



Alberta Conservation
Association

Annual Report 2013/14

Conserving Alberta's Wild Side





Conserving Alberta's Wild Side

Our Vision

An Alberta with an abundance and diversity of wildlife, fish and their habitats; where future generations continue to use, enjoy and value our rich outdoor heritage.

Our Mission

ACA conserves, protects and enhances fish and wildlife populations and their habitats for Albertans to enjoy, value and use.

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2013/14 Snapshot

- 169,988 visitors watched the **peregrine falcon cameras** from June through August 2013.
- 94.1% of employees agreed that they are **satisfied with ACA as a place to work**.
- **56 projects**, received a total of \$799,918 through the Grant Eligible Conservation Fund.
- 9 fisheries projects **conducted on 27 waterbodies**; generated information on population status, recreational harvest, distribution, migration and spawning habitat of sport fish.
- 22.1% of ACA's total operating budget was **generated from non-levy sources** (\$3,202,730).
- **9,879 calls received** from the public to the RAP toll-free hotline.
- Almost **10,000 people signed up** with AVAMP and reported over **20,000 amphibian observations**.
- **\$23,658 raised** in our give campaign to purchase night vision peregrine cameras, GPS collars for wolverines and stock 744 fish.
- Harvested over **200 lbs of silver sagebrush seed** by hand and then planted on native restoration sites.
- **1,979 acres of habitat conserved** (acquisition/land donation) for an additional 8 new Conservation Sites.

photo: ACA, Colin Eyo





Conserving Alberta's Wild Side

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Abbreviations Index

ac	acre
cm	centimetre
°C	degrees Celsius
fish/h	fish caught per hour
fish/km	fish caught per kilometre
h	hour
ha	hectare
h/ha	hours per hectare
km	kilometre
lbs	pounds
m	metre
mg/L	milligrams per litre
mm	millimetre

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Cover Photos: Sharp-tailed grouse, ACA, Mike Jokinen; Mountain goat, ACA, Mike Jokinen; Piping plover nest, ACA, Lisa Monsees; Wolverine, ACA Trail Cam; Bull trout, ACA, Andrew Clough



Conserving Alberta's Wild Side

Member Groups

Alberta Fish & Game Association
Alberta Hunter Education
Instructors' Association
Alberta Professional Outfitters
Society
Alberta Trappers' Association
Nature Alberta
Pheasants Forever, Alberta Council
Treaty 8 First Nations of Alberta
Trout Unlimited Canada
Wild Sheep Foundation Alberta

Board of Directors

Executive

Pat Long, Chairman: Wild Sheep Foundation Alberta
Ken Ambrock, Vice Chairman: Public At Large, Northern Alberta Board Liaison
Brian Bildson - Secretary: Public At Large, Business Representative
Adam Norris - Treasurer: Public At Large, Northwest Region
Tom Bateman, Past Chair: Public At Large, Southern Alberta Board Liaison

Directors

Bill Abercrombie - Alberta Trappers' Association
Vince Aiello - Pheasants Forever, Alberta Council
Dr. Mark Boyce - ACA/University of Alberta Chair in Fisheries and Wildlife
Gordon Burton - Alberta Professional Outfitters Society
Randy Collins - Alberta Fish & Game Association
Sandra Foss - Nature Alberta
Chris Fowler - Public At Large, Northeast Region
Robert Gruszecki - Alberta Hunter Education Instructors' Association
John Pattison - Public At Large, Central Region
Travis Ripley - Minister's Representative, Alberta Environment and Sustainable
Resource Development
Jeff Surtees - Trout Unlimited Canada
Jaarno Van der Wielen - Public At Large, Southern Region
Vacant - Treaty 8 First Nations of Alberta

About Us

Since our inception as a non-profit in 1997, ACA has directed hundreds of millions of dollars towards thousands of conservation efforts across Alberta, from studies on the largest species to the securement of vast tracts of precious habitat.

Every levy dollar from fishing and hunting license sales and every partnership contributes to the conservation of Alberta's natural heritage. Together, we are securing the future of fish and wildlife and the habitats they call home while providing Albertans with access to a myriad of sustainable outdoor recreational activities.

We love the work we do. It's a reward to call Alberta's big backyard our "office" and a privilege to work on behalf of Alberta's hunters, anglers and other conservationists.



Project: Amphibian Monitoring Using Environmental DNA

Partners: Natural Sciences and Engineering Research Council of Canada – Industrial Postgraduate Scholarships Program, University of Alberta – Brandon Booker (M.Sc. candidate), David Coltman, Corey Davis and Cynthia Paszkowski

photo: ACA, Kris Kendell

Delegated Roles and Responsibilities

ACA holds special status as a delegated administrative organization (DAO), which means that we deliver responsibilities as outlined in the *Wildlife Act* and defined in a Memorandum of Understanding (MOU) with the Ministry of Alberta Environment and Sustainable Resource Development (ESRD).

In our role as a DAO, results from our population studies, surveys and assessments feed directly into ESRD management plans and form the basis for fishing and hunting regulation changes and evaluations of new management strategies.

Message from the Chairman



In last year's annual report, I talked about how Alberta Conservation Association programs are ensuring our outdoor heritage is maintained by providing a multitude of opportunities for Albertans to enjoy our abundant natural resources. I state with pride that those successes have not only continued into 2013/14 but also were enhanced through the creation of new programs that reach out to industry, other agencies and Alberta's communities.

President and CEO, Todd Zimmerling indicated that he and his staff are successfully meeting the challenges involved in conserving Alberta's wildlife, fish and habitat resources on an ever-changing landscape. Knowing how dedicated the entire organization is to their work and to finding innovative ways to engage Albertans in conserving our natural resources, I know that these resources are in good hands and will be around for a very long time.

A handwritten signature in black ink that reads "Pat Long". The signature is written in a cursive, flowing style.

Pat Long, Chairman of the Board

President and CEO's Message

Once again, ACA staff, volunteers, member groups and corporate partners have made this a very successful year. Some of the highlights that come to mind are: raising \$3.2 million in non-levy funding, including approximately \$2 million towards the conservation of an additional 2,000 ac (809 ha) of land; a partnership project with Alberta Trappers' Association and University of Alberta that collected valuable data on wolverines, increased the profile of this elusive species in the province, generated significant public and media interest, and highlighted the role that trappers can play in research projects; the Kids Can Catch events, Archery Days events, and Taber Pheasant Festival, which introduced hundreds of people to angling, archery and hunting, and to the fun of being outdoors with friends and family; the peregrine cameras, which have been a huge hit, with tens of thousands of people logging-in to watch the ultimate reality TV show, the trials and tribulations of "Growing-Up Peregrine." The result has been a huge increase in the public's awareness of ACA, our member groups and, perhaps most importantly, conservation issues in Alberta.

Fears over food safety, the push for "local" food and a concern over corporate farms are contributing to a shift in societal values towards hunting, angling and trapping. You don't have to look any further than prime-time TV to see the myriad of shows related to harvesting wildlife and fish. We may not agree with the methods, the attitudes or the premises behind some of these shows, but it is undeniable that mainstream society is beginning to look much more favourably on the consumptive harvest of wildlife and fish. I believe ACA and our member groups can benefit from this shift by introducing people to hunting, angling and trapping. Not everyone has to become a hunter, angler or trapper, but the more people who understand the value of these activities, the more success we will have in our conservation efforts, now and in the future.

I was pleased to see an increase in the total number of hunters and youth hunters in Alberta in 2013/14, extending what has become a long-term trend of yearly increases. In addition, angler numbers remained at a 10-year high, despite very poor fishing conditions for much of the year in southern Alberta. ACA, our member groups and many conservation partners have contributed towards this positive trend.

A number of important conservation issues remain in Alberta; however, based on the success of this past year, I have a positive outlook on the future of Alberta's wildlife and fish populations. I believe that by working together we can ultimately achieve our vision of an Alberta with an abundance and diversity of wildlife, fish and their habitats, where future generations continue to use, enjoy and value our rich outdoor heritage.

Sincerely,



Todd Zimmerling
President and CEO
Alberta Conservation Association

Amanda Zimmerling and her turkey.

photo: Todd Zimmerling



Our People. Our Culture.



Project: Muskeg River Core Area Bull Trout Status

Partnerships: Alberta Environment and Sustainable Resource Development, Alberta Stream Watch Conservation Coalition, TD Friends of the Environment Foundation

photo: ACA, Kevin Fitzsimmons

Health and Safety

Health and safety is an essential component in today's workplace. ACA is committed to employee safety through the integration of a comprehensive Health and Safety program as an essential part of our operations. All workers (be it employees, contractors, volunteers, visitors, etc.) are required to comply with ACA's Health and Safety program for the protection of themselves and others, resulting in a safer and healthier work environment.

2013/14 Overview

- Revised sections of the Health and Safety Manual, including personal protective equipment, vehicle and equipment maintenance, and emergency preparedness and response. The intent is to provide additional safety information and resources to ACA workers.
- Updated the Job Hazard Assessment and Safety Sheets, aligning safety information related to all ACA activities
- Created a "Critical Activity List" as part of our CORE requirements, which identifies activities that put our staff at risk. A total of 59 activities made the list and were ranked from highest to lowest risk.
- Standardized mandatory training information and its delivery mechanism, improving convenience and availability
- Improved accessibility to various health and safety information, documents and forms within ACAWeb
- 91% of staff scored 100% in 7 of the 13 mandatory elements on our (COR) audit
- Aligned Health and Safety program with requirements established within the COR program
- 40 workplace incidents reported, compared with 46 in 2012/13. This decrease is a result of increased awareness and confidence in identifying potential hazards that require proactive or preventative actions before a near miss or incident occurs.

Human Resources

ACA accomplishes a lot of work over vast territory every year, thanks in large part to our 72 permanent staff, 15 temporary staff and numerous seasonal staff. Human Resources not only ensures the best people are recruited for the job, but we are also integral to keeping our most valuable resource—our staff—trained, safe, educated and satisfied with the organization.

Year after year, it is our hardworking, dedicated staff both in the office and in the field who truly make it possible to “Conserve Alberta’s Wild Side.” Congratulations and thanks are extended to the following individuals who achieved significant Years of Service milestones this year:

15 Years of Service – Paul Jones, Margaret Neufeld

10 Years of Service –
Corey Rasmussen

5 Years of Service – Colin Eyo,
Don Myhre, Mike Uchikura

2013/14 Overview

Employee Survey

- 94.1% of employees are satisfied with ACA as a place to work—a 4% increase from last year.
- 86.8% of employees are satisfied with having a good work-life balance, similar to last year.
- 82.4% are satisfied with ACA’s benefit plan, which is a slight increase from last year.

Benefits

- Conducted a market evaluation of our benefit program and decided to change our benefit provider, ensuring we continue to provide a cost-effective plan that benefits all employees without compromising service

Employee Retention

- Staff turnover increased a half a percent to 5.6%. We continue to evaluate and implement ways to increase job satisfaction at ACA by focusing on professional development, mentoring opportunities and work-life balance. We

invest in our own by promoting talent from within the organization whenever possible, which increases opportunities for growth and retention.

Career Fairs

- Attended three career fairs at the University of Lethbridge, Lethbridge College and University of Alberta. These fairs provided excellent opportunities to introduce ourselves and inform new graduates about career options available at ACA.

Recruitment

- Filled 3 permanent, 3 temporary and 6 seasonal positions. This was a successful year for recruitment of staff. Overall, the 12 job postings received an overwhelming response from 1,036 applicants worldwide.

Information Technology

As our organization continues to grow, the management of, and ease of access to, systems and databases becomes increasingly important. Information Technology (IT) is committed to finding solutions, increasing operational efficiencies and saving resources in support of this growth.

With changes in the workforce and in digital technology, it has become essential for staff to access files from just about anywhere and to work on projects in conjunction with other researchers at almost any location in the province. The IT team is committed to finding solutions by consulting with field staff, talking with partners and meeting with experts in the field to develop a system that ensures staff are working as efficiently and effectively as possible.

Taking advantage of changes in technology, our biologists are increasingly using digital photographs and video to collect data. While these new techniques assist with wildlife and fish management, they create significant issues with respect to storing and analyzing such large databases. IT

has been working closely with our field staff to determine potential future data collection activities and to develop a realistic and cost-effective plan for storage expansion, which potentially will reach several terabytes in size.

2013/14 Overview

- Continued to improve staff access to documents by moving to a cloud-based structure, allowing staff to work across the province and collaborate with external resources as required
- Restructured the IT area to allow for better skill use and efficient project management. IT staff are actively involved in planning and delivering the systems they oversee and maintain, which creates an environment of accountability and strong customer support.
- Provided IT support to member groups by implementing a membership database for Alberta Fish and Game Association. This database provides the information needed to help local clubs manage their member base and allows them to provide the services their members want and need.
- Continued updating and improving financial systems to provide better online access for staff in reporting, time entry and budgeting. Our goal is to streamline system entry to make an efficient and user-friendly environment for staff, whether they are entering data or retrieving information for monitoring the progress of their projects.
- Provided value-added services with cell phone plans and purchases, including family member access to plans negotiated by ACA
- Provided staff with newer cellular technology while reducing costs

Business Development

Partnerships with the Alberta business community are integral to achieving our annual operating goals and leveraging funds for conservation projects and land purchases. We're pleased to work with so many businesses that are passionate about conservation in Alberta.

The Corporate Partners in Conservation program provides unique opportunities for Alberta businesses to take part in conserving Alberta's natural heritage. Our corporate partners value their affiliation with ACA and the work we accomplish together. They promote our partnership through their own communications and benefit from ACA's promotion through our communications.

Business Development is responsible for generating revenue through advertising sales to offset costs associated with communications activities on television, radio and our in-house publications, *Conservation Magazine* and the *Discover Alberta's Wild Side: Annual Outdoor Adventure Guide*.

2013/14 Overview

- 3 companies signed on as Corporate Partners in Conservation
 - Bone Beer: Taber Pheasant Festival and Report A Poacher
 - Thompson-Pallister Bait Co.: Kids Can Catch
 - Travel Alberta: Let's Go Outdoors
- 2 existing corporate partners increased their funding towards projects
 - Access Pipeline: Kids Can Catch and Enhanced Sports Fisheries program
 - Dow Chemical Canada: Kids Can Catch and Enhanced Sports Fisheries program
- \$100,000 in advertising sales secured for both issues of *Conservation Magazine* and the 2013/14 edition of *Discover Alberta's Wild Side: Annual Outdoor Adventure Guide*



Fort Saskatchewan, Kids Can Catch 2014
photo: ACA, Colin Eyo

Conservation Programs

Communications

Sharing our conservation work with more people was the focus of our Communications program this year. We created opportunities with the assistance of social media, remote cameras and our own web-programming ingenuity. All of this work brought notable achievements.

