

Annual Report 2019/20



Alberta Conservation
Association

wildlife | fish | habitat

2019/20 Snapshot

- Continued improving staff access by moving to a blend of remote access, on-premise, and cloud-based structure, which allows staff to work across the province and collaborate with external resources as required.
- In 2019/20, Kids Can Catch events across Alberta welcomed 4,387 adults and children and 100 organizations, partners, and sponsors. The flagship Wabamun Lake Kids Can Catch was an outstanding success with over 1,000 participants.
- In 2019/20, we had 20,246 followers on Facebook, 6,220 on Twitter, 3,426 on Instagram, 532 YouTube subscribers, and 66,714 subscribers to our e-newsletter.
- Ninety-three 4-H members participated in the sixth year of Raise and Release program, and successfully raised 4,687 hens (and a few roosters too)! A cornerstone of this program is education, helping kids to understand the resource needs of wildlife.
- Our work with producers on ranchlands expanded greatly with well over 100,000 acres of new ranching partnerships coming onstream. This includes a new focus area in central Alberta with the SHARP project with 15,000 acres of ranchland entering into a long-term commitment to align ranching goals with benefits for wildlife.
- Trappers submitted 214 logbooks with 65% of these coming through a new online approach.
- Along with partners, we stocked 61 ponds with three trout species, aerated 19 lakes to improve water quality and ensure year-round survival of stocked fish, and worked at restoring sport fisheries in some of Alberta's lakes that have become prone to algal blooms.
- 24 rivers/creeks, 25 lakes, and 11 ponds were surveyed, generating information on fish population status, distribution, fishing effort, spawning and rearing habitat, and water quality.
- Added 3 new conservation sites, totalling 599 ac (242 ha) with a land value of approximately \$1,558,000.
- 2,973 calls and 402 online reports about suspected illegal activity to Report A Poacher. As a result, 532 charges were laid and \$73,200 in rewards paid to individuals whose call and information led to charges.
- Conservation, Community and Education Grants supported 82 conservation activities' projects that contribute to wildlife, fish and habitat health with \$969,635 of funding.

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Annual Report 2019/20



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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Board of Directors 2019/20

Executive

Bill Abercrombie, Chairman – Alberta Trappers' Association

Robert Gruszecki, Vice Chair – Alberta Hunter Education Instructors' Association

Sandra Mellon, Treasurer – Public At Large, Northwest Region

Greg Shyba, Secretary – Public At Large, Central Region

Directors

Ken Ambrock – Northern Board Liaison

Tom Bateman – Director Emeritus

Dr. Mark Boyce – ACA / University of Alberta Chair in Fisheries and Wildlife

Fred Calverley – Trout Unlimited Canada

Randy Collins – Alberta Fish & Game Association

Robert Grandjambe – Public At Large, Indigenous Board Liaison

Dr. Brian Joubert – Nature Alberta

Patrick Long – Director Emeritus

Matthew Mellon – Wild Sheep Foundation Alberta

Perry McCormick – Pheasants Forever

Chuck Priestley – Public At Large, Northeast Region

Travis Ripley – Minister's Representative

Jeana Schuurman – Alberta Professional Outfitters Society

Richard Stamp – Public At Large, Southern Region

Brent Watson – Alberta Bowhunters Association

Vacant – Public At Large, Academic Representative

Vacant – Public At Large, Business Representative

Vacant – Treaty 8

Todd Zimmerling – ACA Administration, President and CEO

Member Groups



About ACA

Alberta Conservation Association’s (ACA) Communications, Wildlife, Fisheries, and Land Management program staff work on projects around the province to ensure that wildlife, fish, and their habitats flourish. ACA is a non-profit organization dedicated to conserving, protecting, and enhancing these elements for Albertans to enjoy, value, and use now and for generations to come.

Delegated Roles and Responsibilities

In addition to being a non-profit organization, and a registered charity, 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 Alberta Environment and Parks (AEP). In our role as a DAO, results from our population studies, surveys and assessments feed directly into AEP management plans and can form the basis for fishing and hunting regulation changes and evaluations of new management strategies.

Abbreviations Index

Acronym/Abbreviation	Definition
ABMI	Alberta Biodiversity Monitoring Institute
ac	acre
ACA	Alberta Conservation Association
AEP	Alberta Environment and Parks
AFGA	Alberta Fish and Game Association
AFS	ACA Fish Stocking
AHEIA	Alberta Hunter Education Instructors’ Association
AJSG	Alberta Justice and Solicitor General
AOP	Annual Operating Plan
ATA	Alberta Trappers’ Association
cm	centimetre
CN	Canadian National Railway
COR	Certificate of Recognition
CPIC	Corporate Partners in Conservation
CSM	Conservation Site Management
CWD	chronic wasting disease
DAO	Delegated Administrative Organization
DFO	Fisheries and Oceans Canada
DO	dissolved oxygen
DUC	Ducks Unlimited Canada
ECCC	Environment and Climate Change Canada
eDNA	environmental DNA
FSI	Fish Sustainability Index
FWMIS	Fisheries and Wildlife Information System
h	hour
ha	hectare
HLP	Habitat Legacy Partnership
HSP	Habitat Stewardship Program
HUC	Hydraulic Unit Code
IT	Information Technology
km	kilometre
LHP	Landowner Habitat Program
MD	Municipal District
MOU	Memorandum of Understanding
NCC	Nature Conservancy of Canada
NCNT	North-Central Native Trout
NSS	Northern Sagebrush Steppe
PCF	Prairie Conservation Forum
PLUZ	Public Land Use Zone
PVC	polyvinyl chloride
RAP	Report A Poacher
SHARP	Species Habitat Assessments and Ranching Partnerships
SMRID	St. Mary River Irrigation District
TUC	Trout Unlimited Canada
WIN	Wildlife Identification Number
WSCT	westslope cutthroat trout

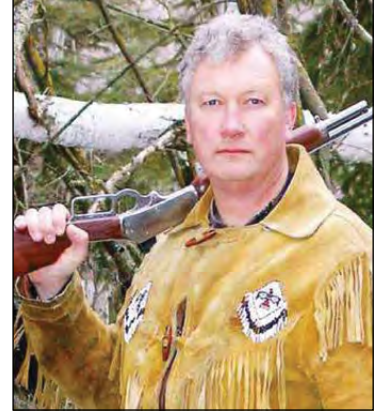
Project: Central Region Angler Survey
Photo: ACA, Erin VanderMarel



Message from the Chairman

Greetings,

There is no doubt that this year the conservation community here in Alberta and globally has met with unprecedented challenges. The pain of economic downturn combined with the fallout of the COVID-19 pandemic in this province was harsh and left many organizations reeling with devastating financial losses and a very uncertain future. As critical fundraising and revenue generating events and programs were cancelled one after the other income streams dried up overnight. Many organizations were already experiencing hardship due to the economic downturn and with subsequent staff layoffs and reorganization we were forced to find an operating bottom line quickly or face disaster.



The trapping community in Alberta is what I am closest to and we were lucky in some respects. Our association was able to move quickly to stop the bleeding as we cancelled events, workshops and shut down education programs. With children out of school many trapping families took to the bush and rode out the dark days of early spring and summer on their traplines. Many other families, associations and businesses have had a very hard time of it and my heart goes out to them. I hope that they were able to take advantage of the assistance provided by the provincial and Federal governments and find a way to weather the onslaught.

The ACA remains fully functional and intact. Thanks to the speedy action of our management and staff we were able to streamline operations and reduce expenditures quickly to hold the line so that we would be prepared for the worst. Thankfully Albertans took to the lakes and streams with renewed enthusiasm after a long tough winter and the subsequent levies from fishing license sales meant that ACA grants were honored and operations was able to move forward in measured capacity. When I see what has been accomplished over the past year by the ACA and our member groups it does give me confidence that much can still be done in the coming year despite our battered economy and the new social reality of COVID-19.

Despite the lack of resources for many groups, the shared vision and commitment of the outdoor community and the conservation movement in Alberta remain intact. This means more than ever that we must come together, find common ground and share our ideas, passion and enthusiasm to make a difference. If we can work together then we can share the burden and continue to move forward. The other thing that I know for a certainty is that when help and support are needed ACA will be there in whatever capacity is needed. The ACA is a tremendous resource, not only for grant funding but information, logistics and management expertise as well.

There may yet be some dark days ahead, in fact that is almost a certainty. Albertans are adept at weathering the storm; we are good at it because our history demanded it and its part of our culture. It is also because Albertans have always had each other's back and that more than anything is what is required now. Nobody knows what the future will bring, all I know is that Albertans we will embrace it and move forward together.

Stay safe and well,

Yours truly,

Bill Abercrombie, ACA Board Chair

Todd Zimmerling
Photo: ACA, Don Myhre



President and CEO's Message

I was going to start out my letter by letting you all know that 2019-20 was a bit of a tough year for ACA with respect to funding. However, by the time this letter is published we will be in month five of dealing with the COVID-19 pandemic and all the various issues that have come along for all of us. In hind-sight 2019-20 was not such a bad year at all. Yes, there were some funding shortfalls, but with a few budget adjustments to some of our projects we were able to deal with it relatively easily.

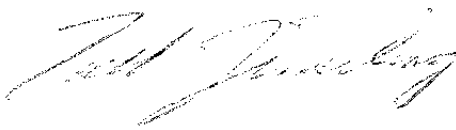
Our staff once again performed well above expectation (which is an accomplishment given that expectations rise every year), and our member groups, corporate and community sponsors and many of you individually, all stepped up to help us out when ever we needed it. I would encourage you to take a few minutes and read through the Annual Report to get a sense of just how much was accomplished with hunter and angler dollars and the generous support of our donors.

Over 100 different partners helped organize, and host Kids Can Catch events across the province. Close to 100 young people participate in the 4-H raise and release program for pheasants. Over 800 hunters show up in Taber to help celebrate the Taber Pheasant Festival and of course over 100,000 trout volunteered to leave the stocking truck and spend sometime in a few ponds so you had a chance to go fishing this past summer. All-in 2019-20 was a very successful year with many positive accomplishments

After you have read through this report if you would like more details on some of the projects please take a look on our website for the annual project summaries. If you still have questions please contact me directly and I will find the right person to talk with to find the answers.

Despite the COVID restrictions, I hope all of you are finding time to get out of the house and enjoy the outdoors.

Sincerely,

A handwritten signature in black ink, appearing to read 'Todd Zimmerling', with a stylized, cursive script.

Todd Zimmerling
President and CEO
Alberta Conservation Association

Our People. Our Culture.

Health and Safety

Health and safety is a key element in today's workplace whether in the office or out in the field. ACA's health and safety program was established, and is continually maintained and improved, to provide the necessary tools for our staff to work in a manner that meets and exceeds OH&S standards. The end goal is always that everyone working on ACA projects goes home healthy and safe!

All workers (employees, contractors, volunteers, visitors etc.) are required to comply with ACA's Health and Safety Program in order to protect themselves and others, which creates a safer and healthier work environment.

2019/20 Overview

- In 2019/2020 there were 49 incidents with a rate of 28.49 incidents per 100,000 payroll hours.
- Most incidents consisted of near misses and non-injuries.
- The results of the 2020 Employee Survey were positive in that 95% of ACA staff are supportive of the Health and Safety Committee's practices. The committee continues to ensure that when concerns are brought forward, the results of the discussions surrounding the issue are communicated back to the individual. This communication is important in making employees aware that the matter was thoughtfully considered and any actions pertaining to the issue were addressed.
- The documentation process of vehicle and equipment maintenance was enhanced by implementing procedures to address inspections and maintenance requirements. All deficiencies are captured and addressed accordingly in each region.
- Processes have been implemented that improve the thoroughness of communication concerning corrective actions of incidents and near misses. This process includes tools created to track the progress of the recommended actions until those recommendations are applied and communicated appropriately.

Human Resources

ACA completes many conservation projects over considerable territory each year, thanks in large part to our 84 permanent staff and numerous seasonal staff. It's not just about hiring talent; it's about keeping people and helping them grow and stay committed over the long term. Here at ACA, we recognize that our most valuable resource is our entire team of employees, who work together diligently to accomplish our goals each year.

Numerous employees reached work anniversary milestones this year. We extend our congratulations and thanks to the following individuals who achieved significant Years of Service milestones:

20 Years of Service

Lance Engley, Kris Kendell,
Andy Murphy

15 Years of Service

Robert Anderson, Jason Blackburn,
Doug Manzer

10 Years of Service

Stefanie Fenson, Erin Vandermaarel,
John van Dijk

5 Years of Service

Britt Schmidt, Lisa Sembaliuk,
Dil Thapa, Andrew Clough,
Budd Erickson, Nikita Lebedynski,
Garret McKen

2019/20 Overview

Employee Survey

- 97.5% of employees agree they are satisfied with ACA as a place to work—a tremendous accomplishment.
- 95.2% of employees are satisfied with having a good work-life balance. This is very important to our organization as ACA has a culture that values work-life balance. A slight increase from last year.
- 82.7% are satisfied with ACA's benefit plan. This is a 10% decrease from the previous year. ACA did a market analysis of the plan to ensure we are receiving the best value for our benefits.
- 80.2% are satisfied with the whole compensation package available to them. This is a slight decrease by 2% from the previous year.

Employee Retention

- Staff turnover was at 8.3%, a 3% increase from the previous year.

Career Fairs

- Attended two career fairs at the University of Lethbridge and University of Alberta. These fairs provided excellent opportunities to introduce ourselves and inform new graduates about career options available at ACA.
- ACA accommodated a couple co-operative work experience terms for students from two different universities.

Recruitment

- We continue striving to hire people who are qualified and also the best fit for the organization. Finding that person who fits with the ACA culture is part of the recruitment process.
- Filled three permanent positions. One out of the three positions was a past seasonal staff member.
- All seasonal positions were suspended due to the emergency health orders given by the province due to COVID-19

Professional Development

- Giving employees the tools they need to succeed continues to be a priority for ACA. We recognize that ongoing leadership, team building, and interpersonal training and support is vital to individual growth and success. We had three new staff members receiving their professional biologist designations adding to the complement of staff that already have the designations.

Information Technology

The management and ease of access to systems and databases continues to be a focus for Information Technology (IT). IT is committed to discovering and implementing solutions that increase operational efficiencies and provide strong systems to support the work of our teams.

With changes in the workforce and in digital technology, it is essential for staff to access files from within the office or out in the field and to work on projects in conjunction with other researchers almost anywhere in the province. The IT team is committed to support this collaboration. We consult with staff, talk with partners, and meet with experts in the field to develop systems that ensure staff can focus on their work using efficient processes.

Work continued this year on our long-range plan for technology. Mobile access continues to be our top priority as our needs change over time and we require increased access from remote field sites. We continued with improvements to budgeting systems, ensuring compliance with employment laws and better detail for managing our human resources allocated to projects. Several new reports give staff access to the detail they need to plan more efficiently and monitor their projects' progress over the year. Staff are evaluating hardware solutions that will stretch capital investment dollars further for annual evergreening. The IT team discussed our priorities with management to ensure alignment with all other resource and functional areas. This collaboration allows the team to better anticipate and meet needs as they arise.

Upgrading the server to ensure up to date software and security was a priority this year and was completed in February. Our technology partner continues to work collaboratively

with us and is providing continue to provide 24/7 helpdesk support to our staff. The team is continuing to look for ways to find cost savings, increase efficiency, and improve service to our staff and external partners.

2019/20 Overview

- Continued improving staff access by moving to a blend of remote access, on-premise, and cloud-based structure, which allows staff to work across the province and collaborate with external resources as required.
- Accessed expertise by using targeted consultants to increase the timing and effectiveness of IT solutions. 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.
- Continued updating and improving systems to provide better and more consistent online access for staff. 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.
- Implemented a new business card ordering system reducing the requirement for HR and Communications involvement at multiple points of the ordering process. Leveraged existing data to automate the process and create a cohesive seamless process.
- Upgrade of File server to enhance security and maintain warranty and regular updates.



Project: Waterfowl Warmup
Photo: ACA, Charmaine Brunes



Business Development

ACA partners with many Alberta corporations (big and small), municipalities and community organizations that sponsor, donate and otherwise support our conservation work and values. These partnerships are integral to helping us achieve the annual goals of our programs including Fisheries, Wildlife, Land Management and Information, Education and Communication. Over the past few years, we have also seen a dramatic increase in support for our growing number of events that continue to engage and educate people about conservation in communities across Alberta.

Many of our partnerships are formally recognized in our Corporate Partners in Conservation (CPIC) program, which provides unique opportunities for businesses, municipalities and organizations to be directly plugged into ACA's conservation work. Our CPIC participants benefit from ACA's promotion of these partnerships and have the ability to promote their affiliation with us through their own communications.

Business Development also generates additional revenue through advertising sales to support our communications activities on television, radio, online and our in-house publications *Conservation Magazine* and the *Alberta Discover Guide*.



Project: Taber Pheasant Festival
Photo: ACA, Colin Eyo

2019/20 Overview

- We are pleased to recognize sixteen companies that are either new Corporate Partners in Conservation or have renewed/increased their ongoing support for ACA programs and projects:
 - AltaLink
 - Backroad Mapbooks
 - Canadian Tire Cochrane
 - County of Cardston
 - Edmonton Trout Fishing Club
 - EQUS
 - Foster Park Brokers Inc.
 - Korth Group
 - Northern Sunrise County
 - Southern Alberta Bowhunters Association
 - St Mary's River Irrigation District
 - Syncrude
 - Tourmaline Oil
 - Town of Cochrane
 - West Fraser Mills
 - Wolf Midstream (formerly Access Pipeline)



Project: ACA/4-H Pheasant Raise and Release Program
Photo: ACA, Rhianna Wrubleski

Our Conservation Programs

Information, Education, and Communications Program

Our Communications resource program's primary role is keeping conservation and our work in fisheries, wildlife and land management recognized and valued within Albertans' diverse lifestyles, corporate sectors and communities. We engage stakeholders through multimedia platforms and events, develop hunter and angler retention and recruitment initiatives and pursue opportunities to strengthen partnerships in conservation.

