

Executive Summary

Introduction

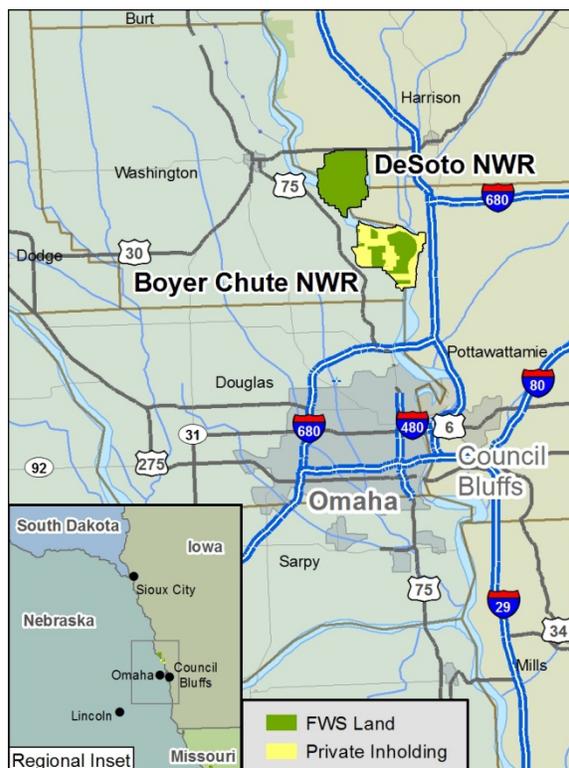
The U.S. Fish and Wildlife Service (Service) has developed this comprehensive conservation plan (CCP) to guide the long-term management of DeSoto and Boyer Chute National Wildlife Refuges (NWRs, refuges) located on the border of Nebraska and Iowa 15 miles north of the Omaha–Council Bluffs Metropolitan Area. For Boyer Chute NWR, this is the first comprehensive planning effort undertaken to guide future management. For DeSoto NWR, this effort revises the CCP finalized in January of 2001—allowing management to consider changing public values, incorporate new scientific information, and reevaluate the management direction. For both refuges this planning process serves to redirect management in the aftermath of catastrophic flooding that occurred in 2010 and 2011. This plan addresses management challenges and opportunities that have emerged because of these flood events.

An environmental assessment (EA) including four potential management alternatives accompanied the draft version of this plan, and was submitted for public review in the fall of 2013. This CCP is based on the preferred alternative of the EA, and is designed to ensure that the refuges fulfill their established purposes and play a role in fulfilling the mission of the Service and the National Wildlife Refuge System (Refuge System).

Background

The Missouri River ecosystem is a resource of national importance with a long history of human interaction and ecological change. The lands and waters of the basin host abundant and diverse resident wildlife and provide important stopover sites for migratory birds in the central flyway. Only three national wildlife refuges straddle the channelized third of the river that flows the 735 miles between Sioux City, Iowa and St. Louis, Missouri. Two of these refuges, DeSoto NWR and Boyer Chute NWRs are located side-by-side, 15 miles north of the Omaha–Council Bluffs Metropolitan Area (figure ES-1). The third is Big Muddy NWR with units between Kansas City and St. Louis, Missouri. DeSoto and Boyer Chute Refuges share management, headquartered out of DeSoto NWR, because of their close proximity and the commonality of their habitats, wildlife management, and ecological resources. When fully acquired, these refuges will conserve over 18,000 acres of unique riverine habitats, seasonal wetlands, bottomland forests, and native floodplain grasslands. The refuges are also popular destinations for people due to the important cultural resources and abundant opportunities for wildlife-dependent recreation they offer to nearby communities and the Greater Omaha–Council Bluffs Metropolitan Area.