2013/14 Overview

App

- People are finding it easier to discover Alberta's greatest and wildest places to fish, hunt, forage and explore with the FREE *Alberta Outdoor Adventure Guide app*. In all, 6,101 people downloaded the app in 2013/14, for a total of 34,141 users since it launched in 2011/12. Many people prefer hard copies to keep in their vehicles or backpacks. We produced 80,000 copies of the *Discover Alberta's Wild Side: Annual Outdoor Adventure Guide*. Across Alberta, 307 retailers and visitor information centres received copies, and thousands more were handed out at tradeshows and mailed to subscribers.

e-news

- More than 94,100 people have subscribed to our monthly Wild Mail e-newsletter—a 41% increase from the 66,898 people on our list last year. Our average open rate is around 31%, shockingly successful when compared to industry standards for other non-profit clients (average of 21.7%).
- Subscribers enjoy the variety of content and are the first to receive our flagship publications, *Conservation Magazine* and *Discover Alberta's Wild Side: Annual Outdoor Adventure Guide*, as well as hear about events and activities, such as Kids Can Catch, Archery Days, Taber Pheasant Festival and peregrine cameras.

Facebook

- Our followers increased by 1,683. With our engaging content, photographs and interaction with our followers, we earned an **amazing 1,416,329 impressions** (content on our page seen by others).

Twitter

- Our Twitter presence increased by 921 followers to 2,199, which generated 2,266 visits to our website.

Peregrine Cameras

- More than 169,988 viewers watched the daily lives of two peregrine falcon families unfold. The cameras captured the chicks hatching and feeding, and sibling and parent behaviour, right up until the chicks took their first flight, which helps the public and researchers learn more about this species at risk. We had immense support from peregrine specialist Dr. Gordon Court and from Bev and Peter Fullbrandt, Aspen Properties, Wiband, TerraGo and the University of Alberta.

YouTube

- The wolverine project became a sensation with video tales filmed in northwest Alberta by ACA biologist Mike Jokinen. The first video posted in November 2013 captured the attention of 6,208 viewers. Overall, 39,587 people watched 19 videos about our conservation work.

Website

- Website traffic increased steadily in 2013/14, with over 145,100 unique visitors. Sessions increased 90% from 151,778 in 2012/13 to 289,076 in 2013/14.

Conservation Magazine

- We are fortunate to produce such a dynamic, informative and attractive publication for free to our stakeholders. This is possible for a few reasons: it is completely produced and designed in-house, we have a bevy of gifted staff who write and supply photographs, many external contributors volunteer their stories and photographs, and our advertising space is always booked, typically issues in advance. This year, we restructured our online edition for people who prefer to read our flagship publication online.

Taber Pheasant Festival

- Within 3 minutes and 43 seconds, all 360 pheasant hunting times were filled, thanks to the innovative online registration system devised by ACA Communications. A total of 73 novice hunters and 636 hunters participated in the festival, many with their faithful four-legged friends. Of these, 75% came from more than an hour away from Taber, and 8% came from out of province (BC lower mainland, Vancouver Island, Manitoba, Virginia and Montana).

Give Campaign Donation Results

- In early 2014, three of our projects received a boost of support from many business, organizations and individuals. Our give campaign raised \$23,658 towards the purchase of night vision peregrine cameras, GPS collars for wolverines and the stocking of 744 rainbow trout.



Taber Pheasant Festival 2014
Pheasant Release
photo: AFGA, Brad Fenson

Wildlife Program

Wildlife projects are delivered within four areas: 1) *Ungulates*, 2) *Upland Gamebirds*, 3) *Waterfowl*, and 4) *Species at Risk*.

In the public eye

Our Wildlife program carries out inventory and habitat enhancement activities and, at its core, seeks to elevate the value of wildlife in the eyes of Albertans. We recognize the long-term contribution that landowners, hunters and trappers have made to conservation and see the potential to make these efforts even more substantial over the coming generation. There is also growing interest from the general public to become directly involved with conservation, and we are seeking ways to integrate volunteers in meaningful activities.

Alberta trappers contribute to wolverine conservation

In winter 2013, we continued to work with a group of dedicated trappers from the Alberta Trappers' Association on traplines spread across the boreal forest to better understand the distribution of wolverines and habitat features important to the species. In this unique undertaking, trappers play a significant role in collecting data that would not otherwise be possible to collect. We also collaborated on a PhD project led by University of Alberta designed to better understand the risks of industrial activities on wolverines.

Landholders cornerstone of grassland conservation

The grasslands of southern Alberta stretch over much of the Milk River basin. The landowners we work with through the MULTISAR project are fundamental to the long-term conservation of grasslands in this system. Landowners are very much involved in deciding what can be done to improve wildlife habitat on their ranches and committed over the long term toward this end. The

project is a testament to landowners leading by example, and it continues to gain positive recognition across Canada. Pronghorn are easily recognized on the prairies of southern Alberta, although the prominence of fencing has brought a serious physical barrier to their movement. We look at methods to improve movement within the existing layout of fences by creating modifications at key points. Unfortunately, weather conditions in winter 2013/14 impacted the distribution of pronghorn, which largely avoided our study area.

Habitat helps all wildlife

Our species-at-risk projects focus on enhancing habitat that supports vulnerable species with actions identified in recovery plans. Importantly, these actions also enhance habitat for other species as well, such as mule deer, amphibians, sharp-tailed grouse and moose. Activities include gaining stakeholder co-operation and conducting long-term monitoring to determine if the recovery process is working. Our piping plover and MULTISAR projects are good examples of adaptive and effective conservation that benefits a variety of wildlife.

Restoring wildlife to farmland

Farmland offers a unique challenge for wildlife. Areas converted to cropland typically offer very little habitat for nesting sites in the early spring and little habitat suitable for species that remain through our long winters. The Habitat Legacy Partnership project implements habitat enhancements in collaboration with landowners to improve upland habitat on farmed landscapes. We also conduct annual surveys for upland gamebirds to better understand long-term population trends, and as a way to measure the benefit of enhancement activities. Although the spring of 2013 was quite wet, brood productivity for pheasants

was higher than the previous year and for grey partridge was about the same. Other components of our upland work include improving hunter access and connectivity along public right-of-ways and working with grazing reserves and landowners in northwestern Alberta in a stewardship initiative to improve habitat for sharp-tailed grouse.

New dawn for upland hunting

We've been enormously encouraged by the interest and success of the Taber Pheasant Festival. We co-hosted the third annual event in October 2013, which again ran at full capacity with over 600 hunters visiting the Taber area during the week-long festival. The goal is to draw hunters into the area annually, improving the rural economy and creating value for upland habitat and upland birds within the community.

Keeping it "WHILD"

Most of Alberta's landscapes are in a state of change. Very few areas are exempt from the pressures of expanding industrial activity, recreational pursuits or residential growth. The WHILDZ (Wildlife Habitat Initiative in Low Disturbance Zones) project identifies high-value resources for wildlife in areas that have relatively low measures of human disturbance. Mineral licks are a key resource favoured by a variety of wildlife, and in 2013/14, we wrapped up our fieldwork by collecting use information from a selection of licks. These resource-rich habitats provide essential nutrients to members of the deer family as well as carnivores during periods of dietary deficiency and increased energy demand.

2013/14 Overview

- 17 individual wolverines identified with camera traps set at 47 sites across the boreal forest with the help of 24 trappers
- 24 marten, 62 fisher, 2 bobcat, 10 cougar and 114 wolverine hair samples collected using non-lethal methods
- Worked with an MSc student to develop genetic markers for all amphibians in Alberta and to develop a technique for detecting these species from water samples (environmental DNA)
- Over 200 lbs of silver sagebrush seed harvested by hand; planted these hard-won seeds on native restoration sites
- Completed habitat improvement plans and reassessments on roughly 58,000 ac
- Identified key areas where fences limit pronghorn movement to help guide where fencing improvements could be undertaken by the Alberta Fish and Game Association volunteer-based Pronghorn Antelope Travel Corridor Enhancement Project
- Collaborated with landowners and 4H Clubs to raise 500 pheasant chicks that were released in suitable habitat at 20 weeks old
- Surveyed grey partridge and ring-necked pheasants; pheasant flush count for every kilometre walked (60 km!) was nearly double that from the previous year, and annual reproduction was also greater with roughly 1.4 times more chicks per hen pheasant
- Sharp-tailed grouse lek occupancy was negatively associated with greater amounts of forest cover in our study area in northwestern Alberta.
- Human observers were more reliable than song meters at detecting sharp-tailed grouse leks on a given day, but song meters had the advantage of being left out for a four-day period that improved the overall detection of leks.
- 81 status reports (14 updates) published on species in Alberta since 1997
- 2 updates on status reports published in 2013/14, including western grebe and hare-footed locoweed
- Spring surveys from 2013 suggest that the piping plover count in Alberta was similar to 2012 but was still down roughly 27% from 2011.
- Nearly 4,700 images of bighorn sheep and 1,400 images of mountain goat captured using camera traps at four mineral lick sites to assess the seasonal variation of use
- Concentrations of calcium, iron, magnesium and sodium were greater at mineral lick sites compared with reference sites.

Overall, the success of our Wildlife program activities in 2013/14 involved the support of over 40 partners consisting of provincial and federal governments, industry, non-governmental organizations, universities, municipalities, leaseholders, private landowners and other interested groups.



Project: Wildlife Habitat Initiative in Low Disturbance Zones – Working with Alberta’s Trappers to Map Wolverine Distribution and Identify Conservation Risks

Partnerships: Alberta Environment and Sustainable Resource Development, Alberta Trappers’ Association, Daishowa-Marubeni International Ltd., Environment Canada, Shell FuellingChange

photo: ACA, Trail Cam

Alberta Wildlife Status Reports

ACA and Alberta Environment and Sustainable Resource Development (ESRD) publish Alberta Wildlife Status Reports for wild species that are believed to be declining in Alberta. These reports are the essential first step for a species to have its status assessed, and they play a key role in identifying *Endangered* and *Threatened* species that need legal protection to keep them from becoming extinct in Alberta. Each status report summarizes the information needed for assessing a species' status—where it lives; the specific habitat it requires; its population size and whether its population is stable, increasing or declining; factors preventing it from thriving in Alberta; and what has been, and is, being done to manage it in Alberta. A committee of Alberta-based scientists compares the information in each status report to internationally set thresholds (for population size, for example) and recommends a status for the species. Using international criteria and thresholds ensures the status assessment process is as unbiased as possible. The status recommended by the scientists is subsequently scrutinized by an Alberta-based multi-stakeholder committee (the Endangered Species Conservation Committee) composed of land managers, academic institutions, conservation groups and industry, who provide their recommendation on a species' status to the Minister of ESRD. The ultimate decision on status designation (e.g., *Endangered*, *Threatened*) is made by the Minister. In 2013/14, we published two status reports (western grebe update, hare-footed locoweed), submitted three reports (Canada warbler, brassy minnow, trumpeter swan) for review to the status assessment committees, and initiated one update report (Arctic grayling update).

Partnerships

Alberta Environment and Sustainable Resource Development

Amphibian Monitoring Using Environmental DNA

We are partnering with University of Alberta to develop a new approach for surveying amphibians using environmental DNA (eDNA). Environmental DNA refers to DNA that organisms leave behind or shed as they pass through the environment. Most people are aware that this is possible with tissue, such as hair, but the next step is collecting a DNA signature from material (mucus, feces, urine or sloughed skin) that is naturally suspended in water. This would allow us to detect amphibian presence by simply taking a water sample and having it analyzed in a genetics laboratory. This technique will be a vast improvement over traditional methods used for surveying amphibians, which commonly require highly skilled personnel often working at night in remote areas. This new approach will allow us to collect water samples at any time of day or night with minimal time spent at a location, as well as the flexibly to engage non-specialists (possibly volunteers) in sampling. One of our first steps has been to test our lab techniques to identify the genetic signature for all 10 species of amphibians that occur in Alberta. We have also initiated tests to detect amphibian eDNA from water samples collected from natural ponds and controlled aquariums. We started the laboratory work in 2013 with a graduate student from the University of Alberta.

Partnerships

Natural Sciences and Engineering Research Council of Canada – Industrial Postgraduate Scholarships Program, University of Alberta – Brandon Booker (M.Sc. candidate), David Coltman, Corey Davis and Cynthia Paszkowski

Effect of industrial disturbance on wolverine

Wolverine are an elusive and mysterious creature thought to be negatively impacted by industrial

disturbance. We have partnered with Dr. Mark Boyce, the University of Alberta and Matt Scrafford (Ph.D. student) on Strafford's wolverine study in the Rainbow Lake area of northwest Alberta with the Dene Tha on their traditional territory. The research examined the effect of industrial traffic and infrastructure on wolverine movements, distribution and their populations. To gather this information, the wolverines required radio-collars. Matt and ACA field crews set and monitored a line of live traps from November through April. The live traps were open for a total of 108 days and 579 trap nights and 24 wolverines, which were processed (marked with either a collar, ear tag weighed, etc.) and three others were captured and released. GPS telemetry data revealed that five of the 11 males had home ranges covering 400-1200 km². The project is slated to continue for several more years as Matt continues to work on his Ph.D.

Partnerships

Mark Boyce, the University of Alberta and Matt Scrafford (Ph.D. student); **Business Donors:** ATB Financial, Bildson Realty Ltd., Hinton Trappers Association, Richard D. McCabe Corporation, Rocky Mountain Wilderness Society, Stojan's Motor Sports; **Individual Donors:** P. Bumstead, L. Elias, L. Hommy, R. Kantor, G. Kruger, G. Macmillan, L. Marciak, D. Middleton, S. Otto, D. Pilon, A. Pollock, R. Reed, B. Smith, J. Sorenson, W. Sullivan, N. Tait, D. Ukeniek, S. Wilson, M. Zapach

Habitat Legacy Partnership

Upland gamebirds are valued for their showy colours, breeding displays and long history in the hunting tradition of Alberta. Ring-necked pheasants require a variety of habitats that provide suitable cover for nesting, brood rearing and travel. The Habitat Legacy Partnership works collaboratively with conservation groups, private

landowners, irrigation districts and municipal districts to host landowner workshops, implement habitat enhancements on the landscape and monitor the effects of habitat enhancements. The goal is to create key habitat components for ring-necked pheasant and gray partridge, but we anticipate that other species will benefit as well. In 2013/14, we planted approximately 2,500 shrubs, including many berry-bearing species, and continued maintenance on the approximately 15,000 trees and shrubs planted over the past four years, which provide food, security and thermal cover for wildlife. We completed our annual pheasant and gray partridge brood survey in which we flushed almost twice as many pheasants per hour in 2013 than in 2012. The encounter rate for partridges in 2013 was only slightly higher than in 2012. To engage and educate the public, we hosted two well-attended advisory workshops and distributed 500 pheasant chicks to 4H members and landowners who raised them to 20 weeks old prior to release on suitable habitat.

Partnerships

Alberta Hunter Education Instructors' Association, Cycle Works Motorsports, Hays 4H Club, landowners, Municipal District of Taber, Municipal District of Warner, Pheasants Forever – Calgary, Lethbridge and Chinook Chapters

Hay-Zama Wetland Monitoring

The Hay-Zama Wetland Monitoring project was developed in response to concerns about the potential impact of oil and gas activities within the wetland complex on waterfowl. As a condition of operation in the Hay-Zama complex, Alberta Energy Regulator requires oil and gas companies to monitor staging waterfowl and suspend production of a well if waterfowl numbers exceed the level of 600 individuals within 30 m. To monitor waterfowl numbers, we conducted weekly aerial surveys during spring and fall

migration periods over all producing oil and gas wells in the complex. Our weekly surveys also included flying an established route over the entire complex to estimate the aggregate number of observed waterfowl, which was used to assess migration status. We observed peak waterfowl numbers during the first survey week in spring (May 9) and the third survey week in fall (September 20). Waterfowl concentrations did not exceed threshold levels at any well site during the 2013 migration periods. We also conducted a single aerial survey for bald eagle nests within the complex on June 6 and observed nine active nests with a total of 15 eaglets.

