DRAFT ENVIRONMENTAL ASSESSMENT
HUNTING PLAN

NORTH PLATTE NATIONAL WILDLIFE REFUGE

February 26, 2007

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Chapter 1 - Purpose and Need for Action

In response to a 2003 lawsuit filed by the Fund for Animals, the U.S. Fish and Wildlife Service (Service) will amend or rewrite environmental assessments that describe hunting programs at 74 National Wildlife Refuges. The new environmental assessments will address the cumulative impacts of hunting at all refuges which were named in or otherwise affected by the lawsuit. This document addresses the hunting programs at North Platte National Wildlife Refuge (NWR) in Nebraska (Figure 1).

Over ninety years old, the North Platte NWR was established "as a preserve and breeding ground for native birds". The Refuge and surrounding area have been recognized as important migratory and wintering habitat for waterfowl within the Central Flyway.

The National Wildlife Refuge System Administration Act of 1966 as amended by the National Wildlife Refuge System Improvement Act of 1997 (16 U.S.C. 668dd et seq.) provides authority for the Service to manage the Refuge and its wildlife populations. In addition it declares that compatible wildlife-dependent public uses are legitimate and appropriate uses of the Refuge System that are to receive priority consideration in planning and management. There are six wildlife-dependent public uses: hunting, fishing, wildlife observation, wildlife photography, environmental education and interpretation. It directs managers to increase recreational opportunities including hunting on National Wildlife Refuges when compatible with the purposes for which the Refuge was established and the mission of the National Wildlife Refuge System.

The purpose of this Environmental Assessment is to evaluate the feasibility of opening the North Platte NWR to limited hunting on previously closed lands in accordance with the approved Hunting Plan dated November 12, 2002. Specifically, this Hunting Plan allows for the hunting of deer (archery only) and, for youth only, hunting of squirrel, rabbit, pheasant, coyote, and furbearers. Further, hunting as proposed would be limited to the Lake Alice Unit (Figure 2), from January 15 through October 14, in accordance with State and Federal regulations.

The proposed action is needed to support the Hunting Plan for North Platte NWR which provides the public with a quality recreational experience that is compatible with the purpose of the Refuge.

Chapter 2 – Alternatives Including the Proposed Action

This chapter discusses the alternatives considered for hunting on North Platte National Wildlife Refuge. These alternatives are 1) the no action alternative which continues with current management[1] prohibiting hunting on the Refuge, and 2) the proposed alternative which would provide for limited hunting activities on the Refuge.

2.1 No Action Alternative: Current Management

Under this alternative, recreational opportunities would not be expanded. Hunting would not be permitted.

2.2 Proposed Alternative: 2002 Hunting Plan for the North Platte NWR

Under this alternative, hunting would be implemented as outlined in the approved Hunting Plan (2002).

The Lake Alice Unit of the Refuge (Figure 2) would be opened to archery deer hunting and a youth-only hunt for coyote, furbearers, squirrel, rabbit, and pheasant. These hunting opportunities would be conducted in accordance with State and Federal Regulations (Appendix A).

While huntable populations of the target species exist, the Lake Alice Unit is not known for an overabundance of such small/upland game and furbearer species. For this reason, Managers would implement a youth-only hunt of such species providing an opportunity for adult guides to introduce youngsters to hunting.

The entire Lake Alice Unit would remain closed to all public entry from October 15 through January 14 to provide undisturbed habitat during peak waterfowl and eagle use periods.

[1] This Environmental Assessment acknowledges that limited hunting has occurred on the Refuge since 2003. However, because of the 2003 lawsuit, preparers of this document are conducting an analysis of environmental impacts from an earlier point in time. "Current Management" equates to pre-2003. Analysis of alternatives includes an expanded discussion of cumulative impacts to various resources.

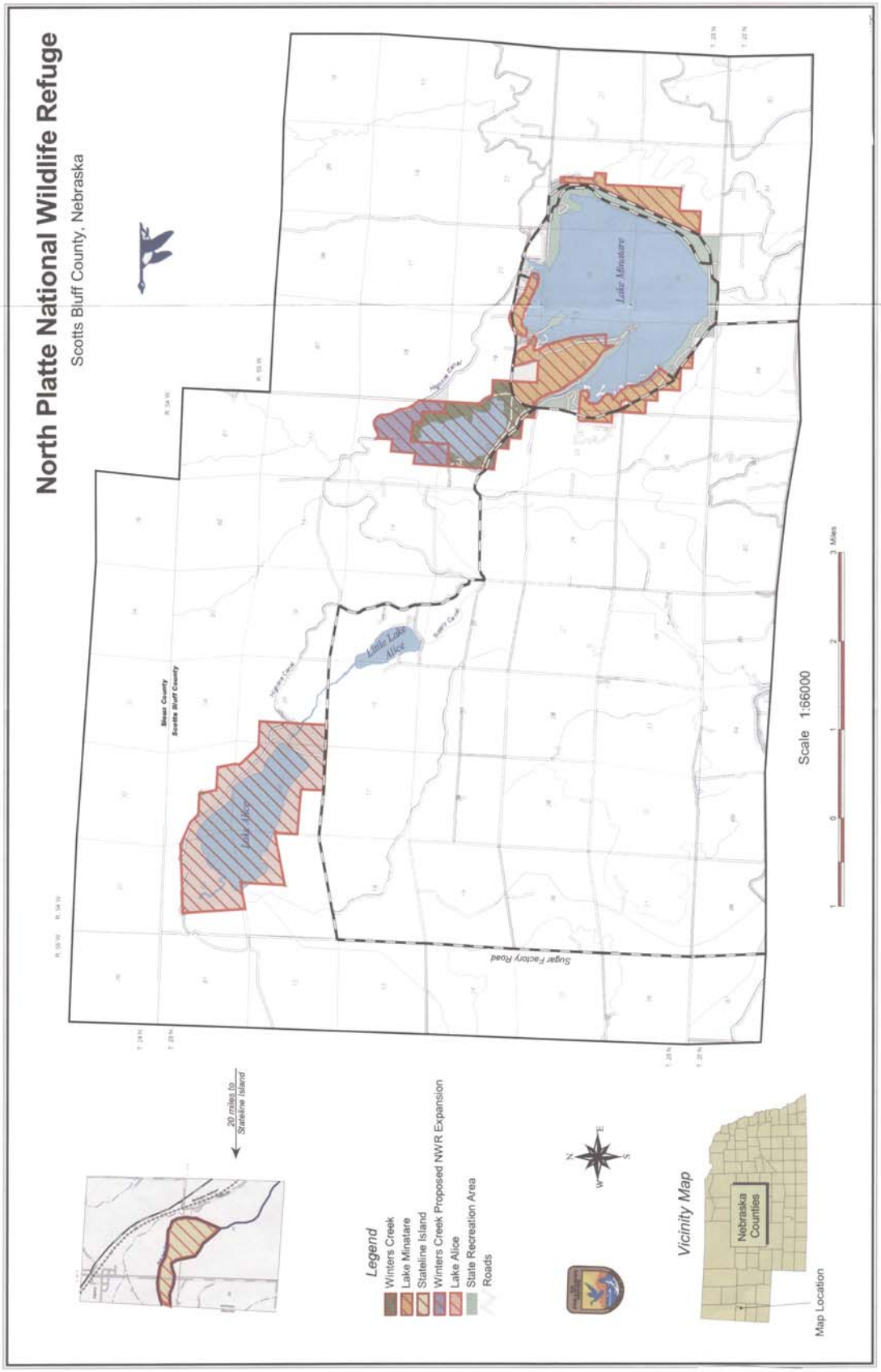

North Platte National Wildlife Refuge
Scotts Bluff County, Nebraska
Lake Minatare
Little Lake Alice
Lake Alice
Winters Creek
Sugar Factory Road
Morrill County
Scotts Bluff County
Scale 1:66000
3 Miles
20 miles to Stateline Island
Legend
Winters Creek
Lake Minatare
Stateline Island
Winters Creek Proposed NWR Expansion
Lake Alice
State Recreation Area
Roads
Vicinity Map
Nebraska Counties
Map Location

