

Executive Summary

Introduction

The Comprehensive Conservation Plan (CCP) for Big Muddy National Fish and Wildlife Refuge (NFWR, refuge) is now complete. A separate Environmental Assessment (EA) and Draft CCP documents the National Environmental Policy Act (NEPA) process for developing the CCP. In general, scoping revealed issues that drove alternative ways of managing the refuge. Implementation of each of those alternative management styles (including the No Action Alternative) had different effects on the physical, biological, and socioeconomic environment. Analysis of these effects reveals the preferred alternative, which constitutes the CCP. The CCP includes goals, objectives, and strategies for the refuge to guide overall management for the next 15 years. The document can be viewed and downloaded at <http://www.fws.gov/midwest/Planning/bigmuddycpp/index.html>. A compact disk or paper copy of the Plan can be requested through:

- E-mail at r3planning@fws.gov (Please include “Big Muddy NFWR CCP” in the subject line); or
- Mail at Big Muddy NFWR, 4200 New Haven Road, Columbia, MO 65201; or
- Telephone at (573) 876-1826.

Big Muddy NFWR, located in Missouri along the floodplain of the Missouri River, is comprised of 11 units that total more than 17,600 acres as of 2013. The 11 refuge units encompass river features, such as islands, chutes, bends, and tributary confluences. These features were once common but are now rare because of changes to the Missouri River and its floodplain initiated to promote navigation and minimize flooding. Some part of each unit still offers a glimpse of the former diversity of the Missouri River floodplain characterized by a shifting mosaic of river features driven by a wide range of seasonal and annual flows. Current refuge management focuses on reconnecting the Missouri River and its tributaries to their floodplains, restoring hydrology, returning native vegetation, reducing invasive species, and offering a variety of wildlife-dependent recreation opportunities. Restoring or mimicking the historic river dynamics fosters a range of bottom land and wetland vegetation and associated fish and wildlife including some, such as the pallid sturgeon, that are at risk of extinction.

Refuge Vision

In stretches between St. Louis and Kansas City, the Missouri river includes side channels, numerous sandbars, shifting depths and velocities, and adjacent wildlands much as it did when first seen by Lewis and Clark. A diverse abundance of native plants and animals confirm the heritage of this ever-changing system of river and floodplain. People come to enjoy and appreciate the recreation dependent on wildlife. They celebrate the river's heritage by supporting its restoration and conservation and the Big Muddy National Fish and Wildlife Refuge.

Refuge Goals

Habitat: Restore and maintain native habitat and natural processes sufficient to support species native to the Missouri River floodplain.

Wildlife: Promote biodiverse and abundant populations of endemic fish and wildlife within the Missouri River floodplain.

People: Refuge visitors enjoy wildlife-oriented recreation and understand refuge resources and efforts to maintain natural habitats and processes in the Missouri River floodplain.

Public Involvement

Initial conversations about comprehensive planning for Big Muddy NFWR began mid-year of 2007 to review policy, discuss the core team, tour the refuge, and gather background information. The initial phase of the planning process—scoping—officially began on May 16, 2007 when a Notice of Intent to prepare a CCP appeared in the *Federal Register*. Scoping, according to the Council on Environmental Quality Regulations for implementing NEPA, is “an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to the proposed action.” A formal 30-day public scoping period began in December 2007 with a series of public open houses held in seven communities along the Missouri River across the state. Collectively, more than 100 people attended the open house meetings and submitted dozens of comments.

The EA and Draft CCP was released for a 30-day public review with publication of a Notice of Availability in the *Federal Register* on October 1, 2013, followed by a news release made through local media outlets, a postcard announcement sent to the CCP mailing list, the distribution of an e-mail announcement, the delivery of paper copies of the full document to local libraries, and by making an electronic copy available on the U.S. Fish and Wildlife Service’s (FWS, Service) website. Due to a federal government shutdown from October 1–16, 2013, the public review period was extended an additional three weeks until November 20, 2013. Open house meetings, where people could ask questions and submit comments on the EA and Draft CCP, took place on November 12 (Columbia), November 13 (Arrow Rock), November 14 (Chesterfield), and November 19 (Richmond).

Issues

Planning is a means to address issues. Public scoping as well as scoping by Service refuge and regional staff and other agencies took place, ultimately producing eight “driving issues,” which are consolidated into three groups. These groupings are the basis for planning alternatives and suggested a range of possible changes in management. They are:

Land and Water Conservation

- What types and intensities of habitat management should be used to help fulfill refuge purposes, the mission of the NWRS, and/or other conservation priorities?
- How should the refuge deal with invasive species?

