

Chapter 2—The Refuge



Dan Severson/FWS

Whooping Crane

This chapter explains the establishment, management history, purpose and special values of Quivira National Wildlife Refuge. Planning issues and a discussion of their effects on resources are also summarized here. Our planning process sought to resolve issues that have the greatest effect on refuge resources and programs, and it ranked these issues for further consideration over the life of the plan.

2.1 Establishment, Acquisition, and Management History

The following section describes the establishment, acquisition, and management history of Quivira Refuge.

Establishment

In May 1955, the Migratory Bird Conservation Commission approved the establishment of, and the processing of purchase agreements for, the “Great Salt Marsh National Wildlife Refuge” to recognize two unique, historic saltmarsh and salt flat areas, the Big Salt Marsh (BSM) and the Little Salt Marsh (LSM).

In 1958, the name of the refuge was changed to Quivira National Wildlife Refuge after the Spanish term for the area. Quivira Refuge has a mixed-grass sand prairie ecosystem that contains a diversity of grassland and wetland vegetation associations (Faber-Langedoen 2001) with a range of salinities, stream corridors, salt flats, sand dunes and hills, and agricultural lands.

Barry Jones/FWS



Boiling Springs

Acquisition History

After establishment, acquisitions were made to bring the refuge area to 21,820 acres by 1969. In August 1991, two Hornbaker tracts totaling 116 acres southwest of the refuge were acquired from the Farmers Home Administration. Approximately 200 more acres were bought from Richardson in 1998 in the BSM area. These acquisitions enlarged the refuge to 22,135 acres (table 2)

Management History

Water management has played a major role at the refuge. In 1957 we filed for a “senior” right to divert 22,200 acre-feet of water from Rattlesnake Creek to refuge wetlands (Estep 2000, Striffler 2011). In 1982, we filed a Notice of Proof of completion of work for water right permit #7571. In 1996, the Kansas Division of Water Resources certified a permit for only 14,632 acre-feet of water diversion from Rattlesnake Creek because we could not show that we had diverted 22,200 acre-feet during the period of proof.

The current Kansas Water Right for the refuge is 14,632 acre-feet per year not to exceed 300 cubic feet per second from Rattlesnake Creek. The actual quantity of water normally diverted from Rattlesnake Creek for refuge management is less than this water right, often because sufficient quantities are not available at the time water is desired to achieve refuge habitat goals and objectives. In years with below-average precipitation and heavy demands for agricultural irrigation, the refuge receives insufficient quantities to exercise all habitat management

options. Water is not metered when it leaves the refuge mostly because water rights are absent downstream where it enters the Arkansas River.

Water control structures may be found in figure 5.

2.2 Purposes

Every unit of the Refuge System has one or more purposes for which it was established. They are the foundation on which to build all management programs, from biology and public use, to maintenance and facilities. No action that anyone takes may conflict with them. The purposes are found in the legislative acts or administrative orders under which lands are either transferred or acquired, or conservation easements are established, for a refuge unit. An individual unit may contain lands that have been acquired under a variety of transfer and acquisition authorities, which then gives the unit more than one purpose.

On May 3, 1955, Quivira Refuge was established under these authorities and for these purposes:

- Migratory Bird Conservation Act (16 United States Code [U.S.C.] § 715d)
 - for use as an inviolate sanctuary, or for any other management purpose, for migratory birds
- Fish and Wildlife Act of 1956 (16 U.S.C. § 742f(a)4)
 - or the development, advancement, management, conservation, and protection of fish and wildlife resources
- Fish and Wildlife Act of 1956 (16 U.S.C. § 742f(b)1)
 - for the benefit of the United States Fish and Wildlife Service, in performing its activities and services

The goals, objectives, and strategies identified in this CCP support these purposes

Table 2. Land acquisition history of the Quivira National Wildlife Refuge, Kansas.

| <i>Acres reserved from public domain</i> | <i>Acres acquired by other Federal agency</i> | <i>Acres donated</i> | <i>Acres bought</i> | <i>Acres in agreement easement or lease</i> | <i>Total acres in refuge</i> | <i>Total cost of land acquisition</i> |
|--|---|----------------------|---------------------|---|------------------------------|---------------------------------------|
| 0 | 116 | 199.2 | 21,820.1 | 0 | 22,135.3 | \$2,059,238 |

