

Prairie Conservation in Canada: The Prairie Conservation Action Plan Experience¹

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Abstract

In Canada, grassland conservation has been mobilized and directed through the development of Prairie Conservation Action Plans and Action Plan Committees in the three prairie provinces of Alberta (45 partner agencies and organizations), Saskatchewan (26 partners), and Manitoba (26 partners). In Alberta, 43 percent of the native prairie remains; in Saskatchewan and Manitoba the amount of mixed-grass prairie remaining is less than 20 percent, while tall-grass prairie in Manitoba has been reduced to less than one percent. Although there are many similarities in the approaches taken to conserve remnant prairie in each province, there are many contrasts due to differences in jurisdictional, political, cultural, climatological, industrial, and agricultural backgrounds. Moreover, the differences in size and total area of remaining prairie, by province, has stimulated differences in programs, projects, and methods for conserving this natural resource. In Alberta, the vision is 'To Conserve the Biological Diversity of Native Prairie and Parkland Ecosystems for the Benefit of Current and Future Generations', focusing strongly on biodiversity and landscapes. In Saskatchewan, the vision is 'The Native Prairie is To Be Sustained in a Healthy State in Which Natural and Human Values are Respected', with a strong focus on supporting sustainable livestock production and working landscapes. While in Manitoba, the main focus is 'Identifying and Implementing Economic Activities That Go Hand in Hand with the Restoration and Maintenance of Healthy Prairie Ecosystems', with attention on deriving economic benefit from the land in a sustainable fashion. The success of the Prairie Conservation Action Plan Committee process in Canada is due largely to the ability of all prairie stakeholders to sit around the same table and discuss difficult prairie conservation issues in an amiable and respectful fashion.

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Introduction

The Prairie Conservation Action Plan (PCAP) was initially developed by World Wildlife Fund Canada in 1988 as part of the 'Wild West' program. After this five-year plan ended, the three Canadian Prairie Provinces developed five-year PCAPs with implementation strategies. In Saskatchewan and Alberta, committees and subcommittees were struck to undertake tasks and deliver on goals set out in their respective provincial PCAPs. The partners represent a wide array of sectors and stakeholders, including; environment, agriculture, conservation, resource extraction, industry, producer groups, government, non-government, general public, and academia. The benefits of the PCAP process are: prairie conservation and land-use stakeholders sit regularly around the same table; there is better communication and cooperation among partners on native prairie issues; and a better understanding of the full scope of issues at hand and the potential for implementing prairie conservation measures in Canada.

As each of the three prairie provinces is different and the issues relating to prairie conservation are correspondingly distinctive, they deliver their own PCAPs in a slightly different fashion. We will present some of the key partners working individually and collaboratively from each province and highlight some of their contributions to prairie conservation. See *Figure 1* for a representation of the three prairie provinces of Canada and the ecoregions of the prairie region of Canada and their extension into the United States of America.

