

Implementation Plan for the
Rainwater Basin
Joint Venture
A Summary





The Rainwater Basin Joint Venture Administrative Area contains a diversity of geographic focus areas that provide important habitat for birds (Sandhill cranes on the Platte River, this page) and support a variety of agricultural uses – such as native rangeland in the Sandhills (opposite page), an area of nearly 20,000 square miles covered in mostly intact native prairie and containing over one million acres of wetlands and lakes.

PHOTO BY JULIE GEISER



PHOTO BY JON FARRAR

The Good Life

Central Nebraska hosts some spectacular world-class natural wonders. These include the Rainwater Basin – an internationally significant gathering place for a large share of the continent’s migrating waterfowl; The Platte River – host in the spring to 90% of North America’s Sandhill Crane population; and the Sandhills – home to one of the continent’s largest intact grasslands. Scattered within and among these wonders are a variety of other wetland, prairie, woodland, stream, and river habitats. Collectively, these habitats are important to hundreds of species of birds and a myriad of other wildlife species.

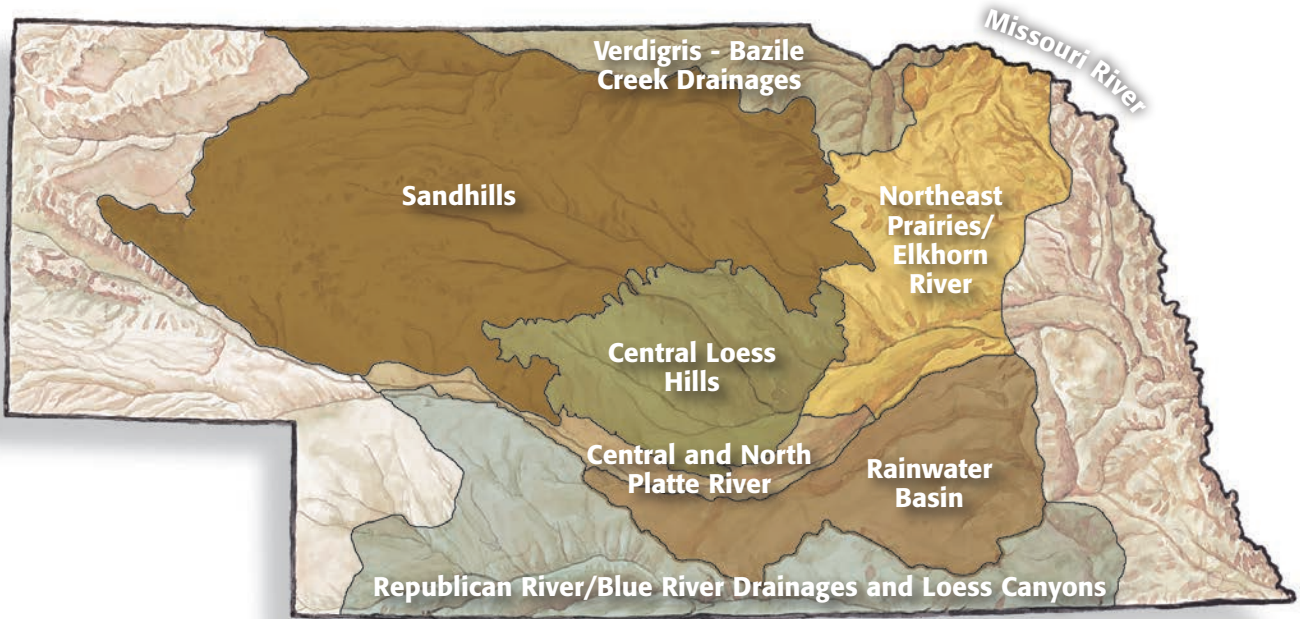
This region is also called home by ranchers, farmers, and people in the small towns and cities that dot the landscape. And the natural wonders of this region attract people from outside of the area who have an interest in wildlife-based recreation.

Bird conservation in this region is a complex undertaking. It requires understanding the biology of the various bird species, how the land functions and has changed, and the effects on local communities and common shareholders. This presents many challenges as well as opportunities.

