

# **Final Environmental Assessment**

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

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Prepared by

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# **Final Environmental Assessment for Resident Game and Migratory Bird Hunting on Fort Niobrara National Wildlife Refuge**

**Date:** January 17, 2020

This environmental assessment (EA) is being prepared to evaluate the effects associated with this proposed action and complies with the National Environmental Policy Act (NEPA) in accordance with Council on Environmental Quality regulations (40 Code of Federal Regulations [CFR] 1500-1508) 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 and fishing.

### **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's 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 NWRSAA, 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 NWRSAA 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; and
- 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 NWR" and "ensure that opportunities are provided within the NWR 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"; Secretarial Order 3347 signed March 2, 2017, "Conservation Stewardship and Outdoor Recreation"; and Secretarial 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 2019–2020 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 EDMP/EA 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 a 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 covers 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.

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 nontoxic 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.
- Nontoxic 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. Shooting hours for coyote, porcupine, prairie dog, woodchuck, and state-defined huntable furbearers are from half an hour before legal sunrise to half an hour after legal sunset. 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 one 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.
- Muzzleloader deer hunters wanting to hunt during the November rifle season, or the December muzzleloader season, must apply for a refuge permit using an approved Service application and permit form. They must also report their hunting activity by February 15 each year using an approved Service hunting report form. Refuge permits for these seasons would be awarded by lottery.

Refuge-specific regulations would be published in the Federal Register as part of the Draft 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 nonconsumptive 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 might affect cultural resources or wilderness values.

This alternative offers increased opportunities for public hunting and fishing and fulfills the Service’s mandate under the NWRSAA, as amended by 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 more than 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.

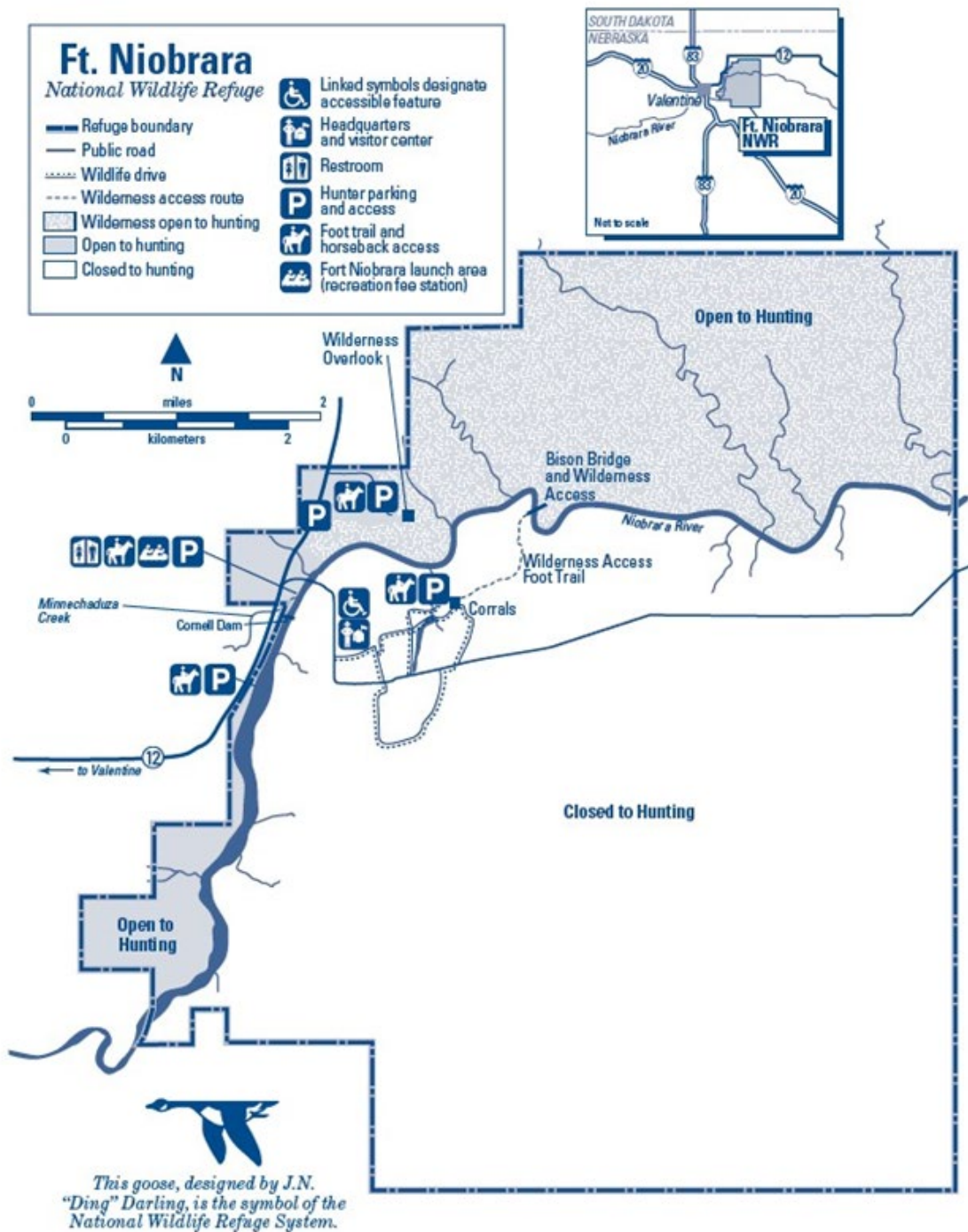


Figure 1. Fort Niobrara National Wildlife Refuge Areas Open and Closed to Hunting.

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](http://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; and
- 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 style="text-align: center;"><b>Affected Resources</b></p>  | <p style="text-align: center;"><b><u>Alternative A (Proposed Action)</u></b><br/><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;"><b><u>Alternative B (No Action)</u></b><br/><i>The hunting program at Fort Niobrara NWR would continue as it currently exists.</i></p>   |
|---|--|---|
| <b>Resident Birds</b>   |  |   |
| <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 expect a possible 25 percent reduction in the existing wild turkey population and 25 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;"><b>Affected Resources</b></p>  | <p style="text-align: center;"><b><u>Alternative A (Proposed Action)</u></b><br/> <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;"><b><u>Alternative B (No Action)</u></b><br/> <i>The hunting program at Fort Niobrara NWR would continue as it currently exists.</i></p>   |
|---|---|--|
| <p><b>Migratory Birds</b></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) is 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> |

| <b>Affected Resources</b>  | <b><u>Alternative A (Proposed Action)</u></b><br><i>Fort Niobrara NWR would expand hunting opportunities for resident game and migratory birds within the current open area of the refuge.</i>  | <b><u>Alternative B (No Action)</u></b><br><i>The hunting program at Fort Niobrara NWR would continue as it currently exists.</i>  |
|--|---|--|
| <b>Big Game Mammals</b>  |   |  |
| <p><b><i>Elk</i></b><br/>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><b><i>White-tailed Deer and Mule Deer</i></b><br/>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><b><i>Pronghorn</i></b><br/>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><b><i>Elk</i></b><br/>Same as the No Action Alternative.</p> <p><b><i>White-tailed Deer and Mule Deer</i></b><br/>Increased deer harvest would be expected on the refuge. Because a refuge permit would be required for muzzleloader deer hunting, hunter numbers are expected to remain approximately the same. 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 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><b><i>Pronghorn</i></b><br/>An occasional pronghorn could be harvested but would not be expected because of low numbers on the refuge.</p> | <p><b><i>Elk</i></b><br/>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><b><i>White-tailed Deer and Mule Deer</i></b><br/>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). 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> |

| <b>Affected Resources</b>  | <b><u>Alternative A (Proposed Action)</u></b><br><i>Fort Niobrara NWR would expand hunting opportunities for resident game and migratory birds within the current open area of the refuge.</i>   | <b><u>Alternative B (No Action)</u></b><br><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><b>Pronghorn</b><br/>No impacts to antelope would be expected.</p> |
| <b>Small Game, Furbearer, and Other Nongame</b>  |  |  |
| <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>  |



| <b>Affected Resources</b> | <b><u>Alternative A (Proposed Action)</u></b><br><i>Fort Niobrara NWR would expand hunting opportunities for resident game and migratory birds within the current open area of the refuge.</i>  | <b><u>Alternative B (No Action)</u></b><br><i>The hunting program at Fort Niobrara NWR would continue as it currently exists.</i> |
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|                           | <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 approximately 15 hunters would engage 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 is 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 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> |   |

| <p style="text-align: center;"><b>Affected Resources</b></p>  | <p style="text-align: center;"><b><u>Alternative A (Proposed Action)</u></b><br/> <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;"><b><u>Alternative B (No Action)</u></b><br/> <i>The hunting program at Fort Niobrara NWR would continue as it currently exists.</i></p>  |
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| <p><b>Other Wildlife and Aquatic Species</b></p>  |   |   |
| <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),<sup>49</sup> additional mammal species, at least 24 species of reptiles and amphibians, and more than 230 species of birds.</p> <p>On average, about 20 trumpeter swans inhabit refuge ponds and the Niobrara River from late fall through early spring.</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. Some wildlife species, such as trumpeter swans, would possibly change their use and flight patterns to avoid areas open to hunting when hunters are present.</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 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> |

| <p style="text-align: center;"><b>Affected Resources</b></p>  | <p style="text-align: center;"><b><u>Alternative A (Proposed Action)</u></b><br/> <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;"><b><u>Alternative B (No Action)</u></b><br/> <i>The hunting program at Fort Niobrara NWR would continue as it currently exists.</i></p>   |
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| <p><b>Threatened and Endangered Species and Other Special Status Species</b></p>  |  |  |
| <p><b><i>Whooping Crane</i></b><br/> 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><b><i>Piping Plover and Least Tern</i></b><br/> 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><b><i>American Burying Beetle</i></b><br/> 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>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 are expected.</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 are 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;"><b>Affected Resources</b></p>  | <p style="text-align: center;"><b><u>Alternative A (Proposed Action)</u></b></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;"><b><u>Alternative B (No Action)</u></b></p> <p><i>The hunting program at Fort Niobrara NWR would continue as it currently exists.</i></p>   |
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| <p><b><i>Northern Long-eared Bats (NLEB)</i></b></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 began last winter to find out if NLEB use crevices within rocky outcrops or cliffs on the refuge as hibernacula. White-nosed Syndrome has not been detected during disease surveillance testing.</p>   |   |  |
| <p><b>Wilderness and Other Special Designated Management Areas</b></p>  |   |  |
| <p><b><i>Fort Niobrara Wilderness Area</i></b></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>While effects to wilderness values and character are 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. 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 are expected.</p> | <p>Effects to the Fort Niobrara Wilderness Area from elk and deer hunting would be minimal. 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> |

| <p style="text-align: center;"><b>Affected Resources</b></p>   | <p style="text-align: center;"><b><u>Alternative A (Proposed Action)</u></b></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;"><b><u>Alternative B (No Action)</u></b></p> <p style="text-align: center;"><i>The hunting program at Fort Niobrara NWR would continue as it currently exists.</i></p> |
|--|---|--|
| <p><b><i>Niobrara National Scenic River</i></b></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.” 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> |   |  |

