

U.S. Fish & Wildlife Service

Plains and Prairie Potholes Landscape Conservation Cooperative

Preliminary Operations Plan



December 11, 2009

Foreword

A message from Tom Melius and Steve Guertin

The global challenges of climate change will significantly alter the future of wildlife conservation in America. To meet these challenges the U.S. Fish and Wildlife Service (FWS) must adapt to provide better science capacity at the landscape level. Under the leadership of Director Sam Hamilton, the FWS has begun working with our conservation partners to organize a coordinated response to climate change through the development of large-scale landscape conservation cooperatives. This document outlines our vision for forming a science partnership in the Plains and Prairie Potholes Landscape Conservation Cooperative (PPP LCC).

The plains and prairie potholes, vast in size and rich in wildlife, is the true heartland for conservation in North America. Well known as the breeding grounds for vast numbers of North American waterfowl, the area also includes substantial portions of the Missouri, Yellowstone and Red River systems. The natural resources found within these waterways provide not only habitat for a number of endangered species, but also provide significant socio-economic benefit to the people living in the region.

Only through extensive partnership with other federal agencies, state governments, tribes, Canadian federal and provincial agencies, conservation organizations, and academia can we hope to conserve the vast plains and prairie potholes region. The framework for this type of cooperative conservation already exists in the region with three migratory bird Joint Ventures, the Missouri River restoration program, four fish habitat partnerships and a numbers of dedicated non-governmental organizations. We propose to compliment these partnerships by adding new resources, new science capacity and new ideas to coalesce all our efforts into a coordinate response to address the impacts of climate change in the region.

The development of this new approach to climate change raises many questions. What follows are answers to nine questions, posed by FWS leadership, about form, function, priorities, science capacity needs, and partnerships needed to develop a new Plains and Prairie Potholes Landscape Conservation Cooperative.

In order to ensure that we act promptly and deliberatively, we have appointed two interim coordinators. Dr. Kelly Hogan is serving as the interim LCC coordinator and is providing oversight to the Plains and Prairie Potholes Landscape Conservation Cooperative development effort. Dr. Patricia Heglund is serving as the interim LCC science coordinator and is organizing efforts to ensure that we are building the appropriate new science capacity to enhance our existing science resources, and to organize an effort for obligating funding to new, high priority scientific investigations. Drs. Hogan and Heglund are working with an anticipated timeline of bringing this partnership together for the first time and forming a steering committee for the PPP LCC in early 2010. While the challenges we all face in light of climate change are great, this is an exciting opportunity for conservation in the region and we look forward to working with you as we address these future challenges.

Sincerely,

Tom Melius
Midwest Regional Director

and

Steve Guertin
Mountain-Prairie Regional Director

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Executive Summary

The U.S. Fish and Wildlife Service's Midwest Region, in cooperation with the Mountain-Prairie Region, will establish the Plains and Prairie Potholes Landscape Conservation Cooperative (PPP LCC). The Service has many strong conservation partnerships within this area, including three migratory bird Joint Ventures and four Fish Habitat Partnerships. These and other existing partnerships form a strong foundation for the LCC. To fully develop the LCC we need to bring together the various partnerships in order to approach landscape conservation in this region using a more holistic approach, particularly given the potential broad-scale impacts from climate change. Therefore, we are planning to form a partnership with representation from existing partnerships, state and federal agencies, tribes, and others to add new resources and new science capability to meet the future conservation challenges in the region.

The PPP LCC encompasses a landscape unparalleled in importance to breeding waterfowl and many species of wetland and grassland birds in steep decline. This area also provides vast expanses of habitat for resident game and nongame animals, and its waters are home to many unique aquatic species. The PPP LCC, which transcends existing U.S. Fish and Wildlife Service regional boundaries and the international border with Canada, includes the entire state of North Dakota; a portion of South Dakota; two-thirds of Montana; one third of Wyoming; large blocks of southern Alberta, Manitoba and Saskatchewan; and portions of Nebraska, Minnesota and Iowa.

Although managed as one LCC, we are proposing three subunits based on ecological differences: the Northern Great Plains, the Prairie Pothole Region, and the Rivers and Riparian Corridors. Currently, the Service and our partners are working to develop and apply the scientific tools necessary to determine how climate change, coupled with existing stressors such as conversion of native prairie for agriculture may affect the health and productivity of populations of federal trust species in this landscape.

We contacted more than 300 potential partners in an extensive scoping process to elicit input on the best approaches for strategic increases in existing science capacity for the LCC. Approximately 200 individuals participated in webconferences and about 100 provided written input. We held special webconferences for federal executives, state natural resources directors, and Canadian provincial bureau chiefs. From these webconferences, we collected and analyzed input on science needs, priority species and habitats, imminent conservation issues, and the potential partner's degree of interest in further involvement in the LCC. We did not ask for specific commitments from partners during our initial scoping; however, we were able to build momentum for support of the LCC and stimulate considerable partnership interest in future involvement.

Preliminary scoping suggests that the three most urgent needs for capacity are: 1) climate science modeling and downscaling to address local conservation needs, 2) spatial analysis; and, 3) resource inventory and monitoring. Each of these high-priority science needs suggests relevant partnerships with other entities. We expect to benefit from a strong relationship with the USGS Climate Science Response Centers for the climate modeling necessary to fulfill the climate modeling needs. We envision the Service's Habitat and Population Evaluation Team (HAPET) Offices, USGS Northern Prairie Wildlife Research Center and the South Dakota State University Cooperative Research Unit will provide a strong foundation for enhancing spatial analysis capacity, and the new National Wildlife Refuge System and existing National Park Service inventory and monitoring programs are springboards for development of a successful inventory and monitoring program in the PPP LCC.

One of the earliest efforts will be to determine priority species and habitats for additional scientific evaluation. We queried partners about criteria for setting priorities and it is apparent that the methods for setting priorities will be based on a combination of indicator, keystone, foundational, socio-economic species, and risk

assessment concepts. In the meantime, we have prepared a list of 29 species thought to be particularly vulnerable to climate change, or otherwise good management indicators for the PPP LCC (table i).

Numerous delivery mechanisms are available for species and habitat conservation within the PPP LCC. Some of the most important for habitat conservation are the programs associated with the USDA Farm Bill. Other important conservation mechanisms include the Technical Assistance and Endangered Species Act programs, National Fish Habitat Action Plan, the North American Waterfowl Management Plan, North American Wetland Conservation Act, and various other

laws and regulations. Several Service programs, including Joint Ventures, Partners for Fish and Wildlife, and Fish Passage Program, are also key to achieving conservation goals within the PPP LCC.

With strong partnerships and an established framework for providing conservation science the PPP LCC has the foundation to achieve immediate success in landscape conservation. We envision with the resources provided by the newly established PPP LCC we will immediately provide applied science support to the conservation community, including supplying specialized expertise in landscape scale conservation planning and design.

Table i. Preliminary list of 29 focal species within the Plains and Prairie Potholes LCC

Species	Habitat		
	1	2	3
Baird's Sparrow	Mixed grass prairie		
Black Tern	Wetlands		
Black-billed Cuckoo	Woodland/Riparian/Cliff/Edge/Barren		
Black-billed Magpie	Woodland/Riparian/Cliff/Edge/Barren		
Black-footed Ferret	Grasslands	Sage Steppe	
Burrowing Owl	Grasslands		
Central Mudminnow	Large Rivers and streams		
Chestnut-collared longspur	Mixed grass prairie		
Ferruginous Hawk	Mixed grass prairie	Grasslands	
Grasshopper Sparrow	Mixed grass prairie		
Greater Prairie Chicken	Tallgrass prairie	Grassland/wetland complexes	
Greater Sage Grouse	Sage Steppe		
Henslow's Sparrow	Tallgrass prairie		
Lark Bunting	Grasslands		
Long-billed Curlew	Grasslands		
Mallard	Grassland/wetland complexes		
Marbled Godwit	Grassland/wetland complexes		
McCown's Longspur	Grasslands		
Northern Harrier	Grassland/wetland complexes	Tallgrass prairie	Grasslands
Paddlefish	Large Rivers and streams		
Pallid Sturgeon	Large Rivers and streams		
Pied-billed Grebe	Wetlands		
Piping Plover	Wetlands	Large Rivers and Lakes	
Sedge Wren	Grassland/wetland complexes		
Sharp-tailed Grouse	Grasslands		
Sprague's Pipit	Mixed grass prairie		
Topeka Shiner	Large Rivers and streams		
Wilson's Phalarope	Grassland/wetland complexes		
Yellow Rail	Grassland/wetland complexes		

QUESTION 1:

Name of the LCC that the Region expects to be fully operational in FY 2010. Provide a brief description of the boundaries of the LCC and any subunits within that will receive special emphasis (indicate when that special emphasis is to occur). Also, please describe the starting point for the development of the LCC, that is, is it an extension of an already powerful set of partnerships or is it starting at the conceptual stage or somewhere in between?

