

Draft Environmental Assessment

for Small Game, Upland Game Bird and Big Game Hunting on Valentine National Wildlife Refuge

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Prepared by

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Date: January 18, 2020

This Environmental Assessment (EA) is being prepared to evaluate the effects associated with this proposed action and complies with the National Environmental Policy Act (NEPA) in accordance with Council on Environmental Quality regulations (40 Code of Federal Regulations [CFR] 1500–1509) and Department of the Interior (43 CFR 46; 516 DM 8) and United States (U.S.) Fish and Wildlife Service (Service) (550 FW 3) regulations and policies. NEPA requires examination of the effects of proposed actions on the natural and human environment.

1.0 Introduction

1.1 Proposed Action

The Service is proposing to expand hunting opportunities across the Valentine National Wildlife Refuge (NWR). The refuge consists of 72,350 acres total (67,828 open for hunting, 2,721 open to waterfowl hunting, 1,801 closed to hunting [see Figure 1]). We, the Service, propose to:

- Open hunting opportunities for new species.
 - Upland game (badger, bobcat, cottontail rabbit, fox, long-tail weasel, opossum, partridge, quail, raccoon, skunk, squirrel, and turkey) across the entire refuge. This would only be limited by the areas that are identified as administratively closed. Proposed for state alignment except for year-round date range because of disturbance to waterfowl nesting and for hours of day to restrict night time use of the refuge.
 - Big game (elk and pronghorn) hunting would be expanded in the same manner as upland game.
- Expand hunting opportunities.
 - Expand Migratory Bird hunting opportunities from 2,721 acres to almost 29,000 acres and cover these additional species: crow, snipe, rail, and woodcock.

Hunting would be expanded for upland game, big game, and migratory birds on the refuge in accordance with the 1999 Valentine NWR Comprehensive Conservation Plan (CCP). The refuge is located in the Sandhills of north-central Nebraska, and is a unique and ecologically important component of the National Wildlife Refuge System (Refuge System), which covers over 500 refuges totaling approximately 93 million acres across the United States. The native prairie and wetlands found here support a diversity of wildlife. Little has changed from historic times. Congress established the refuge in 1935 “as a breeding ground for migratory birds and other wildlife.” The refuge is home to 270 species of birds, 59 species of mammals, and 22 species of reptiles and amphibians.

This proposed action would be iterative and evolve over time as the agency refines its proposal and learns more from the public, tribes, and other agencies. Therefore, the final proposed action may be different from the original. The final decision on the proposed action would be made at the conclusion of the public comment period for the EA.



U.S. Fish & Wildlife Service

Valentine National Wildlife Refuge

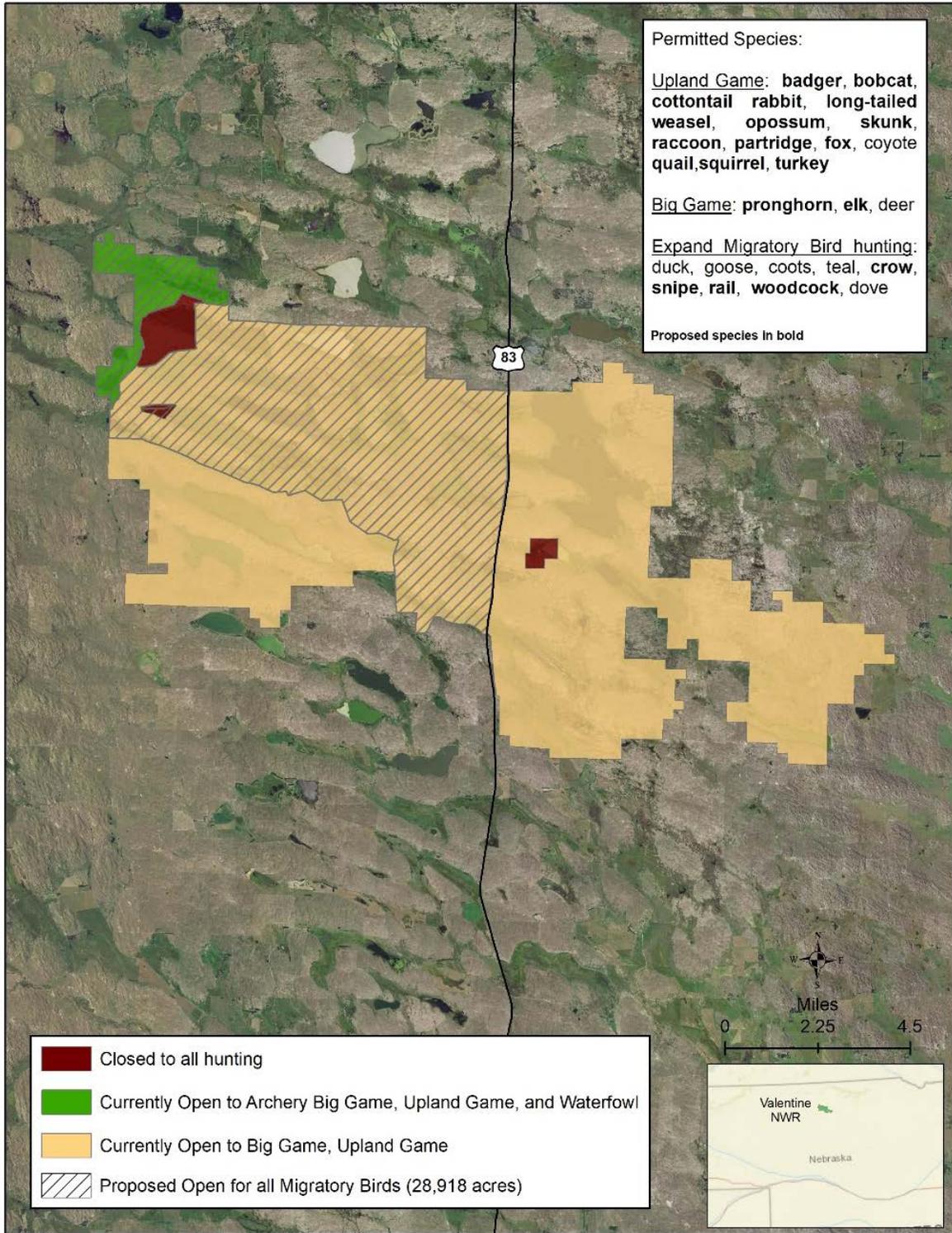


Figure 1. Current and Proposed Hunting Opportunities at Valentine National Wildlife Refuge

1.2 Background

National wildlife refuges are guided by the mission and goals of the Refuge System, the purposes of an individual refuge, Service policy, and laws and international treaties. Relevant guidance includes the National Wildlife Refuge System Administration Act of 1966 (NWRSA), as amended by the National Wildlife Refuge System Improvement Act of 1997 (Improvement Act), Refuge Recreation Act of 1962, and selected portions of the Code of Federal Regulations and Fish and Wildlife Service Manual.

The refuge was established on August 14, 1935, by Executive Order No. 7142 “as a breeding ground for migratory birds and other wildlife.”

The mission of the Refuge System, as outlined by the NWRSA, as amended by the Improvement Act (16 U.S. Code 668dd et seq.), is

“ . . . to administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.”

The NWRSA mandates the Secretary of the Interior in administering the Refuge System to (16 U.S. Code 668dd[a][4]):

- provide for the conservation of fish, wildlife, and plants, and their habitats within the Refuge System;
- ensure that the biological integrity, diversity, and environmental health of the Refuge System are maintained for the benefit of present and future generations of Americans;
- ensure that the mission of the Refuge System described at 16 U.S. Code 668dd(a)(2) and the purposes of each refuge are carried out;
- ensure effective coordination, interaction, and cooperation with owners of land adjoining refuges and the fish and wildlife agency of the States in which the units of the Refuge System are located;
- assist in the maintenance of adequate water quantity and water quality to fulfill the mission of the Refuge System and the purposes of each refuge;
- recognize compatible wildlife-dependent recreational uses as the priority general public uses of the Refuge System through which the American public can develop an appreciation for fish and wildlife;
- ensure that opportunities are provided within the Refuge System for compatible wildlife-dependent recreational uses;
- monitor the status and trends of fish, wildlife, and plants in each refuge.

Therefore, it is a priority of the Service to provide for wildlife-dependent recreation opportunities, including hunting, when those opportunities are compatible with the purposes for which the refuge was established and the mission of the Refuge System.

The refuge is currently open to waterfowl, pheasant, dove, prairie grouse, deer, and coyote hunting throughout most of the refuge.

1.3 Purpose and Need for the Proposed Action

The purpose of this proposed action is to provide compatible wildlife-dependent recreational opportunities on the Valentine NWR. The need of the proposed action is to meet the Service's priorities and mandates as outlined by the NWRSA to "recognize compatible wildlife-dependent recreational uses as the priority general uses of the Refuge System and "ensure that opportunities are provided within the Refuge System for compatible wildlife-dependent recreational uses." (16 U.S. Code 668dd[a][4]). The proposed action also meets the Service's implementation of Secretarial Order 3347 *Conservation Stewardship and Outdoor Recreation* and Secretarial Order 3356 *Hunting, Fishing, Recreational Shooting, and Wildlife Conservation Opportunities and Coordination with States, Tribes, and Territories* by expanding hunting opportunities and aligning Service regulations with state regulations. The refuge proposes to open new hunting opportunities for upland and big game species, as well as expand opportunities for migratory bird species.

2.0 Alternatives

2.1 Alternatives Considered

Alternative A – Expanded and Opened Small Game, Upland Game Bird and Big Game Hunting on Valentine National Wildlife Refuge – Proposed Action Alternative

In addition to current authorized hunting opportunities, the proposed action would allow hunting of additional game animals, including badger, mink, bobcat, elk, long-tailed weasel, opossum, partridge, pronghorn, quail, rabbit and hare, raccoon, rail, snipe, crow, and woodcock, in accordance with the laws of the State of Nebraska, and would open additional lands for hunting. The Service proposes to open or expand small and big game hunting on 70,549 acres in full alignment with state seasons between September 1 and March 31. Exceptions to this include pronghorn, which would align with state season opening date of August 20. Night hunting would remain closed on the refuge. Dogs would be authorized for migratory and upland bird hunting only. The proposed action would open or expand hunting of migratory birds including ducks, coots, geese, crow, rail, snipe, and woodcock, and expand existing migratory bird hunting from 2,721 acres to 28,918 acres.

