



# Neal Smith

*National Wildlife Refuge*

## SUMMARY

### Draft Comprehensive Conservation Plan and Environmental Assessment

August 2012

## We Invite Your Comments

The U.S. Fish and Wildlife Service (FWS, Service) has completed a Draft Comprehensive Conservation Plan and Environmental Assessment (CCP) that describes draft goals, objectives, and strategies that could guide management of Neal Smith National Wildlife Refuge (NWR, Refuge) for the next 15 years.



The Draft CCP is now available for review and comment. This public review period is an opportunity for everyone who cares about Neal Smith NWR and its future to review the proposed management direction and comment on it. Following public review and comment on the draft document, revisions will be made as needed, and the final plan will be prepared and distributed. Completion of the final plan is expected for Fall 2012.

This summary condenses information from the entire 215-page Draft CCP. It describes the issues addressed, the proposed changes in management, and the alternatives considered during the planning process. Information on how to obtain the complete document and how to submit comments is provided on page 2.

In addition, Refuge staff has developed a Hunt Plan Environmental Assessment (Hunt Plan) that proposes changes to the Neal Smith NWR hunting program. That document is separate from this CCP, but it is also available now for public review and comment.

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## Where to Find the Draft CCP

**Online:** Available in portable document format (pdf) for viewing or download at the Neal Smith NWR planning website: <http://www.fws.gov/midwest/planning/NealSmith>.

**At the library:** Paper copy and compact disk (CD) are available for viewing at these libraries:

- Prairie City Public Library, 101 E. Fifth, Prairie City, IA 50228
- Des Moines Public Library, 1000 Grand Avenue, Des Moines, IA 50309

**By request:** We will send you a CD or paper copy of the CCP on request through either of the following:

- Neal Smith National Wildlife Refuge; P.O. Box 399; Prairie City, IA 50228; (515) 994-3400
- The Neal Smith NWR planning website: <http://www.fws.gov/midwest/planning/NealSmith>

**NOTE:** Refuge staff also has developed a Hunt Plan Environmental Assessment that proposes changes to the Neal Smith NWR hunting program. That document is not part of this CCP, but it is also now available for public review and comment at the locations listed above.

## How to Provide Input

We encourage you to share your thoughts with us. The most useful comments will be about specific content in the CCP. Please tell us what you do or do not like about the vision or a particular goal, alternative, etc. We are also looking for important points we may have missed. We will consider your comments as we write the final plan.

**Online via e-mail at:** [r3planning@fws.gov](mailto:r3planning@fws.gov) (Please insert "Neal Smith CCP Comment" into the subject line.)

**Deliver to the Refuge:** in person or by U.S. Mail

Neal Smith National Wildlife Refuge  
Attention: CCP Comment  
P.O. Box 399  
9981 Pacific Street  
Prairie City, Iowa 50228

**At an Open House event:**

- Wednesday, August 29, from 3 p.m. to 8 p.m. at Neal Smith National Wildlife Refuge, 9981 Pacific Street, Prairie City, Iowa

Refuge staff and Service planning staff will be available during the open house to visit with you about the Draft CCP. Copies of the draft CCP and the draft Hunt Plan will both be available for viewing. Forms for submitting written comments also will be available.

## Refuge Background

Located about 20 miles east of Des Moines, Iowa (Figure 1), Neal Smith NWR was established in 1990 as Walnut Creek NWR. The name was changed by Congress in 1998 to honor Congressman Neal Smith, whose support was instrumental in establishment of the Refuge. The Service is authorized to acquire 8,665 acres of land within the Walnut Creek watershed to reconstruct a piece of the tallgrass prairie ecosystem essentially “from scratch” on former farmland. About 5,580 acres have been acquired so far.

Refuge restoration efforts already have provided for a diversity of life on the Refuge including hundreds of native plant species, over 200 bird species, and dozens of mammals, reptiles, amphibians, and butterflies. Prescribed fire and grazing are used to emulate historic processes that maintained the diversity of the landscape.