2019/20 Overview

- 43,000 copies of the Alberta Discover Guide were delivered in January 2020, featuring 789 conservation sites (including Ducks Unlimited Canada [DUC] and Alberta Fish and Game Association [AFGA] sites). The guide is a free annual publication that provides outdoor enthusiasts with a list and description of conservation sites that can be accessed for hunting, fishing, hiking, and more.
- Harvest Your Own campaign and website continued to promote hunting to the locavore culture as an alternative option to source food. This ongoing investment is important to maintaining engagement and education of both non-consumers and consumers of wild game.
- 13,000 subscribers received Conservation Magazine thanks to the combined efforts of writers, editors, biologists and designers. The publication is produced biannually and highlights ACA projects and topics about conservation.
- In partnership with Hunting for Tomorrow and Alberta Hunter Education Instructors' Association (AHEIA), the Wildlife Identification Number (WIN) Card Reimbursement Program supports the recruitment of young hunters. Over 2,002 information packages were sent to youth who completed the hunter education course. A total of 374 youth returned the reimbursement form.
- Supported the Wildlife, Fisheries, and Land Management Resource Programs and Business Development with visual communications, on-demand design, and media services such as regional advertising, site signage, and social media.
- In 2019/20, Kids Can Catch events across Alberta welcomed 4,387 adults and children and 100 organizations, partners, and sponsors. The flagship Wabamun Lake Kids Can Catch was an outstanding success with over 1,000 participants.
- In 2019/20 we ran peregrine cameras at 5 locations in Edmonton—the Bell Tower, the University of Alberta, Genesee Power Plant, the Misericordia Hospital and Nutrien—and we live-streamed the video through our website. The project also includes two ferruginous hawk nests monitored by trail cameras. In 2019/20, views of the wildlife camera section of our website accounted for 29% of web traffic.
- In 2019/20, ACA had 20,246 followers on Facebook, 6,220 on Twitter, 3,426 on Instagram, 532 YouTube subscribers, and 66,714 subscribers to our e-newsletter.

Advertising and Marketing

Advertising is key to achieving a number of long-term goals within the *Strategic Business Plan*, primarily to increase public recognition of ACA's brand; to increase conservation awareness by creating positive profiles of hunting, fishing, and trapping; and to develop corporate partnerships. Project or event promotional advertising engages various audience targets and supports ACA's public profile. Our "It's an Alberta Thing" campaign is a direct approach for establishing relationships with stakeholders keeping conservation valued within today's varied priorities and cultures.

Advertising supports several ACA programs, projects, and events that include: Report A Poacher, *Alberta Discover Guide*, fish stocking, Taber Pheasant Festival, the peregrine cameras, Corporate Partners in Conservation Program, and the Kids Can Catch Program.

Alberta Discover Guide app

The Alberta Discover Guide app was created so users of the *Alberta Discover Guide* could have another way to access information about conservation sites in pursuit of hunting or angling opportunities. The app also provides ACA with a platform for advertising content from ACA's stakeholders and other organizations and businesses focused on fishing, hunting, and conservation. A new feature was added which provides users the ability to favourite a site so it can be easily referenced in future sessions. In 2019/20, around 1,700 Android users and 2,810 iOS users downloaded the app.

Alberta Discover Guide

The *Alberta Discover Guide* is a free, annual publication that provides outdoor enthusiasts with a list of conservation sites that can be accessed primarily for hunting, fishing, and hiking. The sites are private land owned by ACA or its conservation partners, or public land that is managed by ACA on behalf of the Crown. All sites are available for public use and have been made available through conservation efforts by ACA and its partners.

The publication is a major project for ACA's Information, Education, and Communications Program. Advertising is coordinated and produced for free for ACA member groups. Editorial content is developed and written inhouse. The communications team coordinates print production and updates and maintains the subscription database. For 2019/20, we printed 43,000 copies of the guide to mail out to subscribers and to distribute at trade shows and hunting and fishing licence retailers across Alberta. The guide is also available online and as an app.

Partnerships

Advertisers, Alberta Fish & Game Association and affiliated clubs, Ducks Unlimited Canada

Annual Operating Plan

Our *Annual Operating Plan* (AOP) informs Albertans, our stakeholders, and partners about the projects we undertake within the current fiscal year as well as how revenue is directed to our resource program areas. Our board members approved the 2020/21 AOP prior to being posted on our website at the beginning of the fiscal year.

Annual Report

Our *Annual Report* informs our stakeholders know of how ACA has used funding, details on the conservation outcomes achieved, and how ACA has performed relative to its stated goals. Our board members received and reviewed the 2018/19 *Annual Report* for approval, and it appeared on our website in September 2019. Annual summaries also appeared on our website by April 30, 2019.

Conservation Magazine

Our *Conservation Magazine* is a free, biannual publication available in print and digital formats that covers topical conservation issues, and helps bridge understanding between the hunting and angling stakeholders as well as the larger conservation community. The magazine helps increase our profile across Alberta and is used by our Resource Programs and Business Development to reach out to potential donors and partners.

In 2019/20 we printed a combined 30,000 copies, including articles about the important balance between conservation and agriculture, the science behind fish stocking, and partnerships in conservation with the oil and gas sector. The total number of subscribers now exceeds 13,000.

Partnerships

Alberta Environment and Parks, Alberta Professional Outfitters Society, Ducks Unlimited, Canada, MULTISAR, Nature Conservancy Canada, Shell, Syncrude, Suncor, TransAlta, Trout Unlimited Canada/ Northern Lights Fly Fishers

On-site Signage (formerly Conservation Site Signs)

Each conservation site has branded signage to recognize our partners, provide wayfinding for users, and notify users of restrictions on the site. Our Information, Education, and Communications program works with our Land Management, Fisheries, and Wildlife programs to produce signs for conservation sites and their boundaries; to support participating landowners; and for fisheries access sites, pheasant release sites, recreational opportunity enhancement sites, thin-ice areas (warnings), and interpretive trails.

In 2019/20, we produced five conservation site signs, seven ACA Fish Stocking signs, two Riparian Conservation site signs, one Landowner Habitat sign, one Recreational Opportunity Enhancement sign, and various other signs.

Currie Museum/Conservation Education Room

The Currie Museum's Conservation Education Room is an opportunity to provide education outreach within an existing tourist and education programming destination. ACA has signed a five-year Memorandum of Understanding to lease unoccupied space and provide exhibits annually that profile contemporary conservation challenges. In its second year, ACA secured exhibit partnerships and developed free-standing displays and custom digital production on Alberta's species at risk.

Partnerships

Phillip J. Currie Dinosaur Museum, Tourmaline Oil Corp, Royal Alberta Museum, Alberta Hunter Education Instructors' Association, Fish and Wildlife, Alberta Environment and Parks



Project: Waterfowl Warmup
Photo: ACA, Charmaine Brunes

Emerging Issues

The Information, Education, and Communications Program must be able to respond to communications needs that arise as ACA projects, partnerships, opportunities, or crises develop. Our communications team provide services in design, copywriting, photography, editing, print production, and digital media to ACA's executive, Business Development and Human Resources teams, plus our member groups. On-demand requests for communications support include, but are not limited to, aeration updates (social and digital media), pheasant release site updates (social and digital media), digital presentation editing and photography, drone footage documentation, and member group website support.

Final Report Series

Our Fisheries and Wildlife Resource Programs are responsible for submitting reports every year on the projects they have been working on to describe the findings of the work. Communications is responsible for editing, proofing, and formatting these reports and making sure

they are available to the public and our stakeholders and partners through our website and the Alberta Government Library. Two Wildlife reports and three Fisheries reports were completed for 2019/20.

Grants Fund Annual Report

The aim of the *Grants Fund Annual Report* is to document the grants fund procedures and provide an overview of activities and results of projects financially supported through ACA grants (the Conservation, Community, and Education Grants and the ACA Research Grants) each fiscal year. ACA funnels over \$1 million into conservation work in Alberta through the grants. As of our 2019/20 grants round, we have received 2,212 grant applications, of which 1,276 projects have been awarded grants. To date, approximately \$19.3 million has been granted to conservation-related projects throughout the province.

Harvest Your Own

Alberta is one of the few jurisdictions in North America seeing a growth in the number of hunters. This increase is often

attributed to an interest in organic and local food, and hunting as a way to actively and ethically source your own protein. New hunters, in particular men, women and youth from urban areas, may not have a network of family and friends to help them learn to hunt. Harvest Your Own aims to provide new hunters with timely and relevant content that will help them get started and have success in the field and kitchen. In 2019/20, Harvest your own increased its social media audience to 2,985 (+320) Facebook followers, 696 (+263) Instagram followers, and 255 (+63) Twitter followers.

Internal Communications Needs

Our Information, Education, and Communications Program provides creative and technical services to the President & CEO, Human Resources, and Business Development teams, and the Wildlife, Fisheries, and Land Management resource programs. Working with program managers, regional managers, and project leads, Communications ensures ACA programs and projects receive the media and materials needed for their success.



Project: Kids Can Catch
Photo: ACA, Charmaine Brunes

Kids Can Catch Program

Kids Can Catch is a province-wide program in which ACA partners with community and corporate partners to create free family fishing events at lakes and ponds. We developed Kids Can Catch as a way to invite Albertans to fish at stocked and natural waterbodies and to hook new and young anglers on fishing, fish conservation, and responsible angling. In 2019/20, Kids Can Catch events across Alberta welcomed 4,387 adults and children and 100 organizations, partners, and sponsors. The flagship Wabamun Lake Kids Can Catch was an outstanding success with over 1,000 participants.

Partnerships

A1 Rentals, ACA, AHEIA, Alberta Environment and Parks, Alberta Fish and Wildlife, Enforcement Branch, Alberta Forestry and Agriculture, Alberta Fish & Game Association, Alberta Lifesaving Society, Alberta Parks, AltaLink, ATB Financial (Cochrane), Backroads Mapbooks, Barrow Safety, Berkley, Big Sky Flies and Jigs, Cabela's Canada Outdoor

Fund, Cabela's North/South Edmonton stores, Canadian Tire, Canadian Tire Slave Lake, Central Alberta Coop, City of Fort Saskatchewan, City of Lacombe, CN, CN Police, Coop Community Spaces, Coronation Community Support Society, Coronation Family Foods, County of Paintearth, County of Grande Prairie, Dow Chemical Canada, Edmonton Trout Fishing Club, Edmonton Old Timers' Fishing Club, Equis, Fort Saskatchewan Lions Club, Fort Saskatchewan Fish and Game, Fort Saskatchewan Naturalist Society, Foster Park Brokers, Fountain Tire, Government of Alberta, Go Services Inc., Golby Hardware and Sports, Greater Parkland Regional Chamber of Commerce, Grimshaw Agricultural Society, Growing Great Kids Coalition, Indominous Sports Edson, Innisfail Fish and Game Association, Jump Start, Lacombe Fish and Game D&M, Lamont Fish and Game, Leduc County, Len Thompson lures, Lesser Slave Lake Forest Education Society, Lesser Slave Lake Watershed Council, Lesser Slave Lake Search and Rescue, Lesser Slave Regional Fire Service,

Lesser Slave Watershed Council, MNP, Northern Light Fly Fishers, Nutrien, Paintearth Economic Partners Society, Prairie Parent Link, Quantum Canada, River Valley Alliance, River Runner Recreation, Saddle Hills County, Service Credit Union, Shakespeare, Slave Lake RCMP, Slave Lake Rod and Gun Club, Smoky Trout Farm, Stony Plain Fish and Game, Superfly, Taber Fish and Game, Taber Kiwanis Club, Town of Coronation, Town of Hinton, Town of Beaumont, Town of Cochrane, Town of Gibbons, Town of Taber, TransAlta, Village of Wabamun, Volunteer Firefighters, Walleye Master, Wolf Midstream, Walleye Master, West Central Heavy Duty Repair Ltd., Wetaskiwin Safety, Wolverine Guns & Tackle, Yellowhead County

Media Releases

Media releases inform television, radio, and print media sources about events, new conservation sites, and other important information in hopes that they might be announced to a bigger audience. Three media releases were sent out in 2019/20.

Other Publications

Through education outreach activities and partnerships, superior products can be developed for the end-user, and collaborative conservation relationships can be enhanced. In 2018, Nature Alberta approached ACA and Alberta Environment and Parks to combine resources and expertise to produce a more robust riparian resource for the public within their Living Edge program. ACA printed and delivered 1,000 units of the publication in December 2018. This project was to accommodate additional printing in 2019/20, which did not materialize.

Peregrine Cameras

The peregrine and ferruginous hawk cameras provide a bird's-eye view into the daily lives of each species as they fight for mates and territory, catch food, and raise their young. In 2019/20 ACA ran five peregrine cameras in locations throughout Edmonton—the Bell Tower, the University of Alberta, Genesee Power Plant, the Misericordia Hospital, and Nutrien—and we live-streamed the video to our website. The project also includes two ferruginous hawk nests monitored by trail cameras. The still images were reviewed and posted on our website. Also, an online species at risk contest quiz was promoted alongside the ferruginous hawk media. Both the peregrine and ferruginous hawk cameras draw attention to these species, other species at risk initiatives, and resources available from Alberta Environment and Parks. In 2019/20, views of the wildlife camera section of our website accounted for 29% of web traffic and the species at risk contest quiz reached 28,031 people and had 933 participants.

Partnerships

Aspen Properties, Capital Power, Nutrien, TeraGo, TransAlta, University of Alberta, WiBand, AltaLink

Social Media

Social media allows ACA to connect with, inform, and grow audiences. By using Facebook, Twitter,

Instagram, Constant Contact, and YouTube, we can inform our followers about our projects, share news about upcoming events, and respond to questions and comments about conservation in Alberta.

Stakeholder Communications

To foster positive business relationships and partnerships in conservation sectors, ACA promotes projects and events for our stakeholders and member groups whenever possible. This support might appear as an advertisement in *Conservation Magazine*, a post on social media, or a design for a conservation site sign. In addition, ACA provides member group support in their media platforms where needed and as resources allow.

Strategic Business Plan

Our *Strategic Business Plan* provides employees, stakeholders, and partners with a clear understanding of the future direction of ACA. April 2019 represents the end of our 2009–2019 *Strategic Business Plan* and the beginning of our new 2019–2029 *Strategic Business Plan*. All strategic goals and objectives are aimed at meeting our mission and vision statements and all activities are undertaken with our core values in mind.

Waterfowl Warmup

Waterfowl Warmup is a fundraiser in support of the Report A Poacher (RAP) Program. Proceeds from the event support efforts to educate the public about responsible hunting and angling and the negative impacts of poaching. Twenty teams participated in Waterfowl Warmup. Last year's winning team successfully defended their title. The winning team name and members' names were added to the Waterfowl Warmup plaque on display at ACA's office in Sherwood Park. Winning team members each received an individual trophy and prize bag to take home.

Partnerships

American Bridge Canada, Beaverhill Sporting Clays, Brad Fenson

Outdoors, Direct Horizontal, Fisher Marketing/Stoeger Canada (Benelli, Beretta & Franchi), Kingston Ross Pasknak, Maverick Inspection Ltd., Nature Conservancy of Canada, Yeti Roughtider Rentals Ltd.

Website Maintenance and Development

ACA's website provides an accessible gateway to information about our work using current technology to engage users. It is perhaps the primary platform we use to work toward increasing our profile in Alberta, one of the long-term goals of ACA's 10-year Strategic Business Plan.

In 2019/20, we added the following major additions to the website:

- Snow goose GPS tracking map
- Angling Opportunities on North Raven River & Raven River interactive map
- Redesigned Fish and Land feature project pages
- Streamlined payment gateway system
- Improved donation system

In 2019/20, the ACA website achieved approximately 565,933 page views, with the average user spending 1:48 minutes per visit.

WIN Card Reimbursements

In partnership with Hunting for Tomorrow and Alberta Hunter Education Instructors' Association, the WIN Card Reimbursement program supports the recruitment of young people into hunting. The project gives ACA and our member groups a way to connect with new hunters when they purchase their first WIN card. In 2019/20, over 1,905 information packages were sent to youths who had completed the hunter education course. A total of 374 youths returned the reimbursement form.

Partnerships

Alberta Hunter Education Instructors' Association, Hunting for Tomorrow



Project: Amphibian Monitoring Using Environmental DNA
Photo: ACA, Amanda Rezanoff

Wildlife Program

It was an exciting year publishing results from our pronghorn work including co-authorship on a highly regarded paper cited among the top 10 in the field of Ecology for 2019! We also published a novel paper from our collaring work with ATA in the Birch Mountains describing the characteristics of wolverine den sites.

We kicked off fieldwork on a couple of exciting new habitat projects that will lead to better wildlife habitat, as well as provide the vegetation structure to improve ecosystem services in these areas as well. We have found that partners are interested in these bigger-picture benefits that stretch beyond target species alone. In addition to direct benefits for wildlife, we also look for means to improve services such as water quality, pollinator habitat, and nutrient buffering to name just a few.

Our projects geared to encourage hunter participation and recruitment continue to foster strong support. Pheasant release sites were busy with old and new hunters alike, while Taber Pheasant Fest had 81 novice hunters participate!

2019/20 Highlights

- Senior Biologist Paul Jones worked with co-authors to characterize the “Longest terrestrial migrations and movements around the world.” (Scientific Reports).
- We published an evaluation of fence modifications designed to improve their permeability for wildlife across the landscape (Wildlife Society Bulletin). We also explored how “private lands and public policy anchor intact pathways for multi-species wildlife migration.” (Biological Conservation)
- When crossing a fence, pronghorn do so by going under, but we were surprised to learn that mule deer predominately applied this same approach. White-tailed deer crossed by either going under or over, while elk went over the top.
- Our work with furbearers lead to a novel publication describing the characteristics of wolverine den sites in boreal forest in northern Alberta.
- We continued to develop an approach to track furbearer trends in partnership with ATA. Trappers submitted 214 logbooks with 65% of these coming through a new online approach.
- On average, trappers set 33 marten traps for about 43 days, harvesting an average of 11 marten. The average Catch Per Unit Effort was one marten for every 159 trap nights.
- Our partnership with the Country of Warner continues on Ridge Reservoir, including participation from students at Raymond High School who helped plant 3,000 shrubs! Shrub and hedgerows create important habitat for game birds, as well as providing key ecosystem services such as providing nesting sites for pollinators, soil retention, and buffering unwanted chemical nutrients from the reservoir itself.
- The first year of field work with St. Mary River Irrigation District (SMRID) went well. We completed 229 range and riparian health assessments on lands surrounding four reservoirs and from these developed a detailed habitat conservation strategy for each reservoir what will help guide habitat improvements going forward.
- Our work with producers on ranchlands expanded greatly with well over 100,000 acres of new ranching partnerships coming onstream. This includes a new focus area in central Alberta with the SHARP project with 15,000 acres of ranchland entering into a long-term commitment to align ranching goals with benefits for wildlife.
- We searched 33 historic hibernaculum sites for snake activity and found 33% of these still active with the observation of a least one snake.
- Ninety-three 4-H members participated in the sixth year of Raise and Release program, and successfully raised 4,687 hens (and a few roosters too)! A cornerstone of this program is education, helping kids to understand the resource needs of wildlife.
- The pheasant release program continues to be very popular with 42 sites creating hunting opportunities from Peace River to south of Medicine Hat. We released 28,610 male pheasants for hunting, as well as 760 roosters raised by members of the Peace River Fish & Game for sites in their region.
- 803 hunters, including 81 novice hunters, participated in the annual Taber Pheasant Festival. Summed over 9 years, hunters have enjoyed more 6000 hunter days at the event.