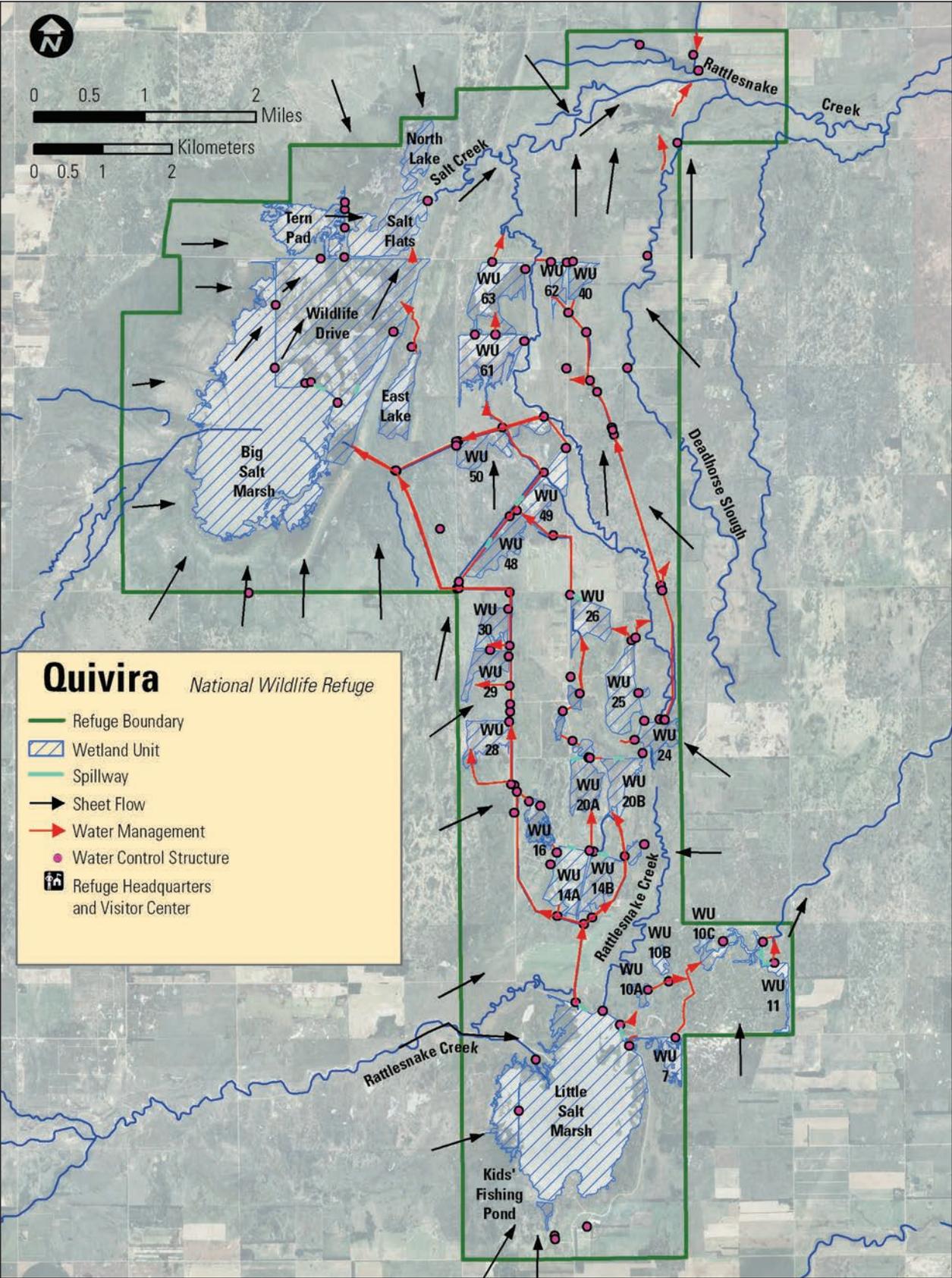


Figure 5. Water control structures, Quivira National Wildlife Refuge, Kansas.