Approximately 140,000 visitors come to the Refuge each year to enjoy the prairie environment, to learn about the Refuge and the tallgrass heritage of central Iowa, and to participate in wildlife-related outdoor activities. The Neal Smith NWR Visitor Center is a major environmental education facility that includes exhibits, meeting rooms, theater, laboratory-classroom, bookstore, and research facilities.

**Figure 1: Location of Neal Smith NWR**



## Refuge Vision

The Refuge is a vast expanse of wind-swept prairie punctuated by sheltering oak savannas. Walnut Creek and its tributaries, bordered by sedge meadows, meander through the Refuge providing clean water for aquatic wildlife. Bound and connected to river systems to the north and south, the Refuge forms a sanctuary and corridor for prairie-dependent wildlife species. These ecosystems are alive with a wide diversity of plants and wildlife that are thriving again. The natural processes that contribute to a healthy ecosystem include fire, grazing, nutrient cycling, pollination, and water filtration. These processes are working to improve life for plants, wildlife, and people. The picture of a landscape that existed before European-American settlement is renewed.

Guided by sound biological information and ongoing research, this landscape continues to be rejuvenated through the dedicated work of staff, volunteers, and the support of the public and the many partners of the Refuge. People of all ages and abilities visit to experience the natural world using



all of their senses and to contribute to the ongoing efforts. Visitors come to the Visitor Center to learn new concepts and to learn about and use new tools and methods to restore prairies. Visitors leave the Refuge with a sense of belonging coupled with new knowledge of these ecosystems, a connection to the natural history of the region, and a desire to be involved in conservation. The Refuge is an open laboratory where experts and laypersons alike share information to demonstrate how to restore and reconstruct tallgrass prairie, oak savanna, and sedge meadow.

## Refuge Goals

### Habitat

The Refuge will actively protect, restore, reconstruct, and manage diverse native communities of tallgrass prairie, oak savanna, sedge meadow, and aquatic ecosystems and the natural processes essential to these ecosystems to enhance the vitality and health of the native prairie environment.

### Wildlife

The Refuge will protect, restore, and maintain biologically diverse populations of native wildlife associated with healthy prairie, savanna, sedge meadow, and aquatic ecosystems, with an emphasis on species most dependent on these ecosystems.

### People

The Refuge will provide a variety of wildlife-dependent recreational and educational opportunities for visitors to experience and develop an appreciation for the native tallgrass prairie heritage, ecological processes, and cultural resources while participating in ecological restoration efforts or enjoying other activities on the Refuge.

## Issues Addressed in Planning

Issues play an important role in planning. Issues focus the planning effort on the most important topics and provide a base for considering alternative approaches to management while evaluating the consequences of managing under these alternative approaches. Significant issues addressed in the CCP are summarized below.

### Habitat

#### ***Refuge Restoration***

Although much progress has been made in converting agricultural fields and restoring remnant prairie, savanna, and sedge meadow sites, much work still remains. Individual tracts of land are in different stages of restoration so management needs vary, but several main issues predominate:

- Low native plant diversity in some locations
- Control of invasive plants
- Effects of subsurface drainage and other watershed alterations
- Disruption of historic fire and grazing regimes
- Varying habitat needs of tallgrass prairie wildlife.

How can we most effectively increase amount and quality of native vegetation and wildlife habitat on the Refuge?

#### ***Landscape-scale Issues***

The long-term ability to restore and sustain native vegetation and wildlife on Refuge lands depends in part on the integrity of the surrounding landscape. The Refuge is located in a primarily rural area just 20 miles east of urban Des Moines. Development near the Refuge is increasing as the city and suburbs expand. Wildlife movement between the Refuge and other protected areas will decrease. As more agricultural areas are developed, opportunities for the Service to influence land use decisions and reduce habitat fragmentation will become increasingly rare. Many conservation options are available on private lands outside the Refuge boundary including cooperative efforts with landowners, conservation easements, or fee acquisition from willing sellers in some cases.