In Fiscal Year 2010 the U.S. Fish and Wildlife Service's Midwest Region, in cooperation with the Mountain-Prairie Region, will establish the Plains and Prairie Potholes Landscape Conservation Cooperative (PPP LCC). Spanning both regional and international boundaries the PPP LCC includes the southern portions of Alberta, Manitoba, and Saskatchewan in Canada, southward to include the entire state of North Dakota; a portion of South Dakota; two-thirds of Montana; one third of Wyoming; and portions of Nebraska, Minnesota, and Iowa. (Figure 1).



Figure 1. Outline of the Plains and Prairie Potholes Landscape Conservation Cooperative.

Included within this vast landscape is one of the most endangered ecosystems in the country, the northern tallgrass prairie, as well as the breeding grounds for the vast majority of North American waterfowl. In addition, the PPP LCC includes a substantial portion of the Missouri River and its major tributaries, including a portion of the Yellowstone River, and the Red River of the North. The natural resources found in this region provide not only habitat for a number of endangered species, but also provide significant socioeconomic benefit to the people living in the PPP LCC.

During the early stages of development of the PPP LCC we examined three successful models for building scientific capability and large-scale conservation delivery. These included the Migratory Bird Joint Venture model, the Northwest Forest Plan model, and the process used by the Columbia Basin Fish and Wildlife Authority. We analyzed the strengths and weaknesses of each

approach, and recommend adapting the Joint Venture model for all species by building on existing partnerships within the PPP LCC area. The Joint Venture model is a proven model that has worked well for bird conservation, and we anticipate that it will work equally well when expanded to cover all species. In general, all existing Migratory Bird Joint Ventures use the Strategic Habitat Conservation (SHC) framework (figure 2) for implementing biological planning, conservation design, conservation delivery, and research and monitoring. As implied throughout Appropriations legislation, and DOI and FWS guidance, the SHC framework combined with the Joint Venture approach is consistent with the overarching goal of LCCs to contribute science capacity. With increased science capacity the LCC will be well positioned to implement an adaptive management approach to solving natural resource based problems consistent with recent direction provided by DOI.

Currently three Joint Ventures are active within the PPP LCC: Northern Plains, Prairie Potholes and Prairie Habitat. All three are focused primarily on waterfowl and associated wetland habitats. Under the Joint Venture paradigm, the PPP LCC will cover all species of flora and fauna and address the scientific and resource needs of not only Service jurisdictional issues but also the needs of PPP LCC partner organizations. The Midwest Region and the Mountain-Prairie Region are currently exploring the full extent to which the existing Joint Ventures might assist in the development of the PPP LCC. Likewise, concerns regarding compliance with the Federal Advisory Committee Act (FACA) and the workings of a public/private steering committee and self-governance model are also being resolved.

The PPP LCC will be managed as one unit, but we have chosen to create three distinct geographic components to facilitate a clearer understanding of the complexity inherent to this large area. The components are the Rivers and Riparian Corridors, the Prairie Pothole Region, and the Northern Great Plains. We believe this sub-division will be helpful for tailoring science capacity needs and facilitating communication. It is important to note that the sub-divisions within the PPP LCC do not infer any priority status. Instead, we will develop scientific capacity for all three simultaneously.

Rivers and Riparian Corridors – In the PPP LCC the rivers function as ecological “magnets” and corridors not only for wildlife but also people as well. Rivers in the Plains and Prairie Pothole LCC are notorious for their extensive flooding, meandering channels, and for their ability to transport massive amounts of sediment. The installation and current operation of the dams and reservoirs along the rivers have resulted in the loss of river bottom habitat, loss of river connectivity, altered sediment transport systems, and severely changed river seasonally important hydrographs. The upper Missouri River system and its major tributaries such as the Yellowstone

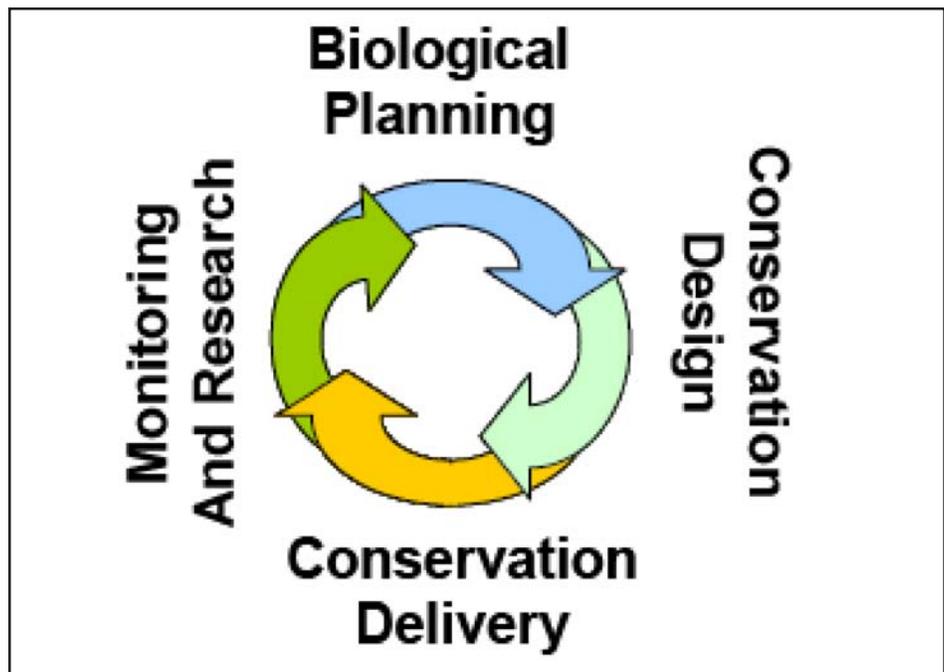


Figure 2. Strategic Habitat Conservation Model

River provide vital habitat for wildlife including the pallid sturgeon, piping plover and least tern.

Currently restoration of the Missouri River system is ongoing through interagency efforts involving the Service, the Corps and numerous States, federal, tribal and other partners who are working to restore the ecological form and function of the river. Restoration is occurring not only on the Missouri but along it’s tributaries as well. For example, at Intake, Montana construction efforts now underway will reopen nearly 200 miles of the Yellowstone to native river fishes such as the pallid sturgeon. The redesign of the irrigation structure at this location will reduce adult fish mortality (numerous species) by almost 500,000 fish per year. The science capacity aspect of this work is related to post construction research, monitoring and evaluation which will be needed to ensure we’re following an adaptive management approach to operation at this site.

Along the smaller tributaries in the PPP LCC, land conversion for agricultural cultivation and urban development have increased the amounts of sedimentation in streams and reduced the diversity of aquatic habitats. Stream channelization, levee construction and impoundments change the natural hydrology, connectivity, temperature and quality of streams. Also, misapplication and overuse of commercial fertilizers and pesticides can increase contaminants in fish and sediments and affect primary productivity. Soil erosion and

nutrients from agricultural and urban runoff negatively affect water quality. The Topeka shiner (*Notropis topeka*) is highly sensitive to habitat changes that result in diminished water quality. As a result, this species may serve as an indicator for stream habitat restoration and improvement in some areas of the LCC.

Prairie Pothole Region – The PPP LCC includes millions of varied wetlands that constitute one of the richest wetland and grassland systems in the world. Formed from small depressions left by retreating glaciers approximately 12,000 years ago these “prairie potholes” and their surrounding grasslands are highly productive and support an incredible diversity of wildlife including the vast majority of breeding waterfowl. In terms of total area, temporary, seasonal, and semi-permanent wetlands comprise the majority of the wetlands in this area of the LCC. Extensive drainage systems have converted native prairie and associated wetlands into farmland and urban centers reducing the extent of unbroken native sod to a fraction of its former range. Resource management

within prairie pothole region is highly complex because of the dynamic nature of the ecosystem which is subject to severe drought and excessive snowfall. Recent advances in agricultural practices coupled with changes in farm subsidy programs severely threaten this area of the PPP LCC. Additional threats include over-grazing, suppression of fire, and development of oil, gas, and wind energy.

