

alberta prairie conservation

[2016 - 2020]

ACTION PLAN



The Prairie Conservation Forum wishes to thank:



- Members of the Prairie Conservation Forum for their involvement in the development of this PCAP and for the use of their photos within this plan.
- The core PCAP team: Ian Dyson, Karen Raven, Nolan Ball, Katheryn Taylor.
- Jordon Christianson, Ross Owen, Brandy Downey, Norine Ambrose,
 Ron McNeil, and Sasha Harriott for providing comments and edits to the PCAP.

This report may be cited as:

Prairie Conservation Forum. January 2016. <u>Alberta Prairie Conservation Action Plan: 2016-2020</u>. Published by the Prairie Conservation Forum, Lethbridge, Alberta. 30 pages.

Copies of this report may be obtained from:

Prairie Conservation Forum 2nd Floor, Provincial Building 200 – 5th Avenue South LETHBRIDGE, Alberta T1J 4L1

This report may be viewed on the Internet at:

http://www.albertapcf.org

ISBN No. 978-0-9920848-4-4 (printed) ISBN No. 978-0-9920848-3-7 (on-line)

This publication has been printed in Canada on recycled paper.

Executive Summary

The Prairie Conservation Forum (PCF) is continuing our collaborative efforts with our 6th Prairie Conservation Action Plan (PCAP); building on the work of past PCAPs and working towards achieving our identified strategies and outcomes. The goal of these five-year plans is to use collaborative approaches among our diverse member stakeholders and partners to initiate and sustain prairie-wide efforts to conserve and manage native prairie species, communities, and habitats. Our vision is that the biological diversity of native prairie and parkland ecosystems is secure under the mindful and committed stewardship of all Albertans. The 2016-2020 PCAP builds on our work from previous PCAPs and continues to provide an ongoing profile for prairie and parkland conservation initiatives.

Alberta's grassland and parkland natural regions are part of a much larger grassland ecosystem called the North American Great Plains that extends from Alberta down through the United States and into Mexico. It is rich in biodiversity and provides ecological, cultural and economic benefits for all Albertans. As such, multiple competing demands are prevalent within the region, including grazing, conversion of native landscapes for agricultural, urban expansion, and industrial land uses. Intensive use of land and water can change the health, integrity, capacity and resilience of the ecosystem to maintain the services critical to our current and future society. The PCF recognizes the need for different activities to occur on the landscape, and because of this, collaborates with many different stakeholders to find ways to manage and conserve native prairie landscapes while still benefitting from the resources the prairies have to offer.

PCAP 2016-2020 recognizes the need to focus activities (that the PCF has the capacity to achieve, either alone or in partnership) around three primary strategies: to complete inventories and assessments of native biodiversity in Alberta; to share knowledge and foster a dialogue around prairie conservation; and to promote stewardship of native prairie and parkland ecosystems. Three important strategic or long-term environmental outcomes are also necessary to bring the PCAP Vision to reality: maintain large native prairie and parkland landscapes; conserve connecting corridors for biodiversity; and protect isolated native habitats. These outcomes require close linkage to management and planning decisions by all levels of government and private land owners. Our educational approach to achieving all outcomes includes educational and awareness programming as well as providing web-based access to prairie conservation information.

The Prairie Conservation Forum takes a coordinating and advisory role, respecting the individual mandates and interests of its members. We recognize that the success of achieving our vision relies upon PCF members to implement PCF programs and activities in their respective organizations. Implementation of the PCAP requires an involved and active membership and Board of Directors. Additionally, successfully achieving our outcomes relies heavily upon the capacity of its member organizations and individuals. The PCF welcomes you to join us on this journey.

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Minister's Foreword

With smart management, innovation and a common set of goals, we will be able to enjoy our prairies and parklands for decades to come.

Our Alberta prairies are landscapes of green and gold, rich with biodiversity, immense beauty and ecological heritage. They are lands that have helped build and sustain our population for hundreds of years through agriculture, industry and nature itself. We, as Albertans, and as stewards of the environment, have to ensure the future sustainability of our landscapes, air and water through responsible resource management.

There is a delicate balance needed between people and environment, ecology and economy. This is not an easy thing to do, but I know we are up for the challenge. Finding that balance and finding sustainable solutions for our prairie and parkland ecosystems is what the 2016-2020 Prairie Conservation Action Plan sets out to do.

We have made notable strides since the original Prairie Conservation Action Plan was released in 1989 by the Governments of Alberta, Saskatchewan, Manitoba and the World Wildlife Fund Canada, including contributing to environmental guidelines for wind energy development, promoting stewardship of native grasslands and contributing to guidelines for managing environmental pollution originating from human activity on native prairie. These successes were all results of partnerships forged through this plan.

Work does not stop there. This action plan is a blueprint that will foster continued stewardship and partnership in our province through the Prairie Conservation Forum. Built on organizations and individuals who are passionate about prairie and parkland conservation initiatives, federal and provincial agencies; industry; landholders; agricultural and environmental groups; municipalities; and academia have been informing, facilitating conversations and educating the public for more than two decades.

And this plan is only one piece of the larger conservation movement in our province. We will continue to work with all Albertans through the regional planning process to identify key conservation areas, such as the Castle area in the southeast. We're currently developing a management plan for the Castle, and are committed to exploring similar conservation opportunities throughout the province.

With smart management, innovation and a common set of goals, we will be able to enjoy our prairies and parklands for decades to come. I look forward to seeing what outcomes this action plan will bring.

Shannon Phillips

Minister of Environment and Parks



Preface











The Prairie Conservation Forum (PCF) has been working collaboratively for over 20 years towards prairie conservation through the development and implementation of Prairie Conservation Action Plans (PCAP). The 2016-2020 PCAP is a 5 year action plan that builds on our work from previous PCAPs. Successes from our 2011-2015 Prairie Conservation Action Plan include:

Completed inventories and assessments to assist Alberta Environment and Parks (AEP) to verify the Grassland Vegetation Inventory (GVI);

Developed indicators for change analysis in cooperation with the Alberta Biodiversity Monitoring Institute (ABMI) to measure long term outcomes;

Developed and delivered the "Deep Roots' interactive school program

Facilitated the delivery of the MULTISAR program with AEP; and

Promoted stewardship of native grasslands through our engagement in the Land Use Framework regional planning process and contributed to guidelines for managing anthropogenic impacts on native prairie.

Details on these initiatives are highlighted in more detail on pages 23-24.

This 2016-2020 Prairie Conservation Action Plan was developed by building on accomplishments from the previous 2011-2015 plan as well as using workshops with our membership to identify and achieve consensus on continuing priorities and new priorities. The PCF has identified strategies and measures to achieve our priorities that maximize and leverage our resources and partnerships to achieve these goals.

The PCF has worked with its members and partners to identify priority areas for native prairie conservation and has raised awareness of the biological diversity and the inherent value of these landscapes. The PCF has conveyed conservation information through education and outreach and will continue to do so in a more targeted way. The PCF efforts have become more focussed on volunteer teams and through partnerships with supporting organizations. With this approach, the PCF can continue to strategically and practically support increased awareness and sustainable management of native prairie and its benefits to all Albertans. This PCAP identifies the importance of continuing to provide input to current Government of Alberta land use planning initiatives and policies to assist in achieving the vision and mission of the PCF and to ensure the benefits of native prairie and parkland are available for future generations. All Albertans, in some way, depend on native prairie and parkland ecosystems. We not only rely on these ecosystems for our livelihoods and

traditional uses, we also rely on them for the many benefits derived from healthy, native ecosystems. Clean water and air, flood water storage and retention in natural riparian areas, capture and filtering of water run-off, carbon storage, species diversity (both plant and animal) and drought tolerance all contribute to a healthy environment for all Albertans to live in and enjoy.