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;"><b>Affected Resources</b></p>   | <p style="text-align: center;"><b><u>Alternative A (Proposed Action)</u></b><br/><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;"><b><u>Alternative B (No Action)</u></b><br/><i>The hunting program at Fort Niobrara NWR would continue as it currently exists.</i></p>  |
|--|--|--|
| <p>An estimated range of 50,000–100,000 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 Minnechaduzza 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 are expected to increase because of expanded hunting opportunities and no longer requiring a refuge access permit except for muzzleloader deer hunting. In 2019, the refuge saw 375 visitors for hunting. Under this alternative, we expect that number to increase by 50 percent, or approximately 562.</p> <p>Increased hunting, however, would discourage use by nonconsumptive wildlife-dependent recreationalists and have minor impact on wildlife viewing opportunities in the fall, winter, and spring, with approximately 25 percent of total nonconsumptive wildlife-dependent recreation visits. This would be the result of nonconsumptive 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 nonconsumptive, 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;"><b>Affected Resources</b></p>  | <p style="text-align: center;"><b><u>Alternative A (Proposed Action)</u></b><br/><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;"><b><u>Alternative B (No Action)</u></b><br/><i>The hunting program at Fort Niobrara NWR would continue as it currently exists.</i></p>   |
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| <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;"><b>Affected Resources</b></p>   | <p style="text-align: center;"><b><u>Alternative A (Proposed Action)</u></b></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;"><b><u>Alternative B (No Action)</u></b></p> <p style="text-align: center;"><i>The hunting program at Fort Niobrara NWR would continue as it currently exists.</i></p>  |
|--|--|---|
| <b>Land Use</b>  |  |   |
| <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 more than 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> |
| <b>Administration</b>  |  |   |
| <p>The administrative organization, number of staff, and budget of the refuge has changed since described in the CCP (USFWS 1999). Fort Niobrara NWR is now part of the Sandhills NWR Complex, which covers Crescent Lake, North Platte, Valentine, and Seier NWRs in Nebraska, and LaCreek NWR in South Dakota. On Fort Niobrara NWR, there has been a noticeable decrease in the number of staff and budget. The project leader for the Sandhills NWR Complex currently also serves as the manager for Fort Niobrara NWR. Additional permanent full-time staff on the refuge include one and a half maintenance persons and one biologist. Staff shared between all Sandhill NWRs 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 NWR 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–\$20,000 per year.</p>          |



| <b>Affected Resources</b>   | <b><u>Alternative A (Proposed Action)</u></b><br><i>Fort Niobrara NWR would expand hunting opportunities for resident game and migratory birds within the current open area of the refuge.</i> | <b><u>Alternative B (No Action)</u></b><br><i>The hunting program at Fort Niobrara NWR would continue as it currently exists.</i> |
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| 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. |  |   |

Key: CCP = Comprehensive Conservation Plan; NWR = National Wildlife Refuge

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

| <p><b>Affected Resources</b></p>  | <p><b><u>Alternative A (Proposed Action)</u></b><br/><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><b><u>Alternative B (No Action)</u></b><br/><i>The hunting program at Fort Niobrara NWR would continue as it currently exists.</i></p>   |
|---|--|---|
| <p><b>Local and Regional Economics</b></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 2013–2017, 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 nonconsumptive, wildlife-dependent visitors for lodging, food, gas, and miscellaneous purchasing would continue to improve the Valentine community.</p> |

| <p style="text-align: center;"><b>Affected Resources</b></p>   | <p style="text-align: center;"><b><u>Alternative A (Proposed Action)</u></b></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;"><b><u>Alternative B (No Action)</u></b></p> <p style="text-align: center;"><i>The hunting program at Fort Niobrara NWR would continue as it currently exists.</i></p>   |
|--|---|--|
| <p><b>Environmental Justice</b></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.**

| <b>Elk Hunting - Fort Niobrara NWR</b>       |                  |                            |                          |                                       |                                      |                                  |
|--|------------------|----------------------------|--------------------------|---------------------------------------|--------------------------------------|----------------------------------|
| 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 <sup>^</sup>             | 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.**

| <b>Deer Hunting - Fort Niobrara NWR</b>                           |   |                          |                          |                                  |                               |                                  |  |                                    |   |
|---|---|--------------------------|--------------------------|----------------------------------|-------------------------------|----------------------------------|--|------------------------------------|---|
| 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  |
| <b>2018 State of Origin for Hunters Reporting Hunting Effort:</b> |   |                          |                          |                                  |                               |                                  |  |                                    |   |
|   | 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 further 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  |
|--|---|
| <b>Hunting</b>   |   |
| <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 (<math>\pm 4</math> percent) ducks and 3,602,500 (<math>\pm 5</math> 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 (<math>\pm 14</math> percent) ducks and during the same period, annual goose harvests for the CF averaged 1,061,500 (<math>\pm 11</math> 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 United States in the CMU was 4,749,100 <math>\pm</math> 283,900 birds, 332,900 hunters, and 852,100 <math>\pm</math> 53,100 days afield (Seamans 2019). 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>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"> <li>• 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).</li> <li>• Deer (adult buck) harvest information (all seasons, weapons) for the KeyaPaha Unit during 2016–2018 period (Table 12).</li> <li>• Furbearer harvest (hunt and trap) information for Nebraska from 2012 to 2017 can be found in Table 13.</li> </ul> | <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><b>Migratory Birds</b></p> <p>Migratory bird populations throughout the country are managed through an administrative process known as flyways. The refuge is located in the CF. 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>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 United States for each hunting season. Coot, moorhen and rail species are also counted and analyzed.</p> |

| Other Past, Present, and Reasonably Foreseeable Activity Impacting Affected Environment   | Descriptions of Anticipated Cumulative Impacts   |
|---|--|
| <p><b>Public Lands</b></p> <p>Public hunting lands near the refuge are limited and include Borman Bridge and Government Canyon Wildlife Management Areas.</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 CF 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"> <li>• The proportion of the national waterfowl harvest that occurs on national wildlife refuges is only 6 percent (USFWS 2013).</li> <li>• There are no populations that exist wholly and exclusively on national wildlife refuges.</li> <li>• Annual hunting regulations within the U.S. are established at levels consistent with the current population status.</li> <li>• Refuges cannot allow more liberal seasons than provided for in federal frameworks.</li> <li>• Refuges bought with money derived from the Federal Duck Stamp must limit hunting to 40 percent of the available area.</li> </ul> <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> <p><b>Resident Birds and Mammals</b></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><b>Public Lands Near Fort Niobrara NWR</b></p> <p>Expanded hunting opportunities on the refuge could alleviate hunting pressure to wildlife populations on nearby public lands.</p> |

| Other Past, Present, and Reasonably Foreseeable Activity Impacting Affected Environment   | Descriptions of Anticipated Cumulative Impacts   |
|---|--|
| <b>Other Wildlife-Dependent Recreation (Road and Trail Development and Use)</b>   |  |
| <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 nonconsumptive 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>   |
| <b>Use of Ammunition and Tackle</b>   |  |
| <p>Nontoxic 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 nontoxic shot for migratory bird hunting. Only nontoxic 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> |
| <b>Climate Change</b>   |  |
| <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>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).</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>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; EA = Environmental Assessment; NGPC = Nebraska Game and Parks Commission; NWR = National Wildlife Refuge

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

| <b>Elk Hunting - Niobrara Unit</b> |      |     |      |       |                |
|------------------------------------|------|-----|------|-------|----------------|
| 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).**

| <b>Elk Hunting - Niobrara Unit</b> |      |     |      |       |                |
|------------------------------------|------|-----|------|-------|----------------|
| 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).**

| <b>Furbearer Harvest - Nebraska</b> |                |        |               |                 |                   |
|-------------------------------------|----------------|--------|---------------|-----------------|-------------------|
| 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. Added 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, nonconsumptive uses, and Service staff activities; and
- 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

nonconsumptive 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 are expected.

The Service’s Hunt Application and Permit Form (Form 3-2439), would only be required for muzzleloader deer hunting under this alternative. Refuge staff would provide information about muzzleloader deer hunter use and harvest to NGPC. Archery deer, antelope, and elk harvest levels would be taken from NGPC telecheck and check station information, which may not be specific to the refuge. Other harvest information would not be regularly documented. 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 for all species as a mitigation measure.

This alternative would help meet the purpose and needs of the Service as described above, because it provides more 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 Application and Permit Form (Form 3-2439356), 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 NWR        |

### **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. Further conversations have occurred with local NGPC biologists in development of this final 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 final 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**

On April 1, 2020, the Service put the draft EA, hunting plan, and compatibility determination out for 30-day public review and comment. The refuge made the public aware of the availability of the draft EA and hunting plan via public notices on the refuge’s website and in the Fort Niobrara NWR headquarters office. During the 30-day public comment period, the Service accepted comments in writing, in person, electronically, or in any other form the public wished to present comments or information. Upon close of the comment period, all comments and information were reviewed and considered. The Service received comments from various individuals and from large non-governmental organizations.

*Comment (1):* We received comments opposed to hunting coyote and bobcat on the refuge because it is deemed biologically unsound, contrary to the Service’s mandate, and not supported by legally sufficient environmental analysis.

*Response:* The NWRSA states that hunting, fishing, wildlife observation and photography, and environmental education and interpretation are to be treated as priority public uses throughout all the units of the Refuge System. Thus, the Service endeavors to facilitate these public uses on the units of the Refuge System, provided they are found to be compatible. Pursuant to the priority given to these public uses by the NWRSA, the Service proposed expanding hunting opportunities, including hunting of coyote, and bobcat at the refuge.

The Service does not allow hunting if its effect would conflict with refuge purposes or the mission of the Service, including significant cumulative effects on individual species, federally-listed species, or migratory birds.

We follow state hunting and fishing regulations, except for where we are more restrictive on individual stations, including state regulations concerning responsible hunting or prohibitions on wanton waste (defined as “to intentionally waste something negligently or inappropriately”).

Furbearer populations are monitored by the state and statewide harvest levels are adjusted accordingly. The Service follows state hunting regulations, but we do so within the regulations governing and the objectives determined by the Refuge System, as well as the purposes of each of its units. For example, Fort Niobrara NWR will differ from the state's furbearer hunting regulations in the duration of the season, the hunting hours, and the allowance of hounds and electronic calls.

The refuge manager makes a decision about managing furbearer populations, including allowing hunting, only after careful examination to ensure the action would comply with relevant laws, policies, and directives. The State of Nebraska monitors furbearer populations and adjusts statewide harvest levels accordingly. We considered the impacts of hunting on furbearer populations through the individual environmental assessment for the proposed hunting opening. We also considered the cumulative impacts of all proposed hunts in the 2020–2021 cumulative impacts report accompanying the proposed rule.

According to research, coyote and bobcat are among the furbearer species whose populations have increased in Nebraska since 1941 (Landholt and Genoways 2000). Populations of coyotes have increased and expanded despite numerous control methods and increasing urbanization (Voight and Berg 1987). Further, although wolves and coyotes coexisted in the past, the extirpation of the larger wolves has also allowed coyotes to expand their populations (Hamilton and Fox 1987). Bobcat harvest numbers showed a minimal increase over the years, but increased resources may have helped them expand their geographic range in Nebraska. Although bobcat prey on a variety of small mammals, white-tailed deer are a significant part of their diet (Rolley 1987). Increased food and decreased predation by large predators have allowed Nebraska's population of deer to greatly expand in recent years.

This data supports the Service's estimate that the hunting of bobcat and coyote at the refuge would result in an insignificant impact to the overall populations of these species in Nebraska.

If bobcats are harvested only rarely, and a very small percentage of the state's coyote population is hunted at the refuge as a result of the proposed action, we would expect a negligible impact to these species at the local and statewide level. Similarly, we would expect their removal to have a minimal impact on the ecosystem.

Through our analysis, we have determined that hunting of coyote and bobcat are compatible uses at the refuge. We believe that current and proposed management actions at the refuge are ensuring the overall biological integrity and diversity of the wildlife and habitats entrusted to the Service.

The Service did not modify the proposal as a result of these comments.

*Comment (2):* We received one comment indicating that the EA was not easily accessible on the Service's website and that the proposed expansion in the number of species that may be hunted on the wilderness area of the refuge may constitute a safety issue and could impact the unique values of the wilderness area.

*Response:* We disagree with the commenter's statement that the EA was not easily accessible on the Service's website. All documents for the proposed hunting openings and expansion proposal at the refuge were (and continue to be) available for the public view and download at the USFWS Legacy Region 6 New Hunting Opportunities website at [www.fws.gov/mountain-prairie/huntfish.php#](http://www.fws.gov/mountain-prairie/huntfish.php#).