Northern Great Plains – Ecologically the Northern Great Plains is the most diverse subunit within the PPP LCC but also the least protected with less than two percent of the region’s 180 million acres managed for wildlife conservation. Habitats vary from riparian wetlands to isolated forested mountain ridges, such as the Black Hills of South Dakota and the sagebrush steppe east of the Rockies. A combination of climate, grazing, and fire were ecological factors that influenced the development of the diverse landscape.

The Northern Great Plains is especially important to grassland birds whose populations have been

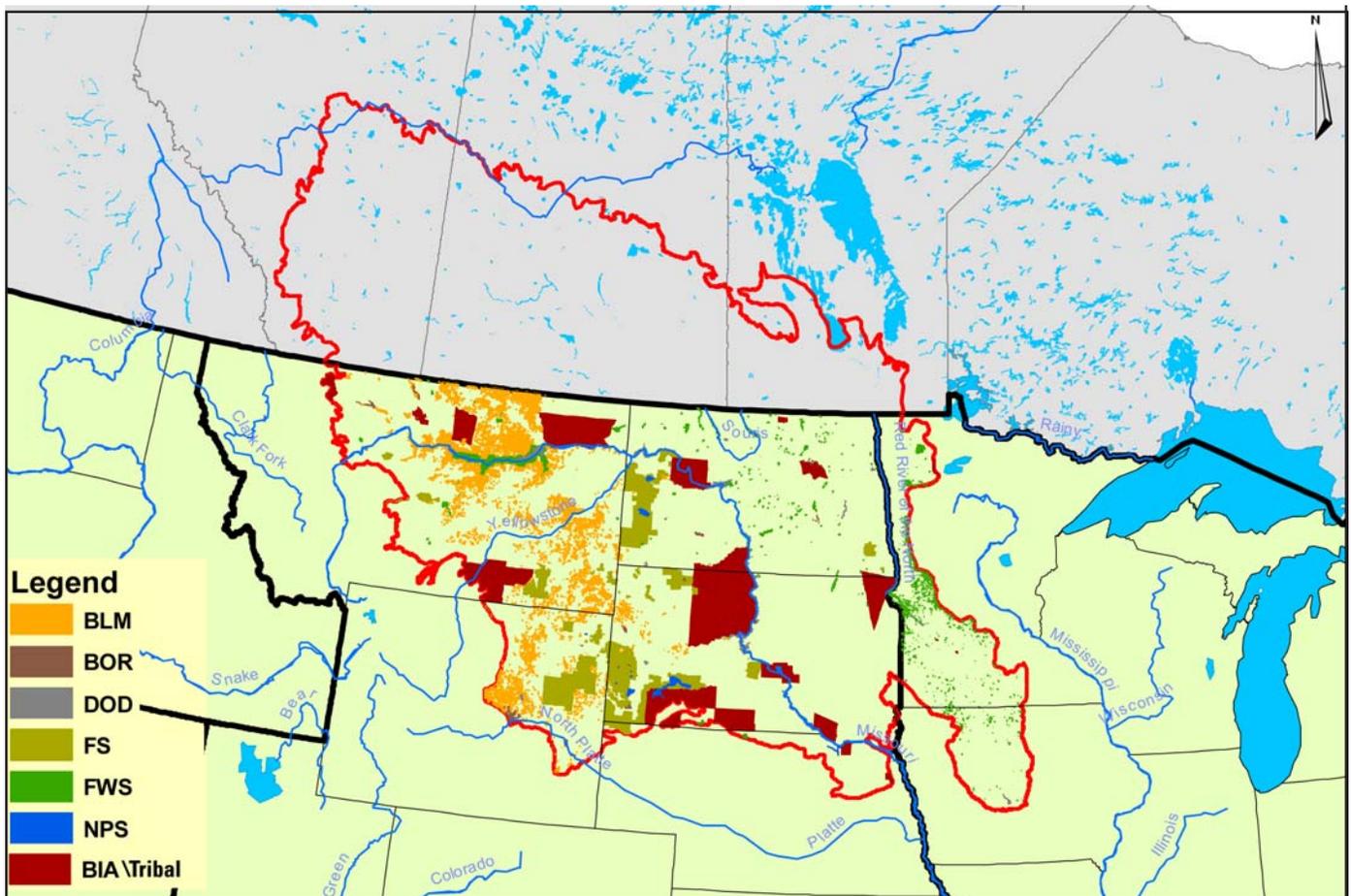


Figure 3. Federal and Tribal lands in the Plains and Prairie Potholes LCC

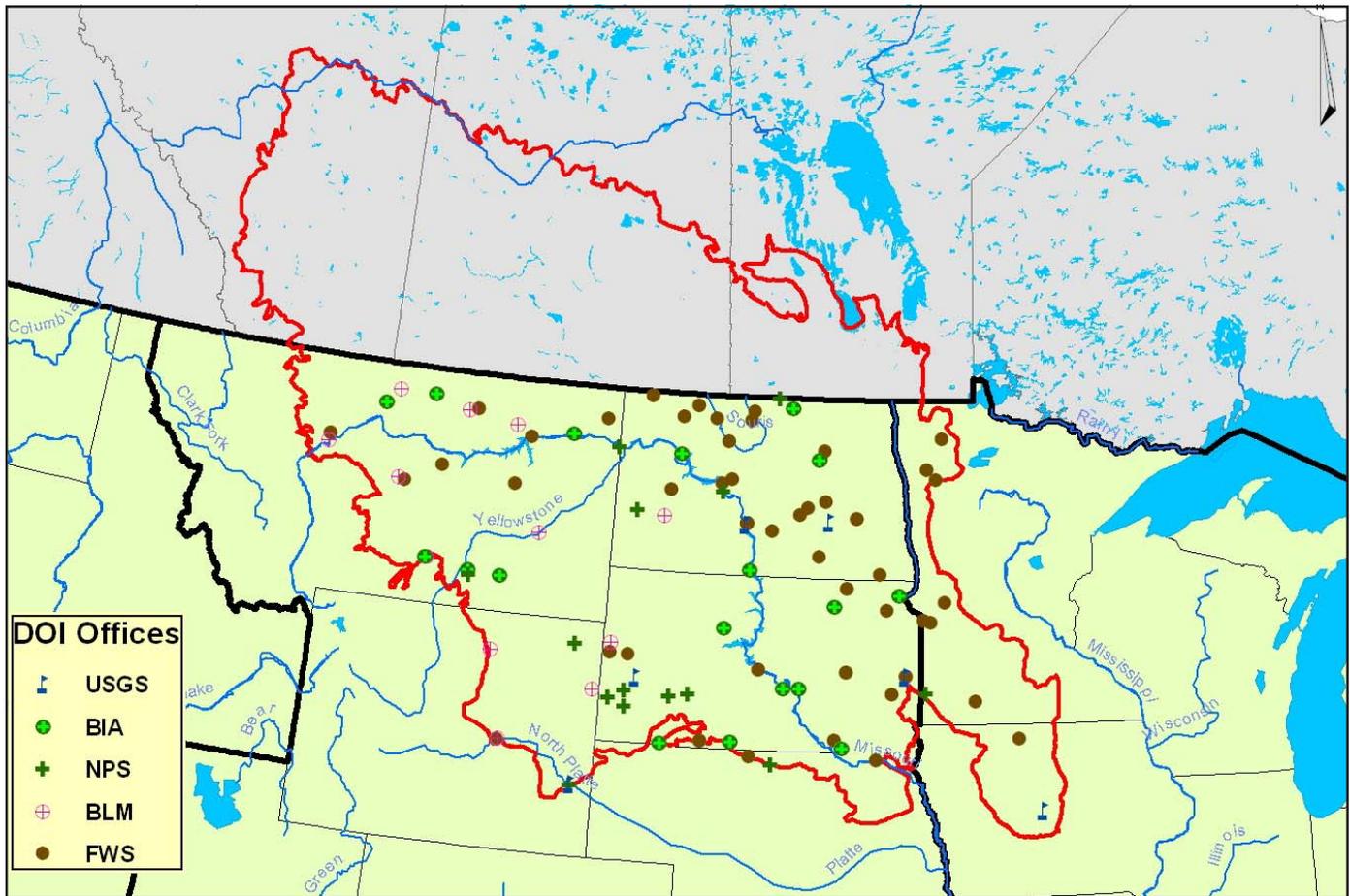


Figure 4. Existing Department of the Interior offices in the Plains and Prairie Potholes LCC

declining for many decades. To date, more than 1,500 species of plants like blue grama, sagebrush and coneflower; 300 species of birds, including the greater sage grouse, golden eagle and sandhill crane; and 220 species of butterfly have been recorded in this region. The Northern Great Plains harbors more than 90 species of mammals, including the American bison, the prairie dog and the blackfooted ferret - the most endangered mammal in North America.

