

Environmental Assessment

Emergency Use of Prescriptive Grazing at the Benton Lake National Wildlife Refuge

Cascade County, Montana

July 2012

Prepared by

U.S. Fish and Wildlife Service
Region 6, Mountain–Prairie Region
Division of Refuge Planning
134 Union Boulevard, Suite 300
Lakewood, Colorado 80228

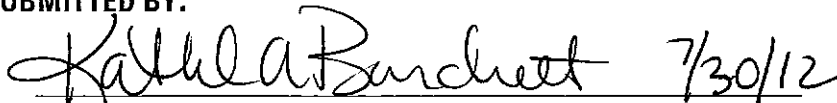
Benton Lake National Wildlife Refuge Complex
922 Bootlegger Trail
Great Falls, Montana 59404

Using local cooperators to accomplish the work is a cost-effective method to accomplish the habitat objectives. The long-term benefits of habitat restoration and management far outweigh the short-term effects caused by cooperative farming, haying, and grazing.

Mandatory 10-year Reevaluation Date: 2022

SIGNATURES

SUBMITTED BY:

 7/30/12

Kathleen A. Burchett, Project Leader Date
Benton Lake National Wildlife Refuge Complex
Great Falls, Montana

REVIEWED BY:

Dean Rundle, Refuge Supervisor Date
U.S. Fish and Wildlife Service, Region 6
National Wildlife Refuge System
Lakewood, Colorado

APPROVED BY:

Matt Hogan, Assistant Regional Director Date
U.S. Fish and Wildlife Service, Region 6
National Wildlife Refuge System
Lakewood, Colorado

designation as critical habitat. Conferencing with ESFO required.

Signature Kathleen Burchett Date 7/30/12
[Supervisor at originating station]

Reviewing Ecological Services Office Evaluation (check all that apply):

A. Concurrence _____

Nonconcurrence ✓

Explanation for nonconcurrence:

B. Formal consultation required
List species or critical habitat unit _____

C. Effects are addressed in the Programmatic Consultation on R6's
Recovery Program – no further consultation needed ✓

D. Conference required
List species or critical habitat unit _____

Name of Reviewing ES Office _____

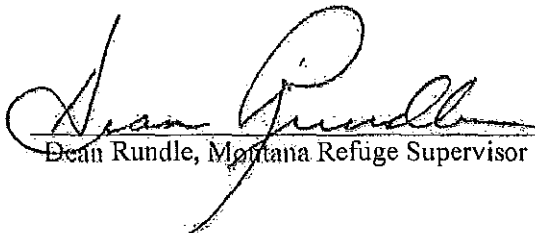
Signature _____ Date _____

CONSERVATION STRATEGY & GUIDELINES
FOR SPRAGUE'S PIPIT ON U.S. FISH & WILDLIFE SERVICE LANDS
IN REGION 6

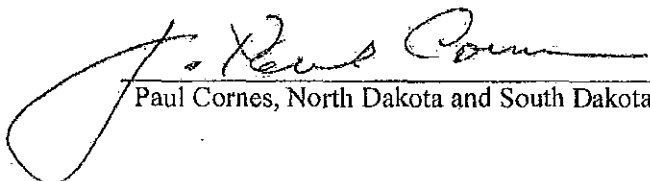
With the implementation of this plan, Region 6, Refuges and Wildlife Division (RW) has determined that the actions described

May affect but Not Likely to Jeopardize the candidate species Sprague's pipit (by policy considered proposed). There currently is no proposed critical habitat for this species. RW requests an informal conference with Ecological Services on this determination.

Submitted:


Dean Rundle, Montana Refuge Supervisor

6/20/11
Date


Paul Cornes, North Dakota and South Dakota Refuge Supervisor

6-20-11
Date

**MANAGEMENT STRATEGY & GUIDELINES
FOR SPRAGUE'S PIPIT ON U.S. FISH & WILDLIFE SERVICE LANDS
IN REGION 6**

By implementation of this plan, Region 6, Refuges and Wildlife Division (RW) has determined that the described land management actions

May affect but are Not Likely to Jeopardize the candidate species Sprague's pipit (by policy considered proposed). There is currently no proposed critical habitat for this species.

Montana



Project Leader, Benton Lake National Wildlife Refuge & Wetland Management District

8/31/11
Date




Project Leader, Bowdoin National Wildlife Refuge & Wetland Management District

08/24/2011
Date



Project Leader, North East Montana Wetland Management District & Medicine Lake National Wildlife Refuge

09/02/2011
Date



Project Leader, Charles M. Russell National Wildlife Refuge Complex

2 Sep 2011
Date

U.S. FISH AND WILDLIFE SERVICE
Region 6
National Wildlife Refuge System

ENVIRONMENTAL ACTION STATEMENT

Within the spirit and intent of the Council on Environmental Quality's regulations for implementing the National Environmental Policy Act (NEPA), and other statutes, orders, and policies that protect fish and wildlife resources, I have established the following administrative record for emergency use of prescriptive grazing at the Benton Lake National Wildlife Refuge:

_____ is a categorical exclusion as provided by 516 DM 2, Appendix I and 516 DM 6, Appendix 1. No further NEPA documentation will therefore be made.

_____ is found not to have significant environmental effects as determined by the attached environmental assessment and finding of no significant impact.

_____ is found to have significant effects and, therefore, further consideration of this action will require a notice of intent to be published in the Federal Register announcing the decision to prepare an environmental impact statement.

_____ is not approved because of unacceptable environmental damage, or violation of U.S. Fish and Wildlife Service mandates, policy, regulations, or procedures.

_____ is an emergency action within the context of 40 CFR 1506.11. Only those actions necessary to control the immediate impacts of the emergency will be taken. Other related actions remain subject to NEPA review.

Other supporting documents:

*Environmental Assessment: Emergency Use of Prescriptive Grazing at the Benton Lake National Wildlife Refuge
Cascade County, Montana*

Signature Approval:

Assistant Regional Director
National Wildlife Refuge System, Region 6

Date

Regional Director, Region 6
U.S. Fish and Wildlife Service

Date

U.S. FISH AND WILDLIFE SERVICE
National Wildlife Refuge System
Region 6

FINDING OF NO SIGNIFICANT IMPACT

Emergency Use of Prescriptive Grazing at the Benton Lake National Wildlife Refuge
Cascade County, Montana

BACKGROUND

The United States is currently experiencing historic drought conditions in 2012. This drought has also created conditions for extreme fire behavior and rapid growth of wildfires across the West. On June 25, 2012 a lightning strike ignited the Ash Creek fire which burned 249,562 acres east of Lame Deer, Montana. Additional fires started on July 3, 2012 consuming an additional 75,501 acres in this area. These fires burned lands owned by the Northern Cheyenne Agency, U.S. Forest Service, Bureau of Land Management, State of Montana, and private citizens. The majority of these lands are used at some level to support commercial cattle operations. Wildfire in extreme conditions consumes nearly all fine fuels and vegetation used as forage by livestock.

On July 13, 2012, the Governor of Montana sent a letter to the U.S. Secretary of Agriculture requesting natural disaster declarations requesting federal assistance to cope with “a severe loss of livestock and crop production along with many physical and economic losses occurring throughout all counties, the counties adjacent to them and the [Northern Cheyenne Indian Reservation].” Also on July 13, 2012, the Service was contacted regarding grazing opportunities on national wildlife refuges as a means to temporarily relocate livestock and reduce financial impacts to operators. The Service may only consider this request within the context of all applicable laws and regulations governing management of national wildlife refuges.

An environmental assessment evaluated two alternatives related to the emergency use of prescriptive grazing on the Benton Lake National Wildlife Refuge. Alternative A—the no-action alternative—would disallow such use; and Alternative B —would allow one or more operators to graze approximately 1,500 acres of the refuge on two management units by issuance of special use permit.

Alternative B, the preferred alternative, was selected for implementation because it provides temporary relief to livestock operators impacted by the drought and wildfire while also providing the opportunity for the Service to begin an effective habitat management method to reduce invasive species and improve habitat conditions for wildlife on the Benton Lake Refuge. Implementing the preferred alternative will directly support and contribute to long-term habitat restoration goals and objectives specified in draft refuge comprehensive conservation plan.

The environmental assessment, which took a hard look at the environmental impacts associated with a temporary prescriptive grazing program provides a unique opportunity to test many assumptions included in the draft comprehensive conservation plan that is currently under final revision.

ANTICIPATED ENVIRONMENTAL EFFECTS

Under the preferred alternative, the Service would have the ability to for prescriptive graze approximately 1,500 acres of the Benton Lake Refuge. The following is a summary of anticipated environmental effects from the implementation of the preferred alternative:

1. Some trampling of areas by livestock may occur. Vegetation will recover quickly after livestock are removed. Grazing, as well as fire, is known to increase the nutrient cycling of nitrogen and phosphorous.
2. The consequences of the proposed management on cultural resources are the same for both alternatives. Prior surveys of the area indicate there are few cultural resources in the area and there will be little or no impact to these resources.
3. Air quality for the Benton Lake Refuge is considered good and the impact of a small temporary livestock operation to air quality is considered insignificant.

4. Social and economic impacts will generally be positive. By allowing emergency access, implementation will avoid significant economic losses in the regional area.

CONTEXT AND INTENSITY

In determining whether this project is a major action significantly¹ affecting the quality of the human environment, both the context and intensity of the action (40 CFR § 1508.27, 40 CFR § 1508.14) as required by NEPA were considered. In terms of context, the preferred alternative is temporary in nature and will occur on approximately 1,500 acres or 12 percent of the refuge. In terms of intensity, implementing the preferred alternative will apply to a small amount of wetland and even smaller amount of grassland habitat available at the refuge.

PUBLIC PARTICIPATION

Prescriptive grazing of the Benton Lake National Wildlife Refuge is contemplated and fully described in the recent draft Comprehensive Conservation Plan (CCP). Public participation included multiple public meetings and a 60-day comment period. No comments or concerns regarding any potential impacts of a prescriptive grazing program were received from the public on this aspect of the draft CCP.