Ecological Regions of North America Level II

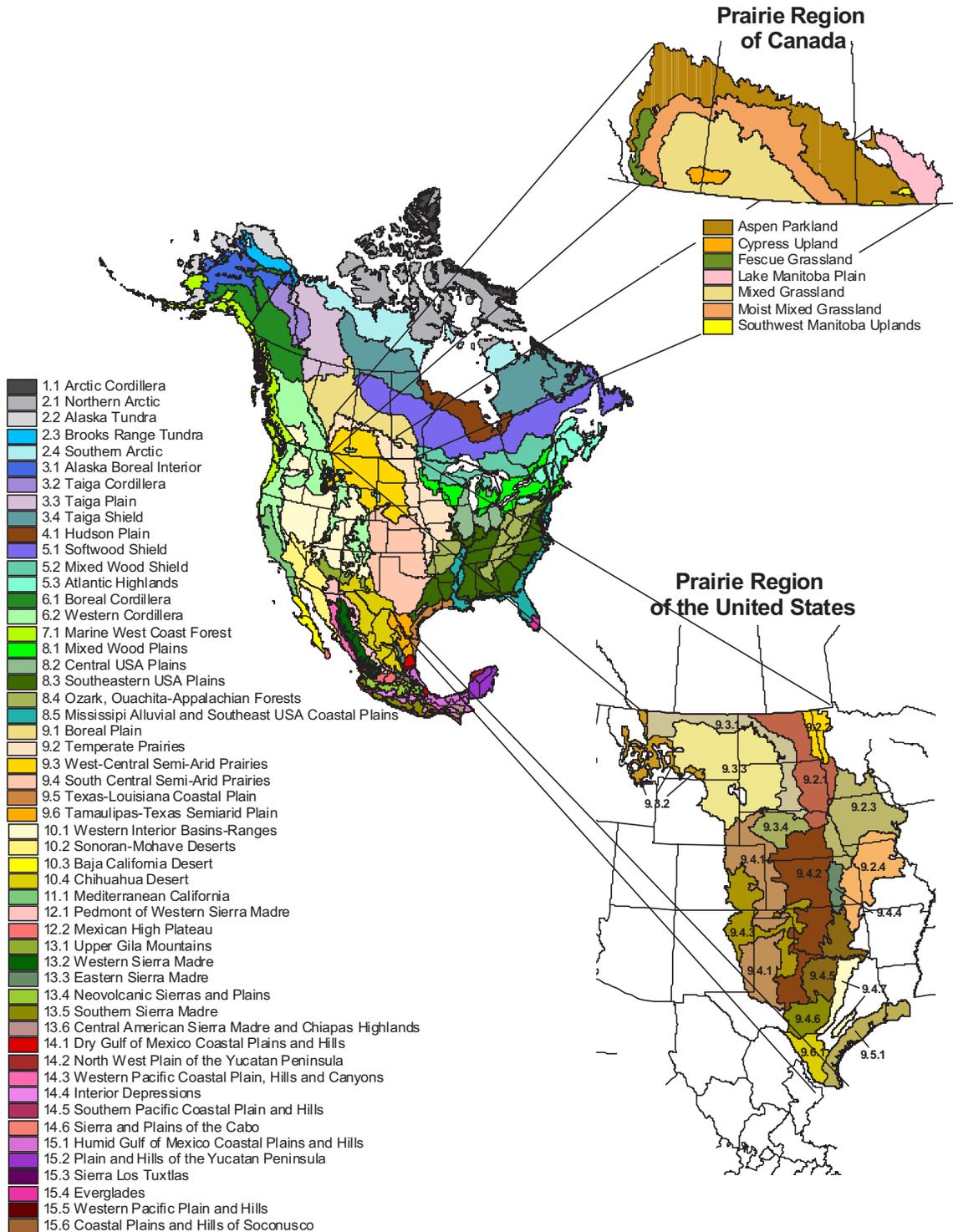


Figure 1— The prairie provinces of Canada and ecoregions of the prairie region of Canada and the United States. Map produced by Canadian Plains Research Centre, Regina, Saskatchewan. Map produced by Canadian Plains Research Centre, Regina, Saskatchewan, Canada.

Manitoba

The grassland region of Manitoba covers approximately 14,700 km². This area in the southwest part of the province consisted mainly of aspen parkland and mixed grass prairie. Native vegetation remains on less than 18 percent of that original landbase. The tallgrass prairie, which formed the smallest component of grassland habitat in Manitoba and is restricted mainly to the Red River Valley floodplain, is now reduced to less than 0.1 percent of its original extent. Most of the remnant prairie habitat suffers from fragmentation, long-term idling, poor condition and degradation, and the invasion of shrubs, trees, and exotic species. These parcels of remnant prairie contain many of the rare and endangered species for that region.

In Manitoba, the PCAP theme is ‘Identifying and Implementing Economic Activities That Go Hand in Hand with the Restoration and Maintenance of Healthy Prairie Ecosystems’. There were 36 partners that originally drafted the Manitoba PCAP. The partners contribute in various ways through programs delivered to public and private landowners and/or through the conservation and management of native prairie on their own land. The Manitoba Habitat Heritage Corporation (MHHC) works actively to preserve remaining prairie habitat through landowner conservation easements and land purchase. These partners continue to inventory and assess habitats in the mixed grass and tall grass ecozones of Manitoba. The Manitoba PCAP partners are involved with implementing landowner stewardship programs (for riparian and upland) and activities such as rotational grazing demonstrations in the mixed and tall grass zones to show the potential to maximize cover and reduce invasive species. In the tall grass zone the partners are involved in fire management to conserve and improve the condition of the native prairie. Much of the work in Manitoba is concentrated on land acquisition and management of remnant tall-grass prairie in the lower Red River Valley and development of conservation easements and stewardship agreements on mixed grass prairie in the southwestern portion of the province.