To address these challenges and opportunities, the Rainwater Basin Joint Venture (RWBJV) completed a major revision of its Implementation Plan in 2013. The Plan contains two parts: the overarching RWBJV Implementation Plan for the RWBJV Administrative Area (see map, page 5), and individual plans for four bird groups – landbirds, shorebirds, waterbirds, and waterfowl. This publication provides an overview of the Implementation Plan and the four associated bird plans. For purposes of this publication, these five documents will collectively be referred to as the Plan. The Plan covers in depth the history of the RWBJV, past accomplishments, describes the Geographic Focus Areas, lays out the issues facing the RWBJV, identifies research needs, and presents objectives, strategies, and targets to address bird conservation in these focus areas. The new Plan builds on twenty years of collaborative conservation and provides a long-term vision for the next twenty years. For those wanting more detail, please visit www.rwbjv.org to access the five plans in their entirety.



The Rainwater Basin Wetland Complex is of international significance, supporting an estimated 8.6 million waterfowl during spring migration. This is estimated to include 90% of the mid-continent population of Greater White-fronted Geese, 50% of the mid-continent Mallards (pictured), and 30% of the continental population of Northern Pintails (pictured).



Map showing the geographic focus areas in the RWBJV Administrative Area.

History of the RWBJV

The RWBJV was formed in 1992. It is administered by a 15-member Management Board representing private landowners and conservation agencies and organizations. The initial focus of the RWBJV was the Rainwater Basin Wetland Complex (RWB) (see map above). This region contains a high density of Rainwater Basin (playa) wetlands and is the focal point of spring migration. Each year an estimated 8.6 million waterfowl, migrating along the Central Flyway, stop and replenish nutrient reserves before continuing to the breeding grounds. This is estimated to include 90% of the mid-continent population of White-fronted Geese, 50% of the mid-continent Mallards, and 30% of the continental population of pintails. Thus, conservation actions during the partnership's initial years were focused on protecting, restoring, and enhancing these wetlands to support migrating waterfowl. In 1999, the RWBJV expanded the partnership's geographic and conservation focus, and accepted the responsibility of implementing the conservation objectives outlined in the four national bird plans: the North American Landbird Conservation Plan, the United States Shorebird Conservation Plan, the North American Waterbird Conservation Plan, and the North American Waterfowl Management Plan. The expanded RWBJV Administrative Area includes the portions of Bird Conservation Regions 11 (BCR 11; Prairie Pothole Region) and 19 (BCR 19; Central Mixed-grass Prairies) that lie in Nebraska.

MAP ILLUSTRATION BY TIM REIGERT. PHOTO BY RYAN ASKREN. MISSOURI COOPERATIVE FISH AND WILDLIFE RESEARCH UNIT

The Rainwater Basin Joint Venture’s primary focus has always been on the protection, restoration, and management of Rainwater Basin wetlands, such as these in York County. Although the administrative area of the RWBJV has expanded, the conservation of wetlands and associated uplands in the Rainwater Basin Wetland Complex continues to be a priority. These wetlands not only provide important bird habitat, but also help to improve water quality and are focal points for groundwater recharge.



PHOTO BY ERIC FOWLER



PHOTO BY ERIC FOWLER

Many Rainwater Basins have been highly degraded by alterations to the wetlands and their watersheds that have reduced water ponding. The lack of ponding, along with the absence of proper management of some wetlands, has led to invasion of undesirable plant species such as reed canary grass (above) and greatly diminished the value of habitat for numerous migrating waterbirds. The RWBJV has worked to restore and better manage many of the wetlands (below), resulting in wetlands that pond water and grow moist-soil plants, such as smartweed (right), whose seeds provide excellent food energy and nutrition for a variety of wildlife species.