The breaking of native sod, a practice referred to as “sodbusting,” for production of grain crops is the most serious threat to native prairie because it eliminates nearly all native species and full restoration of tilled land is difficult and expensive. Additionally, nearly all private and public grasslands in the Northern Great Plains, including many protected areas, are grazed by livestock and/or are under consideration for energy devel-

opment. Traditional grazing practices generally favor a uniform grazing intensity across the landscape, which produces an even vegetative structure rather than the patchy mosaics created by historic patterns of bison grazing; this reduces habitat diversity and continuity for grassland birds and other species. Inappropriate grazing damages the important riparian zones and affects the health of aquatic systems. The open plains provide some of the most reliable wind locations on the continent and wind energy development is on the rise. Whereas grasslands in the Northern Great Plains continue to face threats from increased conversion of native grassland to agricultural use, energy development, and introduced invasive plant species, this vast area is relatively intact ecologically and many opportunities to preserve and restore large patches of the Northern Great Plains exist.

QUESTION 2.

Identify the partners with which the Region has conferred thus far (with particular emphasis on other DOI bureaus), and describe the current and potential roles they may play. Do the same for potential partners. Describe the potential contributions of fiscal and in-kind resources that all partners identified, thus far, may bring to the LCC.

The very essence of landscape-level conservation requires strong and numerous partnerships. Within the PPP LCC, the process to coalesce the multiple federal, state, provincial and non-governmental conservation agencies into a working cooperative began, formally, in October 2009. Our goal was to contact as many partners as possible between mid-October and early November 2009. We invited more than 300 individuals from numerous partner organizations and FWS staff (table 1.) to participate in webconference briefings. Approximately 150 individuals joined in the briefings and approximately 100 of the participants provided feedback (Table 2). We conducted follow up communications with state directors, federal agency executives, and Canadian provincial representatives. Through input collected during this scoping, including a series of 11 web-conferences, direct mailings, and personal outreach, the PPP LCC team identified 42 potential partners.

During the initial scoping with potential partners we ask each to specifically rate their interest in contributing toward implementation of the PPP LCC. From the responses provided, we grouped each into one of three organizational types: Federal government

agencies, State agencies, and conservation organizations. Not surprisingly, the Federal government agencies showed the highest level of potential contributions and commitment to the PPP LCC. We say this is not surprising because all but one respondent was from a DOI agency, and LCCs are a DOI-wide initiative. DOI agencies' responses are very encouraging, including a tentative agreement with USGS to collocate staff with FWS LCC staff, provide office space to FWS employees, and share other resources when and where possible. The full level of commitment depends, to some degree, on the selected location for core LCC staff. Coordination with other DOI bureaus and other federal agencies to assess interest in collaborating in the PPP LCC is ongoing. For instance, since our initial scoping we have received strong support from

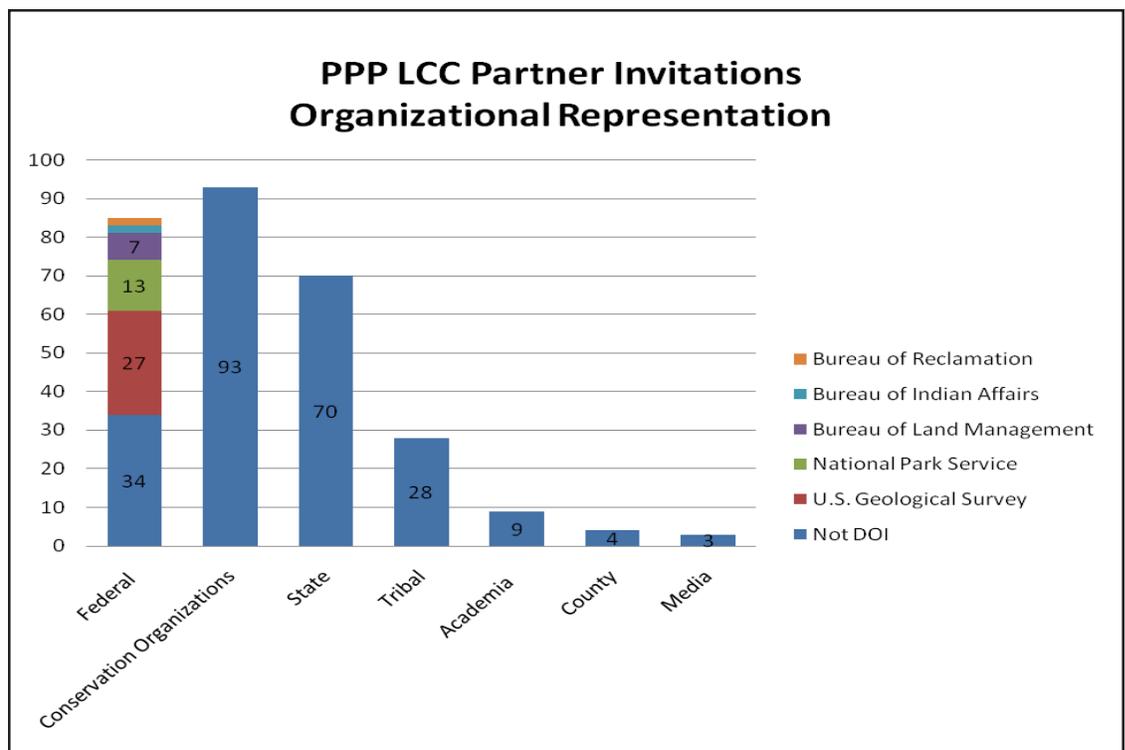


Table 1. Organizations invited to participate in scoping.

the Environmental Protection Agency, Region 8, to assist in developing this LCC. We anticipate that other agencies will also be interested in participating once more information is available.

Respondents from other organizations were generally inclined to participate on the steering committee; but less committed to participating in staff co-location, or contributing financial resources and staff. Conservation organizations indicated greater likelihood of participation in the LCC through staffing, technical services, and financial resources than did state respondents. We anticipate that more non-federal agencies will actively participate as the specific details about this LCC emerge.

Affiliation	Respondents
USGS	6
Bureau of Land Management	4
Minnesota Department of Natural Resources	4
Ducks Unlimited	3
National Park Service	3
Iowa Department of Natural Resources	2
The Nature Conservancy	2
USFWS	2
American Prairie Foundation	1
Army Corps of Engineers	1
Bureau of Indian Affairs	1
Bureau of Reclamation	1
Defenders of Wildlife	1
Izaak Walton League of America	1
Montana Fish, Wildlife and Parks	1
National Audubon Society (Audubon Wyoming)	1
North Dakota Game and Fish Department	1
North Dakota State University	1
South Dakota Game, Fish & Parks Department	1
The Conservation Fund	1
The National Audubon Society/ Rocky Mountain Region	1
Thunder Basin Grasslands Prairie Ecosystem Association	1
World Wildlife Fund US	1

Table 2. Partner organizations that provided feedback. An additional 46 USFWS staff members also provided feedback. DOI bureaus are highlighted in red.

We are in the initial phase of building the PPP LCC as a partnership of interested organizations, and trying to assess the level of interest some of our existing partners might have in participating in the PPP LCC. Please indicate your beliefs about the degree of likelihood that your organization or agency will be interested in participating in the roles and activities identified (in red). Your answers to these questions do not obligate your organization's involvement.

