

Draft Environmental Assessment

for Resident Game and Migratory Bird Hunting on Fort Niobrara National Wildlife Refuge

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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 for resident game and migratory birds on the Fort Niobrara National Wildlife Refuge (NWR) in accordance with the refuge's comprehensive conservation plan (CCP). Resident game hunting covers all non-migratory wildlife hunted in Nebraska under the Nebraska Game and Parks Commission (NGPC) Hunting Regulations. Resident game species include white-tailed deer, mule deer, pronghorn antelope, elk, badger, beaver, bobcat, coyote, fox, long-tailed weasel, mink, muskrat, opossum, prairie dog, porcupine, rabbit and hare, raccoon, skunk, squirrel, woodchuck, greater prairie chicken, grouse, partridge, pheasant, quail, and turkey. Migratory bird hunting covers waterfowl, dove, crow, rail, snipe, and woodcock.

This proposed action is often iterative and evolves over time during the process 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 will be made at the conclusion of the public comment period for the EA and the Draft 2020-2021 Refuge-Specific Hunting and Sport Fishing Regulations. The Service cannot open a refuge to hunting or fishing until a final rule has been published in the Federal Register formally opening the refuge to hunting or fishing, or both.

1.2 Background

National wildlife refuges are guided by the mission and goals of the National Wildlife Refuge System (Refuge System), the purposes of an individual refuge, Service policy, and laws and international treaties. Relevant guidance covers 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 parts of the CFR and Fish and Wildlife Service Manual.

Executive Order (EO) 1461 established Fort Niobrara National Wildlife Refuge (NWR) on January 11, 1912, as the "Niobrara Reservation . . . a preserve and breeding ground for native birds." EO 1642 expanded the refuge on November 12, 1912, and the reintroduction of elk and bison occurred in January 1913 (EO 3256 dated March 31, 1920), and EO 7301 (dated February 21, 1936) added more acreage to the refuge.

In 1997, in preparation for developing the refuge CCP, the Interior Department Library, Library of Congress, National Archives, and National Agriculture Library conducted extensive research independent of refuge staff to find the purpose(s) of the refuge. After reviewing the EOs and supporting historical documents, it was found that big game, such as bison and elk, was an intended purpose of the refuge. The conclusion was that the refuge has two primary purposes which are: (1) a preserve and breeding ground for native birds, and (2) the preservation of bison and elk herds representative of those that once roamed the Great Plains.

In 2008, a proposed Fort Niobrara NWR Elk and Deer Management Plan and Environmental Assessment (EDMP/EA) was put out for public review and comment. Deer and elk hunting in refuge lands north and west of the Niobrara River, approximately 5,065 acres (including 3,500 acres of woodland; 1,330 acres of grassland; 235 acres of wetland) was declared compatible with the purposes for which the refuge was established, and the final EDMP/EA was signed in 2009. The first deer hunt on Fort Niobrara occurred in 2011 and, per conditions of the EDMP, elk hunting began in 2016.

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 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 and fishing, when those opportunities are compatible with the purposes for which the refuge was established and the mission of the Refuge System.

1.3 Purpose and Need for the Proposed Action

The purpose of this proposed action is to provide compatible wildlife-dependent recreational opportunities on Fort Niobrara NWR. The need of the preferred 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)). This action also satisfies EO 13443 signed August 16, 2007, "Facilitation of Hunting Heritage and Wildlife Conservation"; Secretary's Order 3347 signed March 2, 2017, "Conservation Stewardship and Outdoor Recreation"; and Secretary's Order 3356 signed September 15, 2017, "Hunting, Fishing, Recreational Shooting, and Wildlife Conservation Opportunities and Coordination with States, Tribes, and Territories."

2.0 Alternatives

2.1 Alternatives Considered

As of this writing, only the NGPC has contributed ideas for expansion of hunting and fishing at the refuge.

- Their first request was to provide NGPC with hunter use and harvest statistics if available, coordinate with NGPC biologists to evaluate deer and elk population parameters, and decide possible additional use of property. We, the Service, annually provide NGPC hunter survey information collected from refuge hunters. We also have a running dialog with the local NGPC biologist about deer and elk management. We worked closely with NGPC in writing and implementing the refuge elk and deer management plan. As a result, we collaborated in elk population and home range studies, instituted deer and elk hunting on the refuge, and removed the captive elk herd.
- NGPC requested that we add deer and elk hunting along the west side of the refuge south-southwest of the refuge headquarters. This area is already open to that activity. We think they may have misinterpreted our hunt brochure. We made changes to the brochure for the 2019 to 2020 season to clearly show the open hunt area.
- NGPC asked us to consider prairie grouse hunting in the "summer bison range," dependent on the presence, absence, and timing of moving bison. Considering that this would limit our ability to manage the bison herd and risk hunter caused bison releases, we have decided to not pursue this request.
- NGPC requested that we allow special fishing events at the ponds on the refuge. The refuge, Sandhills Prairie Refuge Association, and the NGPC have sponsored kids fishing events at one of the ponds. Over the years, interest waned to the point of almost no attendance. We now help the NGPC with the kids fishing event at the NGPC Valentine Fish Hatchery.

- NGPC is also interested in removing the refuge permit rule for elk and deer hunters. This permit was established with the 2009 EDMP/EA. Part of that permit issuance is tied to the hunter report that the refuge uses to provide NGPC harvest information that they requested. The 2009 plan does provide for future changes in permit rules, lottery draws, and license numbers in cooperation with NGPC.

Alternative A – Expanded Species Hunting – Proposed Action Alternative

The refuge has prepared the Fort Niobrara NWR Resident Game and Migratory Bird Hunting Plan, which is presented in this document as the Proposed Action Alternative.

Under the Proposed Action Alternative, the Service is proposing to expand hunting opportunities for resident game and migratory birds within the current open area of the refuge. Resident game hunting covers all non-migratory wildlife hunted in Nebraska under NGPC Hunting Regulations. Resident game hunting includes white-tailed deer, mule deer, pronghorn antelope, elk, badger, beaver, bobcat, coyote, fox, long-tailed weasel, mink, muskrat, opossum, prairie dog, porcupine, rabbit and hare, raccoon, skunk, squirrel, woodchuck, greater prairie chicken, grouse, partridge, pheasant, quail, and turkey. Migratory bird hunting includes waterfowl, dove, crow, rail, snipe, and woodcock.

Regulations that would be imposed under the proposed action include:

- State-permitted archery and muzzleloader weapons can take elk, deer, and antelope.
- State-permitted shotguns shooting non-toxic shot, archery, and muzzleloader weapons are allowed for badger, bobcat, coot, crow, dark geese, dove, duck, fox, furbearer, greater prairie chicken, grouse, long-tailed weasel, light geese, mink, opossum, partridge, pheasant, quail, rabbit and hare, raccoon, rail, skunk, snipe, squirrel, teal, turkey, woodcock, coyote, porcupine, prairie dog, and woodchuck.
- Falconry is allowed to take pheasant, sharp-tailed grouse, prairie chicken, quail, partridge (gray [Hungarian] and chukar), cottontail rabbit, white-tailed and black-tailed jackrabbit, squirrel, and migratory game birds, including ducks, geese, mergansers, coot, snipe, woodcock, rails (sora and Virginia), dove (mourning, white-winged, and Eurasian collared), and crow.
- Non-toxic shot is required for all shotgun, and muzzleloader shotgun use.
- Hunter access is allowed from two hours before legal sunrise until two hours after legal sunset. Hunting hours for badger, bobcat, fox, furbearers, long-tailed weasel, opossum, raccoon, skunk, coyote, porcupine, prairie dog, and woodchuck are limited to the two hours before sunrise and two hours after sunset limit instead of the 24-hour state allowance. All other shooting hours for proposed species fall within the refuge access hours by state regulation.
- License rules and season dates are according to state regulation.
- Bag limits are generally according to state regulations. Special deer bag limits such as antlerless only, bonus tags, mule deer doe would be negotiated with the NGPC and published in their regulations.

- Access to the wilderness part of the open hunt area is limited to walking, horseback, and canoe, kayak, or float tube. Game carts or any other mechanized device used for retrieving game or transportation are prohibited in the part of the wilderness area open to hunting.
- Access to the *non-wilderness* part of the open hunt area is limited to walking, horseback, bicycling, and e-bicycles. Bicycles and e-bicycles are allowed on established roads and trails. E-bicycles are bicycles with a small electric motor (less than 1 horsepower) power assist in the same manner as traditional bicycles. The operator of an e-bike may only use the small electric motor to aid pedal propulsion. The motor may not be used to propel an e-bike without the rider also pedaling, except in locations open to public motor vehicle traffic.
- Alcoholic beverage possession is not allowed on the refuge.
- The Service's Hunt Permit Application (Form 3-2356), refuge hunt permit (annual), and the Service's Big Game Harvest Report (Form 3-2359) are no longer required.