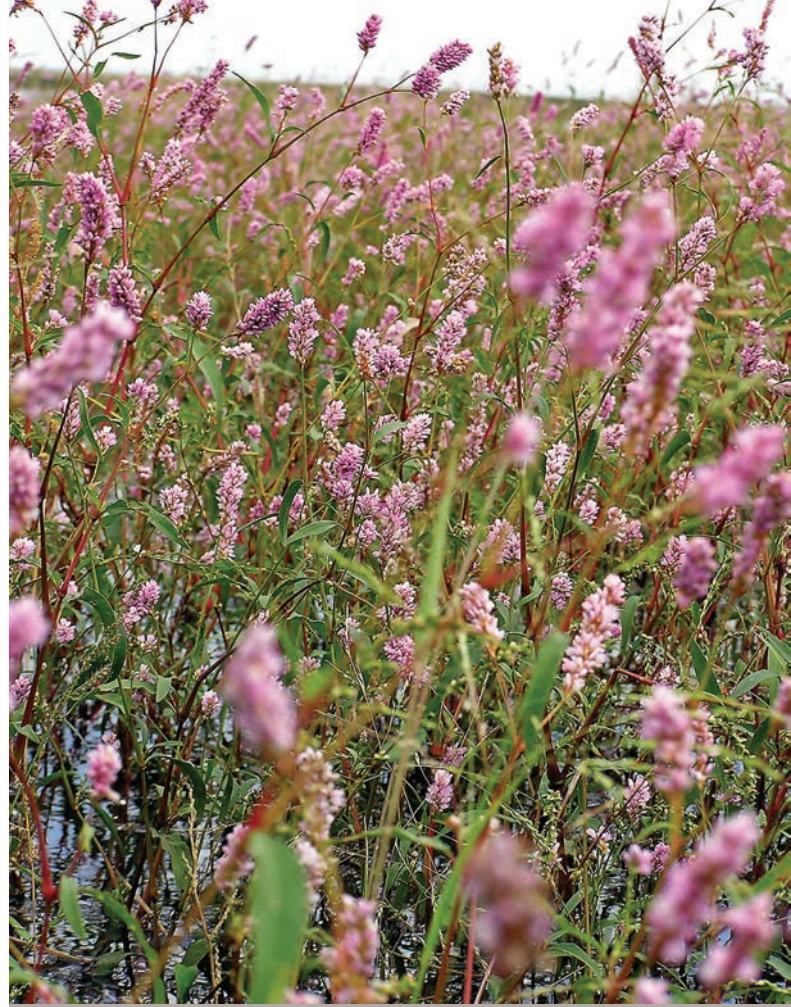


PHOTO BY TED LAGRANGE



PHOTO BY TED LAGRANGE

Plan Development

Since its inception, the RWBJV has strived to find viable opportunities to integrate wetland and upland habitats into this privately owned, agriculturally dominated landscape. The new Plan reflects the current science and describes a set of conservation opportunities that will complement the current habitat conditions in the RWBJV Administrative Area and, if implemented, will support the bird species that rely on this broad geographic landscape.

The Plan was written by a team of individuals from RWBJV partner agencies and organizations. Drafts were then reviewed by the RWBJV workgroups and Technical Committee. The Plan was approved by the RWBJV Management Board in November 2013.



PHOTO BY JON FARRAR

The Buff-breasted Sandpiper is one of the shorebird species that relies on the Rainwater Basin landscape. It is listed as an at-risk Tier 1 species in the Nebraska Natural Legacy Project (State Wildlife Action Plan).

Bird Groups

The Plan identifies 19 priority landbird species that rely on the RWBJV Administrative Area. The Hierarchical All Bird System (HABS) database was used to establish current landscape carrying capacity and species-specific desired carrying capacities. The database estimated that at population goals, the RWBJV Administrative Area would support 16.6 million landbirds, approximately 94% of which are grassland dependent.

Bio-energetic models were developed to guide planning for shorebirds, waterbirds, and waterfowl. The Plan identifies 24 priority shorebird species that rely on the RWBJV Administrative Area. At population goals, an estimated 1.7 million shorebirds would use the RWBJV Administrative Area during migration, and 400,000 shorebirds would breed there. Shorebirds using the RWBJV Administrative Area would require 2.1 billion kilocalories (kcal) of foraging resources from wetland habitats.