2.3 Vision

We developed a vision for Quivira Refuge that describes the focus of refuge management, including what will be different in the future. This is the essence of what we want to accomplish at the refuge by the end of the life of this CCP in 15 years. The vision for Quivira Refuge is as follows:

Near the confluence of the Rattlesnake Creek and Arkansas River in central Kansas, water remains the great driver of a diverse complex of saltmarsh and unique native sand prairie community that is Quivira National Wildlife Refuge. The combination of these productive habitats as well as the refuge's midcontinent location continue to attract millions of birds needing to replenish essential reserves and to find protection in the mosaic of largely open grasses, sedges, rushes, and water. Through environmental education and outreach, we promote understanding and appreciation of the refuge's dynamic landscapes. For visitors, each moment is unique—the smell of moist earth and salty air, the primitive call of a crane, the whispering bluestem, the cacophony of geese, the early steps of a snowy plover chick, or the discovery of a subtle pattern or design in nature. In a land of recurring extremes, ongoing collaboration between refuge professionals, partners, and the public sustains a healthy system. Through land stewards transcending refuge boundaries, the integrity of these ecosystems are conserved with awe, respect, and appreciation of the gifts it offers for all to receive.

2.4 Goals

We also developed a set of goals for Quivira Refuge based on the Improvement Act, the refuge's purposes, and the information we gathered, with help from the public, during planning. These goals will direct our work in achieving the vision and purposes of the refuge, and they outline approaches for managing the refuge's resources.

Landscape Conservation Goal

Actively protect, preserve, manage, and restore the functionality of the diverse ecosystems of the Rattlesnake Creek watershed.

Native Ecological Community Conservation Goal

Actively conserve and improve environmental conditions within refuge boundaries to promote sustainable, native ecological communities and support species of concern associated with this region of the Great Plains.

Visitor Services Goal

See that visitors enjoy quality, wildlife-dependent recreational opportunities.

Public Outreach Goal

Help visitors of all abilities understand, appreciate, and support our mission, the refuge's unique habitats, and the refuge's importance to migratory birds and other wildlife and plant species.



Prickly Pear

Cultural Resources Goal

Name, value, and preserve the cultural resources and cultural history of the refuge and connect staff, visitors, and the community to the area's past.

Visitor and Employee Safety and Resource Protection Goal

Provide for the safety, security, and protection of visitors, employees, natural and cultural resources, and facilities of the refuge and the GPNC.

Administration Goal

Provide and maintain facilities, strategically acquire and allocate staff, increase volunteer opportunities and partnerships, and effectively raise and use money to support the long-term integrity of infrastructure, habitats, and wildlife resources at the refuge and at the GPNC.

2.5 Special Values

The public helped us to name the special values of Quivira Refuge, which are the characteristics and features that make it special, valuable for wildlife, and worthy of national wildlife refuge status. Special values can range from unique biological features to something as simple as “a quiet place to see a variety of birds and enjoy nature.”

Naming the special values for Quivira Refuge, listed below, helps us to recognize its worth and to make sure that these values are preserved, protected, and enhanced through planning.

Rare, Diverse, and Quality Habitat

Quivira Refuge contains unique systems, including inland saltmarsh and native sand prairie. The saltmarsh and alkali flats support a diverse range of wildlife species that use the refuge for migration and nesting. The refuge contains quality grassland habitat that is complimented by a grassland buffer that surrounds the refuge and creates large blocks of contiguous habitat for grassland-dependent species,

including prairie-chicken. The refuge has large areas of wetland habitat that supports many wildlife species and has the potential for moist soil management.

Wildlife Species

Quivira Refuge is located in a transition zone providing habitat for both eastern and western migratory bird species. Large numbers and concentrations of these birds occur on the refuge, and a variety of rail species are also present. The refuge also supports a diverse population of reptiles and amphibians, as well as a prairie dog town.

Species of Concern

The refuge provides critical habitat for the federally listed whooping crane and State-listed western snowy plover. Bald eagles winter and nest on the refuge, and federally listed interior least terns also nest here.

