

# Draft Comprehensive Conservation Plan and Environmental Assessment

*Pathfinder National Wildlife Refuge*

**July 2008**

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# Abbreviations

<b>Administration Act</b>	National Wildlife Refuge System Administration Act of 1966
<b>BSFW</b>	Bureau of Sport Fisheries and Wildlife
<b>CCC</b>	Civilian Conservation Corps
<b>CCP</b>	comprehensive conservation plan
<b>CFR</b>	Code of Federal Regulations
<b>cfs</b>	cubic feet per second
<b>CRP</b>	conservation reserve program
<b>EA</b>	environmental assessment
<b>EO</b>	executive order
<b>FHWA</b>	Federal Highway Administration
<b>FMP</b>	fire management plan
<b>FONSI</b>	finding of no significant impact
<b>FTE</b>	full-time equivalent
<b>GIS</b>	geographic information system
<b>GPS</b>	global positioning system
<b>GS</b>	general schedule (employment)
<b>Improvement Act</b>	National Wildlife Refuge System Improvement Act of 1997
<b>LPP</b>	Land Protection Plan
<b>NABCI</b>	North American Bird Conservation Initiative
<b>NAWMP</b>	North American Waterfowl Management Plan
<b>NAWCA</b>	North American Wetlands Conservation Act
<b>NEPA</b>	National Environmental Policy Act
<b>NGO</b>	nongovernmental organization
<b>NOI</b>	notice of intent
<b>NWR</b>	national wildlife refuge
<b>NWRS</b>	National Wildlife Refuge System
<b>PFW</b>	Partners for Fish and Wildlife
<b>Refuge System</b>	National Wildlife Refuge System
<b>Region 6</b>	Mountain–Prairie Region of the U.S. Fish and Wildlife Service
<b>RONs</b>	Refuge Operating Needs System
<b>SAMMS</b>	Service Asset Maintenance Management System
<b>Service</b>	U.S. Fish and Wildlife Service
<b>SUP</b>	special use permit
<b>SWG</b>	State Wildlife Grant
<b>TNC</b>	The Nature Conservancy
<b>USFWS</b>	U.S. Fish and Wildlife Service
<b>USGS</b>	U.S. Geological Survey
<b>WG</b>	wage grade (employment)
<b>WGFD</b>	Wyoming Game and Fish Department
<b>WUI</b>	wildland–urban interface



# Summary



Mark Ely/USFWS

*Pathfinder National Wildlife Refuge, Wyoming*

This is a summary of the draft comprehensive conservation plan for the Pathfinder National Wildlife Refuge in Carbon and Natrona counties, Wyoming. This plan, when approved, will guide management of the refuge for the next 15 years.

Assessing the refuge's ability to provide quality wildlife habitat for migratory bird species and actively managing the refuge to achieve this end, along with identifying and providing appropriate public uses on the refuge, were key factors driving the development of this plan.

The National Wildlife Refuge System Improvement Act of 1997 requires the U.S. Fish and Wildlife Service to develop a comprehensive conservation plan by 2012 for each unit in the National Wildlife Refuge System.

## THE REFUGE

Located in central Wyoming in a high plains basin near the headwaters of the "Platte-Kansas Rivers" ecosystem, Pathfinder National Wildlife Refuge lies approximately 47 miles southwest of the city of Casper.

Pathfinder Dam construction was completed in 1909, creating the first reservoir on the North Platte River. At the same time, Pathfinder Wildlife Refuge (later renamed "Pathfinder National Wildlife Refuge") was established as an overlay refuge on Bureau of

Reclamation lands on the reservoir. This large body of water was very attractive to waterbirds, and where the refuge once offered a unique environment in this semiarid region of Wyoming, the reservoir on which it is situated is now part of a larger system of reservoirs including Alcova to the north and Seminoe to the south.

Major habitat types of Pathfinder National Wildlife Refuge include open water wetlands, uplands consisting of shrub and grasslands, and alkali flats.

## THE PLANNING PROCESS

The comprehensive conservation plan process consists of a series of steps including environmental analysis. Public and partner involvement are encouraged and valued throughout the process. Management alternatives are developed to meet the purposes, vision, and goals of the refuge. Implementation of the final comprehensive conservation plan will be monitored throughout its 15-year effective period.

## ISSUES

Public scoping for the Pathfinder National Wildlife Refuge initiated in May 2006, along with refuge information, identified nine major areas of concern regarding management of the refuge.

### Refuge Management

Pathfinder National Wildlife Refuge is part of the Arapaho National Wildlife Refuge Complex. Refuge staff are headquartered near Walden, Colorado, approximately a four-hour drive from the refuge. The complex's small staff size (four full-time employees), limited resources, and remote headquarters create management challenges for the refuge, including a lack of day-to-day oversight and minimal opportunities for law enforcement. Degrading infrastructure (specifically, roads, fences, and signs) and litter occur on the refuge due to lack of active management.

Management of Pathfinder Reservoir and refuge lands by multiple agencies creates additional management challenges. The U.S. Fish and Wildlife Service currently has memorandums of agreement and understanding with a number of agencies in the Casper region including the Bureau of Reclamation, the Bureau of Land Management, the Wyoming Game and Fish Department, and Natrona County.

The Bureau of Reclamation has a withdrawal on Pathfinder Reservoir project lands to support project purposes (i.e., flood control, irrigation, and hydroelectric power generation). The U.S. Fish and Wildlife Service has a withdrawal on refuge lands for wildlife management purposes. The roles and responsibilities of each agency should be clearly defined, evaluated, and simplified where possible during the comprehensive conservation plan process.

### Refuge Uses

Refuge uses (grazing and recreation) need to be evaluated to ensure existing and proposed uses are compatible with the purpose of the refuge and the mission of the National Wildlife Refuge System. Refuge uses have not been actively evaluated over time due to minimal staff presence. Through the development of this comprehensive conservation plan, refuge uses and management activities will be evaluated to ensure the best, most informed decisions are made for proper management of refuge lands. For a use to be deemed compatible, appropriate staff and resources must be available to manage the use.

### Water Resources

Water and water availability are vital in semiarid regions. The U.S. Fish and Wildlife Service does not own water rights for the refuge, which can result in poor wildlife habitat for trust species.

### Water Level Fluctuation

During the past 20 years (from 1987 to 2007), the average fluctuation of the reservoir water level was 20 feet per year with a range of 8–40 feet, resulting in a lack of shoreline vegetation and food source for migratory birds and nesting cover for waterfowl. The Bureau of Reclamation is responsible for managing reservoir water levels.

### Separated Land Parcels

The refuge consists of four separate units. Separated land parcels are generally more difficult to access and manage than contiguous parcels of land, and generally of less value to wildlife.

### Invasive Species

Invasive species are a threat to quality habitat. If not contained early, they can also drain resources. Tamarisk and Canada thistle have been identified on the refuge. An increase in monitoring, management, and control of these and other invasive species is needed.

### Research and Science

The U.S. Fish and Wildlife Service needs to obtain good baseline data for the refuge. Monitoring programs need to be implemented for species that use the refuge. Audubon Wyoming could be a partner in gathering quality research data on the refuge.

### Partnerships

Cooperation with other agencies is needed to address issues of common concern. Opportunities for the public to assist in the protection and management of the refuge should be identified and provided. Local conservation groups could help raise funds for the refuge either directly or by lobbying state and federal representatives.

### Staffing

The refuge should be managed by U.S. Fish and Wildlife Service staff stationed in Wyoming. This issue was raised frequently in public meetings. The managing staff is currently headquartered at Arapaho National Wildlife Refuge in Walden, Colorado, approximately 240 miles away from the refuge. The remote location of staff prevents active, consistent oversight of the refuge.

## THE FUTURE OF THE REFUGE

The issues, along with resource conditions, were important considerations during the development of the vision and goals for the refuge.

## THE VISION OF THE REFUGE

The vision describes what the refuge will be and what the U.S. Fish and Wildlife Service hopes to do, and is based primarily on the mission of the National Wildlife Refuge System and specific purposes of the refuge.