Answer Options	conservation organization	U.S. Federal government	State government	Response Count
serve on advisory council				
Definitely	5	10	1	
Probably	5	4	4	
Possibly	3	5	4	
Probably Not	0	0	0	
Definitely Not	0	0	1	
	13	19	10	42
contribute technical staff				
Definitely	3	8	0	
Probably	1	5	1	
Possibly	7	4	6	
Probably Not	2	2	3	
Definitely Not	0	0	0	
	13	19	10	42
contribute technical support, other than staff				
Definitely	1	5	0	
Probably	6	8	3	
Possibly	3	4	3	
Probably Not	2	2	4	
Definitely Not	0	0	0	
	12	19	10	41
co-locate staff				
Definitely	0	6	0	
Probably	2	3	0	
Possibly	6	7	4	
Probably Not	4	3	5	
Definitely Not	0	0	1	
	12	19	10	41
contribute administrative services				
Definitely	0	2	0	
Probably	1	3	0	
Possibly	4	8	2	
Probably Not	8	5	8	
Definitely Not	0	1	0	
	13	19	10	42
contribute financial or other resources				
Definitely	0	2	0	
Probably	1	5	0	
Possibly	8	9	3	
Probably Not	4	0	6	
Definitely Not	0	2	0	
	13	18	9	40

Table 3. Potential partner organization willingness to participate in the LCC.

QUESTION 3.

Identify, on a preliminary basis, the highest priority species and habitats which the Region expects will receive attention within the LCC and whether those priorities are shared with one or more adjoining LCCs. (The Director recognizes that the LCC partnership has not been completed and that the partners may not have participated in a priority-setting process. As a result, he understands that the priorities identified in this plan may change with additional partner involvement.)

Landscape and ecosystem heterogeneity within the PPP LCC is extensive. Although historically dominated by native prairie grasslands the PPP LCC also includes major river systems (Yellowstone, Missouri and Red rivers) and sagebrush dominated ecosystems in the western portion of the LCC. Numerous associated and obligated species occupy these ecosystems. We have not had a chance to select methods for identifying the highest priority species because our planning is still in its formative stages. To get started on this process, we asked participants in the scoping effort to provide suggestions for criteria to identify priority species and habitats. Responses indicate that an early task of the LCC may be to develop a prioritization system using indicator, keystone, or foundational species concepts, risk assessment techniques, and consideration for species of socio-economic value.

To make the PPP LCC immediately relevant to large-scale landscape conservation we have chosen to define our highest priority species and associated habitats on an interim basis, using critical threats to species survival and viability as primary criteria. Through earlier scoping efforts (discussed above) respondents listed energy

development, agriculture and water quality/quantity as driving issues facing the PPP LCC in the next three years (*Table 4*). The PPP LCC planning team has taken these issues and identified the species and habitats most degraded or vulnerable to development and where we anticipate directing our science resources in the near term. *Table 5 (next page)* lists these priority species and their associated habitats within the three subunits of the PPP LCC.

Given the short time frame for developing this document, there has been no opportunity for a thorough discussion among partners in the PPP LCC regarding these priority species. Until we have a rigorous method and opportunities for discussing priorities with partners and the steering committee, we have identified what we are calling

ISSUE	PARTNERS (38)		FWS (44)		TOTAL % (82)		
	#	%	#	%	#	%	Rank
Agriculture	28	74%	27	61%	55	67%	2
ANS / disease	2	5%	4	9%	6	7%	7
Biodiversity	1	3%	0	0%	1	1%	11
Climate Change	9	24%	4	9%	13	16%	5
Energy	27	71%	31	70%	58	71%	1
ESA	3	8%	2	5%	5	6%	8
Funding	0	0%	4	9%	4	5%	9
Habitat Conservation	8	21%	8	18%	16	20%	4
Land Acquisition/Easements	0	0%	4	9%	4	6%	8
Land & Resource Management Planning	7	18%	0	0%	7	9%	6
Land Use	3	8%	0	0%	3	4%	10
River mgt	2	5%	5	11%	7	9%	6
Uncertainty	3	8%	1	2%	4	5%	9
Land Use	1	3%	0	0%	1	1%	11
Water	5	13%	12	27%	17	21%	3

Table 4. Driving issues identified during the scoping process.

“focal species” within each subunit of the LCC. These species represent larger groups of individual species with similar habitat requirements. We recognize that these “focal species” are

imperfect proxies for individual species of concern but rather serve only to guide our initial science capacity development to achieve maximum benefit both within and among habitat types.

Preliminary Priority Species	Habitat	Subunit
Mallard, Blue-winged teal, Gadwall, Northern Shoveler, Northern Pintail, American Wigeon, Canvasback, Redhead, American Bittern, Yellow Rail, King Rail, Whooping Crane, Marbled Godwit, Willet, Wilson’s Phalarope, Nelson’s Sharp-tailed Sparrow, Marsh Wren, Sedge Wren, LeConte’s Sparrow, Greater Prairie-chicken, Northern Harrier	Grassland/wetland complexes	Prairie Pothole Region
Swainson’s Hawk, Ferruginous Hawk, Burrowing Owl, Upland Sandpiper, Baird’s Sparrow, Sprague’s Pipit, Chestnut-collared Longspur, Sharp-tailed Grouse, Clay-colored Sparrow, McCown’s Longspur, Vesper Sparrow, Loggerhead Shrike, Lark Bunting, Grasshopper Sparrow, Western Meadowlark	Mixed grass prairie	Prairie Pothole Region
Northern Harrier, Henslow’s Sparrow, Greater Prairie Chicken	Tallgrass prairie	Prairie Pothole Region
Western Grebe, Black Tern, Horned Grebe, Piping Plover, American Avocet, American White Pelican, Black-crowned Night Heron, Eared Grebe, Pied-billed Grebe, northern leopard frog	Wetlands	Prairie Pothole Region Northern Great Plains
Baird’s Sparrow, Sprague’s Pipit, Chestnut-collared Longspur, Sharp-tailed Grouse, Swainson’s Hawk, Ferruginous Hawk, Northern Harrier, Burrowing Owl, Short-eared Owl, Upland Sandpiper, Clay-colored Sparrow, McCown’s Longspur, Vesper Sparrow, Bobolink, Greater Prairie-chicken, Loggerhead Shrike, Lark Bunting, Grasshopper Sparrow, Western Meadowlark, Dickcissel, Long-billed Curlew, Black-footed Ferret	Grasslands	Northern Great Plains
Least Tern, Piping Plover	Large Rivers and Lakes	Rivers and Riparian Corridors

Table 5. Preliminary Priority species and habitats. Species identified as “focal species” are identified in red. Continued next page.

Greater Sage Grouse, Mountain Bluebird, Sage Thrasher, Brewer's Sparrow, Mountain Plover, Black-footed Ferret	Sage Steppe	Northern Great Plains
Black-billed Cuckoo, Lewis's Woodpecker, Red-headed Woodpecker, Black-backed Woodpecker, Willow Flycatcher, Say's Phoebe, Pinyon Jay, Black-billed Magpie, Northern Goshawk, Golden Eagle, Preble's Meadow Jumping Mouse, Colorado Butterfly Plant, Water Howellia, Ute Ladies' Tresses, Blowout Penstemon	Woodland/Riparian/ Cliff/Edge/Barren	Rivers and Riparian Corridors
Banded Killifish, Bigmouth Shiner, Blacknose Shiner, Blue Sucker, Bluehead Sucker, Bluntnose Darter, Burbot, Central Mudminnow, Central Stoneroller, Channel Catfish, Common Shiner, Finescale Dace, Flannelmouth Sucker, Flathead Chub, Gilt Darter, Gravel Chub, Greater Redhorse, Hornyhead Chub, Iowa Darter, Lake Chub, Lake Sturgeon, Least Darter, Leatherside Chub, Longnose Sucker, Mottled Sculpin, Northern Brook Lamprey, Northern Pearl Dace, Orangethroat Darter, Ozark Minnow, Paddlefish, Paiute Sculpin, Pallid Shiner, Pallid Sturgeon, Pearl Dace, Pirate Perch, Plains Minnow, Plains Topminnow, Pugnose Shiner, Quillback, River Carpsucker, River Redhorse, Roundtail Chub, Sauger, Shorthead Redhorse, Shortnose Gar, Shovelnose Sturgeon, Sicklefin Chub, Slender Madtom, Southern Redbelly Dace, Stonecat, Sturgeon Chub, Suckermouth Minnow, Topeka Shiner, Trout Perch, Western Silvery Minnow	Large Rivers and streams	Rivers and Riparian Corridors

Table 5. (continued from previous page). Preliminary Priority species and habitats. Species identified as "focal species" are identified in red.

QUESTION 4.