Partnerships

Hay-Zama Committee, NuVista Energy Ltd.

MULTISAR

Southeastern Alberta is home to the highest density of *At Risk* wildlife in Alberta. MULTISAR is a multi-species stewardship program for species at risk focusing on the Milk River watershed and portions of the South Saskatchewan watershed. The program is a collaborative effort among landowners, ACA, Alberta Environment and Sustainable Resource Development, and Prairie Conservation Forum. In 2013/14, we completed wildlife and range surveys on approximately 58,000 ac of land and completed four habitat plans for landowners to help them incorporate wildlife habitat needs into their ranching practices. *Endangered* ferruginous hawks and greater sage-grouse, as well as *Threatened* chestnut-collared longspurs and Sprague's pipits, are just a few of the species identified on these lands. Enhancements were implemented on six properties, including the continued restoration of 480 ac back to native grass and the planting of 2,900 silver sagebrush and wild vetch plugs. We also installed reflectors along the top wire of barbed wire fences to reduce potential wildlife collisions (e.g., sage-grouse), removed two old buildings to reduce

predator sites in greater sage-grouse areas, and installed a smooth bottom wire (in place of barbed wire) on 12 km of fence to help pronghorn move more freely. We also installed four hawk poles to increase nest site availability for ferruginous hawks, which provide a natural means of controlling ground squirrels. Through open communication, we continue to build long-term relationships and increase awareness of species at risk with the landholders who care for wildlife. These relationships have helped us implement stewardship activities on 270,000 ac of land for the benefit of wildlife habitat and that complement the business strategy of individual landholders.

Partnerships

Alberta Environment and Sustainable Resource Development, AltaLink, Canadian Natural Resources Limited, Environment Canada – Environmental Damages Fund, Fortis Alberta, Government of Canada Habitat Stewardship Program for Species at Risk, landholders, Prairie Conservation Forum

Piping Plover Recovery Program

Piping plovers are small, stubby-billed, *Endangered* shorebirds that nest and feed along gravel beaches. They face a number of threats, including high rates of predation and damage to their nesting and feeding habitat. We are working with landowners across east-central and southern Alberta to improve habitat and promote awareness of the plight of the piping plover. Each year, we also conduct piping plover counts on key breeding lakes, which allow us to monitor population numbers and distribution, and help us to guide habitat improvement activities. We surveyed 26 waterbodies and found 178 adults on 19 lakes, with 10 or more adults on seven of these lakes. We worked with landowners to build three permanent wildlife-friendly fences and one temporary fence, and to implement seasonal grazing on

one lake to reduce vegetation, improving over 15 km of shoreline habitat. We also completed the second year of a vegetation control project on two lakes and are hopeful these treatments will restore over 4 ha of previously suitable breeding habitat to its former state. Since large-scale recovery efforts began in 2002, we have improved over 57 km of shoreline habitat, with the most key piping plover habitat being protected or improved through fencing.

Partnerships

Alberta Environment and Sustainable Resource Development, Alberta Tourism, Parks and Recreation, Department of National Defence, Ducks Unlimited Canada, Government of Canada, landowners, TD Friends of the Environment Foundation

Pronghorn Program Phase III: Facilitating Movement by Pronghorn

Having evolved on the prairies of North America, pronghorn have not developed an instinct to jump vertical obstacles. The proliferation of fencing that followed cattle ranching into Alberta since the 1880s poses a serious barrier to pronghorn movement. Pronghorn may cross under fence lines in some

locations, but it slows down their movements making them susceptible to predators and in some cases strips hair off their backs causing lacerations and making them vulnerable to infection and frostbite. We mapped over 67,000 km of fence line in 630 townships in southeastern Alberta and found that these digital maps are consistent with ground truthing 72% of the time. We are assessing if specific locations along fence lines can be improved using a treatment known as a “goat-bar,” which raises the bottom fence line wire. Early results from winter 2012/13 suggested that pronghorn did not selectively cross at the modified fence line locations. In fall 2013/14, we set up cameras at 52 sites to assess fall and winter movement at treatment sites. We monitored the existing fence line for one month and then raised 13 sections of fence with quick links or carabineers to assess how pronghorn react to the enhancement. In summer 2013/14, we also conducted trials to assess how domestic livestock and pronghorn react to different-coloured goat-bars (white, tan and green/brown). We are still analyzing the data, but over the three-month period, we captured over 300,000 images. As results from these fence modification enhancements become available, we will disseminate our

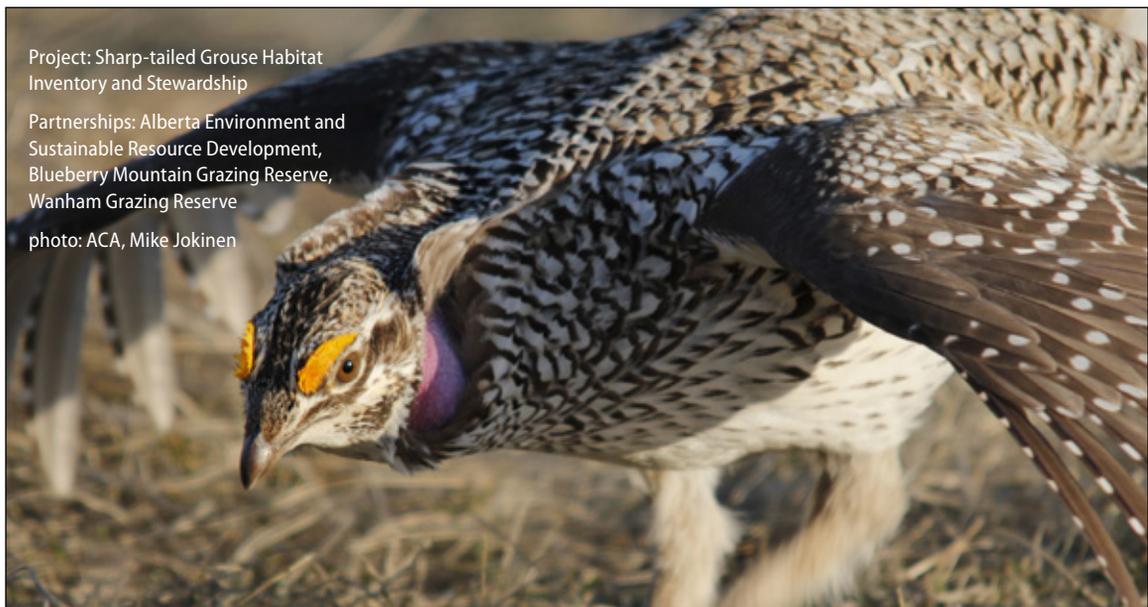
findings to stakeholders, wildlife managers and conservation groups across North America to help guide future work aimed at removing barriers to pronghorn movement.

Partnerships

Alberta Fish and Game Association, Bushnell, Cabelas Canada, Canadian Forces Base Suffield, Onefour Research Station, Safari Club International – Northern Alberta Chapter (Hunting Heritage Fund), TD Friends of the Environment Foundation, World Wildlife Fund, Writing-on-Stone Provincial Park

Restoring Natural Habitat for Wildlife

Wildfire control began in Alberta’s national parks in the 1930s and on provincial forested land in the 1950s. Despite good intentions, this practice has resulted in changes to vegetation diversity important for the survival of many wildlife species. Having an assortment of habitat types with different vegetation characteristics supports various stages in an animal’s life cycle. We are working with the Alberta Government to use disturbance-like controlled fire (prescribed burning) and mechanical clearing (e.g., brushing) to bring back a more natural state of habitat diversity to areas in the province



Project: Sharp-tailed Grouse Habitat Inventory and Stewardship

Partnerships: Alberta Environment and Sustainable Resource Development, Blueberry Mountain Grazing Reserve, Wanham Grazing Reserve

photo: ACA, Mike Jokinen

that are not influenced by other disturbances such as commercial logging. In 2013/14, we helped the Alberta Government conduct habitat surveys to determine how a recent prescribed fire has changed the vegetation patterns on Ram Mountain, an important area for bighorn sheep. With a large portion of trees being killed by the fire, the forest floor has opened up, allowing for grasses and forbs (including wildflowers) to appear in spots that were too shady to grow before. Many tracks from bighorn sheep, elk and deer were seen in this newly burned area, indicating its fresh appeal. Aside from working with the government on public land, we are working towards using similar treatments on ACA titled lands to help improve habitat. As part of this process, we evaluated the methods by which we inventory habitat to ensure we gather the information needed to make informed decisions on habitat treatments. By continuing to improve and monitor habitats, we can have a positive impact on many wildlife species.

Partnerships

Alberta Environment and Sustainable Resource Development

Sharp-tailed Grouse Habitat Inventory and Stewardship

We modelled occupancy of sharp-tailed grouse leks in northwestern Alberta using a combination of song meters and human observers to detect breeding activity over a five-day period. We found that occupancy of a given site was negatively influenced by the amount of forest cover within 1,600 m. Additionally, we worked with the Wanham and Blueberry Mountain grazing reserves to understand local population levels and trends, as well as to create an adaptive pasture management strategy to match cattle grazing needs with retention of grouse habitat. At the Wanham Grazing Reserve, we were interested in observing impacts of reseeded grass within a pasture that had an active lek site. Since

the site was disturbed two years ago, it appears that the grouse have currently abandoned the site. Work at the Blueberry Mountain Grazing Reserve was focused on collecting baseline information on presence or absence of grouse within the property. Efforts from this past spring did not yield any observations of sharp-tailed grouse.

Partnerships

Alberta Environment and Sustainable Resource Development, Blueberry Mountain Grazing Reserve, Wanham Grazing Reserve

Waterfowl Crop Damage Prevention Program

The Waterfowl Crop Damage Prevention Program assists agricultural producers in reducing damage to crops caused by waterfowl during fall migration. To improve effectiveness and efficiency, we approached counties and municipal districts in 2012/13 in areas where we previously operated scare cannon distribution centres and offered scare cannons free of charge for them to incorporate into their existing equipment rental programs. In 2013/14, we continued to work with producers as well as counties and municipal districts to ensure that scare cannons were available where needed for waterfowl crop damage prevention. We provided locations where scare cannons were available for loan and crop damage prevention strategies on our website. We completed decommissioning of all waterfowl feeding stations in 2013/14.

Partnerships

Alberta Environment and Sustainable Resource Development

Waterfowl Nesting Habitat Enhancement

Loss of secure nesting habitat is one of the main limiting factors for mallard, goldeneye and bufflehead populations in areas of Alberta where annual crop production is the predominant land use. Providing nest tunnels in these areas improves

nesting success for mallards, and installing nest boxes for goldeneye and bufflehead increases potential nesting sites. We encourage landowners and interested conservation groups to install and maintain these nest structures and to monitor annual use by waterfowl. We provide information on waterfowl and their habitat through field trips, presentations, and print and electronic media.

In 2013/14, we provided seven nest tunnels to volunteers to install, bringing our total number of installed tunnels to 280 since 2005. We engaged two new conservation groups and two additional landowners to participate in maintenance and monitoring of nearly half of these nest tunnels. Our monitoring results indicate waterfowl nested in approximately 40% of the tunnels, and all but one of the nests appeared to have hatched successfully. We monitored 17 existing nest boxes, installed four boxes on Conservation Sites in our Central Region, and provided one nest box to a private landowner to install on his property. We also responded to 22 requests for information on waterfowl nesting habitat and structures, including distributing over 10 copies of the reprinted booklet *Nest Box Guide for Waterfowl, Alberta Edition* to individuals and groups. We also hosted one field trip and participated in a conservation celebration at Whitney Lakes Provincial Park highlighting waterfowl species and their nesting requirements to approximately 30 adults and 23 youth.

Partnerships

Alberta Fish and Game Association, Delta Waterfowl, Ducks Unlimited Canada, Syncrude Canada Ltd., Wildlife Habitat Canada, Windsor Plywood

Wildlife Habitat Initiative in Low Disturbance Zones – Habitat Resources and Movement Corridors in Southwest Alberta

Identifying resources important for wildlife is an important step towards ensuring that Alberta's wild spaces and wild species are identified and conserved. Between 2010 and 2013, we monitored a subset of naturally occurring mineral licks in southwest Alberta using trail cameras to determine seasonal variation in use by key ungulates. We identified elk, moose, mule deer, white-tailed deer and mountain goats using forested mineral licks and determined that the peak period of use generally occurred in late July. As predicted, moose, deer and elk used forested mineral licks significantly less during the daytime compared with the morning or evening. Alpine mineral licks were most frequently visited by mountain goat and bighorn sheep, with the exception of one site that had moose, elk and deer visiting regularly as well. Peak activity at alpine licks occurred in July and August, where goats are typically present during all hours of the day, whereas sheep tend to avoid the night period. Based on information that we will collect in 2014/15, we will complete suggestions for mineral lick buffer distances and timing restrictions for industrial disturbances.

Partnerships

Alberta Environment and Sustainable Resource Development, Anatum Ecological Consulting, Devon Canada Corporation, Parks Canada

Wildlife Habitat Initiative in Low Disturbance Zones – Working with Alberta's Trappers to Map Wolverine Distribution and Identify Conservation Risks

We are partnering with the Alberta Trappers' Association to identify where wolverines occur in the province and to determine the major factors associated with their distribution. In 2013/14, we focused our efforts on analyzing the responses of trappers in a traditional knowledge survey as well as using field data from the previous winter to explore patterns of provincial wolverine distribution. The trapper survey responses indicated that they were more likely to find wolverine sign on their traplines if their registered fur management areas were larger (the largest traplines are generally found in the northern part of the province) and if road density was lower within that area. Trappers in the northwest Boreal and Rocky Mountain areas reported the highest incidence of wolverine sign on their lines; the northeast Boreal had the lowest reports of wolverine sign. We hope that our future work will help to explain differences from west to east across northern Alberta. To begin answering these questions, we focused all efforts in the winter of 2013/14 on sampling the Boreal Forest Natural Region, where ACA staff and 24 trappers set up and monitored 50 bait and camera sites. Photographs from these sites will be analyzed in summer 2014. The commitment of trapper citizen scientists to this project is substantial, including donating their time and resources over a two-month period outside of their normal trapping seasons. And it has become a family commitment for some, with spouses, children, and sometimes even grandchildren being involved in the set up and monitoring of sites, and the resulting discussion about what makes good wolverine habitat.

Partnerships

Alberta Environment and Sustainable Resource Development, Alberta Trappers' Association, Daishowa-Marubeni International Ltd., Environment Canada, Shell FuellingChange

Wildlife Volunteer and Outreach Project

Volunteers have been playing a crucial role in wildlife conservation efforts for many years. Vast datasets collected through programs such as the nearly 50-year-old North American Breeding Bird Survey, or more recent programs, such as eBird, would not exist without the efforts of volunteers. Individuals who volunteer with ACA can develop skills and gain knowledge related to conservation and, at the same time, increase our capacity to deliver conservation initiatives. In 2013/14, 52 participants from the Alberta Volunteer Amphibian Monitoring Program and Crowsnest Conservation Society submitted 155 amphibian and 44 reptile observations, including locations of seven snake hibernacula (dens). These data represented 80% of the amphibian and 78% of the reptile species native to the province. Data collected by volunteers provide a better understanding of the distribution and status of Alberta's amphibians and reptiles, and provide valuable information for land-use planning efforts. For example, land-use planners can use this information to incorporate appropriate setback distances around breeding ponds used by sensitive species, such as boreal toad, into forestry harvest plans. These partnerships and volunteer relationships are examples of how ACA can work with a network of enthusiastic volunteers to positively impact conservation.

