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# North America's Grasslands



The CEC's work on North American grassland conservation seeks to:

- Establish a Regional Alliance for Chihuahuan Desert Grasslands Conservation—and develop a shared conservation strategy in the region.
- Support comprehensive grassland bird monitoring and inventory programs.
- Review the locations and descriptions of priority conservation areas for the North American grasslands.

## Conserving North America's Grasslands through regional partnerships, species monitoring and inventory programs

Representatives of Canada, Mexico and the United States agreed in 2009 to a program of work on conservation of North American grasslands, the only terrestrial ecological region shared by all three countries. The initiative builds upon past grasslands conservation work sponsored by the Commission for Environmental Cooperation and upon the work of the Trinational Committee of the North American Bird Conservation Initiative (NABCI) launched in 1999.

While grassland bird conservation is an issue of importance in all three North American countries, the focus of the current initiative is Northern Mexico. This region is critical for grassland migratory birds and numerous species at risk. Moreover, the Northern Mexico grasslands are experiencing some of the highest rates of natural habitat conversion to agricultural lands within the Great Plains ecoregion and Chihuahuan deserts in North America.

### A Regional Grassland Conservation Alliance



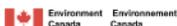
Participants at the December 2009 workshop in Chihuahua.

Conservation groups, research institutions and government agencies concerned with the long-term health of grassland ecosystems in Northern Mexico met in December at a CEC workshop in Chihuahua as part of efforts to establish a regional conservation alliance. This new partnership will formulate a common vision for grassland conservation in the region, build consensus among diverse stakeholders, and help to ensure coordinated action on the ground.

The work of the Regional Alliance for Chihuahuan Desert Grasslands Conservation will be based on preliminary work undertaken in the region and modeled on successful Joint Venture initiatives.

#### Current Participating Organizations

Arizona Game and Fish Department, Association of Fish and Wildlife Agencies, *Comisión Nacional de Áreas Naturales Protejidas* (CONANP), *Comisión Nacional para el Conocimiento y uso de la biodiversidad* (CONABIO), Environment Canada—Canadian Wildlife Service, Chihuahua State Environment Department, National Fish and Wildlife Foundation, The Nature Conservancy, North American Bird Conservation Initiative (NABCI), *Protección de la Fauna Mexicana* (PROFAUNA), ProNatura Noreste, Rocky Mountain Bird Observatory, *Universidad Autónoma de Chihuahua*, US Fish and Wildlife Service (through the Sonoran Joint Venture and the Rio Grande Joint Venture), US Forest Service, World Wildlife Fund—Chihuahuan Desert Program.





# Grasslands: A production landscape

Globally, grasslands are one of the most threatened habitat types and generally one of the most under-represented in protected area systems. The grasslands of North America are no exception, and habitat conversion for crop production and livestock raising has led to significant, and in some cases critical, declines in endemic bird species populations and the populations of other biota.

The Great Plains ecoregion and Chihuahuan deserts, from southern Alberta and Saskatchewan to New Mexico, west Texas, and Northern Mexico have the most extensive and intact native grasslands remaining in North America and support the most important breeding areas for the greatest number of grassland bird species. Conservation opportunities still exist in this region, but traditional conservation approaches focused on protected areas and endangered species may not be enough. Future opportunities for the conservation of North American grasslands can only be fully realized with the active engagement of all stakeholders, along with collaborative action on the ground.

An accurate and comprehensive understanding of land use and conservation priorities across the North American grasslands is essential to support ongoing conservation efforts. The CEC has published



Grasslands Priority Conservation Areas

### Grasslands Priority Conservation Areas

- |                              |  |
|------------------------------|--|
| 1. Hole in the Wall          | 29. Mescalero Sands                    |
| 2. Thunder Basin             | 30. Rita Blanca                        |
| 3. Conata Basin              | 31. Flint Hills                        |
| 4. Southern Coteau           | 32. Chalk Bluff                        |
| 5. Cheyenne River            | 33. Carrzozo                           |
| 6. Chase Lake                | 34. Thunder Basin, Bill                |
| 7. Lostwood                  | 35. Pawnee                             |
| 8. Montana Glaciated Plains  | 36. Sioux Box Butte                    |
| 9. Aspen Parkland            | 37. Roosevelt                          |
| 10. Prairie Montana          | 38. Panhandle                          |
| 11. State-line Wetlands      | 39. Kiowa                              |
| 12. Tall-grass               | 40. Curry                              |
| 13. Poverty Plains           | 41. Cuatro Ciénegas                    |
| 14. Rocky Mountain Front     | 42. Tokio                              |
| 15. Milk River Ridge         | 43. Mapimi                             |
| 16. Cactus Hills/Dirt Hills  | 44. Cuchillas de la Zarca              |
| 17. Great Sandhills          | 45. Valle Colombia                     |
| 18. Suffield                 | 46. Valles Centrales                   |
| 19. Bow Island               | 47. Marfa                              |
| 20. Monet/Matador            | 48. Otero Mesa                         |
| 21. Porcupine Hills          | 49. Sonoita                            |
| 22. Rumsey Block             | 50. Sulphur Springs                    |
| 23. Manitou                  | 51. Janos                              |
| 24. Wainwright/Neutral Hills | 52. New Mexico Bootheel                |
| 25. Central Red Hills        | 53. Amendaris                          |
| 26. Western Red Hills        | 54. Sage Creek Milk River              |
| 27. Ellis                    | 55. Frenchman River – Bitter Creek OMB |
| 28. Cimarron                 |  |