ACA/4-H Pheasant Raise and Release Program

Pheasants were first introduced into Alberta in 1908 by a group of recreational enthusiasts to provide enhanced upland hunting opportunities. Now, more than 110 years later, the tradition continues as ACA partners with stakeholders to improve upland hunting opportunities in Alberta. Changes in agricultural practices and the conversion of native prairie into cropland have dramatically modified the landscape to the point where native game birds are nearly eliminated from areas dedicated to cropland. Pheasants can adapt to areas predominately used for cropland provided that a suite of habitat features are also available. In 2014, we initiated a new partnership with 4-H Alberta offering them the opportunity to raise pheasants from day-old chicks to adult birds for release. This year, we had 93 4-H members who successfully raised and released 4,687 hen pheasants into suitable upland habitat. In addition to the 4-H members, other interest groups including private landowners, Fish & Game Associations, and Boy Scout groups also received the opportunity to raise pheasants from day-old chicks. We did not record how many birds were successfully raised and released from these interest groups as they are free to do what they want with their birds. We held a webinar for 4-H members to discuss habitat features important for improving the odds of survival for pheasants in Alberta.

Partnerships

4-H Alberta, Alberta Environment and Parks, Cabela's Canada Outdoor Fund, ConocoPhillips Canada, Innisfree & District Fish and Game Association, Lethbridge Fish & Game Association, MacFarlane Pheasants, Private donations, Wheatland Conservation & Wildlife Association

Alberta Volunteer Amphibian Monitoring Program

Volunteers play a crucial role in wildlife conservation efforts through their involvement in biodiversity-related citizen science projects. The Alberta Volunteer Amphibian Monitoring Program (AVAMP) invites people to engage with nature and to provide unique information on amphibian and reptile distribution and life-cycle events. To streamline the way AVAMP participants make and report their observations, we are partnering with Alberta Biodiversity Monitoring Institute and trialing their free NatureLynx mobile application. The NatureLynx app allows AVAMP participants to complete data entry in the field. Data are organized in an AVAMP community group set up on the app by ACA and accessible to us. In 2019/20, 41 participants from AVAMP submitted 43 amphibian and 16 reptile observations, including locations of five snake hibernacula (dens) directly through AVAMP. An additional seven amphibian records were submitted through the AVAMP Group on ABMI's NatureLynx platform. Combined, these data represented 60% of the amphibian and 44% of the reptile species native to the province. Setting appropriate conservation measures for amphibians and reptiles requires a good understanding of species distributions and timing of life-cycle events, which are often based on relatively few observation records. AVAMP is an example of how ACA can work with a network of enthusiastic volunteers and partners to fill these data gaps and positively impact conservation.

Partnerships

Alberta Biodiversity Monitoring Institute, Alberta Environment and Parks

Waterfowl Crop Damage Prevention Program

The intention of the Waterfowl Crop Damage Prevention Program is to assist agricultural producers in reducing damage to crops caused by waterfowl during fall migration. Seven years ago, we began offering scare cannons free of charge to Counties and Municipal Districts, enabling them to incorporate this equipment into their equipment rental programs. This has greatly improved efficiency, placing cannons much closer to end users. In 2019/20, 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 updated the ACA website to identify where scare cannons are available for loan and suggested prevention strategies to reduce crop damage.

Partnerships

Alberta Environment and Parks, County of Athabasca, County of Camrose, County of Clear Hills, County of Flagstaff, County of Grande Prairie, County of Lac La Biche, County of Lacombe, County of McKenzie, County of Minburn, County of Northern Lights, County of Northern Sunrise, County of Paintearth, County of Ponoka, County of Smoky Lake, County of St. Paul, County of Stettler, County of Two Hills, County of Vermillion River, MD of Big Lakes, MD of Bonnyville, MD of Fairview, MD of Greenview, MD of Peace, MD of Provost, MD of Smoky River, MD of Spirit River

Connectivity Project

The Connectivity Project addresses habitat fragmentation in southern Alberta by working collaboratively with irrigation districts, municipalities, conservation groups, recreationists, and agricultural producers to improve water quality and re-establish or enhance existing wildlife habitat. Doing so will benefit agriculture, hunters, anglers, and other outdoor enthusiasts. 2019

was the second year of the project and the first year of extensive data collection around four St. Mary River Irrigation District (SMRID) reservoirs: Cross Coulee, Raymond Reservoir, Murray Lake and Stafford Lake. Thirty-one lotic riparian health assessments, 71 lentic riparian health assessments, 75 range health assessments, 31 tame pasture health assessments, and 20 visual range assessments were completed for use in the first Habitat Conservation Strategy for SMRID. Six hundred and forty-seven incidental wildlife observations were made across the four reservoirs, of which 22% were species at risk. This data provides a baseline assessment of the plant communities around each reservoir and the wildlife species using them. It also identifies priority sites where habitat enhancements and/or grazing management recommendations will improve ecosystem service provision (carbon sequestration, water filtration and nutrient retention, wildlife habitat, and biodiversity). The recommendations put forward in the report are developed to improve water quality and habitat but will also increase the resilience of irrigation district operations and grassland ecosystems.

Partnerships

Alberta Environment and Parks, Alberta Fish and Game Association (Zone 1), Lethbridge Fish and Game Association, Canadian Agricultural Partnership, Pheasants Forever - Chinook Chapter, Southern Alberta Bowhunters Association, St. Mary River Irrigation District, Taber Irrigation District

Amphibian Monitoring Using Environmental DNA

Environmental DNA, or eDNA, refers to the DNA that organisms leave behind or shed as they pass through the environment. DNA technology has evolved to allow researchers to detect DNA signatures from material such as mucus, feces, urine, or sloughed skin that is naturally contained within pond water and aquatic sediment. We have worked towards a reliable method of detecting amphibians using eDNA. The first phase of this work involved a MSc project developing an approach for detecting three amphibians in water and aquatic sediment samples. The second phase involved a partnership with Washington State University to further refine and evaluate water and

aquatic sediment sampling methods. In 2018, we adjusted our eDNA sampling methods to ensure more complete coverage of study ponds so that target species were more fully represented in the set of samples collected. This new strategy improved our ability to detect certain species that occur in either lower densities or have tadpoles with schooling behaviour that may result in patchy distribution of their eDNA in a pond. The water filtration technique was as good as field surveys for confirming the presence of boreal toads, wood frogs, and boreal chorus frogs at the ponds sampled; whereas detection was lower using aquatic sediment. These results indicate eDNA sampling can be an effective alternative to more traditional amphibian monitoring methods. The next step is to write up what we have learned and make the results available to our partners and conservation community through a peer-reviewed publication.

Partnerships

Alberta Environment and Parks, Shell Canada Energy, Washington State University – Dr. Caren Goldberg



Project: Pronghorn – Grassland Indicator
Photo: ACA, Paul Jones

Enchant Project – Strong Farmlands. Thriving Habitat.

We have a long-term working relationship with a modern farm to evaluate approaches for re-establishing vibrant upland game bird densities while maintaining a profitable farming operation. We also monitor a range of non-target species to assess how these treatments impact biodiversity (amphibians and songbirds). We trial enhancements that focus on improving habitat features important for nesting, brood rearing, and winter survival of pheasants and grey partridge. This includes approaches within the crop, the juxtaposition of crops types and rotation, harvest method, field edge improvements, water management and wetlands, and trialling seed mixes important for chick survival. In 2019, we trialled a perennial seed blend that is designed to be self-sustaining, provide vertical structure, and flowering plants. We planted Roundup Ready Corn to provide escape and thermal cover but to also help control unwanted weeds. The landowner planted 8.5 km of additional shrub rows (8,525 shrubs) to increase territorial space on the farm. We seeded approximately 2,000 willow stakes around wetlands and 800 giant wild rye plugs in patches. Winter was unseasonably cold in February with a prolonged period of freezing temperatures below -20°C. The density of partridge pairs decreased slightly on the farm from 133 pairs in spring 2018 (22.4 pairs/km²) to 113 (19.0 pairs/km²) in spring 2019. Autumn partridge totals also had a slight decrease from 315 in October 2018 to 288 in 2019. Pheasant numbers increased almost threefold in 2019.

Partnerships

Alberta Environment and Parks, Haggins Family, Stamp Farms

Working with Alberta's Trappers to Monitor Furbearer Population Trends

Alberta Conservation Association was asked to assist Alberta Environment and Parks and Alberta Trappers' Association with a pilot project to develop logbooks for trappers to record information about their trapping activities and fur harvesting results. After revisions to the logbook from 2016/17 and a concerted communication effort with trappers, the number of logbooks submitted has increased with each season. Trappers spent an average of 414 hours on trapping-related activities during 2018/19, with 42% of that time dedicated to setting and checking traps. On average, trappers set 33 marten traps for about 43 days, catching one marten for every 159 trap nights of effort.

Partnerships

Alberta Environment and Parks, Alberta Trappers' Association

Habitat Legacy Partnership

Upland game birds are valued for their showy colours, breeding displays, and long history in the hunting tradition of Alberta. Farming practices around the world have changed significantly over the past 50 years, with an ever-increasing economic pressure to maximize yield. Some of these practices have altered the resources important for pheasants, grey partridge, and sharp-tailed grouse, making their outcomes less stable. The Habitat Legacy Partnership works collaboratively with farmers, ranchers, and conservation groups to improve habitat and hunting opportunity for upland game birds. We meet with private landowners to better understand their farming operations and discuss habitat needs. We work together to identify and map habitat enhancements that can be dovetailed into their long-term farm plans. We also engage the public in a variety of ways to raise the profile of upland game

birds and highlight strategies to benefit pheasants and grey partridge on a working landscape. Public engagement activities include presentations at landowner advisory workshops, stakeholder meetings, novice shoots, public presentations, and distribution of information booklets. In 2019, we continued maintenance on more than 20,000 shrubs, including many berry-bearing species, to provide a reliable food source and create winter cover for upland game birds. Through the Habitat Legacy Partnership project, we are gaining recognition as being a partner for private landowners to collaborate with for habitat development.

Partnerships

Alberta Environment and Parks, Landowners

MULTISAR – Milk River

We focus on multi-species conservation at the landscape level that promotes stewardship through voluntary participation of landholders on both Crown and private lands. The program is a collaborative effort among landholders, ACA, Alberta Environment and Parks, and Prairie Conservation Forum. Our primary goal is to collaboratively develop plans to benefit multiple species; these plans are then implemented through habitat enhancement activities that benefit both the ranch operation and wildlife. We reassessed four ranches previously surveyed in 2013 and 2014, totalling 54,790 acres. We completed 176 range health assessments, 19 tame pasture health assessments, and five riparian assessments. In total, we had 2,605 wildlife observations. We saw a maintenance or increase in range health, even after two years of dry conditions, with the average health scores increasing by as much as 13%. We also saw the number of unhealthy range sites identified during baseline assessments decrease by as much as 14%. In 2019 we completed seven new habitat enhancements on four ranches

and continued work on one other enhancement initiated in previous years. These enhancements include wildlife-friendly fencing, hawk pole installation, portable fencing, upland watering sites, and continued work on our reseeded projects. These improvements not only benefit species at risk habitat but can also provide benefits to upland game birds and ungulates habitat that many hunters and anglers have come to enjoy.

Partnerships

Alberta Environment and Parks, EQUS, Government of Canada, Landholders, Milk River Watershed Council Canada, Prairie Conservation Forum

MULTISAR – South Saskatchewan

Numerous species at risk occur in the southern part of Alberta, often overlapping with agricultural landscapes. Existing management practices on these lands is what has allowed these species to persist, but there are also many opportunities on these lands and adjoining lands to further enhance habitat quality for these species while also benefitting agricultural operations. We work collaboratively with multiple partners to maintain, increase, and improve habitat for species at risk within the Grassland Natural Region of Alberta. In 2019, we collaborated with ranchers and completed four Habitat Conservation Strategies and two Habitat Management Plans (HMP) on 49,514 acres of land. We partnered with six producers on nine enhancements including three movable electric fencing units, bio-control insects for leafy spurge, one wildlife-friendly fencing project, two portable watering units, and two tire troughs at a natural spring, getting cattle out of the flowing water. We identified 173 different species on these six properties, including one species that is federally considered *Endangered*, nine species that are *Threatened*, and eight that are *Species of Special Concern*. In all, we had 4,664 observations of species.

On these same six properties, we also conducted 246 detailed range transects, 308 range health assessments, 10 tame pasture assessments, 65 visual assessments, 21 HMP litter/Robel pole measurements, and nine riparian health assessments. Long-term relationships built on mutual respect and trust between conservation groups and landowners have allowed us to collaborate with more than 90 producers and implement enhancements on close to 167,910 acres since the project started in 2016.

Partnerships

Alberta Beef Producers, Alberta Environment and Parks, Canadian Cattlemen's Association, Canadian Roundtable for Sustainable Beef, Cows and Fish – Alberta Riparian Habitat Management Society, Government of Canada, Landholders, Prairie Conservation Forum

MULTISAR – Taber

Numerous species at risk occur in the southern part of Alberta, often overlapping with agricultural landscapes. Existing management practices on these lands have allowed these species to persist, but there are many opportunities to further enhance habitat quality while also benefiting agricultural operations. This project is a part of the larger South Saskatchewan MULTISAR project, where we work collaboratively with multiple partners to maintain, increase, and improve habitat for species at risk within the Grassland Natural Region of Alberta. In 2019, we continued to collaborate with ranchers in the Municipal District of Taber and completed two projects. This included providing a customized "Use Respect" sign to reduce damage from off-highway vehicles, as well as the purchase of a portable watering unit to draw cattle away from wetland areas. We monitored the use of watering units purchased in a previous year and determined that they are having

the desired outcome of reducing cattle damage in sensitive zones. We continue to foster long-term relationships with the ranching and bordering agricultural communities to benefit wildlife habitat within this municipal district.

Partnerships

Alberta Beef Producers, Alberta Environment and Parks, Canadian Cattlemen's Association, Canadian Roundtable for Sustainable Beef, Cows and Fish – Alberta Riparian Habitat Management Society, Government of Canada, Landholders, Prairie Conservation Forum

MULTISAR – West

While it is true that the majority of Species at Risk (SAR) are found in the Grasslands Natural Region of southern Alberta, the Foothills, Parkland and Rocky Mountain Natural Regions of southwest Alberta boast some of the province's most ecologically diverse landscapes and provide habitat for many SAR including the little brown bat, bull trout, grizzly bear, limber pine, western wood pewee, and westslope cutthroat trout. Best management practices and habitat enhancements occurring on farmlands within this area have enabled many of these species to persist, but there are also many opportunities to further enhance habitat quality for these species while also benefiting agricultural operations.

In 2019, we collaborated with private landowners and leaseholders to complete three Habitat Conservation Strategies on ranches, totalling approximately 14,511 acres. We identified 140 different wildlife species on these three ranches, including 27 that are considered Endangered, Threatened, or Species of Special Concern. In total, we had 2,227 observations of wildlife species and conducted 250 habitat assessments. We partnered with two cattle producers to implement five habitat enhancements including the removal of an old horse corral where,

for over 100 years, livestock had direct access to a creek (a tributary to the Oldman River supporting bull trout and westslope cutthroat trout).

Building off long-term landowner relationships that ACA has established on previous projects has enabled us to collaborate with producers and implement enhancements in 2019. Our goal is to continue building on this mutual trust and respect so we can collaborate on future projects that mutually benefit habitat for wildlife, SAR and ranching operations in southwest Alberta.

Partnerships

Alberta Beef Producers, Alberta Environment and Parks, Altalink, Calgary Stampede OH Ranch, Canadian Cattlemen's Association, Canadian Roundtable for Sustainable Beef, Cows and Fish – Alberta Riparian Habitat Management Society, Government of Canada, Landholders in Southwest Alberta, Prairie Conservation Forum, Shell Canada

Pheasant Release Program

Upland game bird hunting has a long-standing tradition in Alberta. Since the introduction of the Chinese ring-necked pheasant in the early 1900s, wild populations became established in select areas of southern Alberta. To accommodate the high demand for hunting opportunities, the Alberta government started a hatchery in 1945 and created the Provincial Pheasant Release Program, which saw thousands of hatchery-raised pheasants released onto the landscape each fall. In more recent years, the hatchery was privatized due to government cutbacks and was closed in 2013. However, a small group of keen hunters formed Upland Birds of Alberta and agreed to run the release program in 2013. ACA agreed to take over the release program beginning in 2014, with the overall aim to provide greater hunting opportunity for all Albertans. We released 17,080 male pheasants for the fall hunting season

in 2014 and increased this number to 25,000 in 2015. The total increased to 26,000 in both 2016 and 2017, then to 28,173 in 2018, and 28,610 in 2019. We developed a webpage that shows a map and directions to all the sites to make this hunting opportunity more accessible. We operated 42 release sites in the 2019 season. We worked with five Fish & Game clubs in southern Alberta who played a key role with the weekly release of pheasants (6,040 total) at 23 sites from Medicine Hat to Cardston. We also partnered with members of the Peace River Fish & Game club who collectively raised 760 male pheasants for release on the northwest sites. We contracted MacFarlane Pheasants to release birds three times per week at 17 sites and once a week at the Peace River sites (n = 21,810 pheasants). MacFarlane housed these birds in a holding facility near Strathmore. Birds were released at more northern sites beginning September 1 for nine weeks, while releases at southern sites corresponded with the later opening day for pheasants beginning October 15. The program has been well received with positive feedback from hundreds of hunters annually.

Partnerships

Alberta Environment and Parks, Capital Power, Cardston Fish & Game Association, Ducks Unlimited Canada, Fort Macleod Fish & Game Association, 4-H Alberta, Lethbridge Fish & Game Association, MacFarlane Pheasants, Medicine Hat Fish & Game Association, Peace River Fish & Game Association, Picture Butte Fish & Game Association

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 that allow us to monitor population numbers and distribution, and help us guide habitat improvement activities. We surveyed 33 waterbodies and found 90 adults on 15 lakes, with ten or more adults on three of these lakes. We detected one breeding pair on the gravel nesting area we created in 2015, the third consecutive year breeding activity has been recorded on this habitat. We worked with our partners to improve over 5 km of shoreline habitat through the implementation of seasonal grazing and chemical control to reduce the encroachment of vegetation that impairs this habitat for plovers. Since large-scale recovery efforts began in 2002, we have improved over 58 km of shoreline habitat, with the majority of "critical" piping plover habitat being protected or improved through fencing.

