

Draft Comprehensive Conservation Plan and Environmental Assessment

*Bamforth National Wildlife Refuge
Hutton Lake National Wildlife Refuge
Mortenson Lake National Wildlife Refuge*

August 2007

Prepared by

U.S. Fish and Wildlife Service

Arapaho National Wildlife Refuge Complex
953 Jackson County Road #32
Walden, CO 80448
970/723 8202

and

Region 6, Mountain–Prairie Region
Division of Refuge Planning
134 Union Boulevard, Suite 300
Lakewood, CO 80228
303/236 4305

Contents

<i>Summary</i>	S-1
1 Introduction	5
1.1 Purpose and Need for Plan.....	5
1.2 The U.S. Fish and Wildlife Service and the National Wildlife Refuge System	5
1.3 National and Regional Mandates	8
1.4 Refuge Contributions to the National and Regional Plans	8
1.5 Ecosystem Descriptions and Threats.....	10
1.6 Planning Process.....	10
2 The Refuges	15
2.1 Establishment, Acquisition, and Management History.....	15
2.2 Special Values of the Refuges	15
2.3 Purpose.....	16
2.4 Vision	16
2.5 Goals.....	16
2.6 Planning Issues	18
3 Alternatives	23
3.1 Alternative Development.....	23
3.2 Alternatives Developed but Eliminated from Detailed Study	23
3.3 Elements Common to All Alternatives	24
3.4 Description of Alternatives.....	24
3.5 Comparison of Alternatives and Environmental Consequences.....	28
4 Affected Environment	37
4.1 Physical Environment.....	37
4.2 Biological Resources.....	41
4.3 Cultural Resources	55
4.4 Special Management Areas	55
4.5 Visitor Services	56
4.6 Partnerships	59
4.7 Socioeconomic Environment	59
4.8 Refuge Operations	62
5 Environmental Consequences	63
5.1 Effects Common to All Alternatives	63
5.2 Description of Consequences by Alternative	64
5.3 Cumulative Impacts	68
6 Implementation of the Proposed Action (Draft CCP)	69
6.1 Identification of the Proposed Action (Draft CCP)	69
6.2 Summary of the Proposed Action	70
6.3 Draft CCP	71
6.4 Staffing and Funding.....	79
6.5 Step-down Management Plans	79
<i>Glossary</i>	83
Appendix A—Key Legislation and Policies.....	89
Appendix B—List of Preparers.....	93
Appendix C—Public Involvement.....	95
Appendix D—Divestiture Analysis	97
Appendix E—Fire Management Program	99



Appendix F—List of Plant Species.....103
Appendix G—List of Potentially Occurring Bird Species107
Appendix H—List of Potentially Occurring Amphibian and Reptile Species111
Appendix I—List of Potentially Occurring Mammal Species.....113
Appendix J—Draft Compatibility Determination for Wildlife Observation
and Wildlife Photography115
Appendix K—Draft Compatibility Determination for Environmental Education
and Interpretation117
Appendix L—Draft Compatibility Determination for Grazing119
Bibliography.....121

Figures

1. Vicinity map for Laramie Plains refuges, Wyoming.....	6
2. The Laramie Plains refuges are located in the Wyoming Basin, physiographic area 86.....	9
3. Platte–Kansas Rivers ecosystem.....	11
4. The planning process.....	12
5. Base map of Bamforth NWR, Wyoming.....	17
6. Base map of Hutton Lake NWR, Wyoming.....	19
7. Base map of Mortenson Lake NWR, Wyoming.....	20
8. Habitats at Bamforth NWR, Wyoming.....	42
9. Habitats at Hutton Lake NWR, Wyoming.....	43
10. Habitats at Mortenson Lake NWR, Wyoming.....	44
11. Infrastructure and public use areas at Hutton Lake NWR, Wyoming.....	47
12. Infrastructure and public use areas at Bamforth NWR, Wyoming.....	57
13. Infrastructure and public use areas at Mortenson Lake NWR, Wyoming.....	58
14. Laramie Plains refuges in relation to nearby centers of economic influence.....	61
15. Wyoming and study area population.....	61
16. Study area age composition.....	61
17. Study area employment distribution, 2006.....	62
18. The adaptive management process.....	81