FIGURE 1

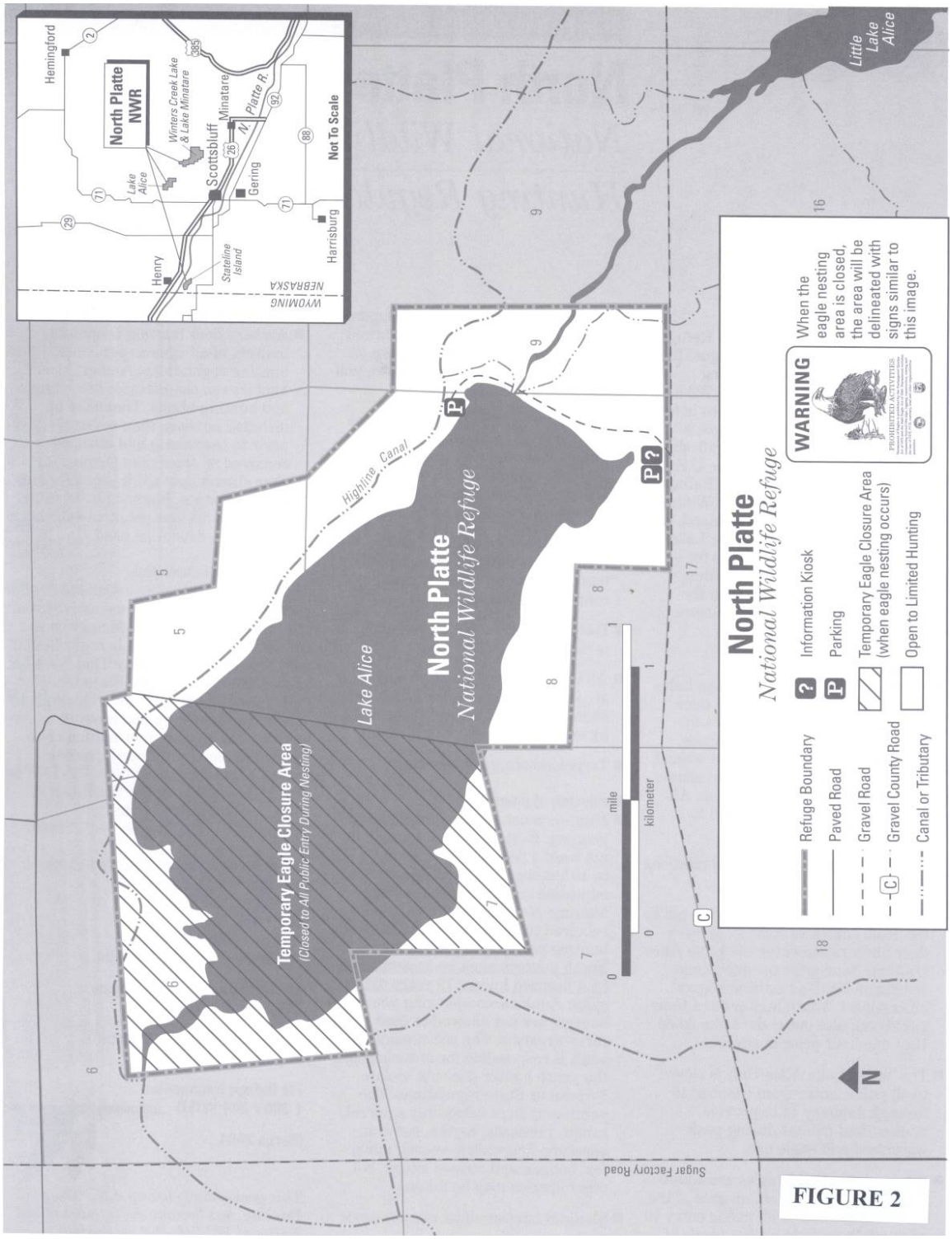

Hemingford
North Platte NWR
Winters Creek Lake & Lake Minatare
Scottsbluff
Minatare
Platte R.
Gering
Lake Alice
Henry
Stateline Island
Harrisburg
WYOMING
NEBRASKA
Not To Scale
Little Lake Alice
Temporary Eagle Closure Area
(Closed to All Public Entry During Nesting)
Lake Alice
North Platte
National Wildlife Refuge
Highline Canal
Sugar Factory Road
mile
kilometer
North Platte
National Wildlife Refuge
Refuge Boundary
Paved Road
Gravel Road
Gravel County Road
Canal or Tributary
Information Kiosk
Parking
Temporary Eagle Closure Area (when eagle nesting occurs)
Open to Limited Hunting
WARNING
When the eagle nesting area is closed, the area will be delineated with signs similar to this image.
PROHIBITED ACTIVITIES
N

FIGURE 2

Chapter 3 Affected Environment

This chapter describes the physical, biological, cultural and socio-economic resources most likely affected by conducting a limited hunting program on the Lake Alice Unit of the North Platte NWR.

The 2,722-acre North Platte NWR, located in the Nebraska Panhandle, was established in 1916 by Executive Order No. 2446 as a "preserve and breeding ground for native birds." The impetus for National Wildlife Refuge status was primarily fall concentrations of bald eagles and up to 250,000 mallards, and 11,000 Canada geese.

Today, the Refuge includes four dispersed management units, all of which are superimposed on Bureau of Reclamation projects and subject to Reclamation uses: Lake Minatare - 430 acres; Winters Creek - 780 acres; Lake Alice - 1,377 acres, and Stateline Island - 135 acres. The predominate cover types are shown in Table 1.

Table 1. Summary of Basic Habitat Types for each Refuge Unit

	Minatare	Winters Creek	Lake Alice	Stateline Island	Total
Open water (lakes)		345	576		921
Small wetlands (w/emergent veg.)		8			8
Grasslands	327	349	698	65	1,439
Trees/scrub shrub	103	55	92	65	315
Administrative (roads, dams, canal)		23	11	5	39
TOTALS	430	780	1,377	135	2,722

A Comprehensive Conservation Plan (CCP) for the Refuge was approved August 24, 2001. Through this planning process, which included comment from the general public and other stakeholders, it was determined that limited hunting would be compatible with the Refuge as well as lack significant environmental effects. The suggested hunting opportunities are limited to the Lake Alice Unit and would be conducted in accordance with State and Special Refuge regulations (Appendix A). Hunting would further be limited to (1) archery deer, and (2) for youth only, the following species: squirrel, rabbit, pheasant, coyote, and furbearers.

3.1 Physical Environment

Geology.- The Refuge is located in the central part of the High Plains Region. The Lake Alice Unit lies on a terrace or bench just north of the North Platte River Valley between two bedrock outcrops. The area has numerous gravel veins, an indication it is a remnant

of an old alluvial terrace. The general landscape surrounding the Refuge is nearly level to rolling prairie.

Climate.- The general climate is characteristic of the high plains. Average annual precipitation is about 14.5 inches. The average January temperature is 23.8 degrees F, while the average in July is 72.8 degrees F. Temperature extremes have ranged from -37 to 108 degrees F. Humidity is relatively low and prevailing winds are west to northwest in winter and east to southeast in summer. Winter winds are occasionally warmed by the down slope effect from the higher elevations to the west and bring rapid warming and melting of snow. The growing season is 135 day. The last killing frost is in mid-May and the first in mid-September.

Air Quality.- There are no known air quality problems. The strategic plan for Scotts Bluff County is to "maintain the level of air quality throughout the area" (Scotts Bluff County, 1999).

Soils. - Refuge soils are mapped and described in detail in the 1968 Soil Survey of Scotts Bluff County. Soils on the reservoir units are mostly deep, sandy and loamy soils on foot slopes and deep sandy soils on uplands.

Water. - The North Platte River is the principle drainage and water source for the North Platte Valley. The Bureau of Reclamation holds a Wyoming water right, with a priority date of December 6, 1904 for storage in the Inland Lakes, three of which are within or adjacent to the Refuge. Under this right, Reclamation may: (1) accrue 46,000 acre-feet (up to 910 cfs) from the North Platte River during the months of October, November and April which may be stored in Glendo and Guernsey Reservoirs before release into the Interstate Canal for storage in the Inland Lakes; and (2) divert from Whalen Diversion at a rate up to the canal capacity during the irrigation season as part of Nebraska's share of flows below the Whalen Diversion. This right was confirmed by the Supreme Court in Nebraska v. Wyoming (1945), reconfirmed by the Special Master's Ruling of April 9, 1992 (in litigation resulting from Nebraska's complaint of violations by Wyoming), and reconfirmed by a Supreme Court Decision of April 20, 1993.

During the 1990's litigation, the United States asserted a Federal reserved water right for the Refuge, subject to Bureau of Reclamation uses, for sufficient water to provide a preserve and breeding ground for native birds. The right carries a priority date of August 21, 1916, the date the Refuge was established. The reserved right was not quantified and the claim was not pursued in subsequent settlement discussions.

Lake Alice was formed by damming a basin-like valley. The amount of water which enters the reservoir depends on spring run-off and water right allocations. During the summer, water is released for irrigation. By September, water levels are at their lowest points and the reservoir usually will not receive more water until the following spring.

Since 1991, Pathfinder Irrigation District (PID) has been able to leave about 1,000 acre-feet of water in storage at Lake Alice in the early fall. This relatively small amount benefits migrating birds and reduces the intensity of local sandstorms. Unfortunately, these benefits are short-lived due to seepage and evaporation.

3.2 Vegetation

Grasslands.- The Refuge has approximately 1,625 acres of grassland, mostly native prairie. The primary native grasses are blue grama, needle and thread, western wheatgrass, and prairie sandreed. Little bluestem, sand bluestem, love grass, and switchgrass are native grasses that were reseeded on about 16 acres in 1998 and 1999. The Refuge maintains a herbarium containing a list of 179 plant species collected from the Refuge (Appendix C).

Non-native species or species not typically found in mixed-grass prairie are interspersed throughout all Refuge units. The most widespread are smooth brome and Kentucky bluegrass.

The Lake Alice Unit is made up of approximately 760 acres of grasslands.

Woodlands /Shrub.- Refuge reservoirs are surrounded with bands of large, naturally established cottonwoods; the bands range in thickness from one or two trees to 100 yards or more. The cottonwoods are a very even-aged, in the range of 70-80 years old. At Lake Minatare, peach-leaf willow grows in relatively undisturbed areas at the high water mark. In the 1930's, the Veterans Civil Conservation Corps (VCCC) planted American elm, green ash, and fruit-bearing shrubs such as chokecherry, among the cottonwoods. At Lakes Alice and Minatare, green ash are established in the understory

Stateline Island is heavily forested with cottonwood, ash, willow and honey locust. Besides native grasses, the understory include shrubs (peach-leaf willow and serviceberry), and forbs such as wild licorice, ground plum, and prickly pear cactus.

Plant Species of Management Concern.- Three plants officially listed as Species of Management Concern by Nebraska Game and Parks Commission occur on the Refuge - wild onion, perennial bursage, and strict sage (Appendix D). The amounts and distribution of these plants is largely unknown.

Exotic and Invading Vegetation.- Several species on the Nebraska noxious plant list are found on the Refuge. The most widespread is Canada thistle which is common on the many disturbed sites within and adjacent to the Refuge. Other invasive, non-native plants include salt cedar, musk thistle, Kentucky bluegrass, smooth brome, downy brome, and Russian olive. The latter is very aggressive and is invading the cottonwood understory at Winters Creek, Lake Alice and Stateline Island.