Partnerships

Alberta Environment and Sustainable Resource Development, Crowsnest Conservation Society, TD Friends of the Environment Foundation



Project: Enhanced Fish Stocking

Partnerships: Access Pipeline, Agrium Redwater, Aquality Environmental, Aux Sable Energy, City of Fort Saskatchewan, Complete Crossings, DOW Agro Sciences

photo: ACA, Velma Hudson

Fisheries Program

Fisheries projects are delivered within three categories: 1) *Enhanced Sports Fisheries (Enhanced Fish Stocking and Lake Aeration)*, 2) *Monitoring and Evaluations*, and 3) *Riparian Conservation*. Beginning in 2013/14, *Riparian Conservation* is delivered under the Land Management program.

Happy anglers

Enhanced Sports Fisheries (Enhanced Fish Stocking and Lake Aeration) provides Albertans with recreational angling in areas of the province where such fishing opportunities don't otherwise exist. The result is reduced pressure on limited native fish stocks and conservation of important fish species.

In 2013/14, we stocked some 120,900 catchable-sized (i.e., 20 cm) rainbow trout in 60 ponds through Enhanced Fish Stocking (EFS), creating "put-and-take" trout fisheries where anglers are allowed to harvest up to five fish per day. Since 1998, when ACA assumed responsibility for EFS, we have stocked over two million rainbow trout. To prevent interaction with native fish species, trout stocking occurs in the "white zone" (settled area of the province) only and in waterbodies that frequently winterkill. These sites are located close to urban centres, making them very popular family destinations all summer long. Among the anglers we surveyed, most were very satisfied with their fishing experience at EFS ponds and frequented these sites because they were close to home. We also installed signage at 13 waterbodies to increase public awareness of EFS. Data collected on water quality, physical characteristics of the waterbodies, and angler effort at EFS ponds will help improve efficiency and cost-effectiveness of our fish stocking project.

An impressive 16 lakes across the province benefited from lake aeration last year, creating great

angling opportunities for residents of neighbouring communities. Aerated lakes are typically shallow, eutrophic, experience prolonged ice-cover, and are prone to both summer and winter fish kills because of low dissolved oxygen. Through aeration, we maintain dissolved oxygen at levels that promote year-round survival of stocked trout. Except for one lake that experienced a late winter fish kill due to an atypically long winter period, all other lakes successfully overwintered fish and prevented summerkills.

New possibilities for urban dwellers

We collaborated with a graduate student at the University of Lethbridge to investigate the suitability of stormwater ponds to support put-and-take recreational fisheries. Approximately 13% (4 of 31) of the ponds examined had suitable water quality and habitat to support viable stocked trout fisheries. Toxicant concentrations (heavy metal and pesticides) in these ponds were well below federal guidelines, both in water samples and in fish tissue. Given the rapid pace of urban development across the province and associated high proliferation of stormwater ponds, the prospect of even a small proportion of them supporting healthy stocked fish populations could result in additional recreational fishing opportunities in urban centres.

Conservation and recreational benefits

We conduct numerous monitoring and evaluation projects to provide information on population structure, abundance, distribution and life history of priority sport fish species. We also monitor sport fisheries for angler use, harvest and demographics. We conducted projects at 7 rivers, 2 lakes and 16 ponds, as well as interviewed 720 anglers during creel surveys. In our sport fish surveys, we focus on walleye, northern pike, Arctic

grayling, bull trout, cutthroat trout, rainbow trout and brook trout. Results from these surveys assist Alberta Environment and Sustainable Resource Development with fisheries management plans and form the basis for fishing regulation changes. They also determine the effectiveness of new management strategies, such as the special walleye fishing licence.

Our studies also generate critical information required for developing key provincial conservation initiatives and resource management policies, including the Alberta Fish Sustainability Index, Alberta Wildlife Status Reports, Alberta Landuse Framework, and State of the Watershed reports under the Alberta Water for Life Strategy.

Bull trout studies in the East Slopes drainages have identified key spawning tributaries, overwintering habitats and subpopulations, as well as inter-basin migrations, that were previously unknown. In the Castle River drainage, we identified new spawning tributaries in Mill Creek, South Castle River, and the Carbondale River system, as well as inter-basin migrations among the Castle, Crownest, and Old Man river basins. The Waterton River project highlights the negative impacts of anthropogenic activities (e.g., habitat degradation and introduction of non-native species) on bull trout. Encroachment by non-native brook trout into their range poses a considerable threat to the remnant bull trout populations in the drainage. Native bull trout are restricted to areas where the water is coldest and stream connectivity is most intact, whereas invasive brook and brown trout are captured throughout the drainage. In the Clearwater River system, our studies suggest that despite unprecedented conservation measures, the bull trout population is still at high risk of extirpation because adult bull trout abundance remains relatively low. By incorporating advances in analytical techniques (such as occupancy modelling) and non-

invasive fish sampling technology (such as transponder-tag scanner array), we lead the development of population status assessment tools for bull trout in the province.

2013/14 Overview

- 120,900 twenty-centimetre long rainbow trout stocked into 60 waterbodies
- 15 aerated waterbodies successfully overwintered fish and prevented summerkills; one experienced late winter fish kill because of an unusually long winter period
- 9 fisheries projects conducted on 27 waterbodies; generated information on population status, recreational harvest, distribution, migration and spawning habitat of sport fish
- Sport fish surveyed: walleye, northern pike, Arctic grayling, bull trout, cutthroat trout, rainbow trout, brown trout and brook trout
- Identified key bull trout spawning tributaries, overwintering habitats and inter-basin movements previously unknown in the East Slopes drainages
- 720 anglers interviewed during creel surveys
- 112 redds counted over 60 river-kilometres
- 260 river-kilometres surveyed using electrofishing or angling
- 39 bull trout tagged with transponders
- Used transponder-tag scanner array to monitor trap avoidance by fish

Overall, the success of our Fisheries program activities in 2013/14 involved the support of over 30 partners consisting of provincial and federal governments, industry, watershed groups, non-governmental organizations, counties/municipalities, universities, private landowners and other interested groups.

Clearwater River Core Area Bull Trout Status

Bull trout is a sport fish native to the eastern slopes of Alberta. In response to alarming declines in abundance and distribution, a province-wide, zero bag limit for the species was imposed by the provincial government in 1995. Despite this and other conservation measures, most remaining bull trout populations in the province are considered to be *At Risk* of extirpation, and several populations, including the Clearwater River population, are considered to be at *High Risk* of extirpation. We began a project in 2011/12 to assess the abundance and distribution of bull trout in the Clearwater River watershed. In 2013/14, the final year of the project, we estimated abundance of adult bull trout in the river itself. We used angling gear to capture bull trout in two reaches of the river that have been assessed since the 1970s. By uniquely marking all the bull trout we captured using an internal transponder tag not much larger than a grain of rice, we were able to compare the proportion of marked fish to unmarked fish in subsequent catches and thereby estimate their

abundance. After six days and over 24 hours of angling in April, we captured a total of 33 bull trout, including 22 individuals and 11 recaptures. Estimated abundance of adult bull trout was between 1.5 and 3.2 fish/km. Our results indicate that abundance of adult bull trout in the Clearwater River is relatively low and, based on past assessments, appears to have been low for the past 35 years. Despite unprecedented conservation measures, the Clearwater bull trout population appears to still be at *High Risk* of extirpation.

Partnerships

Alberta Environment and Sustainable Resource Development

Distribution and Abundance of the Migratory Bull Trout Population in the Castle River Drainage

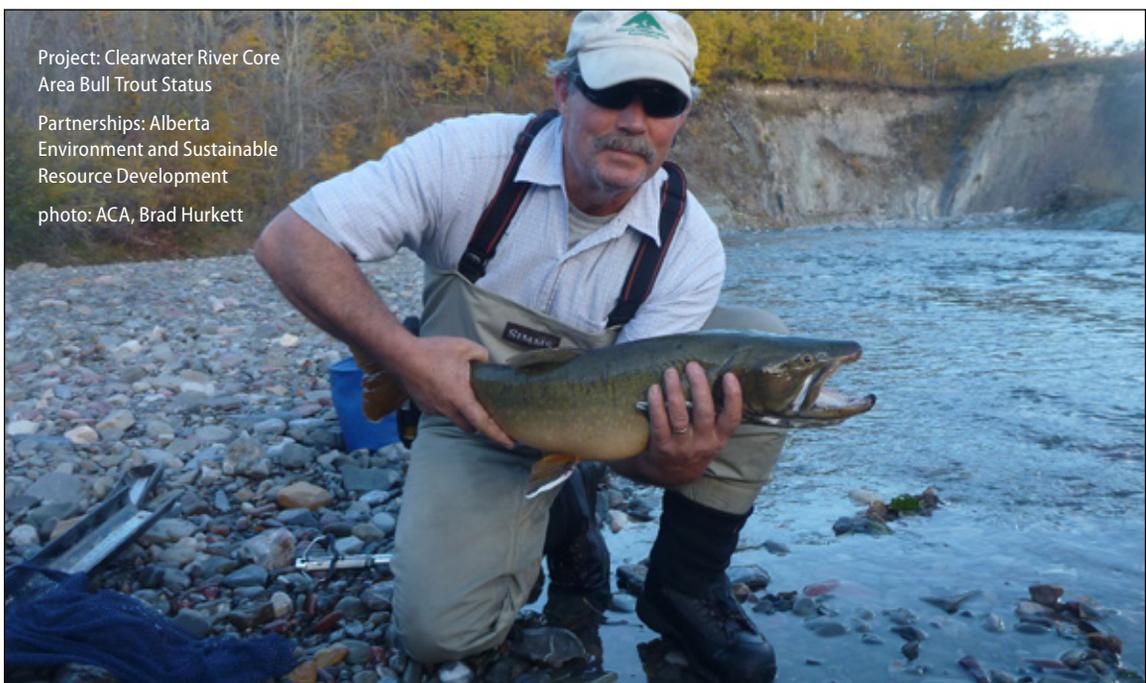
Alberta's bull trout populations have declined over the last century because of anthropogenic disturbances, including habitat fragmentation and degradation, migration barriers, introduction of non-native fish species, and overharvest. In southwestern Alberta, bull trout distribution

has been reduced to approximately 31% of its historical range. Current populations, all of which are *At Risk* of extirpation, exist only in headwater streams. Abundance and distribution of these remnant populations are unclear. We are conducting a four-year abundance and spawning habitat assessment in the Castle River drainage to update the status of these remnant populations. During fall 2013, we installed fish traps in South Castle River, Carbondale River and Mill Creek to capture bull trout migrating downstream. We marked all adult bull trout with an internal transponder tag to track individuals during recapture events. Unseasonably high stream flows caused trap failure at all study sites, which subsequently reduced fish catch rates. We captured 81 adult migratory bull trout in three major spawning streams: 21 in South Castle River, 39 in Carbondale River and 21 in Mill Creek. We conducted redd (fish nest) counts in spawning streams and observed 112 redds in 60 stream kilometres: 10 in South Castle River, 11 in West Castle River, 52 in Mill Creek, and 39 in Carbondale River drainage. High stream flows resulted in low redd counts compared to previous survey years.

Project: Clearwater River Core Area Bull Trout Status

Partnerships: Alberta Environment and Sustainable Resource Development

photo: ACA, Brad Hurkett



We observed streambed scouring that had likely washed out several bull trout redds in most spawning streams. Despite these complications from unseasonable high flows in year three, we continue to gain a better understanding of the bull trout population in the Castle River drainage, and we anticipate learning more in 2014/15, the final year of the project.

Partnerships

Alberta Environment and Sustainable Resource Development, Alberta Stream Watch Conservation Coalition, Devon Canada Corporation, Shell Canada Energy

Enhanced Fish Stocking Project

The Enhanced Fish Stocking project provides anglers with increased opportunities to catch and harvest 20 cm rainbow trout in parts of Alberta where angling opportunities are limited or do not exist. Recipient waterbodies are prone to winterkill and require annual stocking of rainbow trout to maintain angling opportunities. All rainbow trout stockings are delivered through contracts with private growers. We stocked a total of 60 waterbodies with 120,900 rainbow trout during 84 stocking events in 2013. Approximately 60% of the stockings were completed prior to the May long weekend. We also installed signage that displayed ACA's logo and those of contributing partners at 13 waterbodies. Since 1998, when ACA assumed responsibility for the stocking project, we have stocked over two million rainbow trout in 1,376 stocking events.

Partnerships

Access Pipeline, Agrium Redwater, Aquality Environmental, Aux Sable Energy, City of Fort Saskatchewan, Complete Crossings, DOW Agro Sciences

Lake Aeration

We use aeration as a fisheries management technique to provide Albertans with recreational angling opportunities in areas of the province where such opportunities are otherwise limited. Aerated waterbodies are typically shallow, eutrophic, experience prolonged ice cover, and are prone to summer and winter fish kills. We use aeration to maintain dissolved oxygen levels above 3 mg/L to promote year-round survival of stocked trout. In 2013/14, we aerated 16 waterbodies across Alberta. All of our aerated waterbodies successfully overwintered trout. However, a partial summerkill was reported at Swan Lake. We identified and continued to develop potential aeration opportunities to create or enhance angling opportunities. Further, we established and maintained financial and in-kind partnerships for existing and new aeration projects.

Partnerships

Access Pipelines, Alberta Environment and Sustainable Resource Development, Alberta Tourism, Parks and Recreation, Canadian Forest Products Ltd., Clear Hills County, County of Parkland, Daishowa-Marubeni International Ltd., Devon Canada Corporation, Edson Forest Products, Fisheries Enhancement Society of Alberta, Municipal District of Greenview No. 16, Northern Sunrise County, Peace Country Flyfishers, Spring Lake Campground, Trout Unlimited Canada - Yellowhead Chapter, Village of Spring Lake

Mikkwa River Arctic Grayling Population Assessment

Arctic grayling is a strikingly colourful fish, which occupies many boreal and foothills streams in Alberta. Alberta Environment and Sustainable Resource Development is developing a new tool, the Alberta Fish Sustainability Index (FSI), to bring consistency to individual fish stock assessments across the

province. The FSI requires basic demographic data from undisturbed or minimally disturbed "reference" populations that will serve as benchmarks against which data from more disturbed populations can be measured. With its headwaters in the Birch Mountains Provincial Wildland Park and relative absence of any major industrial development in the watershed, the Mikkwa River is a candidate reference population for the Arctic grayling FSI. We surveyed the Mikkwa River to collect demographic data to assist with the development of the FSI. At survey sites, we captured Arctic grayling using backpack electrofishing or test angling, and measured their length and weight. A total of seven Arctic grayling were captured, one caught by angling and six captured by electrofishing. Arctic grayling ranged in size from 55 to 273 mm fork length. We discontinued field surveys after two days because of the low number of grayling captured despite intensive effort.