Figure ES-1: Location of DeSoto and Boyer Chute Refuges



DeSoto National Wildlife Refuge was established in 1958 and encompasses 8,365 acres of floodplain habitat on a former oxbow of the Missouri River. In addition to a stretch of the Missouri River channel and a large oxbow lake, the refuge contains riparian forests, grasslands, wetlands, and riverine habitats that host over 250 bird species, 35 mammal species, 30 reptile and amphibian species, and 60 fish species. DeSoto NWR is also the home of the Steamboat Bertrand Museum Collection, one of the premier assemblages of Civil War era artifacts in the United States. In addition to this wildlife observation, hunting, fishing, and a variety of other wildlife-dependent recreation opportunities available to the public attract enough visitors to make DeSoto NWR one of the more heavily visited refuges in the National Wildlife Refuge System.

Boyer Chute NWR was authorized in 1992 in an ongoing effort to recover, restore, and safeguard fish and wildlife habitat along the Missouri River corridor. Approximately 4,040 acres of 10,010 acres authorized for acquisition are currently owned and managed by the Service; the rest remains in private ownership. Similar to DeSoto NWR, the refuge conserves landscape features found only along major rivers systems including backwaters, side channels, and islands as well as a diversity of associated floodplain habitats ranging from wetlands and prairies to riparian shrublands and woodlands.

Planning Process

A year's worth of CCP planning activities occurred for Boyer Chute NWR starting in 2010. However, two successive years of catastrophic flooding on the Missouri River (2010–2011) resulted in the decision to start planning over, and combine the management of DeSoto and Boyer Chute Refuges. This represents the first CCP effort for management of Boyer Chute NWR, and is the second CCP undertaken for DeSoto NWR.

During the refuge planning process, all factors of management—including habitats, wildlife, visitor services, facilities, operations, cultural resources, and other relevant issues—are discussed and evaluated by Service employees, partners, stakeholders, and the public. A range of alternative management options are then clearly defined and presented to partners, stakeholders, and the public to identify and refine the most suitable or “preferred” management plan for the refuge. This CCP describes the results of the planning process and the details of the preferred alternative. In this document, the broad goals of the preferred alternative are defined and measurable objectives are identified to support each goal. Potential implementation strategies are then offered as available methods to meet these goals and objectives within the 15-year timeframe.



Refuge Goals

Three shared goals were identified by DeSoto and Boyer Chute Refuges:

Goal 1: Habitat

Provide quality native grasslands, floodplain forests, wetlands, sandbar, and riverine habitats through land conservation, restoration, and management.

Goal 2: Wildlife

Protect, maintain, and enhance a diversity of resident, migratory, and endangered species native to the Missouri River floodplain.

Goal 3: People

Refuge visitors will understand and appreciate management of the refuges and the National Wildlife Refuge System through participation in diverse wildlife-dependent recreation, environmental education, and outreach opportunities, and will understand the progression of change in the Missouri River Valley as reflected through the Steamboat Bertrand Museum Collection and its history.

Planning Issues

Scoping identified eight broad issue categories that were addressed when developing management alternatives for the refuges:

- **Habitat Management:** What is the best way to manage habitats on the refuges to maximize benefits to wildlife and support conservation in the greater Missouri River ecosystem?
- **DeSoto Lake:** What is the best way to manage DeSoto Lake to maximize benefits to wildlife and people?
- **Land Conservation:** What Service footprint will best accomplish the refuges' land and water conservation goals and best supplement Missouri River ecosystem conservation?
- **Wildlife:** How can the refuges have the greatest beneficial impact on wildlife in the Missouri River ecosystem?
- **Refuge Administration:** In what ways can the administration of the refuges be improved?
- **Visitor Services & Public Use:** How can the refuges direct resources to provide the best visitor services possible while adhering to capability standards for such uses (given wildlife as the Service's first and highest priority)?
- **Infrastructure:** What is the best configuration of refuge infrastructure for both administration and visitor use?
- **Outreach, Support, & Partnerships:** How can the refuges bolster their relationships with partners, visitors, and other constituents?