By continuing our successful, collaborative approach among our member stakeholders and partners, the PCF can ensure positive benefits for native prairie and parkland and those species, including human populations, who depend on and benefit from its continued, healthy existence. The PCF welcomes you to join us on this journey. We all have something to contribute. The PCF has flourished through the dedication of members from a wide array of backgrounds, our openness to new ideas and our willingness to work together. Collectively we are deepening our understanding of native prairie, taking action to sustain it and at the same time increasing our appreciation of what it does to sustain us. We welcome you to join the PCF!

Karen Raven 2015-2016 Chair Alberta Prairie Conservation Forum

Alberta's Native Prairie Landscape

Alberta's native prairie and parkland landscapes are the most northerly extensions of the North American Great Plains. (Figure 1)

This includes portions of the Northwestern Glaciated Plains (Figure 2), the Cypress Uplands and the aspen parkland of the Northern Glaciated Plains. This semiarid area is considered a transitional ecoregion as it is located between the more humid boreal forest and the drier Northwestern Great Plains.

Alberta's grassland and parkland natural regions are rich in biodiversity and have significant heritage value, while providing ongoing ecological, cultural and economic benefits for all Albertans. The extensive tracts of public and private rangelands in central and southern Alberta are home to both large and small areas of native mixed-grass ecosystems. Sustaining the ecological function of native landscapes throughout prairie and parkland Alberta and adjoining areas, as well as maintaining the connectivity of our landscape within the larger Northwestern Glaciated Plains, provides the greatest long term assurance of environmental quality for the citizens of Alberta.

Native prairie is a fundamental economic and social resource on which the ranching community depends. Ranching provides a unique livelihood and lifestyle, makes

a significant contribution to the provincial economy, and with good stewardship, conserves native prairie. The ranching community assumes a large responsibility in maintaining our grassland and parkland landscapes.

Fostering a stewardship ethic among all current and future users of native prairie rangelands is critical to the success of prairie conservation efforts in Alberta. It demands an enlightened understanding of ecological and economic relationships and an ability to resist persistent pressures to fragment land and intensify land use for short-term economic gains. A strong stewardship ethic strives to maintain long-term values and benefits.

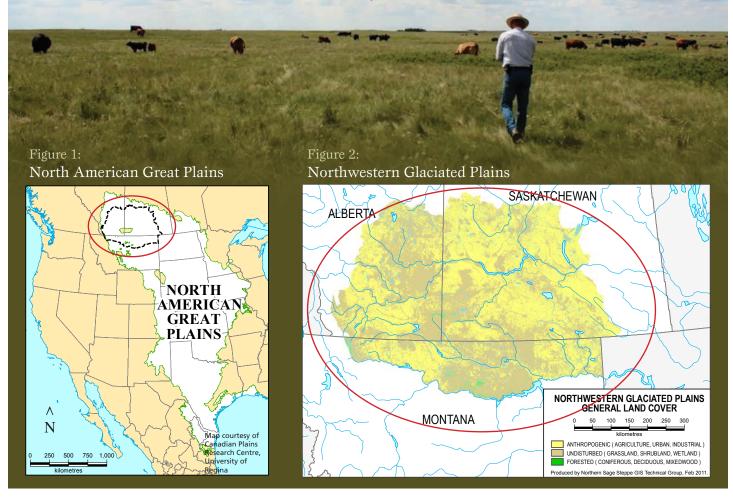
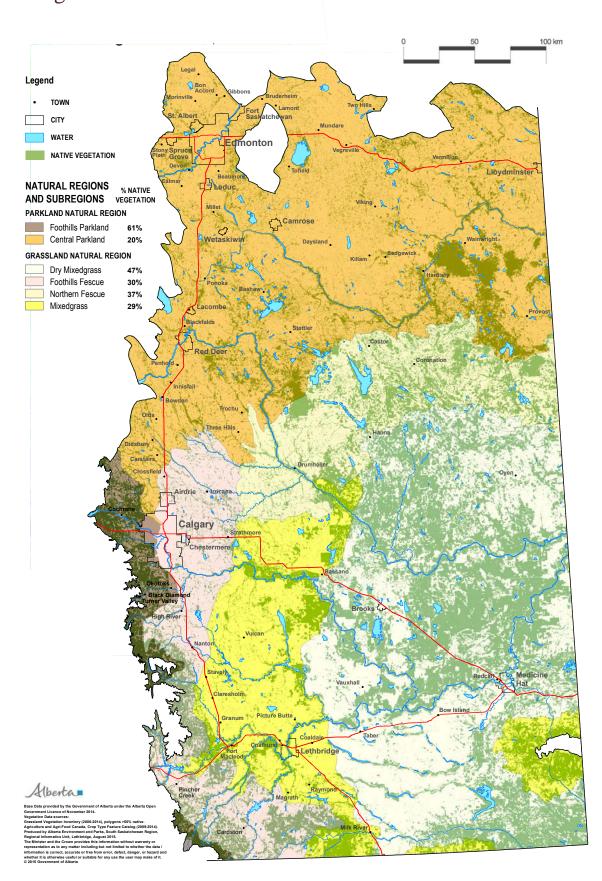


Figure 3: Prairie and Parkland Alberta: Natural Regions and Native Prairie



Strategic Issues

Ensuring Ecosystem Health and Function and Balancing Human Values



There are multiple competing demands on almost all lands within our province and this is prevalent within the native prairie and parkland regions.

These regions are home to fertile soils, diverse grasslands, multiple wildlife species, large open spaces, communities (both large and small), farming and ranching, oil and gas resources, and other land users. These multiple values and uses brought the PCF membership together in appreciation for the natural landscape and in recognition of the necessity of working together to ensure its continued existence and sustainable use. The strategic challenges of the PCF are driven by the diversity and richness of these areas and the benefits they provide such as food, energy, carbon sequestration, wildlife habitat, clean water, recreation, hunting, gathering and spiritual renewal. The challenge is in ensuring we understand the extent, biological

diversity and ecological function of these regions to enable an informed discussion and input to current and existing initiatives and policies shaping the use of these regions and their resources. This knowledge adds additional dimensions to our understanding of the inherent value of these lands which has been appreciated through time, beginning with First Nations, early settlers, and to our current and future society.

An additional challenge is ensuring that connection to the land remains and is strengthened. Staving off apathy is critical. Our wealth and opportunity in Alberta has attracted many new citizens each year and many current Albertans have not grown up with a strong connection to the land or link to our history. If Albertans are unaware of the ecological, social and economic importance of these landscapes, achieving the delicate balance needed to manage these competing interests becomes more of a challenge.

Our land's ecological health is linked to our economic health and vice versa within the umbrella of our social context. Together we can be part of the ongoing challenges facing the region, or we can be part of the solution. We believe the PCF, with our members, stakeholder citizens and partners, have demonstrated the latter, and will continue to do so. It is just that important. This current Prairie Conservation Action Plan builds on the work begun many years ago and strives, through our collaborative efforts, to offer credible actions to meet these challenges.

Alberta's native prairie and parkland are part of our past and present; with collaborative, thoughtful action, they will also be part of our future. One person can make a difference, and working together we can go far in ensuring a healthy native prairie, a healthy economy and a healthy social fabric.

Contemporary Challenges

Population growth has driven urban expansion and rural subdivision development.

Increasing wealth among Albertans who are seeking a country lifestyle impacts high value landscapes and fragments portions of remaining natural landscapes. Infrastructure development for transportation of goods and people has intersected important migration corridors for wildlife across all of the prairie and parkland.