We believe that the proposed outdoor recreation opportunity and its impact on habitat, wildlife, and other compatible uses will be similar to, if not less than, that of other national wilderness areas in the nation. The state where the wilderness area is located sets the regulations that govern hunting on most national wilderness. The associated level of the proposed priority public use is generally acceptable to the public. In our proposal, all existing Wilderness Act use restrictions would remain in place during the hunting season. Additionally, horse use, access, camping, and fires are restricted in the Fort Niobrara Wilderness Area. These restrictions should reduce use and impacts to the wilderness area below that experienced by other national wilderness areas in the nation.

The Service did not modify the proposal as a result of this comment.

*Comment (3):* One comment centered on the impact of muzzleloaders, firearms loaded through the open end of the barrel rather than modern breech-loaded firearms, on wildlife and public health and safety.

*Response:* We have determined that allowing muzzleloader rifles as a method of take at the refuge is compatible with the purposes of the refuge and the mission of the Refuge System. We have also determined that allowing this method of take would have negligible impacts on wildlife and public safety for the following reasons:

- The number of hunters using muzzleloaders on the refuge, and on Service lands in general, is expected to remain low. The 2016 National Survey of Hunting and Fishing reported that only 12 percent of all hunters reported using muzzleloaders.
- Noises produced by muzzleloaders are similar in decibel range to those produced by modern rifles and shotguns of the same caliber and barrel length, approximately 150–160 decibels for shotguns. However, the noises produced by these weapons have very different characteristics. The black powder used in muzzleloaders generates a lower frequency noise of longer duration. Smokeless cartridges used in modern firearms, however, have a faster burn which gives a much higher pitched noise of a shorter duration. The high-pitched crack of modern firearms is more damaging to hearing and likely more disturbing to wildlife than the lower-pitched sound of black-powder weapons.
- Muzzleloader weapons have a shorter effective range and require a closer approach to game than modern firearms. In addition, the long reloading time of muzzleloaders (approximately 30 seconds) means that hunters typically wait for better opportunities and fire fewer shots.
- Muzzleloaders use a variety of propellants, including black powder, a mixture of potassium nitrate, charcoal, and sulfur. Black powder does produce relatively large quantities of smoke when fired. If combustion of black powder is complete, smoke would contain primarily nitrogen and carbon dioxide. However, since combustion is incomplete, black powder combustion produces hydrogen sulfide, sulfur oxides, carbon monoxide, and nitrogen oxides (Del’Aria and Opperman 2017). These compounds are toxic if breathed in high concentrations. However, in field conditions encountered when hunting, black powder smoke disperses rapidly. Total amounts produced as a result of hunting activity would be negligible, and therefore effects to wildlife would also be negligible.
- Muzzleloaders do take significantly more knowledge to use than modern firearms and involve greater risk. However, A Political and Social Research Firearm Injury

Surveillance Study, which accumulated data from 1993 to 2008, reported that firearm-related incidents (all firearms) occurred in only 9 per 1 million hunting days (Loder and Farren 2014). In 2017, over 17 million hunters used firearms, according to the National Sporting Goods Association (NSGA), and only 35 injuries occurred per 100,000 participants. Of those, a vast majority were non-serious injuries (Target Tamers 2020). Thus, while hunting with any type of firearm involves risk, it is an extremely safe activity overall.

We did not make any change to the rule as a result of this comment.

*Comment (4):* We also received comments from birders and other nonconsumptive users of the Refuge System, stating that other forms of recreation are important to them and to the economy besides hunting, and that some areas of the refuge should only be open to nonconsumptive users.

*Response:* Congress, through the NWRSA, envisioned that hunting, fishing, wildlife observation and photography, and environmental education and interpretation would all be treated as priority public uses of the Refuge System. Therefore, the Service facilitates all of these uses on refuges, as long as they are found compatible with the purposes of the specific refuge and the mission of the Refuge System. Environmental education, interpretation, wildlife observation, and photography are compatible uses that are also allowed on this refuge.

We did not make any change to the rule as a result of this comment.

*Comment (5):* We received a comment that any regulation changes should be postponed until public meetings are held.

*Response:* NEPA regulations require opportunities for the public to review proposals, such as the ones presented by this refuge, and a time for the public to provide comments. When developing an EA, there is no NEPA requirement to hold public meetings as part of the public review and comment period on the proposed action. Since the Service values and seeks public participation for proposed actions, we like to hold public meetings whenever appropriate and necessary. Due to ongoing nationwide gathering restrictions, and in following with departmental guidance, the Service did not organize public meetings to help prevent further spread of dangerous viruses and preserve public health. Since it is unclear when these national health guidelines would change, and we have the ability of receiving public comments without the need for public meetings, we decided against postponing a decision until public meetings could take place.

The Service did not modify the proposal as a result of this comment.

*Comment (6):* We received comments that wildlife refuges should not allow hunting.

*Response:* The word “refuge” includes the idea of providing a haven of safety for wildlife, and as such, hunting might seem to be an inconsistent use of the Refuge System. However, the NWRSA stipulates that hunting, if found compatible, is a legitimate and priority general public use of a refuge. In this case, the hunting opportunities in our proposal have been found compatible on this refuge (please see the compatibility determination).

We did not make any change to the rule as a result of this comment.

*Comment (7):* We received a comment that opening hunting opportunities to species other than elk and bighorn sheep is inconsistent with the CCP developed for this refuge.



*Response:* As stated in other responses, Congress determined that hunting is among the six priority public uses that the Service must strive to make available on the units of the Refuge System. While the CCP opened a portion of the refuge to bighorn sheep and elk through a compatibility determination developed concurrent with the CCP, this management document did not stipulate that the refuge would henceforth be closed to other hunting opportunities. It simply stated that at that moment, all other hunting opportunities were not available at the refuge.

The current proposed action to open this refuge to new hunting opportunities was developed as part of the annual review of hunting and sport fishing programs on refuges to determine whether more stations should be included or whether regulations governing existing programs should be modified (see 85 FR 20030). This process is specific to hunting and sport fishing opportunities. However, we are limited to considering other public uses on this refuge in the future, provided they are found to be compatible. To be allowed on the units of the Refuge System, all public uses need to be found compatible with the refuge purpose and need to be evaluated through an additional planning process.

Each refuge manager uses “sound professional judgment” in making these inherently complex management decisions to ensure that each proposed action complies with Service mandates (see the Service’s Service Manual at 603 FW 2.6.U., available online at [www.fws.gov/policy/603fw2.html](http://www.fws.gov/policy/603fw2.html)). Each manager incorporates field experience, knowledge of refuge resources, considerations of the refuge’s role within an ecosystem, applicable laws, and the best available science in making these decisions. Service biologists and wildlife professionals, in consultation with the state, determine the optimal number of each game animal that should reside in an ecosystem and then establish hunt parameters, such as bag limits or sex ratios, based on those analyses. We carefully consider how a proposed hunt fits with individual refuge goals, objectives, and strategies before allowing the hunt.

We did not make any changes to the rule as a result of this comment.

*Comment (8):* We received one comment on the need to report the sources of given informational details found on the EA and how these need to be attributed to a credible source.

*Response:* Each refuge manager uses “sound professional judgment” in making inherently complex management decisions to ensure that each proposed action complies with Service mandates (see the Service’s Service Manual at 603 FW 2.6.U., available online at [www.fws.gov/policy/603fw2.html](http://www.fws.gov/policy/603fw2.html)). Each manager incorporates field experience, knowledge of refuge resources, considerations of the refuge’s role within an ecosystem, applicable laws, as well as the best available science in making decisions. Service biologists and wildlife professionals often use consultation and coordination with state biologists and scientists as the primary source of best available information, especially when there are no other known sources of information. Personal communications with biologists and scientists from the state, a tribe, or other agencies are noted as sources of information in our documents. Sound professional judgement used by Service employees is not noted in special ways.

The Service did not modify the proposal as a result of this comment.

*Comment (9):* One comment pointed out that our draft EA estimated a possible 50 percent reduction in the existing wild turkey and northern bobwhite quail populations as a result of the proposed hunt, mentioning that this was contrary to the sustainability mandated to the Service.

*Response:* After reading this comment, our wildlife biologists consulted with the state's upland bird biologist on our estimated 50 percent population decrease. The state biologist's information allowed us to see our overestimation on the population decrease. As a result of this, we have updated our estimates downward in accordance with the new information.

*Comment (10):* We received a comment that the Service has a legal duty to take a hard look to ensure that the biological integrity, diversity, and environmental health (BIDEH) of the system are maintained for the benefit of present and future generations of Americans. The commenter stated that the Service cannot act consistent with that duty when authorizing the hunting of ecologically important animal species.

*Response:* We do not allow hunting on a refuge if it is found incompatible with that individual refuge's purposes or with the mission of the Refuge System. Part of the mission of the Refuge System is to "ensure that the biological integrity, diversity, and environmental health (BIDEH) of the System are maintained for the benefit of present and future generations of Americans." (16 U.S. Code 668dd[a][4][B]). Therefore, each Service station manager uses "sound professional judgment" in making these inherently complex management decisions to ensure that each proposed action complies with this mandate (see the Service's Service Manual at 603 FW 2.6.U., available online at [www.fws.gov/policy/603fw2.html](http://www.fws.gov/policy/603fw2.html)). Each manager incorporates field experience, knowledge of refuge resources, considerations of the refuge's role within an ecosystem, applicable laws, and the best available science in making these decisions. Service biologists and wildlife professionals, in consultation with the state, determine the optimal number of each game animal that should reside in an ecosystem and then establish hunt parameters, such as bag limits or sex ratios, based on those analyses. We carefully consider how a proposed hunt fits with individual refuge goals, objectives, and strategies before allowing the hunt. Based on the analysis in the EA, we did not find that the proposed action would have any significant impact on predator species, such as mountain lion and bobcat, or rare animals and consequently would have no significant impact on the BIDEH of refuges.

Several factors, which are addressed in our response to concerns over hunting opportunities at this refuge, make it unlikely that providing the proposed hunting opportunities would affect the BIDEH on the refuge.

The Service consistently coordinates with the state regarding the refuge's hunting and fishing program. The Service looks at the state to monitor game and fish species populations, including predators and furbearers, and implement any adjustments to future harvests as needed under the existing state regulations. This ensures sustainable populations, minimize cumulative impacts, and maintains the biological integrity, diversity, and ecological health of refuges and state-managed lands.

The Service did not modify the proposal as a result of this comment.

*Comment (11):* We received comments opposing the proposal to allow use of lead ammunition for hunting resident game because of concerns that it may lead to the poisoning of eagles and other wildlife on the refuge. Some comments also asked the Service to consider an alternative that would require the use of nontoxic ammunition for all hunting on the refuge.

*Response:* The Service shares commenters' concerns regarding the bioavailability of lead in the environment and the fragments that can be deposited in killed game. See, for example, Nancy Golden et al., "A Review and Assessment of Spent Lead Ammunition and Its Exposure and

Effects to Scavenging Birds in the United States,” which is available online at [www.fws.gov/midwest/refuges/Review%20and%20Assessment%20paper.pdf](http://www.fws.gov/midwest/refuges/Review%20and%20Assessment%20paper.pdf). The impacts of spent lead on predators and scavengers on the refuge are analyzed in the EA within the cumulative impacts section. We also expect that expanding hunting opportunities would not substantially increase harvest or hunter numbers but would more likely provide added opportunities for current hunters. As a result of the proposed action, the potential overall increase in and cumulative impact of lead in the environment, both in number of animals harvested and area impacted, is expected to be minor and would not make a significant contribution to the cumulative effects of lead at the local or state level.

Besides potential impacts to wildlife, recent studies have found that lead ammunition can increase the risk to human health due to the ingestion of lead (Hunt et al. 2009). While no lead poisoning in humans has been documented from ingestion of wild game, some experts, including the Center for Disease Control, have recommended the use of nontoxic bullets when hunting to avoid lead exposure and stated that pregnant women and children under the age of six should not consume wild-game shot with lead ammunition (Streater 2009). This recommendation comes after a study done in North Dakota found that those who ate wild game had significantly higher levels of lead in their blood than those who did not (Iqbal et al. 2009).