3.3 Wildlife Resources

Endangered and Threatened Species

The bald eagle is a federally listed threatened species which, at this writing, has been nominated for delisting (Appendix D). If that occurs it would most likely fall into the category of a Species of Management Concern. The Refuge was established, in part, because of the presence of wintering eagles. Numbers were never large (up to 24), but the Refuge remains a consistent and important wintering area because of the large numbers of migrating and wintering mallards. One pair of bald eagles has nested on the

Refuge since 1993; 33 young have fledged from this single nest through 2006. This nest occurs on the Lake Alice Unit.

Whooping cranes, a federally listed endangered species, have not been seen on the Refuge but are occasionally sighted nearby. In 1987, a lone bird was observed east of Scottsbluff and 12 miles north of Lake Minatare. One bird was seen among a flock of sandhill cranes just west of Scottsbluff in 1999. The exposed and shallow water beaches of Lake Minatare and Lake Alice are considered potential fall roosting sites.

Birds

Nebraska includes 413 bird species on its official list, 228 of which occur on North Platte NWR (Appendix C).

Beside the bald eagle, other raptors common to the Refuge include great-horned owl, American kestrel, rough-legged hawk, golden eagle, red-tailed hawk, northern harrier and osprey. Use by all raptors averages about 1,500 to 2,000 use-days per year. The peregrine falcon, a recently recovered endangered species, is an occasional visitor during migrations.

The American Bird Conservancy (1998) has designated Lake Minatare "globally significant" as a wintering area for waterfowl. Although no longer part of the Refuge, Lake Minatare is closed as fall-winter sanctuary under agreement with the Bureau of Reclamation and the NGPC. Table 2 indicates average annual waterfowl use on the Refuge, about 95 percent of which occurs from mid-October through December.

Table 2. Average Annual Waterfowl Use Days for the North Platte National Wildlife Refuge (includes Lake Minatare proper which is no longer part of the Refuge but adjoins the Lake Minatare Unit and is closed as a fall-winter sanctuary under agreement with Reclamation and NGPC).

Species	Average Annual Use Days
Trumpeter Swan	24
White-fronted Goose	37
Snow Goose	373
Canada Goose	80,837
Total Goose Use Days	81,247
Common Merganser	158,340
Red Breasted Merganser	489
Hooded Merganser	480
Mallard	4,721,953
Gadwall	10,341
American Widgeon	16,843
Green-winged Teal	7,693
Blue-winged Teal	2,910
Shoveler	9,167
Pintail	13,359
Wood Duck	943
Redhead	8,293
Canvasback	2,143
Lesser Scaup	11,644
Ring-necked Duck	1,701
Common Goldeneye	174,780
Bufflehead	2,619
Ruddy	3,394
Total Duck Use Days	5,147,092
Total Waterfowl Use Days	5,228,363

North Platte Refuge is not a waterfowl production area. Only four species nest on the Refuge (Canada goose, wood duck, mallard, blue-winged teal). About 100 geese and 200 ducks, 95% of which are wood ducks, are raised to flight stage annually.

Table 3 indicates average annual marsh and water bird use for the Refuge. Herons and cormorants use the area primarily from March into November. A rookery on the Lake Alice Unit, idle since 1991, was occupied by about fifty herons and thirty cormorants; it is not known why the rookery was abandoned.

Table 3. Average Annual Marsh and Water Bird Use Days for the North Platte National Wildlife Refuge (includes Lake Minatare proper which is no longer part of the Refuge but adjoins the Lake Minatare Unit and is closed as a fall-winter sanctuary under agreement with Reclamation and the NGPC).

Species	Average Annual Use Days
Double Crested Cormorant	12,906
White Pelican	4,219
Great Blue Heron	10,732
Black-crowned Night Heron	2,706
Total Use Day	30,563

The heaviest use by shorebirds, gulls and terns occurs from March through November. Table 4 indicates average annual use by shorebirds and allied species.

Table 4. Average Annual Shorebird/Allied Species Use Days for the North Platte National Wildlife Refuge (includes Lake Minatare proper which is no longer part of the Refuge but adjoins the Lake Minatare Unit and is closed as a fall-winter sanctuary under agreement with Reclamation and NGPC).

Species	Average Annual Use Days
Herring Gull	3,084
Ring-billed Gull	220,324
Franklin's Gull	28,459
Bonaparte's Gull	615
Long-billed Dowitcher	455
Stilt Sandpiper	48
Bairds Sandpiper	4,246
Least Sandpiper	1,860
Marbled Godwit	168
Lesser Yellowleg	401
Willet	84
Killdeer	10,032
Total Use Days	269,776

Ring-necked pheasants and sharp-tailed grouse occur in small numbers, primarily on the Lake Alice and Winters Creek units. Bobwhite quail and wild turkey inhabit Stateline Island; the turkey population is estimated at 50.

Mammals

Larger mammals include raccoon, striped skunk, coyote, red fox, black-tailed prairie dog, badger, eastern fox squirrel, eastern cottontail, white-tailed deer, and mule deer. The Refuge Units are small and deer move on and off the Refuge throughout the year; peak numbers occur during winter and average about 50-60 mule deer and 10 white-tailed deer. Two black-tailed prairie dog towns on the Lake Minatare Unit were struck by bubonic plague in 1996. Their numbers are now rebounding.

Amphibians and Reptiles

The northern leopard frog is the most common amphibian. The bullsnake and western plains garter snake are the most common reptiles. The Refuge does not have a complete list of amphibians and reptiles and little is known about these species.

Fish

Refuge reservoirs are man-made and all fish have been introduced through stocking or have entered the lakes through the irrigation canals. Lake Alice dries up each winter following the irrigation season precluding an established fishery.

Invertebrates

Refuge habitats produce large numbers of invertebrates which form an important food base for migrating and nesting birds. The Refuge does not have an insect list and little is known about relative numbers or distribution.

3.4 Cultural Resources

The body of federal historic preservation laws has grown dramatically since the enactment of the Antiquities Act of 1906. Several themes recur in these laws, their promulgating regulations, and more recent Executive Orders. They include: 1) each agency is to systematically inventory the "historic properties" on their holdings and to scientifically assess each property's eligibility for the National Register of Historic Places; 2) federal agencies are to consider the impacts to cultural resources during the agencies' management activities and seek to avoid or mitigate adverse impacts; 3) the protection of cultural resources from looting and vandalism are to be accomplished through a mix of informed management, law enforcement efforts, and public education; and 4) the increasing role of consultation with stakeholders in addressing how a project or management activity may impact specific archaeological sites and landscapes deemed important to these individuals and/or groups.

The U.S. Fish and Wildlife Service, like other federal agencies, is legally mandated to inventory, assess, and protect cultural resources located on those lands that the agency owns, manages, or controls. The Service's cultural resource policy is delineated in the Fish and Wildlife Service Manual: 614 FW 1-5 and 126 FW 1-3. In the Service's Mountain/Prairie Region, the cultural resource review and compliance process is initiated by contacting the Regional Archaeologist. The Regional Archaeologist will determine whether the proposed undertaking has the potential to impact cultural resources, identify the "area of potential effect," determine the appropriate level of scientific investigation necessary to ensure legal compliance, and initiates consultation with the pertinent State Historic Preservation Office (SHPO) and federally recognized Tribes.

The lake units lie north of the Oregon Trail and 10 miles northeast of the Scotts Bluff National Monument. Construction of the lakes took place in the early 1900's. No significant historic, prehistoric or paleontological resources have been identified within the North Platte Refuge.

The Bureau of Reclamation funded a cultural resources survey in 2003 which included a study of the Lake Alice Unit. Results of this survey indicated that this area was not of cultural significance (Swenson 2004).

3.5 Socio-economic

The approximate population of Scotts Bluff County is 36,000. Of this number, 26,000 live in the nine communities within the county. The twin cities of Scottsbluff/Gering have a combined population of 22,900. The entire county population lives within twenty miles of a Refuge unit.

According to the Northeast Panhandle Economic Development Report (Panhandle Area Dev. Dist., ca 1998), the population of Scotts Bluff County will increase to about 41,200 by 2010 (up 12.6 percent). The population of the 11-county Northeast Panhandle will increase from 90,500 in 1997 to 95,350 in 2020 (up 5.1 percent).

Scottsbluff/Gering is a regional trade center for the Nebraska Panhandle and parts of eastern Wyoming. Agriculture is the primary economic activity. Major crops are sugar beets, beans, corn and alfalfa. Beef production is an important trade. Construction, manufacturing and retail merchandising are increasing in importance.

Public Use

All four Refuge units are open during daylight hours for wildlife observation and photography, interpretation and environmental education, fishing, hiking, canoeing, boating (no internal combustion motors), and mushroom and berry picking. The Lake Minatare, Winters Creek and Lake Alice Units are closed during portions of the fall and winter to provide sanctuary for migrating birds. Stateline Island is open year-round.

About 4,500 people visit the Refuge annually; about 90 percent are from local communities. Visitors often engage in more than one activity and an approximate breakdown by activity is: wildlife observation/interpretation (2,100); environmental education (1,400); and fishing (1,900). In addition, Refuge staff present off-site educational programs to about 1,100 people annually, mostly students.

Visitor facilities are limited. Interior Refuge roads are two-track trails which are difficult to travel when wet. Mowed parking areas are located near fishing access points, including a boat launch at Winters Creek. Five information kiosks with leaflet dispensers are located at Refuge entrances. No restroom facilities are provided. Refuge entrances and boundaries are signed.