*Pathfinder Reservoir and surrounding public lands supply life-cycle needs for a multitude of wildlife adapted to this semiarid region of central Wyoming. The wetland complexes, upland sagebrush habitats, and open waters of the reservoir provide feeding, breeding, staging, resting, and nesting areas for migratory birds and resident wildlife. Management decisions will be directed toward maintaining or improving wildlife habitat values. Appropriate public use opportunities will be identified, and provided where possible.*

## GOALS

The following goals were developed to meet the vision of the Pathfinder National Wildlife Refuge.

### Natural Resources Goal

Conserve the ecological diversity of uplands and wetlands to support healthy populations of native wildlife, with an emphasis on migratory birds.

**Visitor Services Goal**

Provide wildlife-dependent recreational opportunities to a diverse audience when the administration of these programs does not adversely affect habitat management objectives.

**Partnerships Goal**

Work with partners to support healthy populations of native wildlife and to increase understanding of wildlife needs as well as the benefits wildlife offer to local communities.

**Cultural Resources Goal**

Identify and evaluate the cultural resources on the refuge and protect those that are determined to be significant.

**Administrative Goal**

Obtain administrative capabilities that will result in efficient strategies to manage the landscape to achieve habitat and public management goals.

**ALTERNATIVES**

The planning team developed the following three alternatives as management options for addressing the key issues.

**Alternative A—Current Management (No Action)**

This no-action alternative reflects the current management of the Pathfinder National Wildlife Refuge. It provides the baseline against which to compare the other alternatives.

Refuge habitats would continue to be minimally managed on an opportunistic schedule that may maintain—or most likely would result in further decline in—the diversity of vegetation and wildlife species. Only limited data collection and monitoring of habitats and wildlife species would occur on the refuge.

Outreach and partnerships would continue at present minimal levels.

**Alternative B—Enhanced Refuge Management**

Management activities under alternative B would be increased. Upland habitats would be evaluated and managed for the benefit of migratory bird species. Monitoring and management of invasive species on the refuge would be increased.

With additional staffing, the U.S. Fish and Wildlife Service would collect baseline biological information for wildlife and habitats. Wildlife-dependent recreation opportunities would be provided and enhanced where compatible with refuge purposes. Efforts would be increased in the operations and maintenance of natural resources on the refuge and to maintain and develop partnerships that promote wildlife and habitat research and management.

**Alternative C—Modify Refuge Boundary (Proposed Action)**

Alternative C is the U.S. Fish and Wildlife Service's proposed action and basis for the draft comprehensive conservation plan.

Under Alternative C, the refuge boundary would be modified to remove areas from the refuge that provide minimal opportunity to improve wildlife habitat and are difficult to manage. Remaining refuge areas would be managed similar to those actions described in alternative B. Modifying the refuge's boundary would enable the U.S. Fish and Wildlife Service to focus efforts on manageable lands, thereby enhancing refuge management and efficiently directing refuge resources toward accomplishing the mission of the National Wildlife Refuge System



# 1 Introduction



Glen Smart/USFWS

*Hooded Merganser*

The U.S. Fish and Wildlife Service (Service, USFWS) has developed this draft comprehensive conservation plan (CCP) to provide a foundation for the management and use of the Pathfinder National Wildlife Refuge (NWR) located in central Wyoming near the city of Casper (figure 1). When finalized, the CCP will serve as a working guide for management programs and actions over the next 15 years.

This draft CCP was developed in compliance with the National Wildlife Refuge System Improvement Act of 1997 (Improvement Act) and Part 602 (National Wildlife Refuge System Planning) of “The Fish and Wildlife Service Manual.” The actions described within this draft CCP and environmental assessment (EA) meet the requirements of the National Environmental Policy Act of 1969 (NEPA). Compliance with the NEPA is being achieved through the involvement of the public.

The final CCP will specify the necessary actions to achieve the vision and purposes of Pathfinder NWR. Wildlife is the first priority in refuge management, and public use (wildlife-dependent recreation) is allowed and encouraged as long as it is compatible with the refuge’s purpose.

The draft CCP and the EA have been prepared by a planning team comprised of representatives from various Service programs (refuge planning, education and visitor services, and ecological services), the Bureau of Reclamation (Reclamation), the Bureau of Land Management (BLM), and the Wyoming

Game and Fish Department (WGFD). In addition, the planning team incorporated public input. Public involvement and the planning process are described in section 1.6 below.

After reviewing a wide range of public comments and management needs, the planning team developed alternatives for management of the refuge. The team recommended one alternative to be the Service’s proposed action. This action addresses all substantive issues while determining how best to achieve the purpose of the refuge. The proposed action is the Service’s recommended course of action for management of the refuge. The proposed action is summarized in chapter 3, with its predicted effects described in chapter 5. The details of the proposed action compose the draft CCP (chapter 6).

## 1.1 PURPOSE AND NEED FOR THE PLAN

The purpose of this draft CCP is to identify the role that the refuge will play in support of the mission of the National Wildlife Refuge System (Refuge System), and to provide long-term guidance for management of refuge programs and activities. The CCP is needed:

- ❑ to communicate with the public and other partners in efforts to carry out the mission of the Refuge System;
- ❑ to provide a clear statement of direction for management of the refuge;

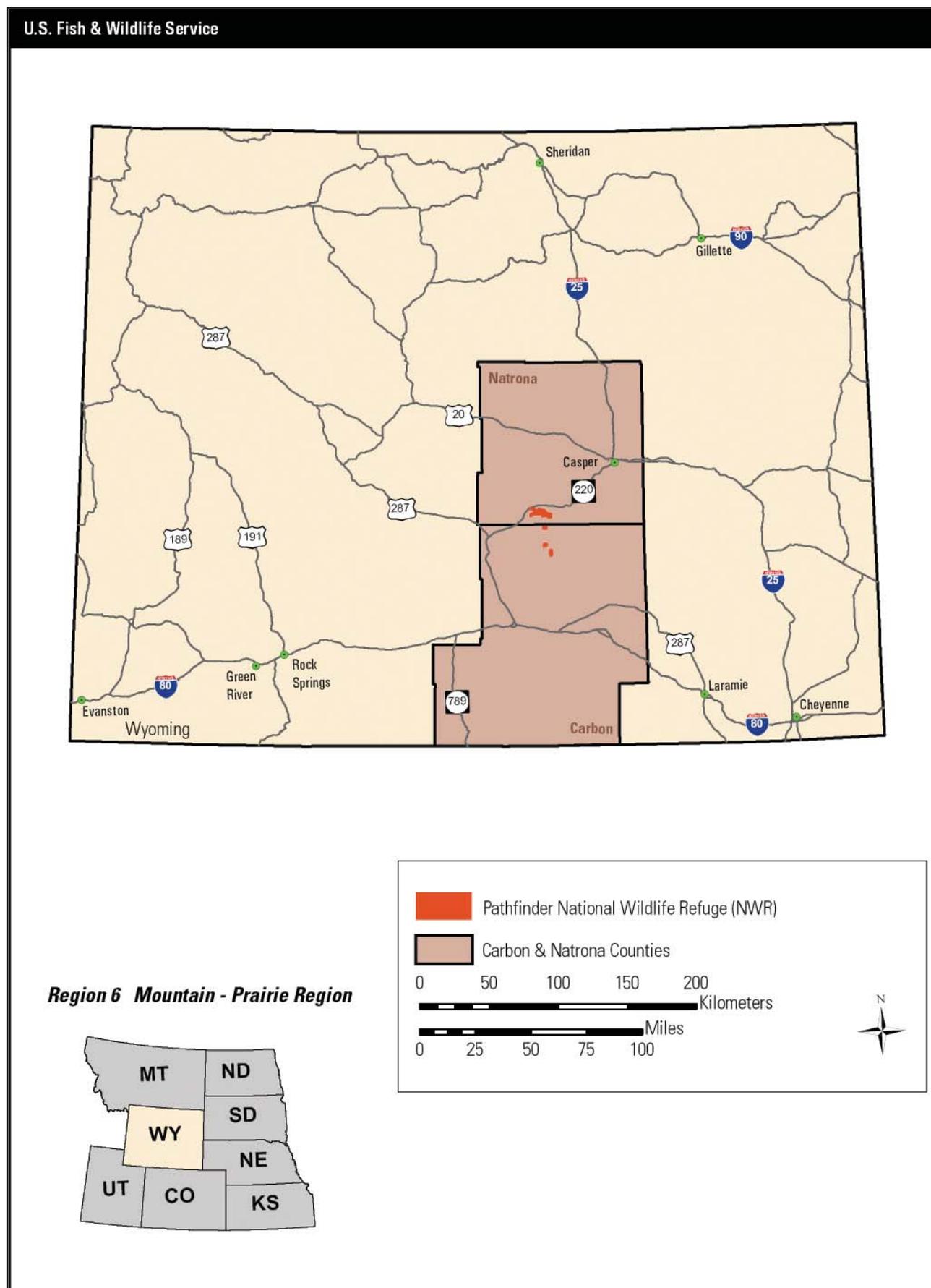


Figure 1. Vicinity map for Pathfinder NWR, Wyoming.