FINDING OF NO SIGNIFICANT IMPACT

On the basis of information contained in the environmental assessment, and other information available to me, my determination is that the selected alternative (Alternative B), which allows the Refuge Manager to allow emergency use of prescriptive grazing on approximately 1,500 acres of the Benton Lake National Wildlife Refuge, is not a federal action that would significantly affect the quality of the human environment within the meaning of Section 102(2)(C) of the National Environmental Policy Act of 1969. Primary to this decision is: 1) the need for additional livestock forage as relief to drought and wildfire impacts is important to local and regional economics; 2) the use of prescriptive grazing as a means of habitat improvement is envisioned in the draft comprehensive conservation plan and; and 3) any potential impacts to wildlife and habitat will be reduced through implementation of conditions included in the special use permit.

The Finding of No Significant Impact (FONSI) and supporting environmental assessment will be made available to the public on the Service's Region 6 refuge planning website. Copies of this FONSI and the associated environmental assessment are available upon request.

¹ 40 CFR § 1508.27 "Significantly," as used in NEPA, requires considerations of both context and intensity. Context means that the significance of an action must be analyzed in several contexts such as a society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend on the effects in the locale rather than in the world as a whole. Both short and long-term effects are relevant. Intensity refers to the severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action.

SUPPORTING REFERENCE

U.S. Fish and Wildlife Service. 2012. Environmental Assessment Emergency Use of Prescriptive Grazing at the Benton Lake National Wildlife Refuge Cascade County, Montana July, 2012.

Regional Director, Region 6
U.S. Fish and Wildlife Service

Date

U.S. FISH AND WILDLIFE SERVICE

ENVIRONMENTAL COMPLIANCE CERTIFICATE

PROJECT: Emergency Use of Prescriptive Grazing at the Benton Lake National Wildlife Refuge

STATE: Montana

ACTION (indicate if not applicable)

DATE

National Environmental Policy Act of 1969, as amended	
Categorical Exclusion	N/A
Environmental Assessment/Finding of No Significant Impact	XXXX
Environmental Impact Statement/Record of Decision	N/A
Endangered Species Act, Section 7	XXXX
National Historic Preservation Act of 1966, as amended	7/25/12
Wilderness Act of 1964.....	N/A
National Wildlife Refuge System Administration Act of 1966, as amended.....	7/25/12
Executive Order 11593, Protection of Historical, Archaeological, and Scientific Properties.....	7/25/12
Executive Order 11988, Floodplain Management.....	7/25/12
Executive Order 11990, Protection of Wetlands.....	7/25/12
Executive Order 12372, Intergovernmental Review of Federal Programs.....	7/25/12
Executive Order 12898, Federal Actions to Address Environmental Justice in Minority and Low-Income Populations.....	7/25/12
Executive Order 12996, Management and General Public Use of the National Wildlife Refuge System	7/25/12
Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds.....	7/25/12

I hereby certify that all requirements of the law, rules, and Service regulations or policies applicable to the terms and conditions as described in the proposed action have met with compliance. On the basis of information contained in the environmental assessment, and other information available to me, the activities described in the selected alternative would not significantly affect the quality of the human environment within the meaning of Section 102(2)(C) of the National Environmental Policy Act of 1969.

Regional Director, Region 6
U.S. Fish and Wildlife Service

Date

PURPOSE, NEED, AND BACKGROUND

1.1 PURPOSE

This Environmental Assessment (EA) documents the purpose of and the issues, alternatives, and analysis associated with allowance of emergency use of prescriptive grazing through special use permits at the Benton Lake National Wildlife Refuge as a means to temporarily relocate livestock whose forage has been impacted by recent wildfires. This EA provides background information and describes the conditions that led the U.S. Fish and Wildlife Service (Service) to consider authorizing temporary use of national wildlife refuge lands for this purpose and will also describe two alternatives and the analysis of any environmental effects expected to occur from implementing each of the alternatives. Alternatives were developed according the National Environmental Policy Act § 102(2)(E) to consider any effects of an emergency grazing program at the Benton Lake National Wildlife Refuge and any effects to the larger human and natural environment.

1.2 NEED FOR ACTION

The United States is currently experiencing historic drought conditions in 2012. This drought has also created conditions for extreme fire behavior and rapid growth of wildfires across the West. On June 25, 2012 a lightning strike ignited the Ash Creek fire which burned 249,562 acres east of Lame Deer, Montana. Additional fires started on July 3, 2012 consuming an additional 75,501 acres in this area. These fires burned lands owned by the Northern Cheyenne Agency, U.S. Forest Service, Bureau of Land Management, State of Montana, and private citizens. The majority of these lands are used at some level to support commercial cattle operations. Wildfire in extreme conditions consumes nearly all fine fuels and vegetation used as forage by livestock.

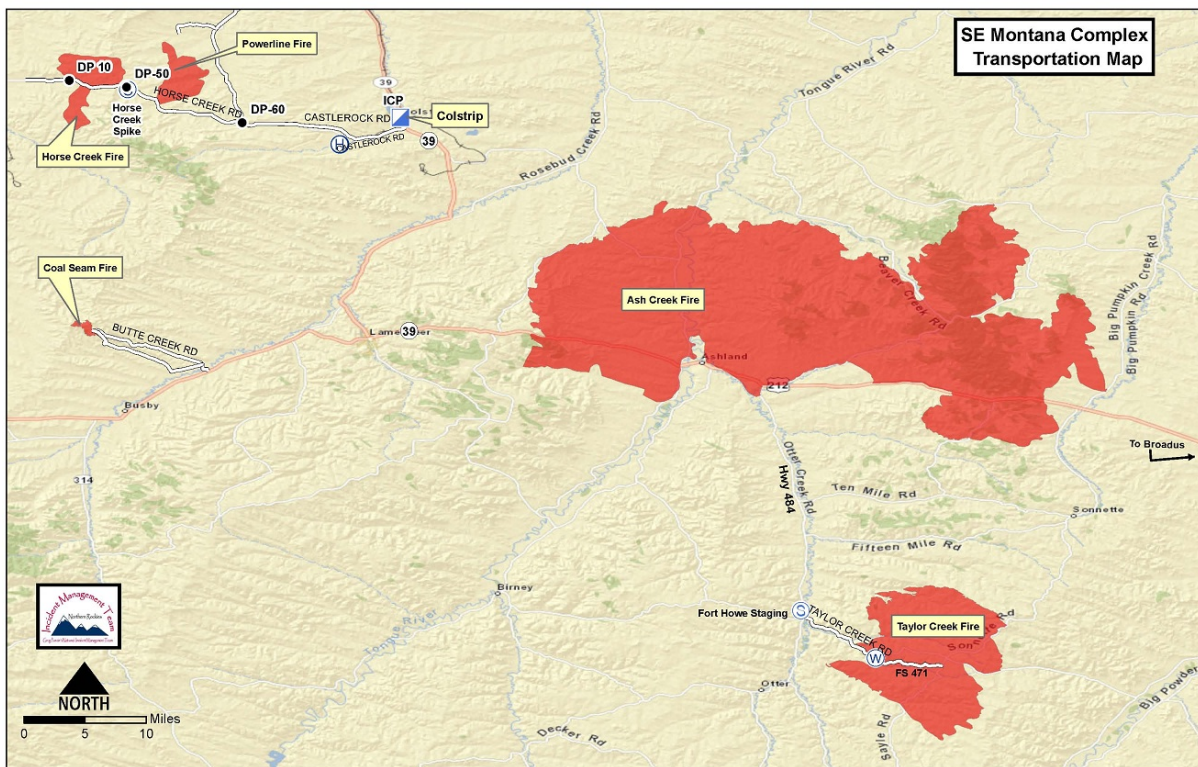


Figure 1. Recent wildfires in southeast Montana.

On July 13, 2012, the Governor of Montana sent a letter to the U.S. Secretary of Agriculture requesting natural disaster declarations requesting federal assistance to cope with “a severe loss of livestock and crop production along with many physical and economic losses occurring throughout all counties, the counties adjacent to them and the [Northern Cheyenne Indian Reservation].” Also on July 13, 2012, the Service was contacted regarding grazing opportunities on national wildlife refuges as a means to temporarily relocate livestock and reduce financial impacts to operators. The Service may only consider this request within the context of all applicable laws and regulations governing management of national wildlife refuges.

1.3 DECISION FRAMEWORK

Based on this EA, the Regional Director for Region 6 will make two decisions:

- Select an alternative regarding whether or not to allow the emergency use of prescriptive grazing at the Benton Lake National Wildlife Refuge.
- Determine if the selected alternative is a federal action significantly affecting the quality of the human environment, thus requiring preparation of an environmental impact statement.

The proposed action recommended to the Regional Director is Alternative B: Allow Emergency Use of Prescriptive Grazing at the Benton Lake National Wildlife Refuge through the issuance of special use permits.

1.4 BACKGROUND

The Benton Lake Refuge (Figure 2) was withdrawn from the public domain and became part of the National Wildlife Refuge System by Executive Order of President Herbert Hoover in 1929. The refuge encompasses 12,383 acres near Great Falls, Montana.

The purposes of the Benton Lake Refuge are:

- As a refuge and breeding ground for birds (Executive Order 5228, dated November 21, 1929).
- For use as an inviolate sanctuary, or for any other management purpose, for migratory birds (Migratory Bird Conservation Act).