Partnerships

ConocoPhillips

Milk River Sauger/Sport Fish Inventory

Fish populations in the Milk River in southwestern Alberta are influenced by international transboundary flow agreements between Alberta and Montana. Discussions are currently underway regarding the timing and quantity of water diverted into the North Milk River and subsequently conveyed into the Alberta portion of the river. Nineteen fish species are documented in the Alberta portion of the river (approximately 170 km of stream). Three of these species—St. Mary's sculpin, western silvery minnow and stonecat—are listed as *Threatened* under the *Species At Risk Act*, and two others—sauger and brassy minnow—are listed as "of special interest." However, the most recent data on fish populations in the Milk River system are more than a decade old. The goal of our project is to generate data on fish



Project: Mikkwa River Arctic Grayling Population Assessment
 Partnerships: ConocoPhillips
 photo: ACA, Troy Furukawa

distribution and abundance, which can be used to review the status of fish species as well as contribute to decisions regarding flow control regimes. In 2013/14 (planning year), we held discussions with Alberta Environment and Sustainable Resource Development to determine the priorities, objectives and broad project direction for ACA's participation in the inventory. Researchers from the University of Alberta will survey sculpin and western silvery minnow in the upper and lower reaches of the Milk River, and we will determine population estimates for sauger and fish community composition in the middle reaches of the river. Data collection and reporting will begin in 2014/15.

Partnerships

Alberta Environment and Sustainable Resource Development

Muskeg River Core Area Bull Trout Status

Bull trout is a sport fish native to the eastern slopes of Alberta. In response to alarming declines in abundance and distribution, a province-wide, zero bag limit for the species was imposed by the provincial government in 1995. Despite this and other conservation measures, most remaining bull

trout populations in the province are considered to be *At Risk* of extirpation, and several populations, including the Muskeg River population, are considered to be at *High Risk* of extirpation. In this first year of a two-year project, we attempted to estimate abundance of adult bull trout in the river using mark-recapture techniques. We used angling and raft electrofishing gear to capture bull trout in two reaches that have been assessed periodically since the 1990s. Each bull trout captured was implanted with a transponder tag to allow us to identify individuals. We only captured 10 bull trout in the two study reaches (14 km), but we angled 34 bull trout in just 2 km of river while scouting upstream of the study reaches. We suspect flooding prior to our sampling affected bull trout distribution in the river. Our low catch in the two study reaches precluded us from estimating adult bull trout abundance in the river. In 2014/15, we will make a second attempt to estimate the abundance of bull trout in the river, and we will describe the distribution of juvenile bull trout throughout the upper Muskeg River watershed.

Partnerships

Alberta Environment and Sustainable Resource Development,

Alberta Stream Watch Conservation Coalition, TD Friends of the Environment Foundation

Summer Sport Fishery on the Peace River, Alberta, 2013

The portion of the Peace River located in northwest Alberta is categorized as a cool-water fishery that supports sport fish species such as walleye, northern pike, goldeye and burbot. Angling is typically concentrated at the mouths of tributaries flowing into the mainstem. However, little is known about recreational angling pressure along this portion of the river. We surveyed anglers along a section of the river around the town of Peace River (i.e., between the confluences of the Smoky and Cadotte rivers) to provide Alberta Environment and Sustainable Resource Development with current data regarding the sport fishery. We interviewed anglers at two locations, at Heart River/Pat's Creek in the town of Peace River and at the Whitemud River confluence, from June 3 to September 25, 2013. To determine ratio-of-use along the survey section, we counted anglers by boat. We estimated that 53% of anglers fished from the two survey sites and that total angling effort along the survey reach was 1.0 h/ha. Catch rates were low at both access sites for all species, with 0.3 fish/h captured at Heart River/Pat's Creek and 0.8 fish/h captured at Whitemud River.

Partnerships

Canada Summer Jobs

Trout Stocking Evaluation

Stocking trout to create put-and-take fisheries is a popular management tool for providing recreational fisheries. ACA stocks about 60 lakes with approximately 121,000 trout. Initial results suggest that put-and-take sport fisheries are composed of populations of many fewer fish than previously believed and that their close proximity to municipalities makes them popular destinations. Despite the stocking program's cost and importance, little information

exists on the suitability of these lakes to support populations of stocked fish and a sport fishery. To assess the suitability of these lakes for stocking, we collected water quality and bathymetry data from 10 lakes and data on angler effort, temperature and dissolved oxygen from six lakes. Stocked lakes varied considerably in size (0.4 to 4.0 ha, mean = 1.6 ha), shape and depth. Water quality parameters varied widely between our 10 study lakes, with pH varying the least and nitrates varying the most. Estimated angler effort ranged from 57 angler-hours to 811 angler-hours. Water temperature ranged from 9.3°C to 25.1°C and reached the upper threshold for rainbow trout to survive (25°C) on only one four-hour occasion at one lake. Dissolved oxygen ranged from 0.0 mg/L to 16.8 mg/L and reached the lower threshold for rainbow trout to survive (3 mg/L) at all lakes except one, ranging from 4% of the recording period to 99% of the recording period.

Partnerships

TD Friends of the Environment Foundation

Walleye Selective Harvest, 2013

A restrictive management strategy due to the overharvest of walleye in Alberta has resulted in increases in walleye numbers but few large fish. Explanations for the large number of small yet old walleye include density compensation resulting in stunted growth, size-selective mortality of larger fish, or selective harvest resulting in genetic changes in growth rate. Paradoxically, the management solutions for these problems are in opposition: either harvest more or harvest less. A Special Walleye Licence (SWL; that is, a draw and tag system) was designed to increase the number of medium- to large-sized walleye. The goal of this project is to evaluate the effectiveness of this regulation to reverse size-selective harvest. We conducted creel surveys at Iosegun and Smoke lakes using single-access

methods during the summer of 2013. The SWLs for walleye <43 cm total length at Iosegun and Smoke lakes were 2.9% and 1.9% subscribed, respectively, whereas the SWLs for walleye 43 to 50 cm total length were fully subscribed at both lakes. We interviewed 215 and 246 anglers and estimated angling effort to be 3,203 h and 1,545 h at Iosegun and Smoke lakes, respectively. Harvest rate at both lakes was 0.1 fish/h. Release rate was 1.5 fish/h at Iosegun Lake and 2.3 fish/h at Smoke Lake. No illegal harvest (harvest without an SWL) was observed at Iosegun Lake. Four walleye of the wrong size and two walleye harvested without an SWL were observed at Smoke Lake.

Partnerships

Alberta Environment and Sustainable Resource Development, Canada Summer Jobs, Municipality of Fox Creek

Waterton River Watershed Bull Trout Status Assessment

Bull trout is an important indicator of stream health and is a valued sport fish. Once among the most widespread native stream fishes to occupy Alberta's coldest streams and rivers, our provincial fish is now considered *Threatened* by the Committee on the Status of Endangered Wildlife in Canada. Populations are fragmented and pushed to the western periphery of the species' historical range in Alberta. Knowledge of the species' current distribution is essential to identify and prioritize remediation efforts; however, the species' widespread decline has made detection difficult in many watersheds. According to a recent assessment by Alberta Environment and Sustainable Resource Development, bull trout are at *High Risk* of extirpation in the Waterton River watershed. Their historical decline in the watershed is well documented, but current information on their distribution is lacking.

In 2012 and 2013, we completed an intensive study using electrofishing

gear to describe the range of bull trout in the Waterton River watershed in relation to existing sport-fish communities, human-made barriers to fish movement, and stream temperature. We used a grid-like sampling pattern across the watershed to detect bull trout and obtain a detailed picture of the existing sport-fish community. We used dataloggers to monitor instream temperature at 29 stations across the watershed. We electrofished roughly 63 km of stream in the watershed at 71 reaches on tributaries, the entire Dardanelles and Waterton River, and the perimeter of Maskinonge Lake. In all, we captured 281 bull trout of which 94% were captured in four short tributary reaches where the water is coldest and stream connectivity is most intact. Overall, the Waterton watershed is dominated by non-native fish species, particularly brook trout, which were captured in every flowing waterbody. Non-native rainbow trout were equally dominant in the Drywood-Yarrow sub-watershed, and brown trout were well established in the Waterton River. Brook trout appear to be a significant threat to remaining bull trout populations; we captured *bull trout x brook trout hybrids* in nearly every tributary where bull trout were captured. Our findings will help fisheries managers decide how and where to best conserve Alberta's provincial fish, while maintaining viable recreational fisheries for Alberta anglers.

Partnerships

Alberta Environment and Sustainable Resource Development, Nature Conservancy of Canada – Waterton Park Front, Parks Canada, University of Lethbridge

Land Management

Land Management projects are delivered within three categories: 1) *Habitat Conservation*, 2) *ACA Conservation Site Management*, 3) *Riparian Conservation and Initiatives*. Beginning in 2013/14, Riparian Conservation (previously delivered under the Fisheries program) is delivered under Habitat Conservation.

Conservation impact

The primary goal of our Land Management program is to conserve important wildlife and fish habitat across Alberta. This habitat, known as Conservation Sites (see *Discover Alberta's Wild Side: Annual Outdoor Adventure Guide*), spans hundreds of thousands of acres across Alberta. Each site has its own unique characteristics and provides an array of opportunities to hunt, fish, forage or view wildlife. Conserving habitat in perpetuity and providing sustainable recreational opportunities—and working with landowners and member groups to achieve these goals—is what ACA's Land Management program is all about.

Each year we acquire new Conservation Sites by securing habitat through land purchase and gracious land donations from private landowners across Alberta. This work is achieved through a collaborative effort between ACA, private donors, our corporate partners and other conservation organizations. Notably, Suncor Energy Foundation, Shell Canada Energy, TransCanada Pipelines, Government of Canada Habitat Stewardship Program for Species at Risk, and many other partners were instrumental in their continued support for retaining key habitats in the boreal and grassland regions of Alberta. This collaborative effort resulted in eight new Conservation Sites, including two land donations, conserving nearly 2,000 acres (809 ha) valued at over \$2 million.

Landowners also play a key role in our conservation efforts and successes. Our Landowner Habitat Program is designed to conserve key wildlife and fish habitat and enhance recreational access on privately owned lands using term agreements. Two new agreements were added to the program in 2013/14. We currently manage 48 agreements conserving over 8,000 acres (3,237 ha) of important wildlife and fish habitat.

Habitat management and recreational benefits

Land management is considered a bit of an art, which requires a lot of heart and creativity. Habitat is the essential element in maintaining wildlife and fish populations. Recognizing this, our goal is to maximize habitat potential on our Conservation Sites and privately owned lands by implementing various management and enhancement techniques to make habitat attractive to a variety of wildlife and fish species.

Our Conservation Site Management program involves actively managing and maintaining Conservation Sites we own or manage (Crown land). To guide management, we develop detailed management plans, which provide short- and long-term objectives on how the sites are to be managed. These plans are a collaborative effort between ACA and other conservation partners who are actively involved in the management of these sites. Managing Conservation Sites involves activities such as installing fences, repairing fences, installing signage, controlling invasive species, repairing infrastructure, completing baseline inventories, monitoring sites, mitigating access issues, managing contracts, addressing land-use referrals, and planning and implementing a variety of habitat enhancement and restoration projects on over 200,000 ac (80,937 ha). In 2013/14, ACA staff and seasonal employees spent over 13,000 hours inspecting and maintaining over 175

Conservation Sites across Alberta, covering over 121,000 acres (48,967 ha) of habitat. This work is not accomplished alone; volunteers, member groups and partners are extremely valuable and assisted us immensely.

As part of Land Management, we also manage 28 fisheries access sites, which provide anglers access to 4 rivers and 24 lakes across Alberta, thereby increasing angling opportunities for the public. Managing these sites is achieved through a variety of partnerships, both in-kind and financial, with volunteer stewards, industry, government, municipalities, various corporate partners and other organizations across the province.

Conserving riparian habitat

Riparian areas are zones that are rich in biodiversity. Riparian habitat is an important ecosystem and vital to a staggering array of organisms. These moisture-rich areas support a diversity of plants, which provide ideal foraging areas for a variety of wildlife species. These areas are also favoured by insects, which provide an essential food source for birds, amphibians and fish to thrive on. We work with landowners and lessees to conserve riparian habitat on priority creeks and rivers. We are currently working on the Edson River, Owl River, North Raven and Raven Rivers, Beaverlodge River and various creeks in the Oldman watershed basin. Working with landowners, we use management tools such as streambank fencing, habitat lease agreements, bank stabilization, off-channel watering for livestock, and education and outreach to enhance, maintain and conserve riparian habitats and overall ecosystem health.

In total, we delivered 14 on-the-ground riparian enhancements, including planting willows, installing livestock exclusion fencing, signing habitat lease agreements to idle riparian habitat, and installing off-channel watering systems and spring developments. Together, our projects

protected approximately 4.5 km of streambank and conserved over 85 ac (34 ha) of riparian habitat.

We also conducted several community outreach activities, including hosting demonstration tours, planting willows, and working with watershed groups, landowners and lessees to highlight riparian projects and increase public interest in maintaining healthy riparian areas. Over 200 volunteers and 60 high school students participated in a variety of events.

We gratefully acknowledge the co-operation and support of our many partners and private landowners; without their support and involvement, these accomplishments could not have been achieved.

The great outdoors: yours to discover

The *Discover Alberta's Wild Side: Annual Outdoor Adventure Guide* profiles 746 Conservation Sites covering over 294,215 ac (119,064 ha) across Alberta. Secured by ACA and our partners, these sites offer a variety of sustainable recreational opportunities including hunting, angling, foraging and wildlife viewing. They include 631 sites where you can hunt and 148 sites where you can fish. The popularity and reach of the *Outdoor Adventure Guide* continues to increase year after year: we distributed 80,000 copies in 2013/14. The inclusion of Alberta Fish and Game Association, its affiliated clubs, and Ducks Unlimited Canada Conservation Sites makes this one of the most extensive outdoor guides available.

2013/14 Overview

- 8 new Conservation Sites secured (acquisition/land donation) totaling 1,979 ac (800 ha)
- \$2,100,000+ in lands secured (approximate value)
- 10-year partnership celebration event held with Suncor Energy Canada; partnership received finalist at the Emerald Awards
- 477 acres (193 ha) of habitat protected by executing 2 new landowner habitat retention agreements
- 195 Conservation Sites inspected
- 38 Conservation Sites underwent habitat enhancements
- 365,000 trees and shrubs planted on our Conservation Sites
- 13,500+ hours spent on Conservation Site management and maintenance
- 28 fisheries access sites maintained, of which 5 received upgrades and enhancements
- 29 Conservation Site signs installed, including boundary and "Foot Access Only" signs on 27 sites
- 37 Conservation Sites required recommendations on land-use referrals
- 35 management plans completed
- 14 on-the-ground riparian enhancements protecting over 4.5 km of streambank and conserving over 85 acres (34 ha) of riparian habitat
- 10 sites inspected on the North Raven River where we have habitat lease agreements

Overall, the success of our Land Management program activities in 2013/14 is a testament to the support and efforts of over 80 partners, including government, industry, non-governmental organizations, counties/municipalities, leaseholders, private landowners, corporate partners and other interested groups. These vital partnerships reduce the amount of levy dollars required to conserve and manage over 200,000 ac (80,937 ha) of habitat.