- ❑ to provide neighbors, visitors, and government officials with an understanding of the Service's management actions on and around the refuge;
- ❑ to ensure that the Service's management actions are consistent with the mandates of the Improvement Act;
- ❑ to ensure that management of the refuge is consistent with federal, state, and county plans;
- ❑ to provide a basis for development of budget requests for the refuge's operation, maintenance, and capital improvement needs.

Sustaining the nation's fish and wildlife resources is a task that can be accomplished only through the combined efforts of governments, businesses, and private citizens.

## 1.2 THE U.S. FISH AND WILDLIFE SERVICE AND THE REFUGE SYSTEM

The Service is the principal federal agency responsible for fish, wildlife, and plant conservation. The Refuge System is one of the Service's major programs.

### ***U.S. FISH AND WILDLIFE SERVICE***

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

Over a century ago, America's fish and wildlife resources were declining at an alarming rate. Concerned citizens, scientists, and hunting and angling groups joined together to restore and sustain America's national wildlife heritage. This was the genesis of the U.S. Fish and Wildlife Service.

Today, the Service enforces federal wildlife laws, manages migratory bird populations, restores nationally significant fisheries, conserves and restores vital wildlife habitat, protects and recovers endangered species, and helps other governments with conservation efforts. In addition, the Service administers a federal aid program that distributes hundreds of millions of dollars to states for fish and wildlife restoration, boating access, hunter education, and related programs across America.

### ***NATIONAL WILDLIFE REFUGE SYSTEM***

In 1903, President Theodore Roosevelt designated the 5.5-acre Pelican Island in Florida as the nation's first wildlife refuge for the protection of brown pelicans and other native, nesting birds. This small but significant designation was the beginning of the Refuge System.

One hundred years later, the Refuge System has become the largest collection of lands in the world specifically managed for wildlife, encompassing over 96 million acres within 546 refuges and over 3,000 small areas for waterfowl breeding and nesting. Today, there is at least one refuge in every state as well as Puerto Rico, Guam, and the U.S. Virgin Islands.

In 1997, the Improvement Act established a clear mission for the Refuge System.

*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.*

The Improvement Act states that each national wildlife refuge shall be managed

- ❑ to fulfill the mission of the Refuge System;
- ❑ to fulfill the individual purposes of each refuge;
- ❑ to consider the needs of fish and wildlife first;
- ❑ to fulfill the requirement of developing a CCP for each unit of the Refuge System and fully involve the public in the preparation of these plans;
- ❑ to maintain the biological integrity, diversity, and environmental health of the Refuge System;
- ❑ to recognize that the six wildlife-dependent recreation activities (hunting, fishing, wildlife observation and photography, and environmental education and interpretation) are legitimate and priority public uses;
- ❑ to retain the authority of refuge managers to determine compatible public uses.

In addition to the mission for the Refuge System, the wildlife and habitat vision for each unit of the Refuge System stresses the following principles:

- ❑ Wildlife comes first.
- ❑ Ecosystems, biodiversity, and wilderness are vital concepts.
- ❑ Habitats must be healthy.
- ❑ Growth of the Refuge System must be strategic.
- ❑ The Refuge System serves as a model for habitat management with broad participation from others.

Following passage of the Improvement Act, the Service immediately began to carry out the direction of the new legislation, including preparation of CCPs for all national wildlife refuges and wetland management districts. Consistent with the Improvement Act, the Service prepares all CCPs in conjunction with public involvement. Each refuge is required to complete its CCP within the 15-year schedule (by 2012).

## **PEOPLE AND THE REFUGE SYSTEM**

The nation's fish and wildlife heritage contributes to the quality of American lives. Wildlife and wild places provide special opportunities to recreate, relax, and enjoy the natural world.

Whether through bird watching, fishing, hunting, photography, or other wildlife pursuits, wildlife recreation contributes millions of dollars to local economies. In 2006, nearly 35 million people visited the Refuge System, mostly to observe wildlife in their natural habitats (Carver and Caudill 2007). Visitors are most often accommodated through nature trails, auto tours, interpretive programs, and hunting and fishing opportunities. Significant economic benefits are being generated to the local communities that surround refuges. During fiscal year 2006, recreational use on national wildlife refuges generated almost \$1.7 billion of sales in regional economies, supported approximately 27,000 private sector jobs, produced about \$543 million in employment income, and generated nearly \$185.3 million in tax revenue at the local, county, state, and federal levels (Carver and Caudill 2007).

## **1.3 NATIONAL AND REGIONAL MANDATES**

Refuge System units are managed to achieve the designated purpose of the refuge (as described in establishing legislation, executive orders, or other establishing documents) and the mission and goals of the Refuge System. Key concepts and guidance of the Refuge System are in the Refuge System Administration Act of 1966 (Administration Act), Title 50 of the Code of Federal Regulations (CFR), "The Fish and Wildlife Service Manual," and the Improvement Act.

The Improvement Act amends the Administration Act by providing a unifying mission for the Refuge System, a new process for determining compatible public uses on refuges, and a requirement that each refuge be managed under a CCP. The Improvement Act states that wildlife conservation is the priority of Refuge System lands and that the Secretary of the Interior will ensure the biological integrity, diversity, and environmental health of refuge lands are maintained. Each refuge must be managed to fulfill the Refuge System's mission and the specific purposes for which it was established. The

Improvement Act requires the Service to monitor the status and trends of fish, wildlife, and plants in each refuge.

A detailed description of these and other laws and executive orders that may affect the CCP or the Service's implementation of the CCP is in appendix A. Service policies on planning and day-to-day management of refuges are in the "Refuge System Manual" and "The Fish and Wildlife Service Manual."

## **1.4 REFUGE CONTRIBUTIONS TO NATIONAL AND REGIONAL PLANS**

Pathfinder NWR contributes to the conservation efforts described here.

### **FULLFILLING THE PROMISE**

A 1999 report, "Fulfilling the Promise: The National Wildlife Refuge System" (U.S. Fish and Wildlife Service [USFWS] 1999), is the culmination of a yearlong process by teams of Service employees to evaluate the Refuge System nationwide. This report was the focus of the first national Refuge System conference in 1998 attended by refuge managers, other Service employees, and representatives from leading conservation organizations.

The report contains 42 recommendations packaged with three vision statements dealing with wildlife and habitat, people, and leadership. This draft CCP deals with all three of these major topics. The planning team looked to the recommendations in the document for guidance during CCP planning.

### **PARTNERS IN FLIGHT**

The Partners in Flight program began in 1990 with the recognition of declining population levels of many migratory bird species. The challenge, according to the program, is managing human population growth while maintaining functional natural ecosystems. To meet this challenge, Partners in Flight worked to establish priorities for conservation efforts and identify land bird species and habitat types. Partners in Flight activity has resulted in 52 bird conservation plans covering the continental United States.

The primary goal of Partners in Flight is to provide for the long-term health of the bird life of North America. The first priority is to prevent the rarest species from going extinct, the second is to prevent uncommon species from descending into threatened status, and the third is to "keep common birds common."