Where suitable for cultivation, much of the natural grasslands have been converted to other uses. As traditional and specialty crop markets strengthen and new ones emerge, the pressure to convert marginal soils that have been previously maintained as native grasslands increases. New technology and innovation has made it easier to access the rich natural fertility and soil carbon reserves that have built up in these grasslands over many centuries.

The entire carbon based energy sector is a high profile and unpredictable flashpoint. Alberta's level of activity can be impacted by any one, or any combination of commodity prices, global economics, politics, the global climate change agenda or social acceptability. The energy/environment relationship

is not just top of mind provincially, but nationally and globally. It is a relationship that has major implications for Alberta's native prairie and parkland ecosystems. Conventional oil and gas extraction in Alberta continues to impact native landscapes with the infrastructure necessary to support it (such as roads, wells, storage, etc). Although there is a history of cyclical pressure from this industry on the landscape (higher use when the economy is robust and lower use when the economy is not), this industry will likely continue to place pressure on native landscapes well into the future. But it's not just conventional oil and gas. There is non-conventional gas development from coalbed methane or shale gas. Vast ancient coal reserves also underlie Alberta's prairie and parkland landscapes.

Unfortunately for native prairie, it's not just the carbon energy sector. It's footprint. In recent years wind generation has increased dramatically in southern Alberta. Often, the best suited locations for these projects occur on exposed prairie ridges and high value ecological landscapes. Solar generation is also getting renewed attention. Moreover, alternate energy sources generate electricity on site, requiring construction

of transmission and distribution infrastructure.

Regardless of the kind of energy development, there is a risk to conservation of native grasslands ecosystems, through footprint, fragmentation, invasive species spread and long-term change of ecosystem integrity. The prairie conservation challenges for the entire renewable and non-renewable energy sector are to reduce footprint and associated impacts. Key requirements are: limiting and coordinating the total footprint activity at any one time; coordination amongst different energy plays (to limit footprint); and timing and phasing activities so reclamation certification precedes new activity. Restoration of disturbed landscapes takes on a very important role as the industry moves through the landscape, and strong reclamation commitments are invaluable to ensuring the continued growth and survivability of native plants and the animals that are associated with them.

The conversion of native landscapes for agricultural, urban and industrial land uses impacts a functioning ecosystem. Intensive use of land and water can change the health, integrity, capacity and resilience of the ecosystem to maintain the services critical to our current and future society.

Threats to landscape integrity include:

- Urban expansion
- Agricultural land conversions and intensification of use
- Development of energy resources including wind, coal and natural gas
- Introduced species
- Climate change uncertainty

Governance Trends

Approaches to environmental management and governance in Alberta continue to shift and evolve.

There is always a tendency in organizations - large and small, government and non-government - to 'discharge their own mandate'. But the overall trend-line in environmental management is toward collaboration as the norm. Some of the most successful programs have collaboration built in as a delivery principle – the Multiple Species at Risk Program (MULTISAR), a program that works with landholders to support species at risk, is a prime example. Also, partnerships comprised of other organizations or other people continue to be vibrant and active. All are place-based and most are broad-tent in composition. Examples include, but are not limited to: partnerships initiated as a result of Alberta Government air and water strategies – such as Airsheds and Watershed Planning and Advisory Councils; locally driven watershed, landholder and municipal groups such as watershed stewardship groups, the Pekisko landowners and the Southern Foothills Initiative; trans-boundary partnerships such as the Crown Managers Partnership, the Crown Round Table and the Plains and Prairie Potholes Landscape Conservation Cooperative; and of course native prairie-focused partnerships such as the Prairie Conservation Forum and the Foothills Restoration Forum.

The Government of Alberta promotes integrated and sustainable approaches to resource and environmental management

through an integrated resource management system that can address environmental cumulative effects and meet social, economic and environmental goals. Regional plans developed under the Land Use Framework are a major delivery mechanism. as is the establishment of an energy regulator (Alberta Energy Regulator), a monitoring agency (Alberta Environmental Monitoring, Evaluation and Reporting Agency) that are intended to work as components of an integrated system along with the environmental and natural resource management policy agency (Alberta Environment and Parks). During the course of the last PCAP the South Saskatchewan Regional Plan was developed and approved – it places policy emphasis on the conservation of native grasslands and biodiversity in the southern portion of the Grassland Natural Region. The North Saskatchewan Regional Plan which addresses the northern portion of the Parkland Natural Region will be developed during the term of this PCAP.

Agriculture is the dominant land use in the prairie and parkland regions of Alberta; both federal and provincial governments place strong emphasis on environmental and economic sustainability, responsible stewardship and innovation.

In the bigger picture Alberta's vulnerability to resource-based commodity prices continues. At the same time we have huge liabilities on the environmental file that affect both our environmental



reputation and economic interests equally. The first is climate change, because of our carbon footprint. Effective response requires both controlling emissions and leading on adaptation measures. The second are the perceptions of our neighbours and our trading partners about our broader environmental stewardship vis-à-vis development. Effective response requires demonstration of seriousness of intent with regard to environmental stewardship.

The outcomes, approaches and actions in the new PCAP have been developed with these governance trends in mind. The PCF involves a large partnership of organizations and individuals and our project delivery philosophy is driven by partnering approaches. The PCF promotes the development and delivery of biodiversity outcomes, integrated with the socio-economic fabric of prairie and parkland Alberta, through an integrated resource management system that includes regional plans. The PCF supports and works closely with the prairie and parkland agricultural community. Finally, trans-boundary collaboration and climate change adaptation are new themes in this PCAP which are included to enhance the contribution the Prairie Conservation Forum is making to build Alberta's environmental performance reputation.

History of a Prairie Conservation Strategy

The first Prairie Conservation
Action Plan (PCAP) was released
by the World Wildlife Fund

- Canada and the provincial
governments of Manitoba,
Saskatchewan and Alberta in
1988. It was a five-year blueprint
(which concluded in 1994),
aimed at prairie-wide efforts
to conserve and manage native
prairie species, communities,
and habitats.

The Prairie Conservation Forum (originally named the Prairie

Conservation Coordinating
Committee), was established
in 1988 by the Government
of Alberta in response to the
original PCAP. The PCF has
grown over the last 28 years,
and today is comprised of some
fifty member organizations.
These organizations represent
three levels of government,
non-government organizations,
industry, academia, and
agricultural and environmental
interest groups.

Following the conclusion of the first prairie-wide PCAP in 1994, provincial successor PCAPs were developed in Alberta, Saskatchewan and Manitoba. The Alberta and Saskatchewan PCAP groups continue to remain active today. The 2016-2020 PCAP is the sixth generation offspring of the original PCAP, and continues to provide an ongoing profile for prairie and parkland conservation initiatives.



Strategic Direction

VISION

The biological diversity of native prairie and parkland ecosystems is secure under the mindful and committed stewardship of all Albertans.

MISSION

The Prairie Conservation Forum is open to all organizations that support and have an interest in achieving the PCAP Vision and who are willing to apply the PCF's Guiding Principles. The Vision will be achieved by:

- Defining desired biodiversity outcomes and measuring progress towards outcomes;
- Acquiring and sharing data, information and knowledge;
- Advancing understanding and increasing awareness of the native prairie and parkland landscape and its interdependence with the social and economic needs of society;
- Collaborating to enhance the conservation and compatible use of native prairie and parkland landscapes; and
- Maintaining the stability and building the capacity of the Prairie Conservation Forum.

STRATEGIES

This PCAP recognizes the need to focus activities around three primary strategies. These strategies underlie all of the approaches and actions that follow within this PCAP.

- 1. Completing inventories and assessments of native biodiversity within Alberta.
- Identify and map areas with high native biodiversity values, what's important, where it is and why (Figure 4, from 2011-2015 PCAP).