The Service encourages refuge-state partnerships to reach decisions on usage and would continue to encourage hunters and anglers to voluntarily use nontoxic ammunition and tackle for all harvest activities. Nontoxic ammunition is becoming more available as the demand for this ammunition increases (Kelly et al. 2011). Copper ammunition is a good alternative because it is less toxic and frangible than lead ammunition (Hunt et al. 2006). The Service’s intent is to reduce the potential of lead poisoning to migratory birds and birds of prey, as well as lower the risk of lead exposure for humans ingesting wild game hunted on refuges.

The Service did not modify the proposal as a result of these comments.

*Comment (12):* We received a comment stating that the EA on this proposal is insufficient, and the Service must not publish a final EA or finding of no significant impact on activities at the refuge before it has accepted and analyzed all comments on the proposed rule, including on the cumulative impacts report.

*Response:* The Service disagrees with the assertion that the EA was insufficient for this proposal. We completed the EA, in compliance with NEPA, to evaluate the impacts of opening or expanding hunting opportunities on the refuge. The EA underwent regional review to address and consider all proposed actions from a local and regional perspective, and to consider the cumulative impacts. After analyzing the impacts, we concluded that the proposed actions would not have significant impacts at the local or regional level. The commenters who have raised these environmental analysis concerns have provided no further information that would change this analysis or our conclusion. We annually conduct management activities on the refuge that reduce or offset impacts of hunting on physical and cultural resources, including establishing designated areas for hunting, restricting levels of use, confining access and travel to designated locations, providing education programs and materials for hunters, and conducting law enforcement activities.

The Service is expanding opportunities for recreational hunting. Expanding opportunities does not necessarily result in increased impacts to the refuge resources. Overall, considering the decreasing trends in hunting generally, and decreasing trends of hunting on refuges, we do not

expect this proposal to have a significant impact on the environment. As noted by the Service in the final rule, hunter participation trends have been generally declining, some refuges attract a very small number of participants, and often participation rates decline over the course of a season.

After analyzing this comment, the Service did not find it necessary to modify the proposal.

*Comment (13):* We received a comment that our EA did not address the impacts on the proposed action to trumpeter swan.

*Response:* We have added information on impacts to trumpeter swans to the final EA (Table 1).

*Comment (14):* We received a comment stating that, contrary to what the EA says, there are no hares in Nebraska.

*Response:* We disagree with this comment. NGFP ([www.outdoornebraska.gov](http://www.outdoornebraska.gov)) states that there are two species of jackrabbit, or hare, in Nebraska: the black-tailed (*Lepus californicus*) and the white-tailed (*Lepus townsendii*) jackrabbits.

The Service did not modify the proposal as a result of this comment.

*Comment (15):* We received a comment that the Service failed to recognize how hunting would impact migratory birds, as well as nonconsumptive users of the refuge, through disturbance from noise, motorized use, increased visitation, and the threat of accidentally being shot.

*Response:* We did analyze these impacts in the EA. In our analysis, we considered that all wildlife species, including migratory birds, may be indirectly impacted by disturbances due to hunting activities in the uplands. The overall impact of the proposed action was determined to have negligible to minor negative impacts on wildlife, including migratory birds. We also addressed measures to ensure the safety of visitors to the refuge during hunting activities. The commenter did not provide any further information that would change our conclusions.

We did not make any changes as a result of this comment.

*Comment (16):* We received a comment that the Service reached a final decision on the proposal even before the public was given the opportunity to provide input and that the Service should properly consider public comments.

*Response:* In spring 2020, U.S. Secretary of the Interior David L. Bernhardt announced a historic proposal for new and expanded hunting and fishing opportunities across 97 national wildlife refuges and 9 national fish hatcheries, including Fort Niobrara NWR. The Service published an announcement in the Federal Register inviting the public to review and provide comments on all the proposals. The Service accepted public input for no less than 45 days, after which the Service reviewed all public comments and made appropriate changes to the proposals based on substantive comments. No final decisions were made prior to considering all public comments and deciding upon appropriate changes based thereupon.

*Comment (17):* We received a comment that refuge management should focus on improving conditions for species locally so they can contribute to population status on a regional or national level and that the refuge should not be managed to reduce local numbers based upon regional or national numbers.

*Response:* The Service's refuge management activities are carefully examined, planned, and adjusted, using an adaptive management approach, to seek habitat improvements conducive to

healthy species populations. Part of the mission of the Refuge System is to “ensure that the biological integrity, diversity, and environmental health of the System are maintained for the benefit of present and future generations of Americans.” Therefore, each Service station manager uses “sound professional judgment” in making inherently complex management decisions to ensure refuge management actions, including consumptive uses like hunting, comply with this mandate (see the Service’s Service Manual at 603 FW 2.6.U., available online at [www.fws.gov/policy/603fw2.html](http://www.fws.gov/policy/603fw2.html)). Each manager incorporates field experience, knowledge of refuge resources, considerations of the refuge’s role within an ecosystem, applicable laws, and the best available science in making these decisions.

*Comment (18):* We received one comment requesting further information on the Service’s statement that expanded hunting opportunities on the refuge could alleviate hunting pressure to wildlife populations on nearby public lands.

*Response:* The Nebraska Sandhills is a region of mixed-grass prairie on grass-stabilized sand dunes that occur only in Nebraska and a small region of South Dakota. Outside of the refuges managed by the Service in this important region, there are very few other public lands within the Nebraska Sandhills. The refuge offers a unique recreational opportunity for hunters. Ecologists recognize the refuge and surrounding area for its biogeographic significance due to the co-occurrence of five distinctly different, major vegetation communities within and adjacent to the Niobrara River corridor. The region is the only place in North America where Rocky Mountain Coniferous Forest (eastern limit), Northern Boreal Forest (southern limit), Eastern Deciduous Forest (western limit), Mixed Prairie, and Sandhill Prairie meet and intermingle. The unusually diverse plant and animal assemblages found in this area are due to unique surface and subsurface geologic formations, water and soil conditions, current and past climates, and differential sun exposure (Fort Niobrara CCP 1999). The uniqueness of this combination of habitats creates a hunting challenge not available anywhere else. Thus, it is within this context that the Service believes opening new hunting opportunities in the refuge could alleviate hunting pressure on nearby public lands.

*Comment (19):* One person asked when and how refuge staff consults with the NGPC to share, evaluate, and discuss available population and harvest data for regulatory changes to ensure viable populations of resident and migratory game species are maintained on the refuge.

*Response:* The EA contains information on state coordination and tribal consultation. Besides specific instances of meetings and conference calls between the Service and NGPC over the years, Service and state biologists and managers coordinate with one another to ensure management actions and outdoor recreational opportunities ensure wildlife populations remain viable.

*Comment (20):* One person asked how often monitoring and inventorying of wildlife populations and refuge habitats are done.

*Response:* Refuge personnel work closely with the staff of the regional Habitat and Population Evaluation Team and of the Division of Biological Resources to coordinate and carry out monitoring and inventory of wildlife populations and refuge habitats. The Habitat and Population Evaluation Team areas of expertise include:

- prioritizing areas for conservation efforts to benefit wildlife populations;

- supporting the development and application of models to identify and prioritize areas for conservation efforts;
- guiding strategic habitat conservation by monitoring migratory bird populations; and
- enhancing the efficiency and effectiveness of land and wildlife conservation by developing computer applications to be used by the Refuge System.

The Division of Biological Resources' areas of expertise include:

- inventorying abiotic resources and physical features;
- creating and interpreting geospatial data;
- providing data management and analysis;
- providing baseline inventories of plants, animals and vegetation;
- establishing status and trends of priority fish and wildlife species;
- conducting comprehensive ecological assessments;
- assessing natural disturbance regimes;
- providing inventories and assessments of water resources; and
- supporting adaptive management at multiple scales;
- assessing vulnerability to climate change;

*Comment (21):* We received several comments either fully supporting the expansion of hunting opportunities or supporting the expansion with qualifiers. We received 15 comments recommending that we not expand hunting opportunities at the refuge. Though various reasons exist for these recommendations, commenters mostly liked the quality of the current hunt and did not want that to change.

*Response:* Hunting is a nationally recognized use of national wildlife refuges.

*Comment (22):* Ten people specifically commented that we should continue to require a refuge permit to hunt at the refuge. Many of those commenters reasoned that this would maintain the quality of the hunt and not allow unrestricted numbers of hunters. They also recommended that we reduce the number of deer hunters. Through hunter reports over the last several years, the preponderance of commenters would have us continue the permit requirement and reduce the overall number of hunters allowed.

*Response:* Given this feedback, we have decided to modify the EA, compatibility determination, and hunting plan to maintain, rather than increase, the number of muzzleloader deer hunters. Muzzleloader deer hunting usually results in high concentrations of hunters using the refuge. We asked the state to administer a lottery draw for muzzleloader deer hunting the refuge but they declined. We would limit the number of muzzleloader deer hunters during the busiest seasons, which are the November rifle and December muzzleloader seasons. We would require muzzleloader hunters apply for a refuge permit and conduct a lottery drawing for refuge permits to hunt during those busy seasons.

*Comment (23):* One commenter noted that refuges in Nebraska have had drastic reductions in staffing over the last 15 years. Expansion of hunting and fishing would place a greater work load on already strained budgets and staff, especially law enforcement officers.

*Response:* Each refuge manager makes a decision regarding hunting or sport fishing, or both, on that particular refuge only after rigorous examination of the available information. Referencing a CCP is generally the first step a refuge manager takes. Our policy for managing refuges is to manage them in accordance with an approved CCP, which, when implemented, would achieve refuge purposes; help fulfill the Refuge System mission; maintain and, where appropriate, restore the ecological integrity of each refuge and the Refuge System; help achieve the goals of the National Wilderness Preservation System; and meet other mandates. The CCP guides management decisions and sets forth goals, objectives, and strategies to accomplish these ends. The next step for refuge managers is developing or referencing step-down plans, including a hunting plan. Part of the process for opening a refuge to hunting after completing the step-down plan is complying with NEPA (42 U.S. Code 4321 et seq.), such as conducting an environmental assessment accompanied by the appropriate decision documentation (record of decision, finding of no significant impact, or environmental action memorandum or statement). The rest of the elements in the opening package are an evaluation of Section 7 of the Endangered Species Act of 1973, as amended (16 U.S. Code 1531 et seq.); copies of letters requesting state and tribal involvement; and draft refuge-specific regulatory language. We make available the CCP, hunting plan, and NEPA documents, and request public comments on them, as well as on any proposed rule, before we allow hunting or sport fishing on a refuge.

In sum, this illustrates that the decision to allow hunting on a national wildlife refuge is not a quick or simple process. It is full of deliberation and discussion, including review of all available data to determine the relative health of a population before we allow it to be hunted.

In order to open or expand hunting or sport fishing on a refuge, we must find the activity compatible. The activity must not “materially interfere or detract from” public safety, wildlife resources, or the purpose of the refuge. For the proposed openings and expansions, we determined that the proposed actions would not have these detrimental impacts and found the actions to be compatible.

Service policy (603 FW 2.12[7]) requires station managers to determine that adequate resources, including staff, such as law enforcement, exist or can be provided by the Service or a partner to properly develop, operate, and maintain the use in a way that would not materially interfere with or detract from fulfillment of the refuge purpose(s) and the Service mission. If resources are lacking for establishment or continuation of wildlife-dependent recreational uses, the refuge manager would make reasonable efforts to obtain added resources or outside assistance from states, other public agencies, local communities, or private and nonprofit groups before determining that the use is not compatible. When Service law enforcement resources are lacking, we are often able to rely upon state fish and game law-enforcement capacity to assist in enforcement of hunting and fishing regulations.

The Service did not modify the proposal as a result of these comments.

*Comment (24):* One commenter stated that wilderness and scenic river qualities are diminished by hunting.