All or parts of the refuge may be closed to hunting at any time if necessary for public safety, to provide wildlife sanctuary, prescribed burning, or for other reasons.

The refuge has prepared a hunting plan (see the 2020 Valentine NWR Hunting Plan), which is presented in this document as the Proposed Action Alternative.

Under the Proposed Action Alternative, the refuge would do the following:

- Open hunting of upland game (badger, bobcat, cottontail rabbit, fox, long-tail weasel, opossum, partridge, quail, raccoon, skunk, squirrel, and turkey) across the entire refuge. This would only be limited by the areas that are identified as administratively closed. Proposed for state alignment except for year-round date range because of disturbance to waterfowl nesting and for hours of day to restrict nighttime use of the refuge.
- Expand big game (elk and pronghorn) hunting in the same manner as upland game.

- Expand migratory bird hunting opportunities for coot, geese, duck, and teal from 2,721 acres to almost 28,000 acres and include additional species such as crow, snipe, rail, and woodcock.

Mitigation Measures to Avoid Conflicts:

- In order to avoid conflicts with nesting migratory birds, hunting seasons on the refuge would begin on September 1 at the beginning of the hunting season, and end on March 31 of the following year.
- The primary non-consumptive public use areas of the refuge remain within the Little Hay Wildlife Drive, Fire Tower overlook, and Refuge Kiosks. These areas provide the visiting public a safe place to observe and photograph wildlife and learn about the environment. The closed areas provide a sanctuary for wildlife and safety for refuge staff.
- Tree marking and electronic or photographic monitoring devices would be prohibited.
- No additional or existing facilities (for example, roads, trails, parking lots) would be supported/constructed that would result in refuge resources being affected.

The refuge would utilize existing state bag limits and methods of take for games species open to hunting on the refuge. Listed below are proposed refuge-specific regulations that would pertain to hunting at the refuge:

- Migratory game bird hunting. We would allow migratory game bird hunting on designated areas of the refuge subject to the following conditions:
 - We would allow hunter access from two hours before legal sunrise to two hours after legal sunset.
 - All personal property such as blinds and decoys must be removed at the conclusion of each day's hunt.
 - We would prohibit discharging a weapon from a motor vehicle, or from or across any refuge roadway, which includes the road right-of-way.
 - Dogs may be used while hunting to locate, point, and retrieve, provided they are under immediate control of the owner at all times.
- Upland game hunting. We would allow upland game hunting on designated areas of the refuge subject to the following conditions:
 - The conditions set forth in the migratory bird hunting section apply.
 - We would prohibit the use of bait to hunt coyotes.
 - We would prohibit the possession or use of toxic shot while hunting.
- Big game hunting. We would allow hunting of deer, elk, and pronghorn antelope on designated areas of the refuge subject to the following condition:
 - The conditions set forth in migratory bird hunting section apply.
 - Portable tree stands and steps are allowed from August 16–January 31.

This alternative offers increased opportunities for public hunting and fulfills the Service's mandate under the Improvement Act. The Service has determined that the hunting plan is compatible with the purposes of the refuge and the mission of the Refuge System.

Alternative B – Current Hunting Opportunities – No Action Alternative

The refuge is currently open to waterfowl, pheasant, dove, prairie grouse, deer, and coyote hunting throughout most of the refuge. Under the No Action Alternative, the hunting program would not make any changes and the current hunting program would continue.

Waterfowl hunting is permitted only in the habitat units around the Watts, Rice, and Duck Lakes in the far northwest corner of the refuge according to the state's seasons and limits. The refuge is open to hunting of sharp-tailed grouse and prairie chickens (collectively called prairie grouse) during the season set by the State that runs from September 1 through the end of January. The refuge is a popular place for both out-of-state and Nebraska resident hunters to pursue prairie grouse. Grouse hunters are surveyed via wing collection boxes placed around the refuge. In 1997, 258 hunter days were recorded through the collection boxes. However, not all hunters participate in the voluntary collection program. The refuge is also open to pheasant hunting during the season set by the state that runs from mid-October through the end of January.

The refuge is open to deer hunting during seasons established by the State of Nebraska. Most of the deer hunting takes place on opening weekend of the rifle deer season in mid-November. In 1997, a total of 88 deer were harvested including both white-tailed and mule deer. These figures come from deer checked by refuge law enforcement officers and records obtained at the Nebraska Game and Parks Commission (NGPC) check stations. The refuge probably receives the heaviest hunting pressure of any location within the State hunting units. A higher quality hunt is possible if opening day is avoided. The refuge is also open for muzzle loader deer hunting during the month of December. Hunting pressure is light and only seven muzzle loader hunters were known to hunt on the refuge in 1997. However, this form of hunting is becoming more popular. Permits are either sex, unlimited, or statewide. The refuge is also open to archery deer hunting and has a season that runs from mid-September through the end of December. There is a dedicated archery hunting only area that coincides with the waterfowl hunting area in the northwest corner of the refuge. Coyotes can be hunted on the refuge from September 1 through March 31.

2.2 Alternative(s) Considered, But Dismissed from Further Consideration

Open Valentine National Wildlife Refuge to Fishing

The Service considered opening Valentine NWR to fishing; however, we decided not to further consider this alternative at this time. The Sandhills NWR complex would seek to gather information and data to inform refuge management regarding a future Valentine National Wildlife Refuge Fishing Plan and associated EA. Much like the current EA and hunting plan, this would be an integrated approach, involving information, participation, and input from state and nongovernmental partners, as well as the American public that uses the Refuge System.

3.0 Affected Environment and Environmental Consequences

3.1 Affected Environment

The refuge consists of approximately 120 square miles in Cherry County, Nebraska (see Figure 1).

The refuge is located in north-central Nebraska. The refuge is a unique and ecologically important component of the Refuge System, which covers over 500 refuges totaling approximately 93 million acres across the United States. The refuge is 71,772 acres and lies in the heart of the Nebraska Sandhills, the largest sand dune area in the western hemisphere and one of the largest grass-stabilized regions in the world. The Sandhills are characterized by rolling, vegetated sand dunes and interdunal valleys that spread over the landscape from a northwest to southeasterly direction. Native grasses predominate. Many shallow lakes and wetlands are interspersed in the lower valleys. Wildlife diversity, except large ungulates and their predators, is relatively unchanged since early settlement in the Sandhills. The native grass prairie and wetlands found here support a diversity of wildlife. Little has changed from historic times. The refuge was established by Congress in 1935 “as a breeding ground for migratory birds and other wildlife.” The refuge is home to 270 species of birds, 59 species of mammals, and 22 species of reptiles and amphibians.

Several threatened and endangered plants, birds, and one insect are found here. Native perennial and annual flowering forbs adorn the various range sites on the refuge, some of which are only found on native grasslands that have not been degraded by the impact of modern man (such as conversion of grassland to farm land, use of herbicides, and chronic overgrazing of livestock).

Sandhill Prairie is within the wide transitional zone of the Mixed Grass Prairie between Tallgrass Prairie and the Short Grass Plains. Annual precipitation is typical of the semiarid Mixed Grass Prairie; however, the Nebraska Sandhills are characterized by a predominance of post-climax tallgrass species typical of a greater moisture regime. This mixture and general dominance by Tallgrass Prairie species is locally influenced by topography (such as the soil moisture holding capacities and soil moisture penetration in different textures of the sand soil range sites and the root structures and the photosynthetic strategies of cool and warm season plants).

Wetland range sites are the low meadow sites dominated by grass species that thrive in a moisture saturated soil profile (such as prairie cordgrass, blue-joint reedgrass, sedge species, and non-grass species such as golden rods, saw-toothed sunflower, and willows). A federally threatened species, western prairie fringed orchid, is found within the wetland range site. Invasive exotic species that threaten the native floral integrity of wetland range sites are reed canary grass, narrow-leaf/hybrid cattail, and Garrison creeping foxtail.

Sub-irrigated range sites are meadows that are very close to the groundwater level. Sub-irrigated range sites are dominated by Tallgrass Prairie species such as big bluestem and Indian grass. Soil moisture in the sub-irrigated range site is adequate to support the deep rooted warm season native grasses even during periods of drought. Sub-irrigated range sites are commonly invaded by exotic species such as Kentucky bluegrass, smooth brome, leafy spurge, and red top.

Sand range sites comprise the dry meadows (low sand sites) and the gently undulating Sandhills. Native vegetative species common to the sand range sites are cool season grasses (needle-and-thread, porcupine grass, prairie June grass, and western wheat grass); and warm season grasses typical of the Tallgrass Prairie (prairie sandreed, sand bluestem, sand love grass, little bluestem,

and switchgrass). Typical non-grass species of the sand range site are stiff sunflower, yucca, lead plant, and prairie rose. Exotic smooth brome and Kentucky bluegrass also tend to invade the lower elevations of the sand range sites.

Choppy sand range sites are the characteristic sand dunes for which the Nebraska Sandhills are named. Many vegetational characteristics are common to the sand range sites, but a greater proportion of unvegetated sand soil surface is subject to wind and water erosion. Typical perennial grasses are blue grama, sand bluestem, prairie sandreed, blowout grass, sand love grass, little bluestem, spiny muhly. Non-grass species are yucca, prairie rose, and sunflowers. The federally endangered species, blowout penstemon, is endemic to the Nebraska Sandhills, and its characteristic habitat includes the blowouts and open sand areas of the choppy sand range sites.

Approximately 45 species of native and introduced trees and shrubs exist in the Sandhills. Native willows are found around wetlands as are occasional cottonwoods. Hackberry, choke cherry, and American plum are found on the north slopes, usually next to the south sides of lakes. The abundance of woody cover has drastically changed since the refuge was established. The Civilian Conservation Corps planted many tree and shrub species, including nonnatives, during the 1930's. Tree planting, combined with changes to the historic disturbances (fire and grazing) that shaped prairie grasslands, have allowed cedar, black locust, willow, cottonwood, and Russian olive trees to expand and invade grasslands and are beginning to jeopardize the floral and faunal integrity of native Sandhills Prairie.