Maps provide a powerful tool for visualizing resource management issues. They can depict the current state of knowledge and represent the shared values among stakeholders. Collaboration in producing and updating maps promotes environmental democracy, forges networks of association across jurisdictions and among stakeholders, and facilitates coordination and cooperation for advancing collective actions.

2. Sharing knowledge and fostering a dialogue around prairie conservation

 The dialogue will be focused on rural Albertans, local governments, provincial agencies and other organizations that share an interest in prairie and parkland conservation.

The enduring conservation of native prairie and parklands requires the active involvement and cooperation of affected interests including local communities, industry, non-government organizations, and all levels of government. Numerous organizations, agencies and industries possess data, information and knowledge that, if shared, could enhance our capacity to understand, plan and implement prairie

and parkland conservation initiatives.

The PCF aims to foster partnerships, active engagement and increased awareness of the PCF's mission and the new PCAP among PCF member organizations, government agencies, conservation and agricultural organizations, and industry.

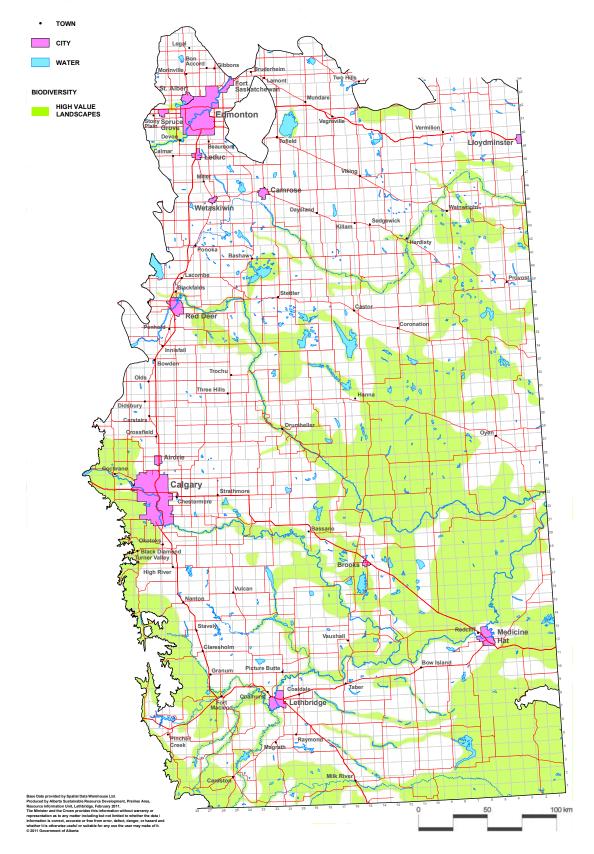
- 3. Promoting stewardship of native prairie and parkland ecosystems.
- Effective stewardship implies that the actions of PCF will make a positive impact.

The collection and sharing of knowledge must support and facilitate prairie conservation. In reality, it is the stewardship of many that will be necessary to achieve the long term outcomes of the Prairie Conservation Action Plan.

Stewardship works at different levels from federal and provincial agencies, to First Nations, local governments and private landowners. A clear focus of this PCAP is in support of provincial agencies and local governments.

Delivering on these strategies is not simple and straightforward. They are complex and will rely heavily on activities that are consistent with the Mission and Guiding Principles. The actions listed in this plan provide a sense of the PCF priorities in the next five years. However, the annual PCF work plan will provide more specificity and consider other actions as circumstances change and opportunities arise.

Figure 4: Native Biodiversity: High Value Landscapes in Prairie and Parkland Alberta



OUTCOMES

In order to bring the PCAP Vision to reality, important strategic or long-term environmental outcomes must be achieved. These outcomes require close linkage to management and planning decisions by all levels of government and private land owners. These outcomes are closely connected to existing functional ecosystems in prairie and parkland Alberta. Three long term outcomes will be the focus of the PCF, with approaches and actions to address each outcome.

OUTCOME



Maintain Large Native Prairie and Parkland Landscapes

The existence of intact and fully functioning native prairie and parkland landscapes in Alberta are the best guarantor of future regional biodiversity and environmental quality.

These open spaces provide ecological goods and services such as carbon storage, clean air and water, as well as outdoor recreation, nature enjoyment activities and hunting and fishing opportunities that enhance our quality of life. They are also home to families and ranching communities that have frequently proven to be faithful stewards of the environment, and as such have become icons of western Canadian society. In the first half of the 1900s, during the time of western expansion and settlement, large tracts of native prairie were ploughed by pioneers who were homesteading on native prairie and parkland landscapes in Alberta as required by the homestead act of

the times. As a result of the massive landscape changes associated with the settlement period, we have inherited a diminished biodiversity, and the native biodiversity which currently exists is frequently under threat. For example, over 75% of Alberta's species at risk, including Sage-Grouse, Burrowing Owls, Sprague's Pipit, Ferruginous Hawk, Swift Fox, Western Silvery Minnow, Short Horned Lizard, and the Western Spiderwort, are associated with prairie environments. Their decline is largely due to these landscape changes. Alberta's remaining native landscapes are an integral component of a much larger continental ecosystem. The maintenance of large native landscapes, whose integrity has not been compromised, affords society a greater range of options in the future and will help us to better withstand the anticipated climatic changes, including increased variability of drought and flooding, that are forecast for the future.

Approaches and Actions

Large Blocks of Native Prairie

*Actions in bold font are actions that the PCF will undertake directly, whereas actions in normal font are actions that PCF partners will undertake.

Approach 1

Promote Large Landscape Conservation

- a. Provide input to government policy through engagement in the South Saskatchewan Regional Plan (SSRP), North Saskatchewan Regional Plan (NSRP), and Red Deer Regional Plan (RDRP).
- b. Co-ordinate a large media project to bring awareness of native landscapes to Albertans.
- Encourage the activity of large landscape conservation planning on the prairies among conservation groups and individuals (eg. MULTISAR).
- d. Work with other organizations to support Ecological Goods & Services values to protect native prairie.

- e. Support the engagement of non-government organizations (NGO's), private landowners, and related organizations in ensuring that large intact blocks of native prairie stay intact (for example, through market-based incentives, conservation easements, purchase of native land to remain native through active management, etc.).
- f. Support work on inventories and assessments that apply to large landscape conservation.



Approach 2

Understanding of Change Analysis and Intactness

Actions

- a. Produce occasional paper to document change analysis using Native Prairie Vegetation Inventory (NPVI), Grassland Vegetation Inventory (GVI).
- Continue to build the understanding from previous reports of native prairie intactness and connectivity of large landscapes.
- c. Host a workshop to facilitate discussion about the risk of losing these identified landscapes and determine what can be done to balance impacts and protection of native prairie.
- d. Support work that enhances the understanding of human footprint, climate change, and invasive stressors on native prairie and parkland ecosystems and that identifies response strategies to retain resilience.



Approach 3

Minimal Disturbance and Restoration of Industrial Footprint on Native Prairie

Actions

- a. Influence frameworks, comprehensive guidelines and policy development for all industrial footprints that deal with restoration and reclamation.
- Continue engagement and support related to minimal disturbance approaches for wind energy development on native prairie.

Approach 4

Encourage Stewardship among Land Managers

Actions

 Support conservation practices by managers of large native landscapes. Apply best management practices of conserving native prairie and initiate pilot projects.



OUTCOME Conserve Connecting Corridors for Biodiversity

Habitat connectivity is essential to maintain native biodiversity and ecosystem function. The conservation and restoration of important corridors will help to maintain functional native prairie and parkland landscapes.

