining walleye population and the importance of maintaining healthy riparian habitat, and our goals for habitat conservation along the Owl River. We established the level of landowner and leaseholder support and appropriate compensation for loss of available grazing and watering areas resulting from the withdrawal of portions of the grazing leases.

For lands where we engaged landowners or leaseholders in our project, we ground-truthed the area to determine the feasibility of installing fencing along the riparian buffer to exclude livestock. We adjusted the width of the proposed riparian buffer where necessary to accommodate the constraints of fence placement. We purchased the materials, contracted installation of the fence, and verified the work was completed to ACA's satisfaction. We then sent the new fenceline location information to ESRD and prepared an application to ESRD to withdraw the riparian portion from the grazing leases. We worked with ESRD to begin development of an application for a PNT to further protect riparian habitat within the withdrawn areas.

## **Results**

We worked with one landowner who holds grazing leases on nine priority Crown quarter sections to conserve riparian habitat within his lease. In 2012, we successfully arranged with ESRD to have a portion of the grazing lease removed, with the potential to assign a type of land use designation (PNT) to this area that will better protect the riparian and aquatic habitats in the future. Through discussions between ACA and ESRD in 2013/14, we continue to focus on establishing a process and finalizing a PNT on lands previously removed from the grazing lease. We will then continue to pursue protection of other important riparian habitat along the Owl River.

## **Conclusions**

The use of wildlife-friendly fencing to restrict livestock grazing from important riparian habitats is an effective restoration tool for reducing future threats of aquatic habitat degradation. With the success of the first agreement on leased lands, we will continue to work with ESRD to implement a PNT to ensure long-term protection of our fish, wildlife and land resources along the Owl River. Once a process is established, we will continue to contact other leaseholders in the area to pursue future riparian habitat conservation initiatives and improve more sections of aquatic habitat along reaches considered important walleye spawning and migration habitat. We are currently investigating opportunities to protect an additional 40 to 50 acres of riparian and wetland habitat with the same leaseholder we worked with initially.

In future years (2015 to 2018), we will continue to monitor water quality, riparian health, walleye habitat use and benthic invertebrates as part of a long-term initiative to assess the effectiveness of riparian enhancement activities. A concurrent walleye spawning run assessment was conducted by ACA in 2011 and 2012, and will be repeated in 2014. For more information on the Owl River Walleye Spawning Run Assessment project, see the Program Reports on our website.

## **Communications**

- Submitted progress report to Syncrude Canada Ltd.
- Published article in Spring/Summer 2013 issue of *Conservation Magazine* on the spawning run assessment and efforts related to riparian habitat conservation. Results of the 2012 field season were highlighted.

## **Literature Cited**

N/A



## Photo Captions



Portion of a new, wildlife-friendly livestock exclusion fence installed on the upper bank on the north side of Owl River in 2012. View is from the south side of river with riparian area protected below. Photo: Stefanie Fenson  
[filename: Photo1\_Riparian OwlR\_2013-14\_Stefanie Fenson.jpg]



Portion of new wildlife-friendly livestock exclusion fence installed on the north side of the Owl River in 2012. Photo: Stefanie Fenson  
[filename: Photo2\_Riparian OwlR\_2013-14\_Stephanie Fenson.jpg]





West side of study area in 2012. Photo: Erin VanderMarel  
[filename: Photo3\_Riparian OwlR\_2013-14\_Ervin VanderMarel.jpg]



North side of Owl River in 2012, with riparian habitat classified as poor during the initial riparian habitat assessment. Photo: Erin VanderMarel  
[filename: Photo4\_Riparian OwlR\_2013-14\_Erin VanderMarel.jpg]