The adjoining Lake Minatare State Recreation Area (SRA) is managed by the Nebraska Game and Parks Commission through a lease with the Bureau of Reclamation. It is open for public use from January 15 to October 15 and closed the rest of the year under agreement with the Service as a sanctuary for migrating and wintering birds. NGPC estimates that the area receives 250,000 to 325,000 visits annually (McCoy, personal communication). These visits are primarily for power boating and fishing, camping and swimming.

Chapter 4 Environmental Consequences

This chapter describes the known environmental consequences of implementing either of the two management alternatives in Chapter 2. When detailed information is available, a scientific and analytic comparison between alternatives and their anticipated consequences is presented, which is described as "impacts" or "effects." When detailed information is not available, comparisons are based on the professional judgment and experience of Refuge staff and Service and State biologists.[2]

4.1 Effects Common to Both Alternatives

Public Health and Safety – Each alternative would have similar effects or minimal to negligible effects on human health and safety.

Refuge Physical Environment - Impacts of each alternative on the Refuge physical environment would have similar minimal to negligible effects. Some disturbance to surface soils, topography, and vegetation would occur in areas selected for hunting, however effects would be minimal. The Refuge would also control access to minimize habitat degradation.

Impacts to the natural hydrology would have negligible effects. The Refuge expects impacts to air and water quality to be minimal and only due to Refuge visitors' automobile emissions and run-off from road and trail sides. The effect of these Refuge-related activities on overall air and water quality in the region are anticipated to be relatively negligible.

Impacts associated with solitude are expected to be minimal given time and space zone management techniques, such as seasonal access and area closures, used to avoid conflicts among user groups.

Cultural Resources - Hunting, regardless of method or species targeted, is a consumptive activity that does not pose any threat to historic properties on and/or near the Refuge. Vehicles will be restricted to existing roadways.

Facilities - Maintenance or improvement of existing facilities (i.e. parking areas, roads, and fences) will cause minimal short-term impacts to localized soils and vegetation and may cause some short-term wildlife disturbances. Maintenance of such facilities would be similar under either alternative.

4.2 Summary of Effects

Impacts to Habitat

[2] Hunting, as described in the proposed alternative, has been a permitted use on the Refuge since 2003. This has allowed managers and biologists the unique opportunity to gauge, first-hand, the environmental consequences of the proposed alternative.

No Action Alternative

Under this alternative, the Lake Alice Unit would not be opened to hunting opportunities. There are no known adverse impacts to habitat if the no action alternative was implemented. Prior to 2003, there was no hunting permitted on the Refuge. Habitat conditions were not found to be adversely or favorably impacted by the lack of hunting.

While a hunting public would not be traversing the Lake Alice Unit, other non-consumptive users would continue to do so, again, causing potential, but minimal, damage to individual plants.

Proposed Alternative

There are no known adverse impacts to habitat as a result of the Refuge hunting program.

In general, deer hunting is essential for the management of deer populations wherever the predominant historic predators are missing. However, Refuge units are small and scattered. Hunting pressure on adjoining private lands is adequate to keep local deer herds from exceeding their carrying capacity. Hunting deer is not considered a Refuge management tool for maintaining Refuge habitat objectives.

Although hunters traverse the Lake Alice Unit, which could cause damage to individual plants by trampling vegetation, such limited damage is indiscernible from that of the non-consumptive user.

Refuge hunting regulations would further protect habitat conditions: only portable or temporary tree stands would be permitted and, non-toxic shot would be required for hunting upland game with shotguns.

Impacts to Hunted Wildlife

No Action Alternative

Mortality of individual hunted animals would not occur under this alternative. Disturbance by hunters to hunted wildlife would not occur; however, other public uses that cause disturbance, such as wildlife observation and photography, would still be permitted.

Proposed Alternative

Additional mortality of individual hunted animals would occur under this alternative, estimated by Refuge staff to be a maximum of 2 deer harvested annually from the Lake Alice Unit. Estimates for other hunted species (squirrel, rabbit, pheasant, coyote, raccoon, opossum, long-tailed weasel, mink, fox, badger, and striped skunk) would be no more than 5 individuals per species. Hunting causes some disturbance to not only the species being hunted but other game species as well. However, time and space zoning established by Refuge regulations would minimize incidental disturbance.

Impacts to Non-hunted Wildlife

No Action Alternative

Disturbance by hunters to non-hunted wildlife would not occur; however, other public uses that cause disturbance, such as wildlife observation and photography, would still be permitted.

Proposed Alternative

Hunting causes some disturbance to not only the species being hunted but other non-hunted species as well. However, time and space zoning established by Refuge regulations would minimize incidental disturbance. Vehicles are restricted to one road and the harassment or taking of any wildlife other than the game species legal for the season is not permitted. Small mammals, including bats, are less active during the shortened hunting season at the Lake Alice Unit. These species are also generally nocturnal – active only when hunters (and other public users) are not present. Hibernation or torpor by cold-blood reptiles and amphibians also limits their activity during the hunting season. Disturbance to the daily activities of birds, such as feeding and resting, might occur, but would be transitory as hunters traverse habitat. Migratory waterfowl and shorebirds using the Lake Alice Unit during the limited hunting season are concentrated within the lakebed area where hunting is unlikely to occur. Disturbance to birds by hunters would be commensurate with that caused by non-consumptive users.

Impacts to Endangered and Threatened Species

No Action Alternative

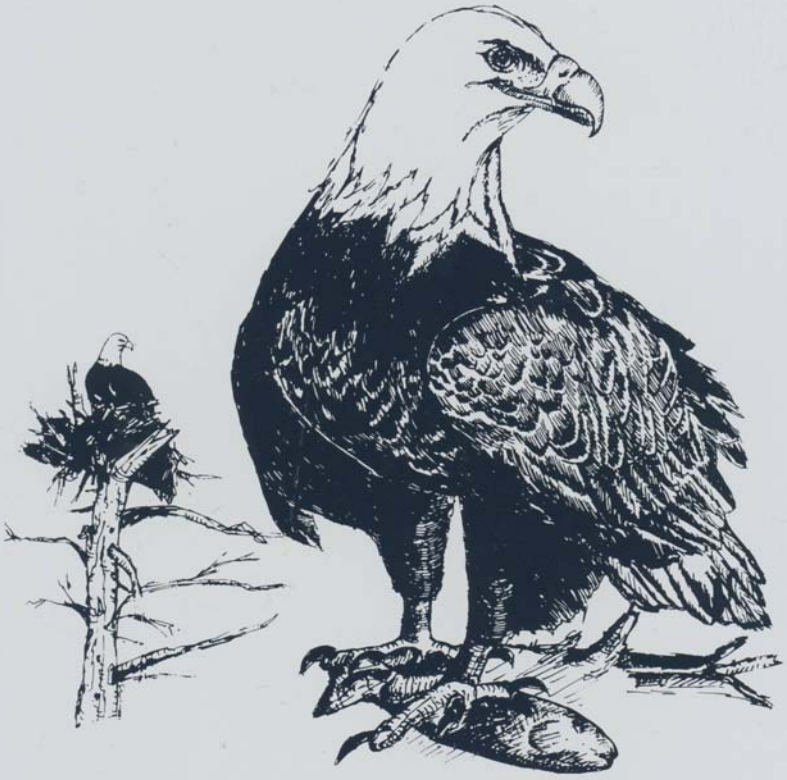
Under this alternative, hunting would not occur. Consequently, disturbance by hunters to bald eagles would not occur. However, other public uses that cause disturbance, such as wildlife observation and photography, would still be permitted. When the Lake Alice Unit bald eagle nest is active (usually mid-February through July) a "temporary eagle nest closure area" is designated (Figure 2) with appropriate signage (Figure 3). All public use activities are curtailed within the closure area during eagle nesting activities.

Proposed Alternative

The bald eagle is a federally listed threatened species which, at this writing, has been nominated for delisting. The Refuge was established, in part, because of the presence of wintering eagles. Numbers were never large (up to 24), but the Refuge remains a

WARNING

EAGLE NESTING AREA



PROHIBITED ACTIVITIES

Harassment of Eagles is prohibited by the Endangered Species Act of 1973 and the Bald Eagle Act of 1940. Harassment include trespassing beyond this sign, logging, construction, mining and the use of DDT, PCB, mercury, lead and other organochlorine pesticides.

FIGURE 3

consistent and important wintering area because of the large numbers of migrating and wintering mallards – a food source for bald eagles. One pair of bald eagles has nested on the Refuge since 1993, fledging 33 young from this single nest through 2006. This nest occurs on the Lake Alice Unit.

When the Lake Alice Unit bald eagle nest is active (usually mid-February through July) a "temporary eagle nest closure area" is designated with appropriate signage. All public use activities are curtailed within the closure area during eagle nesting activities. Proposed hunting opportunities would also be curtailed within the closure area when the eagle nest is active.

Studies of the Lake Alice eagle nest indicate that the predominate food source for nestlings include carp, prairie dog, and waterfowl. Prairie dog and waterfowl are not included among huntable species on the Refuge. However, non-toxic shot is required for hunting when shotguns are used for allowable game species.

Whooping cranes, a federally listed endangered species, have not been seen on the Refuge but are occasionally sighted nearby. In 1987, a lone bird was observed east of Scottsbluff and 12 miles north of Lake Minatare. One bird was seen among a flock of sandhill cranes just west of Scottsbluff in 1999. The exposed and shallow water beaches of Lake Minatare and Lake Alice are considered potential fall roosting sites.

A Section 7 Evaluation associated with the implementation of the Comprehensive Conservation Plan – 2001 (which included the proposal to open the Lake Alice Unit to limited hunting) was conducted and it was determined that the proposed action is not likely to adversely affect the listed endangered species.