Saskatchewan

The grassland region of Saskatchewan covers approximately 241,000 km². This is divided into four ecoregions. Other than the Cypress Upland, which is a unique landscape that was not glaciated during the last glacial period, these regions are distributed from the northeast to southwest in the grassland region of Saskatchewan. The amount of native dominated prairie remaining in these ecoregions, respectively, is: Aspen Parkland (1.05 million ha, 12.9 percent of ecoregion), Moist Mixed Grassland (1.05 million ha, 15.5 percent),

Mixed Grassland (2.70 million ha, 31.3 percent), and Cypress Upland (0.36 million ha, 71 percent) (Gauthier et al. 2002). About 21 percent (5.17 million ha) of the Saskatchewan grassland region remains as native prairie.

Saskatchewan’s PCAP theme is ‘The Native Prairie is To Be Sustained in a Healthy State in Which Natural and Human Values are Respected.’ There are 23 partners in the Saskatchewan PCAP Committee, which is chaired by the Saskatchewan Stock Growers Association. The PCAP is unique as it is the first producer-led, multi-stakeholder funded coordination of native prairie programming in North America. An action-oriented plan, consisting of 85 actions that are tied to five goals, guides partner activities. The Committee meets three to four times per year. Progress is evaluated annually and communicated through the production of “Partner Updates” which consist of an inventory of Partner activities relative to each action, as well as a list of progress and shortfalls in Plan implementation. The current PCAP expires in the spring of 2003 and work is in progress to have a new Plan in place to ensure continuity. The partners contribute in various ways through programming delivered to public and private landowners and/or through the conservation and management of native prairie on their land. The PCAP office and paid manager work also to facilitate the coordination of the PCAP partners and to produce extension and education programs and materials. The PCAP has been effective in reducing or eliminating duplication of programs and activities, contributing to the development of effective, unified communication strategies, and identifying and addressing gaps in existing or proposed programs.

Some of the key partners and their activities include:

Saskatchewan Wetland Conservation Corporation (SWCC)

SWCC delivers wetland, native prairie, and riparian habitat programs in Saskatchewan. Through this partnership, the Corporation links agricultural, industry, and wildlife interest to land-use programming in Saskatchewan. The Corporation leads coordination of the North American Waterfowl Management Plan (NAWMP) activities in the province.

SWCC has inventoried and assessed over 5.5 million ha of prairie land in Saskatchewan, particularly in areas with a high degree of cultivation, although this has included 2.5 million ha in the Missouri Coteau. The Missouri Coteau is an elevated land feature that runs through southern Saskatchewan into North and South Dakota and has an above-average proportion of remnant native prairie. The Corporation has a number of programs to deliver stewardship activities, namely the

Riparian Stewardship Program and the Native Prairie Stewardship Program. Under the latter program they have signed up 500 volunteer landowners to conserve over 80,000 ha of native prairie. Moreover they produce numerous extension publications such as 'Managing Your Native Prairie Parcels,' 'Managing Saskatchewan Wetlands,' and the new 'Classification and Management of Riparian and Wetland Sites,' and 'Land Manager's Guide to Grassland Birds of Saskatchewan'.

Agriculture and Agri-Food Canada

The Prairie Farm Rehabilitation Administration (PFRA), a branch of Agriculture and Agri-Food Canada, was set up in response to the depression during the 1930's. They manage a significant portion of the remaining prairie in Saskatchewan and some areas of Manitoba and Alberta as federal pastures for grazing and biodiversity. Their lands total 930,000 ha with 84 percent still native prairie. They undertake periodic inventories and range condition assessments to monitor the condition and use of these lands.