Refuge-specific regulations would be published in the Federal Register as part of the 2020-2021 Refuge-Specific Hunting and Sport Fishing Regulations.

Mitigation Measures to Avoid Conflicts:

- Endangered whooping cranes occasionally use the refuge for resting and feeding. If whooping cranes are present on the refuge in an area on or near the open hunting area, a closed buffer zone within the hunting area would be temporarily established.
- Hunting is not allowed within 200 yards of public use facilities in the hunt area. These facilities are the refuge canoe launch and two scenic overlook points.
- The primary non-consumptive public use areas of the refuge remain outside the hunt area. These areas are south and east of the Niobrara River. The area covers the Fort Falls Nature Trail, refuge auto tour route, visitor center, and the county road running through the refuge. These areas provide the visiting public a safe place to observe and photograph wildlife, learn about the environment, and float the river. The closed area provides a sanctuary for wildlife.
- Hunters must park at designated hunting parking areas to avoid traffic problems.
- Tree marking and electronic or photographic monitoring devices are prohibited. This would keep the untrammeled appearance of the hunt area which is mostly designated wilderness.
- No additional or existing facilities, such as roads, trails, and parking lots, would be kept or constructed that would result in cultural resources or wilderness values being affected.

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

Alternative B – Continue Hunting Program According to the 2009 Elk and Deer Management Plan and Environmental Assessment – No Action Alternative

Under this alternative, we would continue the hunting program at Fort Niobrara NWR as it currently exists. Hunting of elk and deer would remain open. All current regulations would remain in effect. This alternative would continue to provide a high-quality primitive weapon hunt. Other public use and wildlife viewing opportunities would continue. The refuge's 2009 hunting plan and EA provide more information on this alternative and the associated environmental effects. The map from the refuge hunt brochure showing the open hunt area, access, and other refuge features is found below (Figure 1). The current action alternative as described in the 2009 hunting plan and EA meets most of the purposes and needs of the proposed action; however, it does not meet the main purpose of the proposed action, which is to expand hunting opportunities on the refuge.

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

Not applicable.

3.0 Affected Environment and Environmental Consequences

3.1 Affected Environment

The Fort Niobrara NWR covers 19,131 acres and is located along the Niobrara River in Cherry County near Valentine, Nebraska. The refuge, once a frontier military fort, supports an exceptional diversity of native plants and wildlife representative of the northern Great Plains and geographic regions to the east, west, north, and south.

Six major plant communities converge along the Niobrara River and are situated according to their habitat needs and tolerances. Sandhills Prairie grows atop sand dunes mostly south of the river, and Mixed-grass Prairie is found on hard tablelands to the north. Rocky Mountain Coniferous Forest occurs on dry, rocky soils and steep eroding cliffs. Plants from the Eastern Deciduous Forest, Northern Boreal Forest, and Tallgrass Prairie plant communities inhabit water-rich areas such as the river floodplain, tributaries, and canyon walls. Relative abundance of the general habitat types on the refuge is 75 percent grassland, 23 percent woodland, and 2 percent open water and wetland.

Most of the wildlife present in historical times still inhabit Fort Niobrara seasonally or year-round, including over 230 species of birds, 50 species of mammals, 24 species of reptiles and amphibians, and many species of fish. A conservation herd of plains bison, currently numbering about 350 in the winter, has been managed on the refuge since 1913. Federally listed threatened and endangered species that have been documented on the refuge and in the surrounding area include whooping crane, piping plover, and interior least tern (spring and fall migrations), as well as American burying beetle (year-round resident) and northern long-eared bat (possible year-round resident). Blowout penstemon, western prairie fringed orchid, and Topeka shiner have been documented in Cherry County but are not known to exist on the refuge.

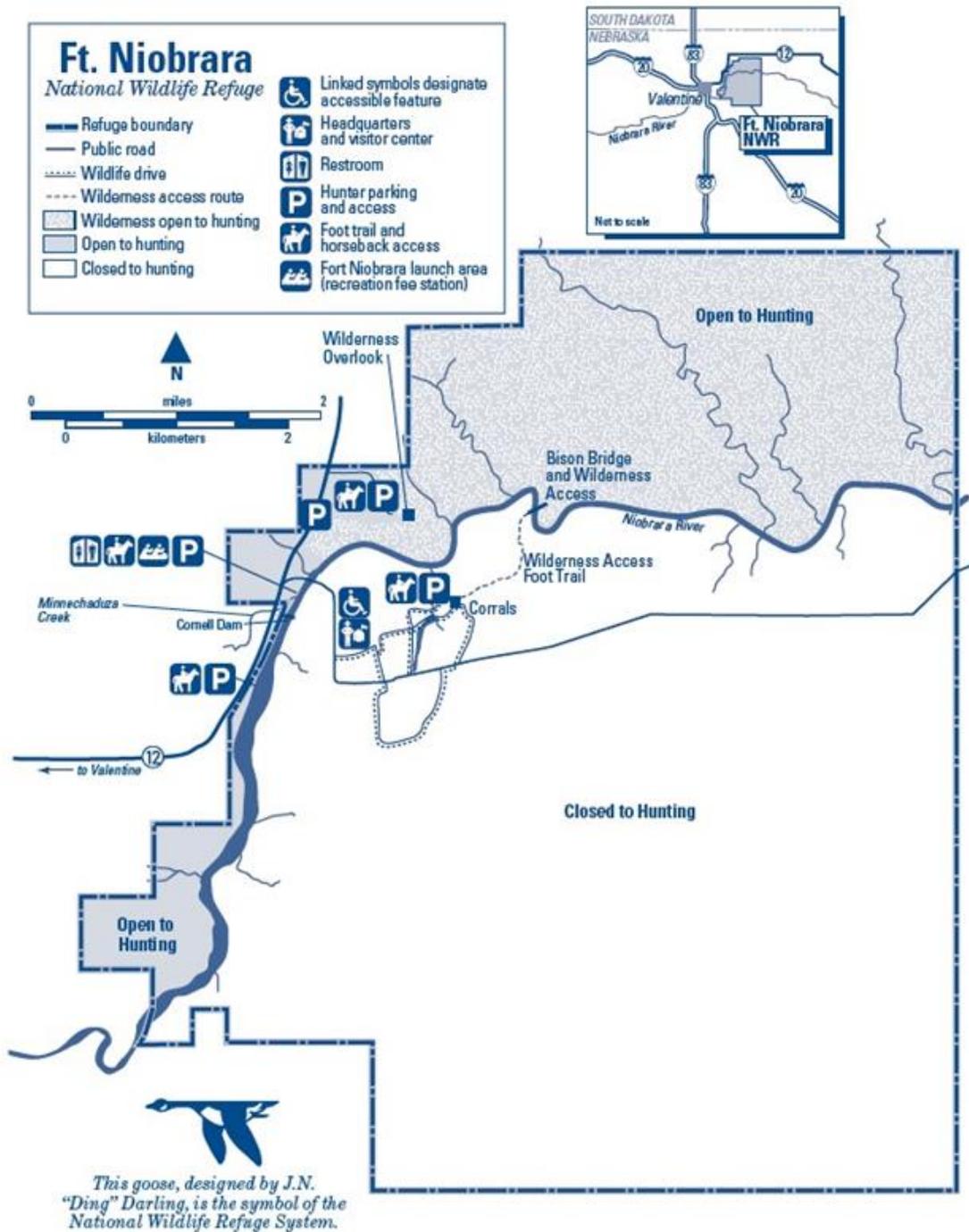


Figure 1. Fort Niobrara National Wildlife Refuge Areas Open and Closed to Hunting.

Many significant cultural and paleontological remains exist on the refuge. Fossils from more than 20 extinct mammal species, including the long-jawed mastodon, giant bison, and three-toed horse, have been unearthed on the refuge. Various expeditions of the middle and late 1800s documented the aboriginal occupation of this region by the Dakota Sioux, Ponca, and Pawnee. Fort Niobrara Military Reservation was established in 1879 to keep peace between frontier settlers and Sioux Indians and to control cattle rustlers and horse thieves. The army closed the fort in 1906 but used it to supply fresh horses for the cavalry until 1911 when some of the land was transferred to the Department of Agriculture, Bureau of Biological Survey, to be used as a preserve and breeding ground for native birds.

Besides providing important habitat for native birds, bison, elk, and other wildlife the refuge has approximately 84,000 visitors annually (2019 Refuge Annual Performance Plan). Visit numbers for different uses and activities include visitor center (4,750), big game hunting (375), fishing (20), wildlife observation (foot trail 17,500; auto tour 49,000; boat trail 4,794; bike trail 10), photography (64,000), and environmental education and interpretation (350). Visitation occurs year-round; however, most people visit from April through October.