Project: Provincial Habitat Securement Program

Partners: Alberta Fish and Game Association, Ducks Unlimited Canada, Government of Canada Habitat Stewardship Program for Species at Risk, Joseph and Laura Di Santo, Parkland County, Pheasants Forever – Calgary and Chinook Chapters, Steve Nickolayuk, Western Sky, Wild Elk Federation

photo: ACA, Marco Fontana

Beaverlodge Riparian Conservation

In 2002, aerial videography was used to assess riparian health on the Beaverlodge River and two of its tributaries, Beavertail Creek and Steeprock Creek. Degraded riparian habitat along these systems is primarily attributed to livestock grazing and watering, feedlot operations, vehicle fording, land clearing and instream alterations. Since 2004, ACA, in partnership with landowners, provincial and municipal governments, and other conservation groups, has delivered riparian restoration and conservation projects throughout this drainage. We completed riparian health inventories and assessments, riparian enhancement projects, bi-annual water quality analysis and monitoring, and public education events. In 2013, we completed six riparian health assessments and two riparian health inventories, delivered one solar-powered watering system, completed spring and fall water quality analyses for which several parameters exceeded recommended guidelines,

and coordinated an interactive event with Beaverlodge Regional High School students to plant willows. The Beaverlodge Riparian Conservation project is a collaborative effort with West County Watershed Society, County of Grande Prairie, and Cows and Fish. Our riparian conservation efforts are resulting in incremental improvements in riparian habitat in the Beaverlodge River watershed and are influencing how landowners steward their lands.

Partnerships

ConocoPhillips, County of Grande Prairie, Cows and Fish, Penn West, West County Watershed Society

Conservation Site Management

We currently manage and maintain 195 Conservation Sites, which include over 200,000 ac of titled and Crown land in Alberta. Our Conservation Site Management program is responsible for the stewardship of these conservation assets in accordance with site management plans. In 2013/14, we inspected and maintained 195 Conservation Sites across Alberta.

We also completed enhancement projects on 38 Conservation Sites, including planting over 365,000 trees and shrubs! Tree and shrub planting and other vegetation enhancements will benefit habitat for ungulates, upland gamebirds and waterfowl. Recreational enhancements at seven of the sites, such as access gates and vehicular controls, also benefit outdoor enthusiasts. We installed 29 Conservation Site signs and provided recommendations on 37 land-use referrals. We also managed public access on two sites through a reservation system. Numerous partners across Alberta participate in and support our work.

Partnerships

Alberta Environment and Sustainable Resource Development, Alberta Fish and Game Association, Alberta Sport, Recreation, Parks and Wildlife Foundation, Alberta Trail Riding Association, Bow River Irrigation District, Buffalo Lake Naturalists, Calfrac, Cameron Development Corporation, Canon Evergreen, County of Lethbridge, County of Newell, County of Warner, Ducks Unlimited Canada, Eastern Irrigation District, Edmonton and Area Land Trust, Grande Prairie District Junior Forest Wardens, Junior Forest Rangers, landowners, MULTISAR, Municipal District of Smoky River, Nature Conservancy of Canada, Pheasants Forever – Calgary and Chinook Chapters, Prairie Conservation Forum, Robert Bateman, Saddle Hills County, Shell Canada Energy, Strathcona Wilderness Centre, Suncor Energy, The Carbon Farmer Inc., Thunder Lake Provincial Park Operations, Total E&P Canada, Tree Canada, volunteer stewards, Westlock Whitetails Junior Forest Warden Club, Wildlife Habitat Canada

Project: Beaverlodge Riparian Conservation

Partners: ConocoPhillips, County of Grande Prairie, Cows and Fish, Penn West, West County Watershed Society

photo: ACA, Melissa Buskas



Corporate Partners Program

Over the last decade, our Corporate Partners Program has made significant contributions to habitat conservation in Alberta. Our goal is to continue working with corporate partners to secure important habitats for wildlife and fish species and to enhance recreational opportunities for Albertans. The program is guided by focus areas, which help prioritize securement efforts and opportunities, and by term agreements developed collaboratively with corporate partners. Corporate partnerships and collaborations with other conservation organizations allow us to maximize our conservation impact and overall effectiveness of our securement efforts. In 2013/14, we acquired four parcels of land, resulting in three new Conservation Sites and an expansion of an existing Conservation Site. These acquisitions amount to 762 ac of high-quality habitat with an estimated land value of approximately \$600,000.

Partnerships

Alberta Fish and Game Association, Shell Canada Energy, Suncor Energy Foundation

Edson River Riparian Conservation

In 2010, we identified the Edson River watershed as a priority for riparian conservation. Aerial videography surveys conducted in that year showed that almost half (49%) of the Edson River riparian areas were degraded. Livestock grazing, erosion and water quality are contributing to the decline of the sport fishery in the watershed, particularly to declines in Athabasca rainbow trout and Arctic grayling populations. Through rehabilitation and enhancement of riparian areas, our goal is to improve instream conditions to support the recolonization and maintenance of sport fish populations. Data collected from 2010 to 2012 were used to determine the current state of the drainage; identify impacted areas; and assess the

fish community, water quality and riparian habitat health. For the past three years, we have monitored water quality at five monitoring stations. We will continue to focus on riparian enhancement projects with landowners, including the use of livestock exclusion fencing, off-site watering systems and Riparian Habitat Agreements, to mitigate negative impacts on riparian habitat and instream fish habitat.

Partnerships

Fisheries and Oceans Canada

Fisheries Access Site Management

Our Land Management program encompasses activities intended to conserve, protect and enhance wildlife and fish habitat and to increase sustainable recreational opportunities, such as angling and hunting. One activity in the program is the delivery of the Fisheries Access Site Management program, which provides access to key streams, rivers and lakes throughout the province. We inspected and

Corporate Partners Program Securement Transactions in 2013/14

Project Name	Corporate Partner	Size (ac)	Special Features
Lac Cardinal West SW-01-084-25-W5M	Suncor Energy Foundation	130	This site is located 20 km west of Grimshaw on the shores of Lac Cardinal Lake. Habitat at the site is a mixture of hayland, sedges and other riparian vegetation along the lake, and several stands of aspen/willow. Wildlife found here includes moose, elk, deer and small furbearers. During spring and fall migration, a variety of waterfowl and swans stage at the lake.
Leddy (Expansion) NE-10-085-23-W5M SE-10-085-23-W5M	Suncor Energy Foundation	320	This site is located about 32 km northwest of Peace River. Habitat at the site is undisturbed mixedwood forest consisting of aspen, poplar and white spruce. Wildlife found here includes moose, deer, elk, black bear, small furbearers and many songbirds.
North Kamisak Lake NW-34-071-12-W6M	Suncor Energy Foundation	161	This site is located approximately 35 km southwest of Vegreville and increases connectivity between Musidora, Musidora 2, South Plain Lake and Plain Lake Conservation Sites. It provides excellent habitat for deer, moose and elk.
Flatbush 7 NW-01-066-02-W5M	Shell Canada Energy	151	This site is located about 65 km north of Westlock and increases connectivity on the landscape between the Pembina River and adjacent ACA Flatbush Conservation Sites. It also provides excellent habitat for deer, moose, elk and black bear.
TOTAL		762	

maintained 28 fisheries access sites in 2013/14. We upgraded five sites with improvements to parking facilities (East Dollar Lake and Birch Lake), walking trails (Mitchell Lake) and fences (Windsor Lake), as well as new infrastructure, such as floating docks/casting platforms (Mitchell Lake) and signage (Brooks Aqueduct). We engaged 15 partners in 2013/14, who generously provided financial or in-kind support. We continued discussions with Alberta Environment and Sustainable Resource Development and other potential partners to expand an existing site in our Northwest Region.

Partnerships

Alberta Environment and Sustainable Resource Development, Alberta Fish and Game Association, Clearwater County, County of Newell, County of Warner, Devon Canada Corporation, Municipal District of Greenview, Municipal District of Northern Lights, Municipal District of Rocky View, North Raven River Working Group, Peace Country Flyfishers, Shell Canada Energy, Trout Unlimited Canada – Central and Yellowhead Chapters, Wetaskiwin County

Landowner Habitat Program

In 2013, Alberta's population grew by 136,000 people. Four million people now call Alberta home, and the province continues to grow at a rapid pace. Alberta's natural land base is under intense pressure from a variety of sources, such as agricultural, industrial and urban development, which contribute to habitat loss, fragmentation and degradation. In 1986, Alberta Fish and Wildlife Division launched the Landowner Habitat Program (LHP) to prevent the loss and destruction of native habitat on privately owned lands. ACA assumed responsibility for the program in 1997. The program was structured to compensate landowners who agreed to retain wildlife habitat on their land by signing a legally binding agreement. While the program provided a cost-effective tool for preserving habitat, it did not guarantee recreational access to the habitat.

In 2008, we modified the LHP agreement to include recreational access as a condition of the agreement. The program requires landowners to retain and idle

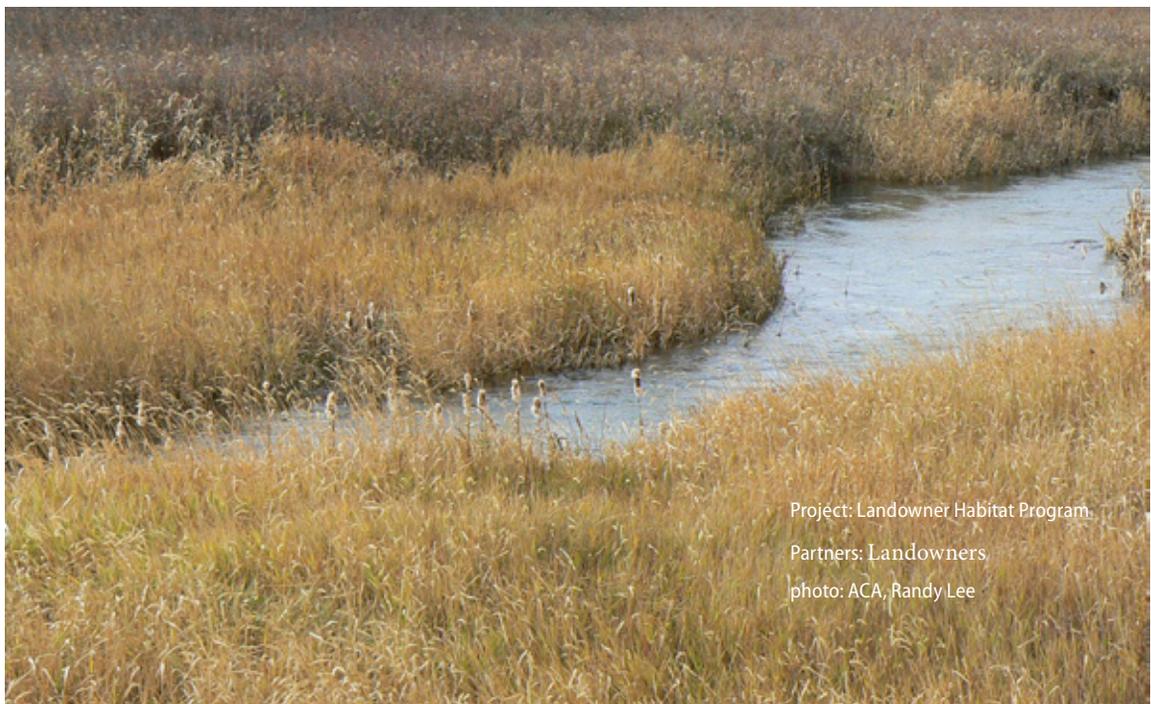
habitat for wildlife and to provide reasonable public foot access. This was the sixth year that we offered these agreements to landowners. In 2013/14, 10 active LHP agreements that protect 265 ac of riparian habitat were transferred to ACA's provincial Riparian Conservation Program. One new landowner and one landowner with an expired agreement signed 10-year agreements. These two agreements protect approximately 477 ac of high-quality habitat and provide reasonable public foot access for sustainable recreational opportunities. Three expiring agreements are scheduled to be signed in 2014/15. We currently manage 48 LHP agreements across the province, which protect approximately 8,142 ac of wildlife and fish habitat.

Partnerships

Landowners

Management Plan Development

We are dedicated to conserving priority wildlife and fish habitats and providing safe and enjoyable outdoor recreational opportunities. Our management plans are



Project: Landowner Habitat Program

Partners: Landowners

photo: ACA, Randy Lee

developed to provide clear direction for managing our Conservation Sites. These plans also outline the roles and responsibilities and other activities that are agreed upon by our conservation partners. Once a new acquisition is secured, we work with our partners to develop a management plan for the site. Once finalized, we and our partners review and update the management plan as required or on a term basis (every five years) to evaluate our effectiveness at addressing the goals and objectives identified in the plans. In 2013/14, we reviewed and updated 30 management plans and developed five new management plans for sites acquired since 2012.

Partnerships

Albert and Pirkko Karvonen, Alberta Environment and Sustainable Resource Development, Alberta Fish and Game Association, Ducks Unlimited Canada, Pheasants Forever – Chinook Chapter, Shell Canada Energy, Strathcona Wilderness Centre, Suncor Energy Foundation, Wild Elk Federation

North Raven River Riparian Conservation

Since 1997, ACA has been responsible for maintaining livestock exclusion fences and watering and crossing sites associated with the Buck for Wildlife (BFW) Streambank Fencing Program. As infrastructure aged, it became logistically and financially prohibitive to continue to deliver this program. Therefore, existing agreements were terminated, and maintenance responsibilities were transferred to landowners. To ensure continued protection of riparian habitat on priority streams, we developed a new program structure to be delivered in our Central Region. We offered landowners on Clear Creek, North Raven River and Raven River new habitat lease agreements for five- to 15-year terms, where financial compensation was intended to facilitate stewardship. We paid a maximum of \$75/ac annually for riparian habitat and \$10/ac annually for any additional

upland habitat being protected. In some cases, fencing or watering site improvements are required to enable landowners to take over maintenance and to expand the riparian buffer area under protection. In 2013/14, we negotiated with three landowners and signed two new agreements protecting a total of 73 ac of habitat, an additional 31 ac from original BFW agreements. All three BFW agreements were terminated. We completed two fence improvement projects totaling 515 m of fence repaired or constructed, and we installed one off-site watering system. We also installed signs at six sites to recognize participating landowners.

We used \$17,500 in partner funds for lease agreements and improvement projects in 2013/14 and submitted an application to Environment Canada's Environmental Damages Fund for \$50,000 for the 2014/15 fiscal year. We continued to partner with Red Deer County, which supports a 50% cost-sharing agreement for any new improvement projects with landowners in Red Deer County. We also partnered with Trout Unlimited Canada for year two of a five-year agreement, which supported lease payments on the North Raven River.

With the support of local landowners, we continue to negotiate new riparian habitat lease agreements and terminate old BFW agreements. In 2014/15, we plan to approach three landowners and hope to negotiate new agreements to conserve approximately 32 ac of riparian habitat on priority streams. We estimate 1.5 km of fencing will be required, and we plan on installing two off-site watering systems to facilitate new agreements.