Impacts to Refuge Facilities (road, parking areas, signs, fences)

No Action Alternative

Additional use and damage to roads and parking areas due to hunter use would not occur, however, other users would still be using the Lake Alice Unit thereby necessitating periodic facilities maintenance and continued law enforcement presence. Additionally, costs associated with a hunting program in the form of instructional sign needs and law enforcement would not be applicable.

Proposed Alternative

The limited hunt program, occurring on the Lake Alice Unit since 2003, has shown impacts to facilities to be minimal. There are some costs associated with the program in the form of instructional sign needs and law enforcement. These costs are minimal relative to total Refuge operations and maintenance costs and do not diminish resources dedicated to other management programs.

Impacts to Wildlife Dependant Recreation

No Action Alternative

The public would not have the opportunity to harvest a renewable resource, participate in wildlife-oriented recreation that is compatible with the purpose for which the Refuge was established, have an increased awareness of the North Platte NWR and the National Wildlife Refuge System; nor would the Service be meeting public use demand. Public relations would not be enhanced within the local community.

Proposed Alternative

The public would be allowed to harvest a renewable resource, and the Refuge would be promoting a wildlife-oriented recreational opportunity that is compatible with the purpose for which the Refuge was established. The public would have an increased awareness of the North Platte NWR and the National Wildlife Refuge System and public demand for more hunting opportunities would be enhanced. This alternative would also allow the public to enjoy hunting at little or no cost in a region where private land is often leased for hunting. This alternative would allow youth the opportunity to experience a wildlife-dependant recreational activity, instill an appreciation for and understanding of wildlife, the natural world and the environment and promote a positive land ethic and environmental awareness.

As public use levels expand over time, unanticipated conflicts between user groups may occur. Experience has proven that time and space zoning (e.g., establishment of separate use areas, use periods, and restrictions on the number of users) is an effective tool in eliminating conflicts between user groups. This also limits disturbance to wildlife during the spring and summer when most species reproduce. Conflicts between hunters and non-consumptive users might occur but would be mitigated by time (non-hunting season) and space zoning. The Refuge focus for non-consumptive use (mainly bird watching and other wildlife viewing) occurs within the other three Units (Minatare, Winters Creek, and Stateline Island) closed to hunting.

4.3 Cumulative Impacts Analysis

Anticipated Direct and Indirect Impacts of Proposed Action of Wildlife Species

Resident Wildlife

Nebraska Game and Parks Commission (NGPC) estimate the statewide, combined (mule and white-tailed) deer population at 320,000. The current 10-year, statewide harvest average (firearm and archery combined) is 46,556, or 14.5% of the herd. NGPC is seeing no cumulative impact to the state's deer population at this harvest rate. Deer hunting does not have regional population impacts due to restricted home ranges. Therefore, only local impacts occur. A maximum annual average of deer harvested from the Lake Alice Unit is estimated at 2, representing only a 0.004% increase in the total state harvest. An abbreviated (30-day) archery hunt on the 1,377-acre Lake Alice Unit should not have negative cumulative impacts on the deer herd.

Squirrel, rabbit, pheasant, coyote, raccoon, opossum, long-tailed weasel, mink, fox, badger, and striped skunk cannot be affected regionally by Refuge hunting because of their limited home ranges. Only local effects will be discussed. Cumulative adverse impacts to these species are unlikely considering 1) only youth (with non-hunting mentors) are allowed to hunt small game/furbearers on the Refuge and, 2) studies have shown that small game/furbearers are not affected by hunting, but rather are limited by food resources.

Preparers of this assessment consulted with biologists from NGPC regarding the cumulative impacts of hunting small game and furbearers. The table below depicts statewide annual harvest estimates for various small game and furbearers along with an estimate of harvest from the Refuge and the resulting increase in the statewide harvest.

Table 5. Cumulative Impact Data for Hunting Furbearer and Small Game on the North Platte National Wildlife Refuge.

	Avg. Annual Statewide Harvest	Expected Annual Refuge Harvest	% Increase in Statewide Harvest
Pheasants	753,509	<5	0.001
Mink	6,719*	<2	0.03
Opossum	9,630*	<1	0.01
Cottontail	233,294	<5	0.002
Jackrabbit	37,372	<1	0.003
Squirrel	119,360	<5	0.004
Red Fox	1,599*	<1	0.06
Badger	1,493*	<1	0.07
Skunk	9,674*	<1	0.01
Coyote	16,869	<2	0.01
Raccoon	60,310*	<2	0.003

*The vast majority of this species is harvested, statewide, through trapping. Trapping is not proposed for the Refuge. Youth hunting with firearms for this species would be rare.

Because of the October 15 to January 14 public use closure at Lake Alice and hunting of the above furbearer and small game species limited to youth only, during daylight hours only, there is not expected to be any negative cumulative impacts on these species as a result of the proposed Refuge hunt.

Non-hunted Wildlife

Non-hunted wildlife would include migratory birds (waterfowl, shorebirds, songbirds, etc.); small mammals (voles, moles, mice, etc.); reptiles and amphibians; and invertebrates (insects). Except for migratory birds and some species of migratory bats and insects, these species have very limited home ranges and hunting could not affect their populations regionally, thus, only local effects will be discussed.

Disturbance to migratory birds could have regional, local, and flyway effects. However, disturbance by hunting to migratory birds should not have cumulative negative impacts for the following reasons. Hunting season would not coincide with the nesting season. Disturbance to the daily wintering activities, such as feeding and resting, of birds might occur. Migratory waterfowl and shorebirds using the Refuge during the limited hunting season are concentrated within the lakebed area where hunting would not be expected to occur. Disturbance to birds by hunters would probably be commensurate with that caused by non-consumptive users.

Disturbance by hunting to non-hunted wildlife would be the most likely negative cumulative impact. However, disturbance would be unlikely for the following reasons. Small mammals, including bats, are less active during the shortened hunting season at the Lake Alice Unit. These species are also generally nocturnal – active only when hunters (and other public users) are not present. Hibernation or torpor by cold-blood reptiles and amphibians also limit their activity during the hunting season. Hunters would rarely encounter reptiles and amphibians during most of the hunting season. Encounters with reptiles and amphibians in the early fall are few and should not have cumulative negative effects on reptile and amphibian populations. Invertebrates are also not active during cold weather and would have few interactions with hunters during the hunting season. The Refuge estimates hunter density on peak days to be no more than 1 hunter per 1,000 acres. During the vast majority of the hunting season, hunter density is expected to be even lower. Refuge regulations further mitigate possible disturbance by hunters to non-hunted wildlife. Vehicles are restricted to roads and the harassment or taking of any wildlife other than the game species legal for the season is not permitted.

Although ingestion of lead-shot by non-hunted wildlife could be a cumulative impact, it is not relevant to the North Platte NWR because the use of lead shot would not be permitted on the Refuge for any type of hunting.

Some species of bats, butterflies and moths are migratory. Cumulative effects to these species at the “flyway” level should be negligible. These species are in torpor or have completely passed through the area by the hunting season. Some hunting occurs during September and October when these species are migrating; however, hunter interaction would be commensurate with that of non-consumptive users.

Endangered Species

The bald eagle is a federally listed threatened species which, at this writing, has been nominated for delisting. Whooping cranes, a federally listed endangered species, have not been seen on the Refuge but are occasionally sighted nearby. The exposed and shallow water beaches of Lake Minatare and Lake Alice are considered potential fall roosting sites.

The Refuge was established, in part, because of the presence of wintering eagles. One pair of bald eagles has nested on the Lake Alice Unit since 1993. Nesting occurs outside of the hunting season. When the Lake Alice Unit bald eagle nest is active (usually mid-February through July) a "temporary eagle nest closure area" is designated with appropriate signage. All public use activities, including hunting, are curtailed within the closure area during eagle nesting activities.

Disturbance to bald eagles could have regional, local, and flyway effects. However, disturbance by hunting to bald eagles should not have cumulative negative impacts for the following reasons. Hunting season would not coincide with the nesting season. Disturbance to the daily wintering activities, such as feeding and resting, of eagles might occur. Disturbance to eagles by hunters would probably be commensurate with that caused by non-consumptive users.

A Section 7 Evaluation associated with the implementation of the Comprehensive Conservation Plan – 2001 (which included the proposal to open the Lake Alice Unit to limited hunting) was conducted and it was determined that the proposed action is not likely to adversely affect the listed endangered species.

Anticipated Direct and Indirect Impacts of Proposed Action on Refuge Programs, Facilities, and Cultural Resources

Wildlife-Dependant Recreation

As public use levels expand over time, unanticipated conflicts between user groups may occur. Experience has proven that time and space zoning (e.g., establishment of separate use areas, use periods, and restrictions on the number of users) is an effective tool in eliminating conflicts between user groups. This also limits disturbance to wildlife during the spring and summer when most species reproduce. Conflicts between hunters and non-consumptive users might occur but would be mitigated by time (non-hunting season) and space zoning. The Refuge focus for non-consumptive use (mainly bird watching and other wildlife viewing) occurs within the other three Units (Minatare, Winters Creek, and Stateline Island) closed to hunting.

Refuge Facilities

The Service defines facilities as: "real property that serves a particular function(s) such as buildings, roads, utilities, water control structures, raceways, etc." Under the proposed action those facilities most utilized by hunters are: roads, parking lots, and signage. Maintenance or improvement of existing facilities will cause minimal short term impacts to localized soils and may cause some wildlife disturbances and damage to vegetation. The facility maintenance and improvement activities described are periodically

conducted to accommodate daily Refuge management operations and general public uses such as wildlife observation and photography. These activities will be conducted at times (seasonal and/or daily) to cause the least amount of disturbance to wildlife. During times when roads are impassible due to flood events or other natural causes those roads and parking areas impacted by the event will be closed to vehicular use.