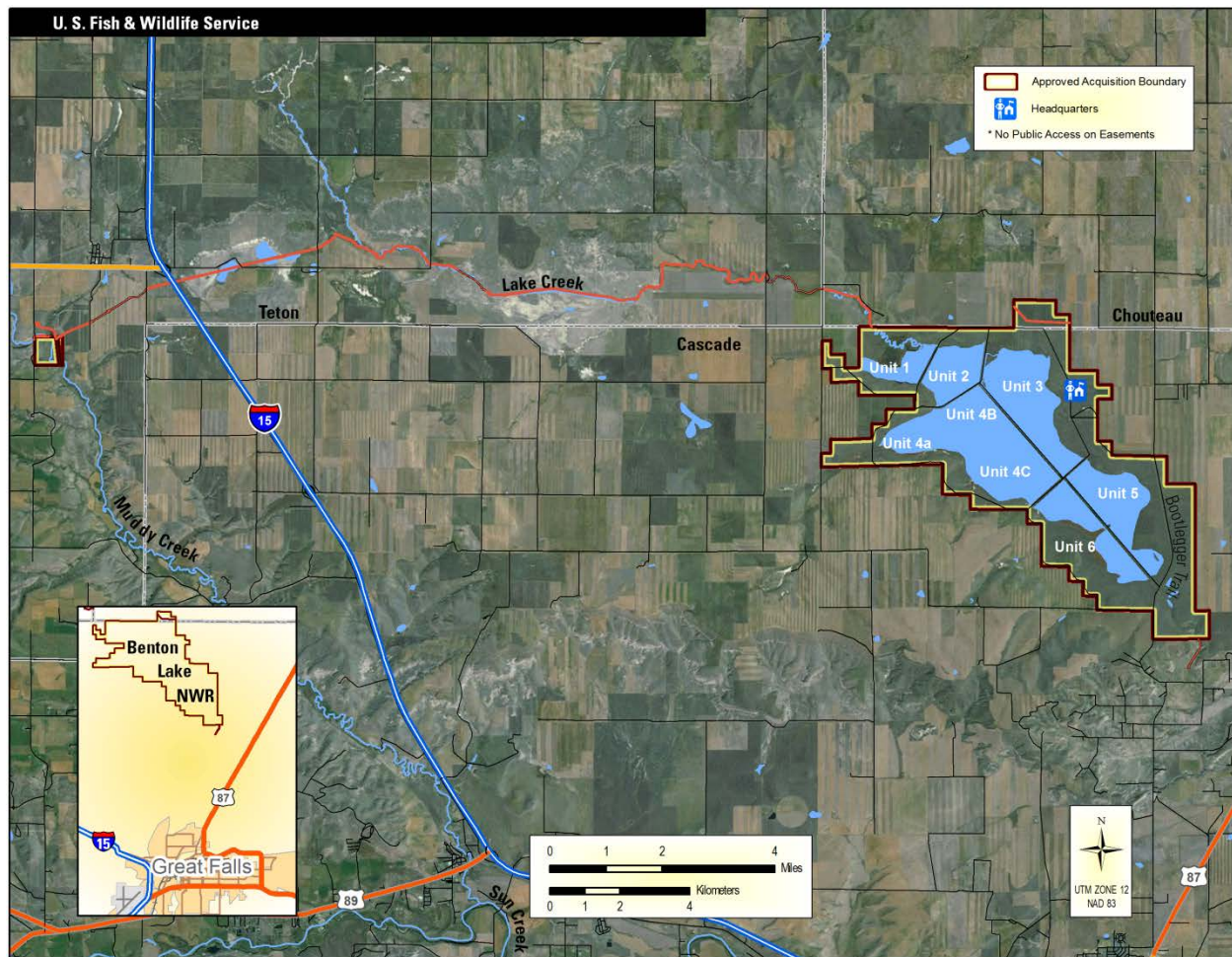


Figure 2. Benton Lake National Wildlife Refuge, Montana.

Benton Lake historically was a large, seasonally flooded marsh that likely supported emergent vegetation during some years. Currently, portions of the wetland are permanently flooded and are more like a lake with relatively large areas of open water. The wetland is completely isolated from the regional ground water system by the presence of an impermeable layer of clay. Subsurface soil layers are restrictive to water movement and root penetration. The water can have increased salinity and be somewhat brackish. The historical gradation of vegetation zones within Benton Lake from robust emergents in deeper depressions to grasslands on uplands has been altered over time. Most historical vegetation communities are still present on the refuge, but their distribution and extent have changed. Developments for water management and subsequent altered hydrology and water chemistry in Benton Lake pools are responsible for most changes. Generally, communities have shifted from drier wetland vegetation such as western wheatgrass, foxtail barley and sedges to a more extensive distribution of wetter and more alkaline-tolerant species (for example, alkali bulrush and cattails). Increasing amounts of exotic and invasive species also now occur on the refuge (Heitmeyer et al. 2009).

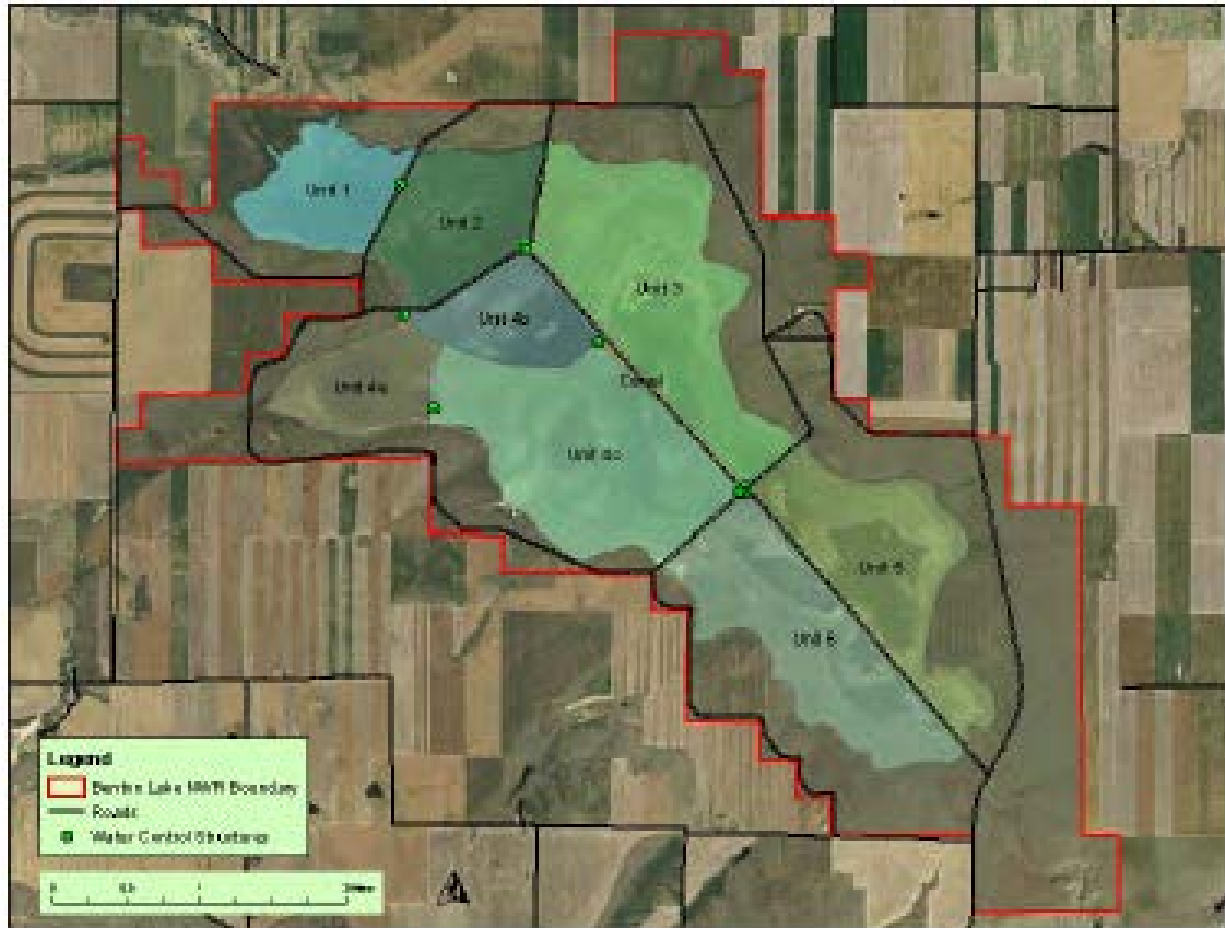


Figure 3. Water management units at the Benton Lake Refuge.

For the first 30 years of the refuge history, the refuge was not staffed and was administered by the National Bison Range in western Montana. During this time, the hydrological regime in Benton Lake mirrored seasonal and long-term regional precipitation patterns (for example, Nimick 1997). In 1957, local support from the Cascade County Wildlife Association prompted a major effort to construct major pumping and water delivery structures from Muddy Creek to the refuge. A pump station and pipeline were constructed 1958–62 to bring irrigation return flow in Muddy Creek from the central and northeast parts of the Greenfields Bench to the refuge. In 1961, full-time Service staff were assigned to, and housed on, the refuge. The first water pumped to Benton Lake from Muddy Creek occurred in 1962. Water from the Muddy Creek pump station is moved 4 miles through an underground pipeline over a low-drainage divide and then is discharged into the natural Lake Creek channel where it flows for about 12 miles to its mouth in Benton Lake. Pumping from Muddy Creek corresponds to times of irrigation return flow in the Greenfields Irrigation system and is generally from May until mid-October.

In the late 1980s, it was discovered that the refuge had concentrations of selenium in water, bottom sediment and biota that were moderately to considerably higher than regional background values or reference concentrations associated with biological risk (Knapton et al. 1988). Since that time, considerable effort has been focused on understanding and characterizing the selenium contamination issues at Benton Lake Refuge (Nimick et al. 1996; USFWS 1991; Zhang and Moore 1997; Henney et al. 2000; unpublished data on file at Benton Lake Refuge 2006, 2008, 2011). Concerns have focused on reducing the selenium levels on the refuge and in the Lake Creek watershed to prevent concentrations that would cause reproductive failure in sensitive birds. High salinity was also a concern before on the refuge. However, a review of long-term salinity data on the refuge found that, while salinity may

increase within a season as wetlands dry, there were no detectable increasing trends over a 10-year period (Nimick 1997).