Partnerships

Alberta Environment and Parks, Cooperating landowners, Department of National Defence

Pronghorn Fence Crossing Enhancement

Having evolved on the prairies of North America, pronghorn have not developed an instinct to jump vertical obstacles. To help alleviate this problem, Alberta Fish & Game Association (AFGA) initiated a project in 2009, which ACA has provided assistance with. The project works with private landowners to actively convert existing barbed-wire fences to wildlife-friendly fences. We completed four fencing projects on six properties with AFGA in 2019, where we modified 47 km of barbed-wire fence by replacing the bottom strand with double-stranded smooth wire and adjusting its height to 46 cm. Additionally, we removed 2.5 km of page wire from the landscape. The cumulative effort of AFGA and ACA's work completed since 2009 have the potential for landscape connectivity for pronghorn.

Partnerships

Alberta Environment and Parks,
Alberta Fish & Game Association

Pronghorn – Grassland Indicator

The Northern Sagebrush Steppe (NSS) is the northern terminus of sagebrush steppe and grassland habitats and is also the northern range limit for a variety of species. Through multiple anthropogenic pressures, native prairie continues to be converted and fragmented across the region and as a result, increased stress on wildlife populations and overall ecosystem function occurs. For wildlife species in this system, maintaining connectivity between seasonal ranges and core habitats is vital in mitigating environmental and anthropogenic pressures. Because pronghorn are well-distributed across the landscape, move and operate at large landscape scales, are sensitive to both environmental and anthropogenic pressures, and are highly regarded in public perception, we hypothesize that they can serve as an umbrella for other sagebrush steppe and grassland species at the periphery of their range. We published three papers, have an additional two papers under consideration, and have drafted another paper that will be submitted in late winter/early spring 2020. We continue to work on the assessment of pronghorn as an indicator species for a suite of grassland species. As results from our work become available, information will be disseminated to stakeholders, wildlife managers, and conservation groups to support efforts to restore and conserve movement patterns and grassland habitats.

Partnerships

Alberta Environment and Parks,
Center for Large Landscape
Conservation, Miistakis Institute,
Montana Department of
Transportation, National Fish and
Wildlife Foundation, National
Wildlife Federation, Sagebrush

Science Initiative (a collaboration between the US Fish and Wildlife Services and Western Association of Fish and Wildlife Agencies), Sage Grouse Initiative, The Nature Conservancy, University of British Columbia, University of Montana

Pronghorn Movement and Enhancement (Fence Trials)

Having evolved on the wide-open prairies of North America, pronghorn did not develop an instinct to jump vertical obstacles. The proliferation of fencing that followed cattle ranching since the 1880s now poses a serious barrier to pronghorn movement. Pronghorn may cross under fence lines in some locations, but it slows down their movement, making them susceptible to predators and in some cases strips hair off their back, causing lacerations

and making them vulnerable to infection and frostbite. Between 2018 to the present, we evaluated fence modifications proposed for ungulates to make crossing over a fence easier to assess the modifications' potential impact on pronghorn and deer fence-crossing behaviours. We have processed all images from the cameras up until February 2020. In addition, between 2016–2018 we determined that sage-grouse reflectors and white polyvinyl chloride (PVC) pipe on the top wire do not act as visual barriers and therefore do not impact the movement across fences by pronghorn, mule deer, or white-tailed deer. Our results from this study will be published in the journal, *Wildlife Society Bulletin*. As results become available, we will disseminate our conclusions to stakeholders, wildlife managers, and conservation groups.



Program: Species Habitat Assessments and Ranching Partnerships
Photo: ACA, Sue Peters

Project: Pheasant Release Program
Photo: ACA, Mike Uchikura



Partnerships

Alberta Environment and Parks, Alberta Fish & Game Association, Bushnell, Cabelas Canada, Canadian Forces Base Suffield, Montana Department of Transportation, National Fish and Wildlife Foundation, National Wildlife Federation, Safari Club International – Northern Alberta Chapter (Hunting Heritage Fund), TD Friends of the Environment, The Nature Conservancy, University of Montana, World Wildlife Fund

Pronghorn Road Crossing Enhancement (Pronghorn Xing)

Among the diversity of prairie wildlife, the pronghorn is the most specialized and representative large mammal. Within the Northern Sagebrush Steppe of Alberta, Saskatchewan, and Montana, 55% of collared pronghorn made seasonal migrations from summer ranges to winter ranges. Along the

migration pathway, pronghorn must navigate their way across primary and secondary highways that are often fenced on both sides, resulting in pinch points where animals pile up. These pinch points along the migration pathway are a formidable challenge for migrating pronghorn. To address this migration challenge, a citizen science project called Pronghorn Xing was initiated in the spring of 2017. Pronghorn Xing is a citizen science program developed to ground-truth seasonal movement pinch-points identified by connectivity modelling across highways in the Northern Sagebrush Steppe and increase public engagement in pronghorn science and conservation. Information on wildlife sightings collected by the public will enable us to better understand where pronghorn and other wildlife are commonly crossing, involved in collisions, or staging next to the highway. To date, 132 individuals have signed up for *Pronghorn Xing* and reported at least

one observation via the smart phone app. As expected, most observations of pronghorn were beside the road, as animals pile up in key locations and are selective as to when they cross the road. Ultimately, we believe the program will create support in Alberta for the construction of an overpass(es) across Highway 1 and the identification of crossing sites along secondary highways (e.g., Highway 41), where fence modifications can be installed to facilitate easier movement by pronghorn and other ungulates.

Partnerships

Alberta Environment and Parks, Alberta Transportation, Miistakis Institute, National Wildlife Federation, National Fish and Wildlife Foundation, Nature Conservancy of Canada, Saskatchewan Ministry of Environment and Infrastructure, Saskatchewan Government Insurance

Ridge Reservoir Habitat Project

The Milk River Ridge Reservoir Water Quality Stewardship Initiative is a multi-year collaborative initiative in the County of Warner. The stewardship initiative is overseen and managed by a working group consisting of Alberta Environment and Parks, ACA, and the County of Warner. The initiative consists of nine segments around the Waterton–St. Mary headworks inlet canal and along the shorelands of the Milk River Ridge Reservoir. These segments are predominantly focused on provincial Crown land—known as the “provincial land corridor”—that surrounds the reservoir. The overall goal of this initiative is the improvement of water quality through the restoration of the vegetation community along shorelands and riparian areas. This restoration translates into the creation of vital wildlife habitat that also filters nutrients and reduces erosion. Approximately \$2.2 million has been raised and invested to date. Thus far we’ve installed 45 km of fencing to protect shoreland and riparian habitat. Twenty-five offsite water units have been installed to move cattle away from fragile riparian zones. We have planted approximately 33,000 shrubs and seeded 386 acres back into perennial wildlife habitat. A large 6.18-acre wetland was developed on the west end of the reservoir, acting as a huge filter for nutrients as well as a magnet for wildlife. Approximately 22 acres was hayed on the west end of the reservoir in 2019 to reduce litter load and decrease fire hazard.

Partnerships

Alberta Environment and Parks, Alberta Fish & Game Association Zone 1, County of Warner, David Bissett, Irrican Power, Landowners, Lethbridge Fish & Game Association, Magrath Rod and Gun Club, New Dayton Rod and Gun

Club, Pheasants Forever Calgary, Raymond Irrigation District, Southern Alberta Bowhunters Association, St. Mary River Irrigation District, Taber Irrigation District

Species Habitat Assessments and Ranching Partnerships

The Species Habitat Assessments and Ranching Partnerships (SHARP) project is a voluntary collaborative project designed to aid in improving the quality and quantity of wildlife habitat available on the landscape. ACA’s objective here is to make wildlife conservation straightforward and cost-effective for producers through education and cost-sharing agreements for habitat enhancements. We develop habitat strategies after first completing in-depth range and riparian health assessments. Through these assessments, we evaluate range and riparian health, and look for areas that could be improved. We balance these with the needs of target species and the long-term objectives of the landholder and come up with mutually agreed-upon solutions that benefit both wildlife and the producer’s operations. As enhancements are made, we develop a monitoring plan to assess their progress and effectiveness. Our first two ranches (total 15,700 acres) were located in the North Saskatchewan Watershed and we look forward to expanding there and into the Peace River Watershed in 2020. Long-term relationships built on mutual respect and trust between conservation groups and landowners are the key to effective on-the-ground conservation efforts being undertaken through initiatives like the SHARP project.

Partnerships

Alberta Environment and Parks, ALUS Canada, Canadian Agricultural Partnerships, Canadian Cattlemen’s Association, Ducks Unlimited Canada, Landholders

Provincial Snake Hibernaculum Survey

In collaboration with Alberta Environment and Parks, ACA completed the final year of a two-year provincial snake hibernaculum (den) survey initiated in 2018/19. We assessed snake activity at known red-sided garter snake, plains garter snake, and wandering garter snake hibernacula using simple visual encounters surveys. We focussed our work on garter snake hibernaculum records held in the Alberta Fisheries and Wildlife Information Systems database. All crews followed a set of survey instructions to maximize their chance of finding snakes and hibernacula. We conducted surveys during emergence from hibernacula in the spring, prior to their dispersal to summer habitat, and/or during the autumn, prior to their ingress into hibernacula for the winter. In total, we assessed 33 hibernaculum records for potential snake activity, of which 11 (33%) were verified to be active based on the observation of at least one snake. We suspected that two hibernacula (6%) were inactive as a result of habitat loss or other disturbance factors. While we did not observe snake activity at the remaining 20 (61%) sites, there was nothing to indicate that snakes could not still occupy the site, therefore these sites were recorded as unknown status. This project has given the opportunity to interact with landowners and learn the location of new hibernacula as well as the history of previously known ones. In turn, we have been able to provide landowners with additional information on snakes and their habitat needs, with the goal of conserving snakes. The next step is to write a final report on what we have learned and make the results available to the conservation community.

Partnerships

Alberta Environment and Parks, Landowners

Project: MULTISAR – West
Photo: ACA, Amanda MacDonald



Alberta Wildlife Status Reports

ACA and Alberta Environment and Parks (AEP) have produced 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 and recovery actions 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 it is stable/increasing/

declining, factors preventing the species from thriving in Alberta, and what work has been done or is ongoing to manage the species in Alberta. A committee of Alberta-based scientists compares the information in each status report to internationally set thresholds (e.g., for population size) 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,

the committee provides its recommendation on a species' status to the Minister of AEP. The ultimate decision on status designation (e.g., *Endangered*, *Threatened*) is made by the Minister. In 2019/20, we continued our work on three reports: McCown's longspur, western wood-pewee, and an update of Canada warbler. ACA has played a key role in assessing the status of Alberta's species at risk through our involvement with the Alberta Wildlife Status Report series. The 2019/20 fiscal year was the final year that ACA jointly produced the Alberta Wildlife Status Report series with AEP.

Partnerships

Alberta Environment and Parks

Taber Pheasant Festival

Recognizing the potential economic benefits and the importance of pheasant hunting as part of Alberta's hunting heritage, ACA initiated the Taber Pheasant Festival in 2011. This festival sets up hunting opportunities by releasing 5,100 male pheasants on forty pre-selected sites in the Municipal District of Taber. Every year, as part of the Pheasant Festival, Alberta Hunter Education Instructors' Association (AHEIA) hosts a novice hunting weekend where new hunters of all ages get to try pheasant hunting for the first time. In 2019, 81 hunters attended these novice shoots. The festival helps to make a connection with local landholders to discuss potential habitat projects to enhance wildlife and pheasant habitat. This unique festival offers the opportunity to showcase hunting from a field-to-plate perspective for the non-hunting population. We provided educational background on pheasants and hunting and demonstrated how to clean and use as much of the pheasant meat as possible with butchering demonstrations and how to transport meat legally. The game to gourmet culinary event showcased what you can do with your pheasant meat after it is harvested. There is no registration fee to hunt in the festival; however, the area sees economic benefits as the hunters spend money on travel, accommodation, food, hunting gear, and associated costs. We host a celebration banquet to thank the landowners who allow us to hunt on their land and to raise funds for next year's festival. We also showcase a scotch and wing night in the local community. There was a strong showing of 803 hunters participating in the ninth year of the festival with some travelling from across western Canada and the United States.

Partnerships

Alberta Fish & Game Association, Alberta Hunter Education Instructors' Association, A1 Fabrication, Beretta/Benelli/Tikka/Sako, Cabela's, Can West Legacy Inc., Cycle Works, Foster Park Brokers, Friends of the Taber Pheasant Festival, Heritage Inn Taber/Canadian Destinations Group, Landowners, Lethbridge College students, MacFarlane Pheasants Inc., Municipal District of Taber, Taber & District Chamber of Commerce, Taber Economic Development, Taber Irrigation District, Thiessen, Town of Taber, Taber Organizing committee, Vortex Optics

Upland Gamebird Studies – Upland Gamebird Productivity Surveys

We worked with volunteers to conduct annual upland gamebird productivity surveys in some of southern Alberta's best habitat. We encountered a total of 52 pheasants, and 56 grey partridge within 16.5 hours of survey time covering 40.6 km. This translates to 1.28 pheasants and 1.38 partridge for each kilometre travelled. Compared to previous survey years, this indicates a well-below-average year for both pheasants and grey partridge. The information acquired from these surveys helps us understand population trends, brood success, as well as heighten the excitement for the upcoming hunting season as we release survey results on our website and various social media venues each fall.

Partnerships

Landowners, Pheasants Forever – Calgary Chapter, Volunteers – Dog Handlers, Alberta Environment and Parks

Wolverine Reporting

We worked with Alberta Trappers' Association (ATA) to identify where wolverines occur in the province and to determine the major factors

associated with their distribution. Trapper local ecological knowledge demonstrated that wolverine sign is more likely to be found in trapping areas with less human disturbance. To investigate fine scale habitat use, movement, and denning behaviour in a landscape dominated by wildfires, we deployed radio collars on animals in north-central Alberta. A total of 10 wolverines were captured and fitted with collars over the course of the study. Two of the collared females had young during the study, providing us with valuable information about where wolverines den. Seven of the eight dens investigated were under a partially lifted root ball created by a leaning or fallen spruce tree. These were found in black spruce stands characterized by hummocky, wet, and mossy terrain subject to windthrow. Although field data collection has ended, we continue to work with the data to learn as much as we can about this data deficient species.

Partnerships

Alberta Environment and Parks, Alberta-Pacific Forest Industries Inc., Alberta Trappers' Association, Animal Damage Control – A Division of Bushman Inc., Daishowa-Marubeni International Ltd., Crowsnest Conservation Society, McGill University, Roadrunner Leasing and Sales Ltd., Shell Fueling Change, TD Friends of the Environment, University of Alberta



Fisheries Program

Fishing is one of Alberta's favourite pastimes, so ACA has an entire team of biologists dedicated to keeping its lakes, rivers, and their fish populations healthy. Projects we engage in reflect our emphasis on the enhancement and development of recreational fishing opportunities across the province, and native fish conservation.

Along with partners, we stocked 61 ponds with three trout species, aerated 19 lakes to improve water quality and ensure year-round survival of stocked fish, and worked at restoring sport fisheries in some of Alberta's lakes that have become prone to algal blooms. This year, we added one new waterbody to expand our aeration project and screened five as potential candidates for future aeration. Our stocking and lake aeration projects provide Albertans with recreational angling in areas of the province where such fishing opportunities would not otherwise exist.

Evaluation and inventory projects generated information required for provincial fish conservation and species recovery initiatives. Projects in the McLeod, Ram, Bow, Oldman, Livingston, Narraway and Muskeg river systems variously determined the distribution, abundance, spawning, habitat,

and the potential of fish passage barriers to serve as conservation agents for native trout species. We conducted angler surveys on three rivers and four lakes, generating information that feed directly into AEP fisheries management plans. Angler surveys on the Clearwater and Berland rivers are of special interest, as they are linked directly to the implementation of the provincial Native Trout Recovery Program.

Overall, the success of our Fisheries program activities in 2019/20 involved the support of 36 partners consisting of provincial and federal governments, industry, watershed groups, non-governmental organizations, counties/municipalities, and other interested groups.

2019/20 Overview

- 103,255 twenty-cm long trout (95,995 rainbow, 6,760 brook and 2,500 brown trout) were stocked into 61 ponds in regions of the province where trout angling opportunities are limited.
- High demand for fish in our stocked ponds; 50% of harvest in stocked ponds occurred within one month of stocking.
- One fish pond dredged to improve water quality.
- 19 aerated lakes successfully overwintered stocked trout with no reported mortalities.
- Added one new lake (spring-fall aeration) to expand aeration project.
- 5 lakes screened as potential candidates for future aeration.
- 4 new financial partnerships established in support of aeration project.
- Angler surveys conducted on three river systems and four lakes.
- 192 anglers were counted during 49 flights on Berland and Clearwater rivers.
- Angling pressure low on the Berland River and moderate on the Clearwater River.
- 24 rivers/creeks, 25 lakes, and 11 ponds were surveyed, generating information on fish population status, distribution, fishing effort, spawning and rearing habitat, and water quality.
- Over 4,000 km of river were surveyed, including 280 km of electrofishing and 18 km of redd survey; logged 138,662 seconds of electrofishing.
- Very high brown trout spawning activity on North Raven River; counted over 1,600 redds in 14 km of river.
- Developed a classification and scoring system to rank fish barriers for their potential to protect westslope cutthroat trout populations from invasive species.
- Developed and successfully deployed an innovative solar-powered underwater video recording system to monitor bull trout spawning runs.

Fish Stocking Project

The Fish Stocking Project provides anglers with increased opportunities to catch and harvest rainbow trout, brown trout, and brook trout in regions of Alberta where angling opportunities are limited. Recipient waterbodies are prone to winterkill and require annual stocking of fish to maintain angling opportunities. We stocked 61 waterbodies. 61 waterbodies with 93,995 rainbow trout, 2,500 brown trout, and 6,760 brook trout for a total of 103,255 trout. Four ponds normally on our stocking list were not stocked this year: 1) Hermitage Pond was being assessed by Alberta Environment and Parks for whirling disease risk; 2) Fort Lions Community Pond at West River's Edge still had yellow perch in it from a previous stocking; 3) Kinsmen Lake was dredged in 2019 to improve water quality; and 4) the water quality at Pro Alta Pond was deemed unsuitable for trout. We installed signage at seven waterbodies.

Partnerships

Alberta Environment and Parks, Aquality Environmental, Canadian Tire, City of Medicine Hat, Complete Crossings, County of Saddle Hills, Nutrien Agrium Inc., SysGen Solutions Group, Town of Cochrane

Lake Aeration

We use aeration as a fisheries management technique to provide Albertans with diverse recreational angling opportunities in areas of the province where such opportunities would be otherwise limited. Aerated waterbodies are typically shallow, eutrophic, experience prolonged ice cover, and are prone to summer and winter fish kills. Using aeration, we maintain dissolved oxygen levels above 3 mg/L to promote year-round survival and availability of larger fish to anglers. In 2019/20, we aerated 19 waterbodies across the province, all of which successfully overwintered fish without any reported fish kills. We established new financial partnerships with Mercer Peace River

and Municipal District of Clear Hills for Sulphur Lake, and Saddle Hills County and Weyehauser Grand Prairie Lumber for Spring Lake (NW), and continue to maintain financial and in-kind partnerships for existing aeration projects.