There are 58 physiographic areas, defined by similar physical geographic features, wholly or partially contained within the contiguous United States and several others wholly or partially in Alaska. Pathfinder NWR falls within physiographic area 86, the Wyoming Basin (figure 2).

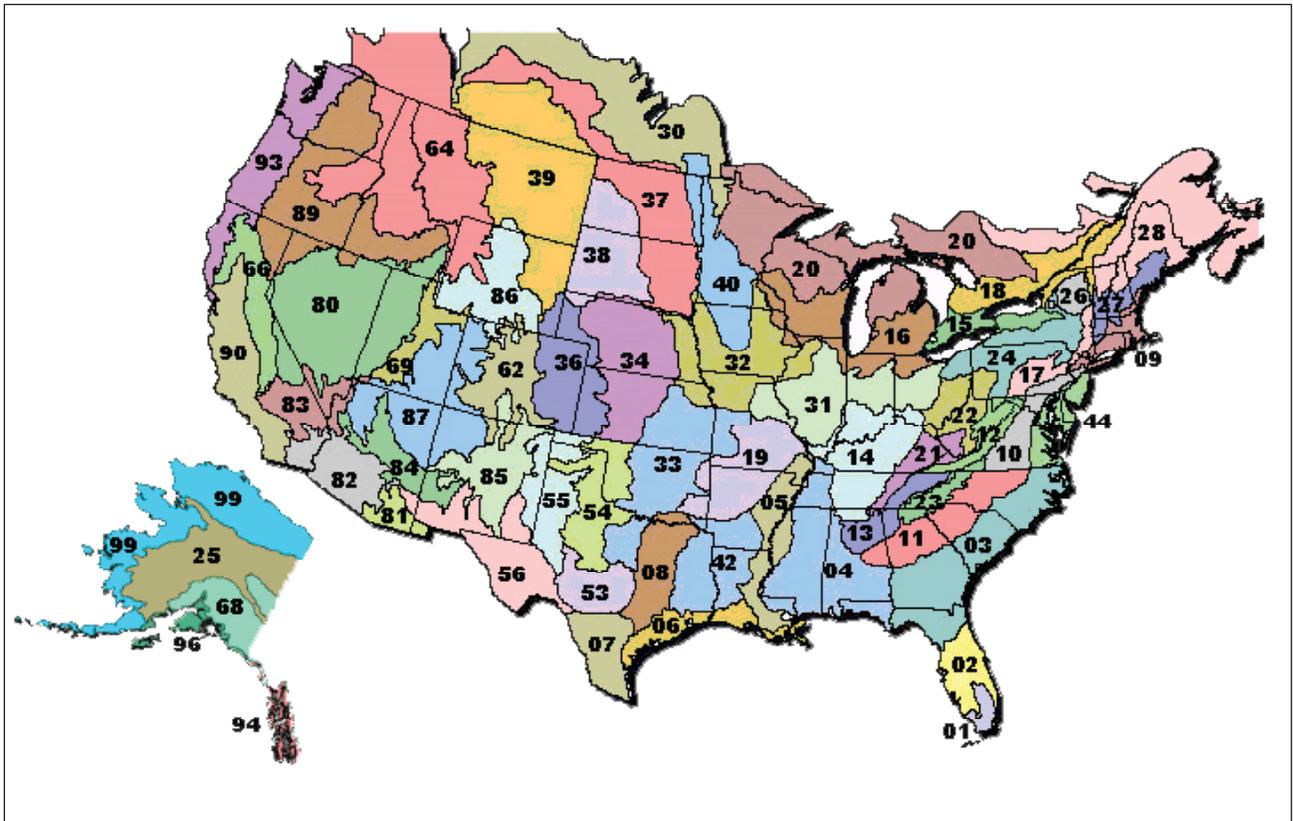


Figure 2. Pathfinder NWR is located in the Wyoming Basin, physiographic area 86.

The Wyoming Basin is primarily in Wyoming but also extends into northern Colorado, southern Montana, and very small parts of northeast Utah and southeast Idaho. The area consists of broad intermountain basins interrupted by isolated hills and low mountains that merge to the south into a dissected plateau. The Wyoming Basin is primarily shrub-steppe habitat, dominated by sagebrush and shadscale, interspersed with areas of short-grass prairie. Higher elevations are in mountain shrub vegetation, with coniferous forest atop the highest areas. Priority bird populations and habitats of the Wyoming Basin include:

#### *Shrub-Steppe*

- Ferruginous hawk
- Prairie falcon
- Greater sage-grouse
- Cassin's kingbird
- Sage thrasher
- Brewer's sparrow
- Sage sparrow

#### *Sagebrush Grasslands*

- Swainson's hawk
- Mountain plover
- McCowan's longspur

#### *Montane Shrub*

- Lewis's woodpecker
- Virginia's warbler

#### *Wetlands*

- American white pelican
- Wilson's phalarope

A large percentage of the Wyoming Basin is in public ownership, with the BLM owning much of the lower elevation shrub-steppe and grassland and the U.S. Forest Service owning a great deal of the higher-elevation wooded land. A checkerboard pattern of land ownership is a subtle problem that affects the consistency of land management over large areas. The primary land use in the Wyoming Basin has been for many years and continues to be grazing, although conversion to agriculture is also an issue. The effects of overgrazing and nonnative plant invasion should be mitigated to improve conditions for breeding birds. Maintenance of springs and riparian habitat may be crucial, particularly to sage-grouse. Fencing or changing grazing systems may be effective in maintaining water flow. Oil and gas extraction and hard rock mining are relatively recent factors that may negatively affect the greater landscape needs of the sage-grouse (Nicholoff 2003).

## **RECOVERY PLANS FOR FEDERALLY LISTED THREATENED OR ENDANGERED SPECIES**

Where federally listed threatened or endangered species occur at Pathfinder NWR, management goals and strategies in their respective recovery plans will be followed. The list of threatened or endangered species that occur at the refuge will change as species are listed or delisted, or as listed species are discovered on refuge lands. Currently, no federally listed threatened or endangered species occur at the refuge.

## **STATE COMPREHENSIVE CONSERVATION WILDLIFE STRATEGY**

Over the past several decades, documented declines of wildlife populations have occurred nationwide. Congress created the State Wildlife Grant (SWG) program in 2001. This program provides states and territories with federal dollars to support conservation aimed at preventing wildlife from becoming endangered and in need of protection under the Endangered Species Act. The SWG program represents an ambitious endeavor to take a proactive role in keeping species from becoming threatened or endangered in the future.

According to the SWG program, each state or territory and the District of Columbia must have completed a comprehensive wildlife conservation strategy (CWCS) by October 1, 2005, to receive future funding.

These strategies will help define an integrated approach to the stewardship of all wildlife species, with additional emphasis on species of concern and habitats at risk. The goal is to shift focus from single-species management and highly specialized individual efforts to a geographically based, landscape-oriented, fish and wildlife conservation effort. The Service approves CWCSs and administers SWG program funding.

The CWCS for the state of Wyoming was reviewed and information therein was used during the development of the CCP. Implementation of CCP habitat goals and objectives will support the goals and objectives of the CWCS.

## **1.5 ECOSYSTEM DESCRIPTION AND THREATS**

Pathfinder NWR is located within the Platte–Kansas Rivers ecosystem, which includes almost all of Nebraska, southeast Wyoming, northeast Colorado, and northern Kansas (figure 3). The ecosystem is home to the Nebraska Sandhills, the largest sand dune complex in the western hemisphere. This area and many others provide vital habitat for numerous threatened and endangered wildlife and plant species.

The ecosystem spans from snow-capped, barren mountain peaks in Colorado to lowland riparian cottonwood forests along the Missouri River in eastern Nebraska and Kansas. The mountainous regions are predominately a mixture of coniferous forests comprised of Douglas fir, ponderosa pine, lodgepole pine, Engelman spruce, and subalpine fir. Pinyon pine, juniper woodlands, and aspen communities are also common throughout. At high elevation, alpine meadows and lakes, willow shrublands, and barren, rocky areas are frequently found. Forests generally transition into shrub communities dominated by sagebrush with short grasses and forbs in eastern Wyoming and western Nebraska. Farther to the east, trees give way to short-grass prairie dominated by buffalo grass, blue gramma, hairy gramma, and western wheatgrass. The short-grass prairie turns into mixed-grass prairie in central Nebraska and Kansas, due primarily to greater annual rainfall.