The Plan identifies 52 waterbird species that use the RWBJV Administrative Area. Due to the limited information available for breeding and migratory waterbirds that use the RWBJV Administrative Area, the RWBJV identified three priority species to guide initial waterbird conservation efforts: Least Tern, Whooping Crane, and Sandhill Crane. The bio-energetic model estimated that the 560,000 Sandhill Cranes that use the Central and North Platte River Geographic Focus Area will require 10.8 billion kcal of foraging resources while staging in the RWBJV Administrative Area. The RWBJV assumed that if sufficient habitat were available for Sandhill Cranes along the Platte River, there would also be sufficient habitat for breeding Interior Least Terns and Piping Plovers, as well as for the millions of waterfowl and the endangered Whooping Cranes that also rely on this river.

To guide conservation planning for waterfowl, the Plan identifies 10 priority species. The bio-energetic model estimated that 8.6 million waterfowl migrating through the RWBJV Administrative Area would require 15.6 billion kcal, with 4.4 billion kcal coming from wetland-derived foraging resources. In addition, an estimated 235,000 breeding waterfowl rely on Nebraska’s Sandhills.

The Plan addresses the conservation needs of four bird groups based on the national bird plans. The four bird groups are waterfowl, waterbirds, landbirds, and shorebirds. Examples of birds from these groups include: Snow Geese, Cackling Geese, and Greater White-fronted geese (this page top); Whooping Cranes (opposite top); Ring-necked Pheasant (this page bottom); and Red-necked Phalarope, Wilson’s Phalarope, Dunlins, Semipalmated Sandpipers, and White-rumped Sandpipers (opposite bottom).



PHOTO BY RYAN ASKREN, MISSOURI COOPERATIVE FISH AND WILDLIFE RESEARCH UNIT



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PHOTO BY JOEL JORGENSEN

Geographic Focus Areas

The Plan identifies eight Geographic Focus Areas (GFAs) in the RWBJV Administrative Area (see map, page 5). Defining GFAs allowed the partnership to describe relevant conservation strategies and targets at the local and Administrative Area scale.

In the Rainwater Basin GFA, the goal is to provide sufficient wetland habitat for the shorebirds, waterbirds, and waterfowl that rely on the public and private lands in this region. The Plan outlines initial goals of 12,515 acres of public land acquisitions, enrollment of 13,585 acres of private lands into long-term conservation programs, enrollment of 7,345 acres of private lands in short-term conservation programs, as well as wetland, watershed and vegetation management to provide sufficient habitat for the shorebirds, waterbirds, and waterfowl that rely on this region.

In the Central Loess Hills the primary focus is on: grasslands for grassland-dependent bird species; playa wetlands to support migrating waterfowl, shorebirds, and Whooping Cranes; and the Loup rivers, which provide breeding habitat for Interior Least Terns and Piping Plovers. Habitat strategies and targets for the Central Loess Hills include 4,000 acres of playa wetlands, a hydrologically functioning Loup River system, and 134,500 acres of grasslands restored and enhanced through removal of eastern red cedar and establishment of herbaceous grasslands.

In the Central and North Platte River GFA, the goals are to: remove 6,000 acres of forest and woodlands from the active channel and adjacent wet meadows; restore and protect 5,000 acres of functional wet meadows and associated uplands; provide habitat inventories to better define a functional riverine wetland system; and ensure the availability of 80,700 acres of cornfields with sufficient waste grain for migrating birds.

In the Missouri River GFA, the goal is to provide data and information to describe the habitat available under different flow regimes. This information will allow RWBJV partners to better describe desired hydrologic conditions for the Missouri River system.

In the Sandhills GFA, the goal is to enhance grassland habitats by removing 8,410 acres of eastern red cedar, while maintaining the current habitat base provided by the abundant wetlands and grasslands found in this region. Sustaining the current habitat conditions will provide sufficient habitat to support breeding population objectives for a majority of the landbirds, shorebirds, waterbirds, and waterfowl in the RWBJV Administrative Area.

In the Northeast Prairies/Elkhorn River, Republican River/Blue River Drainages and Loess Canyons, and Verdigris – Bazile Creek Drainages GFAs, the focus is on grassland birds. In these three GFAs the goal is to improve grassland bird habitat by enhancing 117,660 acres of grassland habitats.