The overwhelming majority of our native prairie and parkland landscapes are fragmented, and in some areas the connectivity within and between ecosystems has been severed, creating habitat islands. This has the effect of isolating genetic communities, causing species decline or extirpation from traditional ranges, and reducing native biodiversity. The Greater Sagegrouse, which once ranged north of the Red Deer River, is now confined to a small geographical area to the south of the Cypress Hills and is facing rapid population decline within Alberta. The Sage grouse has become a casualty of land fragmentation associated

with increasing industrialization of the prairie landscape. Landscape fragmentation within the last five years has also reduced Ferruginous Hawk populations to the extent that this species is now the subject of a provincial recovery plan. The Pronghorn, an important game species and a prairie icon, migrates through a bottleneck across the Trans-Canada highway to the east of Medicine Hat - a habitat corridor that may be in jeopardy because of increased traffic volumes and development pressures within this movement corridor. Further habitat blockages in this key corridor could result in significant winter population die offs and genetic isolation within Alberta's Pronghorn populations. The conservation of major river corridors, coulee systems, and critical migratory and home range travel routes are essential to the integrity of ecosystems and biological diversity found in prairie and parkland Alberta.

Approaches and Actions Connecting Corridors

*Actions in bold font are actions that the PCF will undertake directly, whereas actions in normal font are actions that PCF partners will undertake.

Approach 1

Analysis of Location and Significance

- a. Confirm location and significance of major corridors.
- b. Conduct a pilot of fine-scale mapping and assessment of at least two other corridors.
- Collaborate with research and practitioner parties to better understand structural and functional connectivity on regional and local landscapes.
- d. Undertake a stakeholder risk assessment workshop to identify risks associated with loss of connectivity, major causes of connectivity loss and strategies available to retain or re-establish connectivity.
- e. Encourage and support work by agencies, research foundations or academia that can support any of the above actions.
- Support work on inventories and assessments that apply to connecting corridors.

Approach 2

Build Awareness and Networking

Actions

- For delineated corridors, identify relevant stakeholders and partnerships. Encourage and support corridor conservation networking and collaboration.
- Develop and target extension materials or practical guides on the importance of connectivity and connectivity retention.
 Target and tailor to landholder, municipal and industry audiences.
- c. Ensure current information related to corridor analysis, workshops or extension materials is posted on, or linked to and from, the PCF website.

Approach 3

Promote Stewardship

Actions

- a. Provide input to government policy through engagement in regional planning and policy initiatives.
- Work with appropriate jurisdictions and stakeholders to put in place a corridor conservation/retention strategy for one major corridor.
- c. Encourage and support development of comprehensive corridor conservation planning guidelines for right-of-way alignments, development control, industry activity and land use practices.

Approach 4

Establish Trans-boundary Connections

- a. Explore opportunities for enhanced landscape-level collaboration, confirm known landscape/species connectivity, and identify gaps and priorities. Commence by holding a workshop with Montana and Saskatchewan agencies and stakeholders to build relationships.
- Encourage and support work by agencies, research foundations or academia to fill information and research gaps or support spatial analysis of identified priorities.







OUTCOME | Protect Isolated Native Habitats

Within fragmented landscapes there exist small, isolated pockets of ecological refugia that may be as important for native biodiversity conservation as larger prairie and parkland landscapes. These require identification, study and where required, the promotion of stewardship.

Collectively, these smaller areas offer waypoints of refuge for migrating wildlife and often contain species that are significant to hunters and anglers; or, they serve as oases for species at risk. For example, Alberta's established wetlands and ephemeral shoaling and loafing areas, which are used by waterfowl and shorebirds, collectively contribute to our international commitments for the maintenance of critical breeding grounds for North American migratory waterfowl. Some parks and protected areas are disconnected or are becoming increasingly isolated through land fragmentation, yet these protected areas are capable of retaining diverse

communities of native wildlife and plants. These small scattered pockets of natural habitat, which include but are not limited to riparian areas, wetlands, rocky outcrops and remnant parcels of native prairie and parkland, are usually part of the (working) land base that is used by farmers and ranchers. The retention of viable pockets and patches of habitat provides an example of the cooperative stewardship which is being undertaken by some landowners. Protecting isolated habitats provides an important link in the connectivity chain within a fragmented ecosystem.

Some landscapes have higher native biodiversity than other areas (Figure 4). Figure 4 was prepared by compiling four different map layers including native vegetation, species at risk, ecosystem services and environmentally significant areas. This map provides an appropriate scale to initiate a dialogue around the first two outcomes (maintain large landscapes; conserve connecting corridors) but is too coarse of a scale to inform the third outcome (protect isolated habitats).

Approaches and Actions Isolated Habitats

*Actions in bold font are actions that the PCF will undertake directly, whereas actions in normal font are actions that PCF partners will undertake.

Approach 1

Define 'Isolated' Habitats/ Fragments

- a. Encourage and support an organization or researchers to utilize existing GIS datasets and reports to undertake a literature review to identify common criteria that define isolated native habitats.
- b. Support a pilot project to conduct ground-truthing of isolated habitat fragments to determine quality.
- Use existing information and expertise (such as rare or atrisk species and continentally important stop-over habitats) to focus attention on the significant isolated habitats.
- d. Explore with academia and other organizations the opportunity to support research-related work in this area following completion of Approach 2 or ongoing work that is consistent with this strategy. Commit funds to support this research.

Approach 2

Define what we have and location of, isolated habitats. This includes confirming a definition based on GIS analysis and literature review

Actions

- Utilize existing GIS datasets held by PCF member organizations to confirm and determine locations and sizes of isolated habitat fragments.
- Produce a publicly available map, post it to the PCF website, and distribute to member organizations.
- Support work on inventories and assessments that draw attention to, and helps define, the importance of isolated native habitats.

Approach 3

Identify the Value or Values of these Isolated Parcels

Actions

a. Encourage and support an organization or researcher to conduct a literature review of values and concerns related to isolated habitats. This may be done in conjunction with bullet 4, approach 1.

Produce a paper suitable for posting to the PCF website and distributing to member organizations.

 Hold a facilitated workshop with subject matter experts, including PCF membership, to prioritize areas and explore tools to conserve them (PCF to host and to hire a facilitator).

Produce a paper outlining the process of the workshop and identifying the priorities and strategies resulting from the workshop (perhaps provided by the facilitator as part of the contract).



Education Approaches

Protect Isolated Native Habitats

*Actions in bold font are actions that the PCF will undertake directly, whereas actions in normal font are actions that PCF partners will undertake.

Approach 1

Education and Awareness Programming

Actions

 a. Promote and produce education materials and products for rural and urban audiences about the prairie and parkland habitats of Alberta.

Approach 2

Provide Web-Based Access to Prairie Conservation Information

Actions

a. Continue to update and manage the PCF website.

Update the PCF website to help increase the profile of work being done in the prairies and parkland habitats of Alberta by PCF and by PCF member organizations.

b. Consider using the PCF website as a link to the suite of conservation tools available.

Ensure information is available and accessible to everyone.

Guiding Principles of the Prairie Conservation Forum

Increase the capacity of the Prairie Conservation Forum and its member organizations to achieve the Vision and Outcomes of the Prairie Conservation Action Plan.

The strength of the PCF lies within its broad membership and their capacity to work both together and independently to achieve common goals. The PCF provides coordinating and advisory functions while respecting the individual mandates and interests of its members. As such, the PCF will follow basic guiding principles:

- Management responsibilities for native prairie and parkland fall primarily on public agencies (i.e. Federal, Provincial, and Local Governments), First Nations and private landowners. The PCF will only support and facilitate discussions concerning management actions that contribute positively to the Vision and Mission of the PCF.
- The PCF will facilitate networking, information exchange and the pursuit of common objectives amongst member organizations and with other jurisdictions outside of Alberta.
- Partnership activities are based on the belief that the social and economic benefits which are derived from prairie and parkland ecosystems are dependent on the ecological health of these systems. Therefore, management strategies will be promoted that ensure the ongoing health of these ecosystems.
- The PCF Partnership draws together diverse opinions and approaches to ecosystem management. To best ensure the development of collaborative and effective solutions, the Partnership will interact in a manner that is respectful of that diversity.

