

## **Alberta Conservation Association 2017/18 Project Summary Report**

**Project Name:** Isle Lake Fisheries Restoration

**Fisheries Program Manager:** Peter Aku

**Project Leader:** Brendan Ganton

**Primary ACA staff on project:** Brendan Ganton

### **Partnerships**

Alberta Environment and Parks  
Environment and Climate Change Canada – Environmental Damages Fund  
Lake Isle & Lac Ste. Anne Water Quality Management Society  
Parkland County and Lac Ste. Anne County Alternative Land Use Services Program  
Sturgeon River Watershed Alliance

### **Key Findings**

- We continued partnerships with a variety of stakeholders interested in fisheries restoration at Isle Lake, including Parkland County, Lac Ste. Anne County, and the Sturgeon River Watershed Alliance.
- We have supported delivery of landowner projects including riparian fencing, tree planting, and livestock watering systems within the Lake Isle Basin.

### **Introduction**

Eutrophication and deteriorating water quality of lakes in developed areas of Alberta are common problems. In recent decades, changes in watershed land use have resulted in increased nutrient runoff, particularly phosphorus, into many lakes, including Isle Lake. Increased phosphorus in aquatic systems can result in substantial increases in phytoplankton production and algal blooms, especially blue-green cyanobacteria blooms. Aside from aesthetic concerns, algal blooms have been linked with anoxic water conditions and toxic or harmful impacts to fisheries, human health and recreation. Over the last decade, recurring algal blooms have become more prevalent in Isle Lake, resulting in degradation of water quality, and summer and winter fish kills that has decimated what used to be a popular recreational sport fishery. This multi-year project is focused on working with local community groups and landowners in surrounding watersheds to reduce nutrient loading to Isle Lake in a bid to improve water quality and restore the fish community and associated sport fishery. In 2017/18, we continued focus on developing partnerships throughout the Isle Lake watershed and delivering on-the-ground habitat restoration projects.

## **Methods**

We maintained numerous partnerships with key stakeholders in support of the project throughout the Isle Lake watershed. We provided technical guidance and recommendations to Parkland and Lac Ste. Anne counties' Alternative Land Use Services (ALUS) programs, delivering on-the-ground restoration activities in collaboration with local agricultural producers. We continued our work with the Technical Advisory Committee of the Sturgeon River Watershed Alliance, which allowed us to provide information on the health of these systems directly to the communities, municipalities and organizations that make up this committee.

## **Results**

Through our participation on the ALUS project advisory committee, we have been able to help guide the delivery of numerous on-the-ground projects throughout the Isle Lake basin. These projects have contributed to the rehabilitation of marginal agricultural land, allowing it to provide increased water filtration, nutrient uptake, habitat value, and other ecological services while reducing erosion and flooding—all benefitting Isle Lake. Of these projects, three were approved with financial support from Alberta Conservation Association through administration of funding from the Environmental Damages Fund. These projects are approved and in progress; when completed, they will involve construction of over 1 km of fence, restoration of over 20 hectares (50 acres) of land, and installation of a solar-powered, off-site watering system to prevent cattle from degrading wetland areas within the Lake Isle Basin.

## **Conclusions**

We continue to work with local community groups and landowners in surrounding watersheds to reduce nutrient loading to Isle Lake in a bid to improve water quality and restore the fish community and associated sport fishery. Successful delivery of landowner projects has led to improved landscape ecological function through installation of riparian fencing, tree planting, off-site livestock watering, wetland creation, and other environmental stewardship activities.

## **Communications**

Presentations were made to the Sturgeon River Watershed Alliance (Technical Advisory Committee) and directly to potential partner landowners at Parkland County and Lac Ste. Anne ALUS outreach events.

## **Acknowledgement**

This project was undertaken with the financial support of the Government of Canada.  
Ce projet a été réalisé avec l'appui financier du Gouvernement du Canada.

## Photos



On some shorelines of Isle Lake, cattle grazing and access to the lake has led to bank compression and collapse, formation of hummocks, and increased sediment and nutrient runoff to the lake. Photo: Brendan Ganton



Cattle grazing along the shoreline of Isle Lake. Photo: Brendan Ganton