Tables 1 through 5 provide additional, brief descriptions of each resource affected by the proposed action.

For more information about the affected environment, please see the refuge's CCP, which can be found at www.fws.gov/mountain-prairie/refuges/ftn.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 covers 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.

Tables 6 through 9 provide supplemental hunting data for the affected resources.

Table 10 provides a brief description of the cumulative impacts of the proposed action and any alternatives.

Time Periods and Season:

- *Spring* (March to May)
- *Summer* (June to August)
- *Fall* (September to November)
- *Winter* (December to February)
- *Year-round* (January to December)

Relative Abundance:

- *Common* (abundant, likely to be seen in suitable habitat)
- *Uncommon* (present in lower numbers, not certain to be seen)
- *Occasional* (present in low numbers, seen only a few times during a season)
- *Rare* (may be present, but in low numbers)

Impact Types:

- *Direct effects* are those which are caused by the action and occur at the same time and place.
- *Indirect effects* are those which 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 reasonably foreseeable 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 Any Alternatives.

<p>Affected Resources</p>	<p><u>Alternative A (Proposed Action)</u> <i>Fort Niobrara NWR would expand hunting opportunities for resident game and migratory birds within the current open area of the refuge.</i></p>	<p><u>Alternative B (No Action)</u> <i>The hunting program at Fort Niobrara NWR would continue as it currently exists.</i></p>
<p style="text-align: center;">Resident Birds</p>		
<p>Wild turkey is common in woodlands within the Niobrara River bottom, along creeks, and associated “breaks” habitat where forest and prairie intermix on the north side of the river. The overall status for wild turkey in Nebraska is good with the population estimated at about 140,000 birds in 2014 (NGPC).</p> <p>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. 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 5-year averages (Lusk 2019b).</p> <p>Sharp-tailed grouse is common and greater prairie chicken is uncommon where large expanses of native grassland habitat exist on the refuge. Ring-necked pheasant is an occasional occupant of different habitat types on the refuge including weedy patches, brushy creek bottoms, or cattail marshes.</p> <p>Gray partridge is a rare inhabitant of refuge grasslands and may occur in near to agricultural land cover on private land.</p>	<p>We estimate that opening the refuge to new hunting opportunities would result in approximately 60 additional use days. These use days would be divided among the different hunting opportunities and seasons.</p> <p>Given the near of the refuge’s hunt area to the City of Valentine and limited availability of other public lands in area, we would expect a possible 50 percent reduction in the existing wild turkey population and 50 percent reduction in the northern bobwhite population within the hunt area. Gunfire and associated hunter activity would disrupt bird activity and likely cause dispersal.</p> <p>Minimal hunter harvest and disturbance of sharp-tailed grouse (less than five), greater prairie chicken (less than five), ring-necked pheasant (less than 20), and gray partridge (less than 15) would be expected because of limited suitable habitat or low population numbers within the refuge hunt area.</p> <p>Refuge staff would work in close cooperation with the NGPC in sharing, evaluating, and discussing available population and harvest data, making recommendations for regulation changes, and any other actions necessary to make sure that viable populations of resident birds are supported.</p>	<p>Under this alternative, resident birds and upland game at or near the refuge’s hunting area would continue to be temporarily affected by noise and human disturbance during the big game hunting season. We consider this indirect effect to be minor and of short duration given the firearm used and the short length of 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 style="text-align: center;"><i>Fort Niobrara NWR would expand hunting opportunities for resident game and migratory birds within the current open area of the refuge.</i></p>	<p style="text-align: center;"><u>Alternative B (No Action)</u></p> <p style="text-align: center;"><i>The hunting program at Fort Niobrara NWR would continue as it currently exists.</i></p>
<p>Migratory Birds</p>		
<p>Mallard is a common year-round resident of the refuge that inhabits open water, wetlands, and beaver ponds associated with the Niobrara River and feeder streams. Wood duck and blue-winged teal are uncommon from May through September. Common merganser and common goldeneye are uncommon November through March, and other duck species stop briefly during spring and fall migrations.</p> <p>Canada goose is a common year-round resident of the refuge that inhabit open water, wetlands, and beaver ponds associated with the Niobrara River and feeder streams. During the fall and winter, several hundred geese roost in shallow, sparsely vegetated segments of the Niobrara River above Cornell Dam and forage on grain in agricultural fields off refuge. White-fronted goose and snow goose occasionally fly over the refuge during spring and fall migrations.</p> <p>American coot is an occasional inhabitant during late spring, summer, and early fall of wet meadow and marsh habitats along the Niobrara River, streams, and beaver ponds in the wilderness area. Sora and Virginia rail sightings are rare.</p> <p>Common snipe may be an occasional occupant of freshwater marsh habitat along the river May through September.</p> <p>American woodcock is a rare inhabitant of woodlands along creeks and within the river bottoms late spring through early fall.</p> <p>Mourning dove, a common species known to nest on the refuge, occurs in a variety of habitats including open woodlands, grasslands, and edge areas May through September.</p> <p>American crow is a common year-round resident of the refuge and occupies a variety of woodland, grassland, and wetland habitats.</p>	<p>Minimal hunter harvest of ducks (less than 50) and geese (less than 20) would be expected because of the difficulty in crossing terrain to access beaver ponds in the wilderness area and limited pass shooting opportunities from refuge lands along the river. Gunfire and associated hunter activity would disrupt bird activity and likely cause dispersal.</p> <p>Hunter harvest and disturbance of American coot (less than ten), common snipe (less than one) and American woodcock (less than one) would not be expected because of low population numbers.</p> <p>Given the proximity to the city of Valentine and limited public lands in the immediate vicinity of the refuge, mourning dove harvest could be significant for the refuge but have little influence on total harvest in Nebraska. In 2018, an estimated 189,100 birds were harvested by 11,600 hunters in Nebraska for an average harvest of 16.3 birds per hunter (Seamans 2019). Gunfire and associated hunter activity would disrupt bird activity and likely cause dispersal.</p> <p>Minimal harvest of American crow would be expected because of limited interest in harvesting this species. Gunfire and associated hunter activity would disrupt bird activity and likely cause dispersal.</p>	<p>Under this alternative, the few migratory birds still present at or near the refuge’s hunting area would continue to be temporarily affected by noise and human disturbance during the big game hunting season. We consider this indirect effect to be minor and of short duration given the firearm used and the short length of the hunting season.</p>

Affected Resources	<u>Alternative A (Proposed Action)</u> <i>Fort Niobrara NWR would expand hunting opportunities for resident game and migratory birds within the current open area of the refuge.</i>	<u>Alternative B (No Action)</u> <i>The hunting program at Fort Niobrara NWR would continue as it currently exists.</i>
Big Game Mammals		
<p><i>Elk</i></p> <p>Free-ranging elk occupy the rugged, wooded terrain intermixed with open grasslands along the Niobrara River on Fort Niobrara and neighboring private lands. Elk population numbers in 2018 on Fort Niobrara and private land immediately adjoining the refuge were estimated at 13–15 animals during the winter, 25–29 during the spring, 24–27 during the summer, and 29–34 during the fall (refuge data). The elk herd near Sparks, NE, which may include refuge elk, is estimated at 50–100 animals (NGPC personal communication).</p> <p><i>White-tailed deer and mule deer</i></p> <p>According to the NGPC (personal communication), deer are currently present in relatively low densities in the Sandhills (3–15 deer per square mile). White-tailed deer occupy a wide range of habitats on and off refuge and are more numerous than mule deer. Mule deer primarily inhabit the timbered breaks and draws along the Niobrara River and choppy sandhills to the south.</p> <p><i>Pronghorn</i></p> <p>Pronghorn are rare inhabitants of rolling grasslands on the refuge. Grasslands allow good visibility and provide a mixture of grass, forb, and shrub forage plants. Pronghorn would also inhabit agricultural lands, such as wheat and alfalfa, when interspersed with grassland habitat. In recent years, three to five pronghorns have been observed in refuge grasslands south of the Niobrara River.</p>	<p><i>Elk</i></p> <p>Same as the No Action Alternative.</p> <p><i>White-tailed deer and mule deer</i></p> <p>White-tailed deer and mule deer: Increased deer harvest would be expected on Fort Niobrara NWR. Hunter numbers are expected to increase (less than ten) because of the refuge no longer requiring a special refuge permit. Also, keeping the refuge hunt area open during rifle deer season would enable hunters to harvest deer that come onto the refuge for sanctuary.</p> <p>Gunfire and associated hunter activity would temporarily disrupt deer activity and current distribution, and likely cause dispersal. However, we would expect deer to revert to their normal activities and range within the refuge after the hunt season. The increased trimming of the deer herd caused by hunting activities should support the overall health of the remaining herd. The temporary increased number of hunters and hunting pressure expected at the refuge should not be large enough to have detrimental impacts to the overall health of the deer herd.</p> <p><i>Pronghorn</i></p> <p>An occasional pronghorn could be harvested but would not be expected because of low numbers on the refuge.</p>	<p><i>Elk</i></p> <p>No elk have been harvested on the refuge since primitive weapon elk hunting began in 2016 (Table 6).</p> <p>As population numbers increase, some harvest of elk would be expected on the refuge. Gunfire and associated hunter activity would temporarily disrupt elk activity and current distribution, and likely cause dispersal. However, we would expect elk to revert to their normal activities and range within the refuge after the hunt season. The trimming of the elk herd caused by hunting activities should support the overall health of the remaining herd. Given the relatively small number of hunters and hunting pressure expected at the refuge, there should be neither detrimental nor positive impacts to the overall health of the elk herd from hunting activities.</p> <p><i>White-tailed deer and mule deer</i></p> <p>Primitive weapon deer hunting began on the refuge in 2011. During the past 5-year period, 103 deer were reported harvested on the refuge for an average of 21 deer per year (Table 7).</p> <p>Similar deer harvest levels would be expected on and off the refuge under this alternative. Gunfire and associated hunter activity would temporarily disrupt deer activity and current distribution, and likely cause dispersal.</p>