- 5 PCF members will strive to implement PCF programs and activities in their respective organizations in support of the PCF Vision.
- The Vision can only be achieved by the efforts of many, including the PCF itself and its member organizations, accompanied by effective working relationships with others who share the vision.
- The PCF supports the equitable sharing of social and economic costs and the benefits of maintaining native biodiversity and ecological services among all segments of society.



Building Capacity in the Prairie Conservation Forum

To ensure that the PCF can continue to achieve the Vision and Outcomes of the Prairie Conservation Action Plan, supporting activities are required. These are:

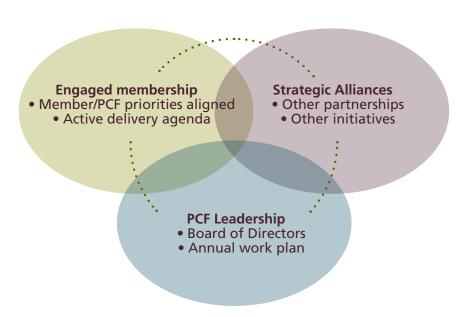
- a. Continue to establish and maintain a stable funding base and institutional support to maintain the PCF Coordinator position and to advance key strategies within the PCAP.
- b. Promote and maintain a diverse membership and Board of Directors to advance the PCF's Vision and Outcomes.
- c. Promote awareness, linkages and partnerships with PCF members, Government of Alberta agencies

- d. Encourage more participation on the PCF from organizations in the Central Parkland Natural Region.
- e. Establish and maintain mechanisms to facilitate the timely exchange of information and ideas amongst member organizations in the PCF.



Implementation

The 2016-2020 PCAP follows the format of the previous PCAP by including three long-term outcomes. Approaches and actions have been identified to address each of these three outcomes and highlights activities that will be led and implemented by the PCF, as well as some activities that could and should be led by members. As with the previous PCAP, this direction for the PCAP requires a more involved and active membership and Board of Directors. The following approach will be used to ensure that the PCAP is implemented within the acknowledged constraints in capacity of the PCF.





- The PCF Board of Directors will be responsible for overseeing and facilitating the implementation of the PCAP and in cooperation with subcommittees, setting out a process for achieving defined plan outcomes.
- An annual work plan and a reporting structure will be established by the Board that identifies the PCF's priorities, operations, and activities.
- In preparing the work plan, the PCF will consider opportunities to engage the membership and establish effective partnerships with other organizations whose mandate is directly related to the Strategic Direction in the PCAP.
- An annual report will be prepared to document PCF achievements at the end of each year and to help identify priorities for amendments to the work plan.
- The annual report for the previous year and the draft work plan for the coming year will be presented to the PCF membership at the January Annual General Meeting.
- Standing committees may be established whenever there is a clear and ongoing need to focus PCF efforts around a specific strategy or activity. As a general rule, these committees will be chaired by a member of the Board.
- Task groups may be established whenever a clear task emerges that has a defined outcome, deliverable or endpoint. Task groups may be led by any member of the PCF, and will periodically update the Board on the task group's activity and progress.
- The next five-year Alberta PCAP (2021-2025) should include a section that summarizes key plan achievements and other PCF accomplishments during the life of this PCAP (2016-2020).

Glossary

The following definitions are provided for some of the key terms used in the Alberta PCAP.

Anthropogenic

Environmental modification through the work or activity of humans.

Benchmark

A fixed or established reference point against which change, outcomes and conditions can be measured.

Biological Diversity (Biodiversity)

The variability among living organisms from all sources. including terrestrial, marine and other aquatic ecosystems; and the ecological complexes of which they are part. This includes diversity within species, between species and of ecosystems (Source: The Convention on Biological Diversity (1992).

Community

The populations of different species interacting with each other in a particular habitat.



Connectivity

Habitat linkages that connect distinguishable areas (i.e., habitat nodes/patches) within a landscape.

Conservation

The wise use, management and protection of natural resources to maintain their quality and quantity on a sustainable basis.

Conservation Ethic

A way of acting and thinking within a conservation oriented framework.

Corridor

An intact passageway that allows for the free movement of animals between habitats in a landscape.



Crown Land

Public lands held by the Crown in right of the provincial or federal government. In Alberta, provincial Crown Land is administered under the authority of the Public Lands Act.

Cumulative Effects

The incremental and combined effects (impacts) of human actions and projects on the environment within a geographically defined area.

Demonstration Site (Project)

An area set aside for the express purpose of testing, confirming, or establishing the outcome of resource management interventions for the benefit of informing others.

Ecological Integrity (see also Landscape Integrity)

An ecosystem condition in which natural processes are intact and fully functional and in which biodiversity (i.e., native species and communities) and ecological components are sustained.

Ecosystem

The structure and function of living and non-living components and the ecological processes that link them.

Ecosystem Function

The set of processes that integrate ecosystem components.

Ecosystem Management

The art and science of conserving natural landscape diversity, productivity and processes while providing a sustainable flow of products to meet society's needs.

Ecosystem Services

Ecosystem services, also referred to as ecological goods and services, are the economic and social benefits humans derive, directly and indirectly, from the natural environment, such as clean air, healthy soil, biodiversity, water quality and quantity, and wildliferelated recreation (Source: Constanza et al, 1997; Agriculture and Agri-Food Canada, 2006; Millennium Ecosystem Assessment, 2005).



Environmental Indicators

A measurable variable – describing an environmental state or condition – that is used to assess the effectiveness of chosen strategies in achieving stated resource management goals, targets and objectives.

Ephemeral

Short-lived, as in water bodies such as ponds that fill or streams that flow briefly after precipitation events.

Fauna

All species of vertebrate and invertebrate animals.

Flora

All species of vascular and non-vascular plants.

Functional Ecosystem

A functional ecosystem is one where ecological processes (e.g. energy flow, hydrologic cycling, nutrient cycling, predation, migration) express little to no deviation from an expected condition (Source: Pellant et al. 2005).



GIS (Geographic Information System)

A powerful mapping tool for collecting, storing, retrieving, displaying and transforming or manipulating mapped data. GIS makes 'smart maps' in that any type of data can be mapped where it occurs in real space and used to answer management questions for particular applications. It can be used to model 'what-if' scenarios – which are an important component of environmental and risk assessments – and is used in cumulative impacts modelling as well as examining trends over time and space.

Habitat

The place where an animal or plant lives.

Industrial Footprint

The geographical area which is disturbed or occupied by an industrial project or activity.

Landscape

All of the biotic and abiotic features of an area including vegetation, microbes, wildlife, topography, soils, geology and climate. A landscape can be a small feature such as a hill, or a regional feature such as a natural region or subregion (see definition of these terms).

Landscape Integrity

The quality of a landscape mosaic in which the structure and function of naturally occurring landforms, surface features and landscape characteristics are maintained while accommodating acceptable levels of disturbance.

Management Plan

A document which contains intentional direction statements (i.e., vision, goals, objectives, strategies, outcomes, indicators, targets, thresholds, guidelines, actions, etc.) which are to be pursued to help ensure that a particular species or habitat does not become rare, threatened or endangered.

Microfauna

Insects and other small invertebrates like mites, nematodes and worms that serve an essential role in ecosystems.

Monitoring

The act of assessing some entity with the intent of detecting changes over time. Ecosystem monitoring, for example, might include establishing some benchmarks or records of initial condition and then surveying those benchmarks every few years for changes in wildlife, plant and microbial composition.