Thirty-seven major wetland complexes are on the refuge, totaling approximately 13,000 acres. These wetlands are a mix of shallow lakes, marshes, seasonal wetlands, wet meadows, fens, and small streams that run during high water periods. Wetlands are well dispersed throughout the refuge grasslands. Submergent and emergent vegetation in lakes and marshes range from very sparse to dense depending on soils and alkalinity. Emergents are cattail, bulrush, wild rice, and phragmites. Vegetation bordering wetlands is primarily grasses, although trees border the steeper slopes of the south shores of some lakes. Seven lakes have water control structures, six of which can increase water elevations significantly above the maximum, naturally functioning level. Several refuge lakes have water-level gauges where records of lake levels are recorded. Refuge staff also record water levels in U.S. Geological Survey groundwater survey wells. Some old drainage ditches remain from before the refuge was established. These ditches are only partially functional due to siltation and perhaps poor design. In several areas, wetlands have been dug out in wet meadows and fens to produce open water areas.

Most of the wetlands on the refuge rise and fall depending on precipitation and ground water levels. Precipitation for the past years has been high, resulting in record levels for lakes. Refuge wetlands normally function as a closed system and only during high-precipitation periods does excess surface water exit the refuge.

Tables 1 through 5 and Table 8 provide additional, brief descriptions of each resource that would be affected by the proposed action.

For more information regarding the affected environment, please see the refuge overview section of the refuge's 1999 CCP, which can be found here: <https://www.fws.gov/mountain-prairie/refuges/vlt.php>.

3.2 Environmental Consequences of the Action

This section analyzes the environmental consequences of the action on each affected resource, including direct and indirect effects. This EA only includes the written analyses of the environmental consequences on a resource when the effects on that resource could be more than negligible and therefore considered an “affected resource.” Any resources that would not be more than negligibly affected by the action have been dismissed from further analyses.

Tables 1 through 5 provide:

- a brief description of the affected resources in the proposed action area;
- impacts of the proposed action and any alternatives on those resources, including direct and indirect effects.

Table 8 provides a brief description of the cumulative impacts of the proposed action and any alternatives.

Impact Types:

- *Direct effects* are those that are caused by the action and occur at the same time and place.
- *Indirect effects* are those that are caused by the action and are later in time or farther removed in distance but are still reasonably foreseeable.
- *Cumulative impacts* result from the incremental impact of the action when added to other past, present, and future actions regardless of what agency (federal or non-federal) or person undertakes such other actions.

Table 1. Affected Natural Resources and Anticipated Direct and Indirect Impacts of the Proposed Action and Alternatives.

<p>Affected Resources</p>	<p><u>Alternative A (Proposed Action)</u> <i>In addition to current authorized hunting opportunities, Valentine NWR would be opened to additional hunting of small game, upland game birds, and big game hunting, in accordance with the laws of the State of Nebraska.</i></p>	<p><u>Alternative B (No Action)</u> <i>The existing hunting program at Valentine NWR would continue with no changes.</i></p>
<p>Resident Big Game</p>		
<p><i>Elk and Pronghorn</i></p> <p>Elk herds once common across all of Nebraska were extirpated by 1900. In the 1960s, a few elk returned to Nebraska, and in 1986 Nebraska had its first modern elk season. Since then, elk have expanded into hills and rivers of western Nebraska, and the annual passage of young bulls through eastern Nebraska is a common occurrence. More than 1,600 elk have been harvested since the first season in 1986. The pronghorn is North America’s swiftest land mammal and one of the fastest in the world. Its speed, endurance, and keen eyesight are well adapted to the short-grass prairies and gumbo badland of the western United States. Herds were at the brink of extinction in Nebraska by 1907 when all hunting seasons were closed. Slow expansion occurred for the next 50 years, and hunting seasons have been held every year since 1958 (outdoornebraska.gov).</p> <p>The Sandhills are home to 55 species of mammals. The most abundant large mammals are mule deer and white-tailed deer. The Sandhills support a few elk and relatively small numbers of pronghorn, particularly in the west. (Schneider et. al. 2011, P.142)</p>	<p>According to the NGPC, in 2016 (the most recently updated available state population data) (outdoornebraska.gov), there were between 2,000 and 3,000 elk in Nebraska, mostly in the Pine Ridge, Wildcat Hills, Niobrara River Valley, and the Loess Canyons south of near North Platte. During the 2016 hunting season, hunters harvested 200 elk and 926 pronghorn throughout Nebraska. Elk and pronghorn are transient species on the refuge. We expect the harvest of each of these species to be between 0 to 2 animals per season given the limited suitable habitat or low population numbers within the refuge hunt area. This level of harvest should not have negative effects on the local or the statewide populations of these species.</p>	<p>No elk or pronghorn hunting would occur on the refuge. However, ample hunting pressure off the refuge on these big game species would continue.</p>

<p style="text-align: center;">Affected Resources</p>	<p style="text-align: center;"><u>Alternative A (Proposed Action)</u></p> <p style="text-align: center;"><i>In addition to current authorized hunting opportunities, Valentine NWR would be opened to additional hunting of small game, upland game birds, and big game hunting, in accordance with the laws of the State of Nebraska.</i></p>	<p style="text-align: center;"><u>Alternative B (No Action)</u></p> <p style="text-align: center;"><i>The existing hunting program at Valentine NWR would continue with no changes.</i></p>
<p>Upland Game</p>		
<p><i>Wild Turkey</i></p> <p>The wild turkey (<i>Meleagris gallopavo</i>) was extirpated from Nebraska by 1915, but thanks to successful reintroduction efforts beginning in the Pine Ridge in the 1950s, turkeys can be found across the state today. Reintroductions were three subspecies (Merriam’s, Rio Grande, and Eastern wild turkeys), and a hybrid between Merriam’s and a game-farm variety that was found to do well where earlier releases failed. The hybrid birds proliferated and intermingled with the pure strains as populations grew. Turkeys in the panhandle and Niobrara River valley are most consistent in showing plumage characteristics of the Merriam’s subspecies. The wild turkey is the largest upland game bird in North America. Adult Merriam’s toms taken in the fall season average 18 pounds and adult hens average 10 pounds. Hybrid birds can be heavier, weighing more than 25 pounds.</p> <p><i>Northern Bobwhite</i></p> <p>The northern bobwhite is uncommon along wooded river and creek drainages and in areas where native shrub thickets and downed trees meet grassland habitat. At the northernmost extent of their range, Nebraska’s bobwhite populations are limited by extreme winter weather events. This past winter, much of Nebraska’s bobwhite range experienced above normal snowfall, prolonged snow cover, and extreme freezing temperatures.</p>	<p>There is an estimated population of 100–200 turkeys on the refuge. We estimate that around 50 hunters would take part in the season on the refuge, harvesting around 10 birds (5–10 percent of the estimated population). This would represent an increase of 0.06 percent in the overall state turkey harvest.</p> <p>Given the low number of northern bobwhite quail and gray partridge on the refuge, the number of hunters pursuing these species would be low (less than ten hunters). Incidental take of these birds while hunting other upland game would be estimated at less than one daily bag limit for these species for the year (less than six and less than three, respectively).</p> <p>Refuge staff would work in close cooperation with the NGPC in sharing/evaluating/discussing available population and harvest data, making recommendations for regulation changes, and any other actions necessary to ensure that viable populations of resident birds are supported.</p>	<p>No additional hunting of resident birds would occur on the refuge. They would still be affected by the abundant hunting pressure the refuge has during the regular firearms season.</p>

<p style="text-align: center;">Affected Resources</p>	<p style="text-align: center;"><u>Alternative A (Proposed Action)</u></p> <p><i>In addition to current authorized hunting opportunities, Valentine NWR would be opened to additional hunting of small game, upland game birds, and big game hunting, in accordance with the laws of the State of Nebraska.</i></p>	<p style="text-align: center;"><u>Alternative B (No Action)</u></p> <p><i>The existing hunting program at Valentine NWR would continue with no changes.</i></p>
<p>(Upland Game Affected Resources continued)</p> <p>This likely had a negative impact on overwinter survival as declines in bobwhite abundance were observed in multiple regions, including the North Central region just east of the refuge. Statewide, bobwhite abundance indices (July Rural Mail Carrier Survey and Whistle Count Survey) were 21–37 percent lower in 2019 compared to 2018 and below the five-year averages (Lusk 2019b).</p> <p><i>Gray partridge</i></p> <p>The gray partridge is a rare inhabitant of refuge grasslands and may occur in close proximity to agricultural land cover on private land.</p>		
<p>Furbearers</p>		
<p>Nebraska has a wealth of furbearing species that provide opportunities for wildlife watching, photography, hunting, and trapping. Furbearers are a group of native mammals that have valuable fur. Furbearers with a harvest season are badger, beaver, bobcat, mink, muskrat, opossum, raccoon, red fox, gray fox, striped skunk, and long-tailed weasels. Coyotes are nongame and thus are not protected as furbearers; however, they also possess valuable fur and are commonly harvested in Nebraska.</p> <p>The furbearing species that are harvested are common or abundant in Nebraska. Regulated harvest through hunting and trapping seasons is an important management tool needed to control populations and damage that these species can cause.</p>	<p>A total of 7,005 fur harvest permits were sold to Nebraska residents in 2017 (down from 7,304 in 2016). Thirty-nine fur harvest permits were sold to non-residents from 14 different states (Colorado, Iowa, Illinois, Kansas, Michigan, Minnesota, Missouri, New Hampshire, Oklahoma, Pennsylvania, South Dakota, Texas, Wisconsin, and Wyoming). The fur harvest permit trends from 1943–2017 is show in Figure 2.</p> <p><i>Harvest</i></p> <p>The estimated harvest during the 2017/2018 season was lower compared with the five-year average. Mink, raccoon, and opossum showed the greatest decrease (down 64 percent, 36 percent, and 20 percent, respectively). Coyote, muskrat, and bobcat showed an increase compared to the five-year average (up 27 percent, 10 percent, and 7 percent respectively).</p>	<p>No furbearer hunting would occur on the refuge. All species would still be affected by the abundant hunting pressure the refuge has during the existing hunting season. We expect no impacts on small game, furbearer, and other nongame mammals.</p>