Cultural Resources

Hunting, regardless of method or species targeted, is a consumptive activity that does not pose any threat to historic properties on and/or near the Refuge. Hunting on Refuges is not a federal undertaking that requires compliance with Section 106 of the National Historic Preservation Act. Consultation with the pertinent State Historic Preservation Office is not required.

Anticipated Impacts of Proposed Hunt on Refuge Environment and Community

Adverse impacts of the proposed alternative to the Refuge environment which consists of soils, vegetation, air quality, water quality and solitude are not expected. The Refuge controls access to minimize habitat degradation.

The Refuge expects impacts to air and water quality to be minimal and only due to Refuge visitors' automobile emissions. The effect of these Refuge-related activities, as well as other management activities, on overall air and water quality in the region are anticipated to be relatively negligible.

Impacts associated with solitude are expected to be minimal given time and space zone management techniques used to avoid conflicts among user groups, such as seasonal access and area closures.

The Refuge would work closely with private partners to minimize impacts to adjacent lands and its associated natural resources, however, no indirect or direct impacts have been noticed nor are anticipated. It is expected that the new hunts will result in a net gain of public hunting opportunities positively impacting the general public, nearby residents, and Refuge visitors. The Refuge expects increased visitation and tourism to bring additional revenues to the local community but not a significant increase in overall revenue in any area.

Other Past, Present, Proposed, and Reasonably Foreseeable Hunts and Anticipated Impacts

Cumulative effects on the environment result from incremental effects of a proposed action when these are added to other past, present, and reasonably foreseeable future actions. While cumulative effects may result from individually minor actions, they may, viewed as a whole, become substantial over time. The hunt plan has been designed so as to be sustainable through time given relatively stable conditions. Changes in Refuge conditions, such as sizeable increases in Refuge acreage or public use, are likely to change the anticipated impacts of the current plan and would trigger a new hunt planning and assessment process.

The implementation of the proposed alternative described in this assessment includes actions relating to the Refuge hunt program (Hunting Plan, 2002). These actions would have both direct and indirect effects; however, the cumulative effects of these actions are expected to be insignificant. The Refuge staff does not foresee any changes to the proposed action in the way of increasing the intensity of hunting in the future.

Anticipated Impacts if Individual Hunts are Allowed to Accumulate

National Wildlife Refuges conduct hunting programs within the framework of State and Federal regulations. As proposed, the North Platte NWR hunting program would be considerably more restrictive than the State of Nebraska. By maintaining hunting regulations that are as, or more, restrictive than the State, individual Refuges ensure that they are maintaining seasons which are supportive of management on a more regional basis. The hunt plan has been reviewed and is supported by the Nebraska Game and Parks Commission. Additionally, Refuge staff coordinate with NGPC officials annually to maintain regulations and programs that are consistent with the State management program.

Chapter 5 Consultation and Coordination with Others

The Nebraska Game and Parks Commission (NGPC) concur and fully support the regulated consumptive public use of the natural resources associated with the North Platte NWR. The US Fish and Wildlife Service also provided an in depth review by the Regional Office personnel and staff biologists. Numerous contacts were made throughout the area of the Refuge soliciting comments, views, and ideas into the development of the 2002 Hunting Plan.

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U.S. Fish & Wildlife Service

Appendix A

North Platte

National Wildlife Refuge

Hunting Regulations

About the Refuge

North Platte National Wildlife Refuge (NWR) was established on August 21, 1916, as a preserve and breeding ground for native birds. This 2,722-acre Refuge is one of over 540 refuges in the National Wildlife Refuge System, a network of lands set aside specifically for wildlife and managed by the U.S. Fish and Wildlife Service. The Refuge consists of four separate units: Winters Creek, Lake Alice, Stateline Island, and portions of Lake Minatare. The Lake Alice Unit is the only unit open for recreational hunting opportunities. Please familiarize yourself with the following information to help ensure a safe and enjoyable visit.

General Regulations

- During the hunting season, the Lake Alice Unit is open to archery deer hunting and a youth-only hunt for squirrel, rabbit, pheasant, coyote, raccoon, opossum, long-tailed weasel, mink, fox, badger, and striped skunk. No other species may be taken. All other Refuge units are closed to hunting.
- Federal and State hunting regulations apply.
- Although the Refuge is closed to public use from sunset to sunrise, archery deer hunters can enter the Lake Alice Unit one hour prior to sunrise and remain on the Unit until one hour after sunset. Youth hunters and their guides can also enter the Lake Alice Unit one hour prior to sunrise.
- The entire Lake Alice Unit is closed to all public entry from October 15 through January 14 to provide undisturbed habitat during peak waterfowl and eagle use.
- When nesting bald eagles are active on the Lake Alice Unit, an area of the Unit stays closed to all public entry to adequately provide for the needs of this protected species. The Temporary Eagle Closure Area will be marked with signs similar to that shown on the map. If an area is not signed, you can hunt the entire unit.
- To protect wildlife habitat, vehicles must stay on designated roads only. Designated "Service" roads are closed to public vehicle use. Parking is available at the Refuge entrance and near the northeast corner of the lake.
- Hunting dogs are allowed on the Refuge only during the youth-only hunt. Otherwise, all pets must be confined to vehicles.
- Possession of alcoholic beverages is prohibited.
- All firearms, including bow and arrow, must be unloaded and cased or dismantled while being transported by vehicle.
- Target shooting is prohibited.

Youth-Only Hunting

- Hunters must be 15 years of age or younger. Resident youth hunters do not need a license, but those ages 12 to 15 are required to carry a hunter education certification card while hunting. Non-resident youths are required to have a current Nebraska hunting permit and habitat stamp. Youth hunters must be accompanied by a licensed hunter 19 years old or older. Adults accompanying youth hunters are not allowed to hunt or to carry firearms. The accompanying adult is responsible for ensuring that the youth hunter does not violate Federal or State regulations. The youth-only hunt takes only squirrel, rabbit, pheasant, coyote, raccoon, opossum, long-tailed weasel, mink, fox, badger, and striped skunk. No other species may be taken.
- Shotgun hunters must use non-toxic shot.

Archery Deer Hunting at Lake Alice

- Archery deer hunting is open to hunters of all ages as per State hunting regulations. Archery deer hunters can use portable tree stands and hunting blinds. They may be installed no more than seven (7) days prior to the season and must be removed no later than October 14. Tree stands may not injure the trees. Screw-in steps, bolts, nails, wire, or other objects that penetrate the bark of the tree cannot be used.

Accessibility Information

Equal opportunity to participate in and benefit from programs and activities of the U.S. Fish and Wildlife Service is available to all individuals regardless of physical or mental ability. Dial 7-1-1 for a free connection to the State transfer relay service for TTY and voice calls to and from the speech and hearing impaired. For more information or to address accessibility needs, please contact Refuge staff at 308 / 635 7851 or the U.S. Department of the Interior, Office of Equal Opportunity, 1849 C Street, NW, Washington, D.C. 20240.

North Platte National Wildlife Refuge
115 Railway St., Suite C109
Scottsbluff, NE 69361
308 / 635 7851
crescentlake@fws.gov
http://crescentlake.fws.gov

For State transfer relay service
TTY / Voice: 711

U.S. Fish and Wildlife Service
http://www.fws.gov

For Refuge Information
1 800 / 344 WILD

March 2004

This goose, designed by J.N. "Ding" Darling, has become the symbol of the National Wildlife Refuge System.

Appendix B Literature Cited/References

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U.S. Fish and Wildlife Service, August 2001. North Platte National Wildlife Refuge Comprehensive Conservation Plan. 83pp

U.S. Fish and Wildlife Service, November 2002. North Platte National Wildlife Refuge Hunting Plan. 13pp

Appendix C List of Plants and Animals Found on the North Platte NWR

Birds Names are the English - or common - name, in accordance with the American Ornithological Union check list. Birds known to nest on the Refuge are marked with a closed dot (●). Those suspected to nest at least occasionally, but needing further confirmation, are marked with an open dot (○).

Loons
Pacific Loon
Common Loon

Grebes
○Pied-billed Grebe
Horned Grebe
Red-necked Grebe
Eared Grebe
Western Grebe
Clark's Grebe

Pelicans
American White Pelican

Cormorants
●Double-crested Cormorant

Bitterns, Herons
American Bittern
●Great Blue Heron
Great Egret
Cattle Egret
Green Heron
●Black-crowned Night Heron
Yellow-crowned Night Heron

Ibis
White-faced Ibis

Swans
Tundra Swan
Trumpeter Swan

Geese
Greater White-fronted Goose
Snow Goose
Ross' Goose
●Canada Goose

Ducks
●Wood Duck
Green-winged Teal
●Mallard
Northern Pintail
●Blue-winged Teal
Cinnamon Teal
Northern Shoveler
Gadwall
American Widgeon
Canvasback
Redhead
Ring-necked Duck
Lesser Scaup
Oldsquaw
Surf Scoter
White-winged Scoter
Common Goldeneye
Barrow's Goldeneye
Bufflehead
Hooded Merganser
Common Merganser
Red-breasted Merganser
Ruddy Duck

Vultures
Turkey Vulture

Hawks, Kites, Eagles
Osprey
●Bald Eagle
Northern Harrier
Sharp-shinned Hawk
Cooper's Hawk
Northern Goshawk
Red-shouldered Hawk
Broad -winged Hawk
Harris's Hawk
Swainson's Hawk
●Red-tailed Hawk
Ferruginous Hawk
Rough-legged Hawk
Golden Eagle

Gallinaceous Birds
○Ring-necked Pheasant
○Sharp-tailed Grouse
●Wild Turkey
○Northern Bobwhite