Overview of Future Management

Over the next 15 years the refuges will take a very active approach to habitat and wildlife management and monitoring, focusing on expanding seasonal wetland habitat to emulate preregulation flood cycles of the Missouri River, and will increase visitor services available to the public. The inlet and outlet structures on DeSoto Lake will be improved to increase management capabilities—allowing the maintenance of the closed system lake or the creation of a limited open system with riverine characteristics and enhanced fish passage. Seasonal wetland acres will increase during the spring and fall migrations through a robust pumping program while offering mudflats, annual vegetation, and perennial vegetation throughout nonmigratory periods. This wetland regimen will be designed to emulate two-year and five-year Missouri River flood cycles.

The cooperative farming program at DeSoto NWR will be phased out and agriculture will only be used in a limited capacity by refuge staff as a management tool to address invasive species, set back succession, and prepare seed beds. The grassland component of the refuges will decrease as new areas transition to wetland and wooded habitats. Grassland and wetland acres will vary seasonally due to natural and managed cycles of wetland expansion and contraction. The past emphasis on mesic tallgrass prairie will shift to a mix of mesic and hydric grasslands. The proportions and distribution of bottomland forest, cottonwood parkland, and shrub/scrub habitat will remain similar to current conditions on DeSoto NWR and will increase moderately on Boyer Chute NWR as Boyer Island and additional riparian areas are transitioned to forested habitats. The table below shows the approximate percent of land cover types associated with the refuges.

Table ES-1: Land Cover Change on the Refuges

Land Cover Type	DeSoto NWR			Boyer Chute NWR		
	2001	Current (2013)	Future	Current (2013)	Future	Future Assuming Full Acquisition
Bottomland Forest	37%	35%	35%	4%	19%	27%
Shrub/Scrub	3%	3%	3%	1%	1%	1%
Grassland	20%	36%	28%	29%	15%	58%
Seasonal Wetland	1%	2%	17%	5%	5%	6%
Missouri River	3%	3%	3%	7%	7%	7%
Sandbar	1%	1%	1%	0%	0%	0%
Developed	1%	1%	1%	1%	1%	1%
Agriculture	24%	7%	0%	--	--	--
DeSoto Lake	10%	11%	11%	--	--	--
Private Inholding	--	--	--	53%	53%	0%

DeSoto NWR is fully acquired, and staff will only consider expansion of the authorized boundary under conditions that are opportunistic, collaborative, and do not exceed a 10 percent increase over the current acreage. Funds have not been allocated for acquisition of the privately-owned 53 percent (calculation excludes the Missouri River surface area) of Boyer Chute NWR since 2005, but management will continue to seek opportunities to acquire inholdings and promote land acquisition as a regional priority. Newly acquired lands on Boyer Chute NWR will be converted from agriculture to prairie habitat, and the development of bottomland forest habitat will be encouraged along riparian corridors.

Wildlife monitoring will increase for a number of aggregated conservation targets, including invasive species, migratory waterfowl, shorebirds, secretive marshbirds, grassland birds, forest birds, fish and aquatic species (in DeSoto Lake), and game species. Additional details of the monitoring program will be fleshed out immediately following the CCP in an inventory and monitoring step-down management plan.

The visitor services program will expand in a number of ways with careful consideration of wildlife disturbance during bird migrations. Overall, public access and visitor opportunities increase while visitor services infrastructure remains fairly constant compared to current conditions. Use of DeSoto Lake will also remain the same as current conditions—closed only during the migratory period. The heavy-duty bridge to the Boyer Island Unit of Boyer Chute NWR will eventually be removed for maintenance, safety, and chute habitat reasons, and replacement options will be considered. Additional changes include new hunting opportunities on both refuges, permitting fishing on all lakes and ponds on units open to the public, opening additional areas of both refuges to the public for wildlife observation and photography, creating new trails and wildlife observation areas, allowing leashed dogs on the refuges, increasing collaborative environmental education within Omaha schools; updating and improving interpretive information, infrastructure, and services; and working to increase volunteerism.