Water Resources

Quivira Refuge has senior water rights, approximately 14,000 acre-feet per year, and water management capability on the refuge is good because of a strong network of infrastructure that has water control structures and dikes.

Communities and People

Local, regional, and international communities support Quivira Refuge. It has a Friends group and boosts the economies of surrounding, rural communities. Less than 3 percent of Kansas' lands are owned by the public, and the refuge makes up a large part of that. In addition, the refuge feels little urban encroachment.

Education and Visitor Services

Quivira Refuge offers many opportunities for wildlife-dependent recreation, including hunting, fishing, wildlife observation, photography, environmental education, and interpretation. Forty percent

of the refuge, or approximately 9,000 acres, is open to hunting. All of the refuge is open to fishing and to foot traffic for wildlife observation and photography year round, except when temporary closures are necessary for events like eagle or tern nesting. Quivira Refuge also comanages the GPNC in Wichita, which complements and supports its purposes.

Cultural Resources

The area is rich in Native American history, as generations of people came here for both food and water. As such, the potential exists for cultural resources to be found on Quivira Refuge.

Facilities and Infrastructure

There is good access to, and within, Quivira Refuge. Directions to the refuge are well signed, and many sites within the refuge are accessible to persons with disabilities.

Special Designations

Quivira Refuge has many special designations including: Ramsar Site, as identified by Wetlands of

International Importance; Western Hemisphere Shorebird Reserve Network contributor; one of the Eight Wonders of Kansas; and Important Bird Area, as identified by the National Audubon Society. We have also designated the Santana Research Natural Area on the refuge.

2.6 Planning Issues

Based on an analysis of comments collected from the public, input from our staff, and a review of the needs of the Improvement Act and NEPA, we identified several key issues for Quivira Refuge. These were used to create alternatives for future management and are summarized below.

Water Quantity and Quality

Agriculture dominates the area, oil production is common, and water rights have been overappropriated within the water management district. These water resource and land use trends relate to additional concerns of current and future characteristics of water quality. Future water availability and quality may not be assured, yet adequate water quantity and chemistry are critical factors of refuge saltmarsh and wetland communities. Substantial declines in the



White-tailed Deer

water table would also likely affect grassland and meadow habitats.

Tree Management

There are differences of opinion about tree management on Quivira Refuge. Prairie restoration, with a reduction in current tree coverage, is generally understood and supported. Yet, some would prefer that we keep tree coverage at a higher level for a variety of reasons.

Whooping Crane Closures

When whooping cranes, which are federally listed as endangered, are present, Quivira Refuge closes to hunting to avoid disturbing them and to prevent accidentally shooting them. Whooping crane arrivals and departures are unpredictable, which makes it difficult for hunters to plan ahead. Public lands for hunting in Kansas are also limited, which exacerbates their frustration. And yet, while disappointing hunters, whooping cranes do attract birders.

We at the refuge have received many requests to reconsider our refuge-wide closures. At the nearby Cheyenne Bottoms Wildlife Area, KDWPT has successfully protected whooping cranes by using partial area closures. This may prove to be effective for us as well.

Prohibiting the Collection of Shed Antlers

Deer population density on Quivira Refuge is relatively high, and those who have an interest in shed antler collection do not support our decision to prohibit this activity on all refuges in Kansas. However, collecting or taking of any plant, wildlife or parts thereof from a national wildlife refuge without a permit is specifically prohibited under Title 50 CFR Part 27.61.

Deer and Turkey Hunting

Deer and turkey hunting have never been approved as a public use activity or management strategy on Quivira National Wildlife Refuge, but there is interest in allowing these hunting activities



Eastern Racer

Rachel Laubhan/FWS

in the future. Populations of these species continue to increase, and research suggests that effective population management may require a control of some sort both on and off refuge lands.

Increasing Public Use and Wildlife Compatibility

We are aware of potential benefits and harm to natural resource conservation brought on by an increasing interest in birding and ecotourism. Whooping cranes and rare birds quickly attract many birders and photographers when they appear on the refuge. According to the National Wildlife Refuge System Compatibility Policy, these wildlife-dependent recreational use activities are welcome as long as they are found not to interfere with, or detract from, the fulfillment of the Refuge System mission or the purposes of the refuge.