Threats to the Platte–Kansas Rivers ecosystem that require attention include overgrazing of land, invasive plants, population growth and housing development, and groundwater and surface-water depletion. To overcome these threats, the priorities for the ecosystem will be to ensure that natural, healthy ecological processes dominate and that economic development complements environmental protection.

## **1.6 THE PLANNING PROCESS**

This draft CCP and the EA for Pathfinder NWR is intended to comply with the Improvement Act and the NEPA as well as the implementing regulations of the acts. The Service issued its Refuge System planning policy in 2000, which established requirements and guidance for refuge plans—including CCPs and step-down management plans—to ensure that planning efforts comply with the Improvement Act. The planning policy identified several steps of the CCP and environmental analysis process (see figure 4).

Table 1 displays the planning process to date for this draft CCP and EA. The Service began the preplanning process in January 2006. The planning team consists of Service personnel from various programs including refuge planning, education and visitor services, and ecological services, as well as representatives from the BLM, Reclamation, and WGFD (appendix B). During preplanning, the team developed a mailing list, internal issues, and a special qualities list. The planning team identified current refuge program status, compiled and analyzed relevant data, and determined the purpose of the refuge.

Over the course of preplanning and scoping (the process of obtaining information from the public for input into the planning process), the planning team collected available information about the resources

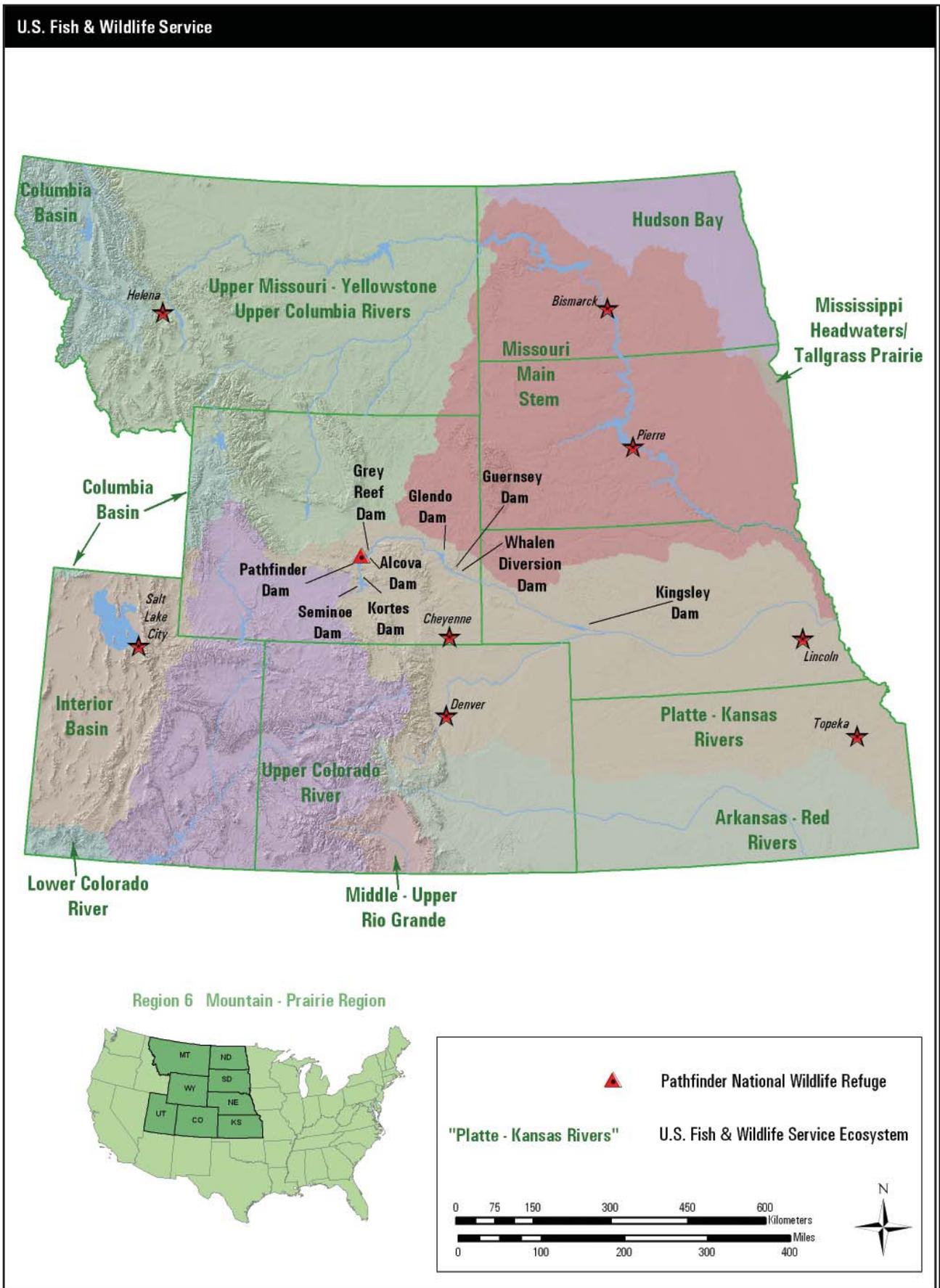
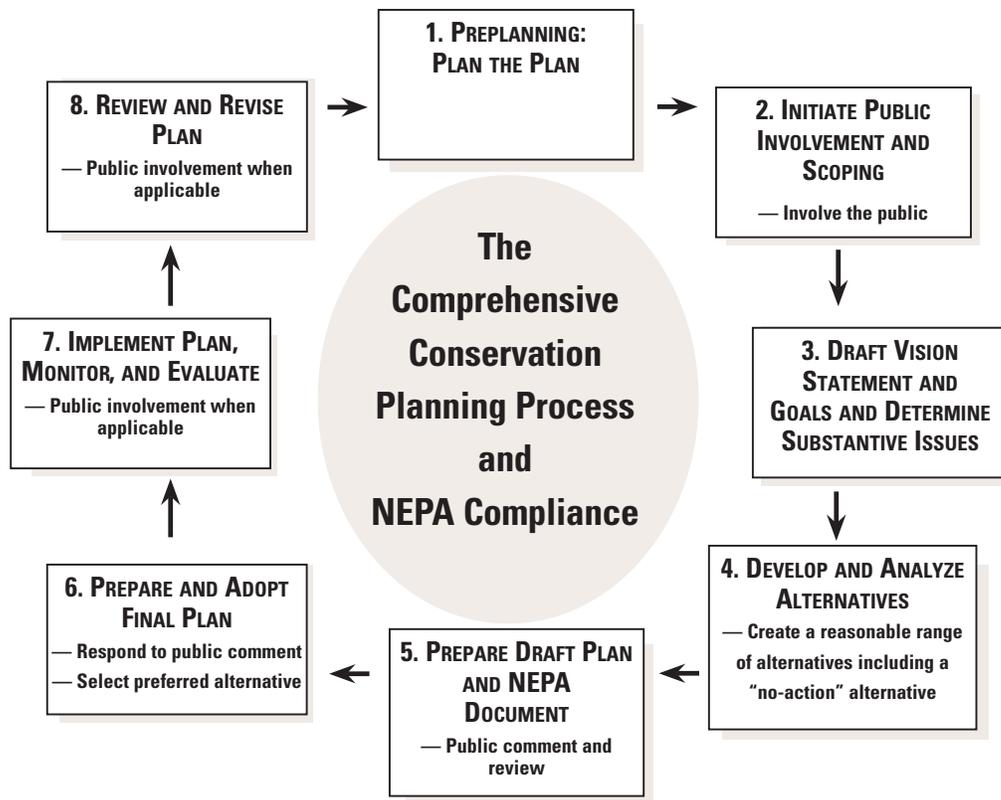


Figure 3. Platte-Kansas Rivers ecosystem.