### Wildlife

#### ***Grassland Birds***

Grassland birds are of particular concern because their populations have exhibited steeper, more consistent declines than any other group of North American birds. Many species have largely disappeared from central Iowa due to habitat loss, but many have returned to the Refuge as former agricultural lands have been restored to tallgrass prairie. Habitat needs vary by species. Some prefer tall vegetation with a dense litter layer, while others prefer shorter patchier vegetation. Most grassland birds prefer areas with little to no woody vegetation and at least low to moderate forb cover. Additional improvements to quality and quantity of habitat would be expected to increase the number, diversity, and productivity of grassland birds that the Refuge can support.

#### ***Bison and Elk***

Bison and elk were reintroduced to a fenced enclosure on the Refuge to re-create the historic role of large grazers in maintaining diverse prairies, to study their effects on the ecosystem, and as a learning experience for visitors. The bison herd also is part of a U.S. Department of the Interior program to maintain genetic diversity of the species. The optimum enclosure size and configuration to best meet

multiple Refuge needs has not been determined. Optimum herd size also has not been firmly established. More information is needed on the effects of grazing on reconstructed Refuge prairies in order to maximize habitat benefits of the program.

### **Other Wildlife Reintroductions**

In addition to bison and elk, the regal fritillary butterfly has been successfully reintroduced on the Refuge. Other wildlife species also might need some help. The Greater Prairie-Chicken is unlikely to recolonize on its own, even if enough suitable habitat is available, due to distance from the nearest population. For reptiles, amphibians, small mammals, and invertebrates, more information is needed on current status, historic range, and/or habitat requirements before well-reasoned decisions can be made on whether or not reintroduction is warranted. All wildlife reintroduction decisions will be made in coordination and collaboration with the Iowa Department of Natural Resources (DNR).

### **People**

The Refuge seeks to provide a variety of compatible wildlife-dependent recreational and educational opportunities so visitors can experience and treasure our native tallgrass prairie heritage. Visitors love the Refuge, and requests for additional activities are more than can be met with current resources. The Refuge also must balance visitor services with safety concerns and the potential for disturbance to wildlife and habitat. Communication and partnerships with area residents and local communities are crucial to the success of Neal Smith NWR.



## **What the CCP Calls For**

The Draft CCP establishes three goals and 23 objectives for meeting those goals. Some of the objectives proposed are departures from current management. This summary of the Draft CCP gives an overview of significant management changes. Please see chapter 4 of the Draft CCP for more information on these changes, a description of all of the objectives and strategies being proposed, and the rationale behind each objective.

### **Agriculture**

This objective calls for planting all Refuge agricultural fields to native prairie and savanna vegetation within five years or as soon as seed and funding are available. Oak savanna reconstruction will be initiated on some of these lands near existing oak savanna remnants.

### **Reconstructed Tallgrass Prairie**

These objectives call for increasing the diversity of native plants on 3,400 acres of reconstructed prairie using prescribed burning and grazing as primary management tools. Bison and elk grazing will continue within the 700-acre fenced enclosure. Grazing by cattle, sheep, and/or goats will be implemented in

selected units outside the enclosure. A mix of tall, medium, and short habitat structure will be maintained to meet the diverse needs of grassland-dependent birds.



### **Tallgrass prairie, Oak Savanna, and Sedge Meadow Remnants**

These objectives call for additional effort to restore vegetation on degraded prairie and savanna remnants before they are permanently lost to invasive plants and undesirable woody vegetation. Invasive reed canarygrass will be reduced in sedge meadows.

### **Habitat Reconstruction and Restoration Research**

This objective calls for evaluating the effects of management actions (grazing, fire, mowing, planting, etc.) on habitat restoration. The highest priority management-relevant questions will be selected and studied. The principles of adaptive management will be incorporated into all management-related monitoring and research activities.