Partnerships

Alberta Environment and Parks, Edmonton Trout Club, Mercer Peace River, Mountain View County, Municipal District of Clear Hills, Municipal District of Greenview No. 16, Saddle Hills County, Thorhild County, Trout Unlimited Canada – Oldman River Chapter, West Fraser – Edson Forest Products, Weyerhaeuser Grand Prairie Lumber

Angler Survey - NW

We conducted camera-based angler surveys to estimate number of parties and trip length at Round, Peerless, Vandersteen, and Graham lakes during summer of 2019. We set up a combination of two Reconyx PC900 HyperFire Professional IR trail cameras at identified access points for each lake to capture boat launch events. Cameras at the Peerless Lake campground boat launch and Round Lake were active from May 15 to October 31, 2019. Cameras were installed at Vandersteen Lake on July 4 after an off-highway vehicle fire ban was lifted, and remained until October 31, 2019. Initial cameras installed at the Graham Lake campground boat launch were stolen and replaced in July 2019. Placement of new cameras at Graham Lake to prevent further theft resulted in few, unreliable capture events. At Peerless Lake campground we observed 161 angling parties who fished for an average of 5.22 hours resulting in an estimated 842 party hours. At Round Lake we observed 132 parties who fished for an average of 3.22 hours resulting in an estimated 422 party hours. At Vandersteen Lake we observed 5 parties who all spent between one and four nights at the lake.

Partnerships

Alberta Environment and Parks

Angler Survey in the Berland River Watershed

The Native Trout Recovery Program (NTRP) is a government-based initiative used to promote the recovery of declining native trout and whitefish populations along the eastern slopes of North Central Alberta. The Berland River watershed is a focal system in the NTRP, as recent fisheries sustainability index (FSI) analysis indicate that native trout and whitefish populations in the system are at a high- to very high-risk state compared to provincial standards. Given the Berland River is open to public recreational fishing, angling pressure constitutes a potential threat that could impact fish populations, yet very little recent data exists on it. We conducted an aerial type angler survey to estimate angling effort on the Berland River. Results from the study will assist in effective management and contribute to species recovery as part of the NTRP. Between June 1 and September 15, 2019, we completed 23 instantaneous aerial (rotary wing) angler counts on the Berland River from the mouth, upstream to the convergence of the North Berland and South Berland rivers. We counted 28 anglers over the study period, averaging 1.2 ± 1.78 (\pm SD) anglers per flight; we did not observe anglers during 14 (61%) of the flights. Using bootstrapping methods, we estimated a total angling effort of 1,595 h (77–2,541, 95% CI) on the Berland River, and the majority of the effort occurred on weekends in August and September. It is likely that unseasonably high stream flows affected angler counts in the Berland River in 2019. Therefore, angling effort estimates in this report may not have adequately captured the level of effort in a typical year.

Partnerships

Alberta Environment and Parks

Central Region Angler Survey

The Clearwater River, Elk Creek (a main tributary to the Clearwater River), and the North Raven River are popular fishing destinations in west central Alberta. Alberta Environment and Parks (AEP) identifies fishing effort and fishing mortality as a key threat to fish populations, yet despite their popularity with anglers, the current level of angler use of these streams is unknown. From June 1 to September 30, 2019, we conducted an aerial angler survey to estimate fishing effort (hours) on the Clearwater River, Elk Creek, and the North Raven River, providing information that will aid AEP in managing these fisheries. We completed 26 instantaneous counts and observed 94 anglers on the Clearwater River, 14 on Elk Creek, and 56 on the North Raven River. Anglers fished for an estimated 7,214 hours on the Clearwater River, 1,162 hours on Elk Creek, and 4,283 hours on the North Raven River. Angling activity on the Clearwater River was more frequent in the second half of our survey (August and September), with only 6 of the 94 total anglers counted in June and July. The low use of the Clearwater River in June and July is very likely due to prolonged high

water and spring flood conditions on the Clearwater River in the first half of the survey.

Partnerships

Alberta Environment and Parks

East Slopes Fisheries Inventory

Alberta Environment and Parks's Fish Sustainability Index is a standardized process of assessment that provides a landscape-level overview of fish sustainability within the province and enables broad-scale evaluation of management actions and land-use planning. Priority species for assessment in our sample area include bull trout and mountain whitefish. Bull trout is a native sport species classed as *Threatened* in Alberta and is particularly sensitive to habitat change. In the summer of 2019, we used backpack and tote-barge electrofishing gear to sample 40 sites randomly distributed throughout the James River watershed, a tributary to the Red Deer River. In addition, we sampled 12 sites in the Yara Creek watershed and five sites in Wildhorse Creek. We captured a total of 996 fish in the study area, with brook trout being the most widely distributed and most abundant species captured. Bull trout were detected

in Wildhorse Creek, the Yara Creek watershed, and the Upper James River watershed. Mountain whitefish were only captured in the Upper James River watershed. The highest catch rates of brook trout and bull trout occurred in Wildhorse Creek. Our study provides land-use managers with information on fish species distribution and abundance that is necessary to minimize land-use impacts to fish, evaluate bull trout status, and otherwise balance the diverse values of the Red Deer River drainages.

Partnerships

Alberta Environment and Parks, Sundre Forest Products – A Division of West Fraser Mills Ltd.

Establishing Walleye Fisheries

During the 2019/20 fiscal year, ACA staff evaluated the value of an ongoing project at Fox Creek and explored the feasibility of a future opportunity to enhance the connectivity between Haig and Sawn lakes. At Fox Creek, our observations of walleye spawning above removed dam locations, in conjunction with historical reports, signify the continued importance of Fox Creek for Iosegun Lake walleye recruitment. As such, we



Project: Lake Aeration
Photo: ACA, Brad Hurrett

recommend that ACA continue with the annual contract for spring beaver dam removal within 2.5 km of Iosegun Lake. For connectivity of Haig and Sawn lakes, we do not recommend removal of beaver dams as an effective method to increase the walleye population density in Sawn Lake because logistical needs and cost to maintain a 21.5 km stretch of barrier-free watercourse are impractical.

Partnerships

Alberta Environment and Parks

Fisheries Barriers in Native Trout Drainages

To effectively safeguard against extirpation of native fish species in Alberta, it is essential to protect native trout populations from hybridization and competition with invasive trout species. In Alberta, several sub-populations of native trout remain protected from invasive species primarily because of waterfalls that impede upstream fish movement. Maintaining and isolating these populations from invasion is critical to the protection and persistence of native trout. Cataloguing waterfalls is a necessary first step in determining where invasion can be managed, allowing for prioritization of population recovery and development of implementation strategies on a stream by stream basis. To determine where native trout refuge might still exist, we gathered fish habitat and community data for the Narraway River watershed and identified 110 potential fish barrier locations. We completed field assessments at 75 of the 110 potential barriers during high flow conditions (spring spawning conditions) but were unable to complete low flow assessments due to unseasonably high flow conditions. Low flow assessments will be completed in fall of 2020.

Partnerships

Alberta Environment and Parks,
Fisheries and Oceans Canada

Fish Stocking Pond Rehabilitation

Fishing pressure at ACA stocked ponds can exceed 2,000 h/ha in the summer months, indicating these ponds can be popular among anglers. However, our recent data suggests that some ponds, including Rainbow Park Pond, may not be capable of supporting trout survival beyond mid-summer due to low dissolved oxygen (DO). Rainbow Park Pond is hypereutrophic (TP $101 \pm 37 \mu\text{g/L}$) and a good candidate for alum treatment owing to its high buffering capacity (alkalinity $132 \pm 4 \text{ mg/L}$) and ability to withstand large fluctuations in pH. Alum treatment will reduce bioavailable phosphorus, thereby improving water quality and increasing DO concentration. Through alum jar tests, we determined that a total of 25 mL (59.5g Al/liter solution) of alum per liter of pond water, applied over two treatments, maintained favourable water quality for fish and invertebrate survival (pH of 7.5, alkalinity of 72 mg/L) while significantly reducing total phosphorus (85% reduction). We will use this information to develop an alum treatment plan for Rainbow Park Pond.

Partnerships

Alberta Environment and Parks

Fish Stocking – New Lakes

Stocked trout fisheries are popular in Alberta, accounting for nearly a quarter of the total number of days reported fishing at all waters in 2005. Given the popularity of trout-stocked fisheries in Alberta, this project seeks to expand the number of stocked ponds through identification and screening of ponds with potential to support a stocked trout fishery. We evaluated nine new ponds in 2019, with three being suitable for further investigation. Chestermere Pond, a candidate pond from 2017, remains promising and is undergoing further evaluation prior to being stocked.

Partnerships

Alberta Environment and Parks,
Alberta Fish & Game Association,
Alberta Transportation, County of Grande Prairie, Saddle Hills County, Taber Irrigation District, Town of Taber

Fish Stocking Evaluation

In 2019, ACA stocked 103,255 catchable trout (rainbow, brown, and brook trout) into 61 ponds. One pond was experimentally stocked with 1,200 yellow perch in 2018. Using trail cameras to collect angler use data allowed us to estimate angler effort at two trout ponds and at a pond stocked experimentally with yellow perch. Angler effort ranged from 21 hours/ha at Bow City East Pond to 960 hours/ha at Taber Pond. Angler effort at Fort Lions Community Fish Pond, a yellow perch pond, was 63 hours/ha. Our results suggest that angler use was highly variable and despite the introduction of a new species, can remain low. Our results continue allowing us to better manage our stocking practices and evaluate site management options to serve Alberta anglers better.

Partnerships

Alberta Environment and Parks

Fish Stocking Expansion – New Species Evaluation

Annually, the ACA stocks waterbodies with catchable rainbow trout. In addition to rainbow trout stockings, we recently diversified angling opportunities at selected ponds by stocking brown and brook trout, creating multi-species fisheries. This project evaluated the contribution of brook trout to our stocked pond fisheries by the relative return to creel of brook and rainbow trout in selected stocked ponds. Spring gill netting results indicate stocking created a population of both brook and rainbow trout for anglers to catch. Of the 2,676 trout we tagged and released, anglers reported catching a total of 161 (6%)

consisting of 108 rainbow trout (67%) and 53 brook trout (33%). Of these, 54 rainbow trout (50%) and 15 brook trout (28%) were reported as harvested. Approximately half of all fish captures occurred within the first month after stocking, indicating rapid utilization of trout from our ponds.

Partnerships

Alberta Environment and Parks,
Cabela's Canada Inc.

Hasse Lake Fisheries Restoration

In recent decades, changes in watershed land use have resulted in increased nutrient runoff, particularly phosphorus, into Hasse Lake that has led to increased intensity and frequency of algal blooms, especially blue-green algal blooms; poor oxygen conditions; and fish kills. Recurring summer and winter fish kills have decimated what used to be a popular stocked sport fishery; there has been no recreational fishery on the lake since 2012. In the summer of 2015, ACA initiated a project with the primary focus of working with local community groups and landowners in the watershed to reduce nutrient loading to the lake, improve water quality, and restore the recreational fishery. Each year we monitored summer and winter water quality conditions; however, we did not conduct surveys during the summer of 2019 due to the departure from ACA of key project staff. In 2019, we also investigated the potential use of alum treatment and lake aeration as alternative approaches to improve water quality and support a year-round population of stocked fish. In the winter, much of the water column was anoxic under the ice by mid-February. Based on sediment phosphorus release rates, estimated cost for alum treatment of Hasse Lake was over US\$660,000 (equivalent to over one million Canadian dollars); at this price, alum treatment is not an economically viable option for ACA. Following

positive discussions with Parkland County and AEP, we plan to restock Hasse Lake with trout by fall 2020; we will extend electrical powerline and install aeration infrastructure on the lake by fall 2020 to enable use of winter aeration to support the stocked trout.

Partnerships

Alberta Environment and Parks,
North Saskatchewan Watershed Alliance, Northern Light Fly Fishers, Parkland County Alternative Land Use Services Program

New Lake Aeration Development

ACA's Lake aeration project promotes angling opportunities in stocked waterbodies across Alberta where such fishing opportunities

are otherwise limited. Aerated waterbodies are prone to fish kills during winter and summer months due to low dissolved oxygen (DO) but with aeration, DO levels are maintained above 3 mg/L to promote year-round survival of stocked trout. Given the substantial cost associated with such operations, it is essential that we carefully screen candidate waterbodies to ensure that we address top AEP provincial-level priorities. Each year we receive many requests from stakeholder groups to aerate stocked waterbodies throughout the province. After a preliminary review of the requests, we develop a short-list of lakes for further screening as potential candidates for future aeration. Currently we are screening five candidate waterbodies by collecting



Project: Fish Stocking Expansion – New Species Evaluation
Photo: ACA, Kevin Fitzsimmons

DO and temperature data during winter months. This is the first year collecting DO and temperature data at Peanut and Sauer lakes, second year at Little Bear Lake, and Bullshead Reservoir, and third year at Kerbes Pond; AEP assisted with data collection at Peanut and Little Bear lakes. In 2019/20, we began aerating Kerbes Pond during the summer and will continue our screening assessment to determine if winter aeration required. Based on our screening results, candidate waterbodies may be selected for development to expand ACA's aeration project.

Partnerships

Alberta Environment and Parks

North Raven River Beaver Management Project

The North Raven River (NRR) brown trout (*Salmo trutta*) fishery is widely regarded one of Alberta's best. Management of beaver (*Castor canadensis*) activity in the NRR began in 1973 and is considered necessary to maintain the trout fishery. Management includes removal of beaver, beaver dams, and feed caches. It has been over

two decades since the observations and assumptions underpinning beaver management along the NRR have been critically assessed. For our assessment, we reviewed recent studies of beaver and fish interactions and completed a redd (i.e., the gravel nest created by spawning trout) survey to document spawning activity in the NRR upstream of Highway 761. Our literature review indicated that low-gradient, groundwater streams like the NRR are particularly susceptible to the negative impacts of beaver activity on trout productivity. We counted over 1,600 trout redds during our survey; redds occurred in such high densities in some reaches that it became impossible to distinguish between individual redds. Trout spawned throughout much of the survey reach, including areas frequented by beaver. Current beaver management practices appeared to allow for unimpeded trout movement throughout most of the survey reach. Our assessment is scheduled to continue in 2020/21.

Partnerships

Alberta Environment and Parks

Using eDNA to document the distribution of Prussian carp in Alberta

Prussian carp is a recent invasive fish species to Alberta, now believed to be widely distributed in the Bow, Red Deer, and South Saskatchewan River drainages. Initial surveys suggest their population and range is expanding exponentially across the province; however, the degree to which the range of Prussian carp has expanded remains unclear. In 2018, ACA used environmental DNA (eDNA) to determine the distribution of Prussian carp in Alberta. However, lab results from 15 of the 83 sites we sampled were inconclusive either due to sample contamination or inhibition. In the summer of 2019, we revisited these 15 sites to collect a second eDNA sample for lab analysis. Of the 15 sites retested for Prussian carp DNA signal, three sites tested positive while 11 tested negative; samples from one site in the Beaver River remained inhibited as in 2018. Positive signals for Prussian carp were detected in the South Saskatchewan, Red Deer, and Bow river systems but not from the North Saskatchewan River. These results align with currently known spatial



distributions of Prussian carp in the province. Overall, our data indicates presence of Prussian carp in the Bow, Red Deer, Oldman, and South Saskatchewan River drainages but not in the Athabasca, Battle, Beaver, McLeod, Milk, North Saskatchewan, Peace, Pembina, or Smoky Rivers.

Partnerships

University of Alberta – Dr. Mark Poesch, Fisheries and Aquatic Conservation Lab

Ram River Bull Trout Assessment

Bull trout is a native sport species classed as *Threatened* in Alberta and is particularly sensitive to habitat change. A government-led initiative, the North-Central Native Trout (NCNT) program was implemented in 2017 to recover native trout and whitefish in the central and northern east slopes of Alberta. The program involves implementation of recovery actions (e.g., trail remediation/closure, implementing industry best-management practices, suppression of non-native species) in an adaptive management framework. Success of this program will be measured using Alberta Environment and Park's Fish Sustainability Index (FSI). The FSI is a standardized process of assessment that provides a landscape-level overview of fish sustainability within the province and enables broad-scale evaluation of management actions and land-use planning. In the summer and fall of 2019, we used a combination of backpack electrofishing, redd surveys, and underwater video recording to assess the bull trout population in the lower Ram River watershed. Our sample frame for backpack electrofishing included 12 randomly selected sites, where we detected fish at five of the 12 sites, catching eight different species. We captured 25 bull trout electrofishing, 20 of which were captured at a single site on an unnamed tributary to the Ram River. We counted 76 bull trout redds on a survey of a 3.5 km reach of Fall Creek. We also tested a solar-powered underwater video recording system for monitoring the bull

trout spawning run in Fall Creek, obtaining over 36 days of footage during the bull trout spawning migration. Our study provides land-use managers with information on fish species distribution and abundance necessary to minimize land-use impacts on fish, evaluate bull trout status, and otherwise balance the diverse values of the Ram River watershed.

Partnerships

Alberta Environment and Parks, Tom Wiseman, Sundre Forest Products – A Division of West Fraser Mills Ltd.

Westslope Cutthroat Trout Population Monitoring in the Upper Oldman River Core Area

In 2018, the Livingstone-Porcupine Hills Land Footprint Plan was introduced by the Government of Alberta to reduce cumulative impacts on the landscape by changing land-use patterns to allow existing land footprints to recover. The resulting Livingstone Public Land Use Zone (PLUZ) encompasses the largest remaining westslope cutthroat trout (WSCT) core area in Alberta. Current land-use restrictions and habitat recovery activities in these critical habitats are anticipated to benefit fish populations and aid in species recovery. ACA is conducting a multi-year WSCT population monitoring study in four watersheds at the hydrologic unit code (HUC) 10 scale in the upper Oldman River (UOM) watershed. The objective of the study is to collect fish data at index sites for five years to determine natural WSCT population variations within the PLUZ. These data will be used to detect population response to the new PLUZ restrictions. In 2019, study year two of five, we completed fish surveys at 39 electrofishing index sites in streams of the UOM core area. Overall, WSCT catch rates declined in 2019 relative to 2018. Westslope cutthroat trout catches were highest in the UOM watershed, followed by the Livingstone watershed and lowest in the Hidden

Creek and Dutch Creek watersheds. We will continue monitoring these four watersheds to examine the ongoing effects of the recent changes to land use in the Livingstone PLUZ.

Partnerships

Alberta Environment and Parks, Fisheries and Oceans Canada

Westslope Cutthroat Trout Range Expansion Feasibility.