Tables

1. Planning process summary for the Laramie Plains refuges, Wyoming.....	13
2. Comparison of management alternatives and environmental consequences for the Laramie Plains refuges, Wyoming.....	29
3. Water rights for Laramie Plains refuges, Wyoming.....	39
4. Documented occurrences of vertebrate species of concern within Laramie Plains refuges, Wyoming.....	52
5. Current and proposed staff for the Arapaho NWR Complex, including Arapaho NWR, Colorado, and Bamforth NWR, Hutton Lake NWR, Mortenson Lake NWR, and Pathfinder NWR, Wyoming....	80
6. Step-down management plans for the Laramie Plains NWRs, Wyoming.....	81

Acronyms and Abbreviations

Administration Act	National Wildlife Refuge System Administration Act of 1966
ABC	American Bird Conservancy
BBS	breeding bird survey
BCR	Bird Conservation Regions
CCC	Civilian Conservation Corps
CCP	comprehensive conservation plan
CFR	Code of Federal Regulations
cfs	cubic feet per second
CRP	conservation reserve program
CWCS	comprehensive wildlife conservation strategy
DNC	dense nesting cover
DU	Ducks Unlimited
EA	environmental assessment
EO	executive order
EPA	U.S. Environmental Protection Agency
FHWA	Federal Highway Administration
FMP	fire management plan
FONSI	finding of no significant impact
FTE	full-time equivalent
GIS	geographic information system
GPS	global positioning system
GS	general schedule (employment)
HAPET	Habitat and Population Evaluation Team
HMP	habitat management plan
IMPROVE	interagency monitoring of protected visual environments
Improvement Act	National Wildlife Refuge System Improvement Act of 1997
LWCF	Land and Water Conservation Fund
LPP	land protection plan
NABCI	North American Bird Conservation Initiative
NAWCA	North American Wetlands Conservation Act
NAWMP	North American Waterfowl Management Plan
NEPA	National Environmental Policy Act
NOI	notice of intent

NRCS	Natural Resources Conservation Service
NWI	national wetland inventory
NWR	national wildlife refuge
NWRS	National Wildlife Refuge System
PFW	Partners for Fish and Wildlife
PL	public law
PPJV	Prairie Pothole Joint Venture
PPR	prairie pothole region
Refuge System	National Wildlife Refuge System
region 6	Mountain–Prairie Region of the U.S. Fish and Wildlife Service
RONs	Refuge Operating Needs System
SAMMS	Service Asset Maintenance Management System
Service	U.S. Fish and Wildlife Service
SUP	special use permit
SWG	state wildlife grant
TMDL	total maximum daily load
TNC	The Nature Conservancy
UGHEP	upland gamebird habitat enhancement program
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WG	wage grade (employment)
WHIP	wildlife habitat incentive program
WPA	waterfowl production area
WMD	wetland management district
WUI	wildland–urban interface

Summary

This is a summary of the comprehensive conservation plan (CCP) for the Laramie Plains refuges in Albany County, Wyoming. The Laramie Plains refuges include Bamforth National Wildlife Refuge (NWR), Hutton Lake NWR, and Mortenson Lake NWR. This plan, approved in 2007, will guide management of the refuges for the next 15 years.

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

THE REFUGES

The Laramie Plains refuges are managed by Service staff headquartered at the Arapaho NWR near Walden, Colorado. All three refuges are located within 15 miles of the town of Laramie, Wyoming.

Laramie is positioned in a high plains basin ecosystem known as the Laramie Basin. The shallow depressions of the basin, within the relatively flat topography of the region, support wetland complexes that are unique to the area. These wetland complexes provide resting, nesting, and breeding areas for migratory birds in the semiarid environment.

In the early 1930s, J. Clark Salyer III was charged with identifying areas to protect as national wildlife refuges for migratory birds. He surveyed the area around Laramie and selected two locations as national wildlife refuges for migratory birds. Bamforth NWR and Hutton Lake NWR were established by Executive Orders in 1932, within one day of each other.

Bamforth NWR comprises three separate parcels with private or state lands between them. The 1,166-acre refuge contains Bamforth Lake, but most of the lake falls outside the refuge boundary. No public use is allowed on Bamforth NWR.

Hutton Lake NWR consists of 1,928 acres and supports approximately 2,000 visits over the course of a year, mostly from March through October. Wildlife viewing opportunities and refuge access are limited from November through February due to frozen ponds and cold, snowy weather.

Mortenson Lake NWR was established in 1993 to protect the Wyoming toad's last known population.