Surface soils are predominantly clays and silty clays (Vertisols) deposited in the lake-system environments of Glacial Lake Great Falls and Benton Lake. The Benton Lake bed and surrounding lower elevation areas are mostly plastic clays and exceed 100 feet deep under parts of Benton Lake. These are Pendroy, Thebo Vanda, and Marvan clays (NRCS 2011c). In the area where Lake Creek enters Benton Lake, soils are mostly silt and sand with minor clay and gravel present in soil stratigraphy. Thickness of these soils range from 10 to 40 feet where they become intermixed with underlying lake-system-type deposits. Higher elevation terrace-type soils along the western and southern edges of Benton Lake are mostly 10–30 feet thick silty clay loam types overlying reddish-brown, poorly sorted sand and gravel dominantly of subangular to slabby sandstone and subrounded quartzite, shale, granite, and argillite (Maughan and Lemke 1991). Some of these surfaces have interesting, stratified soils indicating various depositions from historical marine environments, Lake Great Falls, and underlying Colorado Shale (Condon 2000).

Benton Lake Refuge also has nearly 6,000 acres of intact, northern mixed-grass prairie. The dominant plant community is represented by green needlegrass, western wheatgrass, thickspike wheat-grass, prairie Junegrass and bluebunch wheatgrass. Other grasses and sedges include plains reedgrass, threadleaf sedge and needleleaf sedge. Blue grama is the only common warm-season grass. Grasses represent about 80 percent of the total annual production in this community (NRCS 2005).

Common forbs on Benton Lake's clayey soils include dotted gayfeather, American vetch, white prairie clover and purple prairie clover. American vetch and the prairie clover are nitrogen-fixing species and are valuable forage producing plants. Ground-plum milkvetch, scurfpea and prairie thermopsis are lower successional forbs that have the ability to fix nitrogen. White milkwort, biscuitroot, wild onion and western yarrow may be present as minor components of the plant community. Forbs represent about 15 percent of the total annual production (NRCS 2005).

Winterfat and Nuttall's saltbush are common warm and cool-season shrubs, respectively on Benton Lake Refuge. They are valuable forage for wildlife and livestock. Silver sagebrush, fringed sagewort, broom snakeweed and prickly pear cactus may also represent minor shrub components. Overall, shrubs account for about 5 percent of the annual plant production (NRCS 2005).

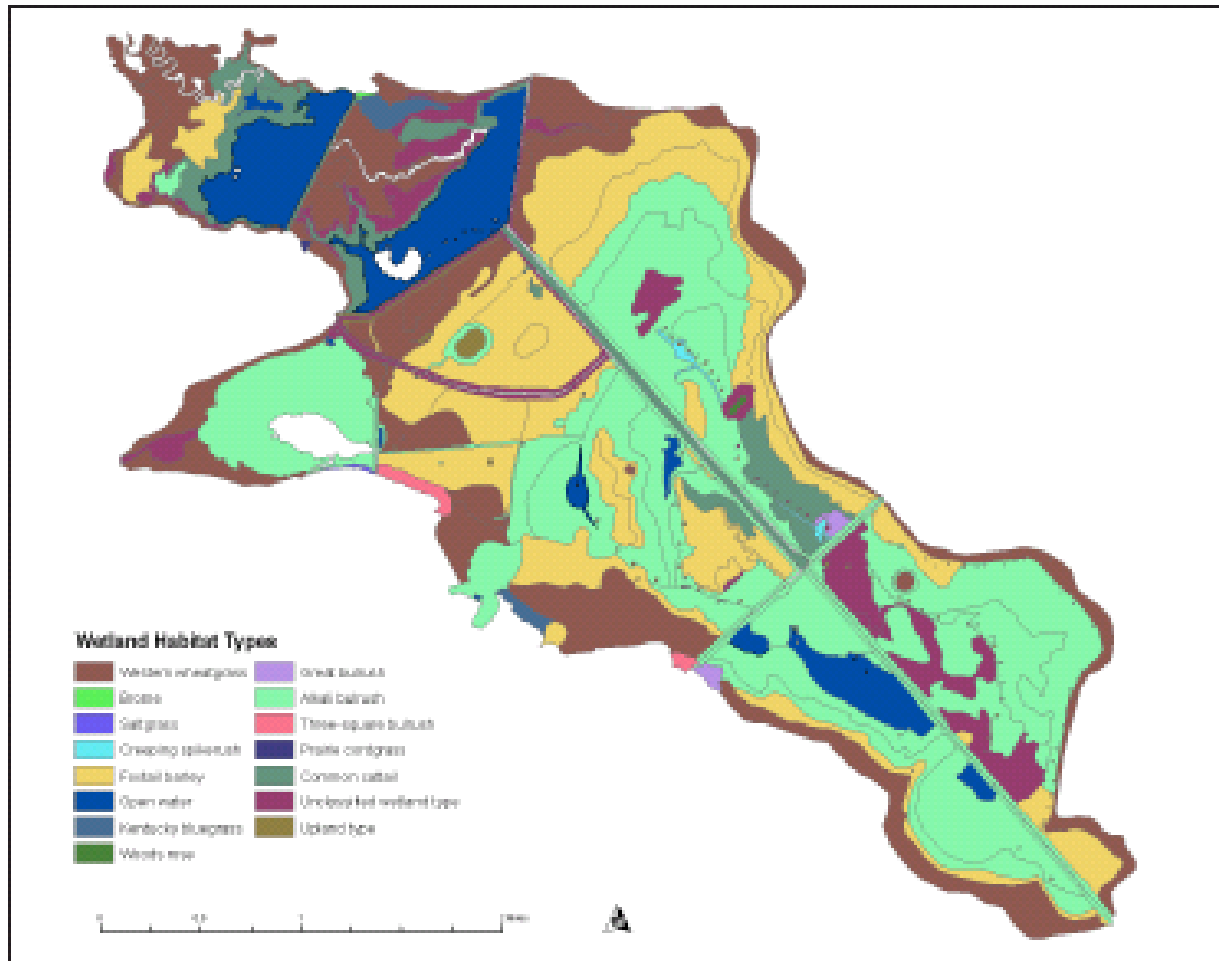


Figure 4. Vegetation communities on the Benton Lake Refuge.

There were some limited areas of native prairie on Benton Lake Refuge that were broken and seeded to tame grass in the 1960s and early 1970s. The predominant herbaceous cool-season species used were varying combinations of intermediate wheatgrass, tall wheatgrass, slender wheatgrass, pubescent wheatgrass, western wheat-grass, and crested wheatgrass; the legumes were alfalfa and sweetclover. The basic seeding rates were comprised of 75 percent wheatgrass and 25 percent legumes. These species, commonly referred to as DNC, were chosen based on research that showed they are highly attractive and beneficial to waterfowl (Duebbert 1969). Rationale was based on research conducted in the late 1960s and 1970s, which showed ducks were experiencing higher nesting success in DNC than in surrounding upland habitats (Duebbert 1969, Duebbert and Lokemoen 1976, Kaiser et al.1979). DNC fields on the refuge are generally in poor condition. Most stands are in some type of rotational management scheme to rejuvenate and extend the longevity of the planting.

FISH AND WILDLIFE RESOURCES

A rich diversity of wildlife species use the Benton Lake basin (Please see Appendix D–Species List of the Draft CCP and EA, Benton Lake National Wildlife Refuge Complex, Montana (March 2012) at http://www.fws.gov/mountain-prairie/planning/ccp/mt/bnl/documents/bnl_ccpdraft_all.pdf).

Many waterbirds breed in the Benton Lake area. The most common breeding species included eared grebe, mallard, northern pintail, gadwall, blue-winged teal, cinnamon teal, American wigeon, northern shoveler, redhead, lesser

scaup, ruddy duck, Canada geese, American coot, American avocet, Wilson's phalaropes, marbled godwits, willets, Franklin's gull, white-faced ibis, black-necked stilt, and black-crowned night-heron.

Grassland bird species on the Benton Lake Refuge are considered priority species due to the conversion of the landscape grassland ecosystems in surrounding areas and the overall trend of grassland bird species decline. During the past quarter-century, grassland birds have experienced steeper, more consistent, and more widespread population declines than any other avian guild in North America (Vickory et al. 2000). A 6-year study done in Northwest Montana showed that grasslands in the northern Great Plains represent unique characteristics that support a composition of all the species that are endemic to the landscape (Hendricks et al. 2007). Throughout the Benton Lake Refuge Complex, priority grassland bird species include the Federal candidate species, Sprague's pipit. Other grassland priority species include ferruginous hawk, upland sandpiper, long-billed curlew, marbled godwit, burrowing owl, short-eared owl, grasshopper sparrow, chestnut-collared longspur, Baird's sparrow, and bobolink.

Grassland bird point counts were conducted for 4 years (1994–7) consecutively at the Benton Lake Refuge. More than 800 individuals and 41 species of grassland birds were detected. Over the course of these surveys, there was a steady decline of the chestnut-collared longspurs, grasshopper sparrows, and horned larks.

Aquatic invertebrates include a variety of Crustacea (such as *Daphnia* sp., *Gammarus* sp., and *Hyalella azteca*) and insects such as Corixid beetles, damselflies and dragonflies, Notonectid backswimmers, and Chironomids (Heitmeyer et al. 2009).

Several amphibian and reptile species also used Benton Lake including tiger salamanders, boreal chorus frogs, painted turtles, and common, western and plains garter snakes. There is one historical record of northern leopard frog on the refuge, but no recent occurrences. Fathead minnows are the only fish species occasionally present on the refuge.

Mammal species diversity and abundance in the Benton Lake wetland basin is relatively low, except for many small rodents such as mice and voles. Several species of bats likely use wetlands as foraging areas, but no formal surveys have been conducted. Muskrat often create openings in wetland vegetation completely every year may be limiting numbers. Additionally, many mammal species that mostly use the uplands, such as coyote, white-tailed deer, mule deer, and pronghorn, use dry parts of the wetlands to forage and breed.