Westslope cutthroat trout (WSCT) currently occupy only 5% of their historic range in Alberta. Recovery of the species requires expanding their distribution and protection from invasive species, which are considered their greatest threat. ACA has been investigating methods for assessing the feasibility of WSCT range expansions into streams and lakes above waterfalls that prevent upstream fish migration. We have adapted components of a range expansion framework originally developed by bull trout researchers, to score and rank habitats above barriers based on WSCT life history requirements. We will determine range expansion feasibility for each upstream habitat based on the sum of scores that rate habitat quality, habitat quantity, habitat complexity, threats to existing WSCT populations, and future invasion risk. Before these habitats can be comprehensively ranked, thorough cataloguing of existing and new information is required to address the components that make up the range expansion scoring framework. Work is ongoing to compile the information required to populate these components and comprehensively rank available habitats for future WSCT range expansions. Final lists of both stream and lake habitats will be produced and ranked by range expansion suitability score, providing a valuable resource to third party agencies involved in WSCT reintroduction projects.

Partnerships

Alberta Environment and Parks, Fisheries and Oceans Canada



MacConnachie Conservation Site

In memory of
**Peter Thomas Fraser
MacConnachie**

AUGUST 1962 - OCTOBER 13, 2010

Peter MacConnachie took a genuine interest in the environment and forged strong relationships with those who had the pleasure of knowing him. His spirit was that of a pioneer, inspiring generations, including his wife Celeste and both children.

MacConnachie was a dedicated conservationist and a passionate advocate for the environment. He was a member of the MacConnachie Conservation Society and a past president of the MacConnachie Conservation Society. He was also a member of the MacConnachie Conservation Society and a past president of the MacConnachie Conservation Society.

Land Management Program

ACA's Land Management Program is all about conserving, enhancing and restoring important wildlife and fish habitat across Alberta. Our Alberta Discover Guide highlights ACA and partner-owned conservation sites, which span hundreds of thousands of acres across our province. Each site has its own unique characteristics that provide an array of opportunities to hunt, fish, forage, or view wildlife. Our goal is to conserve key habitat, benefitting our precious wildlife and fish resource, and in the process, providing an added value for outdoor enthusiasts.

Each year we add acres to the inventory of land assets by securing habitat through purchase or donation. Thanks to our partners and conservation-minded landowners, we secured five new conservation sites this year with the addition of 895 acres of habitat. Two of these are expansions of an existing conservation site. We manage 24 fisheries access sites that add value by providing quality angling opportunities for Albertans on several stocked lakes and access sites on rivers where access is considered challenging. We collaborate with landowners on other habitat-based programs such as our Landowner Habitat and Riparian Conservation Programs, which focus on enhancing and conserving wildlife and fish habitat while improving recreational access on deeded lands. Other programs such as our Recreational Opportunity Enhancement Program are aimed at easing access to privately-owned lands by facilitating access management through a hunter/angler sign-in system. We also have other projects that are focused on initiatives that provide access to rivers, wetlands, and lakes to improve hunting and/or angling opportunities in areas where access may be limited.

The success of our Land Management Program is a testament to the support and effort of over 50 partnerships, including government, industry, non-governmental organizations, counties/municipalities, leaseholders,

private landowners, corporate partners, and other interested groups. These collaborative partnerships are vital to our success. Moreover, they help us maximize each levy dollar we receive, allowing us to achieve the many conservation goals within ACA's Land Management Program.

2019/20 Overview

- Added 3 new conservation sites, totalling 599 ac (242 ha) with a land value of approximately \$1,558,000.
- Suncor Energy contributed \$350,000 towards our CPP-Boreal Habitat Conservation Initiative and secured 151 acres expanding our existing MacConnachie Conservation Site to 460 acres.
- Held a dedication ceremony in memory of Peter MacConnachie at our MacConnachie Conservation Site. Peter was a valued employee of Suncor and had a lifelong commitment to environmental conservation efforts and supported ACA-Suncor partnership.
- Currently managing 33 Landowner Habitat Program Agreements, conserving 5,789 ac (2,343 ha) of wildlife and fish habitat.
- Renewed two Landowner Habitat Agreements that expired in 2018/19, conserving 244 acres.
- Renewed one Landowner Habitat Agreement that expired in 2019/20, conserving 635 acres.
- Continued discussions with AEP on management of Crown conservation sites (disposition process ongoing). To date we received two dispositions on Crown conservation sites.
- Spent over 12,500 hours on management, enhancement, and maintenance of our conservation sites.
- Inspected 181 conservation sites, with routine maintenance and repairs completed on 60 sites.
- Enhanced habitat on 64 conservation sites, including 80 ac seeded with tame forage, 376 trees and shrubs planted, 16-ac sorghum seeded as food plots for upland game birds, and 2.7 km wildlife-friendly fencing installed.
- Improved access for public recreation on 12 conservation sites including parking areas, foot-access gates, and trails.
- Installed project signs on 4 conservation sites and continued installing boundary and "Foot Access Only" signs on conservation sites.
- Provided recommendations on 105 land-use referrals and public inquiries.
- Provided angler access at 24 fisheries access sites, of which 4 received site upgrades and enhancements that included access road and footpath improvements, outhouse repairs, and the installation of vehicle barriers.
- Completed 17 conservation site management plans.
- Delivered 19 riparian enhancement projects, signed 3 new riparian habitat lease agreements, completed 4 riparian fencing projects, installed 5 off-site watering systems, conducted 3 bioengineering projects, 2 erosion control projects, and installed 2 fence stiles for angler access.
- Conserved 228.1 ac (92.3 ha) of riparian habitat through new and existing riparian habitat lease agreements. Installed 21.4 km of new wildlife friendly fencing and removed 1.6 km of dilapidated fence.
- Created an interactive angler access map showing the RHEA's on Clear Creek, North Raven River, and Raven River to provide better angler access to these corridors.
- Completed bank stabilization and restoration by dense live staking willow (Salix) plantings on two project sites.
- Completed 2 riparian health assessments, 10 riparian health inventories, and collected water samples from 4 sites as part of baseline data collection and ongoing water quality monitoring.
- Collaborated with over 19 groups and organizations to enhance and facilitate riparian conservation across Alberta.
- Conducted beaver monitoring and collected redd survey data on the North Raven and Beaverlodge rivers
- Provided 8 participating landowners with recreational user sign-in services for existing properties, totalling improved land access to approximately 91,000 ac (37,190 ha).
- Added one new landowner to the access sign-in program in the South Region, totalling 1,911 ac (773 ha)
- Continued to meet with 5 new landowners in the South region interested in the program, totalling ~56,600 ac (~22,905 ha).
- Investigated opportunities to improve access at 4 waterbodies in the Central Region and one in the Northwest Region.



Corporate Partners Program

Our Corporate Partners Program is a collaboration between ACA and key industry partners to voluntarily offset the impact of industrial activity through the securement of ecologically important lands in Alberta's boreal forest. The properties that are secured through our Corporate Partners Program are incorporated into ACA's network of conservation sites and provide key habitat for fish and wildlife species while allowing for increased recreational opportunities for all Albertans. Our securement efforts are guided by focus areas and ranking criteria that are developed collaboratively between ACA and our corporate partners. Corporate partnerships and collaboration with other conservation organizations allow us to maximize our conservation impact and the overall effectiveness of our securement efforts. Through the Boreal Habitat Conservation Initiative, ACA has been partnering with the Suncor Energy Foundation since 2003 to secure ecologically important habitat in Alberta. Despite an economic downturn in Alberta over the past few years, we continued to partner with Suncor Energy Foundation and purchased a new conservation site in partnership with AFGA.

This acquisition represents 151 acres (61.1 ha) of wildlife habitat with an estimated land value of approximately \$175,000. Our goal is to continue conserving key habitats using a collaborative approach and work towards expanding these opportunities by maintaining our current corporate partnerships and developing new ones.

Partnerships

Alberta Environment and Parks,
Alberta Fish & Game Association,
Suncor Energy Foundation

Conservation Site Management

ACA's Conservation Site Management (CSM) Project currently manages 370 conservation sites and 11 conservation easements, which include over 210,000 acres (approximately 85,000 ha) of titled and Crown land in Alberta. The CSM Project is responsible for ongoing management and enhancement of these sites; activities are guided by site-specific management plans. In 2019/20, we inspected and maintained 181 sites. Our team also completed habitat enhancement projects on 64 conservation sites, including seeding tame forage species on 80 acres, planting 376 trees and shrubs

and food plots for upland game birds, installing wildlife-friendly fencing, and removing old farming equipment, garbage, buildings, and other anthropogenic structures. Recreational access enhancements were completed at 12 sites, including construction of foot access gates and parking areas. We installed new project signs on three conservation sites and a memorial stone at the MacConnachie Conservation Site. Staff provided recommendations on 25 land use referrals and 80 public inquiries. We also managed public access on two high-use conservation sites through a reservation system. Further, we continued discussions with Alberta Environment and Parks representatives to determine long-term partnership roles and responsibilities at Crown conservation sites that Alberta Conservation Association manages. Our success in managing and enhancing conservation sites is achieved through a collaborative effort with a growing number of partners and volunteers throughout Alberta.

Partnerships

Alberta Environment and Parks,
Alberta Fish & Game Association,
Bow River Irrigation District,
County of Lethbridge, County
of Newell, County of Warner,

Ducks Unlimited Canada, Eastern Irrigation District, Environment and Climate Change Canada, Landowners, MD of Greenview, MULTISAR, Nature Conservancy of Canada, Pheasants Forever – Calgary and Chinook Chapters, Shell Canada Energy, Trout Unlimited Canada, Volunteer stewards

Fisheries Access Site Management

ACA’s Land Management Program encompasses activities intended to conserve, protect, and enhance fish and wildlife habitat and to increase sustainable recreational opportunities including angling and hunting. One of the activities of the program is the delivery of the Fisheries Access Site Management Program, which provides angling access to key streams, rivers, and lakes throughout the province. We inspected and maintained 24 fisheries access sites and

commissioned 13 contracts to maintain 20 sites in 2019/20. We upgraded four sites with improvements to access roads and a footpath, outhouse repairs, and the installation of vehicle barriers. We continued to work with partners to identify next steps for access development projects at two additional waterbodies in the Central Region. We recognized 19 partners in 2019/20 who generously contributed financially or with in-kind assistance. We continued to strive to ensure anglers have high-quality experiences at ACA fisheries access sites across the province.

Partnerships

Alberta Environment and Parks, Alberta Fish & Game Association, Alberta Transportation, Camrose County, Clearwater County, County of Greenview, County of Newell, County Northern Lights, Devon Canada Corporation, Lacombe County, Municipal District of

Rocky View, North Raven River Working Group, Northern Sunrise County, Saddle Hills County, Shell Canada , Energy, Stettler County, Trout Unlimited Canada – Central Chapter, Trout Unlimited Canada – Yellowhead Chapter, Wetaskiwin County

Provincial Habitat Securement Program

Alberta’s population growth seemed unaffected in 2019, even with a slow economy and high unemployment rate. Alberta’s population steadily increased and reached over 4.37 million people, up from 4.33 million in 2018. Wildlife and fisheries habitat loss continues to be a threat to native habitat with increasing demands for urban sprawl, agricultural conversion, and industrial expansion. Almost two-thirds of the province (62%) has been altered by industrial or agricultural development; this percentage

Corporate Partners Program and Provincial Habitat Securement Program Transactions in 2019/20

Project Name	Securement Tool & Partners	Size (ac)	Special Features
Central			
Baird NE-23-041-06-W5M	A bequeathal from a landowner to ACA.	160.0	This site is approximately 30 km northeast of Rocky Mountain House and 85 km northwest of Red Deer in the lower foothills. It consists of mixed forest and black spruce, and a small creek flows through the property. Wildlife in the area include moose, deer, elk, black bear, ruffed grouse and waterfowl.
Northeast			
MacConnachie (Expansion) NW-36-054-11-W4M	Suncor and Alberta Fish & Game Association	151.0	This site is located 120 km northeast of the city of Edmonton. Habitat is primarily dry mixedwood forest, with a few small wetlands. Wildlife in the area include elk, moose, deer, black bear, and upland gamebirds.
Northwest			
Funnell Lake SE 33-071-11-W6M	An eco-gift land donation from a family to ACA in memory of Dorothy Ireland.	118.7	This site is approximately 54 km west of Grande Prairie and is in the central mixedwood. It is within 10 km of several of our conservation sites including Albright, Albright II and North Kamisak Lake. It consists of a mixedwood forest surrounding a 40-acre lake named Funnell Lake. Wildlife found here include deer, moose, black bear, upland game birds and a variety of songbirds and waterfowl. Black terns and trumpeter swans have also been observed on Funnell Lake.
South			
Timber Ridge (Expansion)* NW-04-015-29-W4M, SW-04-015-29-W4M	A land purchase between ACA, EC-HSP and Glen and Kelly Hall.	320.4	This site is approximately 45 km southeast of High River and located in the Foothills Parkland-Montane, expanding our Timber Ridge Conservation Site to 1,120 acres. It consists of native grassland and mixed aspen-spruce forest habitat. Wildlife found here include deer, moose, elk, black bear and ruffed grouse.

**Timber Ridge land purchase closed April 2020. Monetary value will be reflected in the 2020/21 Annual Report*

TOTAL	750.1
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increases each year. Urban and rural development have also contributed to habitat loss, fragmentation, and degradation.

ACA's Provincial Habitat Securement Program conserves important wildlife and fish habitat through land purchases, land donations, and leases on Crown land. Securing habitat ensures these lands will be 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-eight 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 2019/20, we completed one land acquisition, one bequeathal and one eco-gift donation, which conserved 599 acres (242.4 ha). These lands have an estimated land value of \$1,558,000. Management plans will be prepared in 2020/21 to collaboratively address roles and responsibilities between managing partners.

Partnerships

Alberta Environment and Parks, Alberta Fish & Game Association, Environment Canada – Habitat Stewardship Program for Species at Risk, Glen and Kelly Hall

Landowner Habitat Program

Alberta's ecosystems continue to shrink as our human footprint grows with development. Biodiversity is often the first casualty of increased and expanding development with habitat alteration and wetland loss. The northern parts of the province have seen the most changes over the past decade. Approximately two-thirds of the province (62%) has been altered by industrial or agricultural development. Urban and rural development have also contributed to habitat loss, fragmentation, and degradation. The Landowner Habitat Program (LHP) was initiated to help conserve key habitat and reduce habitat loss on privately owned land. The program compensates landowners who are willing to sign a legally binding agreement to retain habitat for a term of five to 20 years; a condition of the agreement is for landowners to provide reasonable public foot access. Participants in

this program are acknowledged with a project sign and provided with *Use Respect – Ask First* signage to display along the perimeter of their property. We currently manage 33 LHP agreements across the province, which conserves approximately 5,789 acres (2,342.8 ha) of important wildlife and fish habitat.

Partnerships

Alberta Environment and Parks, Landowners

Management Plan Development

ACA manages and maintains over 210,000 acres (approximately 85,000 ha) of habitat in collaboration with Alberta Environment and Parks (AEP) and other conservation partners. In order to manage our conservation assets effectively, management plans are developed for each of these sites. Emphasis is placed on developing detailed habitat management objectives that maintain the ecological integrity of each conservation site. ACA works with our partners to develop management plans which are used as guiding documents for overall site management. These



Project: Conservation Site Management
Photo: ACA, Dan Sturgess



plans provide specific details regarding site features, objectives regarding enhancement or restoration, recreational and facility enhancements, guidelines, and other planned activities for the site. Management plans are reviewed by ACA and our partners as required, or on a term basis (e.g., after five or 10 years), to ensure we are meeting our intended goals and objectives. In 2019/20, we developed 17 management plans.

Partnerships

Alberta Environment and Parks, Alberta Fish & Game Association, Ducks Unlimited Canada, Environment and Climate Change Canada, Nature Conservancy of Canada, Pheasants Forever – Calgary and Chinook Chapters, Trout Unlimited Canada, Wild Elk Federation, Woodlands County

Riparian Conservation Program

The ecological integrity and health of Alberta's rivers, streams, and surrounding landscapes are often negatively affected by ongoing human development. Riparian areas are complex ecosystems that provide important ecological functions and are critical to maintaining watershed health. Proper management of this sensitive habitat is essential to maintain water quality and habitat integrity. The primary goal of ACA's Riparian Conservation Program is to protect and restore riparian habitat in priority watersheds through on-the-ground habitat restoration projects by engaging landowners, the public, and other stakeholders through community outreach and education activities. Our collaborative partnerships

with landowners, industry, government, watershed groups, and other stakeholders are an integral component of project delivery. In 2019/20, we focused conservation efforts in the following priority watersheds: Beaverlodge, Heart, Raven, and North Raven rivers; and Clear, Dogpound, Todd, Sharples, and Five Mile creeks and their associated tributaries. We delivered 19 enhancement projects using a variety of management tools, including implementing agreements to conserve 228.1 acres (92.3 ha) of riparian and associated upland habitat, five off-site watering systems, three bioengineering projects, two erosion control projects, two fence stiles, and installing of 21.4 km of wildlife-friendly fencing to protect important riparian habitat as part of new and existing agreements. We also monitored water quality and

Project: Conservation Site Management
Photo: ACA, Mandy Couve



riparian health on three systems to help evaluate the effectiveness of riparian enhancements, supported landowners with riparian enhancement activities, and communicated our Riparian Conservation Program to various communities. Beaver activity monitoring was conducted on two systems to identify fish barriers and monitor habitat. Our efforts have contributed to improvements in riparian habitat health and have positively influenced the stewardship approach of many landowners and leaseholders.

Partnerships

Agroforestry & Woodlot Extension Society, Alberta Fish & Game Association, Cenovus Energy, County of Grande Prairie, Cows and Fish – Alberta Riparian Habitat Management Society, Environment and Climate Change Canada, Fisheries and Oceans Canada, Huvan Construction, Landowners, Mighty Peace Watershed Alliance,

Milk River Watershed Council, Nature Conservancy of Canada, Oldman Watershed Council, Oviniv Inc., Red Deer River Watershed Alliance, Sinopec Canada, Syncrude Canada Ltd., Trout Unlimited Canada, West County Watershed Society

Recreational Opportunity Enhancement

The Recreational Opportunity Enhancement project was established to improve opportunities for fishing and hunting, as well as other non-consumptive activities such as hiking, canoeing, or photography. Improving waterfowl hunter access to Crown waterbodies and improving upland and big game hunter access to private lands is the major focus of this project. In addition, the project will focus on initiatives that enhance access to major rivers such as the Bow and North Saskatchewan rivers for angling and other water-related

recreational activities that would be beneficial to our stakeholders. Working with individual landowners has allowed us to improve hunter access to approximately 91,900 acres (37,190 ha) of private land across southern Alberta through a sign-in access system. Increasing access opportunities for hunters may provide AEP additional options to use hunters as a management tool when managing game species. Not only will increased opportunities encourage hunter and angler recruitment, it will also help maintain quality outdoor experiences by distributing hunters and anglers across the landscape.