The Semi-Arid Prairie Agriculture Research Station is undertaking research on native forages, grazing systems, and planted native mixes for grazing trials. They are investigating the use of native plants for conventional agriculture as well.

Saskatchewan Provincial Pasture Program

The provincial pasture program is operated under Saskatchewan Agriculture, Food, and Rural Revitalization. They manage a total of 325,000 ha of land, some of which was converted to tame forages. They manage 1 million ha of rangeland through grazing leases. They have modified these crown lease agreements to incorporate sustainable management and have recently placed conservation easements on a significant portion of this land so that it can not be broken. They provide landowner technical assistance through on-site visits and workshops and extension publications.

Nature Saskatchewan

Founded in 1949, this provincial non-government organization delivers programs addressing the conservation of species at risk and conservation of habitat through stewardship and easements. Through Operation Burrowing Owl, they have agreements with 460 landowners protecting habitat at 603 sites. This includes 22,594 ha on private land and 38,920 ha on public land. The Piping Plover (*Charadrius melodus*) is another major species of concern for this organization.

Native Plant Society of Saskatchewan (NPSS)

The NPSS has been instrumental in developing key resource materials on the conservation and evaluation of native prairie. They have an active membership and Coordinator and work to develop guidelines and encourage new policy and directives. Some of their publications include 'Native Seed Harvesting,' 'Saskatchewan's Native Prairie: Taking Stock of a Vanishing Ecosystem and Dwindling Resource,' and 'Acreage Living: A Conservation Guide for Owners and Developers of Natural Habitat'.

Saskatchewan Burrowing Owl Interpretive Centre (SBOIC)

The SBOIC delivers in-house tours and outreach programming on Burrowing Owls (*Athene cunicularia*) and issues affecting their conservation. The SBOIC features wild, captive, and imprinted owls and a 0.5-ha prairie restoration project. The SBOIC is a key delivery partner of the Owls and Cows Tour and the Eco-Extravaganza. Highly skilled interpretive staff use imprinted Burrowing Owls as a flagship species to effectively communicate the need for native prairie conservation and management to diverse audience groups.

Saskatchewan Environment (SE)

The provincial environment department operates a Representative Areas Network (RAN). They have incorporated 5.1 million ha of ecologically important lands (including holdings of many partners already mentioned) into these RAN sites. Through their Fish and Wildlife Development Fund they have secured 45,000 ha of wildlife habitat.

Saskatchewan Wildlife Federation (SWF)

The Habitat Trust Program, delivered by SWF, has secured over 20,000 ha of prairie and aspen parkland habitat. Over 90 percent of this habitat is natural.

Missouri Coteau Initiative

This Initiative is an example of attempts to coordinate and deliver a large-scale ecosystem landscape-planning program. Most of the large non-government conservation organizations are working in this region in southern Saskatchewan because one-third still remains as natural prairie. The Missouri Coteau is an important area for wildlife including many species at risk, waterfowl, shorebirds, grassland birds, and colonial waterbirds. Saskatchewan's cow-calf industry stewardship programs delivered by the partners strive to provide win-win benefits for wildlife and agriculture.

Table 1— Area (1,000s of ha) of native prairie remaining in the four grassland ecoregions of Alberta and the breakdown between private and crown lands¹

	Mixed grassland	Moist mixed grassland	Northern Fescue	Foothills Fescue	Total
Crown land	1,694 (66%)	326 (57%)	264 (42%)	76 (17%)	2,361 (56%)
Private land	882 (34%)	248 (43%)	366 (58%)	360 (83%)	1,856 (44%)
Total	2,577 (54%)	574 (31%)	630 (40%)	436 (29%)	4,217 (43%)

¹Total percentage is the proportion remaining of historic extent; percent private or crown land is the proportion of remaining prairie under that ownership type. The Commission on Economic Cooperation terms the Northern Fescue portion listed here as part of Aspen Parkland and the Foothills Fescue as Fescue.

Eco-Extravaganza and the Owls and Cows Tour

These outreach programs are organized by the PCAP Manager and delivered by several PCAP partners. Interactive games, skits, and songs are used to communicate information to K-6 students on prairie and riparian areas, species at risk stewardship, and the positive role played by the ranching industry in the conservation and management of native prairie. Teacher evaluations indicate extremely high levels of satisfaction with these programs. Target areas for programming are determined annually by the PCAP Office in consultation with delivery partners.