*Response:* Hunting is routinely allowed on national wilderness areas and national scenic rivers while maintaining acceptable quality of experience by all users.

### 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: Steven A. Hicks, Project Leader, Sandhills NWR Complex

Reviewer Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name/Title: Noreen Walsh, Regional Director, Interior Regions 5 and 7, Lakewood, CO



### 3.13 References

Carver, E.; 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. 372 p.

Hamilton, D.A.; Fox, L.B. 1987. Wild furbearer management in the midwestern United States. In: Novak, M.; Baker, J. A.; Obbard, M.E.; Malloch, B., editors. Wild Furbearer Management and Conservation in North America. Ontario, Canada, Ontario Trappers Association: 1100–1116.

Krolikowski, T. 2019. Biologist II, Nebraska Game and Parks Commission. Personal communication.

Landholt, L.M.; Genoways, H.H. 2000. Population Trends in Furbearers in Nebraska., University of Nebraska-Lincoln.

Meduna, L. 2019. Big Game Research Program Manager, Nebraska Game and Parks Commission. Personal communication.

Nebraska Public Power District. 2007. Community Facts: Valentine, Nebraska. Economic Development Department. 46 p.

Raftovich, R.V.; Chandler, S.C.; Fleming, K.K. 2018. Migratory Bird Hunting Activity and Harvest during the 2016–17 and 2017–2018 Hunting Seasons. U.S. Fish and Wildlife Service, Laurel, MD.

Rolley, R.E. 1987. Bobcat. In: Novak, M.; Baker, J.A.; Obbard, M.E.; Malloch, B., editors. Wild Furbearer Management and Conservation in North America. Ontario, Canada, Ontario Trappers Association: 670-681.

Seamans, M.E. 2019. Mourning Dove Population Status, 2019. U.S. Department of Interior, Fish and Wildlife Service, Division of Migratory Bird Management, Laurel, MD.

U.S. Bureau of Census. 2019. State and County QuickFacts. Washington, D.C.  
<[www.census.gov/quickfacts/table/cherrycountynebraska,NE/PST045218](http://www.census.gov/quickfacts/table/cherrycountynebraska,NE/PST045218)>

[USEPA] U.S. Environmental Protection Agency. 2016. What Climate Change Means for Nebraska. EPA 430-F-16-029. 2 p.

[USFWS] U.S. Fish and Wildlife Service. 1999. Fort Niobrara National Wildlife Refuge Comprehensive Conservation Plan. U.S. Fish and Wildlife Service, Valentine, NE. 135 p.

———. 2013. Issuance of Annual Regulations Permitting the Hunting of Migratory Birds, Final Supplemental Environmental Impact Statement. U.S. Fish and Wildlife Service, Division of Migratory Birds and Management, Laurel, MD. 418 p.

———. 2017. Adaptive Harvest Management: 2018 Hunting Season. U.S. Department of Interior, Washington, D.C. 69 p. <[www.fws.gov/birds/management/adaptive-harvest-management/publications-and-reports.php](http://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. <[www.fws.gov/migratorybirds/pdf/surveys-and-data/Population-status/Waterfowl/WaterfowlPopulationStatusReport18.pdf](http://www.fws.gov/migratorybirds/pdf/surveys-and-data/Population-status/Waterfowl/WaterfowlPopulationStatusReport18.pdf)>

Voight, D.R.; Berg, W.E. 1987. Coyote. In: Novak, M.; Baker, J.A.; Obbard, M.E.; Malloch, B., editors. Wild Furbearer Management and Conservation in North America. Ontario, Canada, Ontario Trappers Association: 344–357 p.

**APPENDIX A. OTHER APPLICABLE STATUTES, EXECUTIVE ORDERS, AND REGULATIONS**

| <b>Statutes, Executive Orders, and Regulations</b>  |
|---|
| <b>Cultural Resources</b>   |
| <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> |
| <b>Fish and Wildlife</b>  |
| <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>   |
| <b>Natural Resources</b>  |
| <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>   |
| <b>Water Resources</b>  |
| <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

## APPENDIX B. FINDING OF NO SIGNIFICANT IMPACT

### FINDING OF NO SIGNIFICANT IMPACT AND DECISION TO EXPAND HUNTING FOR RESIDENT GAME AND MIGRATORY BIRDS

#### FORT NIOBRARA NATIONAL WILDLIFE REFUGE

##### *Cherry County, Nebraska*

The United States (U.S.) Fish and Wildlife Service (Service) proposes to open 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). The Service would also expand existing big game hunting opportunities by discontinuing the use of the general access permit and adopting a quota muzzleloader deer hunt. Accordingly, the refuge has prepared a new hunting plan (see the Final 2020 Fort Niobrara NWR Hunting Plan) to describe and implement the new hunt program and regulations on refuge lands.

#### **Selected Action**

***Alternative A – Proposed Action Alternative:*** Hunting opportunities for resident game and migratory birds would be expanded within the current open area of the refuge. Resident game hunting covers all non-migratory wildlife hunted in Nebraska under the Nebraska Game and Parks Commission (NGPC) hunting regulations. In Nebraska, resident game species include white-tailed deer, mule deer, pronghorn, 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.

All NGPC regulations and bag limits, as well as mitigation measures outlined in the hunting plan, would apply to hunting resident game species and migratory birds on the refuge, and all state and federal licenses, tags, permits, and stamps required to participate in hunting of the species under both categories would apply. All other areas of the refuge would continue to be closed to hunting. In addition, brochures would be available in designated parking areas with information and maps of the refuge hunt program.

Under this alternative, Service law enforcement officers and NGPC wardens would monitor the hunting program, and they would conduct license issuance, possession limits, and gain access to compliance checks. Refuge staff would administer the hunting program by supporting parking areas, producing and updating the hunting brochure, answering the public's questions, and other associated activities.

This alternative was selected over the other alternatives and is the Service's proposed action because it offers the best opportunity for public hunting that would result in a minimal impact on physical and biological resources, supports sustainable populations of resident game and migratory birds, and fulfills the Service's mandates under the National Wildlife Refuge System

Administration Act of 1966 (NWRSA), as amended by the National Wildlife Refuge System Improvement Act of 1997, and Secretarial Order 3356.

### **Other Alternatives Considered and Analyzed**

***Alternative B – No Action Alternative:*** Under this alternative, the refuge would have continued 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. No further coordination would occur with NGPC for opening hunting to other species.

This alternative was not selected because it would not offer an more opportunities for wildlife dependent recreation and would not fulfill the Service's mandate under the NWRSA, as amended by the Improvement Act, or Secretarial Order 3356.

### **Summary of Effects of the Selected Action**

An environmental assessment (EA) was prepared in compliance with the National Environmental Policy Act (NEPA) to provide decision-making framework that: (1) explored a reasonable range of alternatives to meet project objectives; (2) evaluated potential issues and impacts to the refuge, resources, and values; and (3) identified mitigation measures to lessen the degree or extent of these impacts. The EA evaluated the effects associated with two alternatives. It is incorporated as part of this finding.

Implementation of the agency's decision would be expected to result in the following environmental, social, and economic effects.

- Most migratory game bird hunters in the area would probably seek wetland habitats outside of the refuge where these species are more common, rather than the uplands of the refuge. Harvest of migratory birds and resident game species at the refuge is estimated to be small compared to the overall populations of these species throughout Nebraska. Also, added disturbance to other wildlife over current levels from migratory bird and resident game hunters would be negligible. The effects on refuge soils, geology, air quality, wetlands, and floodplains are all considered to range from nonexistent to negligible.
- No public-use conflicts of consequence would be expected. More than half of the refuge would remain closed to hunting. Refuge management and operations would not be affected. There would be no added expense to add the new and the expanded hunting opportunities because there would be no added cost over that which is done to manage the existing hunting program. Service law enforcement officers and NGPC wardens would conduct compliance checks. Participation is expected to be light and would not require significant time to conduct compliance checks. Although estimating the economic impact is difficult, it is anticipated to be very small because participation is not expected to increase from adding light geese to species that may be hunted.

Measures to mitigate or reduce adverse effects have been incorporated into the selected action and include the following:

- 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.
- The site would be accessed on foot from established parking areas, which would limit impacts to refuge resources. No additional or existing facilities, such as roads, trails, and parking lots, would be kept or constructed that would affect cultural resources or wilderness values.
- Federal and state waterfowl hunting regulations do not allow possession or use of anything other than nontoxic shot. This regulation would remain and be enforced for migratory bird hunting on the refuge.
- The primary nonconsumptive 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.
- 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.

While refuges, by their nature, are unique areas protected for conservation of fish, wildlife, and habitat, the proposed action would not have a significant impact on refuge resources and uses for several reasons:

- Combined total harvest of all migratory birds at the refuge is estimated to be around 120 birds annually, which is a very small fraction given the number of migratory birds harvested in Nebraska in 2018. Annual hunting regulations for migratory birds within the United States are established at levels consistent with the current population status.
- Given the relatively small number of hunters and hunting pressure expected at the refuge, the estimated harvest numbers for resident species, consistent with recent years, would also be low. The trimming of the resident game species herds caused by hunting activities should support the overall health of the remaining herd.
- The action would result in beneficial impacts to the human environment, including wildlife-dependent recreational opportunities and socioeconomics of the local economy, with only negligible adverse impacts to the human environment, such as other nonconsumptive users.
- The adverse direct and indirect effects of the proposed action on air, water, soil, habitat, and wildlife are expected to be minor and short-term.
- The Refuge System uses an adaptive management approach to all wildlife management on refuges, annually monitoring and re-evaluating the hunting opportunities on the refuge to ensure that the hunting programs continuously contribute to the biodiversity and

ecosystem health of the refuge and that these opportunities do not contribute to any cumulative impacts to habitat or wildlife from climate change, population growth and development, or local, state, or regional wildlife management.

- The action, along with proposed mitigation measures, would ensure that there is low danger to the health and safety of refuge staff, visitors, federally listed species, and the hunters themselves.
- The action is not in an ecologically sensitive area.
- The action would not impact any threatened or endangered species with the use of temporarily closed buffer zones when necessary or any federally designated critical habitat.
- The action would not impact any cultural or historical resources.
- The action would not have a detrimental impact on the refuge's wilderness area.
- There is no scientific controversy over the impacts of this action. The impacts of the proposed action are relatively certain.
- The proposal is not expected to have any significant adverse effects on wetlands and floodplains, pursuant to Executive Orders 11990 and 11988, because the action of opening the refuge to migratory bird and resident game hunting would not cause any destruction or degradation of wetlands or result in any floodplain development.

The Service believes that hunting on the refuge would not have a significant impact on local, regional, or Central Flyway migratory bird populations because the percentage likely to be taken on the refuge, though possibly additive to existing hunting takes, would be a tiny fraction of the estimated populations. In addition, overall populations would continue to be monitored and future harvests would be adjusted as needed under the existing flyway and state regulatory processes. More hunting would not add more than slightly to the cumulative impacts to waterfowl stemming from hunting at the local, regional, or flyway levels, and would only result in minor, negative impacts to migratory waterfowl populations.

### **Public Review**

The proposal has been thoroughly coordinated with all interested and affected parties. Parties contacted include:

#### ***Coordination with the Nebraska Game and Parks Commission***

Various conversations concerning public hunting at Fort Niobrara NWR have been held with NGPC, including regionally and with their state leadership. The NGPC was informed and provided comments during the development of the refuge's CCP, which included discussion on hunting. Within the last six months, one-on-one conversations have also taken place locally, regionally, and with state leadership. The NGPC has consistently supported opening refuge to hunting, including migratory birds and resident game, according to applicable state regulations. NGPC provided written comments and recommendations on opening and expanding the refuge's hunting program to the Service. These comments and recommendations were instrumental in the development of the hunting plan in accordance with NGPC seasons, regulations, and bag limits.