Rails, Gallinules
Virginia Rail
Sora
●American Coot

Cranes
Sandhill Crane

Plovers
Black-bellied Plover
Semipalmated Plover
○Killdeer

Stilt, Avocet
Black-necked Stilt
American Avocet

Sandpipers
Greater Yellowlegs
Lesser Yellowlegs
Solitary sandpiper
Willet
Spotted Sandpiper
Upland Sandpiper
Long-billed Curlew
Marbled Godwit
Ruddy Turnstone
Sanderling
Semipalmated Sandpiper
Western Sandpiper
Least Sandpiper
White-rumped Sandpiper
Baird's Sandpiper
Pectoral Sandpiper
Dunlin
Stilt Sandpiper
Buff-breasted Sandpiper
Long-billed Dowitcher
Common Snipe

Phalarope
Wilson's Phalarope
Red-necked Phalarope

Gulls
Franklin's Gull
Bonaparte's Gull
Ring-billed Gull
California Gull
Herring Gull
Glaucous Gull
Black-legged Kittiwake
Sabine's Gull

Terns
Caspian Tern
Common Tern
Forster's Tern
Black Tern

Pigeons, Doves, Parakeet
Rock Dove
●Mourning Dove

Cuckoos
Yellow-billed Cuckoo

Owls
Barn Owl
●Eastern Screech-Owl
●Great Horned Owl

Goatsucker
○Common Nighthawk
Common Poorwill

Kingfisher
○Belted Kingfisher

Woodpeckers
○Red-headed Woodpecker
Red-naped Sapsucker
●Downy Woodpecker
Hairy Woodpecker
●Northern Flicker

Flycatchers
Olive-sided Flycatcher
○Western Wood-Pewee
Willow Flycatcher
Least Flycatcher
Cordilleran Flycatcher
Say's Phoebe
Great Crested Flycatcher
Cassin's Kingbird
●Western Kingbird
○Eastern Kingbird

Lark
●Horned Lark

Swallows
●Tree Swallow
Violet-green Swallow
○Northern Rough-winged Swallow
Bank Swallow
●Cliff Swallow
●Barn Swallow

Jays, Magpies, Crows, Ravens
●Blue Jay
Pinyon Jay
●Black-billed Magpie
●American Crow

Chickadees
●Black-capped Chickadee
Mountain Chickadee

Nuthatches
Red-breasted Nuthatch
○White-breasted Nuthatch

Creeper
Brown Creeper

Wrens, Dippers
Rock Wren
●House Wren
Marsh Wren

Kinglets
Golden-crowned Kinglet
Ruby-crowned Kinglet

Thrushes, Bluebirds
Eastern Bluebird
Mountain Bluebird
Townsend's Solitaire
Veery
Swainson's Thrush
Hermit Thrush
●American Robin
Varied Thrush

Thrashers
Gray Catbird
Sage Thrasher
●Brown Thrasher

Pipits
American Pipit

Waxwings
Cedar Waxwing

Shrikes
Northern Shrike
○Loggerhead Shrike

Starling
○European Starling

Vireos
●Warbling Vireo
○Red-eyed Vireo

Warblers
Tennessee Warbler
Orange-crowned Warbler
●Yellow Warbler
Yellow-rumped Warbler
Townsend's Warbler
Blackpoll Warbler
American Redstart
Ovenbird
○Common Yellowthroat
Wilson's Warbler
Yellow-breasted Chat

Tanagers
Western Tanager
Black-headed Grosbeak

Grosbeaks
Blue Grosbeak

Towhee, Sparrows
Spotted Towhee
American Tree Sparrow
Chipping Sparrow
Clay-colored Sparrow
Field Sparrow
Vesper Sparrow
●Lark Sparrow
○Lark Bunting
Savannah Sparrow
Baird's Sparrow
●Grasshopper Sparrow
●Song Sparrow
Lincoln's Sparrow
Swamp Sparrow
White-throated Sparrow
White-crowned Sparrow
Harris' Sparrow

Dark-eyed Junco
McCown's Longspur
Lapland Longspur
Chestnut-collared Longspur

Blackbirds, Orioles
Bobolink
●Red-winged Blackbird
●Western Meadowlark
●Yellow-headed Blackbird
Brewer's Blackbird
●Common Grackle
●Brown-headed Cowbird
●Orchard Oriole
Baltimore Oriole
●Bullock's Oriole

Finches
Gray-crownded Rosy Finch
House Finch
Red Crossbill
Pine Siskin
○American Goldfinch

Old World Sparrow
●House Sparrow

Mammals - A thorough investigation of what mammals can be found utilizing the Refuge has not been conducted. The following list of Refuge mammals has been compiled from casual observations made in the past by staff and/or stakeholders.

Small-footed myotis	*Myotis lucifugus*
Silver-haired bat	*Lasionycteris noctivagans*
Big brown bat	*Eptesicus fuscus*
Hoary bat	*Lasiurus cinereus*
Deer mouse	*Peromyscus manicualatus*
Hispid pocket mouse	*Perognathus hispidus*
Ord kangaroo rat	*Dipodomys ordii*
Plains harvest mouse	*Reithrodontomys montanus*
Muskrat	*Ondatra zibenthicus*
Beaver	*Castor canadensis*
Racoon	*Procyon lotor*
Coyote	*Canis latrans*
Mink	*Mustela vision*
Opossum	*Didelphis virginiana*
Badger	*Taxidea taxus*
Red fox	*Vulpes vulpes*
Mule deer	*Odocoileus hemionus*
White-tailed deer	*Odocoileus virginianus*
Eastern cottontail	*Sylvilagus floridanus*
Fox squirrel	*Sciurus niger*
Black-tailed prairie dog	*Cynomys ludovicianus*
Striped skunk	*Mephitis mephitis*

Amphibians and Reptiles - A thorough investigation of what amphibians and reptiles can be found utilizing the Refuge has not been conducted. The following list of Refuge amphibians and reptiles has been compiled from casual observations made in the past by staff and/or stakeholders.

Tiger Salamander	*Ambystoma tigrinum*
Western Chorus Frog	*Pseudacris triseriata*
Bullfrog	*Rana catesbeiana*
Northern Leopard Frog	*Rana pipiens*
Common Snapping Turtle	*Chelydra serpentina*
Prairie Racerunner	*Cnemidophorus sexlineatus*
Bullsnake	*Pituophis catenifer*
Plains Garter Snake	*Thamnophis radix*
Prairie Rattlesnake	*Crotalus viridis*

Fish - Refuge reservoirs are man made, thus all fish have been introduced, either intentionally or otherwise. Unintentional fish enter the lakes via the inlet canals each year when water is diverted into the reservoirs. Intentional introductions are those game fish stocked for recreational purposes at Winters Creek Lake. Fish species include carp, walleye, yellow perch, white bass, catfish, carp sucker, and bullhead. A variety of native and introduced fish species can be found using the North Platte River at Stateline Island. Such species would include carp, bullhead, and catfish.

Mollusk - A thorough investigation of what mollusks use the Refuge has not been conducted. According to Steve Schainost, Fisheries Research Specialist (NGPC), two mussels have been found in Lake Minatare; paper floater (*Anodonta imbecillis*) and giant floater (*Anodonta grandis*). A third mussel, cylindrical papershell (*Anodontoides ferussacianuf*), is a likely resident but has not yet been documented.

Flora - The following list of plants found on the Refuge was compiled by seasonal Biological Technician, Pam Orr in 1993. The list of 179 plants, while useful, is not intended to be comprehensive.

(Scientific Name-Common Name)

Abronia fragrans	Heart's-delight
Agropyron cristatum	Crested Wheatgrass
Agropyron elongatum	Tall Wheatgrass
Agropyron smithii	Western Wheatgrass
Allium canadense	Wild Onion
Althaea	Hollyhock
Ambrosia tomentosa	Perennial Bursage
Ambrosia trifida	Giant Ragweed
Andropogon gerardi	Sand Bluestem
Apocynum cannabinum	Indian Hemp Dogbane
Arenaria hookeri	Sandwort
Argemone polyanthemos	Prickly Poppy
Artemisia frigida	Fringed Sage
Asclepias incarnate	Swamp Milkweed
Asclepias pumila	Low Milkweed
Asclepias speciosa	Showy Milkweed
Asparagus officinalis	Garden Asparagus-fern
Aster ericoides	White Aster
Aster praealtus v.nebraska	Willowleaf Aster
Aster simplex	Panicled Aster
Aster tanacetifolius	Tansyleaf Aster
Astragalus adsurgens	Prairie Milk-vetch
Astragalus crassicarpus	Ground Plum
Astragalus mollissimus	Woolly Locoweed
Bouteloua gracilis	Blue Grama
Bromus inermis	Smooth Brome
Bromus tectorum	Downy Brome
Calamovilfa longifolia	Prairie sandreed
Calvatia cyathiformis	Puff Ball
Calylophus serrulatus	Tooth-Leaved Evening Primrose
Cardamine	Bitter Cress
Carduus nutans	Musk Thistle
Carex helnoshemsis	Nebraska Sedge
Carex lanuginosa	Wooly Sedge
Carex scoparia	Broom Sedge
Carex stricta	Strict Sedge
Carex vesicaria	Inflated Sedge
Carex vulpinoidea	Fox Sedge
Cenchrus incertus	Field Sandbur
Chenpodium gigantospermum	Maple Leaf Goosefoot
Chorispora tenella	Blue Mustard
Chrysopsis villosa	Golden Aster