The Wyoming toad was listed as an endangered species in 1984. Physical features of 1,968-acre refuge include Mortenson Lake, Soda Lake, and Gibbs Pond. Habitat types include open water, wetlands, wet meadow, grassland, sagebrush, and greasewood communities. No public use is currently allowed on the refuge to prevent potential adverse impact on the Wyoming toad.

THE PLANNING PROCESS

The CCP process consisted of a series of steps including environmental analysis. Public and partner involvement were encouraged and valued throughout the process. Management alternatives were developed to meet the purposes, vision, and goals of the refuges. Implementation of this CCP will be monitored throughout its 15-year effective period.



Refuge habitats include wet meadows and grasslands.

ISSUES

Public scoping for the Laramie Plains refuges initiated in 2006, along with refuge information, identified 10 major areas of concern regarding management of the refuges.

Refuge Uses

Refuge uses (grazing, recreation, transmission lines) need to be evaluated to ensure existing and proposed uses are compatible with the purpose of the refuges and mission of the Refuge System. Over time, with minimal staff presence, refuge uses have not been actively evaluated. 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.

(Applies to all three Laramie Plains refuges.)

Water Resources

Water and water availability are vital in semiarid regions. The limited water rights for these refuges can result in dry spring conditions and poor wildlife habitat for trust species. Acquiring additional water rights would enable the Service to consistently provide high-quality spring migration and nesting habitat for trust species. The Service needs to research the availability and feasibility of obtaining additional water rights for the refuges.

(Applies to all three Laramie Plains refuges.)

Invasive Species

Invasive species are a threat to quality habitat. If not contained early, they can also drain resources. Though the refuges do not have significant invasive species issues, vigilance is required. Tamarisk has been identified and managed at Hutton Lake NWR, but an increase in monitoring, management, and control of it and other invasive species is needed.

(Applies to all three Laramie Plains refuges.)

Research and Science

The Service needs to obtain good baseline biological information for the refuges. Monitoring programs need to be implemented for species that use the refuges. The University of Wyoming, located within 15 miles of the refuges, could be a partner in gathering quality research data on the refuges.

(Applies to all three Laramie Plains refuges.)

Land Protection

Areas of concern center on the small size of the individual refuges and a lack of buffer zones. Each refuge is less than 2,000 acres in size, and the refuges' proximity to Laramie and urban growth in

the area pose a potential threat. (Mortenson Lake NWR may already be affected by septic systems from a home site overlooking the lake.) Refuge advocates want to increase protections through conservation easements or expansions through willing seller acquisitions to ensure the refuges are large enough to preserve wildlife qualities.

(Applies to all three Laramie Plains refuges.)

Partnerships

Cooperation with other agencies is needed to address issues of common concern. Opportunities for the public to assist in protection and management of the refuges should be identified and provided.

(Applies to all three Laramie Plains refuges.)

Staffing

The refuges should be actively managed by Service staff stationed in Wyoming. This issue was raised frequently in public meetings. The managing staff is headquartered at Arapaho NWR in Walden, Colorado, an hour's drive south of Laramie.

The remote location and the small number of staff assigned to Arapaho NWR prevent active, consistent oversight of the Laramie Plains refuges.

(Applies to all three Laramie Plains refuges.)

Lack of Information

Bamforth NWR has not been actively managed since its establishment in 1932. The refuge is not properly posted, fenced, or signed to indicate its status as a national wildlife refuge. The planning team struggled with a lack of information regarding the refuge's wildlife and habitat resources. The planning team discussed whether Bamforth NWR should maintain its national wildlife refuge status. The Service's region 6 divestiture model was used to evaluate the refuge. The evaluation indicated the refuge should remain in the Refuge System, mainly due to insufficient information. The Service needs to obtain a good understanding of the refuge resources before advocating divestiture or promoting public use. With the possibility of recommending divestiture of the refuge in the future, it would not be prudent to fund the development of the infrastructure needed to provide public use opportunities at this time. This plan strives to identify the resources and potential of the refuge to determine its appropriate role in the Refuge System.

(Applies only to Bamforth NWR.)