Affected Resources	<u>Alternative A (Proposed Action)</u> <i>Fort Niobrara NWR would expand hunting opportunities for resident game and migratory birds within the current open area of the refuge.</i>	<u>Alternative B (No Action)</u> <i>The hunting program at Fort Niobrara NWR would continue as it currently exists.</i>
		<p>However, we would expect deer to revert to their normal activities and range within the refuge after the hunt season.</p> <p>The trimming of the deer herd caused by hunting activities should support the overall health of the remaining herd. Given the relatively small number of hunters and hunting pressure expected at the refuge, there should be neither detrimental nor positive impacts to the overall health of the deer herd from hunting activities.</p> <p>Pronghorn</p> <p>No impacts to antelope would be expected.</p>
Small Game, Furbearer, and Other Nongame		
<p>Relative abundance of the various small game, furbearer, and other nongame species that occupy the diverse habitats on the refuge are as follows: fox squirrel (common), eastern cottontail (common), white-tailed jackrabbit (occasional), raccoon (common), Virginia opossum (uncommon), bobcat (common), long-tailed weasel (occasional), mink (uncommon), red fox (occasional), badger (occasional), striped skunk (uncommon), coyote (common), porcupine (common), and woodchuck (rare). A small town of black-tailed prairie dogs in the wilderness area is active every few years.</p>	<p>In 2017, 7,005 fur harvest permits were sold to Nebraska residents (most recent data available). Thirty-nine fur harvest permits were sold to non-residents from 14 different states.</p> <p>The estimated harvest during the 2017 to 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). The total estimated harvest for the 2017 to 2018 season was higher than the 2016 to 2017 season with skunk, beaver, and coyote showing the greatest increase (up 49 percent, 36 percent and 35 percent, respectively).</p>	<p>Under this alternative, small game species, furbearers, and other nongame wildlife at or near the refuge’s hunting area would continue to be temporarily affected by noise and human disturbance during the big game hunting season. We consider this indirect effect to be minor and of short duration given the firearm used and the short length of 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 style="text-align: center;"><i>Fort Niobrara NWR would expand hunting opportunities for resident game and migratory birds within the current open area of the refuge.</i></p>	<p style="text-align: center;"><u>Alternative B (No Action)</u></p> <p style="text-align: center;"><i>The hunting program at Fort Niobrara NWR would continue as it currently exists.</i></p>
	<p>Mink and woodchuck showed the greatest decrease from the 2016 to 2017 season (down 41 percent and 32 percent, respectively) (Table 8).</p> <p>We estimate that there would be approximately 15 hunters engaging in furbearer hunting on the refuge. The cumulative impact of opening a furbearer season on the refuge is expected to be small (Table 9).</p> <p>Harvest of small game, furbearer, and other nongame mammals would be expected but limited because of the difficulty in crossing terrain in the wilderness area and weapon restrictions.</p> <p>Gunfire and associated hunter activity would temporarily disrupt small game, furbearers, and other nongame wildlife activity and distribution, and likely cause dispersal. However, we would expect these species populations to revert to their normal activities and range within the refuge after the hunt seasons. Trimming of the populations of these species from hunting activities should support the overall health of the remaining individuals. The temporary increased number of hunters and hunting pressure expected at the refuge, should not be large enough to have detrimental impacts to the overall health of the populations of these species.</p>	

Affected Resources	<u>Alternative A (Proposed Action)</u> <i>Fort Niobrara NWR would expand hunting opportunities for resident game and migratory birds within the current open area of the refuge.</i>	<u>Alternative B (No Action)</u> <i>The hunting program at Fort Niobrara NWR would continue as it currently exists.</i>
Other Wildlife and Aquatic Species		
<p>A rich and significant diversity of wildlife and plant species with eastern, western, northern and southern affinities as well as niches specific to the northern Great Plains are found on the refuge in the complex mixing of wet and dry habitats. Species assemblages are generally unchanged from historic times. The refuge was established by Executive Order in January 1912 as a “preserve and breeding ground for native birds.”</p> <p>Its purpose was expanded later that same year to include the preservation of bison and elk herds representative of those that once roamed the Great Plains. The refuge is home to a herd of about 350 bison (winter carrying capacity),⁴⁹ additional mammal species, over 230 species of birds, and at least 24 species of reptiles and amphibians.</p>	<p>Effects would be like those described in the No Action Alternative, including disturbance related to increased human presence and noise associated with hunting. Under this alternative, however, resident and migratory game hunting would occur over a longer period, concurrent with state hunting regulations. The likelihood of disturbance to non-target wildlife, because of increased human presence and noise associated with hunting, would be greater relative to the No Action Alternative.</p> <p>The active breeding and rearing season of young for resident and migratory wildlife is from April to July. Only some species are hunted during the same period, such as crow. We would expect only minor effects on non-target wildlife during this period because hunting for crows does not attract many outdoor recreation enthusiasts.</p>	<p>Temporary disturbance/displacement to non-hunted wildlife from foot traffic moving through the area or from gunfire would occur.</p> <p>The active breeding season for most birds (except winter breeding raptors) is within April-July. Hunting would not occur within this period therefore no conflict is expected.</p>
Threatened and Endangered Species and Other Special Status Species		
<p><i>Whooping crane</i></p> <p>Whooping cranes migrate through the area in March and April, as well as in October and November. Whooping cranes are sighted in this area every few years with the most recent on-refuge observation made on October 16, 2001 when an adult whooping crane was observed flying over the refuge with approximately 75 sandhill cranes. Two adult whooping cranes spent several days on the refuge roosting and feeding on shallow, sparsely vegetated segments of the Niobrara River above Cornell Dam in October 1993.</p>	<p>No effects to whooping crane, piping plover, or least tern would be expected. If any of these species are present on the refuge in an area on or near the open hunting area, a closed buffer zone within the hunt area would be temporarily established.</p> <p>Expanded hunting opportunities could result in additional forage for American burying beetles. No other effects would be expected.</p>	<p>No effects to threatened and endangered species would be expected except for NLEB. If this bat species is a year-round resident of the refuge, temporary disturbance or displacement from foot traffic moving through the area or from gunfire would be possible.</p>

<p style="text-align: center;">Affected Resources</p>	<p style="text-align: center;"><u>Alternative A (Proposed Action)</u></p> <p><i>Fort Niobrara NWR would expand hunting opportunities for resident game and migratory birds within the current open area of the refuge.</i></p>	<p style="text-align: center;"><u>Alternative B (No Action)</u></p> <p><i>The hunting program at Fort Niobrara NWR would continue as it currently exists.</i></p>
<p><i>Piping plover and least tern</i></p> <p>Piping plover and least tern sightings during spring and fall migrations on the non-vegetated or sparsely vegetated sandbars of the refuge part of the Niobrara River above Cornell Dam are rare. Least terns and piping plovers nest on Niobrara River sandbars between the Norden Bridge and the Missouri River.</p> <p>The Service has designated critical habitat for the northern Great Plains breeding population of the piping plover on the Niobrara River downstream from the Norden Bridge to the Missouri River confluence.</p> <p><i>American burying beetle</i></p> <p>American burying beetles inhabit grasslands, open woodlands, and forest edge within the Niobrara River corridor. The Nebraska Game and Parks Commission and Nebraska Private Lands Trust conducted American burying beetle surveys in August 2019 and 46 individuals (excludes recaptures) were captured on the refuge.</p> <p><i>Northern long-eared bats (NLEB)</i></p> <p>NLEB have been detected and captured in dense woodlands within the Niobrara River corridor during annual spring and summer surveys beginning in 2015. They roost singly or in colonies under bark of trees and in tree cavities late spring through early fall. A research project would begin this winter to find out if NLEB are using crevices within rocky outcrops or cliffs on the refuge as hibernacula. White-nosed Syndrome has not been detected during disease surveillance testing.</p>	<p>Expanded hunting opportunities could result in increased temporary disturbance or displacement of NLEB from foot traffic moving through the area or from gunfire. No other effects would be expected.</p>	