Partnerships

Alberta Environment and Parks, Alberta Fish & Game Association, Landowners, Lethbridge Fish & Game Association

ACA Conservation Reports

The following is a list of final project reports published in 2019/20. All of these reports can be found on our website or through the Government of Alberta Library.

Annual Summary reports for all ongoing projects can also be found on our website.

Fisheries

Hurkett, B., K. Fitzsimmons, and N. Lebedynski. 2020. Angler Survey in the Berland River Watershed, 2019. Data Report, produced by Alberta Conservation Association, Sherwood Park, Alberta, Canada. 8 pp + App.

Fitzsimmons, K. 2020. Angler Survey on the Clearwater and North Raven rivers, Alberta, 2019. Data Report, produced by Alberta Conservation Association, Sherwood Park, Alberta, Canada. 9 pp + App.

Judd, C., M. Rodtka, and Z. Spence. 2019. Eastern Slopes Fisheries Inventory, 2018 – 2019. Data Report, produced by Alberta Conservation Association, Sherwood Park, Alberta, Canada. 17 pp + App.

Wildlife

Kendell, K. 2020. Garter snake (*Thamnophis* spp.) surveys at historical den sites in Alberta, 2017–2019. Data Report, produced by Alberta Conservation Association, Sherwood Park, Alberta, Canada. 17 pp + App.

Kendell, K. and C.S. Goldberg. 2020. Comparison of water and sediment sampling techniques for the evaluation of amphibian eDNA in lentic waterbodies in Alberta. Data Report, produced by Alberta Conservation Association, Sherwood Park, Alberta, Canada. 16 pp + App.



Report A Poacher and Livestock Compensation Programs

Report A Poacher

The Report A Poacher (RAP) program encourages all Albertans—not just hunters and anglers—to help protect our wildlife, fish, and natural habitats. In addition to providing education about poaching, perhaps the most important RAP program tool is the toll-free phone number: 1-800-642-3800. It allows people to report suspected illegal activities 24 hours a day, seven days a week. Alberta Fish and Wildlife enforcement officers often rely on information from these calls; individuals and communities are RAP’s eyes and ears, and the important information they provide regularly leads to investigations and convictions.

RAP is delivered jointly by ACA and Alberta Justice and Solicitor General. ACA is responsible for program promotion and education activities to enhance public awareness and understanding of poaching, and for the administration of program funds. Alberta Justice and Solicitor General retains sole responsibility for liaising with informants, investigating reports and enforcing laws.



2019/20 Overview

- 17,915 total calls from the public to the RAP toll-free hotline. Plus 435 online written reports.
- 2973 calls about suspected illegal activity – reporting fish and wildlife resource crimes. Plus 402 of the online reports.
- 532 charges laid.
- \$73,200 in rewards paid to individuals whose call and information led to charges.
- Increased RAP promotion through social media, television, radio and print.

Livestock Compensation Programs

For producers, whose livestock may have been killed or injured as a result of predators (eagles, cougars, bears and wolves) or careless discharge of a firearm, relief is provided through the Wildlife Predator Compensation and Shot Livestock Compensation programs. Like Report A Poacher, we are responsible for program promotion and compensation fund management, while Alberta Justice and Solicitor General is responsible for incident investigations and determining payouts.

Wildlife Predator	Claims	Compensation (\$)
Black Bear	21	21,716
Grizzly Bear	49	76,540
Cougar	21	17,499
Wolf	98	133,218
Bald Eagle	1	584
Unknown	1	521
TOTAL	190	250,078

Shot Livestock Total	1	2,801
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ACA Conservation, Community, and Education Grants
Recipient: "Extreme by Nature" Environmental Education for 11 to 15-year-olds
Photo: Environment Lethbridge



Grants Program

Alberta's hunters and anglers contribute directly to conservation through levies on their hunting and fishing licences. The levy funds come to ACA, and one of the many things we do with that money is to support community and research efforts via our Grants Program.

ACA Conservation, Community, and Education Grants

This fund supports conservation activities that contribute to wildlife and fish population health and the health of their environments, and to the understanding, appreciation, and use of those environments. Projects that increase participation in, and awareness of, outdoor opportunities, while developing knowledge and respect for conservation, are also funded through this grant. The projects ranged from youth hunter, angler, and archery programs to local festivals to restoration and stewardship projects.

2019/20 Overview

- Received 115 applications, requesting just over \$1.6 million.
- Supported 82 projects with \$969,635 of funding.
- Leveraged an estimated \$5 for every \$1 spent by ACA CCEG.

ACA Research Grants

The ACA Research Grants fund high-quality research projects on wildlife, fish, and habitat that inform the effective management of wildlife and fish populations and habitat in Alberta. Topics ranged from examining the spread of wildlife diseases (e.g., chronic wasting disease [CWD] in deer) to assessing the effectiveness of Alberta's walleye regulations and looking at Arctic grayling distribution and habitat preferences using environmental DNA.

2019/20 Overview

- Received 38 applications requesting almost \$1.9 million.
- Funded 16 research projects with a total of \$329,388.
- Leveraged an estimated \$4 for every \$1 spent by ACA Research Grants.

Grants in Biodiversity

The ACA Grants in Biodiversity Program is funded by ACA and operated through the Alberta Cooperative Conservation Research Unit—a partnership between the universities of Alberta, Calgary, and Lethbridge. The student academic projects included studies on the consequences of sulfur emissions on conifer growth, effects of forest fires on bat communities, and the impact of urban honey bees on the success of native bees. This year's grants ranged from \$1,595 to \$15,900 and were distributed to six doctoral degree and 18 master's degree candidates.

2019/20 Overview

- Supported 24 graduate student projects with a total of \$206,810 of funding for 2019/20.
- Syncrude Canada Ltd. continued to support of the ACA Grants in Biodiversity Program with \$250,000 commitment over five fiscal years (2019/20 to 2023/24).
- Over the past 3 years, funds provided have been leveraged 3:1.

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. 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: apps.ualberta.ca/directory/person/boyce.

2019/20 Overview

- Endowed with \$20,500 as part of ACA's commitment to science, research, and education.

ACA Conservation, Community, and Education Grants

Recipient	Project	Funding
Alberta Fish and Game Association (AFGA)	Increasing Habitat for Species At Risk in Alberta's Grassland Region through Adaptive Management, Habitat Enhancement, Assessment and Outreach	\$25,100.00
AFGA	Pronghorn Antelope Migration Corridor Enhancement	\$40,698.00
Alberta Hunter Education Instructors' Association (AHEIA)	Conservation Education for the Army Cadet League of Canada - AB	\$3,000.00
AHEIA	AHEIA's Outdoor Bound Mentorship Program	\$3,000.00
AHEIA	16th Annual O.W.L. Day - "Outdoor Wildlife Learning"	\$3,000.00
AHEIA	26th Annual Outdoor Women's Program	\$15,000.00
AHEIA	Outdoor Youth Seminar	\$3,000.00
AHEIA	Provincial Hunting Day Initiatives	\$20,000.00
AHEIA	AHEIA Teachers' Workshop	\$6,000.00
AHEIA	AHEIA's Wildlife Workbook Rewrite for Children	\$3,000.00
AHEIA	AHEIA's Youth Hunter Education Camps (Week 1,2,3,4)	\$48,000.00
AHEIA	AHEIA's National Archery in the School Program	\$40,000.00
Alberta Hunters Sharing the Harvest	Wild Game for the Food Bank Program	\$8,000.00
Alberta Invasive Species Council	Expansion and Promotion of the Early Detection and Distribution Mapping System (EDDMapS) Alberta	\$15,000.00
Alberta Junior Forest Wardens Association	"AC Conference" (Alberta Youth Outdoor Skills Conference)	\$2,510.00
Alberta Mycological Society	Fungal Biodiversity Survey, West Castle - Mushroom Identification	\$3,000.00
Alberta Riparian Habitat Management Society - Cows and Fish	Grazing Schools for Women: Promoting habitat and improved livestock grazing stewardship in south and central Alberta	\$3,000.00
Alberta Riparian Habitat Management Society - Cows and Fish	Implementing Riparian Habitat Management Improvements for Westslope Cutthroat Trout	\$11,150.00
Alberta Trapper's Association (ATA)	Trapper Education in Schools	\$21,100.00
ATA	Youth Camp	\$19,480.00
ATA	Helping to education future trappers and en-sure long-term sustainable harvest using the best available science	\$20,248.00
Alexis Nakota Sioux Nation	Lake Isle Flowering Rush Project	\$30,000.00
Ann & Sandy Cross Conservation Area (ASCCA)	Outdoor Conservation Education for High Needs Schools	\$6,250.00
Aquality Environmental Consulting Ltd.	Alberta Wetlands 101 Online Experience	\$13,000.00
Aquarium Society of Alberta	Water on Wheels	\$12,075.00
Battle River Research Group	A Complex Relationship Between Agricultural Practices and Wildlife Habitat in Central-East Alberta	\$2,950.00
Beaverhill Bird Observatory	Public Engagement, Wildlife Conservation and Monitoring at Beaverhill Lake	\$23,250.00
Bow River Trout Foundation	Bow River Policeman's Flats River Access Upgrade 2019	\$6,304.00*
Calgary Chapter Pheasants Forever Canada Society	Post-Secondary First Pheasant Mentor Hunt Program	\$4,850.00

Recipient	Project	Funding
Calgary Fish and Game Association	Pop Up Archery Range for Youth Education	\$2,500.00
Calgary FGA	CFGA Pheasant Crate Upgrade for Remaining Crates	\$4,095.00
Camrose County	Enhancing Conservation Areas within Camrose County	\$36,652.56
Camrose Wildlife Stewardship Society	2019 Camrose Purple Martin Festival	\$1,350.00
Canadian Parks and Wilderness Society - Southern Alberta Chapter	Healthy Habitats: Getting Albertans Outside to Enjoy, Value and Use Alberta Wilderness	\$20,000.00
Carbon and District Agricultural Society and Curling Club	Creation of Archery Club and Range	\$3,000.00
Castor Fish and Game Club	Evaluation of Parr Reservoir (Castor Creek) for Fish Stocking Suitability	\$3,000.00
Chinook Pheasants Forever	Ross Creek Conservation Site Food Plots Planting	\$3,250.00
Chinook Pheasants Forever	Sauder Reservoir Habitat Project	\$26,970.00
Ducks Unlimited Canada	Marshkeeper's - Conservation through Volunteer Empowerment	\$5,500.00
Edmonton and Area Land Trust	Land Stewardship and Monitoring of New Natural Areas in Beaverhills Biosphere Reserve	\$7,650.00
Glenbow Ranch Park Foundation	2019 Invasive Species Management at Glenbow Ranch	\$12,400.00
Growing Great Kids Coalition; Family and Community Support Services (FCCS) Town of Hinton	Kids Can Catch with Growing Great Kids	\$3,000.00
H.A. Kostash School	H A Kostash School Youth Mentorship Program	\$8,000.00
Helen Schuler Nature Centre	"Extreme by Nature" Environmental Education for 11 to 15-year-olds	\$3,000.00
Helen Schuler Nature Centre	Community Engagement in River Valley Conservation	\$3,000.00
J.T. Foster School	J.T. Foster School Wildlife Education and Recruitment	\$3,000.00
Legacy Land Trust Society	Conservation Community	\$3,000.00
Lesser Slave Lake Bird Observatory Society	Avian Monitoring and Outreach Education Programs at Lesser Slave Lake	\$24,500.00
Mountain View County	Riparian and Ecological Enhancement Program	\$25,000.00
Nature Alberta	Nature Kids Family Nature Nights and Field Trips Across Alberta	\$10,400.00
Nature Conservancy of Canada	An Integrated Pest Management Strategy for Tackling Non-Native, Noxious Weeds Across Alberta	\$35,000.00
NE AFGA	Fish Habitat Restoration in NE and Central Alberta Lakes	\$15,000.00
Northern Lights Fly Fishers/ TUC Edmonton Chapter	Conserving and Restoring Arctic Grayling in the Upper Pembina River Watershed - Habitat Restoration Planning	\$8,997.00
Northern Lights Fly Fishers/ TUC Edmonton Chapter	Fishery Enhancement - Beaumont	\$9,250.00
Onoway & District Fish and Game Association	Birdhouses	\$2,500.00
Red Deer County	Wildlife and Native Habitat Enhancement in Red Deer County via ALUS (2019)	\$40,000.00
Red Deer Fish and Game Association	Pheasant Pen Replacement Program	\$14,412.00

Recipient	Project	Funding
River of Death and Discovery Dinosaur Museum Society (operating as Philip J Currie Dinosaur Museum)	Junior Palaeontologist II Day Camp	\$1,980.76
River of Death and Discovery Dinosaur Museum Society	Summer Day Camps	\$1,763.62
Safe Drinking Water Foundation	Operation Water Drop, Operation Water Pollution and Operation Water Biology kits to be used by students in Alberta as part of field trips/outdoor education	\$3,825.00
Southern Alberta Bible Camp	Archery Program	\$2,500.00
Southern Alberta Bible Camp	Pelletry Program	\$1,500.00
Spruce Grove Fish and Game Association	Bird/Bat Box Project	\$2,000.00
St. Paul Fish and Game Association	Lac Delorme (George's Lake) Access Improvement	\$5,000.00
Sturgeon School District	Environmental Opportunities Enhancement	\$15,000.00
Taber Fish and Game Association	Winter Family Fun Fishing Day	\$9,528.13
Taber FGA	Taber Fish and Game Outdoor Day and Antler Measure	\$2,500.00
Taber FGA	Taber Fish and Game & ACA Youth Fishing Recruitment Day	\$18,900.00
The Botha School Society	Botha School Wildlife Education Program	\$2,625.00
Town of Cochrane	Kids Can Catch 2019	\$3,000.00
Trout Unlimited Canada (TUC)	Stream Rehabilitation Training (SRT) Program	\$11,900.00
TUC	Yellow Fish Road (YFR) and Water Edu-Kit (WEK)	\$22,310.00
TUC	Bringing Back Bull Trout	\$30,000.00
Waterton Biosphere Reserve Association	Promoting Wetland Stewardship and Improving Wetland Habitat in Waterton Biosphere Reserve	\$10,856.00
Weaselhead/Glenmore Park Preservation Society	Weaselhead Invasive Plant Program 2019	\$2,500.00
West County Watershed Society	10 Years Later - A Closer Look at Riparian Enhancement Projects in the Beaverlodge River Watershed	\$22,926.69
Wetaskiwin County	Wetaskiwin/Leduc Alternative Land Use Services (ALUS)	\$4,500.00
Wildlife Conservation Society Canada	Going to Bat for Bats: Citizen Science in Alberta	\$29,500.00
Wildlife Preservation Canada	Conserving Species-At-Risk Bumble Bees, Associated Bee Communities, and their Habitats in Glenbow Ranch Provincial Park	\$20,032.00
Yellowhead County	Kids Can Catch Event	\$1,700.00
Yellowhead Junior Forest Wardens Regional Council	JFW Regional Camp 2019	\$1,200.00
Yellowhead Junior Forest Wardens Regional Council	Trailblazer Advanced Camp	\$2,000.00
	TOTAL FUNDING ACA CONSERVATION, COMMUNITY, AND EDUCATION GRANTS	\$969,634.76

ACA Research Grants

Recipient	Project	Funding
Athabasca University	Characterizing Arctic grayling distribution and habitat preferences using environmental DNA	\$15,000.00
Ducks Unlimited Canada	Understanding the importance of migratory and breeding habitat selection for northern Pintails	\$14,600.00
Fiera Biological Consulting Ltd.	Quantifying yield impacts and the profitability of wetlands in agricultural cropland	\$16,800.00
Goldstream Publishing Inc.	Using citizen science to enhance fisheries data collection and monitoring	\$15,000.00
Université de Sherbrooke	Evolutionarily sustainable management of bighorn sheep	\$9,950.00
University of Alberta	Chronic Wasting Disease in deer: modeling transmission from contact rates	\$32,400.00
University of Calgary	Assessing the effectiveness of Alberta's walleye regulations to sustain high-quality fishing opportunities	\$14,100.00
University of Calgary	Assessing the capacity of urban wetlands to support biodiversity using amphibian sentinels	\$14,500.00
University of Lethbridge	Ecological epidemiology of emerging Ambystoma tigrinum virus (ATV) in a population of tiger salamanders in southwestern Alberta	\$6,338.00
University of Lethbridge	Contribution of pesticides and climate change to the decline of freshwater mussel populations in Alberta	\$27,000.00
University of Lethbridge	Biodiversity and distribution of cryptic duckweed in species in Alberta	\$25,000.00
University of Lethbridge	Assessing translocation success and implications of greater sage grouse in Alberta using genetic assignment methods	\$35,000.00
University of Manitoba	Effects of oil infrastructure and noise on nest predators in Alberta's grasslands	\$25,000.00
University of Montana	Bull elk recruitment, survival, and harvest in a partially migratory elk herd in the Ya Ha Tinda	\$30,000.00
University of Saskatchewan	Sex-specific responses to climate change in a wild hibernator	\$22,700.00
Wildlife Conservation Society Canada	Evaluating the efficacy of bat boxes for the conservation and recovery of bats	\$26,000.00
	TOTAL FUNDING ACA RESEARCH GRANTS	\$329,388.00

2018 ACA Grants in Biodiversity Recipients

Synchrude Canada Ltd. continued to support of the ACA Grants in Biodiversity Program with \$250,000 commitment over five fiscal years (2019/20 to 2023/24).