PHOTO BY ERIC FOWLER

The Plan identifies eight Geographic Focus Areas in the RWBJV Administrative Area. These focus areas include rivers, wetlands, and prairies such as this one in the Central Loess Hills Biologically Unique Landscape.

Vision

The RWBJV Administrative Area is a landscape encompassing the central portion of Nebraska that supports healthy agricultural communities – rich with wetlands, streams, and grasslands. It also provides essential habitat for millions of birds and other wildlife. The healthy ecological conditions of the region’s biologically unique landscapes contribute to its overall economic, social, and environmental stability creating a “sense of place” among the people of Nebraska and North America. Partnerships, which bond the social, economic, and environmental needs of the region, will use their collective talents and resources to maintain this sustainable landscape. Decisions and actions will be undertaken with a united voice, founded on common sense and science-based information.

Mission

The mission of the Rainwater Basin Joint Venture is to facilitate cooperation between government and private conservation actions based on sound science to advance bird populations and the quality and quantity of their habitats within the central region of Nebraska.

Goals

- Restore and maintain sufficient wetland habitat in the Rainwater Basin area of Nebraska to assist in meeting population objectives identified in the *North American Waterfowl Management Plan*.
- Restore and maintain sufficient bird habitats within the RWBJV Administrative Area to support the goals of the four established national bird plans: *North American Waterfowl Management Plan*, *North American Landbird Conservation Plan*, *U.S. Shorebird Conservation Plan*, and *North American Waterbird Conservation Plan*.

Research needs are identified in the Plan. For example, it is important to sample wetlands for the types and amount of food present that will provide nutrition for waterfowl and shorebirds, such as is being done in the research project pictured above.



PHOTO BY RANDY STUTHEIT



The RWBJV has worked in partnership with landowners and many other partners to improve wildlife habitat. This project removed culturally-accelerated sediment from a wetland to help improve ponding and wildlife food production.

Objectives

Recognizing the history of the RWBJV partnership and past focus of the partnership on the Rainwater Basin, two groups of objectives have been established: comprehensive objectives relating to the entire RWBJV Administrative Area, and those specific to the Rainwater Basin. In addition to these overarching objectives, an explicit set of targets and strategies have been established for the different Geographic Focus Areas. These targets and strategies will help the RWBJV focus new resources to achieve conservation success throughout the RWBJV Administrative Area.

RWBJV Comprehensive Objectives

- By 2015, develop specific conservation plans for each Geographic Focus Area within the RWBJV Administrative Area.
- By 2015, revise the RWBJV Landbird Plan to include additional priority species and geospatial Species Distribution Models to inform conservation of landbirds.
- By 2020, increase community support and understanding of the RWBJV’s mission by 25%.
- By 2020, expand by 20% the existing network of conservation partners to include regional and community-based organizations, and make full use of each partner’s capabilities to address the RWBJV’s mission.
- By 2020, expand by 25% the level of outcome-based monitoring in support of established biological targets.
- By 2030, protect, restore, and enhance sufficient wetland habitat to support migrating shorebirds, waterbirds, and waterfowl in the RWB.
- By 2030, protect, restore, and enhance sufficient grassland habitat to support breeding bird population goals established for landbirds, shorebirds, waterbirds, and waterfowl within the RWBJV Administrative Area.

PHOTO BY LISA WEBB, MISSOURI COOPERATIVE FISH AND WILDLIFE RESEARCH UNIT

Rainwater Basin Objectives

- By 2015, develop a comprehensive water management plan to guide wetland and watershed restoration for optimal use of natural runoff and supplemental water supplies.
- By 2015, revise the Rainwater Basin Evaluation Plan to better measure relationships between waterfowl needs, habitat conditions, and management actions.
- By 2020, develop a broader financial base (including traditional and non-traditional funding sources) to ensure a more stable level of funding to complete conservation projects.
- By 2030, improve, maintain, and protect natural wetlands—through a voluntary, cooperative approach—which are capable of meeting the energetic needs of spring-migrating waterfowl (approximately 4.4 billion kilocalories) under average weather conditions.