<p align="center">Affected Resources</p>	<p align="center"><u>Alternative A (Proposed Action)</u></p> <p><i>Fort Niobrara NWR would expand hunting opportunities for resident game and migratory birds within the current open area of the refuge.</i></p>	<p align="center"><u>Alternative B (No Action)</u></p> <p><i>The hunting program at Fort Niobrara NWR would continue as it currently exists.</i></p>
<p align="center">Wilderness and Other Special Designated Management Areas</p>		
<p><i>Fort Niobrara Wilderness Area</i></p> <p>Public Law 94-557 designated a 4,635-acre part of the refuge as wilderness on October 19, 1976. The wilderness area covers the river corridor, as well as the timbered bluffs and mixed prairie tablelands on the north side of the river.</p> <p>Under the Wilderness Act of 1964, this area is “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 about 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.</p> <p><i>Niobrara National Scenic River</i></p> <p>A 76-mile stretch of the Niobrara River, including the 9 miles of river through the refuge, is included in the National Wild and Scenic Rivers System. The Wild and Scenic Rivers Act of 1968 (Public Law 90-542, as amended; 16 U.S. Code 1271-1287) states: “It is hereby declared to be the policy of the U.S. that certain selected rivers of the nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, shall be preserved in free-flowing condition, and that they and their immediate environments</p>	<p>While effects to wilderness values and character would be expected to increase because of expanded hunting opportunities and no longer requiring a refuge access permit, refuge visitors would still be required to abide by wilderness area rules, such as the prohibition of motorized vehicles and bicycles.</p>	<p>Effects to the Fort Niobrara Wilderness Area from elk and deer hunting would be minimal.</p>

<p style="text-align: center;">Affected Resources</p>	<p style="text-align: center;"><u>Alternative A (Proposed Action)</u></p> <p><i>Fort Niobrara NWR would expand hunting opportunities for resident game and migratory birds within the current open area of the refuge.</i></p>	<p style="text-align: center;"><u>Alternative B (No Action)</u></p> <p><i>The hunting program at Fort Niobrara NWR would continue as it currently exists.</i></p>
<p>shall be protected for the benefit and enjoyment of present and future generations.” Under the Wilderness Act of 1964, this area is “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 about 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.</p> <p><i>Niobrara National Scenic River</i></p> <p>A 76-mile stretch of the Niobrara River, including the 9 miles of river through the refuge, is included in the National Wild and Scenic Rivers System. The Wild and Scenic Rivers Act of 1968 (Public Law 90-542, as amended; 16 U.S. Code 1271-1287) states: “It is hereby declared to be the policy of the U.S. that certain selected rivers of the nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations.”</p>	<p>Furthermore, the impacts to wilderness values and character would be temporary and restricted to the hunting season dates. Opportunities for a wilderness experience and solitude would likely be available most of the time.</p> <p>No effects to the Niobrara National Scenic River would be expected.</p>	<p>Hunting within the Wilderness Area has certain limitations with access (foot or non-motorized watercraft), primitive weapons only, and a special access permit that ensures wilderness values are protected. Comments from hunter harvest reports suggest these measures are working. Many hunters expressed appreciation for a quality, primitive weapon hunt opportunity. A few complaints about too many hunters during muzzleloader season have been received and would be expected to continue under this alternative; however, opportunities for wilderness experience and solitude would exist most of the time.</p> <p>No impacts to the Niobrara National Scenic River would be expected.</p>

Key: NGPC = Nebraska Game and Parks Commission; NLEB = northern long-eared bats; NWR = National Wildlife Refuge

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

<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>Fort Niobrara NWR would expand hunting opportunities for resident game and migratory birds within the current open area of the refuge.</i></p>	<p style="text-align: center;"><u>Alternative B (No Action)</u></p> <p style="text-align: center;"><i>The hunting program at Fort Niobrara NWR would continue as it currently exists.</i></p>
<p>An estimated range of 50,000 to 100,000 people, visit the refuge to see, appreciate, and learn about wildlife and their habitats. Most of these visitors enjoy wildlife-dependent recreational opportunities that emphasize interpretation and education, including a visitor center, auto tour route, observation deck, nature trail, special programs, such as the Junior Ranger and bison roundup, and exploring the Fort Niobrara Wilderness Area on foot, horseback, cross-country skis, or river floats. Fishing is allowed on the Minnechadusa Creek and along the Niobrara River downstream from Cornell Dam. Lands north and west of the Niobrara River have been open to deer hunting since 2011 and elk hunting since 2016.</p> <p>Currently, most public use on the refuge occurs April through October. Area schools visit the refuge in April, May, and September for staff-led environmental education activities or self-guided tours. Floating the Niobrara River is popular with about 80 percent of refuge visits for this activity recorded June through August in recent years. The wildlife drive, Fort Falls nature trail, and visitor center receive year-round use from tourists and the local community. Although most visitors to the refuge are from Nebraska and the surrounding states, people from every state in the nation and several foreign countries sign the visitor center log each year. The 2019 Refuge Annual Performance planned estimated public use for this refuge to be around 84,000 total visitors, with activity visits as follows: (1) auto tours with 49,000 visitors, (2) foot trails with 17,500 visitors, (3) boat trails with 4,794 visitors, (4) visitor center with 4,750 visitors, (5) big game hunting with 375 visitors, (3) fishing with 20 visitors, and (7) bicycles with ten visitors.</p>	<p>Under the Proposed Action Alternative, hunter numbers would be expected to increase because of expanded hunting opportunities and no longer requiring a refuge access permit. In 2019, the refuge saw 375 visitors for hunting. Under this alternative, we would expect that number to increase by 50 percent, or approximately 562.</p> <p>Increased hunting, however, would discourage use by non-consumptive wildlife-dependent recreationalists and have minor impact on wildlife viewing opportunities in the fall, winter, and spring, with approximately 25 percent of total non-consumptive wildlife-dependent recreation visits. This would be the result of non-consumptive users restricting their outdoor recreation activities to periods of time and times of the year when their safety would not be affected by hunting activities. This restriction would also be the result of wildlife viewing and photographing opportunities decreasing as a result of disruptions to wildlife activities and wildlife dispersal from normal ranges and habitats during hunting activities.</p>	<p>No change in hunter numbers would be expected. During the 2014 to 2018 period, an average of 63 people per year reported hunting for deer on the refuge (84 people in 2018; 34 people in 2014). The average number of permits issued annually during that same time period was 144 permits (193 permits in 2018; 97 permits in 2014). Since 2016, 16 permits to hunt elk on the refuge have been issued (9 permits in 2018; three permits in 2017; four permits in 2016) and four people reported hunting effort (three people in 2018; one person in 2017).</p> <p>No change in non-consumptive, wildlife-dependent recreation visitor numbers or use periods would be expected. Under current conditions, noise and visual effects related to hunting are temporary. Visual effects are more restricted than noise impacts of shooting. While shooting occurs on surrounding private lands, cumulative effects of noise on and off the refuge would be considered minor.</p>