### **Landscape-scale Development and Habitat Loss**

This objective calls for addressing landscape-scale concerns outside the Refuge boundary through continued conservation partnerships with landowners, local communities, and other partners. The Refuge boundary also will be expanded to include about 3,200 additional acres of the Walnut Creek watershed that lie to the east and west of the current boundary (see Figure 2: Alternative B, on page 10 of this document). The expanded boundary will provide a buffer for existing Refuge lands and will permit restoration of more natural Refuge waterflow through reduction of drainage tile lines under the Refuge. Land will continue to be purchased from willing sellers only.

### **Visitor Services**

These objectives call for expanding environmental education, interpretation, volunteer, and community outreach programs; updating of exhibits, brochures, signs, and websites; and updating of the Refuge hunting plan, possibly to align more closely with the state hunting program. Visitor numbers would increase to at least 200,000 per year.

## Alternatives Considered

This section summarizes the four alternatives considered by the planning team to achieve the proposed vision and goals and to address the issues. These alternatives include continuation of current management (Alternative A) and the planning team's proposed action (Alternative B). Additional information, including a comparison of the environmental effects of each alternative, is included in Appendix A of the Draft CCP.

### **Alternative A: Current Management Direction (No Action)**

This alternative reflects the current management of Neal Smith NWR. It provides the baseline against which to compare other alternatives. Under this alternative, current management practices would not change. A detailed description of existing programs and uses contained in this alternative is found in chapter 3 of the Draft CCP. These are some key elements of Alternative A:

- Manage prairie reconstruction sites (3,400 acres) by burning, mowing, and spraying to increase the diversity of native plant species and to control invasive plants. Continue current grazing program within the bison enclosure.
- Continue current limited efforts to restore prairie, savanna, and sedge meadow remnants.
- Acquire land from willing sellers within the existing approved Refuge boundary.
- Continue current conservation partnerships with federal and state agencies, landowners, universities, and other organizations.
- Continue current levels of outreach, community involvement, and priority public uses that are compatible and wildlife-dependent. Opportunities include four hiking trails and an auto tour route. Environmental education includes teacher training and the Partner Schools program. The current hunt program would continue for deer, squirrel, rabbit, pheasant, and quail.

### **Alternative B: Refuge Grassland Bird Focus (Preferred Alternative)**

This alternative would focus on increasing the amount and diversity of native vegetation on the Refuge and providing the varied habitat structure needed to support wildlife, especially declining populations of grassland birds. Additional effort would be directed toward monitoring and learning from the results of management actions. The Refuge land acquisition boundary would expand to the east and west by 3,210 acres to include all tributaries of Walnut Creek that flow through the Refuge. Detailed objectives, strategies, and rationales associated with this Alternative B are provided in chapter 4 of the Draft CCP.

These are some key elements of Alternative B:

- Convert Refuge crop fields to native vegetation. Manage reconstructed prairie (3,400 acres) to meet specific measurable objectives for vegetation composition and structural diversity of habitat.
- Restore sites dominated by invasive reed canarygrass (330 acres) to at least 25 percent cover of native grasses, sedges, and forbs.
- Increase floristic quality of all prairie and savanna remnants. Begin experimental reconstruction of additional savanna acreage.
- Evaluate the effects of grazing on Refuge habitat. Modify the program if necessary to meet objectives, including possible changes to enclosure size and/or animal numbers. Use grazing by cattle, sheep, and/or goats as a habitat management tool outside the bison enclosure.

- Implement vegetation monitoring; continue bird monitoring; develop studies using adaptive management principles to evaluate the effectiveness of management actions.
- Expand Refuge boundary to allow restoration of more natural waterflow on Refuge lands.
- Focus partnership efforts on improving water quality and reducing the effects of development and habitat loss outside the Refuge boundary through existing programs.
- Expand environmental education, interpretation, volunteer, and community outreach programs. Update exhibits, brochures, signs, and websites. Update the hunting plan, possibly to align more closely with the state hunting plan. Increase visitor numbers to at least 200,000 per year.