A complete list of the 23 targets and 63 strategies for all of the bird groups and Geographic Focus Areas is available in the five plans. Visit www.rwbjv.org to access the five plans in their entirety.

The Future

As each of the RWBJV bird plans was developed, key uncertainties and model assumptions were defined. Uncertainties ranged from forage availability (energetic resources) to local and landscape factors that influence habitat selection and use by different species. The RWBJV will work with universities and partners to implement directed research projects, continue long-term monitoring projects, and initiate baseline inventories to acquire the information needed to better address uncertainties. The RWBJV is committed to integrating new information to inform the objectives outlined in this Implementation Plan.

Conservation in the RWBJV Administrative Area will require a proactive approach that integrates wetland and upland habitat into the landscape. The RWBJV Administrative Area varies in ownership, but most of the GFAs have private ownership exceeding 99%. Achievement of the objectives outlined in this Plan will require the conservation community to be flexible and focused on strategic delivery of programs in GFAs that have the greatest potential to contribute to population goals. All programs delivered by the RWBJV will be on a voluntary basis. In order to successfully realize habitat goals, the RWBJV partners will need to continue to develop economically viable solutions that fit into this privately-owned agricultural landscape.

The partnership's planning process is on a five-year revision cycle, whereby the Management Board and Technical Committee are currently scheduled to review the Plan in 2015. However, the RWBJV Management Board views the Plan as a living document that will be updated and modified with new scientific findings and as new conservation opportunities emerge.

An Invitation to Participate

The natural resources within the RWBJV Administrative Area are like a collection of jewels representing great value — not only to the state of Nebraska, but to the nation. They provide food, rest, and a home for millions of birds, of species both abundant and rare.

The RWBJV has taken on the challenge of ensuring that these resources remain a part of Nebraska's wildlife habitat, while still providing economic opportunities for the people who live and work in the region. The Plan is written to identify the resources and actions that need to be taken to ensure this vision of the future. It is meant to be dynamic and adaptable to changing times. New scientific information and broad-based participation will lead us to new conservation strategies. Problems that now appear as barriers will be overcome when people with different perspectives join together to find workable solutions.



PHOTO BY TED LAGRANGE



PHOTO BY DOUG CARROLL



PHOTO BY DOUG CARROLL



PHOTO BY JON FARRAR

The Plan identifies ways that landowners (opposite top), other partners, and the public can help with conservation efforts and enjoy the many associated benefits, such as wildlife observation (this page top), outdoor education (this page bottom), and hunting (opposite bottom).

Rainwater Basin Joint Venture Management Board Members

(at the time of plan approval)

PETER BERTHELSEN	Pheasants Forever
BOB BETTGER	Fillmore County Landowner
STEVE DONOVAN	Ducks Unlimited
ARDELL EPP	Hamilton County Landowner
GLORIA ERICKSON	Phelps County Landowner
KEN FEATHER	Upper Big Blue Natural Resources District
MACE HACK, PH.D.	The Nature Conservancy
TIM MCCOY, PH.D. (Chair)	Nebraska Game and Parks Commission
MICHAEL ONNEN	Nebraska Association of Natural Resources Districts
CLINT RILEY	U.S. Fish and Wildlife Service
GREG REISDORFF	Farm Service Agency
LARRY REYNOLDS/DAVE RAFFETY	Tri-Basin Natural Resources District
STEVE SHAW	Little Blue Natural Resources District
MEL TAYLOR	Fillmore County Landowner
BRITT WEISER	Natural Resources Conservation Service

Canada Geese flying over the Platte River.



PHOTO BY JON FARRAR

The Rainwater Basin Joint Venture Administrative Area provides important habitat for numerous bird species, including support for 90% of the mid-continent population of Greater White-fronted Geese during their migration.

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JOINT VENTURE

ESTABLISHED 1992

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Greater Prairie-Chicken, by Rocky Hoffmann; Northern Pintails, by Jon Farrar; American Avocet, by Justin Haag; Sandhill Cranes, by Michael Forsberg; Western Meadowlark, by Joel Jorgensen; Snow Geese, by Jon Farrar.