Key: NWR = National Wildlife Refuge

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

<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>Fort Niobrara NWR would expand hunting opportunities for resident game and migratory birds within the current open area of the refuge.</i></p>	<p style="text-align: center;"><u>Alternative B (No Action)</u></p> <p style="text-align: center;"><i>The hunting program at Fort Niobrara NWR would continue as it currently exists.</i></p>
<p>Many significant cultural and paleontological remains exist on the refuge. Seventeen distinct fossil sites have been excavated, including two fossil beds of the lower Pliocene and upper Miocene epochs which provided non-articulated skeletons and bone fragments of more than 20 extinct mammalian species. Archaeological remains collected in this area suggest short-term occupation by prehistoric and historic aboriginal groups for hunting and gathering. Artifacts date back through several cultures to the Paleo-Indian period from 7,500 to 11,500 years ago. Aboriginal occupation of this region, documented in various expeditions of the middle and late 1800s, was by the Dakota Sioux, Ponca, and Pawnee. Military history of the area began in the late 1870s with the restriction of Sioux Indian tribes to the Great Sioux Reservation in Dakota Territory (now western South Dakota) and establishment of Fort Niobrara Military Reservation. The Fort was closed in 1906 and kept by the War Department as a remount station until 1911, when some of the land was transferred to the Department of Agriculture, Bureau of Biological Survey, to be used as a preserve and breeding ground for native birds. A hay shed, constructed in 1897 by the U.S. Army, remains standing on the refuge and is listed on the National Register of Historic Places.</p>	<p>Same as the No Action Alternative.</p>	<p>No effects to cultural resources would be expected. No additional or existing facilities, such as roads, trails, and parking lots would be constructed or kept that result in effects to cultural resources.</p> <p>Current Refuge System and refuge rules and regulations prohibit the disturbance, handling, or extraction of cultural and paleontological resources from refuge lands.</p> <p>The temporary (a few hours of the day during daylight hours) and low impact (no excavation, no fires, no buildings, no motorized vehicles) nature of hunting activities would generally preclude adverse effects to cultural and paleontological resources on the refuge.</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 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>Fort Niobrara NWR would expand hunting opportunities for resident game and migratory birds within the current open area of the refuge.</i></p>	<p style="text-align: center;"><u>Alternative B (No Action)</u></p> <p style="text-align: center;"><i>The hunting program at Fort Niobrara NWR would continue as it currently exists.</i></p>
Land Use		
<p>Management of the refuge focuses on conserving native birds, bison, elk, and the biological diversity of the area. Prescribed fire and planned periods of rest, or non-disturbance, are used in combination with grazing by bison in an effort to mimic the historic processes that helped shape the native plant communities of the refuge. The bison grazing program encompasses over 16,400 acres, including 18 management units, of the refuge yearly basis. In some years, an additional 1,000 acres, including 6 management units, may be grazed by permittee cattle. Up to about 1,000 acres of grassland, woodland, and wetland habitats are prescribed burned annually to keep diverse and healthy native plant communities, reduce invasive or non-native plants, and encourage regeneration of unique forest types.</p>	<p>Conflicts with habitat and wildlife management programs on the refuge would increase with expanded hunting opportunities and require greater coordination with hunters, such as prescribed fires, grazing by bison or permittee cattle, and bison roundup. Violations similar to the No Action Alternative could increase and it is presumed that management would have to dedicate more resources to enforce federal and state regulations. With expanded hunting, there would be increased maintenance needs associated with parking lots and communication requirements, such as keeping brochures in kiosks.</p>	<p>Impacts to habitat and wildlife management programs on the refuge would be minimal. Occasional violations occur, such as illegal take of wildlife, littering, removal of refuge resources, including skulls and antlers, and destruction of property, including shooting and removal of signs.</p>
Administration		
<p>The administrative organization, number of staff, and budget of the refuge has changed since described in the CCP (USFWS 1999). Fort Niobrara is now part of the Sandhills National Wildlife Refuge Complex, which covers Crescent Lake, North Platte, Valentine, and Seier refuges in Nebraska, and LaCreek refuge in South Dakota. On Fort Niobrara, there has been a noticeable decrease in the number of staff and budget. The project leader for the Complex currently also serves as the manager for Fort Niobrara. Additional permanent full-time staff on the refuge include one and a half maintenance persons and one biologist. Staff shared between all Sandhill refuges include a full-time law enforcement officer and budget analyst.</p>	<p>Annual cost associated with overseeing and carrying out this alternative would increase to approximately \$15,000 and include salary, equipment, law enforcement, signage, brochures, and collection and analysis of biological information. Increased hunter activity would further detract from and compete with other law enforcement duties and responsibilities on Fort Niobrara NWR and other refuges within the Sandhills Refuge Complex.</p>	<p>No change in annual costs associated with administering this alternative would be expected. Over the last five years, costs, including salary, equipment, law enforcement, signage, brochures, and collection and analysis of hunt data, have ranged from \$10,000 to \$20,000 per year.</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>Fort Niobrara NWR would expand hunting opportunities for resident game and migratory birds within the current open area of the refuge.</i></p>	<p style="text-align: center;"><u>Alternative B (No Action)</u></p> <p style="text-align: center;"><i>The hunting program at Fort Niobrara NWR would continue as it currently exists.</i></p>
<p>In some years, the refuge has one to three temporary seasonal employees and a volunteer that works the visitor center on weekends during the summer. All staff contribute to the recreational activities associated with the refuge through maintenance of infrastructure, visitor use interactions, and hunt program implementation.</p>		

Key: NWR = National Wildlife Refuge

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>Fort Niobrara NWR would expand hunting opportunities for resident game and migratory birds within the current open area of the refuge.</i></p>	<p><u>Alternative B (No Action)</u> <i>The hunting program at Fort Niobrara NWR would continue as it currently exists.</i></p>
<p>Local and Regional Economics</p>		
<p>The refuge is located in Cherry County approximately three miles east of the City of Valentine, the County seat and largest city in the County with a population of approximately 2,786 people. Cherry County is the largest county in Nebraska with a total area of approximately 5,960 square miles, and one of the least populated counties with approximately 5,761 people recorded in 2017. Rural population in the County is sparse because of large ranch sizes. Predominate land-use in the County is native prairie grazing and haying with less than 10 percent of the acreage cropped or irrigated. Family-owned ranching and farming, as well as tourism ,are the primary sources of income in the County. (Nebraska Public Power District 2007).</p> <p>According to Nebraska QuickFacts (U.S. Census Bureau, 2018), for the period from 2013 to 2017, the median household income for Cherry County was \$53,226 and the percentage of persons living below the poverty level was 11.7 percent. According to the same source, the Cherry County minority population accounted for 10.5 percent of the total population.</p> <p>Nebraska Highway 12, as well as a county-maintained gravel road and bridge, offer access to the refuge. Major highways traversing the County are U.S. Highway 83 (north and south) and US Highway 20 (east and west). The nearest airport with scheduled passenger service is in North Platte, Nebraska located 136 miles south of Valentine, Nebraska.</p>	<p>Expanded hunting opportunities could provide improvements to the local, regional, and state economy compared to current conditions. However, in a landscape dominated by agricultural land use, the relative improvements to the overall state economy are likely 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>Little to no change in wildlife-based recreational opportunities would be expected under current conditions. Spending associated with refuge visitation can generate considerable economic improvements 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 improve the Valentine community.</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>Fort Niobrara NWR would expand hunting opportunities for resident game and migratory birds within the current open area of the refuge.</i></p>	<p style="text-align: center;"><u>Alternative B (No Action)</u></p> <p style="text-align: center;"><i>The hunting program at Fort Niobrara NWR would continue as it currently exists.</i></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 describing 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>Same as the No Action Alternative.</p>	<p>The Service has not identified any potential high and adverse environmental or human health impacts from the proposed action or any 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 from the proposed action or any alternatives.</p>

Key: NWR = National Wildlife Refuge

Table 6. Refuge Hunting Information.

Elk Hunting - Fort Niobrara NWR						
Year	# Permits Issued	# Harvest Reports Received	Hunter Response Rate (%)	# of Hunters Reporting Hunting Effort	Total # Elk Harvested (male, female)	Reported Hunter Success Rate (%)
2018	9	4	44%	3	0	0%
2017	3	1 [^]	0%	1	0*	0%
2016	4	0	0%	0	0*	0%
^ Information included on deer hunter report						
* NGPC provided						

Table 7. Hunter and Harvest Report Information as Required by the Special Refuge Permit.

Deer Hunting - Fort Niobrara NWR									
Year	Permits Issued	Harvest Reports Received	Hunter Response Rate (%)	Hunters Reporting Hunting Effort	Total Deer Reported Harvested	Reported Hunter Success Rate (%)	White-tailed Deer Harvested (male, female)	Mule Deer Harvested (male, female)	Unknown Deer Species Harvested (male, female)
2018	193	126	65%	84	21	25%	11M, 4F		6M
2017	149	100	67%	74	28	38%	23M	1M	4M
2016	165	103	62%	70	18	26%	16M		1M,1F
2015	114	72	63%	53	23	43%	21M, 1F		1M
2014	97	54	56%	39	13	33%	11M, 1F		1M
2018 State of Origin for Hunters Reporting Hunting Effort:									
	NE 17%								
	Out of State 83% - CA (2%), IA(4%), MI (18%), MN(20%), MS(8%), ND(1%), WI (29%), WY(1%)								

Table 8. Nebraska Game and Parks Commission Fur Harvest Survey (2012–2018).

	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

* = Total harvest based on pelt tagging, hunt column covers harvested road kills

Table 9. Cumulative Impact Data for Hunting Furbearers on Valentine National Wildlife Refuge.