Native Biodiversity of Alberta

All forms of life present in prairie and parklands of Alberta at all its levels, from genes and species, to ecosystems and ecological and evolutionary processes that existed in the region before settlement by Europeans. It does not include non-endemic species. Native biodiversity is a reflection of the ecological integrity of native prairie and parkland ecosystems.

Native Prairie

An area of unbroken grassland or aspen parkland dominated by non-introduced species.

Native Prairie Ecosystem

See 'native prairie' and 'ecosystem'. Includes soil, hydrology, vegetation, climate, microbes, wildlife, landscape features, and the processes which link them.

Natural Capital

Refers to those naturally occurring assets that are found on, above or below the earth's surface including: water bodies, soils, forests and grasslands, minerals, energy resources, fish and wildlife, scenery, landforms, etc.

Natural Region/Subregion

A natural region is a broad landscape division characterized by a distinct set of climatic, vegetation, soil, and topographic features. A natural subregion is a finer subdivision of the natural region based on landform variations over a smaller area. There are six natural regions subdivided into 20 natural subregions in Alberta.

Parkland

The 'parkland' includes three natural subregions (Central Parkland, Peace River Parkland and Foothills Parkland) developed on dark-brown or black chernozemic soils. Characteristic vegetation includes rough fescue in grassland portions and trembling aspen in the forested areas. This natural region has a well developed shrub and herbaceous layer.

Protection

Retention of the integrity, authenticity, and intrinsic value of the native prairie resource in perpetuity.

Public Land

Provincial Crown Land. Defined in Alberta's Public Lands Act as "land of the Crown in right of Alberta."

Range, Rangelands

Generally, lands supporting native or introduced plants which are a source of forage for domestic livestock and native animals, and a source of other values derived from ecosystem functions.

Range Management

The art and science of optimizing the returns from rangelands in those combinations most desired by and suitable to society through the manipulation and conservation of range ecosystems.



Recovery Plan

A set of actions for a particular threatened, endangered or extirpated species, aimed at increasing its numbers so that it can be de-listed.

Resource

Any part of the environment which society perceives as having value.

Riparian Management

The actions associated with controlling resource uses in ecosystems along lakes, rivers and streams and on their floodplains to ensure their continuing integrity and function.

Species

A biological unit used to classify living things, describing life forms that share general physical characteristics, and which theoretically can mate and produce fertile offspring.

Species at Risk

An umbrella term that refers to species which fall into the following (federal) categories: extirpated, endangered, threatened, or of special concern (vulnerable).

"Extirpated" species are those that no longer exist in the wild in Canada but exist elsewhere.

"Endangered" species are those that face imminent extirpation or extinction.

"Threatened" species are those which are likely to become endangered if limiting factors are not reversed.

"Special Concern" (Vulnerable) species are those which may become threatened or endangered because of a combination of biological characteristics and identified threats.

Stewardship

The individual and corporate responsibility of one generation to maintain the natural inheritance that it has received, both for its benefit and for the benefit of future generations. A commitment to conserve and maintain the natural features of the land (Source: Grasslands – Toward a North American Conservation Strategy. 2003).

Sustainable Development

Development that meets the needs of the present without compromising the ability of future generations to meet their own needs (Source: Brundtland Commission).

Tame Pasture (tame grassland)

Landscapes which have been converted from natural vegetative cover to forage species through cultivation and seeding.

White Area

Established by the Government of Alberta in 1948, the 'White Area' is that portion of the province which is suitable for human settlement and agricultural use.

Wildlife

All native species of plants, animals (including all invertebrates and vertebrates) fungi, and some unicellular life forms.

Highlights from 2011-2015 PCAP

Strategy One: Completing Inventories and Assessments of Native Biodiversity

Activity: Promote the Use and Application of the Grassland Vegetation Inventory in Close Cooperation with Alberta Environment and Parks (AEP).

The PCF has been involved with the development of the GVI since its inception in 2006. During the 2011-2015 PCAP term, the PCF promoted the GVI through the creation of user-stories. These stories, which show people ways in which they can use GVI, were taken to conferences, posted on the PCF website, and presented to about 220 interested people at awareness workshops and at the 2013 Prairie Conservation and Endangered Species Conference. In addition, the PCF partnered with AEP to fund a contract of a detailed assessment of GVI on the Waldron Ranch. This contract assessed 558 polygons by desktop and field checked 217 of these polygons. Results showed a high degree of confidence in the original GVI mapping and classification of polygons, with almost 80% (of 1302 occurrences) of site types requiring no change.

Activity: Establish a Simple Suite of Indicators for Change Analysis and to Measure Progress in Achieving Long-Term Outcomes, using Grassland Vegetation Inventory and Alberta Biodiversity Monitoring Institute (ABMI) Analyses.

Both GVI and ABMI data can be used to establish a baseline for change analysis and to help evaluate what actions need to be taken to meet desired long-term outcomes. Furthermore, inventories and assessments help the PCF identify and map areas with high biodiversity values, and indicate where

priority areas for future engagement could be targeted. The PCF partnered with ABMI to produce and release a report on biodiversity titled 'The Status of Biodiversity in the Grassland and Parkland Regions of Alberta' in 2015. This report uses ABMI data to assess the status of human footprint, the status of biodiversity, and the status of native habitat within, and outside of, PCF's High Value Landscape (Figure 4).

Strategy Two: Sharing Knowledge and Fostering Dialogue around Prairie Conservation

Activity: Promote and Produce Educational Materials and Products for Rural and Urban Audiences.

The PCF education committee developed an interactive videoconference for grades 4 through 7 called 'Deep Roots: The Story of Alberta's Grassland'. Educational videoconferencing (EDVC) is a tool that can be used to 'bring the grasslands to you, the audience'. For schools and groups that don't have the opportunity to travel to a native grassland site, this is the next best thing to actually being there. Deep Roots allows for direct contact and interaction between the person running the program and the audience, and incorporates professional video segments and games into the program. Activities were also created for each grade, with pre-videoconference activities meant to introduce the students to definitions/concepts that they will learn about in the broadcast, and post-videoconference activities meant to expand on concepts learned during the broadcast. To encourage teachers to fill out evaluation forms and submit proof of completed activities,

there is an additional opportunity for Deep Roots participants to enter a draw for a \$500 bursary to travel to a grassland site and experience grasslands first-hand.

Deep Roots was piloted in 2012, and since that time, 1,265 participants (mainly children between the ages of 8 and 13) have completed the program. The first \$500 bursary was awarded in the spring of 2015, with the winning class using the funds to travel to the Head Smashed-In Buffalo Jump.

Activity: Host the 2013 Prairie Conservation and Endangered Species Conference.

The PCF, in partnership with the Alberta Society of Professional Biologists, successfully hosted the 2013 Prairie Conservation and Endangered Species Conference in Red Deer, Alberta.

There were a total of 375 conference participants, with 107 live presentations, 44 posters, and 7 3D GVI presentations. In addition, the silent auction brought in enough money to provide three \$2500 young professional stewardship grants.

Strategy Three: Promoting Stewardship of Native Prairie and Parkland Ecosystems

Activity: Contribute to the Land-use Framework and Associated Initiatives.

The PCF was actively involved with the South Saskatchewan Regional Plan (SSRP) from the outset by providing the SSRP Regional Advisory Committee (RAC) a two page handout and oral presentation to two RAC members about the PCF and the importance of Alberta's prairies. Afterwards, the PCF responded to the RAC advice by completing a workbook, by sending a letter to the Land-use Secretariat (LUS),

and by attending 4 stakeholder sessions. Once the draft SSRP came out, the PCF responded again with a letter to the LUS and by attending 10 stakeholder sessions throughout southern Alberta. The approved plan was released in September 2014 and includes significant conservation management direction for native prairie, species and habitats which largely reflects advice provided by the PCF. In 2015, PCF became involved with the North Saskatchewan Regional Plan (NSRP) process by attending a meeting and by submitting a one-page handout with three basic recommendations outlined.