- How does the refuge restore Missouri River floodplain dynamics in the face of social and political conflicts?
- How can we learn more about refuge ecosystems and assess the results of refuge management actions

Visitor Services and Refuge Administration

- How should the refuge address the demand for a range of recreation experiences, wildlife-dependent recreation opportunities, other public uses, and facilities?
- How and where should the refuge allocate its resources for administering land and water conservation, visitor services, maintenance, and monitoring?
- How should the refuge involve and coordinate the numerous communities, jurisdictions, authorities, governing bodies, and landowners that affect refuge management or are affected by refuge management?

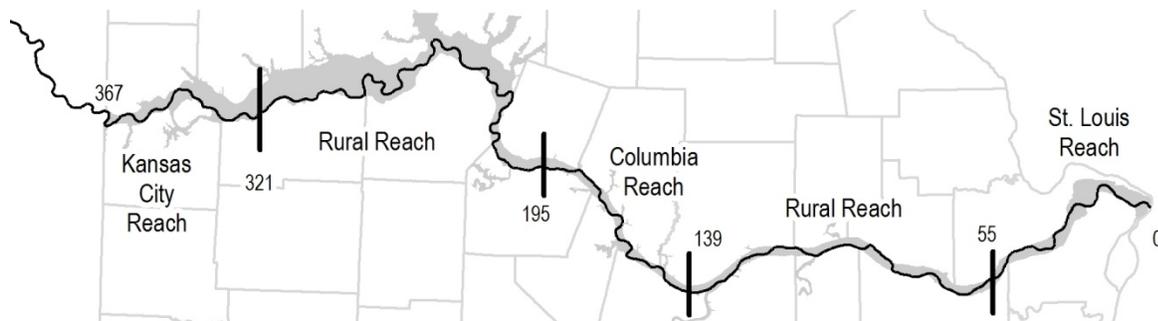
Conservation Footprint

- How should the refuge determine the total number, individual size, and location of refuge units?

Implementation

Management direction is specified in a series of objectives, where each objective applies to one or more of three urban and two rural river reaches delineated by river miles (figure ES-1). The eight objectives fall into two distinct categories: standard objectives and supplemental objectives. Each of the two standard objectives describes a baseline condition—the specific actions associated with these objectives will occur on all refuge units regardless of their location within the planning area. In contrast, each of the six supplemental objectives describes an upper level of management or development. The specific action or actions listed for each supplemental objective are included to help describe the upper limit that could occur.

Figure ES-1: Big Muddy NFWR Planning Area River Reaches Delineated by River Miles



Over the life of the plan, on Big Muddy National Fish and Wildlife Refuge (NFWR, refuge) units across all five river reaches, restore the hydrology of the Missouri River and its tributaries

(where applicable), reconnect the Missouri River and major tributaries to their floodplains, maintain or return natural cover types, and manage invasive species.

Over the life of the plan, within each refuge unit along the Columbia and St. Louis Reaches, emphasize and encourage biological inventory, monitoring, and research.

Over the life of the plan, on each refuge unit across all five river reaches, create or maintain a recreational and management setting that includes all of the following: reasonable car access, reasonable boat access, information kiosks, and parking (in areas with vehicle access).

Over the life of the plan, within each refuge unit along the Columbia Reach and St. Louis Reach, create or maintain a recreational and management setting characterized by the presence of one or more of the following: interpretive displays and other self-guided interpretation, restrooms, trails, overlooks, wildlife observation facilities, maintenance center, and environmental education site.

Over the life of the plan, within the Columbia Reach, allow for the option of a structure located on refuge holdings to serve as the primary administrative center of the refuge. It would include offices and may also include a visitor contact station, an area of the structure dedicated to visitor services.

Over the life of the plan, within the Columbia Reach and St. Louis Reach, emphasize collaboration (building relationships for conservation delivery) as well as outreach (building public understanding and support for conservation).

Over the life of the plan, within the Columbia Reach, allow for staff-led or volunteer-led programming associated with environmental education and interpretation.

Over the life of the plan, across all five river reaches, continue to pursue conservation of up to 30 individual refuge units evaluating tracts available from willing sellers based on the following criteria. Note that the listed criteria are not presented in priority order.

- Proximity to existing refuge units
- Connectivity to existing public lands
- Potential for river feature restoration
- Quality of existing habitat
- Amount of river frontage
- Proximity to populations centers
- Land value and cost
- Size and spatial connectedness or contiguity