■ Grassland Priority Conservation Areas  
■ North American Grasslands

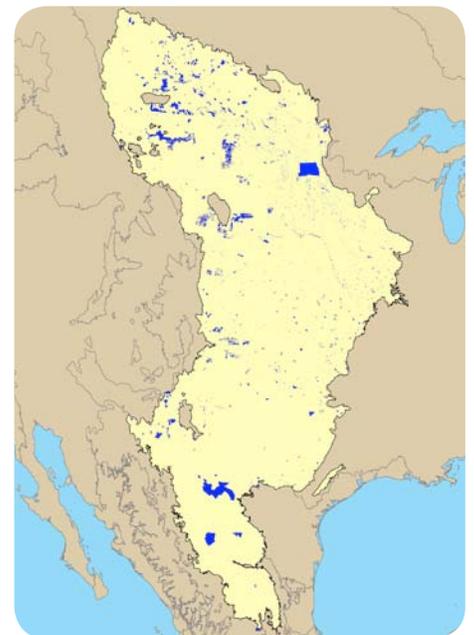
a number of information products to support this understanding, including a North American Land Cover map (2005) and a North American Protected Areas database and map. The CEC's 2005 Grasslands Priority Conservation Areas map, on which the above map is based, is currently being re-

vised based on more recent monitoring and ground-truthing data.

These and other data sets may be viewed and downloaded through the North American Environmental Atlas via its online map viewer available at: <http://www.cec.org/naatlas>.



Greg Levandoski



IUCN-classified protected areas within sections of the Great Plains ecoregion and Chihuahuan desert.

# Biodiversity Monitoring in Priority Conservation Areas in Chihuahuan Desert Grasslands, Mexico

Many North American grassland bird species are of high continental conservation significance due to large-scale habitat loss and degradation over much of their range, leading to significant population declines. Over 90% of grassland-breeding bird species in the area are migratory; only the Galliforms (i.e., prairie chickens, grouse) are truly resident. Bird species richness and population status is also an excellent proxy for the state of biodiversity and natural systems more generally in this ecological region, as birds occupy a wide variety of ecological niches.

Chihuahuan Desert grasslands are essential to the long-term survival of grasslands birds inhabiting western North America, as these areas provide essential overwintering habitat for many of these species. However, there is very little information on wintering grassland bird distribution, abundance, habitat use, and seasonal movements to guide conservation in this region—and help to ensure the long-term viability of these species throughout their North American ranges.

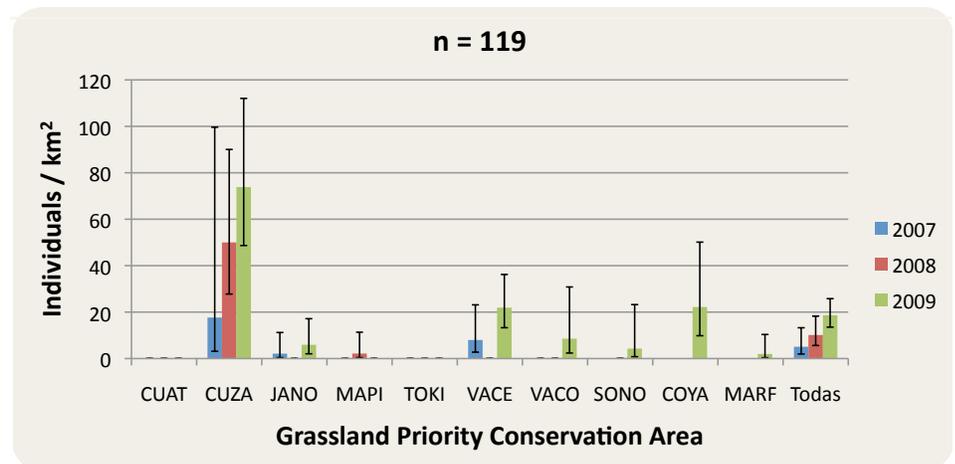
Beginning in 2007, the Rocky Mountain Bird Observatory has carried out an annual, region-wide pilot survey to inventory, research and monitor wintering birds in Grassland Priority Conservation Areas (PCAs) in Northern Mexico. The survey included 682 one-kilometer line transects at randomly-selected grassland sites across 10 PCAs—generating data on 31 grassland-associated species of high regional or continental conservation interest.