Public Use

The public would like Hutton Lake NWR to provide wildlife-dependent recreation opportunities when compatible with the purpose of the refuge and mission of the Refuge System. The low-key, quiet, undeveloped nature of the refuge should be maintained. Consideration should be given to

nonconsumptive public uses (wildlife observation, wildlife photography, environmental education, interpretation), as other nearby public lands provide for consumptive uses. A visitor services management plan needs to be developed to address issues such as access, circulation, and signage. Public awareness of the benefits of protecting breeding and nesting areas for birds should be raised. *(Applies only to Hutton Lake NWR.)*

Endangered Species

Mortenson Lake NWR was established for the endangered Wyoming toad. Although the refuge staff participates on the Wyoming Toad Recovery Team, not having a staff member specifically assigned to the refuges has hindered management decisions and active, planned oversight of these lands for the Wyoming toad. *(Applies only to Mortenson Lake NWR.)*

THE FUTURE OF THE REFUGES

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

The Vision of the Refuges

The wetland complexes and uplands of the Laramie Plains refuges are important resource components of this semiarid region that provide key habitat for the Wyoming toad, migratory birds, and resident wildlife.

The refuges will be evaluated to direct management decisions to provide natural and enhanced habitat, thereby maximizing the unique potential of each refuge. Wildlife-dependent recreation opportunities will be evaluated for each refuge to determine potential, appropriate public use opportunities.

Goals

The following goals were developed to meet the vision of the Laramie Plains refuges.

Research and Science Goal

Conduct natural resource management using sound science and applied research to advance the understanding of refuge resources and natural resource function. *(Applies to all three Laramie Plains refuges.)*

Partnerships Goal

Work with partners to determine the wildlife and habitat resources on the refuges, to maximize

wildlife habitat protection, and to increase understanding of wildlife needs, as well as the benefits wildlife offer to individuals and communities, on and off the refuges. *(Applies to all three Laramie Plains refuges.)*

Cultural Resources Goal

Identify and protect cultural resources on the refuges. *(Applies to all three Laramie Plains refuges.)*

Refuge Operations Goal

Secure and demonstrate the effective use of funding, staffing, and partnerships for the benefit of all resources in support of the refuges and the Refuge System. *(Applies to all three Laramie Plains refuges.)*

Natural Resources Goal

Conduct baseline surveys to identify refuge resources and the role these resources serve in the Laramie Basin ecosystem and the Refuge System. *(Applies only to Bamforth NWR.)*

Wetlands Goal

Manage refuge impoundments and other wetlands to create diverse habitat for wetland-dependent wildlife. *(Applies only to Hutton Lake NWR and Mortenson Lake NWR.)*

Uplands Goal

Evaluate and manage shrub and/or grass dominated uplands for benefits to migratory birds (willet, horned lark), white-tailed prairie dogs, pronghorn, and other wildlife. *(Applies only to Hutton Lake NWR and Mortenson Lake NWR.)*

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. *(Applies only to Hutton Lake NWR.)*

Wyoming Toad Goal

In conjunction with the Wyoming Toad Recovery Team, manage refuge lands around Mortenson Lake and other areas on the refuge as necessary to protect, create, and manage habitat suitable for Wyoming toad recovery from endangered status. *(Applies only to Mortenson Lake NWR.)*

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 Laramie Plains refuges. 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 research and monitoring of refuge habitats and wildlife species would occur on the refuges.

Outreach, partnerships, and public uses (wildlife observation, wildlife photography, environmental education, and interpretation) would continue at present minimal levels.

Alternative B—Enhanced Refuge Management (*Proposed Action*)

Alternative B is the Service's proposed action and basis for the draft comprehensive conservation plan.

Management activities under alternative B would be increased. Upland habitats would be evaluated and managed for the benefit of migratory bird

species. Refuge staff would research the availability of additional water rights for the refuges, and consider obtaining additional water rights, where appropriate, for the benefit of wetland-dependent wildlife. Monitoring and management of invasive species on the refuges would be increased. Wildlife-dependent recreation opportunities would be provided and enhanced at Hutton Lake NWR where compatible with refuge purposes.

With additional staffing, the Service would collect baseline biological information for wildlife and habitats. Efforts would be increased in the operations and maintenance of natural resources on the refuges and to maintain and develop partnerships that promote wildlife and habitat research and management.

Alternative C—Partnerships

Under Alternative C, refuge staff would rely on partnerships to achieve refuge goals and objectives. Refuge management activities would be increased and enhanced through the use of partnerships. Refuge staff would strive to accomplish refuge work through partnerships with others. An emphasis on adaptive management, including monitoring the effects of habitat management practices and using research results to direct ongoing management, would be a priority.