### **Alternative C: Watershed Focus**

Alternative C would emphasize restoration of hydrologic function and native vegetation to the entire Walnut Creek watershed. Refuge staff would build and lead a new public/private partnership to develop and begin implementation of a long-term restoration plan for the watershed. The Refuge land acquisition boundary would expand by 14,600 acres to include all lands within the watershed. These are some key elements of Alternative C:

- Work in partnership with landowners, agencies, organizations, and other stakeholders to restore the Walnut Creek watershed.
- Begin major restoration efforts to re-create creek meanders, restore natural waterflow, reduce erosion, re-connect the creek to its floodplain, and improve water quality.
- Work with landowners and the Partners for Fish and Wildlife Program through existing programs to implement additional conservation measures on private lands within the watershed.
- Expand the Refuge land acquisition boundary to include willing sellers throughout the Walnut Creek watershed.
- Manage reconstructed prairie sites to increase native plant diversity and control the highest priority invasives (especially sericea lespedeza).
- Restore sites dominated by invasive reed canarygrass (330 acres) to at least 50 percent cover of native grasses, sedges, and forbs.
- Expand environmental education, interpretation, volunteer, and community outreach programs. Update exhibits, brochures, signs, and websites. Update the hunting plan, possibly to align more closely with the state hunting program. Increase visitor numbers to at least 200,000 per year.