THREATENED AND ENDANGERED SPECIES

Sprague's pipit is a candidate for listing as endangered or threatened under the ESA (16 U.S.C. 1531 et seq.; USFWS 2008b, 2010). Sprague's pipits have been documented on the Benton Lake Refuge. Sprague's Pipits breed in the northern Great Plains, with the highest density occurring in north-central and eastern Montana to North Dakota. (Stewart 1975, American Ornithologists' Union 1998, Robbins and Dale 1999, Tallman et al. 2002 as cited in Jones 2010). Sprague's Pipits are closely associated with native grassland throughout their range (Sutter 1996, 1997; Sutter and Brigham 1998; Madden et al. 2000; Grant et al. 2004 as cited in Jones 2010) and are less abundant (or absent) in areas of introduced grasses than in areas of native prairie (Kantrud 1981, Johnson and Schwartz 1993, Dale et al. 1997, Madden et al. 2000, Grant et al. 2004 as cited in Jones 2010). Generally, pipits prefer to breed in well-drained native grasslands with high plant species richness and diversity. They prefer higher grass and sedge cover, less bare ground, and an intermediate average grass height when compared to the surrounding landscape, less than 5–20 percent shrub and brush cover, no trees at the territory scale, and litter cover less than 4.7 inches (Sutter 1996, Madden et al. 2000, Dechant et al. 2003, Dieni and Jones 2003, Grant et al. 2004 as cited in Jones 2010). The amount of residual vegetation remaining from the prior years' growth also appears to be a strong positive predictor of Sprague's Pipits occurrence (Madden 1996, Sutter 1996, Prescott and Davis 1998, Sutter and Brigham 1998 as cited in Jones 2010) and where they put their nests (Dieni and Jones 2003, Davis 2005).

Projects that alter grassland habitat with permanent structures, such as wind towers, oil wells, roads and buildings, can make the areas unsuitable for Sprague's pipit use. Because Sprague's pipits avoid not only the structure but also an area around the structure, the effective impact of the disturbance is much greater than its actual footprint. While the grassland habitat on which Sprague's pipits breed can be disturbance dependent, negative effects on the pipit can largely be avoided by doing habitat manipulation such as mowing or prescribed fire outside of the breeding season. These actions may make an area unsuitable for several years until the grassland plant association has partially returned. However, adverse effects can be avoided by performing management actions on a subunit of the grassland area in any given year, so that some suitable grassland habitat is available at all times.

Candidate species are plants and animals for which the Service has sufficient information on their biological status and threats to propose them as endangered or threatened under the ESA, but for which development of a proposed listing regulation is precluded by other higher priority listing activities. A candidate species status is reviewed annually. Candidate species receive no statutory protection under the ESA. However, Service policy requires that candidate species be treated as "proposed for listing" for purposes of Intra-Service section 7 conference procedures (USFWS 1998).

INVASIVE PLANTS

The refuge is generally free from highly invasive, noxious weeds. Through early detection and rapid response, early colonizing plants of spotted knapweed and leafy spurge, in particular, have been eradicated every year and prevented from spreading. Canada thistle has been present for many years on the Benton Lake Refuge; thistle patches are found near many roads, dikes, wetland edges and other disturbed areas. Some dense stands have been treated with success, but most areas go untreated.

Across the wetland and grassland habitat on the refuge; however, several nonnative species are of concern and of particular interest to this EA due to their effect in changing the native habitat, even if they are not on the State's noxious weed list.

CHRESTED WHEATGRASS

Crested wheatgrass has been the most commonly planted exotic grass in western North America since the early 1900s. Invasion of this species into native rangeland can have a negative effect on plant and wildlife diversity (Reynolds and Trost 1981, Christian and Wilson 1999, Davis and Duncan 1999). Crested wheatgrass was used to landscape areas around the refuge headquarters area in the 1960s and to revegetate roadsides and other areas of disturbance. Since then, it has spread throughout the refuge to varying degrees and covers approximately 400 acres.

GARRISON CREEPING FOXTAIL

Creeping foxtail is an introduced rhizomatous perennial species. It has regenerative advantage on sites with conditions transitional between the more regularly flooded alkaline communities such as alkali bulrush and areas formerly dominated by foxtail barley at higher elevations. Its distribution has expanded substantially through the Benton Lake Refuge in recent years and generally occurs in bands or zones lying immediately above the zone occupied by cattail.

AIR QUALITY

Air quality problems in Montana are usually related to more urban areas and mountains or river valleys that are sensitive to temperature inversions. Carbon monoxide and particulate matter are the air pollutants that have the

greatest adverse effect on Montana's air quality. Particulate matter is tiny liquid or solid particles in the air that can be breathed in through the lungs.

Air quality for the Benton Lake Refuge is considered good with few manufacturing sites or major air pollution sources.

CULTURAL RESOURCES

Limited archaeological surveys have taken place on the Benton Lake Refuge associated with the construction of dikes, a prescribed fire survey and several canal segment constructions. The refuge supports a section of both Mullan Road and Benton Lake Canal. The section of Mullan Road on the refuge was listed on the National Register in 1975.

The most substantial cultural resources survey conducted on the refuge is a 560-acre survey of Bootlegger Trail for a Montana Department of Transportation road improvement. During this project, three sites were identified on Service land including Benton Lake Canal 24CA974, Bootlegger Ponds 24CA975 and Slate Pit 24CA976. The Benton Lake Canal was found eligible for the National Register while Bootlegger Ponds and Slate Pit were found not eligible (Frontier Historical Consultants 2004).

Recently, miscellaneous small surveys have been conducted for refuge projects. Loflin (2006) conducted survey for 180 acres for a control burn next to Benton Lake. No cultural resources were observed. In 2005 Loflin surveyed 6.5 acres near the Lake Creek ditch next to Benton Lake in preparation for an upgrade of the ditch. Although no sites were found the researcher observed an isolated lithic flake suggesting that there was some prehistoric occupation of the lake margin, but because the lake size has been altered, it is likely that the sites may have been inundated (Loflin 2005).

In 2008, Alberta Tie, LTD, contracted with the University of Arizona to conduct a Traditional use study along a corridor just east of the refuge with the Blackfeet and Piegan tribes (Zedeno and Murray 2008). This study was in preparation for a 120-mile long electrical transmission line connecting Great Falls to Canada. Four traditional use areas including locations of burials, plant gathering areas and ceremonial locations were identified suggesting that the Blackfeet have traditional use and ongoing interest in the area.

1.5 AUTHORITY & LEGAL COMPLIANCE

System lands are managed consistent with a number of federal statutes, regulations, policies, and other guidance. The National Wildlife Refuge System Administration Act of 1966, as amended (16 United States Code [U.S.C.] 668dd–668ee) (Administration Act) is the core statute guiding management of the System. The National Wildlife Refuge System Improvement Act of 1997 (Public Law [P.L.] 105-57) (Improvement Act) made important amendments to the Administration Act, one of which was the mandate that a comprehensive conservation plan be completed for every unit of the System. Among other things, comprehensive conservation planning has required field stations to assess the current condition of wildlife habitat and establish objectives for the future.

ALTERNATIVES

2.1 INTRODUCTION

This section describes how alternatives were formulated, describes those alternatives carried through for further analysis, describes elements common to all alternatives, and describes those alternatives eliminated from further study.

Specifically, this section describes the two alternatives identified for analysis:

- Alternative A, the no-action alternative, to disallow emergency use of prescriptive grazing at the Benton Lake National Wildlife Refuge
- Alternative B, the proposed action, to allow emergency use of prescriptive grazing at the Benton Lake National Wildlife Refuge through issuance of special use permits.

No additional alternatives were considered.

2.2 FORMULATION OF ALTERNATIVES

The Service reviewed the authorities, policies, and existing research and information on the emergency use of prescriptive grazing at the Benton Lake Refuge. Discussions were held with the Refuge Manager and staff concerning possible grazing opportunities and any potential impacts. Discussions also took place between regional and national office staff. Factors considered in the development of alternatives were as follows:

- federal emergency declarations/determinations
- the Improvement Act
- refuge establishing purposes
- the draft 15-year comprehensive conservation plan for the Benton Lake Refuge
- the availability and effectiveness of alternative management tools
- benefits to and impacts on wildlife and the habitat needed to support wildlife

Two alternatives were identified and selected for further development.

2.3 DESCRIPTION OF DEVELOPED ALTERNATIVES

ALTERNATIVE A: DISALLOW EMERGENCY USE OF PRESCRIPTIVE GRAZING AT THE BENTON LAKE NATIONAL WILDLIFE REFUGE (NO ACTION)

Under this alternative, the Refuge Manager would disallow emergency use of prescriptive grazing. Use of grazing and other habitat management improvement methods would be evaluated and implemented when the Comprehensive Conservation Plan for the Benton Lake Refuge is finalized.

ALTERNATIVE B: ALLOW EMERGENCY USE OF PRESCRIPTIVE GRAZING AT THE BENTON LAKE NATIONAL WILDLIFE REFUGE

Under this alternative, the Refuge Manager would allow emergency use of prescriptive grazing at the Benton Lake Refuge. One or more special use permits would be issued (see proposed conditions below) to allow up to 850 yearlings for up to 30 days with a possible extension up to 60 days on approximately 1,500 acres of wetlands and associated grasslands.

- Grazing would be authorized on Unit 3 and Unit 4c. Grazing would begin in Unit 3 with the option to move into Unit 4c or other units depending on performance of the cattle at meeting habitat objectives.
- Permittees would be required to install and then remove approximately 8.5 miles of temporary electric fence necessary to divide management units into smaller grazing cells.
- Permittees would be required to inspect and repair existing Benton Lake Refuge fences and gates as necessary to confine livestock.
- There is little water available naturally in these Units and permittees would be required to supplement water needed for livestock.
- Any salt and/or mineral blocks used must be placed away from water sources to distribute grazing pressure evenly throughout these units.
- Permittees would be required to notify the Refuge Manager in advance and document all livestock movements. This information will be used to monitor grazing objectives for and used to develop future prescriptive grazing opportunities.

The Refuge Manager may revoke special use permits due to noncompliance with previously agreed upon conditions or in the event of emergency situations involving the safety of the public, permittees, or Refuge employees.

Similar to other land management agencies, the Service utilizes animal unit months (AUMs) as a measure when managing grazing permits. AUMs denote the amount of palatable plant matter physically removed by cattle from a parcel of land. AUMs are determined by multiplying the number of animals by the number of days spent on the grazed area, divided by 30.4 (the average number of days in a month). The amount of forage in an AUM is approximately 794 pounds. For example, 55 cows graze an area for 21 days. $(55 \times 21) / 30.4 = 38$ AUMs. This is approximately 30,172 pounds of forage or 15 tons $(38 \times 94 = 30,172)$ pounds). A mature cow equals one AUM, a cow/calf pair equals 1.2 AUMs, a yearling (9-18 months of age) equals 0.7 AUMs, a weaner calf equals 0.5 AUMs, and an adult bull equals 1.5 AUMs.