Identify anticipated conservation delivery mechanisms and results related to those priority species and habitats. (To the degree possible, describe how conservation will be delivered on the ground, e.g. species recovery program, Partners for Fish and Wildlife, state fishery or wildlife management actions, section 7 of the ESA etc. and the goals for improvement of the species status and/or habitat.)

Delivering effective landscape-level, species and habitat conservation in the uncertain future of global climate change presents new challenges for the Service and our conservation partners. To begin addressing these conservation challenges in the PPP LCC we propose to increase scientific expertise and leverage existing scientific expertise by providing direct project funding and enhance working relationships with our partners through cooperative programs and grant agreements. The PPP LCC will play a significant role in advocating for effective wildlife and habitat conservation through a variety of means including legislative outreach (at the state and federal levels); providing public education; and promoting new methods and practices that resolve environmental stressors (habitat loss, fragmentation, and degradation) and capitalize on new opportunities to protect habitat (carbon sequestration programs). Table 6 outlines the connection between LCCs and conservation delivery.

The U.S. Fish and Wildlife Service and our conservation partners have a long history of working on priority species and habitats, identified above (*see question 3*), within the PPP LCC and maintain a significant presence across the landscape. Initially we propose strengthening our presence through the addition of staff to address data needs common throughout the PPP LCC. In addition, we propose to acquire the necessary spatial and ecological data to begin the process of identifying how priority species and habitats may be affected by climate change. Finally, we will incorporate the new expertise and spatial/ecological data within the framework of existing programs to deliver landscape level conservation. The PPP LCC is fortunate to have many proven (or potential) programs and partnerships which will greatly facilitate conservation delivery. A partial list of proven (or potential) programs and funding sources in the Plains and Prairie Pothole geographic area include:

U.S. Fish and Wildlife Service

Migratory Bird Hunting Stamp Act funds (a significant portion of the annual revenue from the sale of duck stamps is directed to the Prairie Pothole Region to protect and conserve wetlands and associated grasslands, we anticipate this trend to continue.)

National Fish Passage Program (Launched by the U.S. Fish and Wildlife Service in 1999, the National Fish Passage Program (NFPP) is a voluntary, non-regulatory effort that provides financial and technical assistance to remove or bypass these artificial barriers that impede the movement of fish and contribute to their decline.

Land and Water Conservation Fund (these funds are annually appropriated to protect habitat through fee title or conservation easement within an officially approved acquisition boundary. These funds have long-help protect habitat in this geographic area and theoretically will do so in the future.)

North American Wetland Conservation Act grants (This is a very important habitat conservation funding source (USFWS) in this geographic area. The grants are to protect, restore or enhance wetland and associated upland habitats: Standard Grants \$1,000,000; Small Grants \$75,000; both require at least a 1:1 match)

Partners for Fish and Wildlife Program (This USFWS program receives appropriated funds and leverages those funds with countless partners. They have staff throughout the geographic area, and outside of National Wildlife Refuge staff (on site) they are the primary vehicle for habitat delivery.

National Wildlife Refuges Wildlife and Habitat funds (Some of the funding provided to the NWR is used to restore, enhance or create habitat within the boundaries of refuges. There are a significant number of refuges in this geographic area, therefore habitat delivered on refuges remains an important part of the landscape puzzle.)

NAWMP Joint Venture funds (The joint ventures receive appropriated funds and in this geographic area, they leverage much of those with partners for habitat delivery.)

Neotropical Migratory Bird Conservation Act grants (This is a small USFWS matching grant program.)

Technical Assistance and Endangered Species Act (Includes a number of highly effective programs including: ESA section 7, Habitat Conservation Program, Conservation Permitting, Conservation Planning Assistance, and Environmental Contaminants.)

Cooperative Endangered Species Conservation Fund grants (Sec 6 of ESA) (This USFWS program provides federal grants to States for species and habitat conservation actions on non-Federal lands. Only candidate, proposed, and listed species projects are eligible for funding.)

National Fish Habitat Action Plan (Fish Habitat Partnerships are self identified, self organized, and self-directed communities of interest formed around geographic areas, keystone species, or system types. These are locally driven efforts that build private and public partnerships to improve fish habitat. These partnerships will be able to provide delivery of aquatic habitat conservation.)

Tribal Wildlife Grants (The USFWS provides a competitive funding opportunity for Federally recognized Tribal governments to develop and implement programs for the benefit of wildlife and their habitat, including species of Native American cultural or traditional importance and species that are not hunted or fished. Tribal Wildlife Grants are used to provide technical and financial assistance to Tribes for the development and implementation of programs that benefit fish and wildlife resources and their habitat.)

U.S. Department of Agriculture – Farm Bill Conservation Programs

Wetland Reserve Program (Provides cost share assistance to landowners to protect, restore or enhance wetlands and adjacent upland habitats. Cost share depends on the length of easement entered into with the landowner. Given the volume of wetlands in the PPP geographic area, this program will continue to be very important for ongoing wetland conservation.)

Conservation Reserve Program (including specialized CRP programs- i.e CP37) (This cost program is the most important conservation program across this geographic region. Its purpose is to retire highly erodible lands from production and thereby increasing vegetative cover and reducing soil erosion into our water bodies. Landowners sign 10-15 year contracts that eventually expire and if re-enrollment opportunities are not timely available, the landscape in the geographic area could change dramatically. Cost share is up to 50%. For these reasons, this program will continue to be critically important to habitat conservation in the PPP geographic area.)

Grassland Reserve Program (The grassland reserve program provides funding to conserve or restore grassland resources on private lands through easements or rental contracts. This will continue to be an important program for the grassland and aquatic resources and the critically important ranching community across this geographic landscape.)

Wildlife Habitat Incentives Program (This cost share program develops and improves high quality habitat to support wildlife populations. Landowner agreements last generally from 5-10 years. Cost share is up to 75%.)

Environmental Quality Incentive Program (This is a cost share program promotes agricultural production and environmental quality as compatible goals. Cost share is up to 75% of estimated project costs.)

LCC Function	Scientific or Technical Output	Examples of Delivery Mechanism	Conservation Outcome
geospatial habitat optimization modeling	identify hotspots for conservation and ecosystem services	NWRS land acquisition, North American Waterfowl Management Plan, & Partners for Fish and Wildlife Program habitat restoration	sufficient amounts of strategically located habitat to achieve population goals
population modeling	population objectives for recovery of ESA species	ESA authorities to protect species from additive mortality	sufficient population size to remove species from ESA list
habitat modeling	identify amount of habitat necessary to achieve population goals	ESA authorities to conserve habitat for listed species	sufficient habitat to achieve population goals
adaptive management planning	monitoring strategies to determine whether management goals are achieved	NWRS Improvement Act, ESA, MBTA, and many others	achievement of habitat and population goals for identified species
application of climate projections to conservation goals	downscaled models and projections and contingency planning for anticipated future environmental scenarios	NEPA, NWRS CCPs, ESA Recovery Planning	transition habitats to meet the needs of focal species in the future
climate projections coupled with geospatial habitat optimization modeling	hotspots for future conservation and ecosystem services with economic efficiencies	NEPA, NWRS CCPs, ESA Recovery Planning	desired future species and habitat conservation
conservation genetics	identification of genetically significant stocks	Fish Passage Program	target fish passage barrier removal to maintain or restore desired populations

Table 6. Read from left to right, this matrix outlines a few examples of the relationship of the enhanced science capacity in LCCs to conservation delivery mechanisms and desired outcomes.

State Agencies

State Partners include: MN, IA, ND, SD, MT, WY, NE

State Wildlife Grants (These are federal dollars appropriated through the USFWS that are used by the States to implement their State Wildlife Action Plans. There are numerous opportunities under this program to work closely with the states.)

Federal Aid in Wildlife Restoration and Sportfish Restoration funds (These dollars are the result of an excise tax on namely hunting and fishing equipment. Revenues from this fund are used for habitat conservation and improvement projects on lands within the given state.)

Access programs that help conserve habitat (Some states have developed recreation access programs wherein the State enters into a lease agreement with a landowner. This program helps conserve habitat on both a temporary (i.e. lease term) and long-term basis as the funds are used as match toward various Federal grant programs.)

MN sale tax revenue dedicated toward wildlife/habitat conservation (The voters of MN passed a constitutional amendment that directs 3/8 of 1% of the sales tax (potentially \$300 annually) toward actions that produce clean water, fish and wildlife habitat. This will last at least 25 years and has enormous potential to benefit habitat conservation.)