Partnerships

County of Red Deer, landowners, Penn West, Trout Unlimited Canada

Owl River Riparian Conservation

The Owl River is the primary spawning river for Lac La Biche walleye. Since 2006, the provincial government has stocked nearly 200 million walleye fry and fingerlings in Lac La Biche to restore walleye populations. However, potential reductions in water quality and spawning habitat in the Owl River from riparian habitat degradation could limit the success of the provincial government's restoration program. Since 2011, ACA has used previously collected baseline data on riparian health to focus restoration activities along a 30 km stretch of the Owl River. Focal areas for restoration include leased and private lands where livestock grazing is occurring. To date, we have installed over 7 km of wildlife-friendly livestock fencing on one grazing lease, effectively conserving over 8 km of riparian habitat used by spawning walleye and fry. The conserved area equates to over 600 ac of aquatic, riparian, wetland and upland habitat. In 2013/14, we worked with Alberta Environment and Sustainable Resource Development to develop an application to place a protective notation on the riparian habitat that was removed from the grazing lease, which would ensure long-term protection of this wildlife and fish habitat. We continue to work towards an agreement on another quarter section under the same grazing lease, with the potential to secure an additional 40 to 50 ac of riparian and wetland habitat.

Partnerships

Alberta Environment and Sustainable Resource Development, Syncrude Canada Ltd.



Project: Southern Riparian Conservation

Partners: Alberta Agriculture and Rural Development, Alberta Environment and Sustainable Resource Development, Alberta Riparian Habitat Management Society (Cows and Fish), Beaver Creek Watershed Group, Cardston County, County of Lethbridge, Drywood/Yarrow Conservation Partnership, Lyndon Creek Watershed Group, MULTISAR, Municipal District of Ranchland, Municipal District of Willow Creek, Oldman Watershed Council, Penn West, Pincher Creek Watershed Group, Southwestern Alberta Conservation Partnership, Todd Creek Watershed Group, Trout Unlimited Canada, Waterton Watershed Group

photo: ACA, Deanna White

Provincial Habitat Securement Program

Alberta’s natural land base is under intense pressure from a variety of sources. The provincial population grew by 136,000 in 2013—the largest census gain on record—to reach four million. As the population has increased, urban areas have expanded, contributing to ongoing habitat loss and fragmentation. In 2011 and 2012, the Government of Alberta auctioned off more than 90,000 ac of public land in the County of Mackenzie in northern Alberta. This trend will likely continue as Alberta’s population increases and demand for land for agricultural, municipal and industrial development continues.

Our Provincial Habitat Securement Program conserves important wildlife and fish habitat through land purchases, land donations on private land, and protective notations on Crown lands. Securing habitat ensures these lands will remain conserved in perpetuity to benefit our valued wildlife and fish resources and to provide Alberta’s outdoor enthusiasts with year-round, sustainable recreational opportunities. Twenty-seven priority focus areas help guide securement efforts and opportunities. Collaborative partnerships with

conservation groups, industry, various companies and private individuals allow us to maximize our conservation impact and the efficiency of our securement efforts. Together in 2013/14, we conserved 1,217 ac across five sites, including two land donations, two land acquisitions and one split land donation/acquisition. These lands have an estimated value of approximately \$1,520,000.

Partnerships

Alberta Fish and Game Association, Ducks Unlimited Canada, Government of Canada Habitat Stewardship Program for Species at Risk, Joseph and Laura Di Santo, Parkland County, Pheasants Forever – Calgary and Chinook Chapters, Steve Nickolayuk, Western Sky, Wild Elk Federation

Southern Riparian Conservation

For over a decade, ACA has supported riparian enhancement initiatives in southern Alberta, resulting in over 30 enhancement projects in seven watershed sub-basins in the Oldman watershed basin. These projects include riparian fencing, spring developments, and off-site watering systems, and provision of technical advice on livestock grazing strategies for the purpose of improving

wildlife and fish habitat. Past projects involved working with landowner-driven watershed groups, namely Beaver Creek and Todd Creek watershed groups, as well as individual landowners. Several more watershed groups in the south have been engaged, and key conservation groups view ACA as an instrumental partner. In 2013/14, we completed five spring developments, one off-site watering system and one riparian fencing project, which enhanced over 6 km of streambank and 10 ac of riparian habitat. We participated in the annual Pincher Creek Watershed Group’s “Blueweed Blitz” weed pull and education day with over 100 volunteers. We also re-inventoried all 12 riparian sites on the Sandstone Ranch Conservation Site. Workshops and meetings with other watershed groups, partner conservation groups and interested parties were also attended. Strong working partnerships continue to be maintained with Southwestern Alberta Conservation Partnership and the Oldman Watershed Council, and future projects are being initiated. As an ongoing member of the Oldman Watershed Council Rural Team, we once again participated in the 8th annual “Holding the Reins” landowner conference in Fort Macleod. We also partnered with Cows and Fish to plan the Westslope Cutthroat

Trout Workshop at Chain Lakes. Our continued involvement with watershed groups and their partners will be valuable to facilitating on-the-ground change.

Partnerships

Alberta Agriculture and Rural Development, Alberta Environment and Sustainable Resource Development, Alberta Riparian Habitat Management Society (Cows and Fish), Beaver Creek Watershed Group, Cardston County, County of Lethbridge, Drywood/

Yarrow Conservation Partnership, Lyndon Creek Watershed Group, MULTISAR, Municipal District of Ranchland, Municipal District of Willow Creek, Oldman Watershed Council, Penn West, Pincher Creek Watershed Group, Southwestern Alberta Conservation Partnership, Todd Creek Watershed Group, Trout Unlimited Canada, Waterton Watershed Group

Habitat Securement Program Transactions in 2013/14

Project Name	Securement Tool & Partners	Size (ac)	Special Features
Parkland SW-13-053-06-W5M	A private land donation to ACA and Alberta Fish & Game Association	160	This site is located west of Edmonton, near Wabamun Lake. Habitat at the site consists of diverse forest cover, muskeg and wetlands, which support a wide variety of wildlife. It is an important travel corridor and wintering area for many ungulates. Mature aspen has colonized much of the uplands, with low moist areas containing dense stands of black spruce and tamarack. Good understory habitat is present for numerous songbirds and small furbearers.
Walter NW-25-053-10-W5M	A private land donation to ACA and Alberta Fish & Game Association	68	This site is located 73 km east of Edson and 110 km west of Edmonton along Highway 16 south of Chip Lake. It contains undisturbed black spruce bog habitat with a rich understory containing species such as Labrador tea. The habitat on this site is very healthy—game trails and wildlife sign are evident throughout the site. There is potential for the development of interpretive signage at this site.
Di Santo SE-35-034-05-W5M	A split land acquisition/donation between ACA, Alberta Fish & Game Association and Western Sky	148	This relatively undisturbed site is located approximately 18 km north of Sundre. The forest cover consists of aspen, poplar, white spruce and lodgepole pine, with wood lilies, death camas, elephant head, buffalo berry and willow for understory. The site offers opportunities for hiking, photography, wildlife viewing and hunting, and provides excellent habitat for moose, deer, upland gamebirds, songbirds and small furbearers.
Bull Trail NE-05-009-02-W4M SE-05-009-02-W4M NE-08-009-02-W4M SE-08-009-02-W4M SW-09-009-02-W4M	A collaborative acquisition between ACA, Alberta Fish & Game Association, Ducks Unlimited Canada, Government of Canada Habitat Stewardship Program for Species at Risk, Pheasants Forever – Calgary and Chinook Chapters, and Wild Elk Federation.	529	This large parcel of land is located 2.5 km north of Cypress Hills and consists of rolling prairie grasslands and small wetlands. It supports a variety of wildlife, including deer, elk, pronghorn, sharp-tailed grouse and waterfowl. Several species at risk are found here, including the <i>Threatened</i> Sprague's pipit and ferruginous hawk.
Silver Sage (Expansion) SW-05-004-05-W4M NW-32-003-05-W4M	A collaborative acquisition between ACA, Alberta Fish & Game Association, Government of Canada Habitat Stewardship Program for Species at Risk, and Pheasants Forever – Calgary Chapter	312	This site is located 15 km south of Manyberries. It expands the Silver Sage Conservation Site, creating a 1,900-acre parcel of land that is being restored and managed towards a native grassland community type. It provides important habitat for pronghorn and sharp-tailed grouse. This site will also help improve the quantity and quality of habitat for several species at risk in this area.
TOTAL		1,217	

ACA Conservation Reports

All reports were completed and published in the 2013/14 fiscal year.

Fisheries

- Judd, C., and M. Rodtka. 2014. Abundance of bull trout in Clearwater River, Alberta, 2012 – 2013. Data Report, D-2014-001, produced by Alberta Conservation Association, Sherwood Park, Alberta, Canada. 14 pp + App.
- Patterson, W., T. Furukawa, and M. Buskas. 2014. Summer sport fishery and the special harvest licence for walleye at Iosegun and Smoke lakes, Alberta, 2013. Data Report, D-2014-002, produced by Alberta Conservation Association, Sherwood Park, Alberta, Canada. 16 pp + App.
- Buskas, M., and W. Patterson. 2014. Summer sport fishery on the Peace River, Alberta, 2013. Data Report, D-2014-003, produced by Alberta Conservation Association, Sherwood Park, Alberta, Canada. 10 pp + App.

Wildlife

- Ranger, M., and C. Rasmussen, Editors. 2013. Delegated big game surveys, 2012/2013 survey season. Data Report, D-2013-006, produced by Alberta Conservation Association, Sherwood Park, Alberta, Canada. 63 pp.
- Wright, K.D. 2014. Hay-Zama lakes waterfowl staging and bald eagle nesting monitoring program, 2013. Data Report, D-2014-004, produced by Alberta Conservation Association, Peace River, Alberta, Canada. 21 pp + App.

Project: Hay-Zama Wetland Monitoring

Partners: Hay-Zama Committee, NuVista Energy Ltd.

photo: ESRD, Lyle Fullerton



Report A Poacher and Compensation Programs

Report A Poacher

Report A Poacher (RAP) is available for all Albertans—not just hunters and anglers—to protect our wildlife, fish and natural habitats. In addition to providing education about poaching, perhaps the most important RAP tool is the toll-free hotline, which people can use to call in offences. Enforcement officers often rely on these calls; the eyes and ears of individuals and communities provide important information that often leads to investigations and convictions.

The toll-free phone number (1-800-642-3800) is operated 24 hours a day, seven days a week.

The RAP program is jointly delivered by ACA and Alberta Justice and Solicitor General, under a Memorandum of Understanding. ACA is responsible for promotion and education to enhance public awareness of poaching and the RAP program. We are also responsible for administration of program funds. Alberta Justice and Solicitor General retains sole responsibility for liaising with informants, investigating reports and enforcing laws.

2013/14 Overview

- 9,879 calls from the public to the RAP toll-free hotline
- 1,931 calls related to suspected illegal activity
- 361 charges laid
- \$49,900 in rewards paid to individuals whose call and information led to an arrest or fines
- Promoted RAP at 14 tradeshows and events, including Fort Saskatchewan Kids Can Catch, Sherwood Park Archery Days, and at Camp Wainwright during the hunting season
- Increased RAP promotion through social media, television, radio and print

Compensation Programs

ACA takes pride in fostering good working relationships with landowners. For producers whose livestock are killed or injured by predators (eagles, cougars, bears and wolves) or hunter activities, relief is provided through the Wildlife Predator Compensation and Shot Livestock Compensation programs.

Similar to Report A Poacher, we are responsible for program promotion and compensation fund management, while Alberta Environment and Sustainable Resource Development is responsible for incident investigations and determining payouts.

Wildlife Predator	Claims	Compensation
Eagle	3	\$2,808.13
Cougar	18	\$4,325.91
Black Bear	15	\$16,661.79
Grizzly Bear	53	\$72,665.21
Wolf	167	\$221,269.99
Unknown Predator	11	\$8,386.78
TOTAL	267	\$326,117.81
Shot Livestock	8	\$10,978.26



Granting Programs

Grant Eligible Conservation Fund

Alberta's hunters and anglers contribute directly to conservation through levies on their hunting and fishing licences. A portion comes to ACA, and one of the many things we do is support community and research conservation efforts via our Grant Eligible Conservation Fund. Grants support a variety of projects each year, which benefit our wildlife and fish populations, as well as the habitats they depend on. The fund is administered in two parts:

Part A: Conservation Support and Enhancement

Funds conservation activities in Alberta by individuals, organizations and communities that contribute to: healthy wildlife and fish populations, healthy environments for fish and wildlife, and the understanding, appreciation and use of those environments.

Part B: Research

Funds high-quality research projects on wildlife, fish and habitat, which inform the effective management of wildlife and fish populations and their habitats in Alberta.

2013/14 Overview

Part A: Conservation Support and Enhancement

- Received 70 funding applications requesting almost \$1.28 million
- Funded 35 projects for a total of \$469,917

Part B: Research

- Received 26 applications requesting just over \$900,000
- Funded 21 research projects for a total of \$330,001

Grants in Biodiversity

The ACA Grants in Biodiversity program awarded 21 graduate student projects a total of \$224,122. The projects include studies on the effects of industrial noise on owls, toad classification, plant biodiversity, respiration in the Bow River, foraging patterns of grizzlies, and fish restoration.

Students undertaking Alberta-based research from universities across Canada and the United States received grants this year. Twelve grants were awarded to students pursuing master's degrees, and nine grants were awarded to PhD candidates.

The ACA Grants in Biodiversity program is funded by ACA and operated through the Alberta Cooperative Conservation Research Unit—a partnership between the University of Alberta, University of Calgary and University of Lethbridge.

The 20-year-old ACA Grants in Biodiversity program has now awarded over \$4.3 million to 423 researchers. The research supported by the program ultimately aims to conserve, protect and enhance Alberta's wildlife, fish and natural habitats.

For more information, visit www.acabiodiversity.ca.

ACA Chair in Fisheries and Wildlife at the University of Alberta

The ACA Chair was established through an endowment to the University of Alberta, providing educational initiatives to wildlife professionals. As part of ACA's commitment to science, research and education, we endowed \$20,500 in 2013/14.

By addressing issues and problems relevant to Alberta's biological resources, the Chair, Dr. Mark Boyce, supports ACA's goals for long-term sustainable wildlife and fish resources. A contribution to teaching is also an essential duty of the position. The ACA Chair is expected to contribute to the activities of the Department of Biological Sciences and to the university as a whole. Dr. Boyce's expertise is internationally recognized, and he has significantly enhanced ACA's efforts to conserve Alberta's wildlife and fish resources. *For more information and for a list of publications, visit www.biology.ualberta.ca/faculty/mark_boyce.*

Hunter, Trapper and Angler Retention, Recruitment and Education Grants

Projects that increase participation in and awareness of outdoor opportunities, while developing knowledge and respect for conservation, are funded by this grant program. This year, we awarded 47 grants for a total of \$456,280.