The Service provided NGPC the draft EA, hunting plan, and compatibility determination for review during the 30-day comment period. NGPC expressed their support for the proposed action to open the refuge to hunting migratory birds and resident game. We, the Service, would continue to consult and coordinate on specific aspects of the hunting plan with NGPC to ensure safe and enjoyable recreational hunting opportunities.

### ***Tribal Coordination***

The Service mailed an invitation for comments to all tribes potentially impacted 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 Executive Order 13175. We did not receive any responses from tribes.

### ***Public Comment***

On April 1, 2020, the Service put the draft EA, hunting plan, and compatibility determination out for a 30-day public review and comment period. The Service received comments from various individuals and from large non-governmental organizations.

*Comment (1):* We received comments opposed to hunting coyote and bobcat on the refuge because it is deemed biologically unsound, contrary to the Service's mandate, and not supported by legally sufficient environmental analysis.

*Response:* The NWRSA states that hunting, fishing, wildlife observation and photography, and environmental education and interpretation are to be treated as priority public uses throughout all the units of the Refuge System. Thus, the Service endeavors to facilitate these public uses on the units of the Refuge System, provided they are found to be compatible. Pursuant to the priority given to these public uses by the NWRSA, the Service proposed expanding hunting opportunities, including hunting of coyote, and bobcat at the refuge.

The Service does not allow hunting if its effect would conflict with refuge purposes or the mission of the Service, including significant cumulative effects on individual species, federally-listed species, or migratory birds.

We follow state hunting and fishing regulations, except for where we are more restrictive on individual stations, including state regulations concerning responsible hunting, or prohibitions on wanton waste (defined as "to intentionally waste something negligently or inappropriately"). Furbearer populations are monitored by the state and statewide harvest levels are adjusted accordingly. The Service follows state hunting regulations, but we do so within the regulations governing and the objectives determined by the Refuge System, as well as the purposes of each of its units. For example, Fort Niobrara NWR would differ from the state's furbearer hunting regulations in the duration of the season, the hunting hours, and the allowance of hounds and electronic calls.

The refuge manager makes a decision about managing furbearer populations, including allowing hunting, only after careful examination to ensure the action would comply with relevant laws, policies, and directives. The State of Nebraska monitors furbearer populations and adjusts statewide harvest levels accordingly. We considered the impacts of hunting on furbearer populations through the individual environmental assessment for the proposed hunting opening. We also considered the cumulative impacts of all proposed hunts in the 2020–2021 cumulative impacts report accompanying the proposed rule.



According to research, coyote and bobcat are among the furbearer species whose populations have increased in Nebraska since 1941 (Landholt and Genoways 2000). Populations of coyotes have increased and expanded despite numerous control methods and increasing urbanization (Voight and Berg 1987). Further, although wolves and coyotes coexisted in the past, the extirpation of the larger wolves has also allowed coyotes to expand their populations (Hamilton and Fox 1987). Bobcat harvest numbers showed a minimal increase over the years, but increased resources may have helped them expand their geographic range in Nebraska. Although bobcat prey on a variety of small mammals, white-tailed deer are a significant part of their diet (Rolley 1987). Increased food and decreased predation by large predators have allowed Nebraska's population of deer to greatly expand in recent years.

This data supports the Service's estimate that the hunting of bobcat and coyote at the refuge would result in an insignificant impact to the overall populations of these species in Nebraska.

If bobcats are harvested only rarely, and a very small percentage of the state's coyote population is hunted at the refuge as a result of the proposed action, we would expect a negligible impact to these species at the local and statewide level. Similarly, we would expect their removal to have a minimal impact on the ecosystem.

Through our analysis, we have determined that hunting of coyote and bobcat are compatible uses at the refuge. We believe that current and proposed management actions at the refuge are ensuring the overall biological integrity and diversity of the wildlife and habitats entrusted to the Service.

The Service did not modify the proposal as a result of these comments.

*Comment (2):* We received one comment indicating that the EA was not easily accessible on the Service's website and that the proposed expansion in the number of species that may be hunted on the wilderness area of the refuge may constitute a safety issue and could impact the unique values of the wilderness area.

*Response:* We disagree with the commenter's statement that the EA was not easily accessible on the Service's website. All documents for the proposed hunting openings and expansion proposal at the refuge were (and continue to be) available for the public view and download at the USFWS Legacy Region 6 New Hunting Opportunities website at [www.fws.gov/mountain-prairie/huntfish.php#](http://www.fws.gov/mountain-prairie/huntfish.php#).

We believe that the proposed outdoor recreation opportunity and its impact on habitat, wildlife, and other compatible uses would be similar to, if not less than, that of other national wilderness areas in the nation. The state where the wilderness area is located sets the regulations that govern hunting on most national wilderness. The associated level of the proposed priority public use is generally acceptable to the public. In our proposal, all existing Wilderness Act use restrictions would remain in place during the hunting season. Additionally, horse use, access, camping, and fires are restricted in the Fort Niobrara Wilderness Area. These restrictions should reduce use and impacts to the wilderness area below that experienced by other national wilderness areas in the nation.

The Service did not modify the proposal as a result of this comment.

*Comment (3):* One comment centered on the impact of muzzleloaders, firearms loaded through the open end of the barrel rather than modern breech-loaded firearms, on wildlife and public health and safety.

*Response:* We have determined that allowing muzzleloader rifles as a method of take at the refuge is compatible with the purposes of the refuge and the mission of the Refuge System. We have also determined that allowing this method of take would have negligible impacts on wildlife and public safety for the following reasons:

- The number of hunters using muzzleloaders on the refuge, and on Service lands in general, is expected to remain low. The 2016 National Survey of Hunting and Fishing reported that only 12 percent of all hunters reported using muzzleloaders.
- Noises produced by muzzleloaders are similar in decibel range to those produced by as modern rifles and shotguns of the same caliber and barrel length, approximately 150–160 decibels for shotguns. However, the noises produced by these weapons have very different characteristics. The black powder used in muzzleloaders generates a lower frequency noise of longer duration. Smokeless cartridges used in modern firearms, however, have a faster burn which gives a much higher pitched noise of a shorter duration. The high-pitched crack of modern firearms is more damaging to hearing and likely more disturbing to wildlife than the lower-pitched sound of black-powder weapons.
- Muzzleloader weapons have a shorter effective range and require a closer approach to game than modern firearms. In addition, the long reloading time of muzzleloaders (approximately 30 seconds) means that hunters typically wait for better opportunities and fire fewer shots.
- Muzzleloaders use a variety of propellants, including black powder, a mixture of potassium nitrate, charcoal, and sulfur. Black powder does produce relatively large quantities of smoke when fired. If combustion of black powder is complete, smoke would contain primarily nitrogen and carbon dioxide. However, since combustion is incomplete, black powder combustion produces hydrogen sulfide, sulfur oxides, carbon monoxide, and nitrogen oxides (Del’Aria and Opperman 2017). These compounds are toxic if breathed in high concentrations. However, in field conditions encountered when hunting, black powder smoke disperses rapidly. Total amounts produced as a result of hunting activity would be negligible, and therefore effects to wildlife would also be negligible.
- Muzzleloaders do take significantly more knowledge to operate than modern firearms and involve greater risk. However, A Political and Social Research Firearm Injury Surveillance Study, which accumulated data from 1993 to 2008, reported that firearm-related incidents (all firearms) occurred in only 9 per 1 million hunting days (Loder and Farren 2014). In 2017, over 17 million hunters used firearms, according to the National Sporting Goods Association (NSGA), and only 35 injuries occurred per 100,000 participants. Of those, a vast majority were non-serious injuries (Target Tamers 2020). Thus, while hunting with any type of firearm involves risk, it is an extremely safe activity overall.

We did not make any change to the rule as a result of this comment.

*Comment (4):* We also received comments from birders and other nonconsumptive users of the Refuge System, stating that other forms of recreation are important to them and to the economy besides hunting, and that some areas of the refuge should only be open to nonconsumptive users.

*Response:* Congress, through the NWRSA, envisioned that hunting, fishing, wildlife observation and photography, and environmental education and interpretation would all be

treated as priority public uses of the Refuge System. Therefore, the Service facilitates all of these uses on refuges, as long as they are found compatible with the purposes of the specific refuge and the mission of the Refuge System. Environmental education, interpretation, wildlife observation, and photography are compatible uses that are also allowed on this refuge.

We did not make any change to the rule as a result of this comment.

*Comment (5):* We received a comment that any regulation changes should be postponed until public meetings are held.

*Response:* NEPA regulations require opportunities for the public to review proposals, such as the ones presented by this refuge, and a time for the public to provide comments. When developing an EA, there is no NEPA requirement to hold public meetings as part of the public review and comment period on the proposed action. Since the Service values and seeks public participation for proposed actions, we like to hold public meetings whenever appropriate and necessary. Due to ongoing nationwide gathering restrictions, and in following with departmental guidance, the Service did not organize public meetings to help prevent further spread of dangerous viruses and preserve public health. Since it is unclear when these national health guidelines would change, and we have the ability of receiving public comments without the need for public meetings, we decided against postponing a decision until public meetings could take place.

The Service did not modify the proposal as a result of this comment.

*Comment (6):* We received comments that wildlife refuges should not allow hunting.

*Response:* The word “refuge” includes the idea of providing a haven of safety for wildlife, and as such, hunting might seem to be an inconsistent use of the Refuge System. However, the NWRSA stipulates that hunting, if found compatible, is a legitimate and priority public use of a refuge. In this case, the hunting opportunities in our proposal have been found compatible on this refuge (please see the compatibility determination).

We did not make any change to the rule as a result of this comment.

*Comment (7):* We received a comment that opening hunting opportunities to species other than elk and bighorn sheep is inconsistent with the CCP developed for this refuge.

*Response:* As stated in other responses, Congress determined that hunting is among the six priority public uses that the Service must strive to make available on the units of the Refuge System. While the CCP opened a portion of the refuge to bighorn sheep and elk through a compatibility determination developed concurrent with the CCP, this management document did not stipulate that the refuge would henceforth be closed to other hunting opportunities. It simply stated that at that moment, all other hunting opportunities were not available at the refuge.

The current proposed action to open this refuge to new hunting opportunities was developed as part of the annual review of hunting and sport fishing programs on refuges to determine whether more stations should be included or whether regulations governing existing programs should be modified (see 85 FR 20030). This process is specific to hunting and sport fishing opportunities. However, we are limited to considering other public uses on this refuge in the future, provided they are found to be compatible. To be allowed on the units of the Refuge System, all public uses need to be found compatible with the refuge purpose and need to be evaluated through an additional planning process.

Each refuge manager uses “sound professional judgment” in making these inherently complex management decisions to ensure that each proposed action complies with Service mandates (see the Service’s Service Manual at 603 FW 2.6.U., available online at [www.fws.gov/policy/603fw2.html](http://www.fws.gov/policy/603fw2.html)). Each manager incorporates field experience, knowledge of refuge resources, considerations of the refuge’s role within an ecosystem, applicable laws, and the best available science in making these decisions. Service biologists and wildlife professionals, in consultation with the state, determine the optimal number of each game animal that should reside in an ecosystem and then establish hunt parameters, such as bag limits or sex ratios, based on those analyses. We carefully consider how a proposed hunt fits with individual refuge goals, objectives, and strategies before allowing the hunt.

We did not make any changes to the rule as a result of this comment.

*Comment (8):* We received one comment on the need to report the sources of given informational details found on the EA and how these need to be attributed to a credible source.

*Response:* Each refuge manager uses “sound professional judgment” in making inherently complex management decisions to ensure that each proposed action complies with Service mandates (see the Service’s Service Manual at 603 FW 2.6.U., available online at [www.fws.gov/policy/603fw2.html](http://www.fws.gov/policy/603fw2.html)). Each manager incorporates field experience, knowledge of refuge resources, considerations of the refuge’s role within an ecosystem, applicable laws, as well as the best available science in making decisions. Service biologists and wildlife professionals often use consultation and coordination with state biologists and scientists as the primary source of best available information, especially when there are no other known sources of information. Personal communications with biologists and scientists from the state, a tribe, or other agencies are noted as sources of information in our documents. Sound professional judgement used by Service employees is not noted in special ways.