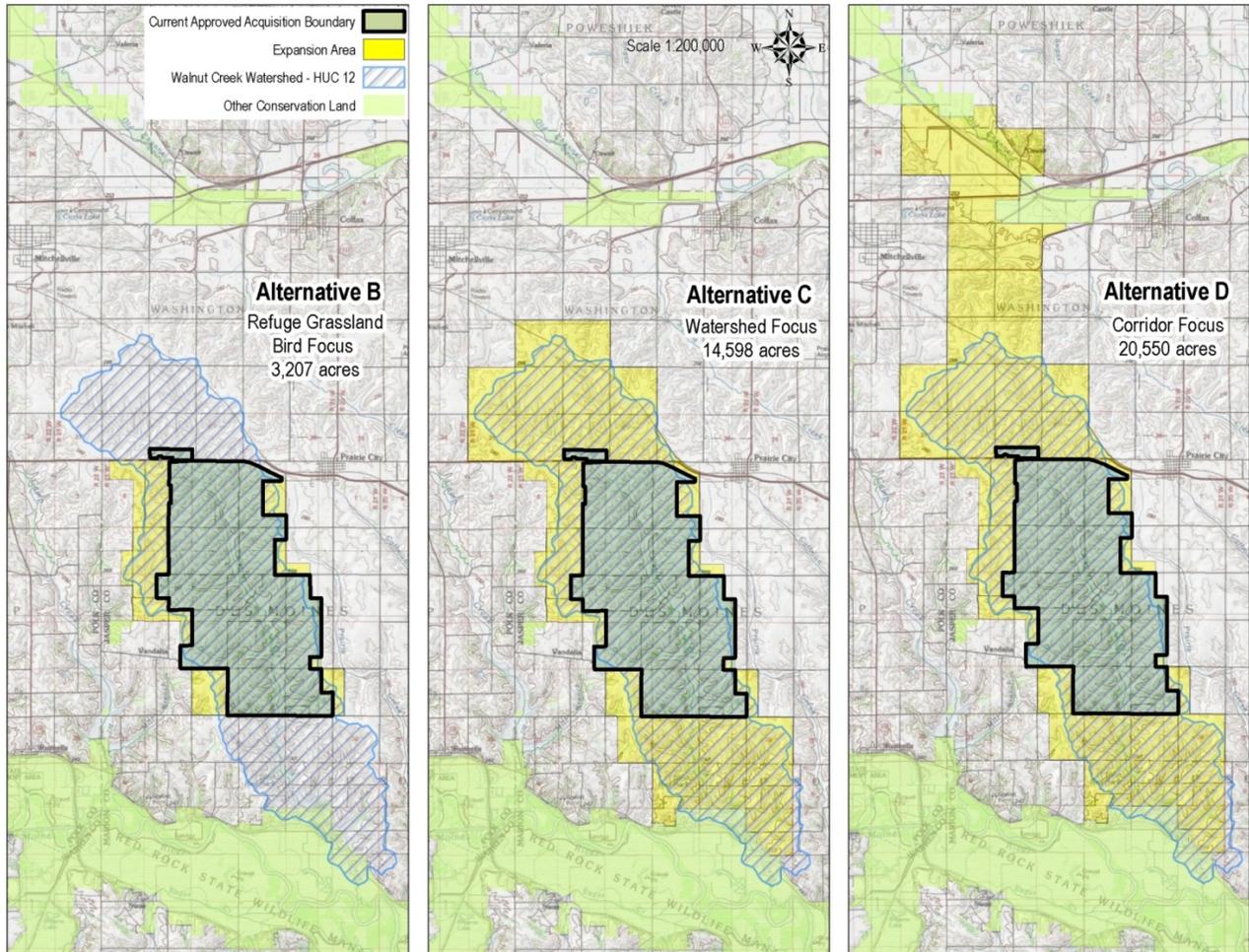
### **Alternative D: Corridor Focus**

Alternative D would emphasize creation of a permanent wildlife habitat corridor connecting Neal Smith NWR with Chichaqua Bottoms Greenbelt to the north and Lake Red Rock to the south. Refuge staff would build and lead a new public/private partnership focused on increasing the wildlife value of lands within the corridor and supporting environmentally sound development. The Refuge land acquisition boundary would expand by 20,550 acres to include the entire corridor area. Prairie restoration and management would focus on creating large connected tracts of wildlife habitat, especially for declining populations of grassland birds. These are some key elements of Alternative D:

- Work in partnership with landowners, agencies, organizations, and other stakeholders to develop and begin implementation of a strategic plan for the long-term conservation of lands within the Neal Smith – Chichaqua – Red Rock corridor.
- Work with landowners and the Partners for Fish and Wildlife Program to implement additional conservation measures on private lands within the corridor.

- Expand the Refuge land acquisition boundary to include willing sellers throughout the Neal Smith – Chichaqua – Red Rock corridor.
- Manage reconstructed prairie sites to create diverse habitat structure needed by grassland birds.
- Work with the Iowa DNR and other partners to restore and reintroduce native wildlife species as the habitat corridor becomes established.
- Expand environmental education, interpretation, volunteer, and community outreach programs. Update exhibits, brochures, signs, and websites. Update the hunting plan, possibly to align more closely with the state hunting program. Increase visitor numbers to at least 200,000 per year.

**Figure 2: Potential Boundary Expansion, Neal Smith NWR**



## Who We Are

The Refuge is administered by the U.S. Fish and Wildlife Service, the primary federal agency responsible for conserving, protecting, and enhancing the nation's fish and wildlife populations and their habitats. The Service oversees the enforcement of federal wildlife laws, management and protection of migratory bird populations, restoration of nationally significant fisheries, administration of the Endangered Species Act, and the restoration of wildlife habitat such as wetlands. The Service also manages the National Wildlife Refuge System (Refuge System), which was founded in 1903 when President Theodore Roosevelt designated Pelican Island in Florida as a sanctuary for Brown Pelicans.

Today, the Refuge System is a network of more than 550 refuges covering over 150 million acres. Most of these public lands and waters (over 80 percent) are in Alaska. Approximately 16 million acres are located in the lower 48 states and several island territories. Overall, the Refuge System provides habitat for more than 5,000 species of birds, mammals, fish, and insects. Refuges also provide unique opportunities for people. When compatible with wildlife and habitat conservation, they are places where people can enjoy wildlife-dependent recreation such as hunting, fishing, wildlife observation and photography, and environmental education and interpretation.



**The mission of the U.S. Fish & Wildlife Service** is working with others to conserve, protect, and enhance fish and wildlife and their habitats for the continuing benefit of the American people.

**The mission of the National Wildlife Refuge System** is to administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.