Four town-hall evening meetings are held annually at communities within the Eco-Extravaganza target area to promote and communicate information to landowners and land managers on stewardship programs offered by PCAP partners. The meetings feature presentations by various PCAP partner groups on their programs, displays, and publications. In their evaluations, participants indicated that they liked that non-government and government groups were working together with producers to communicate information of stewardship programs.

Alberta

The grassland region of Alberta covers approximately 97,000 km². The amount of native prairie remaining varies among the four grassland ecoregions (table 1). On average, 43 percent of the native prairie is remaining over the Alberta grassland region (excluding Parkland) totaling 4.2 million ha¹. The proportion of native prairie remaining varies between private and public land (table 1).

¹Unpublished database on file at Alberta Environment, Lethbridge, Alberta, Canada.

Alberta’s focal theme is ‘To Conserve the Biological Diversity of Native Prairie and Parkland Ecosystems for the Benefit of Current and Future Generations.’ As in Saskatchewan, the partners in Alberta contribute in various ways through programming delivered to public and private landowners and/or through the conservation and management of native prairie on their land as well as education extension to the public at large. There are 43 partners in the Alberta Prairie Conservation Forum (PCAP Committee) with various subcommittees to tackle issues and needs. They have recently re-drafted their Prairie Conservation Action Plan for another five-year term. The Forum meets three times per year and the executive an additional time between each meeting. The Forum and its subcommittees produce numerous publications and public awareness materials, including Occasional Papers, on substantive broad topics, and Prairie Notes, discussing issues of the day.

Some of the key partners and their activities include:

Irrigation District (EID)

The EID delivers water for irrigation and domestic use and provides use of grasslands in a sustainable fashion. They are the largest private landowner in Alberta managing over 250,000 ha of land. Almost 80 percent of this land is native mixed grass prairie. Much of their wetland and grazing management is done in association with Ducks Unlimited Canada.

Alberta Conservation Association (ACA)

The ACA works with ranchers to develop principles of sound grazing management practices for the benefit of wildlife and their client’s ranch.

Target areas and key projects include:

1. Milk River Ridge/Writing-On-Stone -68,000 ha
2. Special Area #4 – 29,000 ha
3. Pakowki Lake – 31,500 ha

They administer the Native Prairie Land Stewardship Program, previously known as the Sharp-tailed Grouse Habitat Program. They are working with landowners to develop range management plans and improvements are implemented on a cost-share basis.

Alberta Fish and Game Association – Operation Grassland Community (OGC)

OGC was developed in 1989 to provide stewardship and education to conserve native prairie habitat and wildlife, particularly species at risk. The OGC program grew from what was initially the Operation Burrowing Owl program and now provides community stewardship initiatives, on-farm planning workshops, and a youth education campaign. OGC is working with 220 landowners and has enrolled 23,000 ha of native prairie.

Alberta Riparian Habitat Management Project – ‘Cows and Fish’

This project provides information to producers, resource managers, and the general public through presentations, field days, and workshops to promote an understanding of practical solutions to the management of riparian areas. They have consulted with over 22,000 people and given almost 400 presentations. Assessments of 1000 km of stream at over 800 sites have been made and they have undertaken an inventory and riparian health assessment with over 400 landowners. The staff of Alberta Public Lands working on this project has produced numerous well-received and used publications, handbooks, and other resource materials.

Southern Alberta Land Trust Society (SALTS)

The SALTS is a locally-based, rancher-driven, non-profit organization dedicated to preserving the ecological, productive, scenic, and cultural value of Alberta’s prairie and foothill regions. The Society developed to resist the pressures of urban development and to assist ranchers who wish to maintain the landscape in active working ranches. It includes an education program to inform urban populations of the value of natural landscapes and the ecological and social costs of urban expansion.

Special Areas

The Special Areas Act was passed in Alberta in 1938. This allowed the provincial government to lease out tax-recovery land and crown lands, to provide municipal services, and to undertake programs to rehabilitate the land for the betterment of the residents of the Special Areas. These areas encompass 2.1 million ha of which 60 percent is native prairie. The entire native

prairie on this land has been protected by law from breaking.