Affected Resources	<u>Alternative A (Proposed Action)</u>	<u>Alternative B (No Action)</u>
<p>(Furbearers Affected Resources continued)</p> <p>Hunting and trapping seasons are typically designed to allow the harvest of furbearers during the fall and winter when the pelts are prime, and they are less likely to have dependent young.</p> <p>There are no bag limits or specific harvest units for furbearers. Trapping and hunting furbearers is a time-honored tradition that provides the ability for families to enjoy time well spent in the great outdoors and earn extra income.</p>	<p>(Furbearers Alternative A continued)</p> <p>The total estimated harvest for the 2017/2018 season was higher than the 2016/2017 season, with skunk, beaver, and coyote showing the greatest increase (up 49 percent, 36 percent, and 35 percent, respectively).</p> <p>Mink and woodchuck showed the greatest decrease from the 2016/2017 season (down 41 percent and 32 percent, respectively). Fur harvesters reported that 25 percent of coyotes and 4 percent of red foxes harvested showed symptoms of mange. Estimated harvest for these species is depicted in Table 6.</p> <p>We estimate that there would be approximately 10 hunters engaging in furbearer hunting on the refuge. We expect the cumulative impact of opening a furbearer season on the refuge to be small. Cumulative impact data (i.e., annual statewide harvest and annual refuge harvest) for hunting furbearers on Valentine NWR is depicted in Table 7.</p>	<p><i>The existing hunting program at Valentine NWR would continue with no changes.</i></p>
Migratory Birds		
<p>The refuge contains extensive areas of emergent marsh, mudflats, and open water that annually support thousands of ducks, geese, coots, swans, and other migratory birds during fall and spring migrations.</p> <p>Common huntable waterfowl and migratory bird species are mallard, northern pintail, northern shoveler, gadwall, green-winged teal, blue-winged teal, American wigeon, common goldeneye, redhead, canvasback, common merganser, red-breasted merganser, bufflehead, ruddy duck, lesser scaup, Canada goose, Wilson’s snipe, Virginia and sora rail, and crow.</p> <p>The refuge is in the Central Flyway.</p>	<p>Migratory bird hunting would be concentrated in a large block of the refuge, ensuring that important habitat areas of the refuge remain an “inviolate sanctuary” for migratory birds.</p> <p>Areas of the refuge open to hunting would be increased by about 26,000 acres. Under this alternative, approximately 40 percent of the refuge would be open to hunting with 60 percent of the refuge closed to hunting.</p> <p>The latter would provide 40,000 acres of the refuge where migratory waterfowl would continue to be protected from any hunting pressure and disturbance. This complies with provisions of the refuge’s establishing legislation.</p>	<p>Hunting has the potential to disturb feeding and resting waterfowl in all open hunt areas during daylight (shooting) hours. Concentrating on hunting a small block and keeping 90 percent of refuge acreage closed to waterfowl hunting would reduce overall disturbance. Therefore, we believe that the potential impacts to feeding and resting waterfowl should not affect the overall health or sustainability of these populations on the refuge.</p>

<p style="text-align: center;">Affected Resources</p>	<p style="text-align: center;"><u>Alternative A (Proposed Action)</u></p> <p><i>In addition to current authorized hunting opportunities, Valentine NWR would be opened to additional hunting of small game, upland game birds, and big game hunting, in accordance with the laws of the State of Nebraska.</i></p>	<p style="text-align: center;"><u>Alternative B (No Action)</u></p> <p><i>The existing hunting program at Valentine NWR would continue with no changes.</i></p>
	<p>(Migratory Birds Alternative A continued)</p> <p>We expect that expansion in the huntable area of the refuge would result in a doubling in the number of hunt days (from approximately 65 to 130) with the following expected take of migratory waterfowl: up to 270 ducks and 225 geese (six ducks and five geese per hunter x 45 hunt visits). We anticipate that gunfire and associated hunter activity would disrupt bird activity and likely cause dispersal to other areas of the refuge.</p> <p>We expect that the harvest of American crows and woodcock would be between zero and two birds due to low interest from hunters (in the case of crows) and low population numbers (in the case of woodcocks). For coots, sora and Virginia rails, common snipe, and American woodcock, we expect that the harvest would be less than the bag limit for each species (15, 10, 8, and 3, respectively).</p> <p>Gunfire and associated hunter activity would disrupt bird activity and likely cause dispersal.</p> <p>We expect that approximately 50 doves would be harvested (two birds per hunter x 20 hunt visits) as a result of opening more refuge acres to hunting.</p> <p>Additional hunting opportunities would disperse hunters over a larger portion of the refuge and provide enhanced hunting opportunities. We anticipate that there would be only a small increase in the number of hunters visiting the refuge (two or fewer additional hunters) due to the low population density of north-central Nebraska and abundant public hunting land near the refuge.</p>	<p>(Migratory Birds Alternative B continued)</p> <p>Hatch year and late hatching birds may be vulnerable to early season hunting mortality (Nelson 1966). Keeping 90 percent of the refuge closed as an inviolate sanctuary would protect hatch year birds and provide vulnerable species the opportunity for population stabilization and recovery on the refuge. Therefore, we believe that impacts to feeding and resting waterfowl would not affect the overall health or sustainability of these populations on the refuge.</p> <p>Under this alternative, hunters would not be allowed to hunt Wilson’s snipe, rails, crow, or woodcock on the refuge.</p>

<p style="text-align: center;">Affected Resources</p>	<p style="text-align: center;"><u>Alternative A (Proposed Action)</u></p> <p style="text-align: center;"><i>In addition to current authorized hunting opportunities, Valentine NWR would be opened to additional hunting of small game, upland game birds, and big game hunting, in accordance with the laws of the State of Nebraska.</i></p>	<p style="text-align: center;"><u>Alternative B (No Action)</u></p> <p style="text-align: center;"><i>The existing hunting program at Valentine NWR would continue with no changes.</i></p>
<p>Other Wildlife and Aquatic Species</p>		
<p>The refuge is located in the Sandhills of north-central Nebraska. The refuge is a unique and ecologically important component of the Refuge System. The native Sandhills prairie and wetlands found here support a diversity of wildlife. Little has changed from historic times. The refuge was established by Congress in 1935 “as a breeding ground for migratory birds and other wildlife.”</p> <p>The refuge is home to 270 species of birds, 59 species of mammals, and 22 species of reptiles and amphibians.</p>	<p>Impacts described under the No Action Alternative apply to the Proposed Action Alternative. Increased hunting may result in additional short-term disturbance to wildlife over a larger area, because additional areas would be opened to hunting and additional opportunities for hunting of new species. This disturbance may include temporary displacement of migratory and resident wildlife from foot traffic moving through the area. Because the frequency of hunting activity would likely increase under this alternative, the Service expects minor to moderate impacts on non-target wildlife on parts of the refuge during the hunting season.</p> <p>We anticipate minor to moderate beneficial impacts with respect to slight declines in predators of many non-game species; and increased exposure to outdoor experiences that potentially would include observations and educational opportunities related to non-game species.</p>	<p>Disturbance to other non-hunted wildlife under either alternative would be minimal. Direct impacts on non-hunted migratory birds such as songbirds (passerines), shorebirds, raptors, and swans would be negligible. Indirect impacts on this group of species also would be minimal and do not appreciably reduce their numbers at the population level. Shorebirds and wading birds would not be affected by hunting because, in most cases, they have already migrated through the area prior to the fall hunting season. Disturbance by hunting to non-hunted migratory birds would not have substantial negative indirect effects because most hunting would not coincide with the nesting season. Other disturbance to these species by hunters afield would be temporary in nature.</p> <p>Migratory birds of prey (eagles and hawks) would be on the refuge during most hunting seasons but disturbance is minimal.</p>

<p>Affected Resources</p>	<p><u>Alternative A (Proposed Action)</u> <i>In addition to current authorized hunting opportunities, Valentine NWR would be opened to additional hunting of small game, upland game birds, and big game hunting, in accordance with the laws of the State of Nebraska.</i></p>	<p><u>Alternative B (No Action)</u> <i>The existing hunting program at Valentine NWR would continue with no changes.</i></p>
		<p>(Other Wildlife Alternative B continued)</p> <p>Disturbance to the daily wintering activities, such as feeding and resting, of residential birds might occur but is insignificant because such interactions would be infrequent and of short duration when they did occur.</p> <p>There is also a possibility of conflict with birds of prey feeding on dead furbearers that may contain lead fragments. Research has shown that lead is present in gut piles, but most furbearer hunters remove the entire carcass from the refuge to process it off-site.</p> <p>Small mammals such as voles and mice are generally nocturnal or secretive. Both qualities make hunter interactions with small mammals very rare. Hibernation, or torpor, of cold-blooded reptiles and amphibians also limits their activity during most of the hunting season, when temperatures are low. Hunters would rarely encounter reptiles and amphibians during most of the hunting season. Some species of butterflies and moths are migratory and would not be present for most of the refuge hunting season. Resident invertebrates are not active during cold weather and would have few interactions with hunters during the hunting season.</p>