The Service did not modify the proposal as a result of this comment.

*Comment (9):* One comment pointed out that our draft EA estimated a possible 50 percent reduction in the existing wild turkey and northern bobwhite quail populations as a result of the proposed hunt, mentioning that this was contrary to the sustainability mandated to the Service.

*Response:* After reading this comment, our wildlife biologists consulted with the state’s upland bird biologist on our estimated 50 percent population decrease. The state biologist’s information allowed us to see our overestimation on the population decrease. As a result of this, we have updated our estimates downward in accordance with the new information.

*Comment (10):* We received a comment that the Service has a legal duty to take a hard look to ensure that the biological integrity, diversity, and environmental health (BIDEH) of the system are maintained for the benefit of present and future generations of Americans. The commenter stated that the Service cannot act consistent with that duty when authorizing the hunting of ecologically important animal species.

*Response:* We do not allow hunting on a refuge if it is found incompatible with that individual refuge's purposes or with the mission of the Refuge System. Part of the mission of the Refuge System is to “ensure that the biological integrity, diversity, and environmental health (BIDEH) of the System are maintained for the benefit of present and future generations of Americans.” (16 U.S. Code 668dd[a][4][B]). Therefore, each Service station manager uses “sound professional judgment” in making these inherently complex management decisions to ensure that each

proposed action complies with this mandate (see the Service's Service Manual at 603 FW 2.6.U., available online at [www.fws.gov/policy/603fw2.html](http://www.fws.gov/policy/603fw2.html)). Each manager incorporates field experience, knowledge of refuge resources, considerations of the refuge's role within an ecosystem, applicable laws, and the best available science in making these decisions. Service biologists and wildlife professionals, in consultation with the state, determine the optimal number of each game animal that should reside in an ecosystem and then establish hunt parameters, such as bag limits or sex ratios, based on those analyses. We carefully consider how a proposed hunt fits with individual refuge goals, objectives, and strategies before allowing the hunt. Based on the analysis in the EA, we did not find that the proposed action would have any significant impact on predator species, such as mountain lion and bobcat, or rare animals and consequently would have no significant impact on the BIDEH of refuges.

Several factors, which are addressed in our response to concerns over hunting opportunities at this refuge, make it unlikely that providing the proposed hunting opportunities would affect the BIDEH on the refuge.

The Service consistently coordinates with the state regarding the refuge's hunting and fishing program. The Service looks at the state to monitor game and fish species populations, including predators and furbearers, and implement any adjustments to future harvests as needed under the existing state regulations. This ensures sustainable populations, minimize cumulative impacts, and maintains the biological integrity, diversity, and ecological health of refuges and state-managed lands.

The Service did not modify the proposal as a result of this comment.

*Comment (11):* We received comments opposing the proposal to allow use of lead ammunition for hunting resident game because of concerns that it may lead to the poisoning of eagles and other wildlife on the refuge. Some comments also asked the Service to consider an alternative that would require the use of nontoxic ammunition for all hunting on the refuge.

*Response:* The Service shares commenters' concerns regarding the bioavailability of lead in the environment and the fragments that can be deposited in killed game. See, for example, Nancy Golden et al., "A Review and Assessment of Spent Lead Ammunition and Its Exposure and Effects to Scavenging Birds in the United States," which is available online at [www.fws.gov/midwest/refuges/Review%20and%20Assessment%20paper.pdf](http://www.fws.gov/midwest/refuges/Review%20and%20Assessment%20paper.pdf). The impacts of spent lead on predators and scavengers on the refuge are analyzed in the EA within the cumulative impacts section. We also expect that expanding hunting opportunities would not substantially increase harvest or hunter numbers but would more likely provide added opportunities for current hunters. As a result of the proposed action, the potential overall increase in and cumulative impact of lead in the environment, both in number of animals harvested and area impacted, is expected to be minor and would not make a significant contribution to the cumulative effects of lead at the local or state level.

Besides potential impacts to wildlife, recent studies have found that lead ammunition can increase the risk to human health due to the ingestion of lead (Hunt et al. 2009). While no lead poisoning in humans has been documented from ingestion of wild game, some experts, including the Center for Disease Control, have recommended the use of nontoxic bullets when hunting to avoid lead exposure and stated that pregnant women and children under the age of six should not consume wild-game shot with lead ammunition (Streater 2009). This recommendation comes

after a study done in North Dakota found that those who ate wild game had significantly higher levels of lead in their blood than those who did not (Iqbal et al. 2009).

The Service encourages refuge-state partnerships to reach decisions on usage and would continue to encourage hunters and anglers to voluntarily use nontoxic ammunition and tackle for all harvest activities. Nontoxic ammunition is becoming more available as the demand for this ammunition increases (Kelly et al. 2011). Copper ammunition is a good alternative because it is less toxic and frangible than lead ammunition (Hunt et al. 2006). The Service's intent is to reduce the potential of lead poisoning to migratory birds and birds of prey, as well as lower the risk of lead exposure for humans ingesting wild game hunted on refuges.

The Service did not modify the proposal as a result of these comments.

*Comment (12):* We received a comment stating that the EA on this proposal is insufficient, and the Service must not publish a final EA or finding of no significant impact on activities at the refuge before it has accepted and analyzed all comments on the proposed rule, including on the cumulative impacts report.

*Response:* The Service disagrees with the assertion that the EA was insufficient for this proposal. We completed the EA, in compliance with NEPA, to evaluate the impacts of opening or expanding hunting opportunities on the refuge. The EA underwent regional review to address and consider all proposed actions from a local and regional perspective, and to consider the cumulative impacts. After analyzing the impacts, we concluded that the proposed actions would not have significant impacts at the local or regional level. The commenters who have raised these environmental analysis concerns have provided no further information that would change this analysis or our conclusion. We annually conduct management activities on the refuge that reduce or offset impacts of hunting on physical and cultural resources, including establishing designated areas for hunting, restricting levels of use, confining access and travel to designated locations, providing education programs and materials for hunters, and conducting law enforcement activities.

The Service is expanding opportunities for recreational hunting. Expanding opportunities does not necessarily result in increased impacts to the refuge resources. Overall, considering the decreasing trends in hunting generally, and decreasing trends of hunting on refuges, we do not expect this proposal to have a significant impact on the environment. As noted by the Service in the final rule, hunter participation trends have been generally declining, some refuges attract a very small number of participants, and often participation rates decline over the course of a season.

After analyzing this comment, the Service did not find it necessary to modify the proposal.

*Comment (13):* We received a comment that our EA did not address the impacts on the proposed action to trumpeter swan.

*Response:* We have added information on impacts to trumpeter swans to the final EA (Table 1).

*Comment (14):* We received a comment stating that, contrary to what the EA says, there are no hares in Nebraska.

*Response:* We disagree with this comment. NGFP ([www.outdoornebraska.gov](http://www.outdoornebraska.gov)) states that there are two species of jackrabbit, or hare, in Nebraska: the black-tailed (*Lepus californicus*) and the white-tailed (*Lepus townsendii*) jackrabbits.

The Service did not modify the proposal as a result of this comment.

*Comment (15):* We received a comment that the Service failed to recognize how hunting would impact migratory birds, as well as nonconsumptive users of the refuge, through disturbance from noise, motorized use, increased visitation, and the threat of accidentally being shot.

*Response:* We did analyze these impacts in the EA. In our analysis, we considered that all wildlife species, including migratory birds, may be indirectly impacted by disturbances due to hunting activities in the uplands. The overall impact of the proposed action was determined to have negligible to minor negative impacts on wildlife, including migratory birds. We also addressed measures to ensure the safety of visitors to the refuge during hunting activities. The commenter did not provide any further information that would change our conclusions.

We did not make any changes as a result of this comment.

*Comment (16):* We received a comment that the Service reached a final decision on the proposal even before the public was given the opportunity to provide input and that the Service should properly consider public comments.

*Response:* In spring 2020, U.S. Secretary of the Interior David L. Bernhardt announced a historic proposal for new and expanded hunting and fishing opportunities across 97 national wildlife refuges and 9 national fish hatcheries, including Fort Niobrara NWR. The Service published an announcement in the Federal Register inviting the public to review and provide comments on all the proposals. The Service accepted public input for no less than 45 days, after which the Service reviewed all public comments and made appropriate changes to the proposals based on substantive comments. No final decisions were made prior to considering all public comments and deciding upon appropriate changes based thereupon.

*Comment (17):* We received a comment that refuge management should focus on improving conditions for species locally so they can contribute to population status on a regional or national level and that the refuge should not be managed to reduce local numbers based upon regional or national numbers.

*Response:* The Service's refuge management activities are carefully examined, planned, and adjusted, using an adaptive management approach, to seek habitat improvements conducive to healthy species populations. Part of the mission of the Refuge System is to "ensure that the biological integrity, diversity, and environmental health of the System are maintained for the benefit of present and future generations of Americans." Therefore, each Service station manager uses "sound professional judgment" in making inherently complex management decisions to ensure refuge management actions, including consumptive uses like hunting, comply with this mandate (see the Service's Service Manual at 603 FW 2.6.U., available online at [www.fws.gov/policy/603fw2.html](http://www.fws.gov/policy/603fw2.html)). Each manager incorporates field experience, knowledge of refuge resources, considerations of the refuge's role within an ecosystem, applicable laws, and the best available science in making these decisions.

*Comment (18):* We received one comment requesting further information on the Service's statement that expanded hunting opportunities on the refuge could alleviate hunting pressure to wildlife populations on nearby public lands.

*Response:* The Nebraska Sandhills is a region of mixed-grass prairie on grass-stabilized sand dunes that occur only in Nebraska and a small region of South Dakota. Outside of the refuges managed by the Service in this important region, there are very few other public lands within the

Nebraska Sandhills. The refuge offers a unique recreational opportunity for hunters. Ecologists recognize the refuge and surrounding area for its biogeographic significance due to the co-occurrence of five distinctly different, major vegetation communities within and next to the Niobrara River corridor. The region is the only place in North America where Rocky Mountain Coniferous Forest (eastern limit), Northern Boreal Forest (southern limit), Eastern Deciduous Forest (western limit), Mixed Prairie, and Sandhill Prairie meet and intermingle. The unusually diverse plant and animal assemblages found in this area are due to unique surface and subsurface geologic formations, water and soil conditions, current and past climates, and differential sun exposure (Fort Niobrara CCP 1999). The uniqueness of this combination of habitats creates a hunting challenge not available anywhere else. Thus, it is within this context that the Service believes opening new hunting opportunities in the refuge could alleviate hunting pressure on nearby public lands.

*Comment (19):* One person asked when and how refuge staff consults with the NGPC to share, evaluate, and discuss available population and harvest data for regulatory changes to ensure viable populations of resident and migratory game species are maintained on the refuge.

*Response:* The EA contains information on state coordination and tribal consultation. Besides specific instances of meetings and conference calls between the Service and NGPC over the years, Service and state biologists and managers coordinate with one another to ensure management actions and outdoor recreational opportunities ensure wildlife populations remain viable.

*Comment (20):* One person asked how often monitoring and inventorying of wildlife populations and refuge habitats are done.

*Response:* Refuge personnel work closely with the staff of the regional Habitat and Population Evaluation Team and of the Division of Biological Resources to coordinate and carry out monitoring and inventory of wildlife populations and refuge habitats. The Habitat and Population Evaluation Team areas of expertise include:

- prioritizing areas for conservation efforts to benefit wildlife populations;
- supporting the development and application of models to identify and prioritize areas for conservation efforts;
- guiding strategic habitat conservation by monitoring migratory bird populations; and
- enhancing the efficiency and effectiveness of land and wildlife conservation by developing computer applications to be used by the Refuge System.