Consistent with Service policy, grazing permittees would be charged fees as described in Regional Chief's memoranda dated September 8, 1989 titled "Using Grazing Assessments to Facilitate Grassland Improvement Except for CMR and UL Bend"; dated February 21, 1990 titled "Clarification of Grazing Use Fees (For Your Information)"; dated "Using Economic Use Deductions to Facilitate Habitat Improvement"; dated February 10, 2012 titled "Calendar Year 2012 Grazing Fees". Grazing rate fees are based on the United States Department of Agriculture (USDA) Statistics Board publication for "Grazing Fee Rates for Cattle by Selected States and Regions" for 2011, which are \$19.40/AUM and \$21.60/AUM for cow/calf pairs. The Refuge Manager may deduct up to 75 percent of total fees for improvements occurring within the grazing units that are made by the permittee.

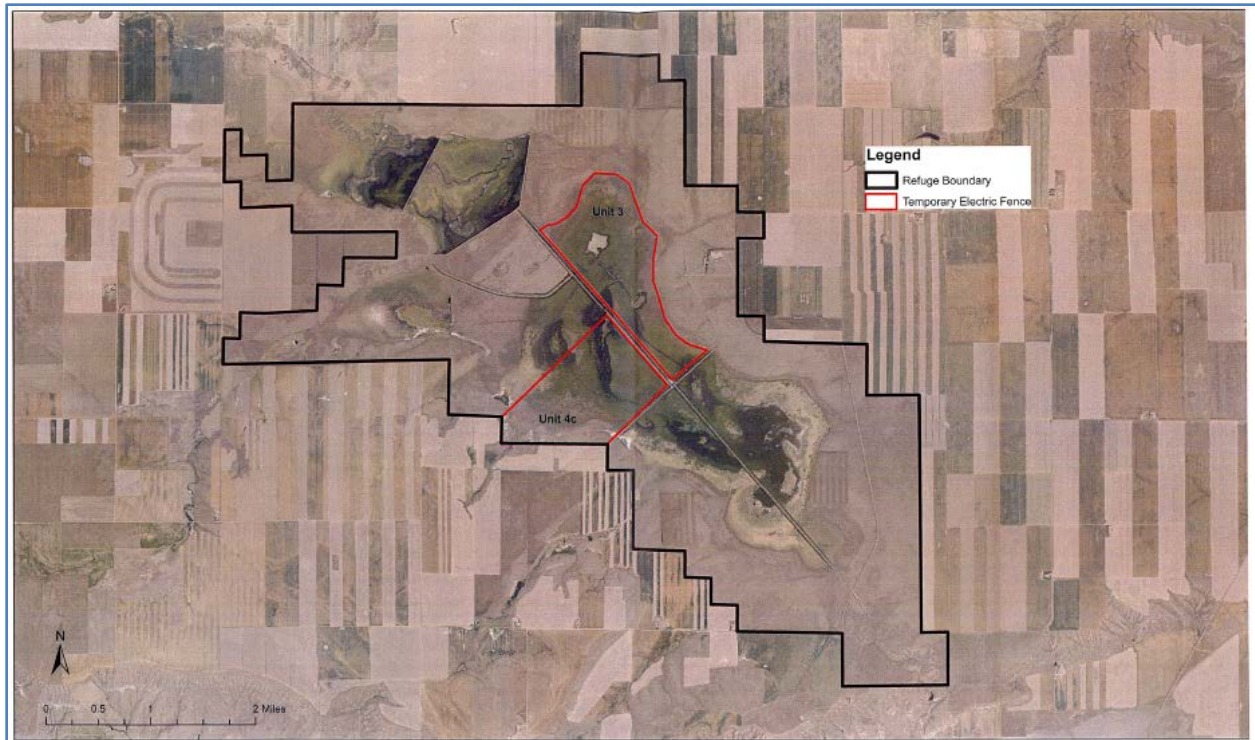


Figure 5. Proposed Grazing Units at Benton Lake Refuge.

2.4 ELEMENTS COMMON TO ALL ALTERNATIVES

ADHERENCE TO SERVICE'S APPROPRIATE USES AND COMPATIBILITY POLICIES

All alternatives evaluated in this EA would adhere to two policies set forth in the Service Manual that guide decisions on activities allowed on lands managed by the System: the Appropriate Refuge Uses Policy (603 FW 1 of the Service Manual) (Appropriate Uses Policy) and the Compatibility Policy (603 FW 2 of the Service Manual).

The Appropriate Uses Policy describes the initial decision process a refuge or wetland management district manager follows when considering whether or not to allow a proposed use. The manager must find a use appropriate before undertaking a compatibility review of the use. An *appropriate use*, as defined by the Appropriate Uses Policy, is a proposed or existing use on a refuge or wetland management district that meets at least one of the following four conditions: (1) the use is a wildlife-dependent recreational use as identified in the Improvement Act; (2) the use contributes to the fulfilling of the refuge purpose(s), the Refuge System mission, or goals or objectives described in a refuge management plan approved after October 9, 1997, the date the Improvement Act was signed into law; (3) the use involves the take of fish and wildlife under state regulations; or (4) the use has been found to be appropriate as specified in section 1.11 (603 FW 1 of the Service Manual). Lands within refuges are different from other multiple use public lands in that they are closed to all public uses unless specifically and legally opened.

The Improvement Act states “. . . the Secretary [of the Interior] shall not initiate or permit a new use of a refuge or expand, renew, or extend an existing use of a refuge, unless the Secretary has determined that the use is a compatible use and that the use is not inconsistent with public safety.”

The Improvement Act also states that “...compatible wildlife-dependent recreational uses (hunting, fishing, wildlife observation and photography, or environmental education and interpretation) are the priority general public uses of the System and shall receive priority consideration in refuge planning and management.”

In accordance with the Improvement Act, the Service has adopted the Compatibility Policy, which includes guidelines for determining if a use proposed on a refuge or wetland management district is compatible with the purposes for which the refuge or wetland management district was established. A *compatible use* is defined in the policy as a proposed or existing wildlife-dependent recreational use or any other use of System lands that, based on sound professional judgment, will not materially interfere with or detract from the fulfillment of the System mission or the purposes of the refuge. The policy also includes procedures for documentation and periodic review of existing refuge uses. A *compatibility determination* is a document that evaluates a proposed use and states whether it has been determined to be compatible or not compatible. The public has an opportunity to review and comment on draft compatibility determinations, often during the comprehensive conservation planning process. The compatibility determination that includes prescriptive grazing of the Benton Lake Refuge is included as an appendix to this EA.

The Refuge Manager has evaluated prescriptive grazing and determined that is an appropriate refuge use and is it not a prohibited use and is a refuge management activity that contributes the purposes and goals of the Benton Lake Refuge. A Compatibility Determination for Cooperative Farming, Hazing, and Grazing was developed as a part of the draft CCP that covers management activities at the Benton Lake Refuge. This Compatibility Determination was presented to the public for review as a part of the public comment period for the draft CCP and EA. Relevant stipulations included with this determination include:

- To make sure there is consistency with management objectives, the Service will require general and specific conditions for each farming, haying, or grazing permit.
- Control and confinement of livestock are the responsibility of the permittee, but the Service will decide where fences, water tanks, and livestock supplements would be placed within the management unit. Temporary electric fence may be used to keep livestock within grazing cells as well as to protect sensitive habitat areas and refuge complex assets such as water control structures. Cooperators would be required to remove fences at the end of the grazing season.

USE OF PRESCRIPTIVE GRAZING

All alternatives evaluated in this EA consider the use of prescriptive versus open range grazing. Grazing effects on grassland communities and woody riparian habitats have been the subject of many studies. The effects of grazing on plant diversity depend on grazing intensity, the evolutionary history of the site and climatic regimes. Hoof impact by grazing animals can break up capped soils, improve the water cycle, stimulate vegetative reproduction of stoloniferous grasses, and enhance the decomposition of old plant material by breaking up plant litter. Hoof action can also distribute and trample seeds into soils, increasing chances of successful germination (Laylock 1967). Nutrients are returned to the soil in the form of urine and feces. Cattle may return 80–85 percent of the nitrogen ingested with plant tissue.

Grazing intensity and frequency can be regulated to enhance species diversity of both plants and animals. Certain levels of grazing can provide habitat diversity and patchiness, particularly in areas of higher precipitation. Cattle dung hosts invertebrate production, undigested plant parts, and newly germinated seedlings, which in turn can be used by wildlife as food. Grazing can be much more species selective than mowing, burning, or chemical treatments. For example, grazing in uplands can stimulate germination and production of grasses without affecting the sagebrush and other species that are important elements of the habitat, while fire removes all flammable material with which it comes in contact.

Grazing is a tool that, when used properly, removes old vegetation, stimulates new plant growth, restructures vegetation, affects plant species composition, and enhances animal diversity. Development of proper grazing strategies is essential to using this tool properly. The objectives of grazing are to help the wildlife species first and foremost, and economic benefits are a secondary consideration. The needs of wildlife and their habitats are the primary determining factors of any habitat management strategy. Determining the proper number of animals to be placed on an area is the principal factor affecting the relative success of any grazing management strategy (Heitschmidt and Sluth 1991). The timing, frequency, and intensity of grazing are the three main variables available to managers when designing a grazing plan.

- Timing refers to the period when livestock will be placed on a parcel of land. It is generally related to the plant phenology (spring=growth period, summer=active growth and reproduction period, fall=reproduction and carbohydrate storage, and winter=dormancy).
- Frequency is the time interval between applications of active treatment strategies. These can range from more than one treatment per year, to annual, alternate year, or greater than 1 year (periodic).
- Intensity has been defined as the proportion of current years forage production that is consumed or destroyed by grazing animals.