<p style="text-align: center;">Affected Resources</p>	<p style="text-align: center;"><u>Alternative A (Proposed Action)</u></p> <p><i>In addition to current authorized hunting opportunities, Valentine NWR would be opened to additional hunting of small game, upland game birds, and big game hunting, in accordance with the laws of the State of Nebraska.</i></p>	<p style="text-align: center;"><u>Alternative B (No Action)</u></p> <p><i>The existing hunting program at Valentine NWR would continue with no changes.</i></p>
		<p>(Other Wildlife Alternative B continued)</p> <p>Impacts on these species due to habitat disturbance related to hunting would be negligible at the local and flyway levels.</p> <p>Overall, hunting impacts on other wildlife and their habitats and impacts on the biological diversity of the refuge, would be insignificant.</p>
<p>Threatened and Endangered Species and Other Special Status Species</p>		
<p>Threatened and endangered species recorded on the refuge are blowout penstemon, western prairie fringed orchid, American burying beetle, bald eagle, whooping crane, and least tern. Managing and supporting prairie habitat by using rest, fire, and grazing benefit these species.</p> <p><i>Blowout Penstemon</i></p> <p>Hayden's, or blowout penstemon, is perhaps Nebraska's rarest plant and is listed as endangered under the provisions of the Endangered Species Act (ESA). Listing was accomplished in 1987. This species is endemic to the Nebraska Sandhills and is dependent upon disturbance for its existence, to promote the blowouts or open sand habitat. The plant grows in and around blowouts, areas of open sand maintained by wind erosion. A small number of naturally occurring blowout penstemon plants have been found in locations on the refuge.</p> <p>Surveys for blowout penstemon are conducted on the refuge each year.</p>	<p>We do not expect this alternative to positively or negatively affect threatened and endangered species. Impacts described under the Proposed Action Alternative would apply to the No Action Alternative. None of the refuge lands to be open to public hunting have been designated as critical habitat for any species listed as endangered or threatened under the ESA of 1973, as amended. Whooping cranes, least terns, and piping plovers may inhabit braided, shallow sand bar habitat during spring and fall migrations. The proposed hunt program would not be anticipated to negatively affect these species. Hunting seasons are well outside of the blooming dates for rare plants. Additional hunting opportunities would create additional forage for American burying beetles.</p> <p>Impacts of hunting on listed species, especially using the refuge from September through February, could increase with increased hunting opportunities under the proposed action. However, we would apply mitigation measures mentioned above under this alternative and expect to limit the effects of hunting to acceptable risk levels (minor). The main noticeable difference between alternatives may be the increased noise and human presence factors associated with the proposed alternative.</p>	<p>Per Intra-Service Section 7 consultations, it has been determined that least terns, piping plovers, bald eagles, American burying beetles, Blowout penstemon, Western Prairie Fringed Orchid, and whooping cranes would not be affected by hunting activities carried out in accordance with federal and state regulations, as well as the habitat protections and refuge programs as described in the 1999 CCP.</p> <p>Overall, current and proposed hunting activities would be limited similarly in terms of season and time (no hunting permitted April through August).</p>

<p style="text-align: center;">Affected Resources</p>	<p style="text-align: center;"><u>Alternative A (Proposed Action)</u></p> <p style="text-align: center;"><i>In addition to current authorized hunting opportunities, Valentine NWR would be opened to additional hunting of small game, upland game birds, and big game hunting, in accordance with the laws of the State of Nebraska.</i></p>	<p style="text-align: center;"><u>Alternative B (No Action)</u></p> <p style="text-align: center;"><i>The existing hunting program at Valentine NWR would continue with no changes.</i></p>
<p>(Special Status Species Affected Resources continued)</p> <p><i>Western Prairie Fringed Orchid</i></p> <p>The western prairie fringed orchid is one of Nebraska’s rarest wildflowers and, in 1989, was listed as threatened under the provisions of the ESA. Prairie fringed orchid site locations are characterized by a high soil-moisture profile common to the wetland range sites on the refuge. Since 1985, inventories have been performed by the refuge staff. Prairie fringed orchids have been documented on the refuge.</p> <p>Western prairie fringed orchids are surveyed in July when in bloom.</p> <p><i>American Burying Beetles</i></p> <p>American burying beetles have been documented on the refuge and are surveyed on a five-year rotation.</p> <p><i>Bald Eagles</i></p> <p>Bald eagles are common winter residents on the refuge and have two verified nests on the refuge.</p> <p><i>Whooping Cranes and Least Terns</i></p> <p>Whooping cranes and least terns are thought to have used the refuge in the past, but no verified sightings have been made of these species. No special management is conducted.</p>	<p>(Special Status Species Alternative A continued)</p> <p>Negligible effects on vegetation have occurred from trampling by hunters, partly because of the area and time limited to hunting. However, we do not know if hunting impacts have influenced the spread of invasive species on the refuge.</p>	<p>(Special Status Species Alternative B continued)</p> <p>Also, the Service has the authority to close areas to hunting for the protection of listed species, such as for the whooping crane or bald eagle, to reduce possible effects of accidental take to insignificant or acceptable risk levels.</p> <p>In addition, state and refuge staff continue to educate hunters on identification of threatened and endangered species to improve the potential to avoid accidental take.</p> <p>Those species that occur during the April through August closed period (for example, American burying beetle) would not be directly affected by hunting activities under any alternative. In part, potential indirect effects of hunting would be mitigated through federal regulations, such as the permitting of non-toxic shot.</p>

Affected Resources	<u>Alternative A (Proposed Action)</u> <i>In addition to current authorized hunting opportunities, Valentine NWR would be opened to additional hunting of small game, upland game birds, and big game hunting, in accordance with the laws of the State of Nebraska.</i>	<u>Alternative B (No Action)</u> <i>The existing hunting program at Valentine NWR would continue with no changes.</i>
Wetlands		
<p>Thirty-seven major wetland complexes are on the refuge totaling approximately 13,000 acres.</p> <p>These wetlands are a mix of shallow lakes, marshes, seasonal wetlands, wet meadows, fens, and small streams that run during high water periods.</p>	<p>The Service has not identified any potential high and adverse impacts from the proposed action. No additional or existing facilities (for example, roads, trails, and parking lots) would be constructed/supported that result in wetlands being affected. Negligible effects on vegetation have occurred from trampling by hunters, partly because of the area and time limited to hunting. Based on refuge monitoring and observation of wetlands on the refuge, we have observed no spread of invasive species due to hunter activity on the refuge.</p>	<p>Same as the Proposed Action Alternative.</p>
Wilderness		
<p>In 1973, the entire refuge was studied to ascertain the suitability or lack thereof of the refuge or any portion of the refuge for inclusion in the National Wilderness Preservation System. Following the study, a 16,317-acre portion of the refuge was recommended for inclusion. Congress must approve the change from a proposed to a designated wilderness but has taken no action. In 1999, the proposed wilderness area was included, along with several other refuge wilderness study areas, in a proposal to Congress to complete designation.</p>	<p>These lands would be managed under the Wilderness Act of 1964 “. . . for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use and enjoyment as wilderness, and so as to provide for the protection of these areas, the preservation of their wilderness character, and for the gathering and dissemination of information regarding their use and enjoyment as wilderness” The Wilderness Act also states that areas would be managed and protected to provide “outstanding opportunities for solitude or a primitive and unconfined type of recreation . . . and that each agency administering an area designated as wilderness shall be responsible for preserving the wilderness character of the area.” All hunting activities would be done without motorized vehicles to aid in the quality and integrity of the wilderness character. We expect that impacts associated with solitude would be minimal given time and space zone management techniques used to avoid conflicts among user groups. The remote location and difficult access to large portions of the refuge also play a role in preserving the wilderness quality and solitude.</p>	<p>Same as the Proposed Action Alternative.</p>

<p style="text-align: center;">Affected Resources</p>	<p style="text-align: center;"><u>Alternative A (Proposed Action)</u></p> <p style="text-align: center;"><i>In addition to current authorized hunting opportunities, Valentine NWR would be opened to additional hunting of small game, upland game birds, and big game hunting, in accordance with the laws of the State of Nebraska.</i></p>	<p style="text-align: center;"><u>Alternative B (No Action)</u></p> <p style="text-align: center;"><i>The existing hunting program at Valentine NWR would continue with no changes.</i></p>
<p>(Wilderness Affected Resources continued)</p> <p>Proposed wilderness areas would be managed as wilderness areas until the designation is completed or withdrawn. Present management of the proposed wilderness area is described in various sections throughout this plan. The proposed wilderness is in the southwest portion of the refuge. The proposal covers two large lakes, Dad's and Mule, and several smaller ones. Marshes border the smaller lakes while Dad's Lake, one of the largest natural lakes in the Sandhills, is bordered on the south by a narrow strip of trees and brush and high sandy hills. Vegetation and wildlife are similar to that found in other areas of the refuge. The area is very scenic, with the native grasses, undeveloped lakes, high choppy sand hills, and feeling of isolation and the expanse of the prairie. Man-made structures in the wilderness consist of a few windmills and tanks, and electric and barbed wire fences. Habitat management in the proposed wilderness area is accomplished with grazing.</p>		

Key: CCP = Comprehensive Conservation Plan, ESA = Endangered Species Act, NGPC = Nebraska Game and Parks Commission, NWR = National Wildlife Refuge
Note: We have determined that the alternatives considered in this EA would have negligible impacts on geology and soils, water resources, or air quality, and as such, these resources have not been analyzed further.

Table 2. Affected Visitor Use and Experience and Anticipated Direct and Indirect Impacts of the Proposed Action and Any Alternatives.

<p>Affected Resources</p>	<p><u>Alternative A (Proposed Action)</u> <i>In addition to current authorized hunting opportunities, Valentine NWR would be opened to additional hunting of small game, upland game birds, and big game hunting, in accordance with the laws of the State of Nebraska.</i></p>	<p><u>Alternative B (No Action)</u> <i>The existing hunting program at Valentine NWR would continue with no changes.</i></p>
<p>Approximately 27,000 people visit the refuge each year (2019 Refuge Annual Performance Plan measures). Visitors participate in hunting, fishing, wildlife observation, photography, environmental education, and view an abundance of wildlife along the refuge’s 8-mile auto tour route. The auto tour route and associated fire tower overlook, and trail are most popular among non-hunting and non-fishing visitors. Increasing numbers of people are visiting the refuge to observe birds and other wildlife. Currently, most of public use on the refuge occurs April–October. The refuge is outfitted with four information kiosks at major entry point. The kiosks have general information on the refuge, a map, information on management of grasslands for wildlife, and leaflet dispensers. Blinds for observing prairie grouse displays are set up in the spring and receive plenty of use. People come to the refuge to birdwatch and enjoy the prairie.</p>	<p>Under the proposed alternative, hunter numbers would be expected to increase due to expanded hunting opportunities by approximately 5–10 percent. Increased hunting, however, could discourage use by non-consumptive wildlife dependent recreationalists and affect wildlife viewing opportunities in the fall, winter, and spring (approximately 25 percent of total non-consumptive wildlife-dependent recreation visits). Noise and visual impacts related to hunting would remain temporary but would be more frequent or greater compared to current conditions. Visual impacts are more restricted than noise impacts of shooting. While shooting occurs on surrounding private lands, cumulative impacts of noise on and off the refuge may be considered of moderate or intermediate impact, at least in the most active morning hours at certain times during the season (for example, opening day of a hunt). Of course, perceived impacts vary by user tolerance and interests.</p>	<p>No change in non-consumptive, wildlife dependent recreation visitor numbers or use periods would be expected. Under current conditions, noise and visual impacts related to hunting would be temporary. Visual impacts are more restricted than noise impacts of shooting. While shooting occurs on surrounding private lands, cumulative impacts of noise on, and off, the refuge would be considered minor.</p>

Key: NWR = National Wildlife Refuge

Table 3. Affected Cultural Resources and Anticipated Direct and Indirect Impacts of the Proposed Action and Any Alternatives.