U.S. Army Corps of Engineers

The Missouri River Recovery Program (This program implements between 50 and 85 million dollars annually towards the restoration and recovery of the Missouri River ecosystem. The program includes a comprehensive Integrated Science Program that is responsible for research, monitoring and evaluation of biological data which is collected from Montana to Missouri.)

Non-Governmental Organizations

A number of NGO partners provide both match funding and direct habitat conservation and delivery. The NGO partners do not necessarily have grant programs, but rather specific habitat conservation objectives respective of their organization. As a result, different partners participate on a “per project” basis. Some of the partners include:

- Ducks Unlimited
- The Nature Conservancy
- Pheasants Forever
- North Dakota Natural Resources Trust
- Iowa Natural Heritage Foundation
- Local and regional land trusts
- World Wildlife Fund

Other Sources

National Fish and Wildlife Foundation (The Foundation has provided several grants in the past for habitat conservation within the geographic area, so they remain a potential source of habitat conservation funding.)

Mitigation (or damage settlements) funds (Damage settlement funds can not be consistently relied upon, however if the past is any sign of the future, the geographic area will have habitat conservation funding available through this mechanism.)

QUESTION 5.

Describe the science capacities that the Region intends to develop or seek in order to support the LCC and any specific science capacity projects that have been identified, thus far.

During the initial scoping process participants identified three common science needs which ranked consistently within the top five science capacity needs for the PPP LCC at both the local and landscape level (*Table 6*). These included climate modeling, development of resource inventory and monitoring, and spatial analysis. Spatial analysis includes GIS, image analysis, landscape planning and modeling. To address these needs the PPP LCC plans the following approach.

Climate Modeling – PPP LCC will work with the USGS regional climate centers to step down climate models to a scale appropriate for use at the PPP LCC level. Currently details regarding implementation of the USGS regional climate centers are unavailable. The PPP LCC anticipates once regional climate centers are fully functional later in FY2010 we will begin working with USGS to develop the appropriate models for conservation delivery.

Local	LCC	Science Needs
5	7	Biological and ecological knowledge in disciplines such as fishery science, wildlife science, plant ecology, conservation biology, and community ecology
1	1	Climate modeling
9	12	Conservation genetics
13	10	Database management and web hosting
12	9	Decision analysis
6	5	Development and application of decision support systems and tools
2	3	Development of resource inventory and evaluative monitoring
10	2	Partnership communication and coordination
3	6	Physical sciences such as hydrology, soils, geomorphology and environmental chemistry
8	11	Population modeling
7	8	Resource planning and conservation design
4	4	Spatial analysis (GIS and image analysis), landscape planning and modeling
11	13	Statistical analysis

Table 6. Science needs identified through scoping at both the local and landscape levels.

Inventory and Monitoring – The USFWS, through the National Wildlife Refuge System will begin a national inventory and monitoring program in FY2010. This program will be based upon the highly successful National Park Service inventory and monitoring program. The NWRS intends to co-locate 2-5 staff with the LCC for landscape scale inventory and monitor in support of adaptive management. The PPP LCC will assist the NWRS inventory and monitoring team as an active partner in this program once established. We anticipate that future financial support from the PPP LCC will help focus inventory and monitoring efforts on aquatic and terrestrial issues important to all partners of the PPP LCC.

Spatial analysis – In FY 2010 the PPP LCC has the opportunity to immediately provide additional science capacity through improved spatial analysis. Past efforts by the Fish and Wildlife Service's NWRS and Migratory Bird programs in Regions 6 and 3, as well as partnerships supported by the Joint Ventures, have demonstrated a strong working partnership which delivers spatial analysis products to support and guide management decisions. While past efforts have focused primarily on priority waterfowl and other migratory birds in the Prairie Pothole Region, development of increased GIS and landscape modeling, especially for aquatic species and habitats, within the PPP LCC will increase the geographic and ecological scope necessary to address climate change affects throughout the landscape. The expanded capacity will be used primarily to develop a better understanding of how populations respond to management and habitat changes through landscape-level model based approaches as they relate to climate and other anthropogenic stressors and to link LCC level responses to range-wide population objectives. Listed below is a preliminary list of science needs which will compliment ongoing Joint Venture efforts, National Fish Habitat Action Plan partnerships, State Wildlife Action Plans, and Tribal conservation strategies. Priorities for where these positions would be located will be determined as priorities and conservation delivery opportunities are identified.

To accomplish PPP LCC goals additional field level science capability is needed in the following areas: biometrics, information technology, spatial modeling, landscape ecology / biology, spatial data management, remote sensing, and population ecology / genetics. To beginning addressing these needs the PPP LCC proposes initially to increase GIS and spatial modeling capability which is a common need across the LCC. For example, we will actively pursue acquisition of National Wetlands Inventory (NWI) data and improved digital elevation models (DEMs) which are beneficial for all partners in the LCC. Several individuals will also be needed to manage and compile available layers and databases and form a geo-database that would allow sharing of information throughout the PPP LCC as well as adjacent LCC's. Equally important, the LCC planning team has identified an urgent need for riverine/aquatic and terrestrial ecologists. These positions are particularly important to the recently initiated planning efforts associated with the Missouri River restoration and recovery.

QUESTION 6.

Identify and describe the Region's top science needs whose cost exceeds the initial regional allocation for science capacity, but not to exceed \$2 million. Refer to "Expectations of all Regions for Adaptive Science Capacity" in the LCC Allocations Document discussed at the October 2009 Directorate meeting.

During the initial scoping process, and subsequent ongoing discussions with our conservation partners, it has become clear that one of the most immediate needs we all share is the need for sound geospatial data at the correct landscape scale. In our pursuit of landscapes that can sustain fish and wildlife populations stressed by a changing climate the LCC will engage in biological planning and conservation designs that link populations to habitat, and habitats to physical and environmental systems. To do this, we must see the system as clearly as possible.

Geographically referenced information is critical to our ability to visualize the landscape and its associated environmental conditions that form the basis for our conservation delivery. In other words, we desire to affect conservation delivery at the right locations at the right time. To do this we need better, more refined land cover/land use maps, better surface elevation models (DEMs), with consistent levels of resolution for the entire country, hydrologic data that ties surface and ground water together, easier access, more simplified queries, and full National coverage of soil information housed in the SURGO database.

A consistent landcover/land use data layer with greater thematic resolution for the contiguous U.S. than currently exists with the National Land Cover Datasets would benefit habitat terrestrial habitat modeling. If the current NLCD could be improved to provide NVCS alliance level resolution, models predicting habitat availability, potential species occurrence, habitat change, and threats would be greatly improved. Finer resolution in elevation and soils datasets would provide similar benefits, particularly in the area of ephemeral and perennial wetland modeling. Thus we propose to direct initial science funding to the following:

1. Acquisition of digital National Wetlands Inventory (NWI) data - The NWI program delineated wetland boundaries and assigned water regimes based on stereoscopic photo-interpretation of aerial

photographs captured during optimal water conditions. Wetland water regimes were based according to the Cowardin (1979) wetland classification system. NWI has major advantages over wetlands data developed from satellite imagery in that resolution is much finer and wetland zones are identified and classified. Both these characteristics have significant implications for development of spatial models to guide wildlife conservation, as most wetland-dependent species respond to wetland size, zonation, and water regime.

2. Acquisition of improved digital elevation models (DEMs) - The horizontal and vertical resolution of early-generation DEMs are too coarse to describe many landforms relevant to spatial modeling of hydrology and wildlife habitat. Light Detection and Ranging (LIDAR) and Interferometric Synthetic Aperture Radar (IFSAR) are recent technologies that can produce DEMs with much finer horizontal and vertical resolution necessary to develop useful models to guide conservation.

3. Acquiring hydrological models that ties surface and ground water together.

4. Revising the national soils database SURGO - the database is currently very challenging to use and needs revamping to make it user friendly and to ensure there is adequate coverage across the continent.

5. Revising the National Land Cover Database to the Alliance Level - This activity goes way beyond any one LCC boundary but land cover/land use is the fundamental base layer for species-habitat relation model.

Most importantly, data acquisition, storage, and management are identified by most other LCCs as a high priority need. We suggest that the entire \$2 million in funding go to support development of data base infrastructure and management for the benefit of all LCCs.

QUESTION 7.