Grazing intensity as it relates to wildlife habitat and cover may be more accurately defined as the amount of standing residual and current vegetation (cover) that is removed or destroyed by grazing animals in relation to the pretreatment standing cover. This definition is different because it addresses the factor of cover in the management of uplands and other areas where the objective is to provide nesting cover. In areas where grazing is to be used to reinvigorate and restore cover, the measure of cover removal will be more meaningful. This can be expressed in a percentage figure of removal of aboveground biomass for planning purposes, and then after monitoring, it can be converted into an AUM figure for ease of developing future grazing prescriptions for that specific field.

Prescriptive grazing is contemplated and described in the draft Comprehensive Conservation Plan for the Benton Lake Refuge, but no specific management plans have been prepared. This plan envisions that short-duration; high-intensity grazing will be the most commonly used form of grazing. A sufficient number of animals will be placed on a given parcel of land to remove the desired amount of standing vegetation within a short period. Under this system, the animals are forced to consume available vegetation instead of being allowed to be so selective that they repeatedly graze only the more palatable plants. Ideally, the plants should be grazed only once during the growing period, and even longer periods of rest will be used to make sure that there is enough vegetation regrowth and accumulation for proper wildlife cover.

AFFECTED ENVIRONMENT

Please see Chapter 4 – Affected Environment of the Draft CCP and EA, Benton Lake National Wildlife Refuge Complex, Montana (March 2012) at http://www.fws.gov/mountain-prairie/planning/ccp/mt/bnl/documents/bnl_ccpdraft_all.pdf.

ENVIRONMENTAL CONSEQUENCES

4.1 EFFECTS COMMON TO ALL ALTERNATIVES

THREATENED AND ENDANGERED SPECIES

The Service is required to complete an Intra-Service Section 7 Evaluation for all federal actions. This process will document the presence and any positive or negative impacts to species listed as endangered or threatened or that may be candidates for listing under the Endangered Species Act.

CULTURAL RESOURCES

The consequences of the proposed management on cultural resources are the same for both alternatives. No new structures or improvements would be constructed and the transport and support of livestock would be through existing roadways. Any additional effects on cultural or historic resources will be minor or non-existent. Areas considered in this review have been previously reviewed by the Service's regional archeologist in consultation with the State Historic Preservation Office as mandated by Section 106 of the National Historic Preservation Act ensuring a low probability of impacts to cultural resources. Areas considered in this review have been previously farmed or disturbed, reducing the likelihood that impacts on cultural resources will occur.

4.2 EFFECTS TO THE PHYSICAL ENVIRONMENT

ALTERNATIVE A (NO ACTION)

Without the use of prescriptive grazing, existing conditions are expected to continue. This principle change will be continued growth of invasive species. However, the impacts of not implementing a temporary program on approximately 1,500 acres of the Benton Lake Refuge are negligible to soils, water quality, and general wetland and upland habitat conditions.

ALTERNATIVE B (PROPOSED ACTION)

The impacts of temporary prescriptive program on approximately 1,500 acres of the Benton Lake Refuge are not significant. The long-term benefits of this habitat management tool should outweigh any short-term negative effects and implementation of the proposed action is anticipated to provide beneficial results to soils, water quality, and wetland/upland habitat conditions.

Use of smaller grazing units, periodic movement of livestock, and proper placement of water sources greatly reduce any impacts of livestock to the physical environment. Some trampling of areas by may occur around watering areas or mineral licks.

It is anticipated that grazing would be in a mosaic pattern with some areas more intensively grazed than others in certain years. Grazing, as well as fire, is known to increase the nutrient cycling of nitrogen and phosphorous (Hauer and Spencer 1998, McEachern et al. 2000). Hoof action may improve vegetative conditions and allow native plant seeds to become established. Cattle grazing may also increase the risk of invasive plants becoming established.

Under the proposed action, within Unit 3, approximately 800 acres will be grazed containing 600 acres of Garrison Creeping Foxtail and approximately 660 acres of Unit 4 will be grazed containing 140 acres of Garrison Creeping

Foxtail. Forage in Unit 3 also includes cattails (undesirable in large amounts) and Unit 4 includes other invasive species such as crested wheatgrass.

4.3 EFFECTS ON THE BIOLOGICAL ENVIRONMENT

ALTERNATIVE A (NO ACTION)

Without the use of prescriptive grazing, existing conditions are expected to continue. While the presence of noxious weeds will increase without treatment the duration, the impacts of not implementing a temporary program on approximately 1,500 acres of the Benton Lake Refuge are negligible.

ALTERNATIVE B (PROPOSED ACTION)

The proposed grazing units are comprised of approximately 1,500 acres of dry wetland habitat in Refuge units 3 and 4c. The dominant plant species present in each unit is Garrison Creeping Foxtail, an introduced species that has spread over large areas of the Refuge during the past 15 years. This species is used extensively for pasture and hayland by the ranching community, but has displaced native plants on the Refuge. It does not undergo dormancy in the summer and provides excellent cattle forage. Grazing of mature Garrison plants will likely have little effect, since it recovers quickly from grazing. Young plants are small and weak and grazing may have a significant negative effect on these plants. This would be a positive impact since the long term Refuge management goal is to control the spread of Garrison. Cattails and alkali bulrush are also present in the designated units, but are not a preferred forage plant. Additional species, such as western wheatgrass and foxtail barley are also present and may have limited grazing pressure. Cattle will be moved between units if the amount of available Garrison forage becomes limited. Heavy grazing pressure on Garrison may impact stand density which will be a positive effect for the Refuge wetland plant community.

Limited avian use is presently occurring in the proposed grazing units since they are dry. White-tail deer are currently using the proposed grazing units and will be displaced during grazing. Large areas of suitable deer habitat are present in other areas of the Refuge so there will be no significant long term effects.

The overall impacts of grazing will be positive since any limits on the growth and spread of Garrison will contribute to long term Refuge habitat restoration goals.

4.4 EFFECTS ON SOCIAL AND ECONOMIC CONDITIONS

ALTERNATIVE A (NO ACTION)

State and federal governments are reporting large economic losses associated with drought, wildfires, and impacts to commercial grazing operations. By not providing emergency use of the Benton Lake Refuge, this condition is expected to worsen and the impact is considered significant on a local and regional scale.

ALTERNATIVE B (PROPOSED ACTION)

Implementation of the proposed action will allow one or more operators to graze up to 850 yearlings on a temporary basis. It is expected this will allow operators the opportunity to continue some or all of the summer operations and deflect some potential financial impacts. Livestock operations will result in some local spending, but the impact is expected to be negligible in the mid-sized community of Great Falls.

In addition, the presence of livestock may be disturbing to some public users. Education of visitors on the benefits of prescriptive grazing as a tool to improve habitat conditions is expected to reduce any concerns.

4.5 CUMULATIVE IMPACTS

Cumulative impacts are effects on the environment that result from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions.

The proposed action is both temporary and invoked in response to an emergency need. The Service does envision the use of prescriptive grazing on the Benton Lake Refuge in the future and this concept has been analyzed in detail as a part of the draft CCP and EA. Therefore it is assumed a prescriptive grazing program will be conducted at some time in the future. Therefore, any cumulative impacts associated with implementing a temporary program on approximately 1,500 acres are not considered significant.

4.6 PROPOSED ACTION

Based on the analysis above, the proposed action is Alternative B: Allow Emergency Use of Prescriptive Grazing at the Benton Lake National Wildlife Refuge through the issuance of special use permits.

CONSULTATION AND COORDINATION

5.1 CONTRIBUTORS

<i>Name</i>	<i>Title</i>	<i>Organization and Location</i>
Kathy Burchett	Project Leader	Benton Lake National Wildlife Refuge Complex, Great Falls, Montana
Vanessa Fields	Refuge Biologist	Benton Lake National Wildlife Refuge Complex, Great Falls, Montana
Toni Griffin	Resource Planner	USFWS, Planning Division, Lakewood, Colorado
Bob Johnson	Deputy Project Leader	Benton Lake National Wildlife Refuge Complex, Great Falls, Montana
David Lucas	Chief of Planning	USFWS, Planning Division, Lakewood, Colorado
Dean Rundle	Refuge Supervisor	USFWS, Region 6, Lakewood, Colorado

5.2 AGENCIES CONSULTED

The following agencies were consulted during the development of this EA:

- USDA-NRCS – Natural Resources Conservation Service

5.3 DOCUMENT AVAILABILITY

Additional copies of this EA are available from the following offices and Web sites.

U.S. Fish and Wildlife Service
Benton Lake National Wildlife Refuge Complex
922 Bootlegger Trail
Great Falls, Montana 59404
406 / 727 7400
www.fws.gov/bentonlake

U.S. Fish and Wildlife Service
Region 6, Division of Refuge Planning
134 Union Blvd., Suite 300
Lakewood, Colorado 80228
303/236 4366

APPENDIX A

Section 7 Intra-Service Biological Evaluation

Intra-Service Section 7 Biological Evaluation Form - Region 6

Originating Person: Kathleen Burchett

Date Submitted: July 23, 2012

Telephone Number: 406/727 7400

I. Service Program and Geographic Area or Station Name: Benton Lake National Wildlife Refuge

II. Flexible Funding Program (e.g. Joint Venture, etc) if applicable: N/A

III. Location: Cascade County, Montana

IV. Species/Critical Habitat: Sprague's pipits have been documented on the Benton Lake Refuge. Breeding season has concluded and this will reduce any negative effects from grazing to this species. In addition, the proposed action follows recommendations by performing management actions at a subunit-basis within a grassland area in any given year, so that some suitable grassland habitat is available at all times.

V. Project Description: The Refuge Manager would allow emergency use of prescriptive grazing at the Benton Lake Refuge. One or more special use permits would be issued (see proposed conditions below) to allow up to 500 cow/calf pairs or appropriate substitutions for yearlings for up to 30 days on 1,460 acres of wetlands and associated grasslands.

VI. Determination of Effects

(A) Description of Effects: The impacts of temporary prescriptive program on 1,460 acres of the Benton Lake Refuge are not significant. The long-term benefits of this habitat management tool should outweigh any short-term negative effects and implementation of the proposed action is anticipated to provide beneficial results to soils, water quality, and wetland/upland habitat conditions.