<p>Affected Resources</p>	<p><u>Alternative A (Proposed Action)</u></p> <p><i>In addition to current authorized hunting opportunities, Valentine NWR would be opened to additional hunting of small game, upland game birds, and big game hunting, in accordance with the laws of the State of Nebraska.</i></p>	<p><u>Alternative B (No Action)</u></p> <p><i>The existing hunting program at Valentine NWR would continue with no changes.</i></p>
<p>Limited cultural resource studies have been conducted by Service, or any other groups to locate, describe, and evaluate cultural and paleontological resources.</p> <p>Current protection and interpretation of cultural and paleontological resources also is minimal.</p>	<p>Because of the temporary and superficial use of refuge habitats during hunting activities, and because there would be no ground disturbance or changes to access, infrastructure, or other existing environmental conditions, there should be no direct impacts on cultural resources under this alternative from visitors engaged in hunting.</p>	<p>Impacts would be the same as described under the Proposed Action Alternative.</p>

Key: NWR = National Wildlife Refuge

Table 4. Affected Refuge Management and Operations and Anticipated Direct and Indirect Impacts of the Proposed Action and Any Alternatives.

<p>Affected Resources</p>	<p><u>Alternative A (Proposed Action)</u> <i>In addition to current authorized hunting opportunities, Valentine NWR would be opened to additional hunting of small game, upland game birds, and big game hunting, in accordance with the laws of the State of Nebraska.</i></p>	<p><u>Alternative B (No Action)</u> <i>The existing hunting program at Valentine NWR would continue with no changes.</i></p>
<p>Land Use</p>		
<p>Predominate land use in Cherry County is native prairie grazing and haying with less than 10 percent of the acreage cropped or irrigated (Miller 1990). Family-owned ranching is the primary source of income in these counties, although income generated from tourism is increasing. The permitting of some grazing and haying on Service lands benefits the local economy, as do the in-lieu-of-tax payments made to Cherry County for Service lands. Presently, five ranchers have permits to graze and/or hay on the refuge.</p>	<p>The refuge would continue to engage in habitat management activities during the hunting season to ensure that the refuge meets its other management objectives (see Habitat Management Plan). Impacts would be reduced by ensuring hunters, cooperators, and partners are aware of each other’s activities and timed to reduce conflict when possible. No impacts would be anticipated under the Proposed Action Alternative or the No Action Alternative to habitat, buildings, infrastructure, traffic, or roadways. We would anticipate a negligible increase to traffic on local or adjacent roadways under the Proposed Action Alternative, with no increased cost or impacts on infrastructure.</p>	<p>Impacts would be the same as described under the Proposed Action Alternative, with no increase to traffic on local or adjacent roadways.</p>
<p>Administration</p>		
<p>The hunting program is designed to be administered with minimal refuge resources. The costs of administering and enforcing the refuge hunting program comes out of the refuge’s annual budget. Expenses are program management, staff resources, boundary posting, signage, brochures, parking lot construction, facility maintenance, gate installation, and other hunting specific activities.</p> <p>Law enforcement of refuge and state hunting regulations, trespass, and other violations associated with management of the refuge is the responsibility of a refuge law enforcement officer. Refuge officers cooperate with, and are assisted by, state and county officers as well as state conservation officers. Ongoing coordination and communication between refuge staff and law enforcement officers is conducted throughout the year.</p>	<p>Because the seasonality of hunting on the refuge would not change, we would not anticipate an increase in law enforcement or refuge management and administrations under the No Action Alternative.</p>	<p>We would not anticipate an additional increase in costs for administration, law enforcement, biological monitoring and research, or annual maintenance.</p>

Table 5. Affected Socioeconomics and Anticipated Direct and Indirect Impacts of the Proposed Action and Any Alternatives.

<p>Affected Resources</p>	<p><u>Alternative A (Proposed Action)</u> <i>In addition to current authorized hunting opportunities, Valentine NWR would be opened to additional hunting of small game, upland game birds, and big game hunting, in accordance with the laws of the State of Nebraska.</i></p>	<p><u>Alternative B (No Action)</u> <i>The existing hunting program at Valentine NWR would continue with no changes.</i></p>
<p>Local and Regional Economics</p>		
<p>Supporting a variety of public uses, including hunting, on the refuge stimulates the local economy. Hunting, in particular, provides an economic boost to local businesses. Tourists usually buy a wide range of goods and services while visiting an area. Major expenditure categories are lodging, food, supplies, and gasoline. Spending associated with refuge visitation can generate considerable economic benefits for the local communities near a refuge.</p>	<p>Expanded hunting opportunities could provide improved benefits to the local, regional, and state economy compared to current conditions. However, in a landscape dominated by agricultural land use, the relative benefits to the overall state economy would likely be minor. Compared to current conditions, with more hunt-related experiences offered on the refuge, there would potentially be more visitation expenditures in the area and an increase in the number of state permit sales.</p>	<p>We would little to no change in wildlife-based recreational opportunities under current conditions. Spending associated with refuge visitation can generate considerable economic benefits for the local communities near a refuge. For example, more than 34.8 million visits were made to refuges in fiscal year 2006; these visits generated \$1.7 billion in sales, almost 27,000 jobs, and \$542.8 million in employment income in regional economies (Carver and Caudill 2007). Revenues generated by hunters and non-consumptive, wildlife-dependent visitors for lodging, food, gas, and miscellaneous purchasing would continue to benefit the Valentine community.</p>
<p>Environmental Justice</p>		
<p>Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires all federal agencies to incorporate environmental justice into their missions by finding and addressing disproportionately high or adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities.</p>	<p>The Service has not identified any potential high and adverse environmental or human health effects of this proposed action or any of the alternatives. The Service has identified no minority or low-income communities within the impact area. Minority or low income communities would not be disproportionately affected by any impacts of this proposed action or any of the alternatives.</p>	<p>Impacts would be the same as described under the Proposed Action Alternative.</p>

Key: NWR = National Wildlife Refuge

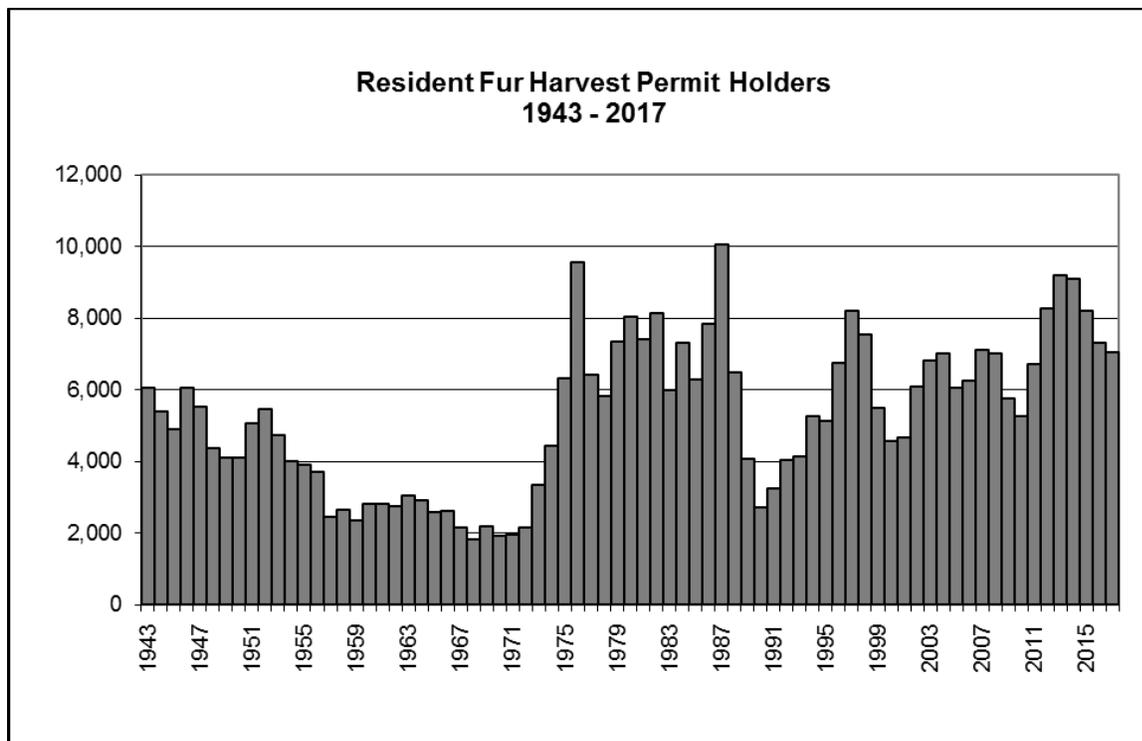


Figure 2. Nebraska Fur Harvest Permit Holders 1943–2017.

Table 6. Estimated Harvest of Furbearing Species in Nebraska, 2017–2018 Season.

Species	Hunt	Trap	Total harvest	Previous Season	5-Year Average 2012–2016
Raccoon	31,529	77,215	108,744	84,732	168,629
Opossum	5,392	19,993	25,386	21,967	31,916
Striped Skunk	2,552	9,809	12,361	8,309	13,300
Badger	713	3,028	3,741	3,234	4,351
Red Fox	657	2,734	3,391	2,895	3,446
Mink	44	769	813	1,374	2,256
Bobcat*	383	991	1,374	1,103	1,284

Source: (NGPC Fur Harvest Survey, 2017/2018 Season, Sam Wilson/Julia Nawrocki)

* Total harvest based on pelt tagging; hunt column includes harvested road kills.

Table 7. Cumulative Impact Data for Hunting Furbearers and Other Species on Valentine National Wildlife Refuge.