Oil and Gas Producers and Regulators

There has been, and continues to be, considerable activity in this industry and their activities do result in disturbance on the remaining native prairie. The energy sector has made significant strides to minimize the impact of their activities upon native prairie.

Region-Wide

Nature Conservancy of Canada (NCC)

The NCC protects ecologically sensitive lands in the Manitoba, Saskatchewan, and Alberta grassland natural regions. Important habitat for waterfowl, grassland birds, shorebirds, colonial waterbirds, species at risk, and other wildlife species through a number of securement techniques such as land purchase and conservation easements. The NCC initiated work in the grassland region of Alberta in spring 2001. They have completed two projects securing and managing 4,500 ha and are currently working with seven landowners managing 8,000 ha. They are focused on three landscape areas: Cypress Uplands, Sage Creek Uplands, and the Milk River Ridge.

Ducks Unlimited Canada (DUC)

DUC is a major deliverer of wetland conservation and waterfowl management programs on the prairies. They lead delivery of NAWMP but work on other bird and prairie conservation initiatives as well. DUC works with private and public landowners to develop long-term agreements for integrated wildlife and range management plans. Projects focus on water control structures and installing fencing and stock watering systems to improve rotational grazing systems.

In Saskatchewan project areas are concentrated in the Missouri Coteau, Allan Hills, and landscapes in north-west Saskatchewan. Examples of Alberta DUC projects include:

1. Contra Costa Project – located east of Brooks, AB on EID land:
 - 30,800 ha of native prairie
 - 3,000 ha of managed irrigation-fed wetlands
2. Cameron Project – located east of Vauxhall, AB on Crown land:
 - 23,500 ha of native prairie
 - 400 ha of managed irrigation-fed wetlands

DUC is re-drafting its strategic plan for southern Alberta to concentrate their conservation efforts on the Northern Pintail (*Anas acuta*). They wish to achieve no net loss of native prairie in the important pintail breeding areas. This area includes 1.1 million ha that DUC will attempt to secure over the next 25 years.

Environment Canada - Canadian Wildlife Service

As a regional federal PCAP partner, the Canadian Wildlife Service (CWS) is involved in many PCAP activities on federal land and in collaboration with other partners. CWS provides a representative to act as a liaison among the provincial PCAP Committees. As a Department, Environment Canada works on protection, securement, and restoration of wildlife habitat by supporting a number of initiatives such as Partners in Flight, NAWMP and its Prairie Habitat Joint Venture, the Species at Risk Habitat Stewardship Program, Eco-Action, and other federal government conservation programs. They are the lead department in implementation of the Migratory Bird Convention Act, Canadian Environmental Assessment Act, and the Species at Risk Act. Also, they manage habitat including National Wildlife Areas (NWA) and Migratory Bird Sanctuaries (MBS). In Alberta there are three NWAs (376 ha) but a fourth NWA at Canadian Forces Base Suffield (45,800 ha) is proposed and there are four MBSs (14,150 ha); Saskatchewan has eight NWAs (21,348 ha) and 14 MBSs (61,461 ha); Manitoba has two NWAs (63 ha) and no MBSs. These are key sites for the demonstration of prescribed burning, ecological grazing, and the restoration of prairie habitat, including wild-harvesting and production of native seed stocks. CWS produces numerous resource publications and undertakes research and monitoring on a wide variety of migratory birds, species at risk, and key habitats.

There are many successes from the PCAP process and reasons for continuing the broad-based partnership of prairie stakeholders and collaborative communication provided by PCAP Committee and Forum round-table gatherings. These include:

1. PCAP partners manage a significant portion of the remaining native prairie and are working with private landowners on much of the rest,
2. Increased awareness and appreciation for the value of native prairie and the need for conservation,
3. Create and maintain a positive working relationship among the partners across all sectors, and
4. Work by consensus that has facilitated communication and increased collaboration and coordination among the native prairie stakeholders.

Consensus among stakeholders may be difficult at times, but the PCAP process builds a strong foundation of trust and is one that could be used successfully in many other landscapes and ecoregions.

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