**Figure 4. The planning process.**

of the refuge and the surrounding areas. Chapter 4 summarizes this information.

The draft CCP (chapter 6) outlines long-term guidance for management decisions; sets forth proposed objectives and strategies to accomplish refuge purposes and meet goals; and identifies the Service's best estimate of future needs.

The draft CCP details program levels that are sometimes substantially above current budget allocations and, as such, are primarily for Service strategic planning purposes.

A notice of intent (NOI) to prepare the draft CCP and EA was published in the "Federal Register" on June 16, 2006. Public scoping began in May 2006 with public meetings in Casper and Laramie, Wyoming.

### **COORDINATION WITH THE PUBLIC**

The Service held two public scoping meetings in May 2006 (see table 1 for details) announced by the local media. During the public meetings, a description of the CCP and NEPA process was provided. Participants were asked to provide suggestions on the scope of issues to be considered in the planning process, and comments were recorded and entered in the planning record. Attendees were encouraged to

ask questions and offer comments; each attendee was given a comment form to submit additional thoughts or questions in writing.

Approximately 51 people attended the public meetings. Attendees included local citizens and members of the Audubon Wyoming, the Wyoming Outdoor Council, and Biodiversity Conservation Alliance.

Written comments were due July 17, 2006. A total of 70 written comments were received throughout the scoping process. Input obtained from meetings and correspondence including email was considered in development of this draft CCP and EA.

A mailing list of more than 148 contacts includes private citizens; local, regional, and state government representatives and legislators; other federal agencies; and interested organizations (appendix C).

In September 2006, the first planning update was sent to everyone on the mailing list. Information was provided on the history of the refuge and the CCP process, along with an invitation to share ideas regarding refuge management with the planning team. Each planning update included a comment form and postage-paid envelope to give the public an opportunity to provide written comments.

**Table 1. Planning process summary for Pathfinder NWR, Wyoming.**

<i>Date</i>	<i>Event</i>	<i>Outcome</i>
January–March 2006	Preplanning.	CCP overview; established planning team; identified purpose of the refuge, history, and establishing authority; developed planning schedule and CCP mailing list.
April 27, 2006	Kickoff meeting.	Toured refuge; conducted internal scoping by developing issues and qualities list for the refuge; identified biological and mapping needs; developed a vision statement for the refuge.
May 8, 2006	News release for public meeting sent to Wyoming media contacts.	Notified public of opportunities for involvement in the CCP process.
May 24, 2006	Public meeting in Casper, WY.	Opportunity for the public to learn about the CCP and offer suggestions on the scope of issues to be considered in the planning process.
May 25, 2006	Public meeting in Laramie, WY.	Opportunity for the public to learn about the CCP and offer suggestions on the scope of issues to be considered in the planning process.
June 16, 2006	NOI (to prepare the CCP) published in the “Federal Register.”	Notified the public of the intention to prepare a CCP and EA for Pathfinder NWR.
August 31, 2006	Goals and alternatives workshop.	Goals developed; alternatives discussed.
September 2006	Planning update distributed to CCP mailing list.	Planning update (describing CCP process and providing opportunity for public suggestions on the scope of issues to be considered in the planning process).
January 25, 2007	Environmental consequences workshop and identification of the proposed action.	Reviewed the anticipated environmental consequences; identified alternative C as the proposed action.
Spring 2008	Internal review of the draft CCP and EA.	Received comments on the draft CCP and EA.
Summer 2008	Release of draft CCP and EA for public review.	Draft CCP and EA presented to the public; received comments on the draft CCP and EA.
Summer 2008	Public meeting in Casper, WY.	Increased public understanding of the draft CCP and EA; received public comments about the draft CCP and EA.

## **STATE COORDINATION**

On January 27, 2006, an invitation letter to participate in the CCP process was sent by the Service’s region 6 director to the director of the Wyoming Game and Fish Department. Two representatives from the WGFD are part of the CCP planning team. Local WGFD wildlife biologists and the refuge staff had established excellent and ongoing working relations before starting the CCP process.

The Wyoming Game and Fish Department is charged with providing “an adequate and flexible system for the control, management, protection,

and regulation of all Wyoming wildlife.” The WGFD maintains 36 Wildlife Habitat Management Areas and 96 Public Access Areas, encompassing 410,000 acres of managed lands for wildlife habitat and public recreation opportunity. These lands contain 121 miles of stream easements and about 21,014 surface acres of lakes and reservoirs for public access (Wyoming Game and Fish Department 2006).

## **TRIBAL COORDINATION**

On October 17, 2006, five Native American tribal governments (Arapaho, Crow, Northern Cheyenne, Oglala Sioux, and Shoshone) were contacted through a letter signed by Service’s region 6 director. With

information about the upcoming CCP, the letter invited tribal recipients to serve on the planning team. Although Native American tribal governments did not express interest in participating on the planning team, the tribal governments remain on the CCP mailing list and will continue to receive CCP correspondence (planning updates, draft CCP and EA, final CCP) and will be given an opportunity to comment on the draft CCP and EA documents.

## ***RESULTS OF SCOPING***

Table 1 summarizes all scoping activities. Comments collected from scoping meetings and correspondence, including comment forms, were used in the development of a final list of issues to be addressed in this draft CCP and EA.

The Service determined which alternatives could best address these issues. The planning process ensures that issues with the greatest affect on the refuge are resolved or given priority over the life of the final CCP. Identified issues, along with a discussion of effects on resources, are summarized in chapter 2.

In addition, the Service considered suggested changes to current refuge management presented by the public and other groups.

## 2 The Refuge



*Northern pintail*

USFWS

The Pathfinder Wildlife Refuge (later renamed the “Pathfinder National Wildlife Refuge”) was established by executive order (EO) in 1909. The refuge’s boundaries have been modified several times since its establishment. The present-day refuge comprises four separate units—Sweetwater Arm, Goose Bay, Deweese Creek, and Sage Creek—totaling 16,806 acres (figure 5).

### 2.1 ESTABLISHMENT, ACQUISITION, AND MANAGEMENT HISTORY

The origins of present-day Pathfinder NWR can be traced to June 17, 1902, when Congress authorized the Bureau of Reclamation to build the Pathfinder Dam and Reservoir in central Wyoming. When dam construction was completed in 1909, the refuge was established on the reservoir as an overlay refuge on Reclamation lands. As such, lands and waters are under the primary jurisdiction of Reclamation, and the refuge purpose is superimposed as a secondary interest in the property. Primary administration is retained by Reclamation, the host agency. Wildlife management must be compatible with those uses for which the primary agency acquired the land.

Below is a summary of the legislation that has shaped the refuge over the years:

- ❑ EO 1032 (February 25, 1909)—established Pathfinder Wildlife Refuge on the Pathfinder Reservoir site “as a preserve and breeding ground for native birds.”
- ❑ EO 3725 (August 18, 1922)—revoked that part of EO 1032 reserving the Pathfinder Reservoir site for use “as a preserve and breeding ground for native birds.”
- ❑ EO 4860 (April 19, 1928)—reestablished the area created by EO 1032 “as a preserve and breeding ground for native birds.”
- ❑ EO 7425 (August 1, 1936)—established the present refuge and designated it “as a refuge and breeding ground for birds and other wildlife.”
- ❑ EO 8296 (November 30, 1939)—changed the refuge name from “Pathfinder Wildlife Refuge” to “Pathfinder National Wildlife Refuge.”

Primary jurisdiction of most of the refuge lands remains under Reclamation’s authority. Reclamation administers lands within the Pathfinder Project boundary for North Platte Project purposes including flood control, irrigation, and hydroelectric power generation. A memorandum of understanding (MOU) specifies the management responsibilities of the Bureau of Sport Fisheries and Wildlife (BSFW),

the Service's predecessor, while preserving the autonomy of Reclamation to manage Pathfinder Dam and Reservoir (see appendix D).