The Division of Biological Resources' areas of expertise include:

- inventorying abiotic resources and physical features;
- creating and interpreting geospatial data;
- providing data management and analysis;
- providing baseline inventories of plants, animals and vegetation;
- establishing status and trends of priority fish and wildlife species;
- conducting comprehensive ecological assessments;



- assessing natural disturbance regimes;
- providing inventories and assessments of water resources; and
- supporting adaptive management at multiple scales;
- assessing vulnerability to climate change;

*Comment (21):* We received several comments either fully supporting the expansion of hunting opportunities or supporting the expansion with qualifiers. We received 15 comments recommending that we not expand hunting opportunities at the refuge. Though various reasons exist for these recommendations, commenters mostly liked the quality of the current hunt and did not want that to change.

*Response:* Hunting is a recognized use of national wildlife refuges.

*Comment (22):* Ten people specifically commented that we should continue to require a refuge permit to hunt at the refuge. Many of those commenters reasoned that this would maintain the quality of the hunt and not allow unrestricted numbers of hunters. They also recommended that we reduce the number of deer hunters. Through hunter reports over the last several years, the preponderance of commenters would have us continue the permit requirement and reduce the overall number of hunters allowed.

*Response:* Given this feedback, we have decided to modify the EA, compatibility determination, and hunting plan to maintain, rather than increase, the number of muzzleloader deer hunters. Muzzleloader deer hunting usually results in high concentrations of hunters using the refuge. We asked the state to administer a lottery draw for muzzleloader deer hunting the refuge but they declined. We would limit the number of muzzleloader deer hunters during the busiest seasons, which are the November rifle and December muzzleloader seasons. We would require muzzleloader hunters apply for a refuge permit and conduct a lottery drawing for refuge permits to hunt during those busy seasons.

*Comment (23):* One commenter noted that refuges in Nebraska have had drastic reductions in staffing over the last 15 years. Expansion of hunting and fishing would place a greater work load on already strained budgets and staff, especially law enforcement officers.

*Response:* Each refuge manager makes a decision regarding hunting or sport fishing, or both, on that particular refuge only after rigorous examination of the available information. Referencing a CCP is generally the first step a refuge manager takes. Our policy for managing refuges is to manage them in accordance with an approved CCP, which, when implemented, would achieve refuge purposes; help fulfill the Refuge System mission; maintain and, where appropriate, restore the ecological integrity of each refuge and the Refuge System; help achieve the goals of the National Wilderness Preservation System; and meet other mandates. The CCP guides management decisions and sets forth goals, objectives, and strategies to accomplish these ends. The next step for refuge managers is developing or referencing step-down plans, including a hunting plan. Part of the process for opening a refuge to hunting after completing the step-down plan is complying with NEPA (42 U.S. Code 4321 et seq.), such as conducting an environmental assessment accompanied by the appropriate decision documentation (record of decision, finding of no significant impact, or environmental action memorandum or statement). The rest of the elements in the opening package are an evaluation of Section 7 of the Endangered Species Act of 1973, as amended (16 U.S. Code 1531 et seq.); copies of letters requesting state and tribal

involvement; and draft refuge-specific regulatory language. We make available the CCP, hunting plan, and NEPA documents, and request public comments on them, as well as on any proposed rule, before we allow hunting or sport fishing on a refuge.

In sum, this illustrates that the decision to allow hunting on a national wildlife refuge is not a quick or simple process. It is full of deliberation and discussion, including review of all available data to determine the relative health of a population before we allow it to be hunted.

In order to open or expand hunting or sport fishing on a refuge, we must find the activity compatible. The activity must not “materially interfere or detract from” public safety, wildlife resources, or the purpose of the refuge. For the proposed openings and expansions, we determined that the proposed actions would not have these detrimental impacts and found the actions to be compatible.

Service policy (603 FW 2.12[7]) requires station managers to determine that adequate resources, including staff, such as law enforcement, exist or can be provided by the Service or a partner to properly develop, operate, and maintain the use in a way that would not materially interfere with or detract from fulfillment of the refuge purpose(s) and the Service mission. If resources are lacking for establishment or continuation of wildlife-dependent recreational uses, the refuge manager would make reasonable efforts to obtain added resources or outside assistance from states, other public agencies, local communities, or private and nonprofit groups before determining that the use is not compatible. When Service law enforcement resources are lacking, we are often able to rely upon state fish and game law-enforcement capacity to assist in enforcement of hunting and fishing regulations.

The Service did not modify the proposal as a result of these comments.

*Comment (24):* One commenter stated that wilderness and scenic river qualities are diminished by hunting.

*Response:* Hunting is routinely allowed on national wilderness areas and national scenic rivers while maintaining acceptable quality of experience by all users.

### **Finding of No Significant Impact**

Based upon a review and evaluation of the information contained in the EA, as well as other documents and actions of record affiliated with this proposal, the Service has determined that the proposal to implement hunting of migratory birds and resident game species, as well as expand existing hunting opportunities on Fort Niobrara NWR does not constitute a major federal action significantly affecting the quality of the human environment under the meaning of Section 102 (2) (c) of NEPA. As such, an environmental impact statement is not required.

### **Decision**

The Service has decided to open hunting of migratory birds and resident game species, as well as expand hunting opportunities for large ungulates on Fort Niobrara NWR. These hunting opportunities would conform with NGPC hunting regulations, seasons, and bag limits that comply with Refuge System regulations.

This action is compatible with the purpose of the refuge and the mission of the Refuge System (see the final compatibility determination).

The action is consistent with applicable laws and policies regarding the establishment of hunting on national wildlife refuges. Refuge-specific regulations promulgated in conjunction with this action for are in the process of being finalized (85 FR 20030). This action will not be implemented until the regulations are finalized.

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Noreen Walsh

Regional Director, Interior Regions 5 and 7

U.S. Fish and Wildlife Service

Lakewood, CO

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Date

**APPENDIX C. INTRA-SERVICE SECTION 7 BIOLOGICAL EVALUATION FORM -  
REGION 6**

Originating Person: Steven A. Hicks

Date Submitted: 7/6/2020

Telephone Number: (402) 376-3789

- I. Service Program and Geographic Area or Station Name:** Refuges – Fort Niobrara National Wildlife Refuge (NWR)
- II. Flexible Funding Program:** N/A
- III. Location:** Cherry County, NE, Headquarters located at 42.893150o -100.476956o; T34N, R27W, Sec 27.
- IV. Species/Critical Habitat:** The area of this evaluation is the currently open hunting area at Fort Niobrara National Wildlife Refuge (NWR). That area is within the range and potential habitat of two federally listed species. There are known records of these species occurring on the refuge.

The American burying beetle (*Nicrophorus americanus*) (ABB) has been documented in habitats having sandy and loess soils, including grassland, woodland, and scrubland, in the Sandhills and Loess Hills regions of Nebraska. In the Sandhills, ABB primarily occupy mesic and lowland grassland habitats. ABB have been documented at the refuge.

During summer, northern long-eared bats (*Myotis septentrionalis*) roost singly or in colonies underneath bark, in cavities, or in crevices of both live and dead trees. Males and non-reproductive females may also roost in cooler places, such as caves and mines. This bat seems opportunistic in selecting roosts, using tree species based on suitability to retain bark or provide cavities or crevices. It has also been found, rarely, roosting in structures like barns and sheds. Northern long-eared bats spend winter hibernating in caves and mines, called hibernacula. They typically use large caves or mines with large passages and entrances, constant temperatures, and high humidity with no air currents. Specific areas where they hibernate have very high humidity, so much so that droplets of water are often seen on their fur. Within hibernacula, surveyors find them in small crevices or cracks, often with only the nose and ears visible. Northern long eared bats have been documented at the refuge.

Whooping crane (*Grus americana*) and piping plover (*Charadrius melodus*) have also been occasionally located in the area closed to hunting at the refuge.

Potential presence of interior least tern (*Sterna antillarum*), blowout penstemon (*Penstemon haydenii*), western prairie fringed orchid (*Platanthera praeclara*) and Topeka shiner (*Notropis topeka* (=tristis)) was evaluated, but none of these species were found to be present within the refuge or have not been documented in many years.

V. **Project Description:** The United States (U.S.) Fish and Wildlife Service (Service) is proposing to increase hunting opportunity at Fort Niobrara NWR. An environmental assessment (EA) and hunting plan have been prepared for that action. Under the Proposed Action Alternative, the Service proposes the expansion of hunting opportunities for resident game and migratory birds within the current open area of the refuge. Resident game hunting includes all non-migratory wildlife hunted in Nebraska under Nebraska Game and Parks Commission (NGPC) hunting regulations. Resident game hunting covers 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.

Regulations that would be imposed under the proposed action include the following.

- State permitted archery and muzzleloader weapons are allowed to take elk, deer, and antelope.
- State permitted shotguns shooting nontoxic 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.
- Nontoxic 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 hour before sunrise and two hour 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 requirements and season dates are according state regulation.
- Bag limits are generally according to state regulations. Special deer bag limits such as antlerless only, bonus tags, and mule deer doe, would be negotiated with the NGPC and published in their regulations.
- Access to the wilderness portion of the open hunt area is limited to walking, horseback, as well as canoe, kayak, and float tube. Game carts or any other mechanized device used for retrieving game or transportation are prohibited in the portion of the wilderness area open to hunting.
- Access to the non-wilderness portion 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, with 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 assist 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 Hunt Permit Application (Form 3-2356), Refuge Hunt Permit (Annual), and USFWS 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 to 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 adjacent to 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 within the hunt area. These facilities are the refuge canoe launch and two scenic overlook points.
- The primary nonconsumptive public use areas of the refuge remain outside the hunt area. These areas are south and east of the Niobrara River. The area includes the Fort Falls 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 maintain the untrammelled appearance of the hunt area which is mostly designated wilderness.
- No additional or existing facilities, such as roads, trails, and parking lots, would be maintained or constructed that would impact cultural resources or wilderness values.

This alternative offers increased opportunities for public hunting and fulfills the Service's mandate under the National Wildlife Refuge System Improvement Act of 1997 (NWRSA). The Service has determined that the hunt plan is compatible with the purposes of the refuge and the mission of the Refuge System.

## VI. Determination of Effects:

### (A) Description of Effects:

#### American burying beetle

Hunting activities may benefit any American burying beetles that might be present on the refuge because of a potential increase in carrion and gut piles. However, American burying beetles are usually inactive from early September to late May and therefore would be hibernating in the soil during most of the hunting seasons. The proposed use may have a positive effect or no effect on American burying beetles.

#### Northern long-eared bat

We do have evidence that northern long-eared bats may use tree and small crevice habitats of the refuge. There are no classic bat hibernacula located on the refuge. Bats are not a species confused with huntable species. Hunting activities should not disturb bats inside roost trees or deep small crevices. The proposed use should have no effect on northern long-eared bats.

#### Whooping crane

Whooping cranes migrate through the Sandhills of Nebraska. No whooping cranes have been documented in the area of the refuge open to hunting. Very few occurrences have been documented on the area closed to hunting at the refuge. If whooping cranes are present on the refuge in an area on or adjacent to the open hunting area, a closed buffer zone within the hunting area would be temporarily established. The proposed use should have no effect on whooping cranes.

#### Other species

Potential presence of interior least tern, piping plover, and Topeka shiner blowout penstemon, western prairie fringed orchid was evaluated, but none of these species was found to be present within the refuge or have not been documented in many years. Due to the location, geographic setting, and timing of hunting, negative effects on the above-mentioned listed species are not anticipated.

**Determination:**

**Response requested**

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

- Whooping Crane
- Western Prairie-Fringed Orchid
- Northern long-eared bat
- Piping Plover
- Interior Least Tern
- Blowout Penstemon
- Topeka Shiner

*May Affect but Not Likely to Adversely Affect:* This determination is appropriate when the proposed project is likely to cause insignificant, discountable, or wholly beneficial effects to individuals of listed species and/or designated critical habitat. **No concurrence from ESFO required.**

- American burying beetle

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

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

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

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



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Signature

Date

[Project Leader of originating station]

ES concurrence is not needed as per Exhibit 1, Director's Order  
194, 04/17/2008.