	Average Annual Statewide Harvest	Estimated Annual Refuge Harvest	Percent Increase in Statewide Harvest
Mink	813	<3	0.36
Opossum	25,386	<4	0.015
Cottontail	14,915	<10	0.006
Jackrabbit	365	<5	1.3
Red Fox	3,391	<2	0.05
Badger	3,741	<2	0.05
Skunk	12,361	<4	0.03
Coyote	46,311	<15	0.03
Raccoon	108,744	<15	0.01

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). Cumulative effects are the overall, net effects on a resource that arise from multiple actions. Effects can “accumulate” spatially when different actions affect different areas of the same resource. They can also accumulate over time as a result of actions in the past, the present, and the future. Occasionally, different actions counterbalance one another, partially cancelling out each other’s effects on a resource. More typically, however, multiple effects add up, with each additional action contributing an incremental effect on the resource.

Table 10. 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>Fort Niobrara NWR is located within the Central Flyway (CF) for waterfowl and the Central Management Unit (CMU) for mourning doves. Total duck and goose harvest in the United States from 2016 to 2017 was estimated at 12,115,800 (± 4 percent) ducks and 3,602,500 (± 5 percent) geese (U.S. Fish and Wildlife Service 2018). For the period of 2016 to 2017, annual duck harvests for the CF averaged 2,429,000 (± 14 percent) ducks and during the same period, annual goose harvests for the CF averaged 1,061,500 (± 11 percent) geese (Raftovich et al. 2018). Migratory Bird Harvest Information Program estimates for mourning dove total harvest, active hunters, and total days afield in the U.S. in the CMU was 4,749,100 \pm 283,900 birds, 332,900 hunters, and 852,100 \pm 53,100 days afield (Seamans 2019).</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>	<p>Like other National Wildlife Refuges, Fort Niobrara NWR 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 decide take limits, hunting seasons, and methods of take. The refuge would regularly coordinate with the State and strive to keep 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 an administrative process known as flyways. The refuge is located in the Central Flyway. In North America, the process for establishing hunting regulations is conducted annually. In the U.S., the process involves several scheduled meetings (Flyway Study Committees, Flyway Councils, and Service Regulations Committee) 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 style="text-align: center;">Other Past, Present, and Reasonably Foreseeable Activity Impacting Affected Environment</p>	<p style="text-align: center;">Descriptions of Anticipated Cumulative Impacts</p>
<p>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 Republican, Southeast, and East Central regions of the State (Lusk 2019b).</p> <ul style="list-style-type: none"> • Elk harvest information (all seasons, weapons) for the Niobrara Unit during the years that elk could be harvested with primitive weapons on the refuge (Table 11). • Deer (adult buck) harvest information (all seasons, weapons) for the KeyaPaha Unit during 2016–2018 period (Table 12). • Furbearer harvest (hunt and trap) information for Nebraska from 2012 to 2017 can be found in Table 13. <p>Public Lands</p> <p>Public hunting lands near the refuge are limited and include Borman Bridge and Government Canyon Wildlife Management Areas.</p>	<p>Annual waterfowl assessments are based on the distribution, abundance, and flight corridors of migratory birds. An Annual Waterfowl Population Status Report (Report) is produced each year and covers the most current breeding population and production information available for waterfowl in North America (USFWS 2018). 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 2017). These reports are intended to aid the development of waterfowl harvest regulations in the U.S. 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 choices using guidance in these reports. The refuge follows the regulations set by the State of Nebraska.</p> <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, although possibly added to existing hunting takes, would be a small fraction of the estimated populations. In addition, overall populations would continue to be studied 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 2013). • There are no populations that exist wholly and exclusively on national wildlife refuges. • Annual hunting regulations within the U.S. are established at levels consistent with the current population status. • Refuges cannot allow more liberal seasons than provided for in federal frameworks. • Refuges bought with money derived from the Federal Duck Stamp must limit hunting to 40 percent of the available area. <p>As a result, changes or additions to hunting on the refuge would have minor effects on migratory birds in Nebraska. Although the proposed action alternative would increase hunting opportunities compared to the current action alternative, the slight increase in hunter activity would not rise to a significant level.</p>

Other Past, Present, and Reasonably Foreseeable Activity Impacting Affected Environment	Descriptions of Anticipated Cumulative Impacts
	<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 choices using data obtained from observing efforts and harvest reports. The potential take 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.</p> <p><i>Public Lands Near Fort Niobrara NWR</i></p> <p>Expanded hunting opportunities on the refuge could alleviate hunting pressure to wildlife populations on nearby public lands.</p>
Other Wildlife-Dependent Recreation (Road and Trail Development and Use)	
<p>The Nebraska Outlaw Trail Scenic Byway Highway 12 covers the refuge. The Byway was developed as an important socio-economic driver in the region.</p> <p>The refuge wildlife drive and a county road in the central part of the refuge has the highest visitation by consumptive and non-consumptive users.</p> <p>Interior roads fragment the refuge and any increase in use may contribute to wildlife disturbance because of more frequent traffic and human activity.</p>	<p>Roads and trails on the refuge contribute to cumulative effects on the environment. Roads and trails fragment habitat, increase the potential for the spread of invasive species and human-wildlife interaction, referred to as disturbance. No newly developed roads or trails are planned under the proposed alternative.</p>
Use of Ammunition and Tackle	
<p>Non-toxic shot is required for all migratory bird hunting on all national wildlife refuges when using loose shot in muzzleloader shotguns and shotshells for modern shotguns.</p>	<p>No effect expected. The refuge allows only non-toxic shot for migratory bird hunting. Only non-toxic shot is allowed for other hunting using muzzleloader shotguns and modern shotguns. The amount of lead put into the environment by muzzleloader rifles is insignificant. The munition size used in this type of hunting is also larger than what typically causes secondary lead poisoning in scavengers.</p>
Climate Change	
<p>Ecological stressors are expected to affect a variety of natural processes and associated resources into the future. The greatest concerns on the refuge are the reduction of water flow in seeps, streams, and the Niobrara River, and the expansion of invasive plants.</p>	<p>The Service would work with the NGPC to use an adaptive management approach for the hunting program on the refuge, reviewing the program annually and making necessary revisions as necessary. The Service's hunting program can be adjusted to make sure that it does not contribute further to the cumulative effects of climate change on resident wildlife and migratory birds.</p>

Other Past, Present, and Reasonably Foreseeable Activity Impacting Affected Environment	Descriptions of Anticipated Cumulative Impacts
<p>Current predictions on climate change suggest that Nebraska will experience higher temperatures, drier soils, and more intense rainstorms. Flooding is likely to increase, yet summers are likely to become increasingly hot and dry. More evaporation and less rainfall during the summer are predicted to increase the use of water by more than 25 percent during the next 50 years, mostly because of increased irrigation, which would reduce the average flow of rivers and streams (EPA 2016). Change in growing season conditions could favor expansion of non-native invasive plants and negatively affect native plant communities. These habitat changes may dramatically reduce the amount and quality of grassland, woodland, and wetland habitats for the species that are hunted. Climate change is also predicted to have significant effects on the health of fish and wildlife including physiological stress, timing of life cycle events, and increased exposure to and transmission of disease pathogens.</p>	

Key: CF = Central Flyway; CMU = Central Management Unit; NWR = National Wildlife Refuge; U.S. = United States

Table 11. Elk Harvest Information at Fort Niobrara National Wildlife Refuge (2016–2018).

Elk Hunting - Niobrara Unit					
Year	Bull	Cow	Calf	Total	Hunter Success
2018	9	20	1	30	77%
2017	6	14	1	21	70%
2016	5	9	0	14	47%

Table 12. Deer Harvest Information at Fort Niobrara National Wildlife Refuge (2016–2018).

Elk Hunting - Niobrara Unit					
Year	Bull	Cow	Calf	Total	Hunter Success
2018	9	20	1	30	77%
2017	6	14	1	21	70%
2016	5	9	0	14	47%

Table 13. Furbearer Harvest in Nebraska (2012–2017).

Furbearer Harvest - Nebraska					
Species	2017/18 Season		Total Harvest	Previous Season	Average 2012-2016
	Hunt	Trap			
Raccoon	31,529	77,215	108,744	84,732	168,629
Coyote	17,848	28,464	46,311	34,290	36,323
Opossum	5,392	19,993	25,386	21,967	31,916
Muskrat	0	24,097	24,097	18,919	21,930
Striped Skunk	2,552	9,809	12,361	8,309	13,300
Beaver	0	8,114	8,114	5,957	9,693
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
Woodchuck	494	644	1,139	1,681	1,252
Bobcat*	383	991	1,374	1,103	1,284

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

3.4 Mitigation Measures and Conditions

Refuge staff would work in close cooperation with the NGPC to share, evaluate, and discuss available population and harvest data, make recommendations for regulation changes, and take any other actions necessary to make sure that viable populations of resident and migratory game species are maintained on the refuge. Additional measures that could be done to reduce, avoid, or end adverse effects include:

- reinstating the rule for the Service's Hunt Permit Application (Form 3-2356), refuge hunt permit (Annual), and the Service's Big Game Harvest Report (Form 3-2359);
- limiting hunting opportunities or access to areas to allow recovery and improvement of refuge or local species populations or habitat conditions;
- adjusting hunting opportunities to address concerns related to disease or contaminants;
- adjusting hunting opportunities to address safety concerns or conflicts associated with multiple hunting uses, non-consumptive uses, and Service staff activities;
- rectifying effects by repairing, rehabilitating, or restoring the affected environment.