The North Platte Project is a 111-mile irrigation project stretching along the North Platte River Valley from Guernsey, Wyoming, to Bridgeport, Nebraska (U.S. Department of the Interior, Bureau of Reclamation [USBR]). The project provides full-service irrigation for about 226,000 acres and supplemental irrigation service for a combined area of roughly 109,000 acres. The project includes five storage dams, four diversion dams, a pumping plant, and a power plant, as well as about 2,000 miles of canals, laterals, and drains.

Many mountain streams rising in the Rocky Mountains of Colorado and Wyoming feed the North Platte River. Its waters are stored and used for irrigation and power development for the North Platte Project and related projects. These projects' storage structures require close operational coordination, which is further complicated by various agreements and laws governing water rights.

Before reaching the Pathfinder Reservoir, the North Platte River waters pass through the Seminole and Kortez dams, where they are joined by waters from the Sweetwater River. Pathfinder Reservoir holds much of the North Platte Project water, with a storage capacity of 1,016,000 acre-feet. A small amount of water is released during the nonirrigation season to satisfy other water rights, enhance fish and wildlife, and operate power plants downstream, and during the irrigation season, water is released as required.

Pathfinder Dam is located about 3 miles below the North Platte River's junction with the Sweetwater River.

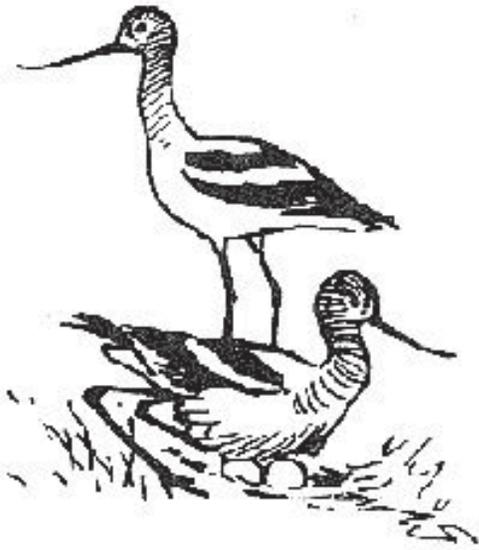
In the 1960s, the BSWF became increasingly concerned with the decline in waterfowl use of the reservoir. This decline was attributed to various ecological changes resulting from Reclamation activities, particularly water manipulation. Recreational activities were also increasing, and the trend was expected to continue. The BSWF concluded that developing and intensively managing only areas that had existing and potential waterfowl attraction would better benefit wildlife than continuing extensive management of the entire area. To this effect, various memorandums of agreement and understanding were signed with Reclamation and other agencies that oversee lands on the Pathfinder Reservoir:

- February 12, 1963—a proposal was made to limit the boundary of Pathfinder NWR to include only the Sweetwater Arm Unit and three small areas (Goose Bay, Deweese Creek, and Sage Creek units) designated for waterfowl production on the main body of the reservoir.

- May 20, 1963—the proposal was approved in a memorandum to the BSWF's regional director of the division of technical services.
- May 19, 1964—the proposal was carried out through partial revocation of EO 7425, which deleted 31,545 acres from the refuge.
- May 26, 1964—an MOU was signed between Reclamation and the BSWF (contract #14-06-700-4605), allowing the latter to manage land and water areas, including grazing, recreation, and related uses, for the conservation of wildlife resources (appendix D).
- September 10, 1964—the BSWF submitted an application to the BLM for the withdrawal of lands from the BLM to add 1,971.97 acres to Pathfinder NWR. The withdrawal of 1,574.84 acres of land was completed November 4, 1964, and serial number Wyoming 0311814 was assigned.
- May 7, 1965—Public Land Order 3657 placed 2,554 acres of public land under the primary responsibility of the BSWF through a realignment of the refuge boundary.
- November 16, 1965—an MOA (contract #14-06-700-4737) between Reclamation, the BLM, and the BSWF transferred administration of the grazing program to the BLM.
- May 19, 1966—an MOU (contract #14-06-700-4749) between Reclamation, the Natrona County Commissioners, and the BSWF was established concerning the administration and development of land and facilities at Alcova, Pathfinder, and Grays Reef reservoirs for recreational purposes.
- May 19, 1991—an MOU (contract # 1-AG-60-01340) between Reclamation and Natrona County replaced the MOU dated May 19, 1966. The area at Pathfinder NWR covered by this MOU is the Bishops Point Recreation Area in the Sweetwater Arm Unit. These recreational lands are currently within the refuge's boundary and therefore are subject to the Service's appropriate use and compatibility policies.

## 2.2 SPECIAL VALUES OF THE REFUGE

Early in the planning process, the planning team and public identified the outstanding qualities of Pathfinder NWR, the characteristics and features that make it special to people, valuable for wildlife, and worthy of refuge status. Identifying these values at the outset helps ensure they will be preserved, protected, and enhanced throughout the planning process. Refuge qualities can range from providing a unique biological habitat for wildlife to offering visitors a quiet place to observe a variety of birds and enjoy nature. The following summarizes the qualities that make portions of the refuge unique and valued.



Avocets

Bob Himes/USFWS

### Wildlife and Habitat

- ❑ Forty species of waterfowl, wading birds, and shorebirds use the refuge for migration and nesting including mountain plover, phalarope, avocet, redhead duck, and scaup.
- ❑ The Steamboat Lake area of the Sweetwater Arm Unit provides important feeding and nesting habitat for waterfowl and other migratory bird species.
- ❑ The refuge contains a large body of water in a semiarid environment that provides resting habitat for migratory birds.
- ❑ Uplands sagebrush habitat on the refuge supports sage-grouse, antelope, and other sage-obligate species.
- ❑ The Sweetwater Arm Unit contains at least one sage-grouse lek, and likely early brood-rearing habitat.
- ❑ The refuge is designated an “Important Bird Area” (Audubon Wyoming).
- ❑ A state-listed rare plant, slender spiderflower, is present in the Sweetwater Arm Unit of the refuge.
- ❑ The potential exists to form partnerships with other agencies and with private landowners in the area who are interested in maintaining and improving the refuge’s natural resources.
- ❑ Currently, there is little pressure for development near the refuge.

### Public Use

- ❑ The refuge provides a variety of public recreation including the six priority public uses of the Refuge System (hunting, fishing, wildlife observation and photography, and environmental education and interpretation).

- ❑ The Steamboat Lake area of the refuge provides excellent wildlife observation and interpretation opportunities.
- ❑ The Oregon Trail and Independence Rock offer opportunities to showcase the refuge to the public.
- ❑ The refuge offers visitors open space and the opportunity to experience solitude in an aesthetically pleasing environment.

## 2.3 PURPOSE

Every refuge is established for a purpose. This purpose is the foundation upon which to build all refuge programs, from biology and public use to maintenance and facilities. No action that the Service or public takes may conflict with this refuge purpose. The refuge purpose is found in the legislative acts or administrative orders, which are the authorities to either transfer or acquire a piece of land for a refuge. Over time an individual refuge may contain lands that have been acquired under a variety of transfer and acquisition authorities, giving it more than one purpose. The goals, objectives, and strategies identified in the CCP are intended to support the individual purpose for which the refuge was established.

As stated in EO 7425, the purpose of Pathfinder NWR is “as a refuge and breeding ground for birds and other wildlife.”

## 2.4 VISION

At the beginning of the planning process, the Service developed a vision for Pathfinder NWR. A vision describes what will be different in the future as a result of the CCP and is the essence of what the Service is trying to accomplish at the refuge. The vision is a future-oriented statement designed to be achieved through refuge management by the end of the 15-year CCP planning horizon. The vision for Pathfinder NWR is the following.