Species	Average Annual Statewide Harvest	Estimated Annual Refuge Harvest	% increase in Statewide Harvest
Mink	813	<2	0.2
Opossum	25386	<1	0.004
Cottontail	14,915	<7	0.05
Jackrabbit	365	<1	0.3
Red Fox	3,391	<1	0.03
Badger	3,741	<2	0.05
Skunk	12,361	<2	0.02
Coyote	46,311	20-40	0.04-0.09
Raccoon	108,744	<10	0.009
Turkey	18,131*	10	0.06
Bobwhite	82,275^	6	0.007

Source: Furbearer 2017–18 Nebraska Game and Parks Data

*2019 Spring Turkey harvest Nebraska Game and Parks Data

^2018–2019 Hunter Success Survey Nebraska Game and Parks Data

3.3 Cumulative Impact Analysis

Cumulative impacts are defined as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions” (40 CFR 1508.7).

For more information on the national cumulative impacts of the Service’s hunting program on the Refuge System, see Title of Cumulative Impacts Report.

Table 8. Anticipated Cumulative Impacts of the Proposed Action and Any Alternatives.

Other Past, Present, and Reasonably Foreseeable Activity Impacting Affected Environment	Descriptions of Anticipated Cumulative Impacts
Hunting	
<p>Total duck and goose harvest in the United States from 2016–2017 was estimated at 12,115,800 (± 4 percent) ducks and 3,602,500 (± 5 percent) geese (USFWS 2018).</p> <p>For the period of 2016–2017, annual duck harvests for the Central Flyway averaged 2,429,000 (± 14 percent) ducks and during the same period, annual goose harvests for the Central Flyway averaged 1,061,500 (± 11 percent) geese (Raftovich et al. 2018).</p> <p>Harvest information provided by the NGPC for resident wildlife hunt programs is compiled at the state, county, or management unit level. Relevant data for assessing cumulative impacts in this EA are summarized below.</p> <ul style="list-style-type: none"> • The turkey harvest and hunter success rate for Nebraska in 2018 was 17,731 birds and 61.3 percent hunter success in the spring, and 3,255 birds and 54.5 percent success in the fall (Lusk 2019a). No harvest information is available for northern bobwhite; however, the best hunting opportunities were found in the southern, southeast, and east-central regions of the State (Lusk 2019b). • Elk and pronghorn are transient species on the refuge. Their harvest would likely be so low as to not affect the local population. Minimal hunter harvest would be expected due to limited suitable habitat. • Furbearer harvest (hunt and trap) information for Nebraska 2012–2017 is in Table 6. 	<p>Similar to other national wildlife refuges, the refuge conducts hunting programs within the framework of state and federal regulations. Population and harvest estimates of hunted species are developed at multiple spatial scales and used to determine take limits, hunting seasons, and methods of take. The refuge would regularly coordinate with the state and strive to support hunting regulations that are the same as or more restrictive than the state for the protection of natural resources and the public.</p> <p><i>Migratory Birds</i></p> <p>Migratory bird populations throughout the country are managed through administrative regions known as flyways. The refuge is in the Central Flyway. In North America, the process for establishing hunting regulations is conducted annually. In the United States, the process involves a number of scheduled meetings (Flyway Study Committees, Flyway Councils, Service Regulations Committee, etc.) where information on the status of migratory bird populations and their habitats is shared with individuals of agencies responsible for setting hunting regulations. In addition, public hearings are held and the proposed regulations are published in the Federal Register to allow public comment.</p> <p>Annual waterfowl assessments are based upon the distribution, abundance, and flight corridors of migratory birds. An Annual Waterfowl Population Status Report is produced each year and includes the most current breeding population and production information available for waterfowl in North America (USFWS 2018b). The report is a cooperative effort by the Service, the Canadian Wildlife Service, various state and provincial conservation agencies, and private conservation organizations. An Annual Adaptive Harvest Management Report provides the most current data, analyses, and decision making protocols (USFWS 2017a). These reports are intended to aid the development of waterfowl harvest regulations in the United States for each hunting season. Coot, moorhen, and rail species are also counted and analyzed.</p> <p>Each state selects season dates, bag limits, shooting hours, and other options using guidance in these reports. The refuge follows the regulations set by the State of Nebraska.</p>

Other Past, Present, and Reasonably Foreseeable Activity Impacting Affected Environment	Descriptions of Anticipated Cumulative Impacts
	<p>The Service believes that hunting on the refuge would not add significantly to the cumulative impacts of migratory bird management on local, regional, or Central Flyway populations because the percentage likely to be taken on the refuge, though possibly additive to existing hunting takes, would be a very small fraction of the estimated populations. In addition, overall populations would continue to be monitored and future harvests would be adjusted, as needed, under the existing flyway and state regulatory processes. Several points support this conclusion:</p> <ul style="list-style-type: none"> • The proportion of the national waterfowl harvest that occurs on national wildlife refuges is only 6 percent (USFWS 2013b). • There are no populations that exist wholly and exclusively on national wildlife refuges. • Annual hunting regulations within the United States are established at levels consistent with the current population status. • Refuges cannot permit more liberal seasons than provided for in federal frameworks. • Refuges purchased with funds derived from the Federal Duck Stamp must limit hunting to 40 percent of the available area. <p>The estimated impacts of expanded waterfowl hunting on Valentine NWR is depicted in Table 9.</p> <p><i>Resident Birds and Mammals</i></p> <p>The NGPC manages resident bird and mammal populations in the State of Nebraska. The state selects season dates, bag limits, shooting hours, and other options using data obtained from monitoring efforts and harvest reports.</p> <p>We estimate that there would be approximately 10 hunters engaging in furbearer hunting on the refuge. The potential harvest of resident game, furbearer, and other species on the refuge is likely negligible in proportion to regional or state harvest numbers and would not add significantly to the cumulative impacts on resident bird and mammal populations in Nebraska. The anticipated cumulative impacts for hunting furbearers and other species on Valentine NWR is shown in Table 7.</p> <p><i>Threatened and Endangered Species</i></p> <p>Hunting would not be expected to have any positive or negative impacts on threatened and endangered species. None of the refuge lands to be open to public hunting have been designated as critical habitat for any species listed as endangered or threatened under the ESA of 1973, as amended. Whooping cranes, least terns, and piping plovers may inhabit braided, shallow sand bar habitat during spring and fall migrations. We would not anticipate the proposed hunt program to have any significant negative impact on these species. Hunting seasons are well outside the blooming dates for rare plants. Additional hunting opportunities would create abundant forage for American burying beetles.</p>

Other Past, Present, and Reasonably Foreseeable Activity Impacting Affected Environment	Descriptions of Anticipated Cumulative Impacts
Public Lands	
<p>Public hunting areas near the refuge are Ballards Marsh Wildlife Management Area (WMA), Rat and Beaver Lake WMA, Merritt Reservoir State Recreation Area, Big Alkali WMA, and Samuel R. McKelvie National Forest.</p>	<p>Expanded hunting opportunities on the refuge could alleviate hunting pressure on wildlife populations on nearby public lands.</p> <p>As a result, changes or additions to hunting on the refuge would have minor effects on wildlife species in Nebraska. Although the Proposed Action Alternative would increase hunting opportunities compared to the No Action Alternative, the slight increase in hunter activity would not rise to a significant level.</p>
Agricultural Land Uses	
<p>Land use in the region is dominated by ranching activities.</p> <p>Refuge habitats are currently manipulated by domestic cattle from neighboring landowners who have a Special Use Permit and Cooperative Agricultural Agreement from the Service.</p> <p>The refuge population of large ungulates is not different from surrounding lands and depredation of surrounding lands has not been a concern by refuge neighbors or landowners in the surrounding community.</p> <p>Hunting activities do not affect the grazing, haying, or other agricultural activities of surrounding landowners and neighbors.</p>	<p>We do not anticipate that increased hunting under the proposed alternative would affect local agricultural uses, in part due to common off-refuge hunting, and the current refuge hunt area remains unchanged.</p>
Use of Lead Ammunition	
<p>Lead ammunition is permitted for big game and furbearers. It is prohibited for migratory birds, upland birds and wild turkey.</p> <p>Research has shown that lead can be present in gut piles left by deer hunters after field dressing. Bald eagles and other raptors feed on the gut piles and may ingest the lead, leading to poisoning.</p>	<p>Under these alternatives, the refuge represents a small portion of hunting that would allow the use of lead ammunition (deer and furbearers). We anticipate minimal impacts on non-target wildlife because the Service permits non-toxic shot only on the refuge, and for animals harvested with lead bullets, the hunters remove carcasses. The number of hunters is so small when compared to surrounding lands that this limited increase in lead in the environment would not have more than a minor effect on cumulative impacts on lead in the environment and those associated impacts.</p>

Other Past, Present, and Reasonably Foreseeable Activity Impacting Affected Environment	Descriptions of Anticipated Cumulative Impacts
Climate Change	
Ecological stressors are expected to affect a variety of natural processes and associated resources into the future. Precipitation availability may have a large impact on the number of potholes available to breeding waterfowl. These habitat changes may dramatically reduce the amount and quality of both grassland and wetland for migratory birds that are hunted. As a result, wildlife would be displaced into other areas of available habitat.	While the impacts from climate change on the refuge wildlife and habitats are not certain, expanding hunting on the refuge would not add to the cumulative impacts of climate change because the refuge uses an adaptive management approach for its hunt program, consistently monitoring and reviewing the hunt program annually and revising annually (if necessary). The Service’s hunt program would adjust as necessary to ensure that it does not contribute further to the cumulative impacts of climate change on resident wildlife and migratory birds.

Key: ESA = Endangered Species Act, NWR = National Wildlife Refuge, WMA = Wildlife Management Area

Table 9. Estimated Impacts of Expanded Waterfowl Hunting on Valentine National Wildlife Refuge.

Species	Central Flyway Harvest	Estimated Valentine NWR Harvest	% Increase in Flyway Harvest
Ducks	2,429,000	270	0.01
Geese	1,061,500	225	0.02

3.4 Monitoring Activities/Efforts

Continued annual biological monitoring of both resident and migratory wildlife and their habitats is done on the refuge in conjunction with our state partners. In addition, the station would stay apprised of the status of threatened and endangered species on the refuge through consultation and local monitoring.

3.5 Summary of Analysis

The purpose of this EA is to briefly provide sufficient evidence and analysis for determining whether to prepare an Environmental Impact Statement or a Finding of No Significant Impact.