The Director's expectation is that each region will provide leadership and support to ensure that one LCC will be fully functional by the end of FY2010, for a total of eight fully functional LCCs. The other Bureaus, DOI and Congress are looking to FWS to implement the LCC concept successfully and to produce strong partnerships supported by excellence in science to achieve conservation gains related to priority species and habitats. Please identify what successes your Region anticipates in FY 2010 that might serve as model accomplishments for other Bureaus, DOI, and Congress.

Building on strong partnerships and existing science capacity the Plains and Prairie Potholes Landscape Conservation Cooperative will be the model for large scale conservation planning and delivery. Both Region 3 and 6 have long established partnerships with all states within the PPP LCC, as well as Native American tribes, Canadian federal and provincial organizations and many NGOs such as Ducks Unlimited, Pheasants Forever, The Nature Conservancy, and Delta Waterfowl. In addition, four fish habitat partnerships (Western Native Trout Initiative, Midwest Glacial Lakes FHP, Reservoir FHP and Great Plains FHP) and three migratory bird Joint ventures (Northern Plains, Prairie Potholes and Prairie Habitat) are extremely active in the area. These partnerships originated from a common need to preserve wetlands and assist with Missouri River Recovery efforts.

In addition to strong partnerships, the PPP LCC is fortunate to have existing science capacity which translates into an immediate conservation planning and delivery framework to build upon. Existing Service science and strategic conservation planning capacity includes the Habitat and Population Evaluation Team (HAPET) Offices in Fergus Falls, Minn., and Bismarck, ND, the Fish and Wildlife Conservation Offices, the Fish Technology and Fish Health centers, and several National Wildlife Refuges, National Fish Hatcheries and Ecological Services Field Offices. We also have a rich history of collaboration USGS which operates the Northern Prairie Wildlife Research Center and the South Dakota State University Cooperative Research Unit and is planning to establish an Intermountain West Regional Climate Change Hub.

With strong partnerships and an established framework for providing conservation science the PPP LCC has the foundation to achieve immediate success in landscape level conservation. We envision with the resources provided by the newly established Plains and Prairie Potholes LCC we will immediately provide applied science support to the conservation community, including supplying specialized expertise in landscape scale conservation planning and design.

In order to ensure that we act promptly and deliberately, we have appointed two interim coordinators. Dr. Kelly Hogan is serving as the interim LCC coordinator and is providing oversight to the Plains and Prairie Potholes Landscape Conservation Cooperative development effort. Dr. Patricia Heglund is serving as the interim LCC science coordinator and is organizing efforts to ensure that we are building the appropriate new science capacity to enhance our existing science resources, and to organize an effort for obligating funding to new, high priority scientific investigations.

QUESTION 8.

Identify any characteristics that you believe makes your LCC unique.

The Plains and Prairie Potholes Landscape Conservation Cooperative is a landscape unparalleled in importance to breeding waterfowl and many species of wetland and grassland birds in steep decline. It also contains the upper reaches of the Missouri River and the many imperiled aquatic species within its waters. Areas in between provide vast expanses of habitat for resident game and nongame animals, and its waters are home to many unique aquatic species.

The LCC, which transcends existing U.S. Fish and Wildlife Service regional boundaries and the international border with Canada, includes the entire state of North Dakota; a portion of South Dakota; two-thirds of Montana; one third of Wyoming; large blocks of southern Alberta, Manitoba, and Saskatchewan; and portions of Nebraska, Minnesota, and Iowa.

Currently, the Service and our partners are working within the PPP LCC to develop and apply the scientific tools necessary to determine how climate change, coupled with existing stressors such as conversion of native prairie for agriculture may affect the health and productivity of populations of federal trust species in this landscape. Increasing emphasis on energy independence and green energy development have increased pressure on this landscape to produce fossil fuels, wind, and biofuel energy to contribute to the Nation's energy portfolio.

The Missouri River Restoration project, one of the largest restoration projects in the country, transects the PPP LCC and includes active partnerships with the Corps of Engineers and numerous States, federal, tribal and other partners working to restore as much ecological form and function as possible.

Also within the PPP LCC is the vast Prairie Pothole region. The Prairie Pothole region includes millions of varied wetlands that constitute one of the richest wetland and grassland systems in the world. These "prairie potholes" and their surrounding grasslands are highly productive and provide breeding habitat for over half of the migratory waterfowl in North America. We envision that these prairie habits will become even more important in the face of petroleum and wind energy development.

The Northern Great Plains portion includes tall and mixed grasslands, small emergent wetlands, lakes, rivers and riparian forests, aspen parklands, and small-river systems. The area is also critical to ongoing recovery efforts for the endangered black-footed ferret, for which the Service may develop new partnerships with NRCS and other agriculture organizations.

Threats from global climate change to this unique landscape will likely have profound impacts on the fish, wildlife and plant populations in the region. Although preliminary Continental-scale climate models are inconclusive regarding the exact nature of change across the landscape; one thing is certain, the Plains and Prairie Potholes region will change. With the enhancement of existing science capacity in the region (*discussed above*) and by building on a framework of strong partnerships, the Plains and Prairie Potholes LCC is uniquely positioned to address these changes.

QUESTION 9.

Identify any additional LCC support that your region will provide in FY 2009. For instance, support for an adjoining LCC, for which another region has primary responsibility; or support for start-up and development of an LCC in addition to the eight initial LCCs.

Region 3 is participating in the start up of five LCCs, including the Plains and Prairie Potholes and Upper Midwest - Great Lakes, for which we have lead.

Upper Midwest and Great Lakes LCC

The Midwest Region, in collaboration with the Northeast Region is currently in the early stages of following a similar strategy as described in this document in order to implement the Upper Midwest and Great Lakes LCC.

The following text outlines the Midwest Region's efforts in LCCs lead by other Regions.

Gulf Coast Plain and Ozarks (GCPO) LCC

We have initially dedicated two Field Office Project Leaders to Region 4's efforts in FY 2010 to stand up the GCPO LCC. They are assisting Bill Uihlein with the initial scoping and assessment of the potential for the Lower Mississippi Joint Venture to lead this LCC Partnership. We will dedicate more staff and contribute information as the planning process progresses.

Appalachian LCC

We are in communication with Region 5 about its efforts to start up the Appalachian LCC in FY 2010. We are selecting Project Leaders to serve on the multi-Region Team. Final assignments for team membership will be made in the near future. We expect to give additional support in scoping science needs and partnership potential.

Great Plains LCC

Although not technically providing support to the start up of the GPLCC, we are working across the PPP LCC boarder to assess possible shared science needs and projects.

Other Contributions

Teresa Woods, R3's current LCC coordinator, is providing leadership nationally by organizing all LCC coordinators (Regional Office and interim LCC coordinators) in webconferences to discuss the development of LCCs, ensure a desired level of consistency across LCCs, and share in joint problem solving and lessons learned discussions. This group convened through grassroots communication and it is self-directed. The LCC coordinators meet by webconference on a weekly to bi-weekly basis, depending on the needs of group members. Chuck Traxler, R3's External Affairs Specialist for science, is helping organize a similar effort with EA staff from other Regions to assess common engagement needs, such as talking points, a glossary of terms, and standard website material. Teresa is also provided technical advice and support to the Great Northern LCC scoping efforts, by sharing MS powerpoints, webconference and survey scoping methods, and analytical techniques.

Conclusion

With strong partnerships and an established framework for providing conservation science the Plains and Prairie Potholes Landscape Conservation Cooperative has the foundation to achieve immediate success in landscape conservation.

We envision that with the resources provided by the newly established PPP LCC we will immediately provide applied science support to the conservation community, including supplying specialized expertise in landscape scale conservation planning and design.

This is especially important while we, as a Nation, struggle with the impacts a changing climate will have on our natural resource.

This is a new partnership and we do not want to presuppose the wishes of our partners by planning too far ahead. Our interim coordinators will convene this partnership and plan a course of action in early 2010.

So, while we are poised to begin this important work, we still have many unanswered questions, and we look forward to working with many partners to answer these questions as the LCC begins to take shape.

We would like to acknowledge the dedicated team of staff from the Midwest Region and the Mountain-Prairie Region who worked collaboratively to analyze scoping information, review existing capabilities and identify future needs to help ensure that natural resource managers in the Plains and Prairie Potholes Landscape Conservation Cooperative have the information and tools they need help the fish, wildlife, plants and habitats under their care survive in the face of a changing climate.

LCC Coordinators

Kelly Hogan
Pat Heglund

Midwest Region Team Members

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Jim Leach (NWRS)
Rex Johnson (MB)
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