Cirsium arvense	Canada Thistle
Cirsium canescens	Platte Thistle
Cirsium flodmanii	Flodman's Thistle
Cirsium ochrocentrum	Yellow Spine Thistle
Cirsium vulgare	Bull Thistle
Cleome serrulata	Rocky Mountain Bee Plant
Conium maculatum	Poison Hemlock
Convolvulus arvensis	Field Bindweed
Conyza canadensis	Horseweed
Coryphantha vivipara	Pincushion cactus
Crepis rundinata	Dandelion Hawksbeard
Croton texensis	Texas Croton
Cryptantha thyrsiflora	Miner's Candle
Dactylis glomerata	Orchardgrass
Dalea candida	White Prairie Clover
Dalea cylindriceps	Massive Spike Prairie Clover
Dalea purpurea	Purple Prairie Clover
Delphinium virescens	Plains Larkspur
Descurainia pinnata	Tansy Mustard
Descurainia sophia	Flixweed
Dyssodia papposa	Fetid Marigold
Echinocystis lobata	Wild Cucumber
Elaeagnus angustifolia	Russian olive
Eleocharis erythropoda	Red-Stemmed Spike Sedge
Elymus canadenis	Canada Wildrye
Equisetum hyemale	Scouring Rush
Eragrostis trichodes	Sand Lovegrass
Erigeron pumilus	Low Fleabane
Eriogonum annuum	Umbrella Plant
Erysimum asperum	Western Wall Flower
Euphorbia dentata	Wild Poinsettia
Euthamia graminifolia	Grassleaf Goldenrod
Franseria discolor	Skeleton-leaf Bursage
Fraxinus pennsylvanica	Green Ash
Gaura coccinea	Scarlet Gaura
Gaura parviflora	Velvety Gaura
Gleditsia triacanthos	Honey Locust
Glycyrrhiza lepidota	Wild Licorice
Grindelia squarrosa	Curly-top Gumweed
Gutierrezia sarothrae	Broom Snakeweed
Haplopappus spinulosus	Cutleaf Goldenweed
Helianthus annuus	Common Sunflower
Helianthus petiolaris	Plains Sunflower
Hesperis matronalis	Dames Rocket
Hordeum jubatum	Foxtail Barley
Ipomoea leptophylla	Bush morning-glory
Iva axillaris	Marsh Elder
Juncus balticus	Baltic Rush
Juncus torreyi	Torrey's Rush
Koeleria pyramidata	Prairie Junegrass
Kuhnia eupatorioides	False Boneset
Lactuca pulchella	Blue Lettuce
Lactuca serriola	Prickly Lettuce
Lathyrus polymorphus	Hoary Vetchling
Lepidium virginicum	Virginia Pepperweed
Lesqterella ludoviciana	Silvery Bladderpod
Liatris punctata	Dotted Gayfeather
Linum suloatum	Grooved Flax
Lippia cuneifolia	Wedgeleaf Fog-fruit

Lithospermum	Puccoon
Lithospermum carolinense	Hairy Puccoon
Lupinus argenteus	Silvery Lupine
Lycopus americanus	Water Horehound
Lycopus uniflorus	Northern Bugleweed
Lygodesmia juncea	Skeletonweed
Medicago sativa	Alfalfa (cultivated)
Melilotus officinalis	Yellow Sweet Clover
Mentha arvensis	Wild Mint
Mentzelia decapetala	Ten-petaled
Mentzelia Mirabilis hirsuta	Hairy Four-o'clock
Mirabilis linearis	Narrowleaf Four-o'clock
Mirabilis nyctaginea	Wild Four-o'clock
Monarda pectinate	Plains Beebalm
Muhlenbergia asperifolia	Alkali Muhly
Myriophyllum verticillatu	Whorled Water-milfoil
Nepeta cataria	Catnip
Oenothera biennis	Common Evening Primrose
Oenothera coronapifolia	Combleaf Evening Primrose
Oenothera nuttallii	White-Stemmed Evening Primrose
Oenothera speciosa	Showy Evening Primrose
Onopordum acanthium	Scotch Thistle
Opuntia	Prickly Pear Cactus
Oryzopsis hymenoides	Indian Ricegrass
Oxytropis lambertii	Lambert Crazyweed
Panicum capillare	Witchgrass
Panicum virgatum	Switchgrass
Penstemon albidus	White Penstemon
Penstemon angustifolius	Narrowleaf Penstemon
Penstemon canescens	Gray Beardstongue
Physalis subglabrata	Smooth Ground Cherry
Plantago major	Broadleaf Plantain
Plantago purshii	Woolly Plaintain
Poa compressa	Canada Blue Grass
Polanisia trachysperma	Roughseed Clammyweed
Polygonum	Smartweed
Polygonum ramosissimum	Tall Knotweed
Populas deltoides	Eastern Cottonwood
Potentilla argentea	Silvery Cinquefoil
Psoralea argophylla	Silver-leaf Scurf Pea
Psoralea tenuiflora	Wild Alfalfa
Ranunculus	Buttercup
Ratibida columnifera	Prairie Coneflower
Ratibida pinnata	Grayhead Prairie Coneflower
Rorippa sinuata	Yellow Cress
Rosa woodsii	Western Wild Rose
Rumex crispus	Curly Dock
Rumex venosus	Wild Begonia
Russula variata	Mushroom
Salidago missouriensis	Prairie Goldenrod
Salix amygdaloides	Peach-leaf Willow
Saponaria officinalis	Bouncing Bet
Schizachyrium scoparium	Little Bluestem
Scirpus pungens	Three-square Bulrush
Scutellaria galericulata	Marsh Skullcap
Senecio plattensis	Prairie Ragwort
Sisymbrium altissimum	Tumble Mustard
Sisyrinchium montanum	Blue-eyed Grass
Smilacina stellata	False Solomon's Seal

Solanum americanum	Common Nightshade
Solanum dulcomara	Bittersweet Nightshade
Solanum rostratum	Buffalo Bur
Solidago canadensis	Canada Goldenrod
Sonchus asper	Spiny Sow Thistle
Sorghastrum nutans	Indiangrass
Spartina pectinate	Prairie Cordgrass
Sphaeralcea coccinea	Red False Mallow
Stipa comata	Needle and Thread
Tamarix ramosissima	Saltcedar
Teucrium canadense	American Germander
Thlaspi arvense	Field Pennycress
Tradescantia occidentalis	Prairie Spiderwort
Tragopogon dubius	Western Salsify
Tribulus terrestris	Puncturevine
Typha angustifolia	Narrow-leaf Cattail
Typha latifolia	Broadleaf Cattail
Verbascum thapsus	Common Mullein
Verbena bracteata	Prostrate Vervain
Verbena hastata	Blue Vervain
Verbena stricta	Hoary Vervain
Xanthium strumarium	Common Cocklebur

Appendix D Endangered, Threatened and Species of Management Concern

The following species are, or have been, found on the Refuge and are also identified as at least rare in Nebraska by the Nebraska Natural Heritage Program from a list last updated 5/23/96. Additionally, noted species have been listed in the USFWS's Migratory Nongame Birds of Management Concern (1995). These species are of concern because of (1) documented or apparent population declines, (2) small or restricted populations, or (3) dependence on restricted or vulnerable habitats. The status and habitat requirements of the following species will be given primary consideration when management actions are planned and implemented.

	Srank	USFWS's Species of Mgmt. Concern (SMC)
BIRDS		
Common Loon		SMC
American Bittern	S3	SMC
Black-crowned Night Heron	S2	
White-faced Ibis	S1	SMC
Trumpeter Swan	S2	SMC
Canvasback	S3	
Bald Eagle	S1	LT/T
Northern Harrier	S3	SMC
Sharp-shinned Hawk	S1	
Cooper's Hawk	S1	
Northern Goshawk		SMC
Red-shouldered Hawk	S1	
Swainson's Hawk	S3	
Ferruginous Hawk	S2	SMC
Golden Eagle	S3	
Merlin	S1	
Peregrine Falcon	S3	
Black-necked Stilt	S1	
Upland Sandpiper		SMC
Long-billed Curlew	S3	SMC
Common Snipe	S2	
Forster's Tern	S3	
Black Tern	S3	SMC
Barn Owl		SMC
Common Poorwill	S2	
Red-headed Woodpecker		SMC
Olive-sided Flycatcher		SMC
Cordilleran Flycatcher	S1	
Violet-green Swallow	S3	
Brown Creeper	S3	
Townsend's Solitaire	S2	
Veery		SMC
Sage Thrasher	S1	
Loggerhead Shrike		SMC
Savannah Sparrow	S3	
Baird's Sparrow		SMC
Grasshopper Sparrow		SMC
Swamp Sparrow	S3	
McCown's Longspur	S3	SMC
Chestnut-collared Longspur	S2	SMC

	Srank
PLANTS	
Wild Onion *Allium canadense*	S3
Perennial Bursage *Ambrosia tomentosa*	S1
Strict Sedge *Carex stricta*	S1

KEY

State Rank

S1 = Critically imperiled in Nebraska because of extreme rarity or because of some factor(s) making it especially vulnerable to extirpation from the state. (Typically 5 or fewer occurrences.)

S2 = Imperiled in Nebraska because of rarity (6 to 20 occurrences or few remaining individuals) or because of some factor(s) making it very vulnerable to extirpation from the state.

S3 = Rare and uncommon in Nebraska (on the order of 21 to 100 occurrences).

SA = Accidental or casual in Nebraska. Includes birds recorded once or twice or only at very great intervals, hundreds or even thousands of miles outside their usual range.

Federal Listing - As determined by the U.S. Fish and Wildlife Service

SMC = Species of Management Concern

LE = Listed Endangered

PE = Proposed for Listing as Endangered

LT = Listed Threatened

PT = Proposed for Listing as Threatened

State Listing - As determined by the Nebraska Game and Parks Commission

E = Endangered

T = Threatened