Preliminary results suggest wintering grassland bird distribution and density vary within and across PCAs, and across years, for nearly all species. Some species appear to use some PCAs more consistently than others (e.g., Baird's Sparrow in Cuchillas de la Zarca). Grass and shrub cover are important variables that influence habitat suitability, and most species of highest conservation concern require grasslands with moderate to high grass cover and little or no shrubs. Continued and expanded monitoring is needed to more fully evaluate patterns of species abundance and identify additional areas of important wintering habitat for priority species.



Greg Levandoski

Baird's Sparrow (*Ammodramus bairdii*) is one of the grasslands bird species surveyed by the Rocky Mountain Bird Observatory. The chart below shows the number of birds found each year in the priority conservation areas studied.



Given widespread degradation of grasslands in the region, and the preference of many species for relatively rare undisturbed grassland conditions, the protection and restoration of grasslands in the Chihuahuan Desert may be the best strategy for maintaining the region's carrying capacity for wintering grassland species in light of the rapidly increasing conversion of native grasslands to croplands.

The survey, which has strong support from NABCI-Mexico, is also helping to build capacity of biologists and organizations in Mexico to support grasslands conservation work. Project donors include:

- US Fish and Wildlife Service Neotropical Migratory Bird Conservation Act
- US Forest Service International Program
- Commission for Environmental Cooperation
- The Nature Conservancy
- US Department of Agriculture, Rio Grande Research Station
- Sonoran Joint Venture
- City of Fort Collins

For more information on the survey:

- Arvind Panjabi, International Program Director  
Rocky Mountain Bird Observatory  
Arvind.panjabi@rmbo.org / www.rmbo.org

## The CEC and the conservation of North American grasslands

The Commission for Environmental Cooperation has contributed to our understanding of the conservation needs of native North American grasslands through species action plans, analysis of regional conservation priorities, and improving our understanding of environmental issues of continental concern through the North American Environmental Atlas. A resolution of the CEC's Council (Resolution 99-03) established the North American Bird Conservation Initiative (NABCI), an ongoing initiative coordinated by a Tri-national Steering Committee.



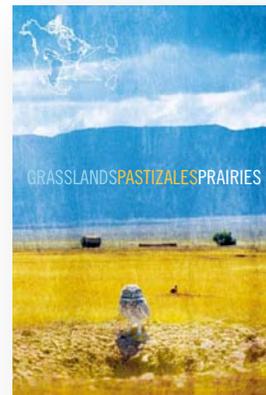
The CEC's **North American Conservation Action Plans (NACAPs)** are the first of their kind: a model for trinational conservation as formulated by the governments of Canada, Mexico and the United States in cooperation with scientists, academics and environmental groups. These species of common conservation concern were selected according to a variety of factors, including a common understanding of the threats faced by each species, their geographic location, profile and feasibility of success.

NACAPs were developed for three terrestrial species: ferruginous hawk, western burrowing owl, and black-tailed prairie dog.

More information at: [www.cec.org/nacap](http://www.cec.org/nacap)

In 2003 the CEC published *Grasslands: Toward a North American Conservation Strategy* to provide a framework for tri- and binational cooperation between Canada, Mexico and the United States that promotes the conservation and sustainable use of central North American grasslands.

It provided a trinational overview of information about the central North American grasslands and the conservation issues faced in the region. This contextual framework seeks to move the conservation agenda forward to the eventual development of a conservation strategy for the grasslands of North America that will integrate, build upon and enhance individual initiatives found in the three countries of North America that could complement each other.



### About the CEC

Since 1994, Canada, Mexico and the United States have collaborated in protecting North America's environment through the North American Agreement on Environmental Cooperation (NAAEC). Entering into force at the same time as the North American Free Trade Agreement (NAFTA), it marks a commitment that liberalization of trade and economic growth in North America would be accompanied by effective cooperation and continuous improvement in the environmental protection provided by each country. Accordingly, the NAAEC established an international organization—the Commission for Environmental Cooperation (CEC)—to support cooperation among the NAFTA partners to address environmental issues of continental concern, including the environmental challenges and opportunities presented by continent-wide free trade.

The CEC comprises a Council, a Secretariat and a Joint Public Advisory Committee (JPAC). The Council is the governing body of the Commission and comprises cabinet-level or equivalent representatives of each country. The Secretariat provides technical, administrative and operational support to the Council. JPAC—five citizens appointed from each country—advises Council on any matter within the scope of the NAAEC.

For more information about the CEC's grasslands work, contact [grasslands@cec.org](mailto:grasslands@cec.org) or visit [www.cec.org/grasslands](http://www.cec.org/grasslands).



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