Activity: Contribute to the Development and Implementation of Guidelines for Managing the Effects of Anthropogenic Impacts on Native Prairie.

The PCF was involved in various projects over the 2011-2015 PCAP term that provide data that will contribute to developing guidelines for managing anthropogenic impacts on native prairie. These projects included:

 a joint report between PCF and ABMI (The Status of Biodiversity in the Grassland and Parkland Regions of Alberta) that provides data on human footprint, biodiversity, and native habitat;

- support of the Foothills Restoration Forum in the development of three reports in 2011 that define guidelines for minimizing surface disturbance of native prairie from wind energy development;
- partnership with the Miistakis Institute of the Rockies on a multiphased project to assess wind energy development in Alberta. The first two phases were completed and included a review of approaches to assessing appropriate placement of wind energy development and a workshop with stakeholders to help participants understand the types of assessment tools that are currently in use in other jurisdictions, to learn about and discuss possible improvements to existing tools, and to articulate the need for such assessment tools;
- partnership with multiple organizations to complete the Landscape Patterns Analysis project, a project that looked at the relationship between human land use patterns and the qualitative state of various parts of the environment (mainly in western North America) that produced a report and annotated bibliography,

a presentation, and a spreadsheet categorizing results from the findings of 172 publications, as well as the production of a searchable database that allows users an accessible interface through which specific findings can be searched and applied in context.

Activity: Facilitate the Delivery of the MultiSAR Program in Close Cooperation with Alberta Environment and Parks.

The Multiple Species-at-Risk (MULTISAR) program strives to conserve habitat for species-at-risk (SAR) in the Grassland Natural Region and improve awareness of them on the landscape. This is achieved through habitat assessment, wildlife inventories and providing detailed recommendations to landholders with SAR habitat. During the 2011-2015 PCAP, MULTISAR completed **16 Habitat Conservation Strategies** covering 85,425 acres, and reassessed 8 of them; completed 51 species at risk Conservation Plans covering 77,717 acres; completed 78 habitat improvements or projects; and made contact with, or provided awareness programs/materials to over 196,367 people (most from people attending the Calgary Stampede Cattle Trail).



Prairie Conservation Forum

The Prairie Conservation Forum is a voluntary association of Alberta organizations and individuals whose interests or jurisdictions relate to prairie and parkland landscapes. It exists to encourage effective implementation of the Prairie Conservation Action Plan and to provide an ongoing profile for prairie and parkland conservation initiatives. Its key functions include:

- · providing a forum for networking and information exchange
- steering implementation of the PCAP
- promoting public awareness and education

Any organization wishing to participate in the work of the Forum may join the Prairie Conservation Forum. All Forum meetings are open to the public. The Prairie Conservation Forum meets about three times annually in various centers in prairie and parkland Alberta.

The current active membership of the Prairie Conservation Forum is as follows:

Alberta Agriculture and Forestry www.agric.gov.ab.ca/app21/rtw/index.jsp

Karen Raven

Alberta Biodiversity Monitoring Institute www.abmi.ca

• Elyse Williams

Alberta Conservation Association www.ab-conservation.com

Brad Downey

Alberta Environment and Park www.environment.gov.ab.ca

- Ian Dyson
- Bill Dolan
- Brandy Downey
- Robert Oakley
- Brian Laing
- Ksenija Vujnovic
- Travis Sjovold
- Cameron Lockerbie

Alberta Native Plant Council www.anpc.ab.ca

Cheryl Bradley

Alberta Riparian Habitat Management Society, Cows and Fish www.cowsandfish.org

Norine Ambrose

Alberta Wilderness Association www.albertawilderness.ca

- Christyann Olson
- Brittany Verbeek

AltaLink Management Ltd. www.altalink.ca

Monique Wilkinson

Ann and Sandy Cross Conservation Area www.crossconservation.org

- Greg Shyba
- Jen Ross

Antelope Creek Ranch www.antelopecreekranch.ca

Neal Wilson

Battle River Watershed Alliance www.battleriverwatershed.ca

• Sarah Skinner

Canadian Parks and Wilderness Society www.cpaws.org

• Katie Morrison

Canadian Wildlife Service, Environment Canada www.ec.gc.ca/default. asp?lang=En&n=FD9B0E51-1

Karl Zimmer

Cenovus Energy www.cenovus.com

• Adam Martinson

City of Lethbridge, Helen Schuler Nature Centre www.lethbridge.ca

Coreen Putman

Department of National Defence, Canadian Forces Base Suffield www.army-armee.forces.gc.ca/en/cfbsuffield/index.page

- Delaney Boyd
- Julie Tingley

Ducks Unlimited Canada www.ducks.ca

Morgan Stromsmoe

Eastern Irrigation District www.eid.ab.ca

Ross Owen

Foothills Restoration Forum www.foothillsrestorationforum.ca Jane Lancaster

Glenbow Ranch Park Foundation www.grpf.ca

- Gerald Kvill
- Susan deCaen

Land Stewardship Centre www.landstewardship.org

• Alexandra Frederickson

LandWise Inc. http://landwise.ca

• Ron McNeil

Lethbridge Naturalists Society www.facebook.com/NatureLethbridge

• Linda Cerney

Milk River Watershed Council www.milkriverwatershedcouncil.ca

- Tim Romanow
- Mary Lupwayi

Multiple Species at Risk Program www.multisar.ca

• Katheryn Taylor

Municipal District of Taber www.mdtaber.ab.ca

• Brian Peers

Nature Alberta http://naturealberta.ca

Andrew Stiles

Nature Conservancy of Canada www.natureconservancy.ca

- Marie Tremblay
- Leta Pezderick

Oldman Watershed Council www.oldmanbasin.org

• Shannon Frank

Operation Grasslands Community, Alberta Fish and Game Association http://grasslandcommunity.org

Kerry Grisley

Southern Alberta Land Trust Society - www.salts-landtrust.org

- Berry Urban
- Justin Thompson

Special Areas Advisory Council https://specialareas.ab.ca

- Graham Caskey
- Bob Gainer

Special Areas Board www.specialareas.ab.ca

- Nolan Ball
- Jordon Christianson

Tera Environmental Consultants, a CH2M Hill Company www.ch2m.com

- Tammy MacMillan
- Cody Thierman

Trace Associates Inc. www.traceassociates.ca

- Chelsea Tomcala
- Jeff Forsythe

Waterton Biosphere Reserve Association www.watertonbiosphere.com

Nora Manners

Waterton Lakes National Park, Parks Canada

www.pc.gc.ca/eng/pn-np/ab/waterton/index.aspx

Robert Sissons

Individuals

- Barbara Francis
- Benjamin Misener
- Branimir Gjetvay
- Cameron Carlyle
- Carla Koenig
- Carlene Godwin
- Carolyn Welby
- Cheryl Fujikawa
- Cliff Wallis
- Danielle Crawford
- Daryl Beatty
- James Fujikawa
- Monica Bartha
- Peg Strankman
- Sarah Kellett
- Sheree Obbagy
- Sean McGrath
- Tracy Kupchenko

Prairie Conservation Forum Coordinators

- Katheryn Taylor
- Sasha Harriott



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Wind energy reports are available on the PCF website at http://www.albertapcf.org

Landscape Patterns Environmental Quality Analysis is available on the PCF website at http://www.albertapcf.org

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