Recipient	Institution	Supervisor(s)	Project Title
Carrie Ann Adams (PhD)	University of Alberta	Erin Bayne and Colleen Cassidy St. Clair	The effects of artificial light at night on habitat use by aerial insectivores in Alberta
Jared Anderson-Huxley (PhD)	University of California, Riverside	Marko Spasojevic	Adapt, move, or go extinct: Will species on the tops of mountains survive climate change?
Monica Ayala-Diaz (PhD)	University of Alberta	Heather Proctor and Clement Lagrue	Division of labour in trematode parasites and its effects on trematode ecology
Charity Blaney (MSc)	University of Calgary	Steven Vamosi	Impacts on long-toed salamander habitat in southwestern Alberta
Lindsey Dewart (MSc)	University of Alberta	Scott Nielsen and Mark Edwards	Influence of wolf (<i>Canis lupus</i>) predation on wood bison (<i>Bison bison athabasca</i>) in the Alberta oilsands
Raiany Dias de Andrade Silva (PhD)	University of Alberta	Barb Thomas	Patterns and mechanisms driving clone size and gender performance in trembling aspen in Alberta
Justin Dubiel (MSc)	University of Lethbridge	Steve Wiseman	Characterization of the sensitivity of three fish species inhabiting the Alberta Oil Sands Region to PAHs and alkyl PAHs
Elène Haave Audet (MSc)	University of Alberta	Kimberley Mathot	Individual differences in information sampling and its correlation with survival in the Blackcapped Chickadee (<i>Poecile atricapillus</i>)
Gabriela Heyer (MSc)	University of Saskatchewan	Jeffrey Lane	Local adaptation in hibernation phenotypes of Columbian Ground Squirrels (<i>Urocitellus columbianus</i>)
Sarah Hirtle (MSc)	University of Lethbridge	Cameron Goater	Causes and consequences of multiparasitism in wild and experimental populations of fathead minnows
Emily Holden (MSc)	University of Alberta	J.C. Cahill	Trait similarity's impacts on plant establishment: General effects among communities
German Lagunas-Robles (PhD)	University of California, River-side	Alan Brelsford	Environmental, genetic, and social influences on sex ratio in the boreal ant <i>Formica podzolica</i>
Keon Park (MSc)	Western Univer-sity	Nusha Keyghobadi	The genetic basis of dispersal and recolonization in a butterfly metapopulation
Emily Purvis (MSc)	University of Calgary	Paul Galpern	The reassembly of plant-pollinator interaction networks following wetland habitat restoration in Alberta croplands
Garrett Rawleigh (MSc)	University of Alberta	Scott Nielsen	Winter responses in wood bison (<i>Bison bison athabasca</i>) to seasonal dynamics in water and factors influencing forage availability in wetlands
Jessica Serbu (PhD)	University of Alberta	Vince St. Louis	Impacts of rapid glacial melt on downstream river freshwater quality and food webs in Banff and Jasper National Parks
Lee Sutcliffe (MSc)	University of Manitoba	Nicola Koper	Effects of oil well drilling noise on parental breeding behavior of chestnut-collared longspurs (<i>Calcarius ornatus</i>)
Molly Tilley (MSc)	University of Lethbridge	Cameron Goater	Life cycle, intra-host development and cons-quences of an emerging new pathogen of minnows in southern Alberta
Zoey Zapisocki (MSc)	University of Alberta	Viktoria Wagner	Local adaptation of plains rough fescue (<i>Festuca hallii</i>) to Kentucky bluegrass (<i>Poa pratensis</i>) invasion

Auditor's Report

Project: Connectivity Project
Photo: ACA, Kelsey Cartwright

June 12, 2020
Edmonton, Alberta

INDEPENDENT AUDITOR'S REPORT

To the Members of Alberta Conservation Association

Opinion

The summary financial statements, which comprise the summarized statement of financial position as at March 31, 2020, and the summary statement of operations are derived from the audited financial statements of Alberta Conservation Association for the year ended March 31, 2020. We expressed a qualified audit opinion on those financial statements in our report dated June 12, 2020.

In our opinion, the accompanying summarized financial statements are a fair summary of the audited financial statements, on the basis described in Note 1. However, the summary financial statements are subject to conditions equivalent to those of the audited financial statements of the Alberta Conservation Association for the year ended March 31, 2020, upon which we issued a qualified audit opinion.

Summary Financial Statements

The summary financial statements do not contain all the disclosures required by *Canadian accounting standards for not-for-profit organizations*. Reading the summary financial statements and the auditors reports thereon, therefore is not a substitute for reading the audited financial statements and the auditor's report thereon.

The Audited Financial Statements and Our Report Thereon

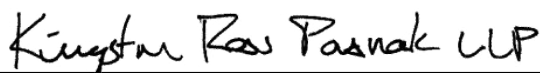
We expressed a qualified audit opinion on the audited financial statements in our report dated June 12, 2020. The basis for our qualified opinion was that, in common with many charitable organizations, the Association derives some of its revenue from donations, the completeness of which is not susceptible 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 contributions, excess of revenue over expenses, current assets and net assets.

Responsibilities of Management for the Summary Financial Statements

Management is responsible for the preparation and fair presentation of the summary financial statements on the basis described in Note 1.

Auditor's Responsibilities

Our responsibility is to express an opinion on whether the summary financial statements are a fair summary of the audited financial statements based on our procedures, which were conducted in accordance with Canadian Auditing Standards (CAS 810), *Engagements to Report on Summary Financial Statements*.



Kingston Ross Pasnak LLP

Chartered Professional Accountants


ALBERTA CONSERVATION ASSOCIATION
Summarized Statement of Operations
Year Ended March 31, 2020

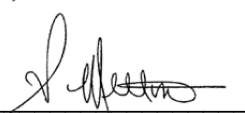
	2020	2019
REVENUE		
Levy, fees and assessments	\$ 13,198,056	\$ 13,492,496
Partner contributions	1,985,975	1,568,685
Miscellaneous	271,940	336,159
Donations	89,646	103,763
Interest Income	22,537	14,196
	15,568,154	15,515,299
EXPENDITURES		
Salaries and benefits	7,639,823	7,304,561
Materials and supplies	1,746,963	1,767,290
Grants	1,525,407	2,905,325
Contracted services	1,359,261	1,719,759
Rentals	591,119	496,704
Amortization	305,124	404,327
Office	299,591	280,597
Repairs and maintenance	284,474	260,261
Advertising	233,990	230,649
Travel	231,905	245,098
Landowner agreements	219,078	199,671
Insurance	168,427	157,269
Fuel and lubricants	166,823	202,847
Telephone and communications	161,383	169,062
Utilities	82,846	99,197
Freight and postage	71,915	63,638
Hosting and conferences	46,062	51,109
Bank charges and interest	40,730	47,436
Training and membership	31,470	26,269
Fees, licenses and permits	19,500	26,649
Interest on loans	7,185	127,346
Bad debts	-	41
	15,233,076	16,785,105
EXCESS (DEFICIENCY) OF REVENUE OVER EXPENDITURES FROM OPERATIONS	335,078	(1,269,806)
OTHER INCOME (EXPENDITURES)		
Investment Income	452,211	464,646
Gain on sale of investments	138,345	241,760
(Loss) gain on disposal of property and equipment	(13,059)	653,571
Unrealized loss on investments	(917,145)	(466,273)
	(339,648)	893,704
DEFICIENCY OF REVENUE OVER EXPENDITURES	\$ (4,570)	\$ (376,102)

ALBERTA CONSERVATION ASSOCIATION
Summarized Statement of Financial Position
March 31, 2020

	2020	2019
ASSETS		
CURRENT		
Cash	\$ 696,851	\$ 714,416
Short term investments	10,962	10,132
Accounts receivable	424,347	476,755
Inventory	1,071	3,292
Goods and Services Tax recoverable	41,324	29,501
Prepaid expenses	660,476	70,493
	1,835,031	1,304,589
LONG TERM INVESTMENTS	5,308,701	5,174,377
PROPERTY AND EQUIPMENT	33,337,794	32,914,270
FILM COLLECTION	1,549,577	1,549,577
	\$ 42,031,103	\$ 40,942,813
LIABILITIES AND NET ASSETS		
CURRENT		
Bank indebtedness	\$ 20,000	\$ 355,000
Accounts payable and accrued liabilities	1,704,602	1,521,697
Source deductions payable	82,003	83,160
Deferred contributions	4,139,733	3,616,365
Deposits	33,690	13,946
	5,980,028	5,590,168
NET ASSETS		
Invested in property and equipment	34,887,371	34,463,847
Internally restricted	443,349	243,349
Unrestricted	720,355	645,449
	36,051,075	35,352,645
	\$ 42,031,103	\$ 40,942,813

ON BEHALF OF THE BOARD


 _____ Director


 _____ Director

BASIS OF PRESENTATION (Note 1)

Management is responsible for the preparation of the summary financial statements. The summary financial statements are comprised of the summary statement of financial position and the summary statement of operations, and do not include any other schedules, a summary of significant accounting policies or the notes to the financial statements. The summary statement of financial position and the summary statement of operations are presented with the same amounts as the audited financial statements, but all note referencing has been removed.

Financial Highlights

Summarized Financial Statements

In 2019/20, ACA received \$13,198,056 in levy revenue from hunting and angling licences, representing a decrease of \$294,440 from the previous year. In 2019/20 fishing license sales decreased 8,700 contributing \$160,000 of the decrease in levy revenue. In addition to the decline in fishing licenses, hunting licenses, specifically wildlife certificates and deer licenses, contributed to the decline in levy revenue. The overall decrease in levy funds forced management and all ACA staff to review project expenditures and engage in cost reduction and spend management wherever possible in an effort to mitigate an operational deficit.

Despite the financial challenges faced by ACA in 2019/20, our staff were still able to complete a wide range of projects and provide substantial leverage to the levy funds we received. Together, our Wildlife, Fisheries, Land Management, Communications, Grants, Predator Compensation, Shot Livestock and RAP Programs had expenditures totalling \$12,320,141, plus an additional \$703,000 in land purchases and donations (for accounting purposes, these funds are recorded as assets, not direct operational expenditures). Total expenditures for the year (includes Land Purchases and Donations) were \$13,023,141 resulting in approximately 98.7% of the levy value collected being directly invested back into conserving Alberta's resources.

ACA received approximately \$3,073,098 in non-levy revenue (including \$703,000 in land donations and funds for land purchase), representing 18.9%

of total revenue. These funds came from a variety of donors, including individuals, corporations, granting foundations, the federal government, and other conservation organizations. Total revenue of \$16,271,154, means ACA was able to leverage levy dollars an additional 23.3% for conservation activities. This does not include increased dollar leveraging that has occurred as a result of grants provided to third-party conservation organizations.

Expenditures by Program

Often stakeholders want to determine what funds are being directed towards their particular passion. When examining the Expenditures by Program, 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. Granting is shown separately even though it relates to all four resource areas.

2019/20 Wildlife program expenditures include the AEP Chronic Wasting Disease project, where ACA paid all employees on behalf of AEP. The project cost included under Wildlife is \$326,954, with a resulting full partner contribution of the same value.

Administration costs (7.0% of expenditures) continue to be well below the federal guideline for charitable organizations and includes areas such as regional and corporate administration.

2019/20 ended in an unbudgeted surplus. As a result of significant

effort by staff to reduce expenditures, 2019/20 ended in an operational surplus of \$335,078 (revenue minus expenses); however, the addition of realized and unrealized losses and gain from investments resulted in an accounting deficit \$4,570 at year end.

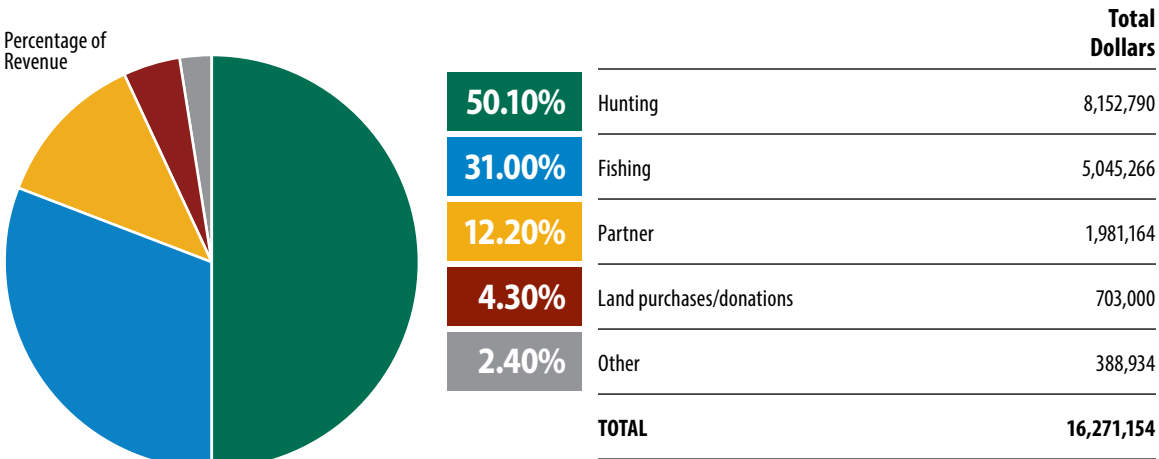
Revenue by Source

Approximately 18.9% of ACA's total revenue was generated from non-levy sources (\$3,073,098). This decrease from the previous year is largely due to the lower land purchases and donations. Miscellaneous and Interest Income are made up of a variety of revenue sources, these include, reimbursement by AEP for Predator Compensation, Raffle Ticket Sales for various ACA events, registration for Waterfowl Warmup and Taber Pheasant Festival. Interest Income is a result of the bank balances and is directly available for operating activities. Land donations and purchases added approximately 429.70 acres (excludes Timber Ridge land purchase completed April 2020) to ACA's conserved lands, for future generations to use, value, and enjoy.

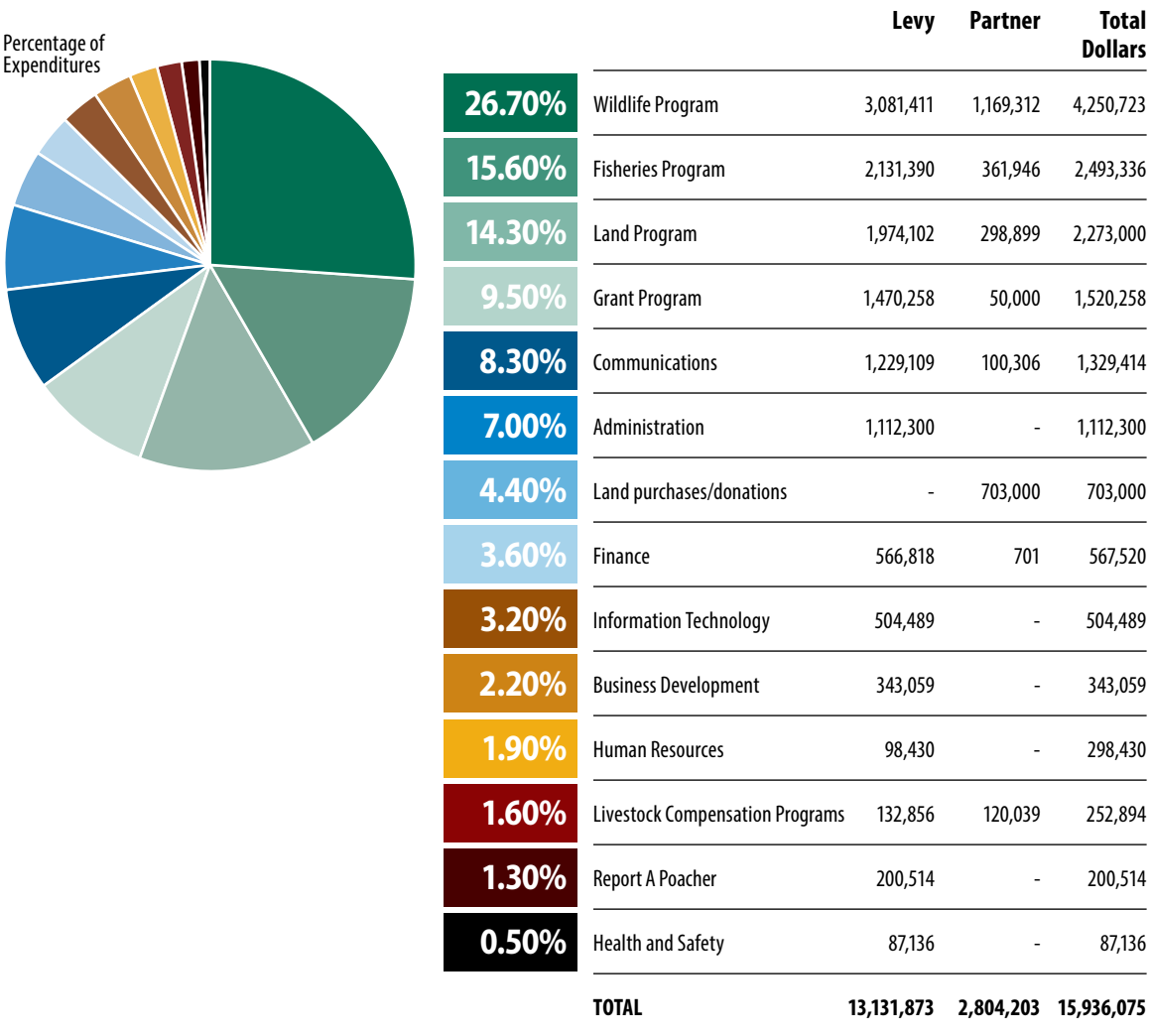
2019/20 Overview

- Total revenue of \$16,271,154
- Received \$13,198,056 from levies on hunting and fishing licences.
- Received \$3,073,098 in non-levy revenue.
- Applied 98.7% of levy value directly towards the conservation of Alberta's wildlife, fish, and habitats.
- Administration costs kept to 7.0% of total expenditures.
- Current year operational surplus is \$335,078, which is a direct reflection of cost restraint and an innovative approach to project management by all ACA staff.

Revenue by Source



Expenditures by Program



Corporate Partners in Conservation



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.

Abacus Datagraphics Ltd.

AltaLink

Aquality Environmental Consulting Ltd.

Backroad Mapbooks

Beretta/Benelli/Tikka/Sako

Cabela's Canada Outdoor Fund

Canadian Cattlemen's Association

Canadian National Sportsmen's Shows

Canadian Natural Resources Limited

Canadian Tire – Cochrane

Can West Legacy Inc.

Capital Power

CCI Inc.

City of Fort Saskatchewan

City of Medicine Hat

ConocoPhillips Canada Resources Corp.

County of Cardston

County of Warner

Cycle Works Motorsports

Dow Chemical Canada ULC

Edmonton Trout Fishing Club

EQUUS

Foster Park Brokers

Holiday Inn Calgary MacLeod Trail South

HUVAN Construction

Inter Pipeline Ltd.

Korth Group

MacFarlane Pheasants Inc.

Martin Motor Sports

Matrix Solutions Inc.

Municipal District of Greenview

Mercer Peace River Pulp Ltd.

Mountain View County

Northern Sunrise County

Natura Drain Products

Nutrien

Saddle Hills County

Shell Canada Limited

Sinopac Canada Ltd.

Southern Alberta Bowhunters Association

St. Mary's River Irrigation District

Suncor Energy

Syncrude Canada Ltd.

SysGen Solutions Group Ltd.

Taber Irrigation District

TeraGo Networks

Thompson-Pallister Bait Company Ltd.

Thorhild County

Tourmaline Oil

Town of Cochrane

Town of Taber

TransAlta Generation Partnership

West Fraser Mills Ltd.

WiBand Communications

Wolf Midstream

Yeti Roughrider Rentals Ltd.



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ab-conservation.com
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