3.5 Monitoring

Inventory and monitoring of wildlife and their habitats would be done on the refuge in conjunction with our state and federal partners. Refuge staff would work in close cooperation with the NGPC in sharing, evaluating, and discussing available population and harvest data, making recommendations for regulation changes, and taking any other actions necessary to make sure that viable populations of resident and migratory wildlife are supported. In addition, the refuge would stay knowledgeable on the status of threatened and endangered species through consultation and local monitoring.

3.6 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 expand hunting opportunities in the current open hunt area on the refuge to include hunting of pronghorn, badger, beaver, bobcat, coyote, fox, long-tailed weasel, mink, muskrat, opossum, prairie dog, porcupine, rabbit and hare, raccoon, skunk, squirrel, woodchuck, greater prairie chicken, grouse, partridge, pheasant, quail, turkey, waterfowl, dove, crow, rail, snipe, and woodcock. In addition, the refuge hunt program would better align with NGPC hunting regulations. The potential take of most resident and migratory wildlife species open to hunting on the refuge is likely negligible in proportion to regional or state harvest numbers and would not add significantly to the cumulative effects on the various species. Direct effects to refuge populations of some species, including turkey and deer, would not be known until the hunt program is conducted. Expanded hunting opportunities would most likely result in increased temporary disturbance and displacement of hunted and non-hunted wildlife species from foot traffic moving through the area or from gunfire. Minor effects to other wildlife-dependent recreation, such as wildlife viewing opportunities, would be possible under the proposed alternative during the fall, winter, and spring. However, about 75 percent of non-

consumptive wildlife-dependent visits occur during the summer. Wilderness values could be affected if hunter numbers increase significantly. No effects to cultural resources or the refuge environment and community would be expected.

The Service’s Hunt Permit Application (Form 3-2356), refuge hunt permit (Annual), and the Service’s Big Game Harvest Report (Form 3-2359) is not required under this alternative. Refuge staff would no longer have reliable information to use and provide to NGPC about hunter use and harvest. Harvest levels would be taken from NGPC telecheck and check station information which may not be specific to the refuge. Wilderness character monitoring would be less exact. If concerns arise about adverse effects to wildlife populations or wilderness values, the refuge hunt permit and harvest report rule could be reinstated as a mitigation measure.

This alternative would help meet the purpose and needs of the Service as described above, because it provides additional wildlife-dependent recreation opportunities on the refuge and better aligns with state hunt programs. The Service has found that the proposed action is compatible with the purposes of the Fort Niobrara NWR and the mission of the Refuge System.

Alternative B – No Action Alternative

As described above, this alternative would continue to offer primitive weapon hunting of deer and elk on Fort Niobrara NWR. Current conditions do not allow opportunities to hunt pronghorn, badger, beaver, bobcat, coyote, fox, long-tailed weasel, mink, muskrat, opossum, prairie dog, porcupine, rabbit and hare, raccoon, skunk, squirrel, woodchuck, greater prairie chicken, grouse, partridge, pheasant, quail, turkey, waterfowl, dove, crow, rail, snipe, or woodcock, nor does it provide for greater alignment with state regulations. Effects to natural resources, visitor use and experience, cultural resources, refuge management and operations, and socioeconomics would be negligible because the level of use and hunter visits would likely remain the same. The Service’s Hunt Permit Application (Form 3-2356), refuge hunt permit (annual), and the Service’s Big Game Harvest Report (Form 3-2359) would continue to be required. Refuge staff would have reliable information to use and provide to NGPC about hunter use and harvest. This information could be used to adjust permit numbers and harvest and is important for wilderness character monitoring.

This alternative meets the purpose and needs of the Service as described above, because it would continue to provide consumptive, 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.

3.7 List of Sources, Agencies and Persons Consulted

- Nebraska Game and Parks Commission

3.8 List of Preparers

Name	Position	Work Unit
Steve Hicks	Project Leader	Sandhills Refuge Complex
Kathy McPeak	Biologist	Fort Niobrara National Wildlife Refuge

3.9 State Coordination

On July 10, 2018, NGPC leadership provided suggestions for expanded hunting and fishing 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.” Refuge staff reviewed the operations and regulations for neighboring state wildlife management areas, public lands administered by other agencies, such as the 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 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 make sure safe and enjoyable recreational hunting opportunities. In the near future, we will send a letter and the draft EA to the state asking to coordinate with them to adjust the hunting plan to align, where possible, with state management goals.

3.10 Tribal Consultation

The Service mailed an invitation for comments to all Tribes potentially affected by initiating an EA to open the refuge to new hunting opportunities. The Service extended an invitation to engage in government-to-government consultation in accordance with EO 13175.

3.11 Public Outreach

The refuge will make the public aware of the availability of the draft EA and hunting plan via public notices on the refuge’s website, through local newspapers, and in the refuge’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 substantive comments submitted.

3.12 Determination

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

- 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: _____

3.13 References

- Carver, E.; and Caudill, J. 2007. Banking on nature 2006: the economic benefits to local communities of national wildlife refuge visitation. Division of Economics, U.S. Fish and Wildlife Service, Washington, D.C. 372pp.
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- [USFWS] U.S. Fish and Wildlife Service. 1999. Fort Niobrara National Wildlife Refuge Comprehensive Conservation Plan. U.S. Fish and Wildlife Service, Valentine, NE 135pp.
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- . 2017. Adaptive Harvest Management: 2018 Hunting Season. U.S. Department of Interior, Washington, D.C. 69pp. Available from <www.fws.gov/birds/management/adaptive-harvest-management/publications-and-reports.php>
- . 2018. Waterfowl population status, 2018. U.S. Department of Interior, Washington, D.C. USA. Available from <www.fws.gov/migratorybirds/pdf/surveys-and-data/Population-status/Waterfowl/WaterfowlPopulationStatusReport18.pdf>

APPENDIX A OTHER APPLICABLE STATUTES, EXECUTIVE ORDERS, AND REGULATIONS

Statutes, Executive Orders, and Regulations
Cultural Resources
<p>American Indian Religious Freedom Act, as amended, 42 U.S. Code 1996 – 1996a; 43 CFR 7</p> <p>Antiquities Act of 1906, 16 U.S. Code 431-433; 43 CFR 3</p> <p>Archaeological Resources Protection Act of 1979, 16 U.S. Code 470aa – 470mm; 18 CFR 1312; 32 CFR 229; 36 CFR 296; 43 CFR 7</p> <p>National Historic Preservation Act of 1966, as amended, 16 U.S. Code 470-470x-6; 36 CFR 60, 63, 78, 79, 800, 801, and 810</p> <p>Paleontological Resources Protection Act, 16 U.S. Code 470aaa – 470aaa-11</p> <p>Native American Graves Protection and Repatriation Act, 25 U.S. Code 3001-3013; 43 CFR 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. Code 668-668c, 50 CFR 22</p> <p>Endangered Species Act of 1973, as amended, 16 U.S. Code 1531-1544; 36 CFR 13; 50 CFR 10, 17, 23, 81, 217, 222, 225, 402, and 450</p> <p>Fish and Wildlife Act of 1956, 16 U.S. Code 742 a-m</p> <p>Lacey Act, as amended, 16 U.S. Code 3371 et seq.; 15 CFR 10, 11, 12, 14, 300, and 904</p> <p>Migratory Bird Treaty Act, as amended, 16 U.S. Code 703-712; 50 CFR 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. Code 7401-7671q; 40 CFR 23, 50, 51, 52, 58, 60, 61, 82, and 93; 48 CFR 23</p> <p>Wilderness Act, 16 U.S. Code 1131 et seq.</p> <p>Wild and Scenic Rivers Act, 16 U.S. Code 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. Code 1451 et seq.; 15 CFR 923, 930, 933</p> <p>Federal Water Pollution Control Act of 1972 (commonly referred to as Clean Water Act), 33 U.S. Code 1251 et seq.; 33 CFR 320-330; 40 CFR 110, 112, 116, 117, 230-232, 323, and 328</p> <p>Rivers and Harbors Act of 1899, as amended, 33 U.S. Code 401 et seq.; 33 CFR 114, 115, 116, 321, 322, and 333</p> <p>Safe Drinking Water Act of 1974, 42 U.S. Code 300f et seq.; 40 CFR 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 Regulation; U.S. = United States