Use of smaller grazing units, periodic movement of livestock, and proper placement of water sources greatly reduce any impacts of livestock to the physical environment. Some trampling of areas by may occur around watering areas or mineral licks.

It is anticipated that grazing would be in a mosaic pattern with some areas more intensively grazed than others in certain years. Grazing, as well as fire, is known to increase the nutrient cycling of nitrogen and phosphorous (Hauer and Spencer 1998, McEachern et al. 2000). Cattle grazing may also increase the risk of invasive plants getting established.

Under the proposed action, within Unit 3, 800 acres will be grazed containing 600 acres of Garrison Creeping Foxtail and 660 acres of Unit 4 will be grazed containing 140 acres of Garrison Creeping Foxtail. Forage in Unit 3 also includes cattails (undesirable in large amounts) and Unit 4 includes other invasive species such as crested wheatgrass.

- Grazing would only be authorized on Unit 3 and Unit 4c. Grazing would begin in Unit 3 with the option to move into Unit 4c depending on performance of the cattle at meeting habitat objectives.
- Permittees would be required to install and then remove approximately 8.5 miles of temporary electric fence necessary to divide management units into smaller grazing cells.

- Permittees would be required to inspect and repair existing Benton Lake Refuge fences and gates as necessary to confine livestock. There is little water available naturally in these Units and permittees would be required to provide any water needed for livestock. Any salt and/or mineral blocks used must be placed away from water sources to distribute grazing pressure evenly throughout these units.
- Permittees would be required to notify the Refuge Manager in advance and document all livestock movements. This information will be used to monitor grazing objectives for and used to develop future prescriptive grazing opportunities.

(B) Determination: Determine the anticipated effects of the proposed project on species and critical habitats listed in item IV. Check all applicable boxes and list the species (or attach a list) associated with each determination.

Determination

No Effect: This determination is appropriate when the proposed project will not directly or indirectly affect (neither negatively nor beneficially) individuals of listed/proposed/candidate species or designated/proposed critical habitat of such species. **No concurrence from ESFO required.**

May Affect but Not Likely to Adversely Affect: This determination is appropriate when the proposed project is likely to cause insignificant, discountable, or wholly beneficial effects to individuals of listed species and/or designated critical habitat. **Concurrence from ESFO required.**

May Affect and Likely to Adversely Affect: This determination is appropriate when the proposed project is likely to adversely impact individuals of listed species and/or designated critical habitat.

Formal consultation with ESFO required.

May Affect and Likely to Adversely Affect but the proposed action is for the purpose of endangered or threatened species recovery and falls under Region 6's Programmatic Consultation on Service-initiated Recovery Actions: This determination is appropriate when adverse effects are likely but the project is designed to assist with recovery of listed species and/or designated critical habitat. **Concurrence from the ESFO that the project is covered by the programmatic consultation is required.**

May affect but Not Likely to Jeopardize candidate or proposed species/critical habitat: This determination is appropriate when the proposed project may affect, but is not expected to jeopardize the continued existence of a species proposed for listing or a candidate species, or adversely modify an area proposed for designation as critical habitat. **Concurrence from ESFO optional.**

_____ X _____

Sprague's pipit

Likely to Jeopardize candidate or proposed species/critical habitat: This determination is appropriate when the proposed project is reasonably expected to jeopardize the continued existence of a species proposed for listing or a candidate species, or adversely modify an area proposed for designation as critical habitat. **Conferencing with ESFO required.**

Signature _____ Date _____
[Supervisor at originating station]

Reviewing Ecological Services Office Evaluation (check all that apply):

A. **Concurrence** _____

Nonconcurrence _____

Explanation for nonconcurrence:

B. Formal consultation required
List species or critical habitat unit

C. Effects are addressed in the Programmatic Consultation on R6's
Recovery Program – no further consultation needed

D. Conference required
List species or critical habitat unit

Name of Reviewing ES Office _____

Signature _____ Date _____

APPENDIX B

Compatibility Determination

COOPERATIVE FARMING, HAYING, AND GRAZING

The Service would continue to use cooperative farming and prescriptive livestock grazing and haying as management tools throughout the refuge complex. These tools would be used to meet habitat objectives, control vegetative litter, promote native plant production and diversity, control the spread of invasive plant species, and help convert disturbed grasslands back to native plant species.

The district currently uses cooperative farming and haying as tools to manage upland habitats, including control of invasive plant species and cattails. In the past, these techniques were also used on Benton Lake Refuge. The draft CCP proposes to use cooperative farming and haying to manage habitats. Furthermore, the draft CCP establishes goals and objectives for specific habitat types where cooperative farming and haying may be used. The refuge complex would improve the monitoring and research programs for vegetation and wildlife to assess habitat and wildlife population responses to cooperative farming and haying.

The refuge complex currently uses prescriptive livestock grazing as a tool to manage a variety of uplands and seasonal wetlands. Fencing and controlling livestock is the responsibility of the cooperating rancher. The Service provides instruction and guidance within the special use permit for placement of fences, water tanks, and livestock supplements to make sure that sensitive habitats or refuge complex assets are protected. Temporary electric fencing is used. Current forage conditions, habitat objectives, and available water would decide stocking rates in each grazing unit. The draft CCP proposes to continue using prescriptive livestock grazing to meet habitat objectives. Furthermore, the draft CCP establishes goals and objectives for specific habitat types where prescriptive livestock grazing may be used. The refuge complex would improve the monitoring and research programs for vegetation and wildlife to assess habitat and wildlife population responses to prescriptive livestock grazing. Different grazing rates and management strategies would be investigated to figure out the best methods for meeting the habitat goals and objectives.

AVAILABILITY OF RESOURCES

Existing resources would be sufficient to administer the farming, haying, and grazing programs at current levels. These programs would continue to be conducted through special use permits or cooperative farming agreements, which reduce the need for staff time and Service assets to complete work.

ANTICIPATED IMPACTS OF THE USE

The cooperative farming and haying program and prescriptive livestock-grazing program would be used to meet habitat- and species-specific goals and objectives identified in the draft CCP. These programs are intended to support and enhance habitat conditions to help a wide variety of migratory birds and other wildlife that use the refuge complex. Minimal negative effects are expected. Control of invasive plant species through these programs would be a long-term benefit.

Some wildlife disturbance may occur during farming operations and some animals may be temporarily displaced. Wildlife would receive the short-term benefit of standing crops or stubble for food and shelter and the long-term benefit of having cropland or other poor-quality habitat converted to native grasses or DNC. In addition, restoration of cropland to grassland cover would prevent soil erosion, improve water quality, and the need for chemical use.

Some trampling of areas by livestock may occur around watering areas or mineral licks. If fences are not supported, it may be difficult to meet habitat objectives. It is anticipated that grazing would be in a mosaic pattern with some areas more intensively grazed than others in certain years. Grazing, as well as fire, is known to increase the nutrient cycling of nitrogen and phosphorous (Hauer and Spencer 1998, McEachern et al. 2000). Hoof action may break up mats of clubmoss and allow native plant seeds to become established. Cattle grazing may also increase the risk of invasive plants getting established. In addition, the presence of livestock may be disturbing to some wildlife species and some public users. The long-term benefits of this habitat management tool should outweigh the short-term negative effects.

PUBLIC REVIEW AND COMMENT

This Compatibility Determination is presented for public review and comment as part of the 30-day public comment period for the Draft Comprehensive Conservation Plan and Environmental Assessment for Benton Lake National Wildlife Refuge Complex.

DETERMINATION

Cooperative farming, haying, and grazing as a habitat management tools would be compatible uses on the Benton Lake and Swan River Refuges and waterfowl production areas in the district.

STIPULATIONS NECESSARY FOR COMPATIBILITY

- To make sure there is consistency with management objectives, the Service will require general and specific conditions for each farming, haying, or grazing permit.
- Only areas that have a prior crop history, an invasive plant problem, or decadent DNC will be included in the farming and haying program. To reduce effects on nesting birds and other wildlife, the staff will determine and incorporate any needed timing constraints on the permitted activity into the cooperative farming agreement or special use permit. For example, haying will not be permitted on Service lands until after July 15 to avoid destroying bird nests on the management unit unless the complex staff deems it necessary to hay earlier to control invasive plants or restore grasslands.
- The cooperative farming agreement or special use permit will specify the type of crop to be planted. Farming permittees will be required to use Service-approved chemicals that are less detrimental to wildlife and the environment.
- Control and confinement of livestock are the responsibility of the permittee, but the Service will decide where fences, water tanks, and livestock supplements would be placed within the management unit. Temporary electric fence may be used to keep livestock within grazing cells as well as to protect sensitive habitat areas and refuge complex assets such as water control structures. Cooperators would be required to remove fences at the end of the grazing season.

JUSTIFICATION

Some habitat management needs to occur to support and enhance habitat for migratory birds and other wildlife. When properly managed and monitored, prescriptive farming and haying are options that can be used to improve wildlife cover and restore disturbed habitats to desirable grassland cover. Prescriptive livestock grazing can rejuvenate native grasses and help control the spread of some invasive plant species. Each of these tools can be controlled and the results would be monitored (for example, vegetation monitoring) so that adjustments in the programs can be made to meet habitat goals and objectives.

Using local cooperators to accomplish the work is a cost-effective method to accomplish the habitat objectives. The long-term benefits of habitat restoration and management far outweigh the short-term effects caused by cooperative farming, haying, and grazing.

Mandatory 10-year Reevaluation Date: 2022

SIGNATURES

SUBMITTED BY:

Kathleen A. Burchett, Project Leader Benton Lake National Wildlife Refuge Complex Great Falls, Montana	Date
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REVIEWED BY:

Dean Rundle, Refuge Supervisor U.S. Fish and Wildlife Service, Region 6 National Wildlife Refuge System Lakewood, Colorado	Date
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APPROVED BY:

Matt Hogan, Assistant Regional Director U.S. Fish and Wildlife Service, Region 6 National Wildlife Refuge System Lakewood, Colorado	Date
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