Alternative A – Proposed Action Alternative

As described above, this alternative would open existing refuge lands to hunting of the following species, according to state seasons and regulations: badger, squirrel, bobcat, fox, opossum, cottontail rabbit, skunk, long-tailed weasel and raccoon, partridge, quail, turkey, antelope, elk, rail, snipe, crow, and woodcock. It would also expand hunting opportunities on newly expanded land for hunting waterfowl. As new lands are acquired, they would be open to all species identified in this plan after completion of required compliance.

The refuge currently owns 72,000 acres and would most likely remain dispersed in the landscape, interspersed with state WMAs and private lands. More opportunities are likely to

attract more hunters and would be a boon to the local economy. Now, we believe hunting use would not conflict with other visitor uses, and in the future, if it does, the impact would be mitigated. There is not likely to be an adverse effect on endangered or threatened species. Effects on wildlife and habitat would be negligible to nonexistent. The challenge of balancing multiple consumptive and non-consumptive uses, all while supporting the conservation of natural resources, would persist. However, refuge hunting and fishing mitigation measures and periodic assessments would allow adjustments in hunt and fish activities under both alternatives. In the years since CCP approval (1999), current conditions have offered hunting and fishing opportunities as the American public continues to safely increase use of the refuge. This trend would be expected to continue.

This alternative would help meet the purpose and needs of the Service as described above, because it would provide additional wildlife-dependent recreation opportunities on the refuge that meet the Service's priorities and mandates. This alternative also would help align Service regulations with state regulations in an effort to make hunting more accessible and understandable by the American public. The Service has determined that the proposed action is compatible with the purposes of the refuge and the mission of the Refuge System. The compatibility determination is available as a reference document (*Compatibility Determination for Recreational Hunting on Valentine National Wildlife Refuge*).

Alternative B – No Action Alternative

As described above, this alternative would continue to offer hunting of migratory game birds, upland game, and big game on the refuge; however, this would not provide more alignment with state regulations because hunting would not be allowed of badger, squirrel, bobcat, fox, opossum, cottontail rabbit, skunk, long-tailed weasel, raccoon, partridge, quail, and turkey, antelope, elk, rail, snipe, crow, and woodcock. Hunting opportunities would be limited to those interested in those species currently allowed on the refuge. Effects on wildlife and habitat would be negligible because there would likely be the same amount of use by hunters.

This alternative also meets the purpose and needs of the Service as described above, because it would provide wildlife-dependent recreation opportunities. However, it does not allow for the variety of hunting opportunities that could be offered nor allow for alignment with state regulations. However, it would take less time and fewer resources and staff and create fewer conflicts between user groups on the refuge.

3.6 List of Sources, Agencies, and Persons Consulted

- Nebraska Game and Parks Commission

3.7 List of Preparers

The project leader, refuge manager, and wildlife biologists at Valentine NWR were involved with preparing this draft EA.

3.8 State Coordination

On July 10, 2018, NGPC leadership provided suggestions for expanded hunting opportunities on Service lands in Nebraska. Their input was consistent with the Department of Interior Secretarial Order 3356, "Hunting, Fishing, Recreational Shooting, and Wildlife Conservation Opportunities

and Coordination with States, Tribes, and Territories.” The refuge reviewed the operations and regulations for neighboring state wildlife management areas, public lands administered by other agencies (for example, the U.S. Forest Service), and other national wildlife refuges in Nebraska to find consistency where possible. Additional conversations have occurred with local NGPC biologists in development of this draft EA and draft hunting plan. The Service will be sending a letter to the state summarizing efforts to increase hunting opportunity and align with state hunting regulations. We will continue to consult and coordinate on specific aspects of the hunting plan to ensure safe and enjoyable recreational hunting opportunities.

3.9 Tribal Consultation

The Service mailed an invitation for comments to all tribes potentially affected by initiating an EA to open Valentine NWR to expanded hunting opportunities. The Service extended an invitation to engage in government-to-government consultation in accordance with Executive Order 13175.

3.10 Public Outreach

The refuge will make the public aware of the availability of the draft EA and draft hunting plan via public notices on the refuge’s website, through local newspapers, and in Valentine NWR’s office and visitor center. During a 30-day public comment period, the Service will accept comments in writing, in person, electronically, or in any other form the public wishes to present comments or information. Upon close of the public comment period, all comments and information will be reviewed and considered. The final EA will address the comments submitted.

3.11 Determination

This section will be filled out upon completion of any public comment period and at the time of finalization of the Environmental Assessment.

- The Service’s action will not result in a significant impact on the quality of the human environment. See the attached **“Finding of No Significant Impact.”**
- The Service’s action **may significantly affect** the quality of the human environment and the Service will prepare an Environmental Impact Statement.

Preparer Signature: _____ Date: _____

Name/Title/Organization: _____

Reviewer Signature: _____ Date: _____

Name/Title: _____

3.12 References

Carver, E.; Caudill, J. 2006. Banking on Nature—The economic benefits to local communities of National Wildlife Refuge visitation: Washington, D.C., U.S. Fish and Wildlife Service, Division of Economics, 372 pp.

Nebraska Game and Parks Commission Fur Harvest Survey, 2017/2018 Season, Sam Wilson/Julia Nawrocki.

Raftovich, R.V.; Chandler, S. C.; Fleming, K.K. 2017. Migratory bird hunting activity and harvest during the 2015–16 and 2016–17 hunting seasons. U.S. Fish and Wildlife Service, Laurel, Maryland, USA.

Schneider, R.; Stoner, K.; Steinauer, G.; Panella, M.; Humpert, M. 2011. The Nebraska Natural Legacy Project: State Wildlife Action Plan. 2nd ed. The Nebraska Game and Parks Commission, Lincoln, NE. <<http://outdoornebraska.gov/wp-content/uploads/2015/09/NebraskaNaturalLegacyProject2ndEdition.pdf>>

[USFWS] U.S. Fish and Wildlife Service. 2013a. Banking on Nature, The economic benefits to local communities of national wildlife refuge visitation. USFWS, Division of Economics, Washington, DC. 365pp.

———. 2013b. Issuance of Annual Regulations Permitting the Hunting of Migratory Birds, Final Supplemental Environmental Impact Statement. USFWS, Division of Migratory Birds and Management, Laurel, MD. 418pp.

———. 2017. Adaptive Harvest Management: 2018 Hunting Season. U.S. Department of Interior, Washington, D.C. 69 pp. <<http://www.fws.gov/birds/management/adaptive-harvest-management/publications-and-reports.php>>

———. 2018. Waterfowl population status, 2018. U.S. Department of the Interior, Washington, D.C. USA. <https://www.fws.gov/migrator:ybirds/pdf/surveys-and-data/Population-status/Waterfowl/WaterfowlPopulationStatusReport_18.pdf>

APPENDIX A OTHER APPLICABLE STATUTES, EXECUTIVE ORDERS, AND REGULATIONS

Other Applicable Statutes, Executive Orders, and Regulations
Cultural Resources
<p>American Indian Religious Freedom Act, as amended, 42 U.S.C. 1996 – 1996a; 43 CFR Part 7</p> <p>Antiquities Act of 1906, 16 U.S.C. 431–433; 43 CFR Part 3</p> <p>Archaeological Resources Protection Act of 1979, 16 U.S.C. 470aa – 470mm; 18 CFR Part 1312; 32 CFR Part 229; 36 CFR Part 296; 43 CFR Part 7</p> <p>National Historic Preservation Act of 1966, as amended, 16 U.S.C. 470–470x-6; 36 CFR Parts 60, 63, 78, 79, 800, 801, and 810</p> <p>Paleontological Resources Protection Act, 16 U.S.C. 470aaa – 470aaa-11</p> <p>Native American Graves Protection and Repatriation Act, 25 U.S.C. 3001–3013; 43 CFR Part 10</p> <p>Executive Order 11593 – Protection and Enhancement of the Cultural Environment, 36 Fed. Reg. 8921 (1971)</p> <p>Executive Order 13007 – Indian Sacred Sites, 61 Fed. Reg. 26771 (1996)</p>
Fish and Wildlife
<p>Bald and Golden Eagle Protection Act, as amended, 16 U.S.C. 668–668c, 50 CFR 22</p> <p>Endangered Species Act of 1973, as amended, 16 U.S.C. 1531–1544; 36 CFR Part 13; 50 CFR Parts 10, 17, 23, 81, 217, 222, 225, 402, and 450</p> <p>Fish and Wildlife Act of 1956, 16 U.S.C. 742 a-m</p> <p>Lacey Act, as amended, 16 U.S.C. 3371 et seq.; 15 CFR Parts 10, 11, 12, 14, 300, and 904</p> <p>Migratory Bird Treaty Act, as amended, 16 U.S.C. 703–712; 50 CFR Parts 10, 12, 20, and 21</p> <p>Executive Order 13186 – Responsibilities of Federal Agencies to Protect Migratory Birds, 66 Fed. Reg. 3853 (2001)</p>
Natural Resources
<p>Clean Air Act, as amended, 42 U.S.C. 7401–7671q; 40 CFR Parts 23, 50, 51, 52, 58, 60, 61, 82, and 93; 48 CFR Part 23</p> <p>Wilderness Act, 16 U.S.C. 1131 et seq.</p> <p>Wild and Scenic Rivers Act, 16 U.S.C. 1271 et seq.</p> <p>Executive Order 13112 – Invasive Species, 64 Fed. Reg. 6183 (1999)</p>
Water Resources
<p>Coastal Zone Management Act of 1972, 16 U.S.C. 1451 et seq.; 15 CFR Parts 923, 930, 933</p> <p>Federal Water Pollution Control Act of 1972 (commonly referred to as Clean Water Act), 33 U.S.C. 1251 et seq.; 33 CFR Parts 320–330; 40 CFR Parts 110, 112, 116, 117, 230–232, 323, and 328</p> <p>Rivers and Harbors Act of 1899, as amended, 33 U.S.C. 401 et seq.; 33 CFR Parts 114, 115, 116, 321, 322, and 333</p> <p>Safe Drinking Water Act of 1974, 42 U.S.C. 300f et seq.; 40 CFR Parts 141–148</p> <p>Executive Order 11988 – Floodplain Management, 42 Fed. Reg. 26951 (1977)</p> <p>Executive Order 11990 – Protection of Wetlands, 42 Fed. Reg. 26961 (1977)</p>

Key: CFR = Code of Federal Regulations; U.S.C. = U.S. Code