*Pathfinder Reservoir and surrounding public lands supply life-cycle needs for a multitude of wildlife adapted to this semiarid region of central Wyoming. The wetland complexes, upland sagebrush habitats, and open waters of the reservoir provide feeding, breeding, staging, resting, and nesting areas for migratory birds and resident wildlife. Management decisions will be directed toward maintaining or improving wildlife habitat values. Appropriate public use opportunities will be identified, and provided where possible.*

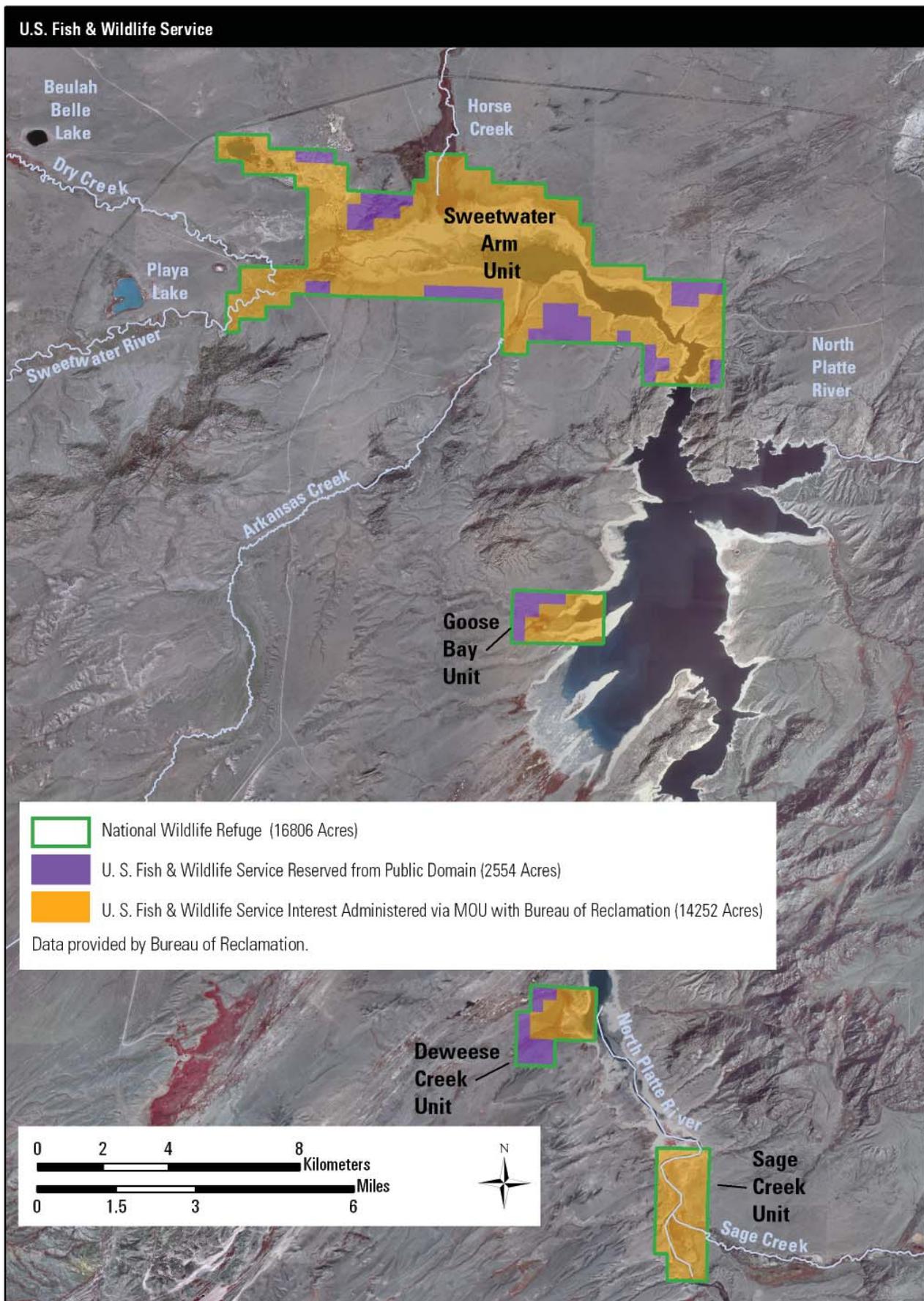


Figure 5. Base map of Pathfinder NWR, Wyoming.

## 2.5 GOALS

The Service also developed a set of goals for the refuge based on the Improvement Act, the refuge purpose, and information developed during project planning. The goals direct work toward achieving the vision and purpose of the refuge and outline approaches for managing refuge resources. The following five goals were identified for Pathfinder NWR.

### Natural Resources Goal

Conserve the ecological diversity of uplands and wetlands to support healthy populations of native wildlife, with an emphasis on migratory birds.

### Visitor Services Goal

Provide wildlife-dependent recreational opportunities to a diverse audience when the administration of these programs does not adversely affect habitat management objectives.

### Partnerships Goal

Work with partners to support healthy populations of native wildlife and to increase the understanding of wildlife needs as well as the benefits wildlife offer to local communities.

### Cultural Resources Goal

Identify and evaluate the cultural resources on the refuge and protect those that are determined to be significant.

### Administrative Goal

Obtain administrative capabilities that will result in efficient strategies to manage the landscape to achieve habitat and public management goals.

## 2.6 PLANNING ISSUES

Several key issues were identified following the analysis of comments collected from refuge staff and the public, as well as a review of the requirements of the Improvement Act and the NEPA. Substantive comments (those that could be addressed within the authority and management capabilities of the Service) were considered during the formulation of the alternatives for future management. These key issues for Pathfinder NWR are summarized below.

### Refuge Management

Pathfinder NWR is part of the Arapaho NWR Complex. Refuge staff are headquartered near Walden, Colorado, approximately a four-hour drive from the refuge. The complex's small staff size (four full-time employees), limited resources, and remote headquarters create management challenges for the refuge, including a lack of day-to-day oversight and minimal opportunities for law enforcement. Degrading infrastructure (specifically, roads, fences,

and signs) and litter occur on the refuge due to lack of active management.

Management of Pathfinder Reservoir and refuge lands by multiple agencies creates additional management challenges. The Service currently has memorandums of agreement and understanding with a number of agencies in the Casper region including Reclamation, BLM, WGFD, and Natrona County. Reclamation has a withdrawal on Pathfinder Reservoir project lands to support project purposes (i.e., flood control, irrigation, and hydroelectric power generation). The Service has a withdrawal on refuge lands for wildlife management purposes. The roles and responsibilities of each agency should be clearly defined, evaluated, and simplified where possible during the CCP planning process.

### Refuge Uses

Refuge uses (grazing and recreation) need to be evaluated to ensure existing and proposed uses are compatible with the purpose of the refuge and mission of the Refuge System. Refuge uses have not been actively evaluated over time due to minimal staff presence. Through the development of this CCP, refuge uses and management activities will be evaluated to ensure the best, most informed decisions are made for proper management of refuge lands. For a use to be deemed compatible, appropriate staff and resources must be available to manage the use.

### Water Resources

Water and water availability are vital in semiarid regions. The Service does not own water rights for the refuge, which can result in poor wildlife habitat for trust species.

### Water Level Fluctuation

During the past 20 years the average fluctuation of the reservoir water level was 20 feet per year with a range of 8–40 feet, resulting in a lack of shoreline vegetation and food source for migratory birds and nesting cover for waterfowl. The Bureau of Reclamation is responsible for managing reservoir water levels.

### Separated Land Parcels

The refuge consists of four separate units. Separated land parcels are generally more difficult to access and manage than contiguous parcels of land, and generally of less value to wildlife.

### Invasive Species

Invasive species are a threat to quality habitat. If not contained early, they can also drain resources. Tamarisk and Canada thistle have been identified on the refuge. An increase in monitoring, management, and control of these and other invasive species is needed.

## **Research and Science**

The Service needs to obtain good baseline data for the refuge. Monitoring programs need to be implemented for species that use the refuge. Audubon Wyoming could be a partner in gathering quality research data on the refuge.

## **Partnerships**

Cooperation with other agencies is needed to address issues of common concern. Opportunities for the public to assist in the protection and management of the refuge should be identified and provided. Local conservation groups could help raise funds for the refuge either directly or by lobbying state and federal representatives.

## **Staffing**

The refuge should be managed by Service staff stationed in Wyoming. This issue was raised frequently in public meetings. The managing staff is currently headquartered at Arapaho NWR in Walden, Colorado, a four-hour drive from the refuge. The remote location of staff prevents active, consistent oversight of the refuge.