2013 ACA Grants in Biodiversity Recipients

Recipient	Supervisor(s)	Institution	Project Title
Brandon Allen (MSc)	Sean Rogers	University of Calgary	Integration of genetics into adaptive management strategies: Genetic population responses to size-selective harvest pressures in Alberta walleye (<i>Sander vitreus</i>)
Natasha Annich (MSc)	Cynthia Paszkowski	University of Alberta	Utility of Ducks Unlimited's Wetland Classification for predicting amphibian distribution and abundance with an emphasis on Canadian toads
Vincent Del Bel Belluz (MSc)	John Spence	University of Alberta	Effects of disturbance and recovery of lodgepole pine forest on carabid and staphylinid assemblages (Coleoptera: Carabidae, Staphylinidae)
Mallory Hazell (MSc)	John Gamon	University of Alberta	Detecting functional plant biodiversity via airborne imaging spectrometry
Cheryl Hojnowski (PhD)	Justin Brashares	University of California, Berkeley	Assessing recreation impacts on large mammal ecology in Kananaskis Country, Alberta
Gregory Holmes (MSc)	Robert Laird	University of Lethbridge	Interactions of the leaf galling wasp <i>Aulacidea pilosellae</i> , rust fungus <i>Puccinia hieracii</i> and their invasive hawkweed host, <i>Pilosella caespitosa</i> , and their impact on plant growth and reproduction
Mark Hornsby (PhD)	Andrew Hurly	University of Lethbridge	Spatial orientation and navigation in fathead minnows: Impacts from ecological conditions and naturally- and anthropogenically-induced perturbations
Joseph Kermish-Wells (MSc)	Marco Musiani	University of Calgary	Human and natural factors influencing foraging patterns and kill rate of grizzly bears
Jamie Lantz (MSc)	Shelley Alexander	University of Calgary	Interactions amongst humans, domestic dogs (<i>Canis familiaris</i>), livestock and coyotes (<i>Canis latrans</i>) on Glenbow Ranch Provincial Park, Alberta
Preston Lennox (PhD)	Joseph Rasmussen	University of Lethbridge	Establishing the link between fish biodiversity and biomass production in freshwater ecosystems
Yan Liu (PhD)	Jana Vamosi	University of Calgary	Genetic diversity of <i>Mimulus guttatus</i> from putative Pleistocene refugia in Alberta
Brian Meagher (MSc)	Sean Rogers	University of Calgary	Collaborative phased fish restoration project in the Hidden Lake and Corral Creek drainage of Banff National Park
Ahmed Najar (PhD)	Nadir Erbilgin	University of Alberta	Alberta's Achilles heel: An investigation of the features of susceptibility of Albertan balsam poplar to <i>Septoria musiva</i>
Eric Neilson (PhD)	Stan Boutin	University of Alberta	Wolf-mediated effects of oil sands development on moose survival and abundance
Jennine Pedersen (MSc)	Scott Nielsen and Ellen MacDonald	University of Alberta	Use of assisted migration to mitigate the effects of climate change on rare plants in Alberta
Gabriel Pigeon (PhD)	Fanie Pelletier	Université de Sherbrooke	Constraints to the recovery of a population of bighorn sheep
Heather Polan (MSc)	Rebecca Rooney	University of Waterloo	Biodiversity and abundance of waterbirds and aquatic invertebrates for the assessment and conservation of non-permanent marshes in the Northern Prairie and Parkland Region of Alberta
Julia Shonfield (PhD)	Erin Bayne	University of Alberta	Effects of industrial noise on owls in northeastern Alberta
Jarvis Singer (MSc)	Leland Jackson	University of Calgary	Role of nitrogen and phosphorus in photosynthesis-respiration in the Bow River, Alberta
Linhao Wu (PhD)	John Spence	University of Alberta	Influences of habitat heterogeneity and disturbance on temporal variability of ground beetle assemblages in the mixedwood boreal forest
Daniel Yip (MSc)	Erin Bayne	University of Alberta	Understanding detection distances of rare nocturnal and diurnal animals using automated recording units

Auditor's Report



Piping Plover Recovery Program

Partnerships: Alberta Environment and Sustainable Resource Development, Alberta Tourism, Parks and Recreation, Department of National Defence, Ducks Unlimited Canada, Government of Canada, landowners, TD Friends of the Environment Foundation

photo: ACA, Lisa Monsees

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An independent member firm
of  DFK

June 18, 2014
Edmonton, Alberta

INDEPENDENT AUDITOR'S REPORT

To the Members of Alberta Conservation Association

The accompanying summary consolidated financial statements, which comprise the summary consolidated statement of financial position as at March 31, 2014, and the summary results from consolidated statement of operations for the year then ended, are derived from the audited consolidated financial statements of the Alberta Conservation Association for the year ended March 31, 2014. We expressed a qualified audit opinion on those consolidated financial statements in our report dated June 18, 2014.

The summary consolidated financial statements do not contain all the disclosures required by accounting standards for not-for-profit organizations. Reading the summary financial statements, therefore, is not a substitute for reading the audited financial statements of Alberta Conservation Association.

Management's Responsibility for the Summarized Consolidated Financial Statements

Management is responsible for the preparation of a summary of the audited consolidated financial statements on the basis described in Note 1.

Auditor's Responsibility

Our responsibility is to express an opinion on the summary consolidated financial statements based on our procedures, which were conducted in accordance with Canadian Auditing Standard (CAS) 810, "Engagements to Report on Summary Financial Statements."

Opinion

In our opinion, the summary consolidated financial statements derived from the audited consolidated financial statements of Alberta Conservation Association for the year ended March 31, 2014 are a fair summary of those consolidated financial statements, on the basis described in Note 1. However, the summary consolidated financial statements are subject to conditions equivalent to those of the audited consolidated financial statements of the Alberta Conservation Association for the year ended March 31, 2014, upon which we issued a qualified audit opinion.

In addition, in common with many not-for-profit organizations, the Association derives some of its revenue from partner contributions and donations, the completeness of which is not susceptible to satisfactory audit verification. Accordingly, our verification of these revenues was limited to the amount recorded in the records of the Association and we were not able to determine whether any adjustments might be necessary to partner contributions, excess of revenue over expenses, current assets, deferred contributions and net assets.

A handwritten signature in black ink that reads "Kingston Ross Pasnak LLP".

Kingston Ross Pasnak LLP
Chartered Accountants

ALBERTA CONSERVATION ASSOCIATION
Summarized Consolidated Statement of Operations
Year Ended March 31, 2014

	2014	2013
REVENUE		
Fees and assessments	\$ 11,305,999	\$ 11,080,741
Partner contributions	1,286,619	1,619,374
Miscellaneous	264,251	271,690
Investment income	183,146	149,284
Donations	80,725	240,270
Film sales (recovery)	230	(16,559)
	13,120,970	13,344,800
EXPENDITURES		
Salaries and benefits	6,102,533	6,176,187
Grants	1,607,186	1,557,151
Contracted services	1,319,487	1,274,581
Advertising	433,336	326,047
Materials and supplies	424,906	529,049
Rentals	414,464	706,633
Amortization	399,541	417,870
Travel	338,931	356,099
Repairs and maintenance	244,281	202,968
Fuel and lubricants	194,140	201,504
Office	190,945	162,166
Bank charges and interest	159,576	149,709
Telephone and communications	157,930	159,095
Landowner agreements	134,114	372,045
Insurance	132,909	135,447
Freight and postage	67,116	71,692
Utilities	61,730	51,330
Training and membership	45,743	35,086
Fees, licenses and permits	26,487	30,842
Hosting and conferences	10,748	15,494
Bad debts	244	9,965
	12,466,347	12,940,960
EXCESS OF REVENUE OVER EXPENDITURES FROM OPERATIONS	654,623	403,840
OTHER REVENUES		
Unrealized gain on investments	357,480	261,195
Gain on sale of investments	81,910	11,570
Gain on disposal of property, plant and equipment	10,167	12,206
	449,557	284,971
EXCESS OF REVENUE OVER EXPENDITURES	\$ 1,104,180	\$ 688,811

ALBERTA CONSERVATION ASSOCIATION
Summarized Consolidated Statement of Financial Position
March 31, 2014

	2014	2013
ASSETS		
CURRENT		
Cash	\$ 772,215	\$ 1,130,803
Short term investments	1,058,199	66,350
Accounts receivable	831,074	936,772
Inventory	12,292	14,203
Goods and Services Tax recoverable	53,578	41,336
Prepaid expenses	505,911	393,570
	3,233,269	2,583,034
LONG TERM INVESTMENTS	3,856,892	4,240,792
PROPERTY, PLANT AND EQUIPMENT	20,885,127	19,676,616
FILM COLLECTION	3,023,870	3,023,870
	\$ 30,999,158	\$ 29,524,312
LIABILITIES AND NET ASSETS		
CURRENT		
Bank indebtedness	\$ 2,239,995	\$ 2,557,476
Accounts payable and accrued liabilities	1,512,991	1,585,996
Deferred contributions	2,662,305	2,982,859
Deposits	19,621	33,988
Demand non-revolving loan	1,301,744	1,367,542
	7,736,656	8,527,861
PROJECT CONTRIBUTIONS	1,474,293	1,474,293
	9,210,949	10,002,154
NET ASSETS		
Invested in property, plant and equipment	22,434,704	21,226,193
Internally restricted	7,343	474,846
Unrestricted	(653,838)	(2,178,881)
	21,788,209	19,522,158
	\$ 30,999,158	\$ 29,524,312

ON BEHALF OF THE BOARD

 DIRECTOR

 DIRECTOR

Financial Highlights

Summarized Financial Statements

In 2013/14, ACA received \$11,305,999 in levy revenue from hunting and angling licences, which is a \$225,258 increase from the previous year. This continual upward trend in levy revenue demonstrates strong interest in hunting and angling in Alberta.

Together, our Wildlife, Fisheries, Land Management, Communications, Report A Poacher, Compensation, and Granting programs had expenditures totaling \$9,243,637 plus an additional \$1,387,759 in land purchases and donations (for accounting purposes, these funds are recorded as assets, not direct operational expenditures), meaning that approximately 94% of the levy value collected went back into conserving Alberta's resources (expenses plus increase in habitat assets).

ACA received approximately \$3.2 million in non-levy revenue (including \$1,387,759 in land donations and funds for land purchase). These funds came from a variety of donors, including individuals, corporations, granting foundations, the federal government and other conservation organizations.

Administrative costs were held to 13.0% of total operating revenue (including funds for land purchase and donations).

Expenditures by Program

Often stakeholders want to determine what funds are being directed towards their particular passion. When examining the Expenditures by Program, please keep in mind that the numbers shown are somewhat arbitrary and do not necessarily represent all projects that may relate to a particular program area. For instance, fisheries access sites, which are directly related to increasing angling opportunities, are administered, and budgeted for, under our Land Management program instead of the Fisheries program.

Based on last year's annual report, expenditures in our Wildlife, Fisheries and Land Management programs appear to have declined this year. In past years, we have split the Report a Poacher and Compensation programs and the Granting programs between Wildlife, Fisheries, and Land Management programs, based on the specific expenditure. This year, to provide greater clarity around our expenditures, we have elected to show the Report a Poacher and Compensation programs and Granting programs as separate expenditures, even though the specific projects funded in these programs directly relate to Wildlife, Fisheries and Land Management.

Revenue by Source

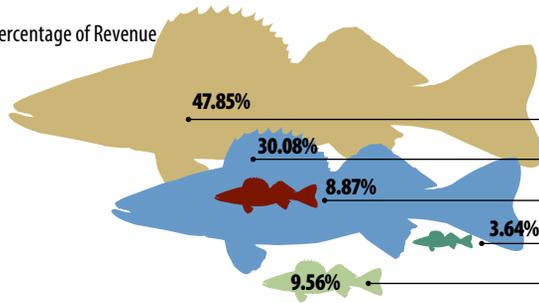
Approximately 22.1% of ACA's total operating budget was generated from non-levy sources (\$3,202,730). This represents a decrease of approximately \$2.3 million from the previous year, which was largely attributable to the flooding in Alberta; many companies focused their efforts on supporting flood recovery initiatives, delaying land purchases to the following year. Land donations and purchases in 2013/14 conserved approximately 2,000 ac (809 ha) for future generations.

2013/14 Overview

- \$11,305,999 received from levies on hunting and fishing licences
- \$3.2 million received in non-levy revenue
- \$10,631,396 in value directly applied towards the conservation of Alberta's wildlife, fish and habitats
- Administration costs kept to 13.0% of revenue
- A surplus of \$658,890 (not including investments gains) recorded for 2013/14

The following charts summarize the total operating expenditures in each program area. We encourage you to review the entire annual report to gain a greater understanding of the conservation projects undertaken within each program and how they may relate to your particular passion. If you have any questions, please do not hesitate to contact our President and CEO, Todd Zimmerling.

Percentage of Revenue

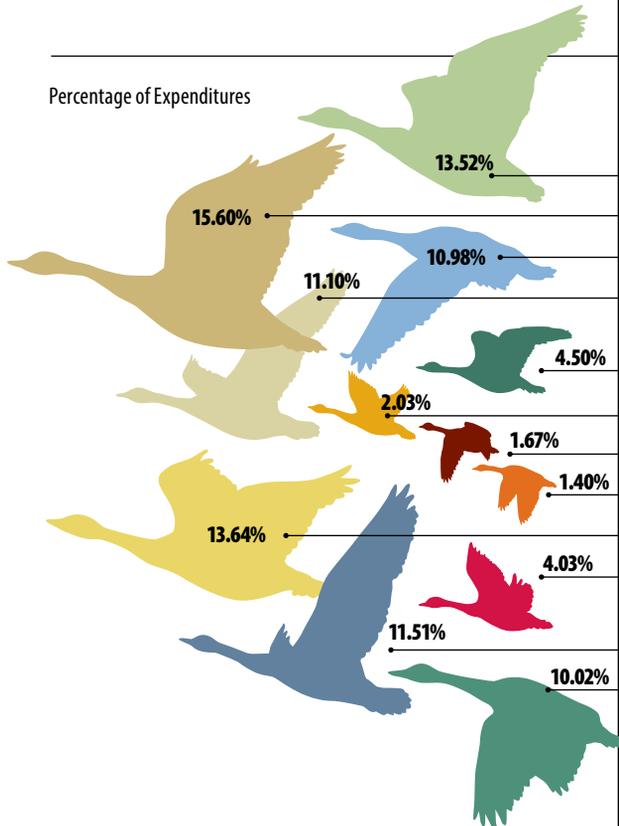


Revenue by Source

	Total Dollars
Hunting	6,942,016
Fishing	4,363,983
Partner	1,286,619
Other	528,352
Land Purchases/Donations	1,387,759
TOTAL	14,508,729

*Not including unrealized gains on investments.

Percentage of Expenditures



Expenditures by Program

	Levy	Partner	Total Dollars
Land Program	1,462,525	409,504	1,872,029
Wildlife Program	1,649,540	511,567	2,161,107
Fisheries Program	1,458,599	62,742	1,521,341
Communications Business Development	1,384,589	152,744	1,537,333
Finance	605,184	18,518	623,702
Information Technology	280,719		280,719
Human Resources	231,305		231,305
Health and Safety	193,351		193,351
Administration	1,889,368		1,889,368
Report A Poacher and Compensation	426,664	131,544	558,208
Granting Programs	1,593,619		1,593,619
Land Purchases/Donations	130,538	1,257,221	1,387,759
TOTAL	11,305,999	2,543,840	13,849,841

Operational surplus not including investment gains.



Alberta Conservation Association wishes to thank our Corporate Partners in Conservation who have provided multi-year financial contributions in support our conservation programs and projects. Together we are conserving Alberta's natural heritage for generations to come.





Alberta Conservation
Association

Conserving Alberta's Wild Side



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